

# Response to: RFP 109035 O3 Independent Verification and Validation (IV&V) Services

Presented to:

**State of Nebraska**

**Department of Health and Human Services (DHHS)**

Submitted by:

**First Data Government Solutions, LP (FDGS)**

George Love, Sales Director

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November 19, 2021

## ORIGINAL: TECHNICAL PROPOSAL

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# Title Page

## Technical Proposal

RFP Subject	Independent Verification and Validation Services for the State of Nebraska Department of Health and Human Services
RFP Number	109035 O3
Vendor Name	First Data Government Solutions, LP
Business Address	255 Fiserv Drive Brookfield, WI 53045
Opening Date	November 19, 2021
Opening Time	2:00 p.m. CT

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November 19, 2021

Andy Budell/Holly Glasgow  
Department of Health and Human Services  
301 Centennial Mall S  
Lincoln, NE 68508

Subject: First Data Government Solutions, LP  
Response to RFP #109035 O3  
Independent Verification and Validation (IV&V) Services

Dear Mr. Budell and Ms. Glasgow:

First Data Government Solution, LP (FDGS) is pleased to submit our proposal in response to the **RFP #109035 O3** to provide Independent Verification and Validation (IV&V) Services. We are confident that the State's evaluators will find our proposal fully compliant with the RFP requirements, as well as **Addendum One (Questions and Answers)** and **Addendum Two (Revised RFP Sections)**, dated October 29, 2021. Further, we believe the Department will find that FDGS has submitted a proposal representing the best solution for the IV&V services required by the State.

The State of Nebraska and FDGS have worked together successfully on multiple projects including EES and DMA and we are ready to continue to this partnership on future projects. Nebraska has demonstrated its understanding and recognition of the important role an IV&V contractor plays in helping the State to identify and mitigate risks and issues. It is clear that the objective of IV&V services for Nebraska is to ensure independent and objective project oversight. FDGS is the partner who has consistently demonstrated the ability to professionally deliver these services with uncompromising integrity and independence.

FDGS offers an unmatched combination of experience and capability, including a proven IV&V methodology based on industry standards; a thorough understanding of integrated eligibility systems and supporting technologies, and unparalleled health and human services program experience.

### **First Data Has the Keys to Successful Projects**

For more than 30 years, FDGS has provided services to our government clients. We understand that successful project outcomes do not occur by chance. Rather, they are born of four keys to success:

- **An Understanding of the Project's Goals and Objectives** – we have a clear understanding of expected results
- **A Defined Project Plan** – we focus and guide all project activities toward the achievement of the desired outcomes
- **The Right People** – we provide the requisite expertise, knowledge, and experience
- **An Experienced Firm** – we are financially sound, with a history of successfully providing similar services

## First Data Understands the Project's Goals and Objectives

We know that your plan is to manage multiple initiatives as a portfolio of projects with staged implementation and are pleased to hear that this process is managed by a single governance structure. Successfully achieving the DHHS and Division of Medicaid and Long Term Care (MLTC)'s long-term operational vision and objectives requires a partner with expertise, experience, and insight into current IV&V and quality assurance practices, coupled with a broad understanding of healthcare and human services program delivery. Nebraska also benefits from a partner that understands the State's complex technological and business environments and how it must integrate with various Medicaid stakeholders as well as internal state resources.

### **FDGS is that partner.**

FDGS helps identify and address issues and risks early in the project from initiation through certification. We fully understand what Nebraska is striving to achieve, and we recognize how critical this project is to the citizens you serve.

## First Data Has a Proven Approach Tailored to the Portfolio of DHHS Projects

Our approach to IV&V services is founded upon the importance of following a consistent and disciplined approach emphasizing independence; objectivity; and the use of a methodology that is proven, rigorous, and based on industry standards. This approach provides FDGS with the credibility to effectively evaluate and assess the implementation vendors' project management teams, as well as project plans, processes, procedures, controls, and the resulting outcomes and products. This disciplined approach is applied to all phases of the System Development Life Cycle (SDLC).

We recognize the critical importance of IV&V services. The complexity of the portfolio of projects is magnified by the number of work products to be reviewed; the velocity of day-to-day decisions on the project and certifications to be conducted. By using our proven IV&V methodology, we help the State overcome these challenges by:

- **Focusing on high-value, high-risk areas of the project:** IV&V reviews require discipline and focused attention. Because of the size and complexity of the project, it may be easy to overlook the root causes of project risks and become distracted by the symptoms of the risks. Our approach emphasizes gaining an understanding of the true elements of risk to the project and providing meaningful analysis that the State and implementation vendors can use to guide the project and take corrective action as needed.
- **Using Proven Pre-Defined Checklists:** Our approach includes tailored checklists, already in use in Nebraska to verify and validate project activities. The FDGS checklists were developed using industry standards and have been refined over many years and numerous engagements, incorporating lessons learned. The checklists assist us in specific needs of each project.
- **Leveraging Recent IV&V Experience:** FDGS has proven experience in providing similar IV&V services to numerous other implementation projects across the country, as detailed in **Section 1.8: Summary of Contractor's Corporate Experience**. As a result

of these engagements, the FDGS Team has an unmatched understanding of the risks, issues, and mitigation strategies associated with complex implementations in health and human services agencies.

- **Deep understanding of the business:** FDGS looks forward to continue our support of the Medicaid modernization efforts with DHHS. The latest projects in scope for this RFP continue to expand the capabilities of the Department as they affect business processes, policy, procedures, and operations of the delivery of critical services to citizens. Our consultants have deep and personal experience in operating many of these programs and truly understand the associated issues and challenges.
- **Incorporating a 360-degree risk analysis perspective:** The risks that arise during the portfolio of DHHS projects come from many sources. Our IV&V activities are heavily focused on deliverables, work products, processes, procedures, and methodologies. At the same time, our risk analysis takes into account a variety of perspectives including project risks stemming from the State, its divisions and program areas, and other stakeholders.

### First Data Has the Experienced Project Team to Deliver "Day 1" Value

FDGS is proposing a team of IV&V professionals who collectively address the specialized skills your project requires. Our team is built with specific Nebraska experience in mind. Mr. Michael Lawson is our IV&V Lead. His team consists of a certified Project Manager supported by analysts highly-skilled in Medicaid, Technical, Privacy and Security, and CMS Certification.

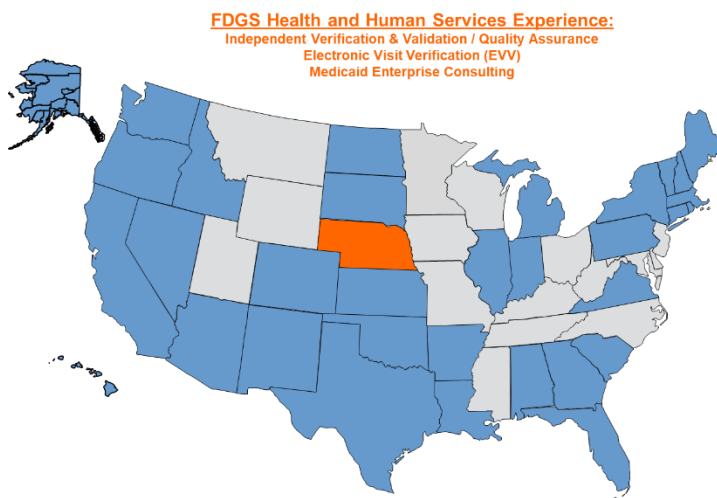
Our core team is complemented with a pool of professional technical and business SMEs that are available to support this project. The FDGS IV&V Project Team represents a powerful lineup committed to providing a cost-effective IV&V solution for Nebraska. Our staff credentials are detailed in **Section 2.2: C. Organizational Staffing**. Specifically, FDGS offers:

- Consultants with extensive experience and knowledge with all of the health and human services programs included within the scope of the portfolio of projects outlined in the RFP
- A team that includes consultants currently performing IV&V services for similar projects in Nebraska and across the United States, including other large-scale integrated eligibility implementation efforts
- Proactive risk analysis methods developed through our long history of IV&V consulting engagements
- Hands-on technical expertise with the technology listed in this RFP, including Electronic Visit Verification and Outcomes-Based Certification
- A staffing approach that provides for expertise, continuity of resources, and the ability to efficiently add to our team's capacity at key points in the project
- Utilizing staff that have worked with you on current projects like Data Management and Analytics (DMA) mitigates risks associated with selecting another vendor. Nebraska will not have to spend any resources on knowledge transfer or schedule slippage by selecting FDGS to continue to provide IV&V services for current projects

- Operational Verification and Validation (OV&V) experience – as projects move into Maintenance and Operations, FDGS is ready to continue support of DHHS with defined OV&V practices used in other states

### First Data is an IV&V Vendor with significant Medicaid experience

FDGS is a nationally recognized leader in both health and human services consulting and IV&V. We have been providing these services for our state partners' complex, statewide automation projects for the past 30 years. We bring a national perspective having provided these services on one or more, large, complex, statewide systems in multiple states. This significant level of real experience provides IV&V services meeting the State's requirements and expectations.



Our methodology for performing IV&V on system implementations has been successful at all levels of government across multiple service areas. We have learned that most successful projects are a result of strong partnerships with our State clients. To develop cohesive working relationships, we provide our clients with quality service and outstanding personnel.

### The First Data Value Proposition

Our proposal offers the Department a unique combination of hands-on and Nebraska-specific experience, robust IV&V methods and tools and a deep understanding of health and human services programs. Nebraska is clearly making a significant investment in both time and resources with this portfolio of projects. The IV&V contractor must also be viewed as an investment in the success of this effort. Based on our extensive and relevant experience, we offer the best value and lowest risk to support ongoing projects, like DMA and EVV, as well as the projects that will begin soon. Our knowledge of State operations and our commitment to excellence in delivery will allow DHHS to achieve its vision.

FDGS welcomes the opportunity to discuss our proposal should there be any questions that may arise. If you have any questions, please do not hesitate to contact Mr. George Love via email at [George.Love@fiserv.com](mailto:George.Love@fiserv.com) or 480-370-6472.

Regards,

Shane McCullough  
Vice President

# Form A: Contractor Proposal Point of Contact

## Form A Contractor Proposal Point of Contact Request for Proposal Number 109035 O3

Form A should be completed and submitted with each response to this solicitation. This is intended to provide the State with information on the contractor's name and address, and the specific person(s) who are responsible for preparation of the contractor's response.

Preparation of Response Contact Information	
<b>Contractor Name:</b>	First Data Government Solutions, LP
<b>Contractor Address:</b>	55 Fiserv Drive Brookfield, WI 53045
<b>Contact Person &amp; Title:</b>	George Love, Sales Director
<b>E-mail Address:</b>	<a href="mailto:George.Love@fiserv.com">George.Love@fiserv.com</a>
<b>Telephone Number (Office):</b>	480-370-6472
<b>Telephone Number (Cellular):</b>	480-370-6472
<b>Fax Number:</b>	N/A

Each Contractor should also designate a specific contact person who will be responsible for responding to the State if any clarifications of the contractor's response should become necessary. This will also be the person who the State contacts to set up a presentation/demonstration, if required.

Communication with the State Contact Information	
<b>Contractor Name:</b>	First Data Government Solutions, LP
<b>Contractor Address:</b>	55 Fiserv Drive Brookfield, WI 53045
<b>Contact Person &amp; Title:</b>	George Love, Sales Director
<b>E-mail Address:</b>	<a href="mailto:George.Love@fiserv.com">George.Love@fiserv.com</a>
<b>Telephone Number (Office):</b>	480-370-6472
<b>Telephone Number (Cellular):</b>	480-370-6472
<b>Fax Number:</b>	N/A

# Request for Proposal for Contractual Services

## REQUEST FOR PROPOSAL FOR CONTRACTUAL SERVICES FORM

### CONTRACTOR MUST COMPLETE THE FOLLOWING

By signing this Request for Proposal for Contractual Services form, the contractor guarantees compliance with the procedures stated in this Solicitation, and agrees to the terms and conditions unless otherwise indicated in writing and certifies that contractor maintains a drug free work place.


Per Nebraska's Transparency in Government Procurement Act, Neb. Rev Stat § 73-603 DAS is required to collect statistical information regarding the number of contracts awarded to Nebraska Contractors. This information is for statistical purposes only and will not be considered for contract award purposes.

**NEBRASKA CONTRACTOR AFFIDAVIT:** Bidder hereby attests that bidder is a Nebraska Contractor. "Nebraska Contractor" shall mean any bidder who has maintained a bona fide place of business and at least one employee within this state for at least the six (6) months immediately preceding the posting date of this Solicitation.

\_\_\_\_\_ I hereby certify that I am a Resident disabled veteran or business located in a designated enterprise zone in accordance with Neb. Rev. Stat. § 73-107 and wish to have preference, if applicable, considered in the award of this contract.

\_\_\_\_\_ I hereby certify that I am a blind person licensed by the Commission for the Blind & Visually Impaired in accordance with Neb. Rev. Stat. §71-8611 and wish to have preference considered in the award of this contract.

### FORM MUST BE SIGNED USING AN INDELIBLE METHOD (NOT ELECTRONICALLY)

<b>FIRM:</b>	First Data Government Solutions, LP
<b>COMPLETE ADDRESS:</b>	255 Fiserv Drive Brookfield, WI 53045
<b>TELEPHONE NUMBER:</b>	402-450-0393
<b>FAX NUMBER:</b>	N/A
<b>DATE:</b>	11/17/2021
<b>SIGNATURE:</b>	
<b>TYPED NAME &amp; TITLE OF SIGNER:</b>	Shane McCullough, Authorized Signer

# HIPAA Business Associate Agreement

109035 O3

## DHHS HIPAA BUSINESS ASSOCIATE AGREEMENT PROVISIONS SERVICES CONTRACTS

1. BUSINESS ASSOCIATE. "Business Associate" shall generally have the same meaning as the term "business associate" at 45 CFR § 160.103, and in reference to the party in this Contract, shall mean Contractor.
2. COVERED ENTITY. "Covered Entity" shall generally have the same meaning as the term "covered entity" at 45 CFR § 160.103, and in reference to the party to this Contract, shall mean DHHS.
3. HIPAA RULES. "HIPAA Rules" shall mean the Privacy, Security, Breach Notification, and Enforcement Rules at 45 CFR Part 160 and Part 164.
4. OTHER TERMS. The following terms shall have the same meaning as those terms in the HIPAA Rules: Breach, Data Aggregation, Designated Record Set, Disclosure, Health Care Operations, Individual, Minimum Necessary, Notice of Privacy Practices, Protected Health Information, Required by Law, Secretary, Security Incident, Subcontractor, Unsecured Protected Health Information, and Use.
5. THE CONTRACTOR shall do the following:
  - 5.1. Not use or disclose Protected Health Information other than as permitted or required by this Contract or as required by law. Contractor may use Protected Health Information for the purposes of managing its internal business processes relating to its functions and performance under this Contract. Use or disclosure must be consistent with DHHS' minimum necessary policies and procedures.
  - 5.2. Implement and maintain appropriate administrative, physical, and technical safeguards to prevent access to and the unauthorized use and disclosure of Protected Health Information. Comply with Subpart C of 45 CFR Part 164 with respect to electronic Protected Health Information, to prevent use or disclosure of Protected Health Information other than as provided for in this Contract and assess potential risks and vulnerabilities to the individual health data in its care and custody and develop, implement, and maintain reasonable security measures.
  - 5.3. To the extent Contractor is to carry out one or more of the DHHS' obligations under Subpart E of 45 CFR Part 164, comply with the requirements of Subpart E that apply to DHHS in the performance of such obligations. Contractor may not use or disclosure Protected Health Information in a manner that would violate Subpart E of 45 CFR Part 164 if done by DHHS.
  - 5.4. In accordance with 45 CFR §§ 164.502(E)(1)(ii) and 164.308(b)(2), if applicable, ensure that any agents and subcontractors that create, receive, maintain, or transmit Protected Health Information received from DHHS, or created by or received from the Contractor on behalf of DHHS, agree in writing to the same restrictions, conditions, and requirements relating to the confidentiality, care, custody, and minimum use of Protected Health Information that apply to the Contractor with respect to such information.
  - 5.5. Obtain reasonable assurances from the person to whom the information is disclosed that the information will remain confidential and used or further disclosed only as required by law or for the purposes for which it was disclosed to the person, and the person notifies the Contractor of any instances of which it is aware that the confidentiality of the information has been breached.
  - 5.6. Within fifteen (15) days:
    - 5.6.1. Make available Protected Health Information to DHHS as necessary to satisfy DHHS' obligations under 45 CFR § 164.524;
    - 5.6.2. Make any amendment(s) to Protected Health Information as directed or agreed to by DHHS pursuant to 45 CFR § 164.526, or take other measures as necessary to satisfy DHHS' obligations under 45 CFR § 164.526;
    - 5.6.3. Maintain and make available the information required to provide an accounting of disclosures to DHHS as necessary to satisfy DHHS' obligations under 45 CFR § 164.528.



- 5.7. Make its internal practices, books, and records relating to the use and disclosure of Protected Health Information received from, or created or received by the Contractor on behalf of the DHHS available to the Secretary for purposes of determining compliance with the HIPAA rules. Contractor shall provide DHHS with copies of the information it has made available to the Secretary.
  - 5.8. Report to DHHS within fifteen (15) days, any unauthorized use or disclosure of Protected Health Information made in violation of this Contract, or the HIPAA rules, including any security incident that may put electronic Protected Health Information at risk. Contractor shall, as instructed by DHHS, take immediate steps to mitigate any harmful effect of such unauthorized disclosure of Protected Health Information pursuant to the conditions of this Contract through the preparation and completion of a written Corrective Action Plan subject to the review and approval by DHHS. The Contractor shall report any breach to the individuals affected and to the Secretary as required by the HIPAA rules.
6. TERMINATION.
- 6.1. DHHS may immediately terminate this Contract and any and all associated contracts if DHHS determines that the Contractor has violated a material term of this Contract.
  - 6.2. Within thirty (30) days of expiration or termination of this Contract, or as agreed, unless Contractor requests and DHHS authorizes a longer period of time, Contractor shall return or at the written direction of DHHS destroy all Protected Health Information received from DHHS (or created or received by Contractor on behalf of DHHS) that Contractor still maintains in any form and retain no copies of such Protected Health Information. Contractor shall provide a written certification to DHHS that all such Protected Health Information has been returned or destroyed (if so instructed), whichever is deemed appropriate. If such return or destruction is determined by the DHHS to be infeasible, Contractor shall use such Protected Health Information only for purposes that makes such return or destruction infeasible and the provisions of this Contract shall survive with respect to such Protected Health Information.
  - 6.3. The obligations of the Contractor under the Termination Section shall survive the termination of this Contract.

Signature:  \_\_\_\_\_

Shane McCullough  
Authorized Signer

## II. Terms and Conditions

### II. TERMS AND CONDITIONS

Contractors should complete Sections II through VI as part of their proposal. Contractor is expected to read the Terms and Conditions and should initial either accept, reject, or reject and provide alternative language for each clause. The Contractor should also provide an explanation of why the Contractor rejected the clause or rejected the clause and provided alternate language. By signing the solicitation, contractor is agreeing to be legally bound by all the accepted terms and conditions, and any proposed alternative terms and conditions submitted with the proposal. The State reserves the right to negotiate rejected or proposed alternative language. If the State and Contractor fail to agree on the final Terms and Conditions, the State reserves the right to reject the proposal. The State of Nebraska is soliciting proposals in response to this solicitation. The State reserves the right to reject proposals that attempt to substitute the Contractor's commercial contracts and/or documents for this solicitation.

The Contractors should submit with their proposal any license, user agreement, service level agreement, or similar documents that the Contractor wants incorporated in the Contract. The State will not consider incorporation of any document not submitted with the Contractor's proposal as the document will not have been included in the evaluation process. These documents shall be subject to negotiation and will be incorporated as addendums if agreed to by the Parties.

If a conflict or ambiguity arises after the Addendum to Contract Award have been negotiated and agreed to, the Addendum to Contract Award shall be interpreted as follow s:

1. If only one Party has a particular clause then that clause shall control;
2. If both Parties have a similar clause, but the clauses do not conflict, the clauses shall be read together;
3. If both Parties have a similar clause, but the clauses conflict, the State's clause shall control.

#### A. GENERAL

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The contract resulting from this solicitation shall incorporate the following documents:

1. Request for Proposal and Addenda;
2. Amendments to the solicitation;
3. Questions and Answers;
4. Contractor's proposal (Solicitation and properly submitted documents);
5. The executed Contract and Addendum One to Contract, if applicable; and,
6. Amendments/Addendums to the Contract.

These documents constitute the entirety of the contract.

Unless otherwise specifically stated in a future contract amendment, in case of any conflict between the incorporated documents, the documents shall govern in the following order of preference with number one (1) receiving preference over all other documents and with each lower numbered document having preference over any higher numbered document: 1) Amendment to the executed Contract with the most recent dated amendment having the highest priority, 2) executed Contract and any attached Addenda, 3) Amendments to solicitation and any Questions and Answers, 4) the original solicitation document and any Addenda, and 5) the Contractor's submitted Proposal.

Any ambiguity or conflict in the contract discovered after its execution, not otherwise addressed herein, shall be resolved in accordance with the rules of contract interpretation as established in the State of Nebraska.

**B. NOTIFICATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Contractor and State shall identify the contract manager who shall serve as the point of contact for the executed contract.

Communications regarding the executed contract shall be in writing and shall be deemed to have been given if delivered personally or mailed, by U.S. Mail, postage prepaid, return receipt requested, to the parties at their respective addresses set forth below, or at such other addresses as may be specified in writing by either of the parties. All notices, requests, or communications shall be deemed effective upon personal delivery or five (5) calendar days following deposit in the mail.

Either party may change its address for notification purposes by giving notice of the change, and setting forth the new address and an effective date.

**C. NOTICE (POC)**

The State reserves the right to appoint a Buyer's Representative to manage [or assist the Buyer in managing] the contract on behalf of the State. The Buyer's Representative will be appointed in writing, and the appointment document will specify the extent of the Buyer's Representative authority and responsibilities. If a Buyer's Representative is appointed, the Contractor will be provided a copy of the appointment document, and is expected to cooperate accordingly with the Buyer's Representative. The Buyer's Representative has no authority to bind the State to a contract, amendment, addendum, or other change or addition to the contract.

**D. GOVERNING LAW (Statutory)**

Notwithstanding any other provision of this contract, or any amendment or addendum(s) entered into contemporaneously or at a later time, the parties understand and agree that, (1) the State of Nebraska is a sovereign state and its authority to contract is therefore subject to limitation by the State's Constitution, statutes, common law, and regulation; (2) this contract will be interpreted and enforced under the laws of the State of Nebraska; (3) any action to enforce the provisions of this agreement must be brought in the State of Nebraska per state law; (4) the person signing this contract on behalf of the State of Nebraska does not have the authority to waive the State's sovereign immunity, statutes, common law, or regulations; (5) the indemnity, limitation of liability, remedy, and other similar provisions of the final contract, if any, are entered into subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity; and, (6) all terms and conditions of the final contract, including but not limited to the clauses concerning third party use, licenses, warranties, limitations of liability, governing law and venue, usage verification, indemnity, liability, remedy or other similar provisions of the final contract are entered into specifically subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity.

The Parties must comply with all applicable local, state and federal laws, ordinances, rules, orders, and regulations.

**E. BEGINNING OF WORK**

The Contractor shall not commence any billable work until a valid contract has been fully executed by the State and the successful Contractor. The Contractor will be notified in writing when work may begin.

**F. AMENDMENT**

This Contract may be amended in writing, within scope, upon the agreement of both parties.

**G. CHANGE ORDERS OR SUBSTITUTIONS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The State and the Contractor, upon the written agreement, may make changes to the contract within the general scope of the solicitation. Changes may involve specifications, the quantity of work, or such other items as the State may find necessary or desirable. Corrections of any deliverable, service, or work required pursuant to the contract shall not be deemed a change. The Contractor may not claim forfeiture of the contract by reasons of such changes.

The Contractor shall prepare a written description of the work required due to the change and an itemized cost proposal for the change. Changes in work and the amount of compensation to be paid to the Contractor shall be determined in accordance with applicable unit prices if any, a pro-rated value, or through negotiations. The State shall not incur a price increase for changes that should have been included in the Contractor's proposal, were foreseeable, or result from difficulties with or failure of the Contractor's proposal or performance.

No change shall be implemented by the Contractor until approved by the State, and the Contract is amended to reflect the change and associated costs, if any. If there is a dispute regarding the cost, but both parties agree that immediate implementation is necessary, the change may be implemented, and cost negotiations may continue with both Parties retaining all remedies under the contract and law.

**\*\*\*Contractor will not substitute any item that has been awarded without prior written approval of SPB\*\*\***

**H. VENDOR PERFORMANCE REPORT(S)**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The State may document any instance(s) of products or services delivered or performed which exceed or fail to meet the terms of the purchase order, contract, and/or solicitation specifications. The State Purchasing Bureau may contact the Vendor regarding any such report. Vendor performance report(s) will become a part of the permanent record of the Vendor.

**I. NOTICE OF POTENTIAL CONTRACTOR BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

If Contractor breaches the contract or anticipates breaching the contract, the Contractor shall immediately give written notice to the State. The notice shall explain the breach or potential breach, a proposed cure, and may include a request for a waiver of the breach if so desired. The State may, in its discretion, temporarily or permanently waive the breach. By granting a waiver, the State does not forfeit any rights or remedies to which the State is entitled by law or equity, or pursuant to the provisions of the contract. Failure to give immediate

notice, however, may be grounds for denial of any request for a waiver of a breach.

**J. BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Either Party may terminate the contract, in whole or in part, if the other Party breaches its duty to perform its obligations under the contract in a timely and proper manner. Termination requires written notice of default and a thirty (30) calendar day (or longer at the non-breaching Party's discretion considering the gravity and nature of the default) cure period. Said notice shall be delivered by Certified Mail, Return Receipt Requested, or in person with proof of delivery. Allowing time to cure a failure or breach of contract does not waive the right to immediately terminate the contract for the same or different contract breach which may occur at a different time. In case of default of the Contractor, the State may contract the service from other sources and hold the Contractor responsible for any excess cost occasioned thereby. OR In case of breach by the Contractor, the State may, without unreasonable delay, make a good faith effort to make a reasonable purchase or contract to purchased goods in substitution of those due from the contractor. The State may recover from the Contractor as damages the difference between the costs of covering the breach. Notwithstanding any clause to the contrary, the State may also recover the contract price together with any incidental or consequential damages defined in UCC Section 2-715, but less expenses saved in consequence of Contractor's breach.

The State's failure to make payment shall not be a breach, and the Contractor shall retain all available statutory remedies and protections.

**K. NON-WAIVER OF BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The acceptance of late performance with or without objection or reservation by a Party shall not waive any rights of the Party nor constitute a waiver of the requirement of timely performance of any obligations remaining to be performed.

**L. SEVERABILITY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

If any term or condition of the contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the contract did not contain the provision held to be invalid or illegal.

**M. INDEMNIFICATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

**1. GENERAL**

The Contractor agrees to defend, indemnify, and hold harmless the State and its employees, volunteers, agents, and its elected and appointed officials (for the purposes of this section, "the Indemnified Parties") from and against any and all third party claims, liens, demands, damages, liability, actions, causes of action, losses, judgments, costs, and expenses of every nature, including investigation costs and expenses, settlement costs, and attorney fees and expenses (for the purposes of this section, "the Claims"), sustained or asserted against the State for personal injury, death, or property loss or damage, arising out of, resulting from, or attributable to the willful misconduct, negligence, error, or omission of the Contractor, its employees, Subcontractors, consultants, representatives, and agents, resulting from this contract, except to the extent such Contractor liability is attenuated by any action of the State which directly and proximately contributed to the Claims.

**2. INTELLECTUAL PROPERTY**

The Contractor agrees it will, at its sole cost and expense, defend, indemnify, and hold harmless the Indemnified Parties from and against any and all Claims, to the extent such claims arise out of, result from, or are attributable to, the actual or alleged infringement or misappropriation of any patent, copyright, trade secret, trademark, or confidential information of any third party by the Contractor or its employees, Subcontractors, consultants, representatives, and agents; provided, however, the State gives the Contractor prompt notice in writing of the claim. The Contractor may not settle any infringement Claim that will affect the State's use of the Licensed Software or any other deliverable under this solicitation without the State's prior written consent, which consent may be withheld for any reason.

If a judgment or settlement is obtained or reasonably anticipated against the State's use of any intellectual property for which the Contractor has indemnified the State, the Contractor shall, at the Contractor's sole cost and expense, promptly modify the item or items which were determined to be infringing, acquire a license or licenses on the State's behalf to provide the necessary rights to the State to eliminate the infringement, or provide the State with a non-infringing substitute that provides the State the same functionality. At the State's election, the actual or anticipated judgment may be treated as a breach of warranty by the Contractor, and the State may receive the remedies provided under this solicitation.

**3. PERSONNEL**

The Contractor shall, at its expense, indemnify and hold harmless the Indemnified Parties from and against any claim with respect to withholding taxes, worker's compensation, employee benefits, or any other claim, demand, liability, damage, or loss of any nature relating to any of the personnel, including subcontractors and their employees, provided by the Contractor.

**4. SELF-INSURANCE**

The State of Nebraska is self-insured for any loss and purchases excess insurance coverage pursuant to Neb. Rev. Stat. § 81-8,239.01 (Reissue 2008). If there is a presumed loss under the provisions of this agreement, Contractor may file a claim with the Office of Risk Management pursuant to Neb. Rev. Stat. §§ 81-8,829 – 81-8,306 for review by the State Claims Board. The State retains all rights and immunities under the State Miscellaneous (Section 81-8,294), Tort (Section 81-8,209), and Contract Claim Acts (Section 81-8,302), as outlined in Neb. Rev. Stat. § 81-8,209 et seq. and under any other provisions of law and accepts liability under this agreement to the extent provided by law.

**5. LEGAL REPRESENTATION**

The Parties acknowledge that Attorney General for the State of Nebraska is required by statute to represent the legal interests of the State, and that any provision of this indemnity clause is subject

to the statutory authority of the Attorney General.

**N. ATTORNEY'S FEES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

In the event of any litigation, appeal, or other legal action to enforce any provision of the contract, the Parties agree to pay all expenses of such action, as permitted by law and if ordered by the court, including attorney's fees and costs, if the other Party prevails.

**O. ASSIGNMENT, SALE, OR MERGER**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Either Party may assign the contract upon mutual written agreement of the other Party. Such agreement shall not be unreasonably withheld.

The Contractor retains the right to enter into a sale, merger, acquisition, internal reorganization, or similar transaction involving Contractor's business. Contractor agrees to cooperate with the State in executing amendments to the contract to allow for the transaction. If a third party is involved in the transaction, the Contractor will remain responsible for performance of the contract until such time as said third party involved in the transaction agrees in writing to be contractually bound by this contract and perform all obligations of the contract.

**P. CONTRACTING WITH OTHER NEBRASKA POLITICAL SUB-DIVISIONS OF THE STATE OR ANOTHER STATE**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The Contractor may, but shall not be required to, allow agencies, as defined in Neb. Rev. Stat. §81-145, to use this contract. The terms and conditions, including price, of the contract may not be amended. The State shall not be contractually obligated or liable for any contract entered into pursuant to this clause. A listing of Nebraska political subdivisions may be found at the website of the Nebraska Auditor of Public Accounts.

The Contractor may, but shall not be required to, allow other states, agencies or divisions of other states, or political subdivisions of other states to use this contract. The terms and conditions, including price, of this contract shall apply to any such contract, but may be amended upon mutual consent of the Parties. The State shall not be contractually or otherwise obligated or liable under any contract entered into pursuant to this clause. The State shall be notified if a contract is executed based upon this contract.



**Q. FORCE MAJEURE**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Neither Party shall be liable for any costs or damages, or for default resulting from its inability to perform any of its obligations under the contract due to a natural or manmade event outside the control and not the fault of the affected Party ("Force Majeure Event"). The Party so affected shall immediately make a written request for relief to the other Party, and shall have the burden of proof to justify the request. The other Party may grant the relief requested; relief may not be unreasonably withheld. Labor disputes with the impacted Party's own employees will not be considered a Force Majeure Event.

**R. CONFIDENTIALITY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

All materials and information provided by the Parties or acquired by a Party on behalf of the other Party shall be regarded as confidential information. All materials and information provided or acquired shall be handled in accordance with federal and state law, and ethical standards. Should said confidentiality be breached by a Party, the Party shall notify the other Party immediately of said breach and take immediate corrective action.

It is incumbent upon the Parties to inform their officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a (i)(1), which is made applicable by 5 U.S.C. 552a (m)(1), provides that any officer or employee, who by virtue of his/her employment or official position has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.

**S. OFFICE OF PUBLIC COUNSEL (Statutory)**

If it provides, under the terms of this contract and on behalf of the State of Nebraska, health and human services to individuals; service delivery; service coordination; or case management, Contractor shall submit to the jurisdiction of the Office of Public Counsel, pursuant to Neb. Rev. Stat. §§ 81-8,240 et seq. This section shall survive the termination of this contract.

**T. LONG-TERM CARE OMBUDSMAN (Statutory)**

Contractor must comply with the Long-Term Care Ombudsman Act, per Neb. Rev. Stat. §§ 81-2237 et seq. This section shall survive the termination of this contract.

**U. EARLY TERMINATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The contract may be terminated as follows:

1. The State and the Contractor, by mutual written agreement, may terminate the contract at any time.
2. The State, in its sole discretion, may terminate the contract for any reason upon thirty (30) calendar day's written notice to the Contractor. Such termination shall not relieve the Contractor of warranty or other service obligations incurred under the terms of the contract. In the event of termination the Contractor shall be entitled to payment, determined on a pro rata basis, for products or services satisfactorily performed or provided.
3. The State may terminate the contract immediately for the following reasons:
  - a. if directed to do so by statute;
  - b. Contractor has made an assignment for the benefit of creditors, has admitted in writing its inability to pay debts as they mature, or has ceased operating in the normal course of business;
  - c. a trustee or receiver of the Contractor or of any substantial part of the Contractor's assets has been appointed by a court;
  - d. fraud, misappropriation, embezzlement, malfeasance, misfeasance, or illegal conduct pertaining to performance under the contract by its Contractor, its employees, officers, directors, or shareholders;
  - e. an involuntary proceeding has been commenced by any Party against the Contractor under any one of the chapters of Title 11 of the United States Code and (i) the proceeding has been pending for at least sixty (60) calendar days; or (ii) the Contractor has consented, either expressly or by operation of law, to the entry of an order for relief; or (iii) the Contractor has been decreed or adjudged a debtor;
  - f. a voluntary petition has been filed by the Contractor under any of the chapters of Title 11 of the United States Code;
  - g. Contractor intentionally discloses confidential information;
  - h. Contractor has or announces it will discontinue support of the deliverable; and,
  - i. In the event funding is no longer available.

**V. CONTRACT CLOSEOUT**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
<i>SM</i>			

Upon contract closeout for any reason the Contractor shall within 30 days, unless stated otherwise herein:

1. Transfer all completed or partially completed deliverables to the State;
2. Transfer ownership and title to all completed or partially completed deliverables to the State;
3. Return to the State all information and data, unless the Contractor is permitted to keep the information or data by contract or rule of law. Contractor may retain one copy of any information or data as required to comply with applicable work product documentation standards or as are automatically retained in the course of Contractor's routine back up procedures;
4. Cooperate with any successor Contractor, person or entity in the assumption of any or all of the obligations of this contract;
5. Cooperate with any successor Contractor, person or entity with the transfer of information or data related to this contract;
6. Return or vacate any state owned real or personal property; and,
7. Return all data in a mutually acceptable format and manner.

Nothing in this Section should be construed to require the Contractor to surrender intellectual property, real or personal property, or information or data owned by the Contractor for which the State has no legal claim.

# III. Contractor Duties

## III. CONTRACTOR DUTIES

### A. INDEPENDENT CONTRACTOR / OBLIGATIONS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

It is agreed that the Contractor is an independent contractor and that nothing contained herein is intended or should be construed as creating or establishing a relationship of employment, agency, or a partnership.

The Contractor is solely responsible for fulfilling the contract. The Contractor or the Contractor's representative shall be the sole point of contact regarding all contractual matters.

The Contractor shall secure, at its own expense, all personnel required to perform the services under the contract. The personnel the Contractor uses to fulfill the contract shall have no contractual or other legal relationship with the State; they shall not be considered employees of the State and shall not be entitled to any compensation, rights or benefits from the State, including but not limited to, tenure rights, medical and hospital care, sick and vacation leave, severance pay, or retirement benefits.

By-name personnel commitments made in the Contractor's proposal shall not be changed without the prior written approval of the State. Replacement of these personnel, if approved by the State, shall be with personnel of equal or greater ability and qualifications.

All personnel assigned by the Contractor to the contract shall be employees of the Contractor or a subcontractor, and shall be fully qualified to perform the work required herein. Personnel employed by the Contractor or a subcontractor to fulfill the terms of the contract shall remain under the sole direction and control of the Contractor or the subcontractor respectively.

With respect to its employees, the Contractor agrees to be solely responsible for the following:

1. Any and all pay, benefits, and employment taxes and/or other payroll withholding;
2. Any and all vehicles used by the Contractor's employees, including all insurance required by state law;
3. Damages incurred by Contractor's employees within the scope of their duties under the contract;
4. Maintaining Workers' Compensation and health insurance that complies with state and federal law and submitting any reports on such insurance to the extent required by governing law;
5. Determining the hours to be worked and the duties to be performed by the Contractor's employees; and,
6. All claims on behalf of any person arising out of employment or alleged employment (including without limit claims of discrimination alleged against the Contractor, its officers, agents, or subcontractors or subcontractor's employees)

If the Contractor intends to utilize any subcontractor, the subcontractor's level of effort, tasks, and time allocation should be clearly defined in the contractor's proposal. The Contractor shall agree that it will not utilize any subcontractors not specifically included in its proposal in the performance of the contract without the prior written authorization of the State.

The State reserves the right to require the Contractor to reassign or remove from the project any Contractor or subcontractor employee.

Contractor shall insure that the terms and conditions contained in any contract with a subcontractor does not conflict with the terms and conditions of this contract.

The Contractor shall include a similar provision, for the protection of the State, in the contract with any Subcontractor engaged to perform work on this contract.

**B. EMPLOYEE WORK ELIGIBILITY STATUS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of an employee.

If the Contractor is an individual or sole proprietorship, the following applies:

1. The Contractor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at <http://das.nebraska.gov/materiel/purchasing.html>
2. The completed United States Attestation Form should be submitted with the solicitation response.
3. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the US Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
4. The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. §4-108.

**C. COMPLIANCE WITH CIVIL RIGHTS LAWS AND EQUAL OPPORTUNITY EMPLOYMENT / NONDISCRIMINATION (Statutory)**

The Contractor shall comply with all applicable local, state, and federal statutes and regulations regarding civil rights laws and equal opportunity employment. The Nebraska Fair Employment Practice Act prohibits Contractors of the State of Nebraska, and their Subcontractors, from discriminating against any employee or applicant for employment, with respect to hire, tenure, terms, conditions, compensation, or privileges of employment because of race, color, religion, sex, disability, marital status, or national origin (Neb. Rev. Stat. §48-1101 to 48-1125). The Contractor guarantees compliance with the Nebraska Fair Employment Practice Act, and breach of this provision shall be regarded as a material breach of contract. The Contractor shall insert a similar provision in all Subcontracts for goods and services to be covered by any contract resulting from this solicitation.

**D. COOPERATION WITH OTHER CONTRACTORS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Contractor may be required to work with or in close proximity to other contractors or individuals that may be working on same or different projects. The Contractor shall agree to cooperate with such other contractors or individuals, and shall not commit or permit any act which may interfere with the performance of work by any other contractor or individual. Contractor is not required to compromise Contractor's intellectual property or proprietary information unless expressly required to do so by this contract.

**E. DISCOUNTS**

Prices quoted shall be inclusive of ALL trade discounts. Cash discount terms of less than thirty (30) days will not be considered as part of the proposal. Cash discount periods will be computed from the date of receipt of a properly executed claim voucher or the date of completion of delivery of all items in a satisfactory condition, whichever is later.

**F. PRICES**

All prices, costs, and terms and conditions submitted in the proposal shall remain fixed and valid commencing on the opening date of the proposal until an award is made or the solicitation is cancelled.

Prices submitted on the cost proposal form shall remain fixed for the life of the contract.

**G. COST CLARIFICATION**

The State reserves the right to review all aspects of cost for reasonableness and to request clarification of any proposal where the cost component shows significant and unsupported deviation from industry standards or in areas where detailed pricing is required.

**H. PERMITS, REGULATIONS, LAWS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The contract price shall include the cost of all royalties, licenses, permits, and approvals, whether arising from patents, trademarks, copyrights or otherwise, that are in any way involved in the contract. The Contractor shall obtain and pay for all royalties, licenses, and permits, and approvals necessary for the execution of the contract. The Contractor must guarantee that it has the full legal right to the materials, supplies, equipment, software, and other items used to execute this contract.

**I. OWNERSHIP OF INFORMATION AND DATA / DELIVERABLES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
		SM	All of the Contractor's pre-existing intellectual property, templates, methodologies and processes, or intellectual property, methodologies and processes developed independently of this contract are and shall remain the sole and exclusive property of the Contractor.

The State shall have the unlimited right to publish, duplicate, use, and disclose all information and data developed or obtained by the Contractor on behalf of the State pursuant to this contract.

The State shall own and hold exclusive title to any deliverable developed as a result of this contract. Contractor shall have no ownership interest or title, and shall not patent, license, or copyright, duplicate, transfer, sell, or exchange, the design, specifications, concept, or deliverable.

J. INSURANCE REQUIREMENTS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
		<i>SM</i>	<p>Our General Liability coverage does not include XCU Liability (Explosion, Collapse, and Underground Damage) coverage. FDGS asks that XCU Liability (Explosion, Collapse, and Underground Damage) coverage be removed as it is not applicable for the scope of IV&amp;V Services.</p> <p>FDGS asks that Abuse and Molestation coverage be moved out of the General Liability coverage category to an "Other" category. While Abuse and Molestation is not specifically covered under General Liability, our Directors and Officers insurance covers Employee Suit against Fiserv and/or management alleging:</p> <ul style="list-style-type: none"> <li>• Wrongful dismissal, termination, demotion, discipline, failure to employ or promote</li> <li>• Harassment, Discrimination or Retaliation</li> <li>• Employment related misrepresentation</li> <li>• Employment related libel/slander/invasion of privacy</li> <li>• Infliction of emotional distress</li> </ul>

The Contractor shall throughout the term of the contract maintain insurance as specified herein and provide the State a current Certificate of Insurance/Acord Form (COI) verifying the coverage. The Contractor shall not commence work on the contract until the insurance is in place. If Contractor subcontracts any portion of the Contract the Contractor must, throughout the term of the contract, either:

1. Provide equivalent insurance for each subcontractor and provide a COI verifying the coverage for the subcontractor;
2. Require each subcontractor to have equivalent insurance and provide written notice to the State that the Contractor has verified that each subcontractor has the required coverage; or,
3. Provide the State with copies of each subcontractor's Certificate of Insurance evidencing the required coverage.

The Contractor shall not allow any Subcontractor to commence work until the Subcontractor has equivalent insurance. The failure of the State to require a COI, or the failure of the Contractor to provide a COI or require subcontractor insurance shall not limit, relieve, or decrease the liability of the Contractor hereunder.

In the event that any policy written on a claims-made basis terminates or is canceled during the term of the contract or within two (2) years of termination or expiration of the contract, the contractor shall obtain an extended discovery or reporting period, or a new insurance policy, providing coverage required by this contract for the term of the contract and two (2) years following termination or expiration of the contract.

If by the terms of any insurance a mandatory deductible is required, or if the Contractor elects to increase the mandatory deductible amount, the Contractor shall be responsible for payment of the amount of the deductible in the event of a paid claim.

Notwithstanding any other clause in this Contract, the State may recover up to the liability limits of the insurance policies required herein.

1. **WORKERS' COMPENSATION INSURANCE**  
 The Contractor shall take out and maintain during the life of this contract the statutory Workers' Compensation and Employer's Liability Insurance for all of the contractors' employees to be engaged in work on the project under this contract and, in case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all of the Subcontractor's employees to be engaged in such work. This policy shall be written to meet the statutory requirements for the state in which the work is to be performed, including Occupational Disease. **The policy shall include a waiver of subrogation in favor of the State.**

The COI shall contain the mandatory COI subrogation waiver language found hereinafter. The amounts of such insurance shall not be less than the limits stated hereinafter. For employees working in the State of Nebraska, the policy must be written by an entity authorized by the State of Nebraska Department of Insurance to write Workers' Compensation and Employer's Liability Insurance for Nebraska employees.

**2. COMMERCIAL GENERAL LIABILITY INSURANCE AND COMMERCIAL AUTOMOBILE LIABILITY INSURANCE**

The Contractor shall take out and maintain during the life of this contract such Commercial General Liability Insurance and Commercial Automobile Liability Insurance as shall protect Contractor and any Subcontractor performing work covered by this contract from claims for damages for bodily injury, including death, as well as from claims for property damage, which may arise from operations under this contract, whether such operation be by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall not be less than limits stated hereinafter.

The Commercial General Liability Insurance shall be written on an **occurrence basis**, and provide Premises/Operations, Products/Completed Operations, Independent Contractors, Personal Injury, and Contractual Liability coverage. **The policy shall include the State, and others as required by the contract documents as Additional Insured(s). This policy shall be primary, and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory. The COI shall contain the mandatory COI liability waiver language found hereinafter.** The Commercial Automobile Liability Insurance shall be written to cover all Owned, Non-owned, and Hired vehicles.

<b>REQUIRED INSURANCE COVERAGE</b>		
<b>COMMERCIAL GENERAL LIABILITY</b>		
General Aggregate		\$2,000,000
Products/Completed Operations Aggregate		\$2,000,000
Personal/Advertising Injury		\$1,000,000 per occurrence
Bodily Injury/Property Damage		\$1,000,000 per occurrence
Medical Payments		\$10,000 any one person
Damage to Rented Premises (Fire)		\$300,000 each occurrence
Contractual		Included
XCU Liability (Explosion, Collapse, and Underground Damage)		Included
Independent Contractors		Included
Abuse & Molestation		Included
<b>WORKER'S COMPENSATION</b>		
Employers Liability Limits		\$500K/\$500K/\$500K
Statutory Limits- All States		Statutory - State of Nebraska
USL&H Endorsement		Statutory
Voluntary Compensation		Statutory
<b>COMMERCIAL AUTOMOBILE LIABILITY</b>		
Bodily Injury/Property Damage		\$1,000,000 combined single limit
Include All Owned, Hired & Non-Owned Automobile liability		Included
Motor Carrier Act Endorsement		Where Applicable
<b>UMBRELLA/ EXCESS LIABILITY</b>		
Over Primary Insurance		\$5,000,000 per occurrence
<b>COMMERCIAL CRIME</b>		
Crime/Employee Dishonesty Including 3rd Party Fidelity		\$1,000,000
<b>CYBER LIABILITY</b>		
Breach of Privacy, Security Breach, Denial of Service, Remediation, Fines and Penalties		\$10,000,000
<b>CONTRACTOR'S POLLUTION LIABILITY</b>		
Each Occurrence/Aggregate Limit		\$2,000,000
Includes Non-Owned Disposal Sites		



<b>MANDATORY COI SUBROGATION WAIVER LANGUAGE</b>
"Workers' Compensation policy shall include a waiver of subrogation in favor of the State of Nebraska."
<b>MANDATORY COI LIABILITY WAIVER LANGUAGE</b>
"Commercial General Liability & Commercial Automobile Liability policies shall name the State of Nebraska as an Additional Insured and the policies shall be primary and any insurance or self - insurance carried by the State shall be considered secondary and non-contributory as additionally insured."

**3. EVIDENCE OF COVERAGE**

The Contractor shall furnish the Contract Manager, with a certificate of insurance coverage complying with the above requirements prior to beginning work at:

Department of Health and Human Services  
 Attn: IV&V Contract Manager  
 301 Centennial Mall South, 5<sup>th</sup> Floor  
 Lincoln, NE 68508

These certificates or the cover sheet shall reference the RFP number, and the certificates shall include the name of the company, policy numbers, effective dates, dates of expiration, and amounts and types of coverage afforded. If the State is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall be responsible for all reasonable costs properly attributable thereto.

Reasonable notice of cancellation of any required insurance policy must be submitted to the contract manager as listed above when issued and a new coverage binder shall be submitted immediately to ensure no break in coverage.

**4. DEVIATIONS**

The insurance requirements are subject to limited negotiation. Negotiation typically includes, but is not necessarily limited to, the correct type of coverage, necessity for Workers' Compensation, and the type of automobile coverage carried by the Contractor.

**K. NOTICE OF POTENTIAL CONTRACTOR BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

If Contractor breaches the contract or anticipates breaching the contract the Contractor shall immediately give written notice to the State. The notice shall explain the breach or potential breach, and may include a request for a waiver of the breach if so desired. The State may, at its discretion, temporarily or permanently waive the breach. By granting a temporary waiver, the State does not forfeit any rights or remedies to which the State is entitled by law or equity, or pursuant to the provisions of the contract. Failure to give immediate notice, however, may be grounds for denial of any request for a waiver of a breach.

**L. ANTITRUST**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The Contractor hereby assigns to the State any and all claims for overcharges as to goods and/or services provided in connection with this contract resulting from antitrust violations which arise under antitrust laws of the United States and the antitrust laws of the State.

**M. CONFLICT OF INTEREST**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

By submitting a proposal, Bidder certifies that no relationship exists between the Bidder and any person or entity which either is, or gives the appearance of, a conflict of interest related to this Request for Proposal or project.

Bidder further certifies that Bidder will not employ any individual known by bidder to have a conflict of interest nor shall bidder take any action or acquire any interest, either directly or indirectly, which will conflict in any manner or degree with the performance of its contractual obligations hereunder or which creates an actual or appearance of conflict of interest.

If there is an actual or perceived conflict of interest, Bidder shall provide with its proposal a full disclosure of the facts describing such actual or perceived conflict of interest and a proposed mitigation plan for consideration. The State will then consider such disclosure and proposed mitigation plan and either approve or reject as part of the overall bid evaluation.

**N. STATE PROPERTY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The Contractor shall be responsible for the proper care and custody of any State-owned property which is furnished for the Contractor's use during the performance of the contract. The Contractor shall reimburse the State for any loss or damage of such property; normal wear and tear is expected.

**O. SITE RULES AND REGULATIONS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The Contractor shall use its best efforts to ensure that its employees, agents, and Subcontractors comply with site rules and regulations while on State premises. If the Contractor must perform on-site work outside of the daily operational hours set forth by the State, it must make arrangements with the State to ensure access to the facility and the equipment has been arranged. No additional payment will be made by the State on the basis of lack of access, unless the State fails to provide access as agreed to in writing between the State and the Contractor.

**P. ADVERTISING**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The Contractor agrees not to refer to the contract award in advertising in such a manner as to state or imply that the company or its goods or services are endorsed or preferred by the State. Any publicity releases pertaining to the project shall not be issued without prior written approval from the State.

**Q. NEBRASKA TECHNOLOGY ACCESS STANDARDS (Statutory)**

Contractor shall review the Nebraska Technology Access Standards, found at <http://nitc.nebraska.gov/standards/2-201.html> and ensure that products and/or services provided under the contract are in compliance or will comply with the applicable standards to the greatest degree possible. In the event such standards change during the Contractor's performance, the State may create an amendment to the contract to request the contract comply with the changed standard at a cost mutually acceptable to the parties.

**R. DISASTER RECOVERY/ BACK UP PLAN**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

The Contractor shall have a disaster recovery and back-up plan, of which a copy should be provided upon request to the State, which includes, but is not limited to equipment, personnel, facilities, and transportation, in order to continue delivery of goods and services as specified under the specifications in the contract in the event of a disaster.

**S. DRUG POLICY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Contractor certifies it maintains a drug free work place environment to ensure worker safety and workplace integrity. Contractor agrees to provide a copy of its drug free workplace policy at any time upon request by the State.

**T. WARRANTY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Despite any clause to the contrary, the Contractor represents and warrants that its services hereunder shall be performed by competent personnel and shall be of professional quality consistent with generally accepted industry standards for the performance of such services and shall comply in all respects with the requirements of this Agreement. For any breach of this warranty, the Contractor shall, for a period of ninety (90) days from performance of the service, perform the services again, at no cost to Customer, or if Contractor is unable to perform the services as warranted, Contractor shall reimburse Customer the fees paid to Contractor for the unsatisfactory services. The rights and remedies of the parties under this warranty are in addition to any other rights and remedies of the parties provided by law or equity, including, without limitation actual damages, and, as applicable and awarded under the law, to a prevailing party, reasonable attorneys' fees and costs.

# IV. Payment

## IV. PAYMENT

**A. PROHIBITION AGAINST ADVANCE PAYMENT (Statutory)**  
 Neb. Rev. Stat. §§81-2403 states, “[n]o goods or services shall be deemed to be received by an agency until all such goods or services are completely delivered and finally accepted by the agency.”

**B. TAXES (Statutory)**  
 The State is not required to pay taxes and assumes no such liability as a result of this solicitation. The Contractor may request a copy of the Nebraska Department of Revenue, Nebraska Resale or Exempt Sale Certificate for Sales Tax Exemption, Form 13 for their records. Any property tax payable on the Contractor's equipment which may be installed in a state-owned facility is the responsibility of the Contractor.

### C. INVOICES

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Invoices for payments must be submitted by the Contractor to the agency requesting the services with sufficient detail to support payment. The terms and conditions included in the Contractor's invoice shall be deemed to be solely for the convenience of the parties. No terms or conditions of any such invoice shall be binding upon the State, and no action by the State, including without limitation the payment of any such invoice in whole or in part, shall be construed as binding or estopping the State with respect to any such term or condition, unless the invoice term or condition has been previously agreed to by the State as an amendment to the contract.

### D. INSPECTION AND APPROVAL

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Final inspection and approval of all work required under the contract shall be performed by the designated State officials.

The State and/or its authorized representatives shall have the right to enter any premises where the Contractor or Subcontractor duties under the contract are being performed, and to inspect, monitor or otherwise evaluate the work being performed. All inspections and evaluations shall be at reasonable times and in a manner that will not unreasonably delay work.

### E. PAYMENT (Statutory)

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
SM			

Payment will be made by the responsible agency in compliance with the State of Nebraska Prompt Payment Act (See Neb. Rev. Stat. §81-2403). The State may require the Contractor to accept payment by electronic means such as ACH deposit. In no event shall the State be responsible or liable to pay for any goods and services



provided by the Contractor prior to the Effective Date of the contract, and the Contractor hereby waives any claim or cause of action for any such services.

- F. LATE PAYMENT (Statutory)**  
 The Contractor may charge the responsible agency interest for late payment in compliance with the State of Nebraska Prompt Payment Act (See Neb. Rev. Stat. §81-2401 through 81-2408).
- G. SUBJECT TO FUNDING / FUNDING OUT CLAUSE FOR LOSS OF APPROPRIATIONS (Statutory)**  
 The State's obligation to pay amounts due on the Contract for a fiscal years following the current fiscal year is contingent upon legislative appropriation of funds. Should said funds not be appropriated, the State may terminate the contract with respect to those payments for the fiscal year(s) for which such funds are not appropriated. The State will give the Contractor written notice thirty (30) calendar days prior to the effective date of termination. All obligations of the State to make payments after the termination date will cease. The Contractor shall be entitled to receive just and equitable compensation for any authorized work which has been satisfactorily completed as of the termination date. In no event shall the Contractor be paid for a loss of anticipated profit.
- H. RIGHT TO AUDIT (First Paragraph is Statutory)**  
 The State shall have the right to audit the Contractor's performance of this contract upon a thirty (30) days' written notice. Contractor shall utilize generally accepted accounting principles, and shall maintain the accounting records, and other records and information relevant to the contract (Information) to enable the State to audit the contract. (Neb. Rev. Stat. §84-304 et seq.) The State may audit and the Contractor shall maintain, the Information during the term of the contract and for a period of five (5) years after the completion of this contract or until all issues or litigation are resolved, whichever is later. The Contractor shall make the Information available to the State at Contractor's place of business or a location acceptable to both Parties during normal business hours. If this is not practical or the Contractor so elects, the Contractor may provide electronic or paper copies of the Information. The State reserves the right to examine, make copies of, and take notes on any Information relevant to this contract, regardless of the form or the Information, how it is stored, or who possesses the Information. Under no circumstance will the Contractor be required to create or maintain documents not kept in the ordinary course of contractor's business operations, nor will contractor be required to disclose any information, including but not limited to product cost data, which is confidential or proprietary to contractor.

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within Solicitation Response (Initial)	NOTES/COMMENTS:
<i>SM</i>			

The Parties shall pay their own costs of the audit unless the audit finds a previously undisclosed overpayment by the State. If a previously undisclosed overpayment exceeds one-half of one percent (.5%) of the total contract billings, or if fraud, material misrepresentations, or non-performance is discovered on the part of the Contractor, the Contractor shall reimburse the State for the total costs of the audit. Overpayments and audit costs owed to the State shall be paid within ninety (90) days of written notice of the claim. The Contractor agrees to correct any material weaknesses or condition found as a result of the audit.

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# 1 Corporate Overview (RFP Section VI)

## **Corporate Overview**

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*Corporate Overview should include but is not limited to:*

- a. the ability, capacity, and skill of the Contractor to deliver and implement the system or project that meets the requirements of the solicitation*
- b. the character, integrity, reputation, judgment, experience, and efficiency of the contractor*
- c. whether the Contractor can perform the contract within the specified time frame*
- d. the quality of vendor performance on prior contracts*
- e. such other information that may be secured and that has a bearing on the decision to award the contract*

FDGS has provided IV&V services for the State of Nebraska since 2014. Throughout our working relationship, FDGS staff have provided oversight for multiple HHS projects including EES course correction and a DMA deployment.

Our team has proven we have character and integrity necessary to provide unbiased project evaluations, the quality judgement and expertise required to offer strategic council, and a reputation as an efficient partner. Our IV&V team has consistently met milestones and provided status reports that outlined our contributions to every project we support.

FDGS has proven our flexibility with the State of Nebraska by constantly looking for ways to provide IV&V services in a mutually beneficial configuration. FDGS takes great pride in the relationship we have formed with the State of Nebraska and we look forward to continuing this partnership well into the future. We also look forward to continually focusing on the things that have made our relationship successful such as:

- **Open communication** so that stakeholders have the information they need to make decisions and guide project activities as we progress through each project's life cycle
- **Forward-looking feedback** intended to provide an opportunity to immediately course correct versus simply assessing what already went wrong
- **Open collaboration**, with nothing hidden, to provide all of the project staff with the information they need to understand what is happening when – we don't like surprises and we know you don't either
- A comprehensive **Center of Excellence and Innovation (CoE&I)**, IV&V methodologies and tools, trained and experienced staff along with mature leadership, provide effective oversight and management of required work products and deliverables

## 1.1 Contractor Identification and Information

### a. CONTRACTOR IDENTIFICATION AND INFORMATION

*The Contractor should provide the full company or corporate name, address of the company's headquarters, entity organization (corporation, partnership, proprietorship), state in which the Contractor is incorporated or otherwise organized to do business, year in which the Contractor first organized to do business and whether the name and form of organization has changed since first organized.*

Requirement	Contractor Information
<b>Full company or corporate name</b>	First Data Government Solutions, LP
<b>Address of the company's headquarters</b>	255 Fiserv Drive Brookfield, WI 53045
<b>Entity organization</b>	Limited Partnership *First Data Government Solutions, LP is a wholly owned limited partnership of Fiserv, Inc.
<b>State organized to do business</b>	Delaware
<b>Year organized</b>	2004
<b>Has name and form of organization changed since first organized</b>	No

## 1.2 Financial Statements

### b. FINANCIAL STATEMENTS

*The Contractor should provide financial statements applicable to the firm. If publicly held, the Contractor should provide a copy of the corporation's most recent audited financial reports and statements, and the name, address, and telephone number of the fiscally responsible representative of the contractor's financial or banking organization.*

*If the Contractor is not a publicly held corporation, either the reports and statements required of a publicly held corporation, or a description of the organization, including size, longevity, client base, areas of specialization and expertise, and any other pertinent information, should be submitted in such a manner that proposal evaluators may reasonably formulate a determination about the stability and financial strength of the organization. Additionally, a non-publicly held firm should provide a banking reference.*

*The Contractor must disclose any and all judgments, pending or expected litigation, or other real or potential financial reversals, which might materially affect the viability or stability of the organization, or state that no such condition is known to exist.*

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*The State may elect to use a third party to conduct credit checks as part of the corporate overview evaluation.*

First Data Government Solutions, LP is a wholly owned limited partnership of Fiserv, Inc. As a subsidiary of a Fortune® 500 multi-billion-dollar company, FDGS has the financial resources and solvency anticipated as necessary to cover the investments and risks related to the requirements of this RFP.

Fiserv has been named among the Fortune® World's Most Admired Companies® for eight consecutive years (2014–2021), recognized for strength of our business model, people management, social responsibility, and innovative leadership. Fiserv has 49 U.S. offices operating in 19 states.

Fiserv is a publicly held company; their ticker symbol is “FISV” on NASDAQ. You can find Fiserv’s audited annual reports on our Financial Information Annual Reports page, including the Fiserv 2020 Annual Report on Form 10-K: <https://investors.fiserv.com/financial-information/annual-reports>

For convenience, we have also provided Fiserv’s 2020 audited financial statements (Form 10-K) as **Appendix 1**. Our financial organization representative is:

Mr. Shane McCullough  
6802 Pine Street  
Omaha, NE 68106  
402-222-3397  
[shane.mccullough@firstdata.com](mailto:shane.mccullough@firstdata.com)

As the global leader in transaction processing and services for financial institutions, retailers, and government organizations, Nebraska and DHHS can trust that in addition to being a well-rounded and highly qualified company, Fiserv is also a financially stable organization.

First Data Government Solutions, LP has had no judgments, litigation, or financial reversals which might materially affect the viability or stability of our organization.

## 1.3 Change of Ownership

### *c. CHANGE OF OWNERSHIP*

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*If any change in ownership or control of the company is anticipated during the twelve (12) months following the proposal due date, the Contractor should describe the circumstances of such change and indicate when the change will likely occur. Any change of ownership to an awarded Contractor(s) will require notification to the State.*

First Data Government Solutions, LP does not anticipate any change in ownership or control during the twelve (12) months following this proposal’s due date. We understand that the State should be notified of any change or ownership to an awarded vendor.

## 1.4 Office Location

### d. OFFICE LOCATION

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*The Contractor's office location responsible for performance pursuant to an award of a contract with the State of Nebraska should be identified.*

Our corporate headquarters is located in Brookfield, Wisconsin. We also have a large office location in Omaha Nebraska, as well as Roseville, California, Englewood, Colorado and Alpharetta, Georgia. Our Omaha office located at 6902 Pine Street is the responsible location for the delivery of this project upon award.

## 1.5 Relationships with the State

### e. RELATIONSHIPS WITH THE STATE

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*The Contractor should describe any dealings with the State over the previous two (2) years. If the organization, its predecessor, or any Party named in the Contractor's proposal response has contracted with the State, the Contractor should identify the contract number(s) and/or any other information available to identify such contract(s). If no such contracts exist, Contractor shall so declare.*

First Data Government Solutions, LP (FDGS) has been providing Independent Verification and Validation (IV&V) Services in Nebraska since January 2014. The original contract number was 58755 O4 and it ran from January 2014 through November 30, 2016. Contract 73672 O4 began on December 1, 2016 and will remain in effect until the State awards this contract.



In addition to the contract referenced above, Fiserv/FDGS employs more than 4,000 associates in the State, which makes Fiserv the fifth largest employer in Nebraska. We have a large presence in both Lincoln and Omaha, Nebraska. First Data originally opened an office in Omaha in 1971 and we still have 8 buildings, totalling 1.5 million square feet of real estate in Nebraska. Our long history and presence demonstrates our commitment to the State and its various projects and endeavors.

## 1.6 Contractor's Employee Relations to State

### f. CONTRACTOR'S EMPLOYEE RELATIONS TO STATE

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*If any Party named in the Contractor's proposal response is or was an employee of the State within the past twenty-four (24) months, Contractor shall identify the individual(s) by name, State agency with whom employed, job title or position held with the State, and separation date. If no such relationship exists or has existed, Contractor shall so declare.*

*If any employee of any agency of the State of Nebraska is employed by the Contractor or is a Subcontractor to the Contractor, as of the due date for proposal submission, Contractor shall identify all such persons by name, position held with the Contractor, and position held with the State (including job title and agency). Describe the responsibilities of such persons within the*

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*proposing organization. If, after review of this information by the State, it is determined that a conflict of interest exists or may exist, the Contractor may be disqualified from further consideration in this proposal. If no such relationship exists, Contractor shall so declare.*

To the best of our knowledge, no party named in our proposal response is or was an employee of the State within the past 24 months.

To the best of our knowledge, no employee of First Data Government Solutions, LP is an employee of any agency of the State of Nebraska.

## 1.7 Contract Performance

### ***g. CONTRACT PERFORMANCE***

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*If the Contractor or any proposed Subcontractor has had a contract terminated for default during the past five (5) years, all such instances must be described as required below. Termination for default is defined as a notice to stop performance delivery due to the Contractor's non-performance or poor performance, and the issue was either not litigated due to inaction on the part of the Contractor or litigated and such litigation determined the Contractor to be in default.*

*It is mandatory that the Contractor submit full details of all termination for default experienced during the past five (5) years, including the other Party's name, address, and telephone number. The response to this section must present the Contractor's position on the matter. The State will evaluate the facts and will score the Contractor's proposal accordingly. If no such termination for default has been experienced by the Contractor in the past five (5) years, Contractor shall so declare.*

*If at any time during the past five (5) years, the Contractor has had a contract terminated for convenience, non-performance, non-allocation of funds, or any other reason, Contractor shall describe fully all circumstances surrounding such termination, including the name and address of the other contracting Party*

First Data Government Solutions, LP has had two (2) contracts terminated for convenience during the past five (5) years:

**Delaware Department of Health and Social Services:** The State of Delaware Department of Health and Social Services (DHSS) elected to exercise its right to terminate for convenience under their Agreement with FDGS due to our respective business and technical teams' inability to mutually agree to the scope of services and delivery schedule for the Electronic Visit Verification (EVV) Services system. Upon receipt of the Delaware DHSS termination for convenience notice outlining DHSS' decision to go a different direction for EVV services, FDGS assisted DHSS in transitioning to its new service provider.

#### Contact Information:

Stephen M. Groff, Director, Division of Medicaid and Medical Assistance  
1901 N. DuPont Highway, New Castle, DE 19720  
302-255-9500

**New York State Information Technology Services:** The New York State Information Technology Services elected to exercise its right to terminate for convenience under their Agreement with FDGS due to a reduction of funds by the New York State legislature to pay for the IV&V Services, as New York State monetary resources were allocated elsewhere to fund pandemic related programs and activities. Additionally, the scope of services was no longer required due to CMS Outcomes Based Certification guidance. The New York client is referenceable.

Contact Information:

Veronica Webster, NY IES/NYSOH IV&V Contract Manager  
40 North Pearl, 4th Floor, Albany NY 12207  
518-473-6901

## 1.8 Summary of Contractor's Corporate Experience

### ***h. SUMMARY OF CONTRACTOR'S CORPORATE EXPERIENCE***

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*The Contractor should provide a summary matrix listing the Contractor's previous projects similar to this solicitation in size, scope, and complexity. The State will use no more than three (3) narrative project descriptions submitted by the Contractor during its evaluation of the proposal.*

*The Contractor should address the following:*

*i. Provide narrative descriptions to highlight the similarities between the Contractor's experience and this solicitation. These descriptions should include:*

- a) The time period of the project;*
- b) The scheduled and actual completion dates;*
- c) The Contractor's responsibilities;*
- d) For reference purposes, a customer name (including the name of a contact person, a current telephone number, a facsimile number, and e-mail address); and*
- e) Each project description should identify whether the work was performed as the prime Contractor or as a Subcontractor. If a Contractor performed as the prime Contractor, the description should provide the originally scheduled completion date and budget, as well as the actual (or currently planned) completion date and actual (or currently planned) budget.*

*ii. Contractor and Subcontractor(s) experience should be listed separately. Narrative descriptions submitted for Subcontractors should be specifically identified as Subcontractor projects.*

*iii. If the work was performed as a Subcontractor, the narrative description should identify the same information as requested for the Contractors above. In addition, Subcontractors should identify what share of contract costs, project responsibilities, and time period were performed as a Subcontractor.*

One of the key focus areas of the FDGS professional services team is health care, with particular emphasis on the Medicaid programs and their systems. As a result, we have excellent understanding of the programs, policies, processes, and types of systems involved in Medicaid projects. For Nebraska's projects, FDGS brings a strong understanding of eligibility systems, IV&V expertise specific to MITA and Medicaid interfaces, and experience deploying and certifying an Electronic Visit Verification system.

FDGS provides three (3) project summaries on the following pages to detail our experience for IV&V Services of similar size and scope as this RFP.



### 1.8.1 *State of Nebraska Department of Health and Human Services (DHHS)*

Project Information	Details
<b>Agency</b>	Nebraska Department of Health & Human Services (DHHS)
<b>Name</b>	Nebraska Enterprise IV&V Services
<b>Overview</b>	<p>FDGS is the prime contractor.</p> <p>FDGS provides Enterprise IV&amp;V services in support of the Data Management and Analytics (DMA) project related to Nebraska’s Medicaid Management Information System (MMIS) modernization strategy.</p>
<b>Contract Dates</b>	December 1, 2016 to November 30, 2021.
<b>Scheduled Completion Date and Budget</b>	<p>Scheduled completion date: November 30, 2021</p> <p>DMA &amp; EES - \$6,751,905</p>
<b>Actual Completion Date and Budget</b>	<p>Actual completion date: November 30, 2021</p> <p>DMA &amp; EES - \$7,598,812</p>
<b>Contractor Responsibilities</b>	<p>IV&amp;V</p> <p>Quality Management</p> <p>Requirements Validation</p> <p>System and Acceptance Testing Oversight</p> <p>Federal Review Support</p>
<b>Client Contact</b>	<p>Jeremy Brunson</p> <p>Deputy Director – Finance &amp; Program Integrity</p> <p>MEDICAID &amp; LONG-TERM CARE</p> <p>Nebraska Department of Health and Human Services</p> <p>Cell: 402-540-0380</p> <p>Email: <a href="mailto:Jeremy.Brunssen@nebraska.gov">Jeremy.Brunssen@nebraska.gov</a></p>
<b>Description</b>	<p>FDGS has been the primary IV&amp;V contractor for Nebraska’s Department of Health and Human Services (DHHS) since 2014. The State is currently replacing its data warehouse and decision support system with an updated data warehouse and business intelligence technology platform. This Data Management and Analytics (DMA) project started in 2016 and FDGS has been providing Independent Verification and Validation (IV&amp;V) since the beginning.</p> <p>Our team of industry experts provide a completely independent assessment of the work products and project’s progress. Our mission is to verify and validate that a system complies with its stated requirements and organizational standards and meets its users’ needs.</p>



## 1.8.2 State of New York Integrated Eligibility System (IES) / New York State of Health (NYSOH)

Project Information	Details
<b>Agency</b>	New York Office of General Services
<b>Name</b>	New York Integrated Eligibility System IV&V
<b>Overview</b>	<p>New York’s HHS programs are comprehensive and diverse, and the IT environment that supports them is even more so. Currently, all-in-one mainframe systems are working side-by-side with modular, cloud-based systems. New York is one of the few states to successfully implement a state-based exchange system, the New York State of Health (NYSOH). However, the other programs continue to use the Welfare Management System (WMS) as their primary tool, which has limited their ability to be as innovative as the Department of Health and NYSOH. The addition of new state and federal expectations and updated federal guidance make an already complex environment even more difficult to navigate.</p> <p>FDGS was the prime IV&amp;V contractor for New York’s Integrated Eligibility System (IES) and the New York State of Health (NYSOH) state-based exchange. The State is currently replacing their mainframe-based Welfare Management System (WMS) with a modular, innovative solution for their health and human services programs that still utilize WMS. The State is currently in the process of contracting with system integrators for IES. Our team of industry experts provided a completely independent assessment of the work products and progress on the IES and NYSOH projects.</p>
<b>Contract Dates</b>	October 2018 to July 2020
<b>Scheduled Completion Date and Budget</b>	9/17/2018 thru 9/1/2021 \$10,876,952
<b>Actual Completion Date and Budget</b>	9/26/2018 thru 7/27/2020 \$5,615,466
<b>Contractor Responsibilities</b>	FDGS provided Independent Verification and Validation (IV&V) for the IES Program and the NYSOH Project.
<b>Client Contact</b>	Veronica Webster NY IES/NYSOH IV&V Contract Manager 40 North Pearl, 4th Floor, Albany NY 12207 518-473-6901 <a href="mailto:Veronica.Webster@its.ny.gov">Veronica.Webster@its.ny.gov</a>
<b>Description</b>	FDGS’ Independent Verification and Validation (IV&V) approach is to provide full-time teams, embedded in the activities of the over-arching programs. FDGS has provided a large, experienced team that includes staff specifically dedicated to the IES Program and the NYSOH Program and an IV&V Leadership team that provides direction and support to both.

Project Information	Details
	<ul style="list-style-type: none"> <li>• Monitored the IES State and NYSOH contractors/subcontractors' project plans and project management processes, review and comment on the plans and processes, and recommend changes to improve effectiveness of plans and processes.</li> <li>• Reviewed all of the IES State and the NYSOH contractor's/subcontractor's project deliverables for completeness and compliance with the project quality plan and documentation of deliverable deficiencies.</li> <li>• Prepared summaries of overall project progress for the IES Leadership Team.</li> <li>• Provided the IES and NYSOH Monthly Status Reports which included current and planned IV&amp;V activities, risks, issues and observations for the reporting period.</li> <li>• Produced the NYSOH IV&amp;V Quarterly Status Reports which included current and planned IV&amp;V activities, risks, issues and observations for the reporting period.</li> <li>• Produced the IES IV&amp;V Quarterly E&amp;E Progress Reports in compliance with the CMS Medicaid Eligibility and Enrollment Toolkit (MEET).</li> <li>• Collaborated with IES Program Office, DOH and ITS staff and IES Program and NYSOH Program contractors/subcontractors.</li> <li>• Ensured compliance with federal and State rules and regulations.</li> <li>• Identified and documented findings and recommend solutions on a continual basis throughout the project.</li> <li>• Observed and verified testing was completed according to NYSOH Contractors' test plans.</li> <li>• Evaluated and provided recommendations about readiness to proceed with subsequent project phases.</li> </ul>

### 1.8.3 State of Indiana Family Social Services Administration (FSSA) Division of Family Resources (DFR)

Project Information	Details
<b>Agency</b>	Indiana Family and Social Services Administration
<b>Name</b>	Indiana Eligibility Modernization Program
<b>Overview</b>	<p>FDGS is the primary OV&amp;V contractor for Indiana’s Family Social Services Administration (FSSA) Division of Family Resources (DFR) since 2007. DFR currently contracts with a number of Vendors to perform services related to the Eligibility Operation. The Eligibility Operation is the central resource in helping Hoosiers apply for and/or establish continuing eligibility for assistance programs, including SNAP, TANF, Medicaid, HIP 2.0, and Hoosier Healthwise.</p> <p>The Eligibility Operation is conducted from FSSA managed local offices throughout the State and vendor-operated Central and Regional Change Centers. Our OV&amp;V Team provides the following services to DFR as it relates to the oversight, verification and validation of Vendors and state processes:</p> <ul style="list-style-type: none"> <li>• Performance Monitoring &amp; Quality Assurance</li> <li>• Project Quality Management</li> <li>• Project Management Support</li> <li>• Project Operations Management Support</li> <li>• Project Deliverables Review as requested</li> <li>• Measuring Client Satisfaction</li> <li>• Maintenance and Point Release Rollout Support</li> <li>• Change Order Process Support</li> <li>• Indiana Eligibility Custom Reports, Document Retention and Access</li> </ul> <p>The Indiana Family and Social Services Administration (FSSA) provides services to low-income individuals and families, children, senior citizens, and people with mental illness, addictions, and physical and developmental disabilities. The agency has undertaken a project to modernize the State’s eligibility processes.</p> <p>Under the new solution, the State provides increased access to services through web and call center self-service options, and by partnering with CBOs/FBOs. The project supports the SCHIP, Medicaid, TANF, and SNAP programs. In support of this effort, FSSA contracted FDGS to provide verification and validation services to augment and complement the FSSA Project Management Office in overseeing the Eligibility Modernization Program.</p>
<b>Contract Dates</b>	May 2007 to present
<b>Scheduled Completion Date and Budget</b>	5/7/2007 thru 5/6/2011 – Original Contract \$11,429,514

Project Information	Details
	12/27/2016 thru 12/31/2021 – Rebid Contract \$16,879,296
<b>Actual Completion Date and Budget</b>	5/7/2007 thru 12/26/2016 – Original Contract and Amendments \$33,881,559 12/27/2016 thru 12/31/2021 – Rebid Contract and Amendments \$20,679,766
<b>Contractor Responsibilities</b>	Business Process Reengineering Call Monitoring Case Review IAPD Updates Implementation Support Performance Monitoring Project Management Quality Assurance
<b>Client Contact</b>	Adrienne Shields, DFR Director 402 W. Washington St., Room W392 Indianapolis, IN 46204 Office: (317) 234-2373 Fax: (317) 232-4490 <a href="mailto:Adrienne.Shields@fssa.in.gov">Adrienne.Shields@fssa.in.gov</a>
<b>Description</b>	<p>The FDGS Team was hired as an independent party to assist with oversight of the prime vendor’s contract to modernize Indiana’s welfare system. Since the prime vendor’s contract was terminated in December 2009 and the State has assumed the prime contractor role, FDGS team is now augmenting a new State Program Management Office. The specific FDGS tasks have included the following:</p> <p><b>PMO Establishment and Operations</b></p> <ul style="list-style-type: none"> <li>• Evaluate Current PMO Practices: Review and evaluate current practices and processes within the FSSA PMO to determine the adequacy and applicability of these practices and processes for the Eligibility Modernization Program.</li> <li>• Recommend PMO Best Practices: Prepare recommendations for incorporating supplemental “best practices” into FSSA PMO project management methodology, based on practices used in the Eligibility Modernization Program.</li> <li>• Develop PMO Knowledge Transfer Plan: Develop a plan to assist FSSA PMO in the shared development and usage of procedures, checklists,</li> </ul>

Project Information	Details
	<p>manuals, test scripts, and other materials to be used in evaluating the quality and progress of project deliverable.</p> <ul style="list-style-type: none"> <li>• PMO Training Assistance: Assist in the development and delivery of training that will enhance the project management skills and methodology of State personnel.</li> <li>• OV&amp;V Operations Planning: Develop an Operations Plan in collaboration with the FSSA PMO to identify tasks, timelines, and deliverables.</li> <li>• Performance Metrics/Monitoring: Review data collection for and assist in monitoring of contracted performance metrics:</li> <li>• Monitor quality assurance activities and processes</li> <li>• Review program quality assurance metrics</li> <li>• Perform periodic audits</li> <li>• Make recommendations as appropriate</li> <li>• Assist the FSSA PMO in monitoring plans, efforts, schedules, resource requirements, budgets, and costs. Report discrepancies, project timeline slippage, or concerns.</li> <li>• Risk Assessment: Perform risk assessments and develop risk mitigation strategies.</li> <li>• Assist the FSSA PMO in preparing briefing papers, presentations and other materials.</li> <li>• Establish and document a traceability and review plan for processing invoices, ensuring that correct timekeeping, billing, and invoicing procedures are being followed.</li> <li>• Change Order Management: Assist the FSSA PMO in monitoring change order activities and processes and make recommendations as appropriate. Review each Change Analysis prepared in accordance with the Master Services Agreement between the State and its contractors for validity and content. Recommend approval/denial of Change Request submissions to Change Control Board. Serve as a member of, and participate in, activities of the Change Control Board.</li> <li>• Issue Management/Dispute Resolution: Provide a permanent delegate to serve as a member of, and participate in activities of, the Operations Management Board. Assist in facilitating good communications and systematic procedures for addressing potential and existing disputes in a fair, timely, and efficient manner. Monitor that disputes, if they arise, are dealt with in accordance with the Dispute Resolution Procedures of the Master Services Agreement. Monitor that disputes, if they escalate, follow the escalation levels defined in the Governance Plan appended to the Master Services Agreement.</li> <li>• Federal Agency Regulation Compliance: Review plans, events, and deliverables for compliance with federal agency regulations. Assist the</li> </ul>

Project Information	Details
	<p>State in obtaining required approvals of planning and other documents. Assist the State in responding to questions and participate in meetings and conference calls with State and Federal officials.</p> <p><b>Program Governance</b></p> <ul style="list-style-type: none"> <li>• Strategic Focus: Provide focus on the strategic goals, objectives, and benefits of the Eligibility Modernization Program and ensure that these are evident in its constituent activities.</li> <li>• Communications: Monitor that there are open communications and access among key individuals at the State, its contractors, and other program stakeholders.</li> <li>• Governance Plan Adherence: Monitor that the State and other program stakeholders act in accordance with the terms of the Master Services Agreement Governance Plan.</li> <li>• Governance Board Participation: Act as a member of, and participate in, activities of the following program governance boards:                         <ul style="list-style-type: none"> <li>• Executive Steering Committee</li> <li>• Strategic Policy Board</li> <li>• Transition Management Board</li> <li>• Operations Management Board</li> <li>• Change Control Board</li> </ul> </li> <li>• Risk Monitoring: Ensure that wider business risks in relation to the program are recognized and being managed.</li> </ul> <p><b>Business Process Reengineering</b></p> <ul style="list-style-type: none"> <li>• Business Process Reengineering Support: For both the Appeals Fair Hearings and Field Operations divisions, we evaluated the business processes, conducted time studies, and provided recommendations for how to improve operations. Our recommendations for improved efficiency were implemented.</li> <li>• Quality Improvements: Provide quality improvement recommendations for to enhance overall project business processes as the new eligibility system is implemented.</li> </ul> <p><b>Change Management</b></p> <ul style="list-style-type: none"> <li>• Change Management Support: Assist in the execution of change management efforts, including stakeholder communications. Ensure contractor compliance in the use of best practices to address change management issues with all stakeholders via multiple communication vehicles including, but not limited to, marketing materials, newsletters, intranet content, and e-mail distribution.</li> </ul>

Project Information	Details
	<ul style="list-style-type: none"> <li>• Documentation Review: Participate in the review and approval of documentation including, but not limited to, training plans, training curricula, vendor staff training logs, system test plans, end-user documentation, process documentation, and implementation documentation.</li> </ul> <p><b>Deliverable Review</b></p> <ul style="list-style-type: none"> <li>• Deliverable Reviews: Review contractor deliverables for quality, progress, standards, and requirements traceability.</li> <li>• QMMP Compliance Monitoring: Monitor compliance with the provisions of Quality Metric Management Plan.</li> <li>• Transition Phase QMMP Review: Review, analyze, and provide feedback on the Transition Quality Metric Management Plan developed by the prime contractor to cover the period during which the contractor will be delivering services utilizing the State’s “As-Is” operating environment.</li> <li>• Steady State QMMP Review: Review, analyze and provide feedback on the Steady State Quality Metric Management Plan developed by the prime contractor to cover the period during which the contractor will be delivering services under the modernized operating environment.</li> <li>• Documentation Review: Review Quality Metric Management Plan documentation for clarity, completeness, and accuracy, such documentation to include at a minimum:                     <ul style="list-style-type: none"> <li>• Eligibility process descriptions</li> <li>• Continuous improvement process descriptions</li> <li>• Data collection, reporting, and analysis schedule</li> </ul> </li> <li>• Test Plan Review: Review all system test plans and user acceptance test plans for appropriateness and completeness.</li> </ul> <p><b>Transition Support</b></p> <ul style="list-style-type: none"> <li>• Transition Management Board Participation: Provide a permanent delegate to serve as a member of, and to participate in, activities of the Transition Management Board.</li> <li>• Transition Plan Review: Review, analyze, and provide feedback on the comprehensive Transition Plan developed by the prime contractor to supplement and expand the Initial Transition Plan.</li> <li>• Monitor transition phase activities and make recommendations as appropriate.</li> <li>• Go-live Readiness: Provide go-live readiness reviews.</li> <li>• Monitor Satisfaction: Develop and execute quality assurance activities to monitor the satisfaction levels of all parties involved in the Transition Phase.</li> </ul>

Project Information	Details
	<p><b>Ongoing Operations Support</b></p> <ul style="list-style-type: none"><li>• Conduct Procedural Case Reviews: Complete policy and process reviews for 450 authorized cases per month to identify error trends.</li><li>• Develop Provide Case Review Findings and Analysis Reports: Consolidate the case review error data to provide detailed and trending data monthly, quarterly and every six months.</li><li>• Conduct Indiana Manpower Placement and Comprehensive Placement (IMPACT) Reviews: Conduct onsite review of the policies and processes utilized by the IMPACT vendors.</li><li>• Conduct Training Materials Review: Review all vendor training materials for clarity, completeness, and accuracy.</li><li>• Support Work Instruction Development: Review the work instructions for clarity, completeness, and accuracy.</li><li>• Provide Various Operational Reports for Applications, Queues, and Call Volumes.</li></ul>



## 1.9 Summary of Contractor's Proposed Personnel/Management Approach

### i. SUMMARY OF CONTRACTOR'S PROPOSED PERSONNEL/MANAGEMENT APPROACH

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*The Contractor should present a detailed description of its proposed approach to the management of the project.*

*The Contractor should identify the key personnel whom will work on the State's project if their company is awarded the contract resulting from this solicitation. The names and titles of the team proposed for assignment to the State project should be identified in full, with a description of the team leadership, interface and support functions, and reporting relationships. The primary work assigned to each person should also be identified.*

*The Contractor should provide resumes for all personnel proposed by the Contractor to work on the project. The State will consider the resumes as a key indicator of the Contractor's understanding of the skill mixes required to carry out the requirements of the solicitation in addition to assessing the experience of specific individuals.*

*Resumes should not be longer than three (3) pages. Resumes should include, at a minimum, academic background and degrees, professional certifications, understanding of the process, and at least three (3) references (name, address, and telephone number) who can attest to the competence and skill level of the individual. Any changes in proposed personnel shall only be implemented after written approval from the State.*

Beyond the tools, methodologies, and approaches, it is clearly the quality of the team members that help determine success on the project. FDGS prides itself on being able to offer a unique combination of business processing acumen and government programmatic subject matter expertise in order to confirm our solutions fit with the appropriate context of business needs, financial constraints, and client services.

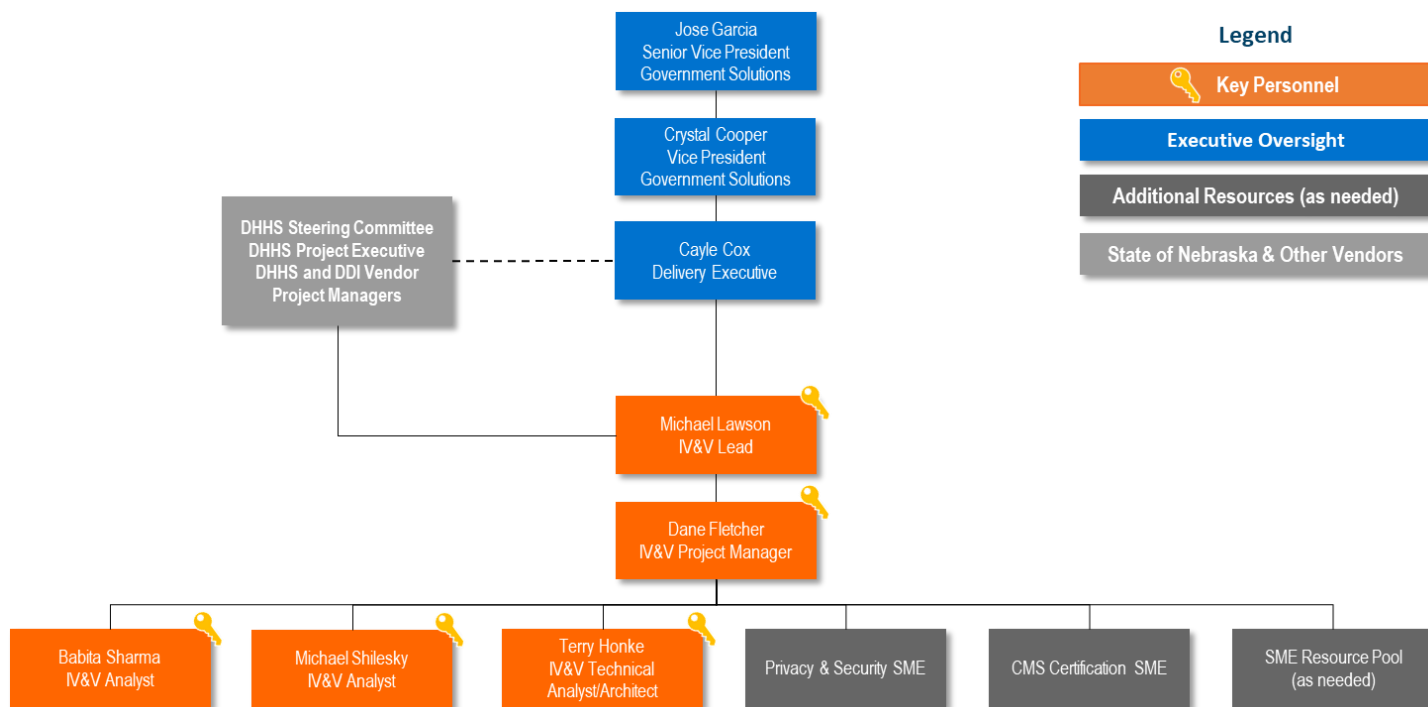
For this particular agency initiative, FDGS has assembled a team that represents the real, hands-on, practical knowledge, experience and expertise required to support the projects in this RFP. The FDGS Team is a mix of IV&V experts from across the country as well as members of our existing Nebraska IV&V Services team. Our team brings methodologies, best practices, and tools from Nebraska's prior and existing projects as well as some of the latest projects in the country. As a result, we understand what it takes to be successful and how to help DHHS implement future projects successfully.

The relevant qualifications, expertise and experience of the FDGS Team are truly unique; particularly in the areas of project management and IV&V services. **Table 1** lists the proposed FDGS Team for the key positions required for IV&V Services.

**Table 1: FDGS Proposed Key Positions**

Key Position	Name	Primary Work and Responsibility
<b>IV&amp;V Lead</b>	Michael Lawson	<ul style="list-style-type: none"> <li>• Oversight of all projects</li> <li>• Escalation point for client issues/concerns</li> <li>• Oversight of staffing</li> <li>• Contract management</li> </ul>
<b>IV&amp;V Project Manager</b>	Dane Fletcher	<ul style="list-style-type: none"> <li>• Management of IV&amp;V project schedules</li> <li>• Production of weekly status reports</li> <li>• Contributor to monthly status reports</li> <li>• Attendance at weekly project management and planning meetings</li> </ul>
<b>Business Analysts (2)</b>	Sharma Babita Michael Shilesky	<ul style="list-style-type: none"> <li>• Assessment lead of the implementation contractor's ability to meet requirements</li> <li>• Contributor to all IV&amp;V deliverables</li> <li>• Support of assessment of functional work products that support business process</li> <li>• Support for validation of requirements</li> <li>• Attendance at required meetings</li> </ul>
<b>Technical Analyst</b>	Terry Honke	<ul style="list-style-type: none"> <li>• Validation of technical architecture for consistency with state and federal requirements, including CMS-7 and MITA 3.0</li> <li>• Identification of technical risks</li> <li>• Contributor to implementation contractor deliverable reviews and technical portions of IV&amp;V deliverables</li> <li>• Review of technical artifacts against enterprise architecture standards</li> </ul>

In addition to our key resources and core team, Mr. Cayle Cox serves as the Delivery Executive for the Nebraska DHHS IV&V Services project. Mr. Cox's responsibility is to oversee the management of FDGS professional services projects, specifically for Nebraska and DHHS. Mr. Cox is responsible for monitoring client satisfaction and verifying adequate resource coverage to meet and exceed DHHS expectations. The organizational chart (**Figure 1**) below outlines our proposed staffing covering the projects in scope for this RFP.



**Figure 1: The FDGS Team brings deep program and system implementation knowledge to support Nebraska’s vision**

We have provided resumes for each of the key personnel proposed for the required key positions. Resumes can be found in **Section 2.2, C. Organizational Staffing**.

## 1.10 Subcontractors

### j. SUBCONTRACTORS

*If the Contractor intends to Subcontract any part of its performance hereunder, the Contractor should provide:*

- i. name, address, and telephone number of the Subcontractor(s);*
- ii. specific tasks for each Subcontractor(s);*
- iii. percentage of performance hours intended for each Subcontract; and*
- iv. total percentage of Subcontractor(s) performance hours.*

FDGS will not be utilizing any subcontractors for the projects included within the scope of this RFP.

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## 2 Technical Approach (RFP Section V. Project Description and Scope of Work)

### Section Highlights

- **We are industry leaders in IV&V** – FDGS’ Medicaid experts have worked 50 government QA/IV&V projects
- **We will hit the ground running** – FDGS has been Nebraska’s trusted IV&V vendor for the last seven years
- **We understand the programs AND the data** – FDGS has worked with all of the major health and human services programs and we understand how various related programs intersect and support DHHS’ overarching vision

### **FDGS shares the Department of Health and Human Services’ mission to “Help People Live Better Lives!”**

Achieving the Nebraska DHHS and Division of Medicaid and Long Term Care (MLTC)’s vision of an integrated service delivery system through the implementation of interoperable and responsive technology requires a partner with expertise, experience, insight, and a commitment to working hand-in-hand with DHHS to continue to deliver the ongoing services in support of its latest projects.

Nebraska needs a partner that understands the Medicaid program, both broadly and deeply. It requires a partner that understands the complex technology environment across today’s health and human services agencies. It requires a partner with a proven record of accomplishment in helping health and human services agencies design and implement multiple large systems successfully. It requires a partner who is well versed in Medicaid eligibility, and comes to the project equipped with tools to expedite the delivery of IV&V services across DHHS’ projects.

Most importantly, it requires a partner that understands DHHS’ vision for each project and a partner that is committed to focusing on attainment of that vision across the enterprise. **FDGS remains that partner!**

### **The Future is Bright!**

We bring a unique combination of extensive IV&V expertise, experience collaborating with states to successfully manage multiple projects, strong Medicaid credentials, and an intimate understanding of Nebraska’s technological and business landscape. For example, as Nebraska continues to evolve further toward managed care, FDGS has the right team to help guide you to achieve your goals of improved health outcomes, integration of services and quality of care, improved care management, a financially sustainable system and reduced program costs.

We also recognize your vision for automated solutions and re-engineering business processes. We offer the State an extremely qualified team of experts with knowledge of Medicaid enterprise systems, CMS certifications and the State of Nebraska human services needs including:

- An enhanced consumer/citizen benefits portal (iServe)
- An Integrated Benefits Eligibility & Enrollment Management System (iBEEM)
- Electronic Visit Verification (EVV) phases 1 (PCS) and 2 (HHCS)
- A transition from HITECH to MES funding sources
- A new Medicaid Drug Rebate (MDR) and a Point of Sale (POS) prescription drug claims processor
- Compliance with the CMS Interoperability and Patient Access Final Rule
- Continued Transformed Medicaid Statistical Information System (T-MSIS) compliance and improvements
- Provider Screening & Enrollment (PS&E)
- Enrollment Broker (EB)
- Dental Benefits Manager (DBM)

With FDGS by your side, all of these are attainable. We stand ready to assist you as your partner for the years to come.

**First Data Government Solutions (FDGS) Strong and Proud!**

**Table 2** provides detailed insight into our core strengths and how these can be leveraged to support Nebraska initiatives:

**Table 2: Strengths provided by your FDGS IV&V Team**

FDGS Team Core Strengths	Applied Actions	Benefits to Nebraska
<p><b>Best in Class IV&amp;V Methodology and Toolset</b></p>	<ul style="list-style-type: none"> <li>• Complete assessment scorecards for critical MMIS checkpoints – within and across business functions</li> <li>• Comprehensive coverage of improvement initiative work areas, both anticipated and unanticipated</li> <li>• Tools and methods compatibility with common systems engineering practices inside and outside the Medicaid vendor community</li> <li>• Maximized efficiency of the FDGS IV&amp;V Team</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive, consistent, professional and high-value IV&amp;V work products created and delivered by certified professionals</li> <li>• Understandable IV&amp;V findings and recommendations, fit for both leadership and technical consumption</li> <li>• Actionable IV&amp;V findings and recommendations that are feasible, practical and effective</li> <li>• Reduction in any disruption that IV&amp;V activities may have on the project team</li> </ul>

FDGS Team Core Strengths	Applied Actions	Benefits to Nebraska
<b>Federal Requirements and Relationship Management</b>	<ul style="list-style-type: none"> <li>• Delivery of clear MITA compliance and improvement strategy feedback</li> <li>• Delivery of clear Seven Standards &amp; Conditions compliance</li> <li>• Cost Allocation Strategy Alternatives guidance</li> <li>• Partnership with Nebraska providing strategic guidance and communication support with CMS and other stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Proven service competence and value with CMS: they know and trust FDGS</li> <li>• Itemized regulatory compliance guidance, founded on proven strategies</li> <li>• Maximized federal funding participation for Nebraska</li> <li>• Reduced anxiety about federal oversight, federal strategies, and federal expectations</li> </ul>

FDGS is intimately aware of the challenges and complex considerations facing DHHS because of our history with Nebraska, and other states in the strategic planning, development, implementation, and operations of large, complex healthcare systems. Some of these challenges include:

- **Need for flexibility in business operations** – We understand the challenges faced by agencies in today’s rapidly changing program environments. Systems must be able to quickly respond to legislative or programmatic changes, such as Health Care Reform, otherwise cumbersome workarounds may be required to correctly determine and administer Medicaid enterprise systems and processes.
- **Coordinating project efforts with many stakeholders involved** – Because we have worked with other states that are undergoing wide-spread system changes, we appreciate the importance of working closely with all stakeholders across multiple organizations that service the same clients. We already have the established relationships required with the project stakeholders and federal partners to foster expediency in the review process. In addition, the project must manage input from multiple legislative initiatives and be accountable by providing timely and accurate information as the projects progress. We want the IV&V experience to include lessons learned across all initiatives and for the State to actualize the benefit of having a consolidated IV&V provider to support accountability
- **Securing project success** – Historically, IT projects across the country tend to experience schedule slippages, budget overruns, and failure to meet end-user expectations. As a result, we have gained a deep appreciation for the long-term implications of the decisions that are made early in the process and can help the Department while enforcing the processes and standards that work well. As with the current FDGS IV&V Team, we will continue to focus each project implementation on achieving stated outcomes. In addition, we align objective based assessments to the DHHS strategic goals via program oversight.

- **Meeting all federally mandated requirements while also implementing a new system** – We are fully aware of CMS requirements and can provide confirmation that the new system meets these federal standards. We leverage CMS, DHHS and FDGS tools to validate compliance the applicable standards and requirements.
- **Improve efficiency of operations and provide better service to the public** – We understand the business needs driving this project and the need to provide operational improvements. We realize DHHS is looking to do this by aligning with MITA and the Seven Standards and Conditions to promote the interoperability between State systems, and desiring to progress to target MITA maturity levels. We analyze and report progress towards these efforts.

FDGS has a long history of partnering with government clients in their efforts to plan and manage the replacement of large legacy eligibility systems, including several recent, large-scale, complex HHS projects, examples of which are included as project samples in our summary of corporate experience section. Below we highlight some of the advantages our extensive experience on Nebraska projects:

- **We can hit the ground running** – Having been Nebraska’s trusted IV&V vendor for the last seven years and we are uniquely poised to continue our responsibilities ---on Day One, thus mitigating any scope, schedule or cost risk Nebraska might experience through transitioning to another vendor. We have worked with the State, its vendors and CMS through the requirements and design phases and understand the risks, rewards, and strategic imperatives set forth by DHHS.
- **We understand Medicaid Enterprise Systems** – FDGS has helped many Medicaid agencies plan, procure, and implement complex systems, providing a deep and broad understanding of various Medicaid enterprise administrations, the corresponding programs, and the interrelations between the programs and various interfaces.
- **We understand the programs AND the data** – FDGS has worked with all of the major health and human services programs and we understand how the various related programs intersect and support DHHS’ overarching vision. We have a very good understanding of the programs, policies, and business processes associated with all of these programs and can bring best practices from other states. Our proposed team brings the right skills and experience to support your vision. We also understand how the data intersects between all of the programs since we have provided IV&V oversight for the Data Management and Analytics system.
- **We are fiercely independent** – FDGS has extensive experience as an independent advisor on system development and implementation projects. FDGS does not prefer any solution or solution provider, but has worked with most of the current systems or approaches in an independent capacity. We have no agenda other than the successful design, development and implementation of DHHS projects.
- **We are industry leaders in IV&V** – The FDGS Team has a long list of successful IV&V projects involving government information systems. Our list of clients includes 50



government QA/IV&V projects. This has included some of the largest and highest-profile projects in the country and has enabled us to gain valuable lessons learned from other states that can help Nebraska as it makes this significant transformation. As a result, we have seen what works well and we know things to watch out for as the project progresses. Our role has taken many different forms and responsibilities over the lifecycle of the projects, depending on the specific milestone or work product developed, but we have always maintained our commitment to meeting the needs of the project with dedicated staff and proven tools and methodologies.

- **We have a history of successful projects** – Perhaps the greatest testament to the quality of our work is the number of clients that have asked us to continue supporting their project after the conclusion of our original contract. Twenty (20) of our large system projects have involved an IV&V role after performing the initial planning/procurement, or have involved a significant contract extension in order to increase the scope of the effort. We recognize that states have options when selecting a partner for their projects, and we are honored that so many of them have continued to select us after working with us. The long-term nature of our client engagements and the re-selection of the FDGS Team through multiple re-procurements demonstrate the trust our clients have in us as a partner that delivers on its commitments.

Corporate qualifications are important, and while we are proud of ours, we know that the qualifications of the people on the ground working with you to actually deliver the project are the most important. From our pool of accomplished resources, we bring to you a skilled team with the right mix of Nebraska knowledge, Medicaid program expertise, deep technical knowledge and an accomplished track record helping states implement complex health and humans services systems.

Our roots in Nebraska run deep and we very much appreciate the opportunity to partner with you on this program that is so vital to the health and welfare of the people of Nebraska. In our response to the technical and business requirements below, we clearly demonstrate why FDGS is the best choice for making the DHHS enterprise improvement programs a success for all Nebraskans.

As requested in the RFP, we have addressed the following throughout the remaining sections of our Technical Proposal:

*a. Understanding of the project requirements*

In the following sections, as well as **Attachment A – Business Requirements Traceability Matrix**, FDGS has detailed our understanding and ability to meet all of the project requirements included the RFP and our responsibilities providing IV&V services.

*b. Proposed development approach*

**Section 2.1.2 Independent Assessment and Quality Assurance** focuses on our continued support of DHHS to assess vendor progress and deliverable quality across each of its Medicaid enterprise projects.

*c. Technical considerations*

While each of the sections' requirements touch on technical considerations, our IV&V Team carefully consider the impacts of the technical solution for each project. **Section 2.1.4 CMS and MITA Compliance** and **Section 2.1.5 Operational and System Readiness** focus more on the technical validation that each system is able to meet Federal guidelines and requirements and to confirm operational and system readiness in production.

*d. Detailed project work plan*

FDGS provided an example of our baseline IV&V project work plan with **Section 2.1.1 Project Management**. Our IV&V Project Manager works with DHHS and its vendors to tailor the specific tasks and timelines to integrate with the overall target dates required by the Department.

*e. Deliverables and due dates*

FDGS describes our development and delivery of IV&V deliverables and their respective due dates in **Section 2.1.3 IV&V Status Meetings and Reporting** and **Section 2.1.6 IV&V Deliverables and Work Products**. For each of the projects in Nebraska's Medicaid roadmap of enterprise improvements, FDGS aligns with DHHS and vendor timelines as appropriate.

## 2.1 B. IV&V Responsibilities

FDGS has carefully reviewed and understands the requirements set forth and looks forward to working with you to verify that Nebraska's IT vendors are making systematic, steady progress toward implementing the necessary tools and technology for DHHS. The FDGS Team is uniquely qualified to be the partner Nebraska needs to help DHHS achieve its objectives. Given the opportunity, we believe our involvement will continue to be a key element of success for all your projects.

We bring an integrated IV&V methodology previously applied to the largest system integrators in the country, including Accenture, Deloitte and Xerox, which we have adapted to manage a program portfolio of interdependent projects such as those proposed. In addition, you continue to benefit from our position as a national leader in the area of Medicaid systems, allowing us to bring many years of experience and project success to your program.

Through our IV&V services, the FDGS Team brings a knowledge base that enables us to verify that the right system is built and to validate the system is built correctly for each project. This knowledge and our understanding of the past and most recent CMS certification processes helps us to understand and support Nebraska's program and project-specific needs and how to partner in oversight of the management of projects.

FDGS reviews work products and deliverables that are outcomes of design, development, and implementation activities to verify that DHHS and CMS requirements are met. With this understanding, FDGS is able to provide recommendations aimed at enhancing the overall quality and robustness of the deliverables to meet project goals. At critical points in time on similar projects, such as the completion of major activities, our understanding has helped us to update and examine the Requirements Traceability Matrix (RTM) to confirm there are no orphans, missing or incomplete requirements. To accurately measure progress and adherence to timeframes, the FDGS Team may also analyze work plans, schedules, test plans and test results. Our knowledge and understanding enables us to verify that the system adheres to the stakeholder's expectations for each project.

As an IV&V vendor whose proven processes and best practices scale to the enterprise level, we recognize this dynamic environment must be reflected in our methodology and approach, so that DHHS does not sacrifice quality in order to achieve the aggressive schedule. We accomplish this by working with the State and its partners in a team environment to help support a high quality product without bottlenecks. By integrating IV&V processes throughout the life cycle, rather than reviewing the results after completion of deliverables, DHHS can save time and effort through less rework. We also focus on identifying risks early and establishing response plans so that when issues do arise, the project can continue moving forward. In this approach, we measure our success as an IV&V vendor not by the number of deficiencies we identify, but by the success of the projects we support. Thus, we continue to view our role as an important partner to the overall success of the ongoing projects as well as the latest projects as part of this RFP intended to achieve DHHS' enterprise business objectives.

FDGS has extensive experience as an independent advisor on system development and implementation projects. FDGS does not prefer any solution or solution provider, but has worked with most of the current systems or approaches in an independent capacity.

The FDGS Team also recognizes that not all IV&V projects are the same. In fact, the requirements, implementation methodology, and technologies used for one project may vary greatly between projects given the timing of the tasks, the level of true independence required, and, at times, the need to couple IV&V services with QA services/planning and operational support through subject matter experts. With this in mind, we have developed a team structure and methodology that provides flexibility for our clients to verify the specific needs and requirements of each project are met. For each engagement, we also assign staff that has the appropriate subject matter expertise to perform comprehensive assessments.

*The IV&V service contractor will review project and system processes and progress in areas including, but not limited to, the following: project management and modular development.*

The FDGS IV&V approach accounts for review of the project and system processes and progress which is detailed in Sections 2.1.1 through 2.1.6. **Table 3** and **Table 4** below provide at a glance views of our IV&V Responsibilities for both Project Management and Modular Development.

**Table 3: At a Glance Project Management Responsibilities**

Project Management	Approach to Verification and Validation
Progress against budget and schedule	<ul style="list-style-type: none"> <li>• Monitor the project’s progress, resources, budget, schedules, workflow, and reporting to identify any issues, risks, or deficiencies, and make recommendations to address them.</li> <li>• Verify management involvement with scope and schedule management.</li> <li>• Validate resource loading, planned vs. actual completion, budget expenditures, and progress to plan.</li> <li>• Attention to the coordination and communication among teams, agencies, and departments to confirm everyone is working together, consistent with the overall project plan.</li> <li>• Verify stakeholder cooperation among project teams and escalate any communication risks identified.</li> </ul>
Risk management	<ul style="list-style-type: none"> <li>• Verify and validate the Risk Management process is documented in a Risk Management Plan.</li> <li>• Review the risk management approach with a focus on identification, analysis of probability, impact and level of control, prioritization, assignment, mitigation planning, tracking, and monitoring.</li> <li>• Verify the project has well-developed technical and operational contingency plans in place to address the risk of failure of critical dependencies, such as a component or service from another state or CMS (for example, the data services hub).</li> </ul>

Project Management	Approach to Verification and Validation
	<ul style="list-style-type: none"> <li>• Assess compliance with the Risk Management Plan by evaluating risks identified, the mitigation plans developed, and the risk resolution process.</li> </ul>
<p>Inclusion of state goals / objectives and all federal MMIS requirements in requests for proposal and contracts</p>	<ul style="list-style-type: none"> <li>• Analyze the requirements to validate that they adhere to State and Federal guidelines, regulations and conditions, meet the expectations of project and agency stakeholders and include DHHS and system performance standards. This includes verifying that various stakeholder groups have provided input to and/or participated in usability prototyping and testing of the system look and feel and have validated the interface requirements.</li> <li>• Validate the project requirements against state and federal requirements, industry standards and other market research to verify that there are no gaps in the requirements.</li> </ul>
<p>Adherence to the state's software development lifecycle (SDLC)</p>	<ul style="list-style-type: none"> <li>• Validate that hardware, software, system development and project management standards are adhered to including but not limited to:                             <ul style="list-style-type: none"> <li>○ Nebraska IT Standards, current and planned</li> <li>○ Nebraska IT Plan</li> <li>○ Nebraska DHHS EPMO standards</li> </ul> </li> <li>• Make recommendations for any additional standards that may be needed</li> </ul>
<p>Incorporation of the Seven Standards and Conditions into design and development</p>	<ul style="list-style-type: none"> <li>• Validate that hardware, software, system development and project management standards are adhered to the CMS Seven Standards and Conditions</li> <li>• Make recommendations for any gaps identified</li> </ul>
<p>Reasonability, thoroughness, and quality of MITA self-assessment, concept of operations, information architecture, and data architecture</p>	<ul style="list-style-type: none"> <li>• FDGS will review the most recent state self-assessment, confirm that the following are addressed and identify gaps to the State:                             <ul style="list-style-type: none"> <li>○ Review the as-is business architecture description accurately reflects the reality of the environment as of 2022.</li> <li>○ Evaluate the proposed to-be business architecture environment is a quantifiable improvement over the as-is environment and aligns with the anticipated maturity as published.</li> <li>○ Confirm that the as-is technical architecture description accurately reflects the reality of the environment in 2022.</li> <li>○ Evaluate whether the proposed to-be technical architecture environment incorporates the necessary technical enhancements currently being developed in order to achieve the anticipated maturity as published.</li> <li>○ Confirm that the as-is information architecture description accurately reflects the reality of the environment in 2022.</li> <li>○ Evaluate whether the proposed to-be information architecture environment incorporates the necessary capture, retention and transmission enhancements currently being developed in order to achieve the anticipated maturity as published.</li> </ul> </li> </ul>

Project Management	Approach to Verification and Validation
	<ul style="list-style-type: none"> <li>Review MITA 3.0 (or newer) Business, Information and Technical Architecture and how Nebraska meets 7 Standards and conditions. The State will update the SS-A as appropriate.</li> </ul>
<p>Reflection of the state's MITA goals and plans into actual MMIS design and development</p>	<ul style="list-style-type: none"> <li>FDGS reviews the most recent self-assessment and confirms that the published goals and objectives are still relevant. The FDGS Team meets with leadership to confirm the goals are still relevant, given the potential of multi-phase development, and the fact that goals and objectives may change since the original completion of the self-assessment. The State will update the SS-A as appropriate.</li> <li>The FDGS Team will compare solutions found in various design documents to the published and agreed-upon state goals and objectives. As part of design review responsibilities, the FDGS Team will identify gaps between what is being proposed and what is expected by the client in terms of goals and objectives. The IV&amp;V Team may need to escalate their concern to the appropriate leadership forum if time or severity dictates.</li> </ul>
<p>Configuration management that is robust and includes state or developer configuration audits against configuration baseline</p>	<ul style="list-style-type: none"> <li>Evaluate the configuration management (CM) plans and procedures to confirm they appropriately identify and control the functional and physical design characteristics of the implementation contractor.</li> <li>Verify the CM plans and procedures and describe what items will be placed under configuration management control and how those items will be managed throughout the SDLC. This must include software code promotion and documentation version control for all environments: development, training, system test, user acceptance test, and production.</li> <li>Include a list of all functional and physical items (configuration items) included in the scope of configuration management, which includes requirements, hardware, software, design, business rules, code, settings and configurations, and services.</li> <li>Identify the configuration management processes and tools are being documented, being adhered to, and contain the ability to rebuild system configurations from source code.</li> <li>Validate that the configuration management processes and tools support the CMS standard and condition for reuse of services in a SOA model.</li> <li>Validate the configuration management processes and understood throughout the project by monitoring code promotions.</li> </ul>
<p>Change Management</p>	<ul style="list-style-type: none"> <li>Evaluate the Change Management Plan and procedures to verify they are comprehensive, follow industry standards and are monitored for adherence and effectiveness.</li> <li>Review the scope change management approach to verify it is consistent with vision of the State. A robust scope management approach should be tightly coupled to the requirements management function and contains defined processes for modifying the Work Plan once scope changes have been approved by the change control board.</li> </ul>

Project Management	Approach to Verification and Validation
	<ul style="list-style-type: none"> <li>• Confirm that the change management approach encompasses clear processes for identifying, documenting, reviewing and assessing the impact of the potential change on the project schedule, budget and past and future deliverables and milestones, whether there is training or other user related impacts and that formal change control board meetings are conducted with designated approvers.</li> <li>• Confirm that the Change Management Plan includes cross-project dependencies, requirements for all projects involved with the dependent requirements and that any changes to scope evaluate impacts across projects.</li> </ul>
Adherence to service level agreements	<ul style="list-style-type: none"> <li>• Validate system performance requirements are clearly defined and measurable (e.g. timing, response time and throughput) and satisfy user needs. FDGS provides recommendations regarding Service Level Objectives (SLO) and Agreements (SLA) that are appropriate based on the solution whether it is a development project, COTS product or outsourced business process.</li> </ul>

**Table 4: At a Glance Modular Development Responsibilities**

Modular Development	Approach to Verification and Validation
Completeness and reasonability of MMIS concept of operations, architecture, and designs	<ul style="list-style-type: none"> <li>• Analyze the requirements to validate that they adhere to MMIS guidelines, regulations, and conditions.</li> <li>• Analyze that the requirements and the timeframe for delivery meet new CMS rules that will be effective at delivery.</li> <li>• Validate the project requirements against state and federal requirements, industry standards and other market research to verify that there are no gaps in the overall component solution design or redundancy.</li> </ul>
Accuracy of capture of interfaces and data sharing requirements with systems external to the MMIS	<ul style="list-style-type: none"> <li>• Verify the project has well-developed technical and operational contingency plans in place to address the critical dependencies, such as a component or service from another project in the NE roadmap for MMIS replacement, other State Agency, other State or Federal service (e.g., the data services hub).</li> <li>• Verify that all system interfaces requirements comply with preferred approach per CMS 7 standards and conditions for SOA and interoperability, Federal standards for data exchange, security and privacy, and include operational, input/output controls, and error recovery.</li> <li>• Verify data interfaces and integration with the overall systems design, comply with preferred approach per CMS 7 standards and conditions for SOA and interoperability, Federal standards for data exchange, security and privacy, and include operational, input/output controls, and error recovery.</li> <li>• Verify that approved interface documents are available, maintained and published to the appropriate projects, vendors and organizations to verify compliance to the standards and documented requirements for delivery and maintenance of interfaces and system / component integrations.</li> </ul>



Modular Development	Approach to Verification and Validation
<p>Viability and completeness of the data transition plan</p>	<ul style="list-style-type: none"> <li>• Suggest improvements to the conversion database designs to improve data integrity and system performance, including required data timeframes for conversion, data formats for archive of older data, data mapping plans, data backup at points in the conversion process and data validation in the ETL process.</li> <li>• Review the Conversion Data Dictionary and make recommendations regarding source locations, data normalization and/or data transformations.</li> <li>• Validate the conversion database design for maintainability, scalability, refresh ability, concurrence, normalization and other factors affecting performance and data integrity.</li> <li>• Evaluate the test plans of the data transition for completeness, appropriate data sets required for testing, testing scenarios, data modification scripts post data load, end to end testing for potential business rules or database trigger executions and complete validation through reports and user interfaces.</li> <li>• Evaluate the test results for the conversion database, including ETL reports and errors, operational reports against the data, i.e. ledgers, aging reports, and successful completion of the test case results defined in the data transition plan.</li> </ul>
<p>Traceability of requirements through design, development, and testing</p>	<ul style="list-style-type: none"> <li>• Assess the existence of a Requirements Management Plan and validate that it is followed. Requirements will be validated during design, development, testing and implementation.</li> <li>• Evaluate and assess the proposed RTM tool for requirements management and provide feedback indicating whether the tool is appropriate for the project, works in conjunction with other related tools used by other teams on the project, and meets the requirements of the requirements tool in specific areas (i.e., traceability, tracking, reporting, escalation).</li> <li>• Confirm that the requirements follow SMART (specific, measurable, achievable, traceable, and testable) guidelines.</li> <li>• Verify that requirements are tracked in an RTM for future traceability through design, code, test and implementation. The RTM enables forward and backward traceability from Solicitation through UAT and Project completion.</li> <li>• Verify that the requirements in the RTM are consolidated at an enterprise level in a multi-project approach and that cross project dependency requirements are identified and linked to verify deliverables will function as defined.</li> <li>• Confirm both the process and traceability matrix properly document the life of a requirement and provide bi-directional traceability between various associated requirements. Verify the process and artifact(s) enables the State to find the origin of each requirement and tracks all changes made to all requirements.</li> <li>• Confirm all requirements are properly included and documented at the appropriate level. Identify items that do not trace, incorrectly trace, or do not sufficiently trace. Identify any missing, additional or ambiguous requirement to avoid future problems in design. Verify traceability artifacts are maintained and used as designed during all project phases.</li> </ul>



Modular Development	Approach to Verification and Validation
	<ul style="list-style-type: none"> <li>• Verify any tracing issues, problems, or questions generated by the traceability analysis have an agreed upon resolution. If appropriate, confirm documentation (or requirement) updates are completed to prevent future issues and confirm documentation of the resolution points to or resides with the traceability analysis.</li> </ul>
<p>Adequacy of system security and privacy policies, plans, technical designs, and implementations</p>	<ul style="list-style-type: none"> <li>• Evaluate and make recommendations on project policies and procedures to confirm that the system is secure and that the privacy of client data is maintained to specific, defined standards (NIST, HIPAA, MARS-E).</li> <li>• Assess the approach and tools mentioned in the design and development deliverables that include network security, security of data, access or physical security, and the security of the application software.</li> <li>• Review of the Site Preparation Plan, includes checking the results of detail modeling to operations facilities to verify the proposed network design contains adequate bandwidth for transmission to meet specifications.</li> <li>• Monitor that redacted data is used whenever possible during testing, training and conversion validation. Verify appropriate access as required for PHI and PII. Review these work products and confirm they adequately address security requirements for the Equipment, Software, Network and Facility.</li> <li>• In order to determine what areas within the system would be likely targets of potential threats, we analyze the conceptual technical architecture and business requirements with a focus on the known security threat landscape to identify risks for each of the functional and architectural areas identified.</li> </ul>
<p>Coverage and integrity of all system testing, including stress testing and testing of interfaces between modules and with external partner systems</p>	<ul style="list-style-type: none"> <li>• Review schedules to verify that adequate time and resources are assigned for planning, development, review, testing and rework.</li> <li>• Review the Performance test plan to validate it is measuring performance of appropriate scenarios, volumes of transactions and provide output measurements consistent with the defined performance requirements.</li> <li>• Review performance testing results to include the review of new and existing system hardware configurations to determine if their performance is adequate to meet existing and proposed system requirements.</li> <li>• Evaluate the planned hardware configurations and infrastructure architecture to verify it is scalable, maintainable, and upgradeable, and will meet the demands of the planned system. Where the FDGS Team finds deficiencies, we make recommendations for changes to the hardware design and, if applicable, any cloud configurations.</li> <li>• Review the State's hardware configuration management plans and procedures to identify any potential issues, such as the sun setting of support for a hardware component.</li> <li>• Evaluate volume and stress testing results, and evaluate the capacity planning program to verify its ability to support future growth.</li> <li>• Identify issues, risks, or deficiencies, we will make recommendation to improve system performance and accommodate future growth.</li> </ul>

Modular Development	Approach to Verification and Validation
	<ul style="list-style-type: none"> <li>• Validate that the testing of the software simulates operational conditions.</li> <li>• Validate that daily, month end, and month beginning conditions exist for batch testing.</li> </ul>
<p>Capacity management, including consideration of future vendors' support and release plans for underlying databases, software, and hardware</p>	<ul style="list-style-type: none"> <li>• Evaluate program changes and impacts that may produce significant spikes in system demand such as open enrollment periods, changes to MAGI requirements for Medicaid eligibility, month end, quarterly and annual processing volumes.</li> <li>• We evaluate growth plans, and evaluate the capacity planning program to verify its ability to support future growth.</li> <li>• Verify any discrepancies between the system design and development documentation and the DHHS technology plan.</li> </ul>
<p>Adequacy of Disaster Recovery Planning</p>	<ul style="list-style-type: none"> <li>• Confirm that roles and responsibilities, timeframes and communication procedures and escalation procedures are clearly defined for all project stakeholders, including specific contacts. Both the routine and unexpected process requirements that are likely to impact the systems reliability should be addressed.</li> <li>• Review the available Business Continuity Plan accessing for identification of all critical systems alternate processes are documented, when a business disruption of a system requires moving to a disaster recovery plan and appropriate alternative sites and contracts are in place to support Business Continuity Plan and Disaster Recovery Plan. Assess the plans, processes and procedures for business continuity and recovery are in place in the event of a disaster or business emergency.</li> <li>• Verify that training and tests will be conducted periodically.</li> <li>• Review results on any disaster recovery test performed.</li> </ul>

## 2.1.1 Project Management

*Overview: The IV&V contractor will need to coordinate its activities with the schedule and activities for the projects. Flexibility is necessary in adapting to the project status and realignment of resources to meet the requirements of the RFP.*

Leveraging relationships currently in place with DHHS, the FDGS IV&V Team will continue to work collaboratively with DHHS and key stakeholders to coordinate all IV&V activities. The IV&V Project Management Plan (PMP) customized for each project enables programmatic oversight, ensure IV&V services are applied consistently, and outline coordination with other project plans.

FDGS will work with DHHS and its partners to develop the initial IV&V project schedule and to integrate the IV&V schedule with Master Project schedules, as appropriate. IV&V schedules provide the flexibility to modify workload as schedule changes occur.

*Describe the bidder's proven methodology, approach, and process for Project Management of Medicaid IV&V activities. (RFP Section V, B.1.c.i)*

FDGS has worked with multiple states verifying and validating that their systems are built according to defined specifications. With decades of rich first-hand experience at leveraging information technology methodologies and industry best practices that draw from standards such as CMMI, IEEE and PMI, we bring professionals that can assess work products and provide recommendations aimed at enhancing the overall quality and robustness of deliverables.

With our understanding of past DHHS projects and the future vision of DHHS, FDGS aligns our IV&V management methodology to the standard project phases as defined by the PMBOK and as reflected in **Figure 2** below. We understand DHHS' strategic goals and the roadmap to achieve them. We tailor our IV&V program management methodology to work with the agreed upon development methodology to include waterfall, prototyping, interactive/incremental, spiral, rapid application development (RAD), and agile methodology.

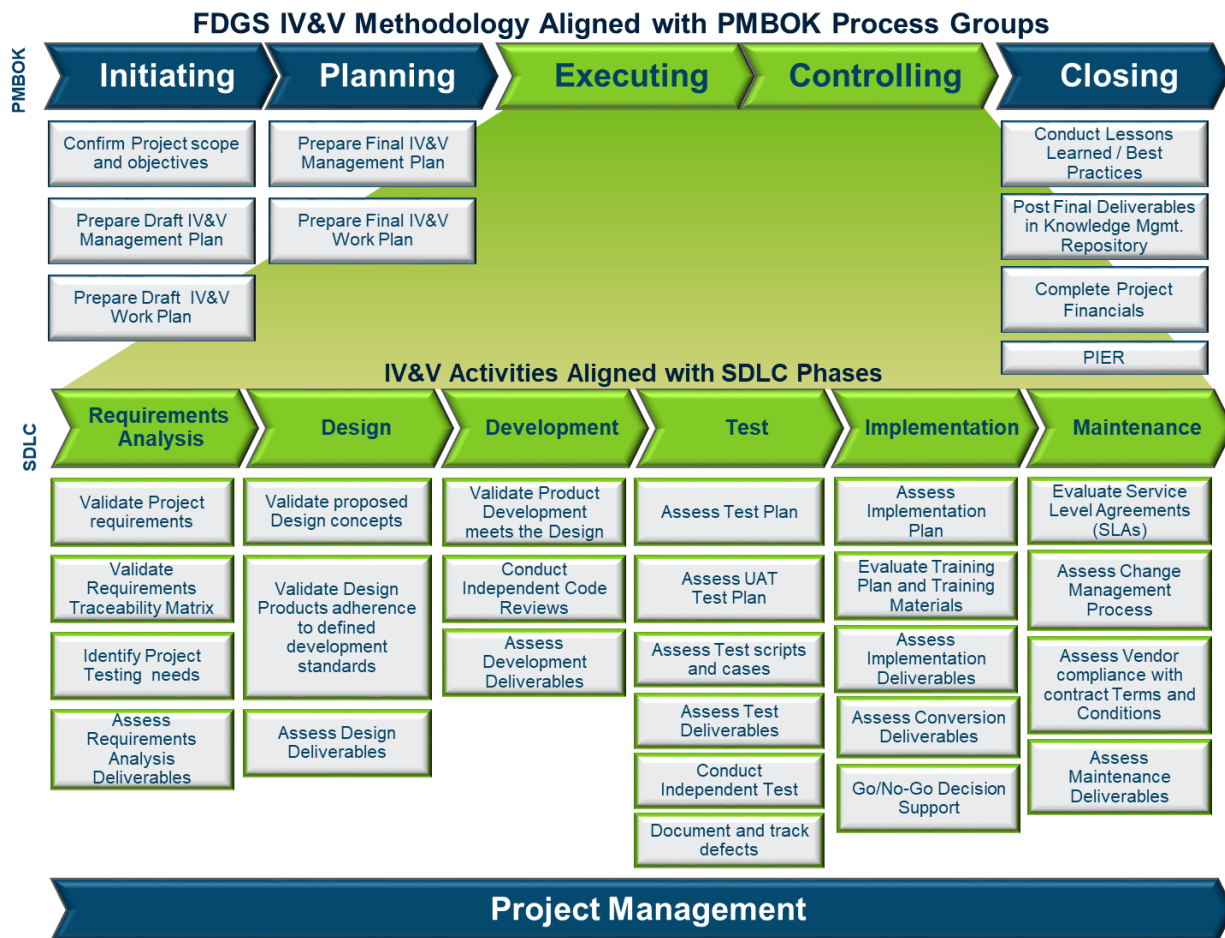


Figure 2: FDGS aligns with PMBOK and each SDLC phase

FDGS follows a structured IV&V project management approach as follows:

- **Initiate** – we confirm key project and IV&V objectives, secure staff and prepare a draft IV&V Management Plan and IV&V Work Plan
- **Plan** – we create and maintain a structure to accomplish the objectives and prepare the team to begin the phase or task. This includes finalization of both the IV&V Management Plan and the IV&V Work Plan.
- **Execute** – we coordinate the people to carry out the IV&V Management Plan and build the IV&V products/tools. In this phase, we:
  - Complete all IV&V tasks, including deliverable, progress and process reviews
  - Provide and use our IV&V tools, such as checklists and metrics
  - Prepare required IV&V deliverables, including deliverable review reports and IV&V Status Reports
  - Share our findings through defined communication processes and channels
- **Control** – we confirm that project objectives are met by monitoring and measuring progress and recommending corrective action as necessary. We apply consistent

assessment and monitoring processes throughout design, development and implementation. We track and monitor progress of our IV&V tasks and deliverables, assess the progress and performance of the implementation contractors and adherence to the overall schedule and budget.

- **Close** – we assist the project in verifying that all deliverables meet requirements, the products have been tested, that there are no findings that would preclude final implementation and provide a recommendation for final approval/acceptance.

Our proposed project management methodology is directed to the accomplishment of four fundamental objectives:

- **Effective Communications** – Timely and accurate communication of issues and progress to all project participants throughout the duration of the project
- **Dynamic IV&V Project Management** – Estimating, planning, organizing, and managing the work to verify that quality work products are delivered on schedule and within budget
- **Proactive IV&V Quality Management** – Building the processes for evaluating progress, work products, and work processes to deliver quality end products that meet business objectives, client expectations and project requirements into our internal standards for deliverable and work product development
- **Comprehensive IV&V Risk Management** – Well-defined processes for anticipating, assessing and mitigating project risk areas. The proven practices developed by our staff over years of successfully conducting similar projects enable us to anticipate various types of risks and incorporate procedures to avoid or minimize areas of risk

The overall project management methodology is structured to meet these four objectives, as illustrated in **Table 5** below:

**Table 5: Techniques and Tools of the Project Management Objectives**

Objectives	Techniques	Tools
<b>1. Effective Communication</b>	<ul style="list-style-type: none"> <li>• Communication and management reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Standardized report formats</li> <li>• Communication plan with appropriate contact points and escalation procedures</li> <li>• Weekly and Monthly Status Reports</li> <li>• Document tracking system for procedures and reports</li> </ul>
<b>2. Dynamic IV&amp;V Project Management</b>	<ul style="list-style-type: none"> <li>• Planning and organizing work</li> <li>• Documentation standards</li> <li>• Estimating and administering the work effort for the project</li> <li>• Managing project resources</li> </ul>	<ul style="list-style-type: none"> <li>• IV&amp;V Management Plan is completed to establish standards and procedures</li> <li>• MS Project to manage tasks, activities, dependencies, and schedule</li> <li>• MS Office software to support email and the development of deliverables and presentations</li> </ul>

Objectives	Techniques	Tools
	<ul style="list-style-type: none"> <li>Establishing project controls</li> <li>Formalizing Change Control</li> </ul>	<ul style="list-style-type: none"> <li>Resource allocation and scheduling plan and procedures</li> <li>Change Control procedures and approval process</li> </ul>
<b>3. Proactive IV&amp;V Quality Management</b>	<ul style="list-style-type: none"> <li>Establishing standards and approved conventions</li> <li>Issue Identification</li> <li>Scope/Change Control Management</li> </ul>	<ul style="list-style-type: none"> <li>Quality Checklist and Templates</li> <li>Scheduled Quality Assurance checkpoint reviews</li> <li>Quality Control work product evaluations</li> <li>Issue Tracking System</li> <li>Established change control, change approval and communication procedures</li> </ul>
<b>4. Comprehensive IV&amp;V Risk Management</b>	<ul style="list-style-type: none"> <li>Identifying and anticipating all components of risk – managerial, political, technical and financial</li> <li>Developing risk evaluation and mitigation strategies from project outset</li> <li>Conducting ongoing risk assessments</li> </ul>	<ul style="list-style-type: none"> <li>Standardized risk assessment templates</li> <li>Standardized assessment categories</li> <li>Best Risk Management practices from prior projects</li> <li>Ongoing risk monitoring (risk triggers) included in the project status reports</li> </ul>

FDGS applies a structured deliverable review and assessment methodology that our team has used on many prior IV&V engagements. This includes:

**Phase 1 – Information Gathering**

- **Validate Scope** – confirm why the assessment is being conducted, what areas, the timelines, schedules, types of communication, roles responsibilities, etc.
- **Collect Documents** – request for applicable historical documents, set up of repository and identify types of categories for your assessment type
- **Conduct Interviews** – schedule and conduct interviews with key staff/groups/divisions in applicable areas identified for the assessment(s), collect information

**Phase 2 – Analysis of Information**

- **Review documents to identify the good, the bad, and the ugly** – put into categories specific to assessment type
- **Analyze information by category** – identify common themes (i.e. how often they occur, performance measurements, policy or procedure gaps, age of equipment, skills gaps, defects, etc.)
- **Conduct Analysis on Alternatives** – Identify alternatives by research on other states, other departments, and national standards or there may also be an alternative to

consider that research does not identify. Conduct the analysis including pros and cons, consideration of timelines and cost, Federal and state mandates, enterprise goals, etc.

### Phase 3 - Final Report

- Document findings in accordance with specifications from the client and CMS
- Summarize findings and summarize the alternatives (what the possibilities are)
- Additionally, depending on the statement of work and type of assessment the final report may include the future vision, objectives, gaps between the future and current, recommendation report, a roadmap, implementation plan or change resistance plan

CMS is looking to IV&V contractors to serve a role in confirming that their requirements are met when supporting Medicaid transformation projects. FDGS remains independent from the vendors who are providing solutions for these transformations and we understand the outcomes that CMS is encouraging Nebraska to achieve. Our flexible IV&V service offering is focused on helping Nebraska achieve its transformation of the Medicaid Enterprise to managed care while meeting CMS expectations.

FDGS recognizes the importance of alignment to CMS standards and processes throughout the journey of system development. We use the following methods to keep the projects aligned with CMS where appropriate:

- Work with the State to identify the most appropriate templates and artifacts to develop, based on the artifacts available in the CMS Opportunity to Network and Engage (CMS zONE)
- Perform assessment of the implementation contractors' approaches and deliverables against MITA and the standards and conditions for Medicaid IT
- Utilize the most recent certification guidance available from CMS including Medicaid Enterprise Certification Toolkit (MECT) version 2.3, Medicaid Eligibility and Enrollment Toolkit (MEET) version 1.1, Outcomes-Based Certification (OBC), and Streamlined Modular Certification (SMC)

The FDGS Team creates a culture of accountability by measuring the vendor's achievements against DHHS' explicit goals and objectives and, where necessary, help clarify the desired outcomes to your contractors. We recognize that IV&V's duty to complete mandatory IV&V reporting on behalf of CMS must be balanced with the specific dynamics that pertain to Nebraska, and must ultimately be supportive of your defined strategy. Nebraska's vision for Medicaid transformation is an overarching consideration of FDGS when providing IV&V oversight of your vendors. Our verification and validation practices are centered on protecting the interests of Nebraska citizens – clients you serve, your staff, and the economic interests of taxpayers.

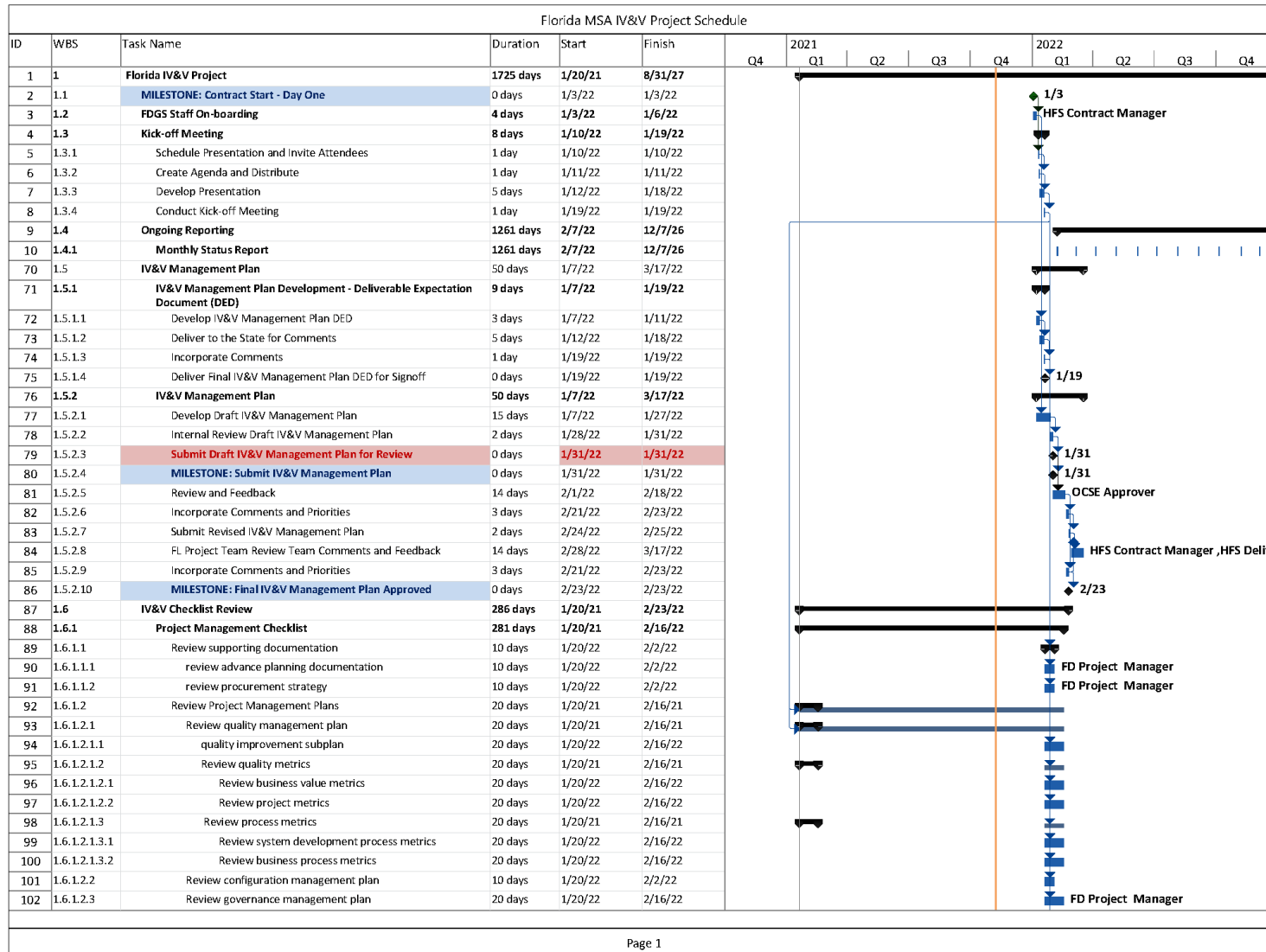


*Include an example of an IV&V project schedule utilized on similar projects. (RFP Section V, B.1.c.ii)*

FDGS has included an example of a project schedule on the following pages. This example was developed for our FDGS Florida Information Technology IV&V Project Proposal. Florida Department of Management Services (DMS), initiated a Request for Proposal (RFP) to provide Independent Verification and Validation (IV&V) services for Information Technology (IT) projects. The state issued the RFP May 18, 2021 to establish a new State Term Contract (STC) for use by all state agencies.

This example includes the baseline for the repeated IV&V activities and details for each of our IV&V projects. Our IV&V Lead and IV&V Project Manager begin with a baseline similar to this example and tailor it to the unique needs and timeline of each system implementation based on its current implementation phase or whether it has moved into Operations and Maintenance. Additional customization of the plan is necessary to accommodate unique technology and vendor timelines or constraints to align all project activities.





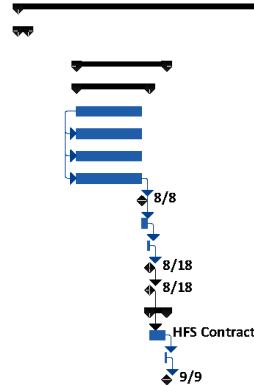


Florida MSA IV&V Project Schedule														
ID	WBS	Task Name	Duration	Start	Finish	2021				2022				
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
103	1.6.1.2.4	Review training plans	20 days	1/20/22	2/16/22									FD Business Analyst
104	1.6.1.2.5	Review requirements management plan	20 days	1/20/22	2/16/22									FD Business Analyst ,FD Business Lead
105	1.6.1.2.6	Review project reporting plan	20 days	1/20/22	2/16/22									FD Project Manager
106	1.6.1.2.7	Review issues and risk management plan	20 days	1/20/21	2/16/21									
107	1.6.1.2.7.1	Review and analyze issues and risks	20 days	1/20/22	2/16/22									
108	1.6.1.2.8	Review configuration management plan	20 days	1/20/22	2/16/22									
109	1.6.1.2.9	Review staffing plan	20 days	1/20/22	2/16/22									
110	1.6.1.2.10	Review change management plan	20 days	1/20/21	2/16/21									
111	1.6.1.2.10.1	Verify areas resistant to change have been identified	20 days	1/20/22	2/16/22									
112	1.6.1.2.10.2	Analyze change management steps are followed	20 days	1/20/22	2/16/22									
113	1.6.1.2.11	Review communications plan	20 days	1/20/22	2/16/22									
114	1.6.1.2.12	Review project schedule management plan	20 days	1/20/21	2/16/21									
115	1.6.1.2.12.1	review project baseline schedule	20 days	1/20/22	2/16/22									
116	1.6.1.2.12.2	Review current schedule	20 days	1/20/22	2/16/22									
117	1.6.1.2.13	Review data governance plan	20 days	1/20/22	2/16/22									
118	1.6.1.2.14	Review quality management plan	20 days	1/20/22	2/16/22									
119	1.6.1.2.15	Analyze changes need for improvements to project managem	3 days	1/20/22	1/24/22									
120	1.6.1.2.16	Develop recommendations to improve project management pl	3 days	1/20/22	1/24/22									
121	1.6.1.2.17	Document recommendations needed to improve project mana	3 days	1/20/22	1/24/22									
122	1.6.1.3	Review project status reports	20 days	1/20/22	2/16/22									FD Project Manager
123	1.6.1.4	Review project lessons learned	20 days	1/20/22	2/16/22									FD Business Analyst ,FD Business Lead
124	1.6.1.5	Customize independent verification and validation checklists	20 days	1/20/22	2/16/22									FD Business Analyst ,FD Business Lead
125	1.6.1.6	Business process re-engineering plan, process and procedures	20 days	1/20/21	2/16/21									
126	1.6.1.6.1	Review the SDLC methodology for appropriateness to support	20 days	1/20/22	2/16/22									FD Business Lead,FD Technical Analyst
127	1.6.1.6.2	Review the re-engineering plan for resources, cost and leaders	20 days	1/20/22	2/16/22									FD Business Lead,FD Technical Analyst
128	1.6.1.6.3	Verify the approach is supported with relevant change manage	20 days	1/20/22	2/16/22									FD Business Lead,FD Technical Analyst
129	1.6.1.6.4	Review business process for optimization	20 days	1/20/22	2/16/22									
130	1.6.1.7	Review change and configuration control plans, process and proce	10 days	1/20/22	2/2/22									FD Business Lead,FD Technical Analyst
131	1.6.2	<b>Quality Management Checklist</b>	5 days	1/20/22	1/26/22									
134	1.6.3	<b>Training Checklist</b>	20 days	1/20/22	2/16/22									
139	1.6.4	<b>Requirements Management Checklist</b>	25 days	1/20/22	2/23/22									
140	1.6.4.1	Verify that system requirements are well-defined, understood, an	25 days	1/20/22	2/23/22									
141	1.6.4.2	Verify that software requirements can be traced through design, c	25 days	1/20/22	2/23/22									
142	1.6.4.3	Verify that requirements are under formal configuration control	25 days	1/20/22	2/23/22									
143	1.6.4.4	Verify that performance requirements satisfy user needs	25 days	1/20/22	2/23/22									
144	1.6.4.5	Verify that all system interfaces are exactly described,	25 days	1/20/22	2/23/22									
145	1.6.4.6	Verify those approved interface documents are available	25 days	1/20/22	2/23/22									
146	1.6.5	<b>Operating Environment Checklist</b>	25 days	1/20/22	2/23/22									
151	1.6.6	<b>Software Development Checklist</b>	20 days	1/20/22	2/16/22									
152	1.6.6.1	Evaluated the design products for adherence to the project design	20 days	1/20/22	2/16/22									
153	1.6.6.2	Verify that design requirements can be traced back to system req	20 days	1/20/22	2/16/22									
154	1.6.6.3	Verify that all design products are under configuration control	20 days	1/20/22	2/16/22									
155	1.6.6.4	Evaluate the system's division between batch and on-line process	20 days	1/20/22	2/16/22									
156	1.6.6.5	Evaluate the appropriate use of OS scheduling software.	20 days	1/20/22	2/16/22									



Florida MSA IV&V Project Schedule													
ID	WBS	Task Name	Duration	Start	Finish	2021				2022			
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
157	1.6.6.6	Evaluate coding standards	20 days	1/20/22	2/16/22								
158	1.6.6.7	Evaluate the level of test automation, interactive testing, and inte	20 days	1/20/22	2/16/22								
159	1.6.6.8	Evaluate the level of test automation, interactive testing, and inte	20 days	1/20/22	2/16/22								
160	1.6.6.9	Verify that an appropriate level of test coverage is achieved	20 days	1/20/22	2/16/22								
161	1.6.7	<b>Operations Oversight Checklist</b>	10 days	1/20/22	2/2/22								
165	1.6.8	<b>System and Acceptance Testing Checklist</b>	20 days	1/20/22	2/16/22								
166	1.6.8.1	Conduct detailed assessment of the Master Test Plan to validate	120 days	1/20/22	2/16/22								
167	1.6.8.2	Review testing methodology to be employed including approach	20 days	1/20/22	2/16/22								
168	1.6.8.3	Review description of the roles and responsibilities of the Testing	20 days	1/20/22	2/16/22								
169	1.6.8.4	Review documentation of test procedures to be used by the Testi	20 days	1/20/22	2/16/22								
170	1.6.8.5	Verify provisions for maintenance of test script tracking database	20 days	1/20/22	2/16/22								
171	1.6.8.6	Validate that appropriate level of automation is maintained with	20 days	1/20/22	2/16/22								
172	1.6.9	<b>Data Management Checklist</b>	15 days	1/20/22	2/9/22								
178	1.7	<b>Initial IV&amp;V Report</b>	106 days	2/10/22	7/7/22								
179	1.7.1	<b>Initial IV&amp;V Report - Deliverable Expectation Document (DED)</b>	9 days	2/10/22	2/22/22								
184	1.7.2	<b>Prepare Draft Initial IV&amp;V Report</b>	68 days	2/10/22	5/16/22								
194	1.7.3	<b>Initial IV&amp;V Report Federal Review</b>	17 days	5/17/22	6/8/22								
198	1.7.4	<b>Initial IV&amp;V Report State Review</b>	16 days	6/9/22	6/30/22								
202	1.7.5	<b>Initial IV&amp;V Report Debriefing</b>	5 days	7/1/22	7/7/22								
207	1.8	<b>Periodic IV&amp;V Reports</b>	1381 days	5/17/22	8/31/27								
208	1.8.1	<b>Periodic IV&amp;V Report #1</b>	89 days	5/17/22	9/16/22								
209	1.8.1.1	<b>Prepare Draft Periodic IV&amp;V Report #1</b>	68 days	5/17/22	8/18/22								
210	1.8.1.1.1	Review Relevant Documentation	60 days	5/17/22	8/8/22								
211	1.8.1.1.2	Attend and Document Meeting Observations	60 days	5/17/22	8/8/22								
212	1.8.1.1.3	Clarify Observations	60 days	5/17/22	8/8/22								
213	1.8.1.1.4	Document Findings	60 days	5/17/22	8/8/22								
214	1.8.1.1.5	Report Cutoff Date	0 days	8/8/22	8/8/22								
215	1.8.1.1.6	Develop Draft Periodic IV&V Report #1	5 days	8/9/22	8/15/22								
216	1.8.1.1.7	Internal Review Draft Periodic IV&V Report #1	3 days	8/16/22	8/18/22								
217	1.8.1.1.8	Submit Draft Periodic IV&V Report #1 for Review	0 days	8/18/22	8/18/22								
218	1.8.1.1.9	<b>MILESTONE: Submit Draft Periodic IV&amp;V Report #1</b>	0 days	8/18/22	8/18/22								
219	1.8.1.2	<b>Draft Periodic IV&amp;V Report #1 State Review</b>	16 days	8/19/22	9/9/22								
220	1.8.1.2.1	State Review Comments and Feedback	14 days	8/19/22	9/7/22								
221	1.8.1.2.2	Correct Mistakes of Fact / Append Comments	2 days	9/8/22	9/9/22								
222	1.8.1.2.3	<b>MILESTONE: Final Periodic IV&amp;V Report #1 Approved</b>	0 days	9/9/22	9/9/22								
223	1.8.1.3	<b>Periodic IV&amp;V Report #1 Debriefing</b>	5 days	9/12/22	9/16/22								
224	1.8.1.3.1	Create Agenda	1 day	9/12/22	9/12/22								
225	1.8.1.3.2	Develop Debriefing Presentation	3 days	9/13/22	9/15/22								
226	1.8.1.3.3	Deliver Presentation	1 day	9/16/22	9/16/22								
227	1.8.1.3.4	<b>MILESTONE: Periodic IV&amp;V Report #1 Debriefing Delivered</b>	0 days	9/16/22	9/16/22								
228	1.8.2	<b>Periodic IV&amp;V Report #2</b>	89 days	8/19/22	12/21/22								
248	1.8.3	<b>Periodic IV&amp;V Report #3</b>	89 days	11/23/22	3/27/23								
268	1.8.4	<b>Periodic IV&amp;V Report #4</b>	89 days	2/27/23	6/29/23								
288	1.8.5	<b>Periodic IV&amp;V Report #5</b>	89 days	6/1/23	10/3/23								

Florida MSA IV&V Project Schedule														
ID	WBS	Task Name	Duration	Start	Finish	2021					2022			
						Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
308	1.8.6	Periodic IV&V Report #6	89 days	9/5/23	1/5/24									
328	1.8.7	Periodic IV&V Report #7	89 days	12/8/23	4/10/24									
348	1.8.8	Periodic IV&V Report #8	89 days	3/13/24	7/15/24									
368	1.8.9	Periodic IV&V Report #9	89 days	6/17/24	10/17/24									
388	1.8.10	Periodic IV&V Report #10	89 days	9/19/24	1/21/25									
408	1.8.11	Periodic IV&V Report #11	89 days	12/24/24	4/25/25									
428	1.8.12	Periodic IV&V Report #12	89 days	3/28/25	7/30/25									
448	1.8.13	Periodic IV&V Report #13	89 days	7/2/25	11/3/25									
468	1.8.14	Periodic IV&V Report #14	89 days	10/6/25	2/5/26									
488	1.8.15	Periodic IV&V Report #15	89 days	1/8/26	5/12/26									
508	1.8.16	Periodic IV&V Report #16	89 days	4/14/26	8/14/26									
528	1.8.17	Periodic IV&V Report #17	89 days	7/17/26	11/18/26									
548	1.8.18	Periodic IV&V Report #18	89 days	10/21/26	2/22/27									
568	1.8.19	Periodic IV&V Report #19	89 days	1/25/27	5/27/27									
588	1.8.20	Periodic IV&V Report #20	89 days	4/29/27	8/31/27									
608	1.9	Deliverable Observation Reports (DOR)	1119 days	3/3/22	6/16/26									
609	1.9.1	Deliverable Observation Report - Deliverable Expectation Document (DED)	9 days	3/3/22	3/15/22									
614	1.9.2	Deliverable Observation Report #1	84 days	5/17/22	9/9/22									
615	1.9.2.1	Prepare Draft DOR #1	68 days	5/17/22	8/18/22									
616	1.9.2.1.1	Review Relevant Documentation	60 days	5/17/22	8/8/22									
617	1.9.2.1.2	Attend and Document Meeting Observations	60 days	5/17/22	8/8/22									
618	1.9.2.1.3	Clarify Observations	60 days	5/17/22	8/8/22									
619	1.9.2.1.4	Document Findings	60 days	5/17/22	8/8/22									
620	1.9.2.1.5	Report Cutoff Date	0 days	8/8/22	8/8/22									
621	1.9.2.1.6	Develop Draft DOR #1	5 days	8/9/22	8/15/22									
622	1.9.2.1.7	Internal Review DOR #1	3 days	8/16/22	8/18/22									
623	1.9.2.1.8	Submit Draft DOR #1 for Review	0 days	8/18/22	8/18/22									
624	1.9.2.1.9	MILESTONE: Submit DOR #1	0 days	8/18/22	8/18/22									
625	1.9.2.2	Draft DOR #1 State Review	16 days	8/19/22	9/9/22									
626	1.9.2.2.1	State Review Comments and Feedback	14 days	8/19/22	9/7/22									
627	1.9.2.2.2	Correct Mistakes of Fact / Append Comments	2 days	9/8/22	9/9/22									
628	1.9.2.2.3	MILESTONE: Final DOR #1 Approved	0 days	9/9/22	9/9/22									
629	1.9.3	Deliverable Observation Report #2	84 days	3/27/23	7/20/23									
644	1.9.4	Deliverable Observation Report #3	84 days	2/12/24	6/6/24									
659	1.9.5	Deliverable Observation Report #4	84 days	2/14/25	6/11/25									
674	1.9.6	Deliverable Observation Report #5	84 days	2/19/26	6/16/26									



*Describe how the IV&V bidder's project management approach adapts to varying State governance models. (RFP Section V, B.1.c.iii)*

The FDGS IV&V project management approach can be calibrated to suit the needs of any organization or governance model as needed by DHHS. We bring the tools, templates and talent and apply the right amount of rigor to the processes as directed by our clients. As a leading provider for IV&V services in the healthcare industry we have seen vastly disparate service requests for IV&V. Some of our clients have taken the “kitchen sink” approach and included any augmentation services they needed and applied the title of IV&V, while other clients have taken an approach where they are only doing IV&V because they are required to, with minimalistic vendor involvement.

FDGS builds on the processes already established for the ongoing DMA Project and other prior projects incorporating and adapting as the governance needs and structure evolve in the project lifecycle. FDGS commends DHHS on establishing an Enterprise Project Management Office (EPMO) and looks forward to supporting the EPMO's efforts to establish a standard approach to portfolio, program and project management. The complexity and dynamic nature of this and any large-scale project makes effective project management a mandatory ingredient for success.

From our numerous and wide-range of IV&V projects, we have found that the keys to project management success include the following:

- **Providing the right team** – skilled in project management and specific program areas with sound subject matter expertise
- **Providing an understanding of the business problem** – given the timeframes and mission critical nature of the projects, it is imperative to provide leadership assistance in prioritizing the work and maximizing productivity
- **Providing best practice solutions** – based on individual customer requirements, provide a proven set of methods, tools and procedures that can be customized to each project's needs
- **Creating a partnership** – with DHHS to create shared project success criteria, provide the professionals and experience to validate the project success criteria, and stand with the client throughout the project to reach this goal
- **Mitigating Risk** – through our experience and commitment, we are able to add value and assist DHHS management in making informed decisions regarding risk mitigation, risk control, and project planning
- **Credentials** – of having a national government practice with highly skilled professionals who have worked on engagements in nearly every state. This depth of experience has led to the development of a comprehensive methodology for managing and executing successful, large-scale IV&V projects

The project teams follow a similar core approach to address the individual project needs, nature, and scope of the IV&V responsibilities. The FDGS Team is staffed with skills necessary to address the business needs, the technology used, and development methodology employed.

*Address the bidder’s approach to meeting each requirement in a table that contains the requirement and the contractor’s approach to meeting the requirement. (RFP Section V, B.1.c.iv)*

**Table 6** documents our approach to each requirement for Project Management.

**Table 6: Project Management Requirements**

#	Requirement	FDGS Approach
1.	<i>Must develop and submit comprehensive IV&amp;V Project Management Plan(s) work product for Department approval a maximum of 30 days after the project start, and must manage and perform the IV&amp;V services in accordance with the IV&amp;V Project Management Plan(s).</i>	<p>The FDGS Team works collaboratively with DHHS and key stakeholders to develop and customize an IV&amp;V Project Management Plan (PMP) that integrates with, and meets the needs of each project. We understand the value of the PMP comes from the execution of the plan’s content.</p> <p>This is not a deliverable that “sits on the shelf;” it is the guide for the entire FDGS Team with some key components that DHHS can also apply to enable programmatic oversight over the projects. FDGS is committed to delivering an IV&amp;V PMP that is practical and useful, applied consistently in the management of the IV&amp;V effort, and coordinated with other project plans.</p> <p>The sub-subsections of this plan detail how our IV&amp;V team handles Risks and Issues Management, Quality Management, Cost Management, Stakeholder Management, Change Management, staffing, and other sub-plans based on guidance from the Project Management Body of Knowledge (PMBOK®).</p>
2.	<i>Must develop IV&amp;V project schedule(s) work products a maximum of 30 days after the projects’ start and update weekly IV&amp;V schedules that coordinates IV&amp;V activities with project schedules.</i>	<p>FDGS works with DHHS and its partners to develop the baseline IV&amp;V project schedule, outlining the project tasks, roles, responsibilities and deliverables for each project. IV&amp;V schedules align to implementation contractor project schedules when available and provide the flexibility to modify workload as schedule changes occur. FDGS works closely with DHHS to integrate the IV&amp;V schedule with the Master Project schedule and proceed to baseline all schedules across MMIS modules and MES phases.</p> <p>FDGS will:</p> <ul style="list-style-type: none"> <li>• Validate tasks and modify them as requested, to include:                     <ul style="list-style-type: none"> <li>○ Validate tasks and deliverables from the RFP were included in the initial project Work Breakdown Structure (WBS)</li> <li>○ Identify any additional tasks and deliverables to add to WBS based on initial feedback from DHHS</li> <li>○ Identify predecessors and successors</li> <li>○ Incorporate tasks and due dates for all deliverables that require drafts and final submissions and review and approval periods</li> </ul> </li> <li>• Assign resources to tasks and confirm that resources are not over allocated</li> </ul>

#	Requirement	FDGS Approach
		<ul style="list-style-type: none"> <li>• Baseline approved work plan to track actual against baseline start and finish dates</li> <li>• Using Microsoft Project, review and update the work plan on a weekly basis to support currency, accuracy, and completeness as well as to facilitate timely progress and measurement tracking and reporting</li> <li>• Complete weekly updates to determine activities or tasks that may be at risk of budget or schedule variances and to allocate resources to address project risks, including:                         <ul style="list-style-type: none"> <li>○ Summary of key impacts and changes made since prior month and risks and issues associated with changes</li> <li>○ Percent complete for each task and subtask</li> <li>○ Actual hours by task and subtask</li> <li>○ Resource adjustments as necessary</li> <li>○ Gantt charts and various views showing planned start and end dates and durations of all tasks, subtasks, and major milestones and deliverables, including timeframes for review and approval of all deliverables and work products and exceed contract commitments</li> </ul> </li> <li>• Submit IV&amp;V schedule to DHHS for review and approval in accordance within 30 days after project start date</li> </ul>
3.	<p><i>Must develop clear lines of communication and collaborative working relationships with project teams, project leadership, and CMS.</i></p>	<p>FDGS plans to leverage relationships currently in place with DHHS, its vendor and CMS as a starting point for communications. As part of the IV&amp;V Project management Plan, FDGS develops a Communication Plan to govern communications throughout the project life cycle. The purpose of the Communication Plan is to identify the methods of exchanging information between the IV&amp;V Team and other project stakeholders. Good communication policies encompass information exchange and dissemination both internally to project participants and externally to parties with a vested interest in project progress. The Communication Plan identifies the formal communication approach and protocols that are employed to keep stakeholders informed throughout the duration of the project. As part of executing this communication plan, FDGS will:</p> <ul style="list-style-type: none"> <li>• Periodically assess the comprehensiveness of the Communication Plan and that is appropriately addresses all required contractors, partners, stakeholders and sponsors</li> <li>• Encourage participation from stakeholders early and often through planning and development to encourage “buy-in”</li> <li>• Collaborate with CMS through the gate review process</li> <li>• Devise a well-coordinated review process with stakeholders that includes result reporting</li> </ul>

#	Requirement	FDGS Approach
		<ul style="list-style-type: none"><li>• Evaluate if additional communications are required or additional communication protocols need to be established and enacted</li><li>• Verify that there is timely and accurate communication of issues and progress to all project participants throughout the duration of the project</li></ul>



## 2.1.2 Independent Assessment and Quality Assurance

*Overview: The IV&V contractor will actively participate in the projects and provide ongoing assessments of the project to proactively identify risks, issues, and opportunities along with associated recommendations for the project team. Project processes, work products, and deliverables will differ between projects.*

Independent Verification and Validation (IV&V) is defined as processes that determine whether development products of a given activity conform to the requirements of that activity, and whether the product satisfies its intended use and user needs. This may include active analysis, evaluation, review, inspection, assessment, and testing of software products and processes. Simply stated, IV&V is independent assessment of an IT project’s products and processes to verify the quality of the final product. IV&V organizations are both technically and managerially separate from the organization responsible for developing the product.

There are two key principles that characterize IV&V:

- **Are we building the thing right?** Independently verifying the development processes to confirm they adhere to best practices.
- **Are we building the right thing?** Independently validating the products to confirm quality and meet the project requirements and objectives.

The core of IV&V activity is deliverable assessment. The primary purpose of deliverable assessment is not only to verify each deliverable satisfies all applicable business and technical requirements and conforms to project quality and industry standards, but also to confirm that each deliverable moves the project one step closer to implementation. The results of IV&V deliverable reviews help DHHS understand and measure progress in each area and correspondingly make informed decisions. The FDGS deliverable review approach is an important tool in that it sets expectations for the State and vendor through the System Development Life Cycle (SDLC) and into Operations and Maintenance (O&M).

*Address the bidder’s approach to meeting each requirement in a table that contains the requirement and the bidder’s approach to meeting the requirement. (RFP Section V, B.2.c.i)*

**Table 7** documents our approach to each requirement for Independent Assessment and Quality Assurance.

**Table 7: Independent Assessment and Quality Assurance Requirements**

#	Requirement	FDGS Approach
1.	<i>Must submit an IV&amp;V Management Plan for each project assigned, which includes specific information on what the contractor will do, periodic reviews, timelines, anticipated resources, estimated hours, and estimated/actual budget information.</i>	FDGS will update and expand the current IV&V Management Plan to take advantage of enhancements which have occurred since the current one was created. The new plan will also allow the FDGS Team to add additional information based on their current knowledge and insights from Nebraska DHHS Projects.

#	Requirement	FDGS Approach
2.	<i>Must actively participate in the projects and provide ongoing assessments of the projects to proactively identify risks, issues, and opportunities along with associated recommendations for the project team.</i>	FDGS actively participates in each project. We provide verbal feedback during meetings and ongoing assessments of the project work products and deliverables to identify and document risks, issues, and IV&V observations. We will provide recommendations for mitigation and remediation as needed as well as for each IV&V observation.
3.	<i>Must assess the progress of the projects against the planned schedules, budgets, and resource utilizations. This will include periodic assessment of the project plan/schedule on a monthly or quarterly basis (schedule will be determined based on what is appropriate for the project timeline)</i>	<p>FDGS will review the work breakdown structure (WBS) provided by the project team to identify project tasks, work products and milestones. We will ensure that all deliverables are associated with levels of effort and required resources. We evaluate all assumptions and constraints, work plans, critical paths, phases, metrics, and trends, and summarize both internal and external schedule/project work plan dependencies.</p> <p>We will validate and verify the schedule by ensuring the project schedule is base lined, maintained, and managed accordingly. Once the schedule is the agreed-upon we will ensure start and finish dates are used to guide and monitor the project to completion. We will also ensure milestones are identified and accurately reported.</p> <p>FDGS will compare all of the details in the WBS against both preceding governance documentation and resulting work products. We will validate the WBS internally for correctly tabulated volumes of effort and metrics/trending. We will evaluate and make recommendations on the estimating and scheduling process of the project to confirm that the project budget and resources are adequate for the work breakdown structure and schedule. We will review schedules to verify that adequate time and resources are assigned for planning, development, review, testing and rework.</p>
4.	<i>Must assess the projects' resources, managerial responsibilities, and governance structure to identify gaps and provide recommendations.</i>	We will verify that a project management plan (PMP) is created and being followed. The PMP is the main planning document for a project and describes how major aspects of the project will be managed. This would include management responsibilities and governance structures. We will evaluate the project management plans and procedures to verify that they are developed, communicated, implemented, monitored and complete.
5.	<i>Must participate in all project meetings unless otherwise directed by DHHS.</i>	FDGS understands and agrees to participate in all project meetings as directed by DHHS.
6.	<i>Must perform an independent assessment of issues where the implementation contractors and DHHS' project management organization disagree and provide the results of the assessment and recommendation to DHHS leadership.</i>	FDGS will continually evaluate all assigned projects to ensure work is being done accurately, on schedule, and on budget. As an independent organization our evaluations and observations will not be swayed by alliances to DHHS's project management team or to contractors implementing work on the state's behalf. We will remain objective 3 <sup>rd</sup> party observers and when we identify issues we will document our findings in the IV&V observation log and report our concerns to DHHS leadership. Whenever possible we will provide

#	Requirement	FDGS Approach
		<p>possible solutions to each issue as well as pros and cons for the solutions we identify. FDGS will track all observations through resolution and update the log accordingly. For any issue on which DHHS and the vendor disagree, FDGS will perform an independent assessment, evaluate potential mitigation strategies provided, and recommend any additional resolution approaches. When appropriate we will set up and execute meetings to help resolve these issues.</p>
7.	<p><i>Must perform one or more reviews of project deliverables and work products including but not limited to infrastructure, system documentation, design, working code, test scenarios, test cases, test results, plans, etc. and provide a detailed assessment of the quality of the deliverables and work products along with recommended changes. Assessment must include a recommendation on whether DHHS should approve the work product or deliverable. Review must address at minimum the following attributes:</i></p> <ul style="list-style-type: none"> <li>• <i>Traceability and adherence to requirements</i></li> <li>• <i>Clarity</i></li> <li>• <i>Completeness</i></li> <li>• <i>Consistency</i></li> <li>• <i>Quality</i></li> <li>• <i>Adherence to applicable laws, rules, and guidelines</i></li> </ul>	<p>With our previous experience in working with DHHS, the FDGS Team brings a knowledge base that enables us to verify that all deliverables reflect quality and adhere to applicable rules, regulations, laws and guidelines. This knowledge helps us to understand DHHS' project-specific needs and how to review and assess the work products and deliverables thus verifying completeness and that all requirements are met.</p> <p>FDGS applies a structured deliverable review and assessment methodology that our team has used on many prior IV&amp;V engagements. We will apply this methodology to the review of different project deliverables. Our methodology is based on the following tenets:</p> <ul style="list-style-type: none"> <li>• <b>Participate in the full deliverable lifecycle</b> – FDGS works with project teams throughout the entire deliverable development, review, and comment and approval process, through submission of a recommendation for deliverable acceptance.</li> <li>• <b>Provide input and feedback on a flow basis</b> – This allows recommendations to be incorporated into subsequent versions of deliverables, which improves the quality of the final product and minimizes the time associated with final reviews.</li> <li>• <b>Incorporate our processes into the State process</b> – This provides a consistent and consolidated format where cosmetic and material deficiencies are documented.</li> <li>• <b>Produce thorough Deliverable Review and Assessment Reports</b> – FDGS reviews and assesses the readability, comprehensiveness, accuracy, level of detail, and quality of all required deliverables.</li> </ul>
8.	<p><i>Must assess project plans, processes and procedures to identify improvements and whether they are being followed.</i></p>	<p>We will review and assess project work plans, project management plans, and implementation contractor processes to verify they are being followed and identify potential improvements.</p>
9.	<p><i>Must assess project change orders for the following:</i></p> <ul style="list-style-type: none"> <li>• <i>The change order is following the approved change management plan and processes.</i></li> </ul>	<p>When changes are proposed by the implementation contractor or DHHS, the proposed change orders must be analyzed. The process for handling Change Orders will be documented in the PMP and some of the initial steps are</p>

#	Requirement	FDGS Approach
	<ul style="list-style-type: none"> <li>• <i>The change order is within the scope of the existing contract.</i></li> <li>• <i>Cost and resource estimates for the change order are reasonable.</i></li> <li>• <i>Recommendations for alternate approaches to achieving the outcome of the change order.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Review draft change orders with respect to scope, level of effort, resources, schedule, cost, and impact to the existing Work Plan.</li> <li>• Confer with the Vendor team during the change order analysis process and determine whether the vendor provided sufficient alternatives</li> <li>• Meet with the appropriate implementation contractor representatives to request additional information or clarification.</li> </ul> <p>FDGS will use the following steps to conduct change order reviews:</p> <ul style="list-style-type: none"> <li>• Verify required information on the change order                         <ul style="list-style-type: none"> <li>○ Can the completion date be achieved? Are the start and end dates realistic and achievable?</li> </ul> </li> <li>• Validate the schedule to complete the change order                         <ul style="list-style-type: none"> <li>○ Can the overall completion date be achieved? Are the start and end dates realistic and achievable?</li> </ul> </li> <li>• Validate costs                         <ul style="list-style-type: none"> <li>○ Conduct an independent estimate of the total cost</li> <li>○ Compare effort to other similar efforts in the original work plan</li> <li>○ Determine the appropriateness of the hourly rate structure used for resources and tasks</li> <li>○ Are resources assigned to the appropriate role?</li> </ul> </li> <li>• Validate assumptions and constraints                         <ul style="list-style-type: none"> <li>○ Confirm that the assumptions and constraints that affect the overall estimate have been identified and explained</li> <li>○ Make recommendations for more details as appropriate</li> <li>○ Document findings that are not valid or otherwise introduce risk</li> </ul> </li> <li>• Analyze the impact on existing work plan                         <ul style="list-style-type: none"> <li>○ Does the change order negatively impact work already scheduled?</li> <li>○ Do resources have to be relocated to change order tasks?</li> </ul> </li> <li>• Document change order benefits and/or risks                         <ul style="list-style-type: none"> <li>○ Evaluate the cost of not implementing a change order</li> <li>○ Do the costs outweigh the quantifiable benefits?</li> <li>○ Does implementing the change order introduce any risk to the project?</li> </ul> </li> </ul>

#	Requirement	FDGS Approach
10.	<i>Must comply with IV&amp;V regulatory requirements detailed in 45 CFR 95.626.</i>	FDGS understands and agrees to be an independent IV&V vendor for DHHS.
11.	<i>Must identify areas of un-necessary duplication and overlap between roles on the projects.</i>	As part of the IV&V review of roles and responsibilities of the project staffing, FDGS will assess whether there is any duplication and overlap between project roles and make recommendations on making changes for increasing efficacy and reducing costs. FDGS will apply this assessment at a programmatic level to identify potential duplication between projects.
12.	<i>Must assess and verify requirement traceability throughout the project and system development lifecycle of the projects. Assessment and verification will occur periodically as appropriate for the project timeline</i>	<p>FDGS will validate that all requirements are correctly identified to verify the system meets the needs of the project and its stakeholders. We will ensure that all requirements are “traceable” through the SDLC phases: Requirements Analysis, Design, Development, Test, and Implementation phases. To accomplish this, the following steps will be undertaken:</p> <ul style="list-style-type: none"> <li>• Validate the requirements in the Requirements Traceability Matrix (RTM) incorporate traceability of the requirement at requirement validation checkpoints and throughout the entire project.</li> <li>• Make sure every requirement is uniquely identified by validating each major section of requirements is numbered hierarchically, and then individual requirements are uniquely identified within each section. This approach provides organization while keeping labels short, meaningful, and independent.</li> <li>• Remind the project team to report risk and issues identified during the RTM’s creation to the Issue and Risk Management Team and analyze the Issue and Risk Tracking Logs to ensure to the necessary updates were completed.</li> </ul> <p>Invariably, new requirements are identified once the initial gathering sessions complete, often the result of participants returning to their positions and looking at their business processes in a slightly different perspective. Inserting the occasional new requirement will not require a complete renumbering. FDGS will evaluate all new requirements in the same manner as any original requirement, with the exception of also considering impacts to other requirements, project cost, schedule and scope.</p>
13.	<i>Must develop and monitor project performance metrics which allow tracking project completion against milestones.</i>	<p>FDGS will develop and monitor project performance metrics which allow tracking to project completion milestones. Our team will work closely with DHHS to:</p> <ul style="list-style-type: none"> <li>• Identify Metrics</li> <li>• Obtain benchmark data</li> <li>• Identify metrics owners</li> <li>• Set clearly defined goals for improvement ranges and tolerances.</li> </ul>

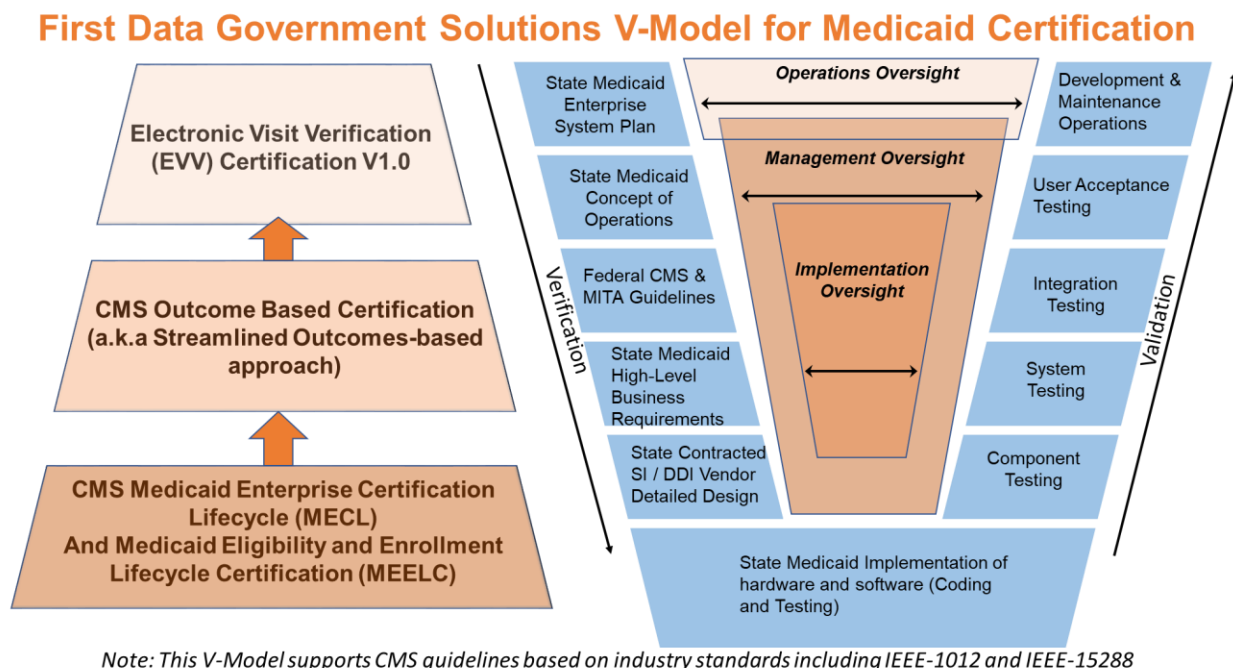


#	Requirement	FDGS Approach
		<ul style="list-style-type: none"> <li>• Provide periodic meetings and progress reports as agreed upon</li> <li>• Complete formal project milestones review</li> <li>• Compare actual vs. planned start date for project tasks</li> <li>• Generate reports based on information gathered from the performance metrics and other measuring processes</li> </ul>
14.	<p><i>Must submit criteria for approval for defining a Critical Incident which could adversely affect the outcome of the projects.</i></p>	<p>FDGS previously worked with DHHS and the project teams to develop criteria to define Critical Incidents as “a distinct event or situation that creates a significant risk of substantial or serious harm impacting either the solution functionality or the project timeline.” We will continue to work closely with DHHS to evolve this definition to meet the agency’s needs.</p>
15.	<p><i>Must notify the Department immediately when the IV&amp;V Contractor discovers any Critical Incident. Provide a Contractor Critical Incident Report for each Critical Incident that summarizes the incident, how it may affect the project, notes any discrepancies found by the IV&amp;V Contractor and provides a proposed action plan to resolve the incident and mitigate its impact.</i></p>	<p>FDGS will work directly with the State and each vendor Project Manager during Project Initiation to determine the proper cadence and communication channels for both actual and potential critical incidents. We will develop a critical incident report and process with steps from discovery through resolution, providing proposed action plans to aid a quick efficient resolution to mitigate impact.</p>
16.	<p><i>Must interview and observe project management staff and developer staff and observe project meetings and activities to understand the process, procedures, and tools used.</i></p>	<p>Through the use of meeting participation, interviews and documentation, FDGS will observe management and developer staff to better understand the processes, daily procedures and use of tools. This will be an ongoing activity.</p>
17.	<p><i>Must review and analyze all applicable and available documentation for adherence to accepted, contractually-defined industry standards.</i></p>	<p>FDGS institutes our quality assurance methodologies from our Center of Excellence and Innovation to perform verification of software development tasks and processes to confirm they are well-defined, repeatable, and consistent with contract requirements and industry standards. This includes validating quality standards and practices and performing assessments of items such as the following:</p> <ul style="list-style-type: none"> <li>• Technical Deliverables and Documentation</li> <li>• Medicaid System designs</li> <li>• Equipment Installation</li> <li>• Medicaid Testing Plans</li> <li>• Project management processes and reporting standards</li> </ul>

Describe the bidder's approach in detail to IV&V including:

a) Project participation at the level of detail necessary to assess the project's health

FDGS recognizes that a large and complex project requires the engagement of team members to present a comprehensive and accurate view into project health. **Figure 3** below depicts the FDGS Team's approach to IV&V relationships followed by each system feature during its development lifecycle. It focuses IV&V rigor on what is critically important throughout the lifecycle, and ties together static testing activities (reviews, inspections) with the dynamic test effort.



**Figure 3: The FDGS V-Model supporting all CMS Certification processes**

The FDGS IV&V team will monitor and assess project activities by observing meetings, conducting interviews, reviewing reports and analyzing trends. The FDGS IV&V team analyzes past project performance sufficient to identify and make recommendations for improvement. FDGS IV&V will examine all project artifacts, documents, and testing efforts to evaluate the effectiveness of the project management controls, procedures and methodologies. FDGS reviews project management and technical progress against the DHHS stakeholder and vendor baseline plans and against requirements.

By fostering an atmosphere of collaboration while maintaining our independence, our team is able to advise and promote results. The driving principle for our engagements is to provide you with the actionable intelligence to make the best decision to promote success of your project.

### *b) Risk, issue, and opportunity management*

FDGS has proven experience with DHHS and an IV&V methodology that is highly effective across multiple types of large, complex state government projects. FDGS will continue to monitor risks, issues, and opportunities at both a macro and micro level to provide integrated support across DHHS projects. FDGS engages in daily oversight activities to assist DHHS in regular and ongoing vendor management activities. Daily interactions with vendor stakeholders lead to early identification of issues, risks, and opportunities that could impact the success of their respective engagements.

### **Risk and Issue Management**

Risk is the possibility of the occurrence of any event that can affect the success of a project. Issue is an event that has already happened and has impacted the project. The FDGS Team will collaborate with DHHS and other stakeholders across projects to identify any known risks and issues early during the Initiation Phase of the project. We understand early detection allows each project the greatest chance of maintaining the schedule, scope and cost. Risk and Issue identification and management are ongoing throughout a project lifecycle, from the initial planning phase to project closing activities. FDGS also escalates any new risks or issues as they are identified, along with the corresponding mitigation plans and resolution options through appropriate, project approved channels.

All large, complex technology integration projects are subject to risks and issues because there is an inherent combination of uncertainty and constraints. Not all project risks or issues can be completely eliminated. However, project risks and issues can and must be managed and/or mitigated. To go beyond this initial identification of risks and issues, however, the agencies must view risk and issue management as a facet of quality, using basic techniques of analysis and measurement to verify that risks and issues are properly identified, classified, and managed. FDGS will ensure each project's risk management processes include these key components:

- **Identify** – Before risks can be managed, they must be identified. Identification discovers risks before they become problems and adversely affect a project. FDGS has developed techniques for surfacing risks by the application of a disciplined and systematic process that encourages project personnel to raise concerns and issues for subsequent analysis.
- **Analyze** – Analysis is the conversion of risk data into risk decision-making information. Analysis provides the basis for the Project Managers to work on the "right" risks. This step includes determining probability of occurrence to determine which risks warrant the highest level of attention.
- **Plan** – Planning turns risk information into decisions and actions (both present and future). Planning involves developing actions to address individual risks, prioritizing risk actions, establishing an owner to address each risk, and creating an integrated risk management plan. The plan for a specific risk could take many forms. Examples might include:
  - Mitigate the impact of the risk by developing a contingency plan (along with an identified triggering event) should the risk occur.



- Avoid a risk by changing the design or the development process.
- Accept the risk and take no further action, thus accepting the consequences if the risk occurs.
- Study the risk further to acquire more information and better determine the characteristics of the risk to enable decision-making.
- **Track** – Tracking consists of monitoring the status of risks and taking action to minimize any potential risk impacts. Appropriate risk metrics are identified and monitored to enable the evaluation of the status of risks themselves and of risk mitigation plans.
- **Control** – Risk control or abatement corrects for deviations from planned risk actions. Once risk metrics and triggering events have been chosen, there is nothing unique about risk control. Rather, risk control melds into project management and relies on project management processes to control risk action plans, correct for variations from plans, respond to triggering events, and improve risk management processes.
- **Communicate** – Risk communication lies at the center of the model to emphasize both its pervasiveness and its criticality. Without effective communication, the risk management approach cannot be viable. While communication facilitates interaction among the elements of the model, there are higher-level communications to consider as well. To be analyzed and managed correctly, risks must be communicated to and between the appropriate organizational levels and entities. Because communication is pervasive, our approach is to address it as integral to every risk management activity and not as something performed outside of, and as a supplement to, other activities.

FDGS will also ensure each project's issue management processes include these same key components and can be applied to issues arising from realized risks as well as those that emerge unexpectedly.

In addition, FDGS reviews risks and issues monthly at a minimum, to ensure compliance with the approved Risk and Issue Management Plan and the key components outlined above. In order to facilitate reviews and to effectively track the status of risks and issues, FDGS will use the project's approved Risk and Issue Management Tool or Register. As needed, we will conduct formal risk meetings with leadership to follow the progress of the risk and its probability, as well as the status of any mitigation or contingency strategies that have been executed or resolved. We will provide ongoing recommendations to improve the effectiveness of the mitigation plans and discuss these at weekly and monthly status meetings.

### Opportunity Management

Our experience not only proves our ability to help government agencies succeed, but it also gives us a wealth of insight and knowledge to directly benefit the newest Medicaid Enterprise projects in this RFP. Our well-rounded experience with many different systems in complex, multi-agency projects enables us to bring best practices, lessons learned, and proven methodologies and tools to help verify each project learns from and takes advantage of the

experiences our prior work for DHHS as well as those from other states. One such tool FDGS employs are IV&V Observations. IV&V Observations can be positive or negative.

Positive findings can be further designated as opportunities or “best practices.” FDGS understands that in a successful project, opportunities can be realized in various ways. Our teams, through detailed analysis, participation, and deliverables review were able to present recommendations and alternatives which have been able to help our clients realize various opportunities such as:

- Increased cost savings
- Increased project efficiency
- Improved product quality
- Improved delivery

Negative findings can be further designated as risks, issues, critical incidents, or general observation. IV&V provides an independent and unbiased perspective on the progress of module development and the integrity and functionality of the system. This perspective includes identification of observations as the module is planned, developed, and deployed and recommendations to effectively manage these items as described below.

- A “Critical Incident” is a distinct event or situation that creates a significant risk of substantial or serious harm impacting either the solution functionality or the project timeline.
- An “Issue” is a problem that is about to occur or is currently occurring and presumed to have detrimental effects on the project.
- A “Risk” is any unexpected event that might adversely affect people, processes, technology, and resources involved in a project.
- A “General Observation” is any potential impediment to project success which needs to be effectively managed and isn’t classified as a Critical Incident, Issue or Risk.

While FDGS provides a recommendation to address each observation, the DHHS project team then decides the appropriate action needed for resolution such as:

- Open a new Issue, Risk or Action Item
- Associate with an existing Issue, Risk or Action Item
- Acknowledge the IV&V observation but take no action

IV&V tracks each observation and recommendation to encourage the project team to effectively manage or avoid potential impediments to project success. FDGS has been able to help our clients realize better project efficiency, on-time delivery and cost savings, utilizing this model.

*c) Deliverable review and reporting of deliverable findings (RFP Section V, B.2.c.ii)*

The FDGS deliverable review and assessment methodology is a formal, structured process. This methodology is applied to the review of all vendor deliverables and any applicable DHHS artifacts. FDGS provides an independent, unbiased, and comprehensive evaluation of the deliverables and services. Our methodology is based on the following tenets:

- **Gather Information and prepare for assessment** – FDGS validates deliverable scope, requests applicable historical documents, and identifies applicable requirements and industry standards.
- **Participate in the full deliverable lifecycle** – FDGS work with the Vendor and DHHS project staff throughout the entire deliverable development, review, and comment and approval process, beginning with development of the Deliverable Expectation Document (DED) and continuing through submission of a recommendation for deliverable acceptance.
- **Provide input and feedback on a flow basis** – This allows recommendations to be incorporated into subsequent versions of deliverables, which improves the quality of the final product and minimizes the time associated with final reviews. Our ability to do this depends on whether deliverable reviews only occur during scheduled review periods.
- **Use a structured tool to document findings** – This provides a consistent and consolidated format for both FDGS and State reviewers and includes a place for the Vendor to respond with justification if they do not agree with the disposition of a deficiency or corresponding recommendations.
- **Produce thorough Deliverable Review and Assessment Reports** – FDGS reviews and assesses the readability, comprehensiveness, accuracy, level of detail, and quality of all required deliverables. These reviews are measured against the standards and requirements delineated in the approved DED.
- **Produce final Deliverable Review and Assessment** – This will allow each project the time to review and incorporate IV&V findings and recommendations into the deliverable approval process.

The FDGS team has integrated the IV&V deliverable review process with existing DHHS review processes, reducing an addition burden on DHHS projects managers and allowing for recommendations to be incorporated within the existing deliverable development lifecycle. We look forward to working with DHHS to improve these processes further as your needs evolve.

*Explain past challenges and common issues along with the recommendations provided to address the issues. (RFP Section V, B.2.c.iii)*

Risks and Issues arise on every project and during any phase of the lifecycle. Large, complex IT projects are inherently susceptible to full or partial failure due to them being late, over budget, having poor quality, lacking needed worker functionally, and/or not having implementation backing at the highest decision making levels.

Concerns include schedule delays, changes in project scope, depth of deliverables, or newly identified requirements. They can also exist with designs, documentation, test scripts, environment configuration, data set-up, or business processes.

Many such challenges have the potential to adversely impact the project if they are not resolved properly and in a timely fashion. **Table 8** lists how the FDGS Team brings a strong tracking and resolution process that effectively addresses these challenges before they impact the project.

**Table 8: Challenges previously identified and resolved by FDGS IV&V teams**

Challenge	Recommended Approach
System documentation requirements need to meet CMS Certification Review requirements.	<ul style="list-style-type: none"> <li>• Review latest guidance from CMS</li> <li>• Assess the system documentation provided against the certification requirements</li> <li>• Use the CMS Opportunity to Network and Engage (CMS zONE) to assess how other states have met the requirements</li> </ul>
Overall system performance	<ul style="list-style-type: none"> <li>• Create Service Level Objectives</li> <li>• Implement formal performance tracking procedures</li> <li>• Invest in additional data gathering</li> <li>• Conduct system load testing earlier</li> <li>• Apply capacity planning/analysis techniques</li> </ul>
Conversion Issues may occur.	<ul style="list-style-type: none"> <li>• Involve team with test focus within the implementation/conversion plan</li> <li>• Conduct conversion testing with legacy data not “dummy” data</li> <li>• Provide early requirements for system migration</li> <li>• Include lessons learned involving conversions from legacy systems</li> </ul>
Quality of the delivered product	<ul style="list-style-type: none"> <li>• Involve the team in defining standards in advance</li> <li>• Confirm that standards are formally documented, easily accessible, and easily understandable</li> <li>• Provide early feedback on adherence to standards</li> <li>• Include adherence to standards as an item in walk-throughs</li> <li>• Conduct code reviews</li> </ul>

Challenge	Recommended Approach
	<ul style="list-style-type: none"> <li>• Develop comprehensive test plan</li> <li>• Review results of unit and system testing</li> <li>• Review results of UAT</li> </ul>
<p>Team assembled working together for the first time and has varying levels of development methodology understanding.</p>	<ul style="list-style-type: none"> <li>• Provide appropriate training to fill knowledge gaps</li> <li>• Once team is established, use retrospect and storming early with team to make needs known.</li> </ul>
<p>Ability of developers to complete system development within specified timeframes</p>	<ul style="list-style-type: none"> <li>• Analyze sprint and/or release capacity</li> <li>• Identify changes in schedule</li> <li>• Assess backlog and determine Project is falling behind schedule</li> <li>• Discuss plan/approach to working through backlog</li> </ul>

The FDGS Team will continue to follow the progress of the risk or issue and its probability, as well as the status of any mitigation/contingency strategies that have been executed or the issue has been resolved. We provide recommendations to improve the effectiveness of the mitigation plans and discuss these at the Weekly and Monthly Status Meetings. Our risk management approach centers around identifying and dealing with potential threats to the overall project. On a proactive basis, the FDGS Team helps DHHS formulate mitigation strategies to alleviate the impact of those threats.

*Provide examples of opportunities or positive risks reported in past projects where the customer was able to capitalize. (RFP Section V, B.2.c.iv)*

We have worked closely with our clients to confirm risks are identified and managed in all phases of the project. We have also identified opportunities to help the client realize cost savings and benefits in other areas. Some examples of how opportunities or positive risks in past projects have allowed FDGS clients to capitalize are:

- **Fair Hearing Information System (FHIS) Project Kick-Off** – FDGS identified an opportunity where the processes and documentation types used for the FHIS project kick-off could be leveraged by the NY IES project for future project/workstream kick-off meetings. The FHIS project kickoff presentations provided a good overview of goals and objective and a forum to present and discuss the System Development Life Cycle (SDLC) processes and set stakeholder expectations. It also provided participants with a clear understanding of the project along with descriptions and examples of functional requirements and user acceptance criteria.
- **Nebraska Data Management and Analytics: Research Request** – FDGS identified a note included in the vendors cost proposal which indicated all required hardware,

software, hosting and support to maintain the required environments was included in the price quoted. This provided the state an opportunity to avoid paying separate charges for those costs.

- **Nebraska Data Management and Analytics: Deliverable Review** – FDGS provided templates and feedback to the state regarding the User Acceptance Testing (UAT) Plan. Once completed and proved, FDGS additionally identified an opportunity where the state could leverage the UAT Plan and lessons learned during DDI to develop a UAT Plan for operations.
- **Nebraska Data Management and Analytics: Risk & Issue Management** – FDGS observed some Risks, Action Items, Issues & Decisions (RAID) items were potentially out of date and/or no longer relevant given there was a new approach to implementation and a new project timeline. This presented an opportunity where the project team conduct a review of the RAID log and closed several items.

*Provide examples of the bidder's deliverable review findings and issue assessments utilized on previous projects. (RFP Section V, B.2.c.v)*

As part of our methodology, we complete comprehensive reviews and assessments for our clients. Some examples of past project reviews and assessments have been included in **Appendix 2:**

- **Indiana Eligibility Determination Services System (IEDSS) Project Schedule Review** - FDGS conducted an assessment of the vendor's project schedule. The report includes approach to analysis and documentation of all deficiencies. Included are recommendations provided on how to change the deliverables to correct the deficiencies.
- **Nebraska Data Management and Analytics IVV System and Business Operations Readiness Review (SaBORR) Go Live Report** – is the result of assessing the status of selected readiness tasks, identifying outstanding items from the Design, Development and Implementation (DDI) phase and evaluate the risk of proceeding with implementation (Go/No-Go decision).
- **Nebraska Data Management and Analytics Post Go-Live Stakeholder Interviews** – FDGS conducted interviews with project stakeholders to solicit feedback about several areas including:
  - Go-live implementation
  - First production release
  - HIA governance committees
  - General concerns
  - Potential improvements

The IV&V team then provided recommendations to address the trends or concerns identified.

### 2.1.3 *IV&V Status Meetings and Reporting*

*Overview: The IV&V contractor must provide regular status reporting on the IV&V responsibilities. The level of detail in the status reporting must be catered to the audience for the reporting. The IV&V must also facilitate and participate in status meetings to communicate and expand on contents of the status reporting.*

FDGS agrees to continue generation of monthly and weekly reports for DHHS management. FDGS continues to tailor reports to DHHS needs and suggest improvements based upon industry best practices, as well as FDGS experience across our other IV&V projects. FDGS understands that DHHS needs may change and as the Enterprise Project Management Office (EPMO) matures, reporting may have to change to align with that evolution.

FDGS knows that one of the main challenges DHHS faces with multiple vendors supporting the Medicaid program is that comprehensive overview becomes difficult for State leadership when multiple reports are submitted. Therefore, FDGS proposes continuation of enterprise-wide reporting within our Weekly Status Reports, providing DHHS stakeholders unified views of these activities from the more individualized reports. Though we refine the content and format of these reports upon project start, we intend to position these reports as follows:

- The IV&V Weekly Status Report summarizes IV&V work, meetings and activities completed for the prior week and identifies upcoming activities
- The IV&V Monthly Status Report focuses on IV&V analysis of contractor performance and meets the guidance and requirements provided by CMS and industry best practices

Though we have proposed types, format and frequency of reports as outlined below, FDGS, in full consultation with DHHS, and with its approval, reasonably adjusts the specific parameters of these reports to accommodate evolving needs, or add or remove reports themselves.

Furthermore, we understand that the State occasionally requires unscheduled or irregular reports or data queries from those sources available to IV&V on activities of these vendors which are of immediate consequence to the facilitation of agency priorities. We agree to provide a reasonable quantity of these at no further charge under our scope for IV&V services. FDGS will continue to distribute all reports via email and store all relevant project documentation in the DHHS approved repository.



*Address the bidder’s approach to meeting each requirement in a table that contains the requirement and the bidder’s approach to meeting the requirement. (RFP Section V, B.3.c.i)*

**Table 9** below details our approach to meeting each requirement for IV&V Status Meetings and Reporting.

**Table 9: IV&V Status Meetings and Reporting Requirements**

#	Requirement	FDGS Approach
1.	<p><i>Must prepare and submit a weekly status report including activities for the previous week and upcoming activities for the next two weeks that includes the following information:</i></p> <ul style="list-style-type: none"> <li>• <i>Project meeting participation including an assessment of completed meetings and any recommendations for improvement.</i></li> <li>• <i>Planned project meetings for IV&amp;V participation.</i></li> <li>• <i>Project deliverable review activities.</i></li> <li>• <i>Risks, issues, and opportunities which are new or have been updated since the previous submission.</i></li> <li>• <i>Updated IV&amp;V schedule</i></li> <li>• <i>Critical incidents summarizing the incident, impact to the project, and a proposed action plan to address the incident.</i></li> <li>• <i>Other IV&amp;V activities as defined by DHHS.</i></li> </ul>	<p>FDGS believes in keeping its customers well informed of IV&amp;V activities, and will continue to collaborate with DHHS to customize the structure and format requirements for weekly project status reports. FDGS recommends that, at a minimum, a weekly status report include the following:</p> <ul style="list-style-type: none"> <li>• Current Week Activities, including:                             <ul style="list-style-type: none"> <li>○ Project meeting participation</li> <li>○ Project deliverable review activities</li> <li>○ New IV&amp;V Observations (i.e. risks, issues, and opportunities including a recommendation to address the item)</li> <li>○ Updates to the IV&amp;V schedule</li> <li>○ Critical incidents summary with high level impact to the project, and proposed action plan to address the incident. For any Critical Incident, the FDGS team produces a separate report detailing the estimated impact to the project and a proposed action plan to address the incident; the report will be maintained until closure of the incident.</li> <li>○ Other opportunities for improvement</li> <li>○ Other IV&amp;V activities</li> </ul> </li> <li>• Upcoming Activities, including:                             <ul style="list-style-type: none"> <li>○ Planned project meetings for IV&amp;V participation</li> <li>○ Planned project deliverable review activities</li> <li>○ Other planned IV&amp;V activities</li> </ul> </li> </ul>
2.	<p><i>Must submit each weekly status report by the DHHS established day and time. DHHS will allow a minimum of one business day from the end of the weekly reporting period for submission.</i></p>	<p>FDGS understands and agrees to submit each weekly status report by the agreed upon day and time.</p>
3.	<p><i>Must facilitate a weekly IV&amp;V status meeting with DHHS identified project leadership.</i></p>	<p>Weekly status meetings provide a forum for discussing the progress of the project. The FDGS Team validates that project status meetings are scheduled on a weekly basis with project sponsors, stakeholders and any other state or federal partners as required. We verify that status meetings cover the following items:</p>



#	Requirement	FDGS Approach
		<ul style="list-style-type: none"> <li>• Overall and phase-specific project status</li> <li>• High priority risks and issues identified</li> <li>• Project Work Plan tasks that are upcoming and those that are behind schedule</li> <li>• Status and quality of project deliverables</li> </ul>
4.	<p><i>Must prepare and submit a maximum of five business days after month end a monthly IV&amp;V report that includes the following:</i></p> <ul style="list-style-type: none"> <li>• <i>Summary of IV&amp;V activities for the past month.</i></li> <li>• <i>Summary of IV&amp;V activities planned for the next month.</i></li> <li>• <i>IV&amp;V assessment of the overall project, schedule, budget, scope, and quality status in comparison to the project teams' reported status clearly identifying any differences along with the reasoning.</i></li> <li>• <i>Additions or updates to executive level risks, issues, and opportunities along with further recommended actions.</i></li> <li>• <i>Summary assessment of project deliverables and work products reviewed in the last reporting period.</i></li> <li>• <i>Other IV&amp;V activities as defined by DHHS.</i></li> </ul>	<p>The FDGS Team will continue to produce an IV&amp;V Monthly Status Report, which includes a summary of IV&amp;V activities and assessments (deliverable and otherwise) completed during the reporting period in addition to any problems or issues that require management attention.</p> <p>The FDGS Team works with DHHS to validate and enhance the expectations, format, and communication channels for the status report. The status report includes an ongoing project scorecard or dashboard with key metrics to be jointly determined with DHHS. This indicator advises whether there are potential problems with scope, resources, budget or schedule or in the feasibility of achieving a project milestone or deliverable across all of the project components. It also provides recommendations for solutions and required follow-up actions.</p> <p>Each IV&amp;V Project Status Report includes a status of all current IV&amp;V Observations. The Observations Log is the method by which project concerns and opportunities are documented and monitored through resolution at the summary level. This log provides a comprehensive history of concerns and opportunities that the project leadership can use for decision making purposes in status meetings, status reporting and executive meetings, briefings and/or reports.</p>
5.	<p><i>Must facilitate a monthly IV&amp;V report meeting with DHHS identified leadership.</i></p>	<p>FDGS facilitates and meets with DHHS management, identified stakeholders, and leadership to review content of the IV&amp;V report related to both management and technical aspects of the projects.</p>
6.	<p><i>Must create the agenda and take the minutes for any IV&amp;V meetings.</i></p>	<p>FDGS understands and agrees to create the agenda and take the minutes for any scheduled IV&amp;V meeting. The meeting agenda and subsequent minutes will be distributed to the participants and other stakeholders after agreement by the DHHS Project Manager. Historical meeting agendas and minutes will be stored in the appropriate repository.</p>

*Describe the bidder's process for capturing detailed status on project activities (i.e., scheduled tasks, risks, issues, staffing, communications, etc.) at a detailed level and reporting the information as needed based on the reporting audience. (RFP Section V, B.3.c.ii)*

FDGS applied our years of experience to build our own IV&V tools and methodology, which is built on industry standards and CMS guidance. The scope of each project dictates the need for formal periodic status reporting to confirm that all project team members are kept informed of overall progress and direction of the project efforts. Using our proven methodology and tools, FDGS tailors each report type to the appropriate audience.

The observation log is the method by which project concerns and opportunities are documented and monitored through resolution at the summary level. This log provides a comprehensive history of concerns and opportunities that project leadership can use for decision making purposes in status meetings, status reporting and executive meetings, briefings and/or reports. The observation process is detailed in **Section 2.1.2 – Independent Assessment and Quality Assurance**. Each IV&V Monthly Status Report includes a status of all current IV&V Observations.

FDGS understands that schedule management encompasses the monitoring of project accomplishments against the project schedule, the scheduling of future and current tasks, and the evaluation of the type and level of resources assigned to project tasks. The primary tool for schedule management is the Master Project Work Plan. This may be one file for a project, or a Master Schedule capable of relating many subordinate schedules. The FDGS Team regularly analyzes the project schedule and report on the results in the status report. The following elements which may impact the project schedule may be reported:

- Number of tasks on the critical path that have started on time
- Number of tasks on the critical path that did not start on time
- Number of tasks on the critical path that have completed on time
- Number of tasks on the critical path that were not completed on time
- For tasks on the critical path that did not start or complete on time, number of days past the scheduled start or completion date
- Actual level of effort (work hours) compared to planned level of effort for tasks
- Actual resources/positions assigned to tasks compared to planned resources
- Any new tasks or changes in tasks that could affect the critical path
- Changes in task start dates or finish dates

Where the schedule allows, the FDGS team analyzes each project before inception to determine what if any other tools may provide our IV&V team and/or DHHS value. Examples of these additional tools are:

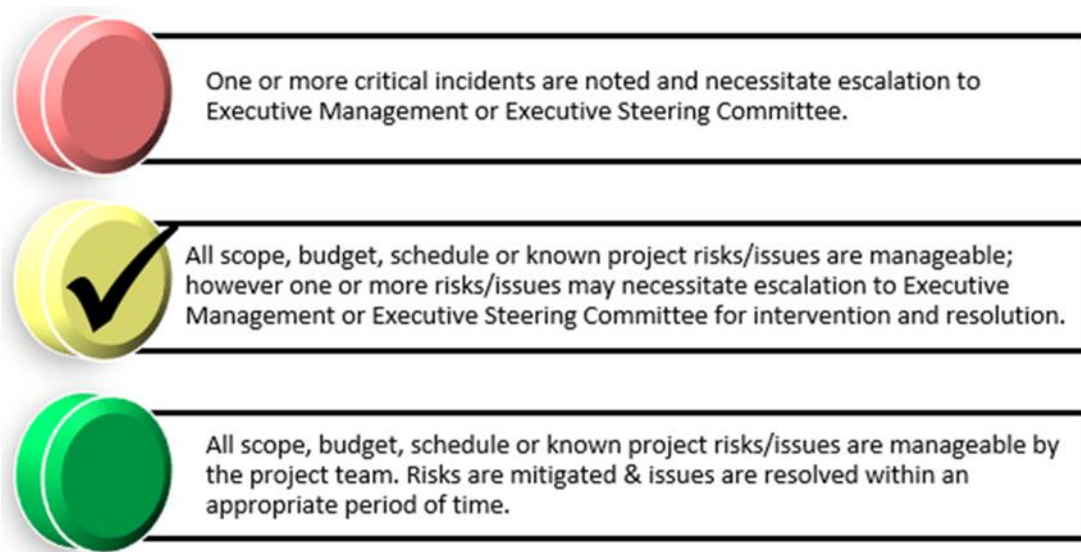
- **Health and Human Services Business Architecture (HHSBA)** – The FDGS-developed HHSBA product provides clients with a MITA-based tool to verify requirements, confirm compliance and minimize overall risk to the agency. The HHSBA is aligned with the CMS MITA 3.0 framework but is flexible enough for enterprise-wide efforts or for MMIS modules. In addition, it assists clients with making strategic business decisions and identifying opportunities for scalability in future system enhancements for the Medicaid Enterprise.
- **Checklist Evidence Review Tracker (CERT)** – The FDGS’ MECT/MECL Evidence Tracker is a team collaboration application that facilitates the efficient completion of MECL Checklist projects. Our proprietary tool provides an enhanced set of operational components capable of streamlining work and communication between the client and the FDGS IV&V Team as you prepare for milestone reviews. As checklist items are completed, the Checklist Tracker “job aid” alerts the IV&V Team that a checklist item is ready for review. FDGS provides these additional MECT job aids, which are proven to support greater efficiency, collaboration and transparency to the complex checklists CMS requires. Our CERT tool is currently being evaluated to accommodate the latest OBC and SMC guidance and processes from CMS.

*Describe the bidder’s methods for determining and reporting overall project, schedule, budget, scope, and quality status (i.e., determining whether a project is red, yellow, or green, and providing defined criteria as to what constitutes each type of status). (RFP Section V, B.3.c.iii)*

As part of monitoring and measuring progress of the project, the FDGS Team produces a regular status report, including a summary of work activities and major accomplishments achieved during the reporting period in addition to any problems or issues that require management attention. The FDGS Team will work with DHHS to modify the currently produced status report to confirm that it provides the content expected in the correct format and clarifies communication channels for the status reports.

The current status report includes an ongoing project summary and a scorecard or dashboard. Typically utilization of a “Red, Yellow, Green” scheme to indicate ‘Fatal, Problematic, and Adequate’, respectively; advises whether there are potential problems with scope, resources, budget or schedule or in the feasibility of achieving a project milestone or deliverable. It also provides recommendations for solutions and required follow-up actions.

Definitions of the status values used in determining overall project health in the current Nebraska DMA IV&V Monthly Status Report are included below in **Figure 4**.



**Figure 4: Stoplight values used for status reports**

*Provide the bidder's status report templates, including instructions and procedures for completing the templates. (RFP Section V, B.3.c.iv)*

FDGS believes in keeping the project leadership and stakeholders well-informed of project activities. Project status reporting will continue weekly and monthly to confirm that accurate information is provided on a timely basis. Status reports provide updates on project progress.

### **Weekly Status Reporting**

A Weekly Status Report includes the following:

- IV&V Observations identified during the reporting period including recommendations to address each observation
- Critical Incidents identified during the reporting period including recommendations to address each incident
- Activities completed during the reporting period including:
  - Meeting participation
  - Project deliverables reviewed
  - Other IV&V activities
- Activities to be completed during the next reporting period including:
  - Meeting participation
  - Project deliverables reviews
  - Other IV&V activities
- Updates to the IV&V Schedule
- Other opportunities for improvement

A sample Weekly Project Status Report template is provided in **Figure 5** below. FDGS will continue to work with DHHS to tailor the weekly status reports with unique reporting requirements for each implementation project in the Scope of Work.

**First Data**  
is now **fiserv.**

**IV&V Weekly Status Report**

**Nebraska DHHS IV&V Services**  
**Weekly Status Report, Week Ending 04/29/2022**

Program Sponsor:		
Program Director:		
FD Delivery Director		
FD Project Manager		
Report Date	04/25/2022-04/29/2022	
Period Ending	04/29/2022	
<b>Overall Project Status</b>	<b>Yellow</b>	<b>Comment on assignment of current status for Red/Yellow/Green...</b>

**Status:**

<b>Findings (Risks/Issues)</b>	1)
<b>Critical Incidents</b>	1)
<b>Opportunities</b>	1)
<b>IV&amp;V Schedule Updates</b>	•
<b>IV&amp;V Completed Activities</b>	Participated in the following activities: Participated in the following meetings and work sessions: Conducted the following interviews: •
<b>IV&amp;V Upcoming Activities</b>	•
<b>Corrective Actions/ Mitigations</b>	•

**Figure 5: Weekly Project Status Report Template**

## Monthly Status Reporting

As part of today's monitoring and measuring progress of the Data Management and Analytics (DMA) project, the FDGS Team produces a Monthly Status Report, which includes a summary of the current state of project effort.

The Monthly Status Report encompasses a broad view of the Nebraska DMA project and also includes specific summary data relative to the tasks performed. The Monthly Status Report includes the following information:

- Project Name and Information
- Executive Summary
- Task Summary
- IV&V project work product and deliverable assessments completed within the month
- Critical incident reports
- Requirements traceability matrix updates
- CMS and MITA compliance activities
- IV&V work plan updates
- Process and Technical Gap Management
- Risk Management

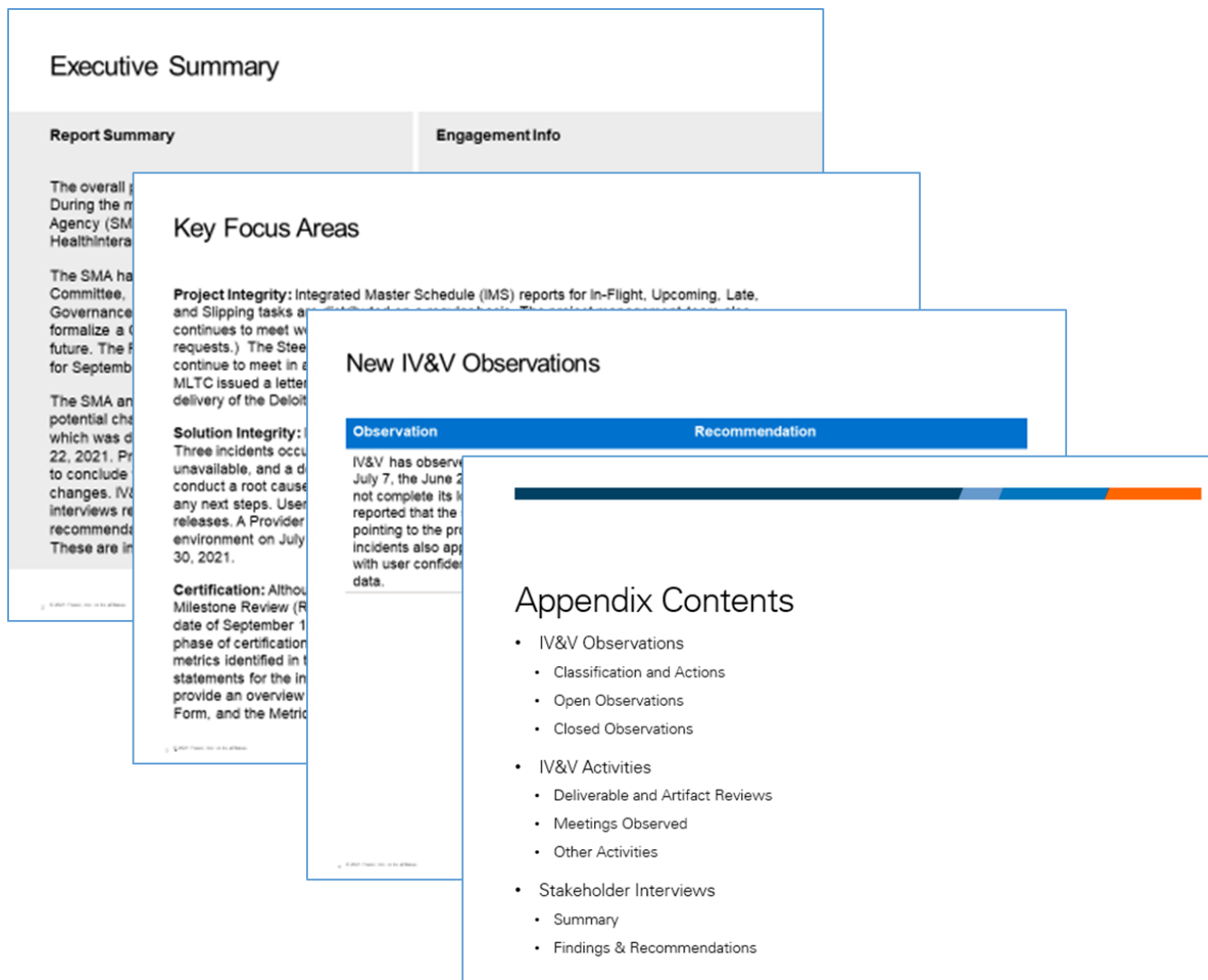
As the starting point for defining the Monthly IV&V Report, in order to outline the information above, FDGS uses the following structure:

- 1.0 Executive Summary
  - Report Summary
  - Engagement Information
  - Project Dashboard
- 2.0 Key Focus Areas
  - Project Integrity
  - Solution Integrity
  - Certification
  - Other
- 3.0 New Observations with Recommendations
- 4.0 Appendix

- IV&V Observations
- IV&V Activities
- Other

Each Monthly Status Report includes a status of all current project observations. The Observation Log is the method by which project issues are documented, communicated, and monitored through resolution at the summary level. This log provides a synopsis and history of issues that the project leadership can use for decision making purposes in status meetings, status reporting and executive meetings, briefings and/or reports.

A sample Monthly Project Status Report template is provided in **Figure 6** below. FDGS will continue to work with DHHS to tailor the monthly status reports with unique reporting requirements across all of the implementation projects in the Scope of Work.



**Figure 6: Monthly Project Status Report Template**



*Provide examples of similar weekly status reports used in previous projects. (RFP Section V, B.3.c.v)*

A Weekly Status Report provides an opportunity for to get support and decisions and address any concerns with the project sponsor. We work closely with our clients to tailor our weekly status reports to meet the specific needs of our clients and their projects. Below is a brief description of weekly reports, from past projects, which are included in **Appendix 3**:

- **IV&V Weekly Status Report – State of Nebraska** – The weekly status report tailored for Nebraska includes a section for each active IV&V project in one comprehensive report. The report lists new critical incidents and observations identified including recommendations to resolve. The report also lists deliverables reviewed, project meetings observed and other activities which occurred during the reporting period as well as expected upcoming activities.
- **IV&V Weekly Status Report – State of New York Integrated Eligibility System (IES)** – This report was tailored for the project to provide a snapshot of weekly activities completed, planned activities for the upcoming week and new issues and risks for the current period to be discussed and included to the risk register. The report is presented in customer required format for presentation at the project weekly status meetings for stakeholders and sponsors.

*Provide examples of the IV&V's previous monthly status reports from other projects. (RFP Section V, B.3.c.vi)*

FDGS understands that a comprehensive monthly status report serves an important role in keeping project stakeholders, sponsors and staff updated and providing an overview of project progression from month to month. Below is a brief description of past project IV&V Monthly Status reports with examples of the actual report included in **Appendix 4**:

- **IV&V Monthly Status Report – State of Nebraska Data Management and Analytics (DMA)** – The Monthly Report tailored for Nebraska includes overall project health, summaries of key focus areas and new findings with recommendations to resolve. The report is presented in format easily consumable by executives and other stakeholders alike. The report also includes information on deliverables reviewed, project meetings observed and other activities which occurred during the reporting period. The report also includes a breakdown of all open observations and reflected progress that has been made towards each to date.
- **IV&V Monthly Status and Recommendations Report – State of New York Integrated Eligibility System (IES)** – The Monthly Status and Recommendations Report tailored for New York State IES is a detailed report providing, background status and overall health of the project with recommendation to keeps the project on track and on schedule. The report includes detailed information of deliverables reviewed by work stream, status and alternatives. Our IV&V team in New York also managed multiple, concurrent implementation projects similar to this RFP's scope of work.

## 2.1.4 CMS and MITA Compliance

*Overview: IV&V is required by CMS for major system projects and enhancements, though MLTC acknowledges that the role of the IV&V contractor is under review by CMS. Traditionally, CMS depends on the IV&V for an independent assessment of projects for the implementation of major system changes and enhancements which are required for CMS funding of the implementation and ongoing enhanced funding. For future projects, the State foresees the IV&V contractor being responsible for following CMS guidance on one of two following approaches to certification:*

### *i. Medicaid Certification Enterprise Lifecycle (MECL)*

*CMS is currently establishing/revising the certification approach and criteria. The current Medicaid Certification Enterprise Lifecycle (MECL) administered by CMS contains four lifecycle phases and three types of certification milestone reviews. The milestone reviews occur at different phases of system / module development. Specifically, the three reviews are the Project Initiation Milestone Review, the Operational Milestone Review, and the MMIS Certification Final Review. The IV&V contractor will be responsible for completing all responsibilities defined in 45 CFR 95.626 and dictated by the most current guidance available from the Centers for Medicare and Medicaid Services (CMS).*

### *ii. Outcomes-Based Certification (OBC)*

*CMS has indicated that it is transitioning its systems certification process to an Outcomes-Based Certification (OBC) approach. OBC is designed to ensure that system projects and enhancements that receive federal financial participation (FFP) are meeting the business needs of both the state and CMS. OBC also contains two formal CMS reviews: Operational Readiness Review and Certification Review. MLTC anticipates that CMS will release formal guidance about the OBC approach to certification as pilot projects are completed and processes are refined.*

*MLTC will determine which approach to certification will be used for each project supporting the Operational Vision and any additional optional projects based on guidance from CMS. The scope of required IV&V services and compensation may change or diminish in the event that the OBC standard and processes are supported by CMS versus the MECL standard and processes. Regardless of the approach to enhanced funding and/or CMS compliance, 7 conditions and standards, ACA compliance, MITA, HIPAA etc. for the project, the IV&V must perform any required roles by CMS or DHHS necessary to secure the enhanced funding.*

In addition to the RFP requirements that FDGS addresses here specific to part 4. CMS and MITA Compliance, we have carefully examined the answers included in Addendum One Questions and Answers (dated October 29, 2021). Based on answers 23, 54 and 60, and our current work on the DMA project, FDGS understands that DHHS is currently being guided by CMS to adopt Streamlined Modular Certification (SMC), with the exception of EVV, for which CMS established OBC.

FDGS is ready to transition the State from MECL/MECT to the latest guidance from CMS under SMC and OBC. Throughout the rest of this section, we will show that our knowledge and

expertise supports the State through the transition to SMC and OBC processes and certification by CMS to maintain the highest available federal financial participation (FFP) for the State.

CMS has already transitioned EVV to an OBC approach and is transitioning the rest of the Medicaid enterprise systems to an OBC-like approach, currently referred to informally as SMC. OBC is designed to ensure that system projects and enhancements that receive FFP are meeting the business needs of both the state and CMS. OBC uses a smaller set of criteria focused on the process results, rather than the process itself, to evaluate system compliance with program objectives. FDGS understands that both OBC and SMC may change or reduce the role of the IV&V services contractor based on final CMS guidance.

OBC contains two CMS milestone reviews: Operational Readiness Review and Certification Review. SMC will follow a similar approach with milestones and outcomes to OBC, but will use a slightly broader set of criteria than currently written for EVV because the Medicaid enterprise as a whole covers more program objectives. MLTC anticipates that CMS will release formal guidance about the SMC approach to certification as pilot projects are completed and processes are refined. In the interim, MLTC has started participating in an SMC pilot, which will inform future certification approach transition, adoption, and success.

FDGS works directly with our agency partners and CMS to provide support for the current CMS guidance and practices for the certification of the Medicaid Enterprise components. Most recently, in January 2021, our AuthentiCare solution received final full CMS approval following the Outcome Based Certification (OBC) approach in our Nevada Electronic Visit Verification implementation.

FDGS has a demonstrated history of providing IV&V services to public and private sector entities for more than two decades in support of project certifications and securing enhanced funding. Nevada EVV is the first full certification for any vendor under the OBC methodology. We are actively helping South Carolina, Oklahoma and Arkansas to become CMS certified for their EVV systems as well.

Our successful portfolio of engagements include efforts in support of state agencies that are in the process of or have replaced and upgraded their Medicaid Management Information System (MMIS) and Eligibility and Enrollment Systems (EES) environments, developed various forms of health insurance marketplaces and expanded healthcare service offerings. During this same time, FDGS has amassed a wealth of experience related to the development of Enterprise Data warehouses that support state healthcare initiatives.

Our previous engagements have relied heavily upon CMS supplied documents, webinars and guidance which include the previous and current versions of Medicaid Information Technology Architecture (MITA) initiative, previously published Enterprise Life Cycle (ELC) documentation, Enhanced Funding Requirements: Seven Conditions and Standards (2011) and Medicaid Enterprise Certification Toolkit (2016), as well as OBC for EVV.

With the release of the latest Medicaid Enterprise Certification Toolkit (MECT) in August 2018, FDGS modified our processes to facilitate alignment with the MECT. FDGS continues to meet with CMS to come to a common understanding regarding the expected outcomes of the state's

current effort to upgrade its eligibility and enrollment environment in light of the recent standards. This common understanding is necessary given the reality that the effort began several years prior to the most recent MECT release.

The current MECT provides much needed refined and targeted critical success factors (CSFs). As MECT transitions to OBC and SMC, we will adapt existing processes to an outcomes-based approach, including mapping CMS-defined outcomes, identifying gaps, and making recommendations on additional outcomes, as requested by CMS and MLTC. The Medicaid Enterprise Certification Life Cycle (MECL) documentation addresses the outsourcing of Medicaid functions to third parties.

Based on our experience with transitioning to OBC, we anticipate SMC guidance introducing additional changes to system certification, similar to OBC with EVV. This documentation and suggested approach has proven invaluable as DHHS moves forward with the Heritage Health Adult initiative.

FDGS understands there are primary objectives to your system automation projects, implement them to work properly, and implement them in accordance with CMS standards to secure funding. We can do both of these through our IV&V practice.

*Address the bidder's approach to meeting each requirement in a table that contains the requirement and the bidder's approach to meeting the requirement. (RFP Section V, B.3.c.i)*

**Table 10** below details our approach to meeting each requirement for CMS and MITA Compliance.

**Table 10: CMS and MITA Compliance Requirements**

#	Requirement	FDGS Approach
1.	<i>Must provide IV&amp;V services for CMS in support of the MECL in accordance with guidance released in the MECT and guidance from CMS regarding Outcomes-Based Certification (OBC).</i>	<p>CMS sets forth three key activity sets in the MECT: conduct technical design reviews, perform project management reviews and prepare and submit certification progress reports to CMS. With regards to the technical design reviews, these artifacts will include Detail System Designs, Security &amp; Privacy (MARS-E), Requirements Tractability, and User Acceptance (which must include Performance Testing). In previous IV&amp;V engagements, FDGS has performed these technical design reviews and prepared the necessary artifacts which contained our findings and recommendations that were presented to CMS.</p> <p>In completing these tasks, FDGS recognizes the importance of maintaining its independence. Independence is best characterized as being both technical independence (reliance upon subject matter expertise on the team and within FDGS) and managerial independence (the team is internally directed in consultation with CMS but not directed by the client, vendor or stakeholders).</p> <p>FDGS recognizes with the release of the updated MECT, CMS expectations and guidance have changed. The FDGS Team will engage CMS and support DHHS in the development of a plan to get each project in scope for this RFP through the Operational and</p>

#	Requirement	FDGS Approach
		<p>Certification Milestone reviews. The most important artifacts that need to be addressed are the Certification Progress Reports and the underlying checklists that are key components of the reports.</p> <p>For OBC and, if or when MLTC adopts SMC for other modules, FDGS will support the transition from MECT by providing suggested mapping of current work, gap analysis, and suggested outcomes to address gaps. We will also support oversight of the ongoing Key Performance Indicator (KPI) reporting.</p> <p>For OBC and SMC, FDGS will contribute to the development of new outcomes, as needed, and provide recommendations on adapting the outcomes to the Nebraska environment by applying our experience with OBC and SMC pilots, as well as lessons learned from the industry. This will facilitate an easier adoption of new guidance, identify early potential risk areas, and mitigate issues stemming from initial misalignment that can start a project off on the wrong foot.</p> <p>With a secure footing in OBC and SMC, we will support MLTC throughout the project lifecycle. OBC and SMC create more opportunities for hands-on engagement with a wider variety of project tasks. As your IV&amp;V vendor, FDGS will be able to provide structured document reviews with more direct feedback on areas of interest, as well as collaborating with stakeholders to improve these areas.</p> <p>Consistent with our approach to milestone reviews in MECT, under OBC and SMC, FDGS will review certification criteria evidence documents. With the added flexibility for IV&amp;V, we can work with vendors more directly to improve these documents, as needed. We will also support project success with reviews of project documentation, such as management plans and schedules.</p> <p>In preparing for milestone reviews, we will serve as an intermediate level of quality checks after a vendor believes they are complete with tasks, like preparing evidence documents or demonstrations, and before they present their documentation to you and CMS. We will verify the quality of these representations to maximize the use of your time and avoid stakeholders presenting subpar information to you and CMS.</p> <p>As IV&amp;V, we will use the significant insight into the project we gain from serving as IV&amp;V to enhance all stakeholders understanding of the project at critical junctures. During milestone reviews, we will attend and participate, as directed, including generally tracking and resolving stakeholder questions. While the bulk of the presentation will come from vendors and MLTC, we will answer CMS' questions of IV&amp;V specifically and, where directed, speak to IV&amp;V findings or add clarifications based on IV&amp;V reviews.</p> <p>We understand that prompt resolution of outstanding CMS questions from the milestone review expedites CMS approval. Following milestone reviews, we will follow up and seek to resolve these questions.</p>



#	Requirement	FDGS Approach
		<p>While OBC and SMC will reduce the number of milestone reviews, these processes add ongoing KPI reporting after go live. CMS expects KPI submissions on a quarterly basis starting at go live and running through the duration of operations. We have also observed that, while CMS does not have specific thresholds set for KPI's nationally, CMS looks to set baselines for individual states and to have explanations for apparent outlying KPI results.</p> <p>We will support the development, production, and review of these KPI's. Before go live, we will confirm the definition of the KPI's and coordinate with stakeholders to support a consistent understanding of these definitions. We will validate that a feasible and effective plan and process is in place for data to be available in a state-designated database and processed in a way to support the KPI's. Starting at go live, we will validate the data are collected, transmitted, and stored according to the plan. When the quarterly calculations are completed, we will validate the calculations and analyze for outliers. Based on this analysis, we will seek out explanations in order to be prepared to help you explain any outliers to CMS. This will help you make a more clear and convincing case to CMS for certification and expedite the granting of enhanced funding during the Certification Review.</p>
2.	<p><i>Must periodically, as needed, produce exception based Certification Progress Reports in the format required by CMS. The report must utilize the MECT checklists and MMIS Critical Success Factors (CSFs) and must objectively illustrate the strengths and weaknesses of the project and provide recommendations for correcting any identified weakness.</i></p>	<p>The Medicaid Enterprise Certification Toolkit instructs the FDGS Team to produce quarterly Progress Reports and Progress Reports before each milestone. If these coincide, a decision between MLTC, CMS, and FDGS will determine whether FDGS produces a periodic and/or a milestone Progress Report.</p> <p>The FDGS Team will utilize the MECT Certification Progress Report template supplied by CMS. The FDGS Team will make use of the appropriate checklists and criteria based on the solution being addressed. We will validate the checklist and criteria selection with MLTC and CMS at the project initiation and before each milestone review to help maintain expectation alignment.</p> <p>A key checklist effort is the confirmation that the critical success factors are being address/satisfied with the solution. The expected sequence of events will be for the state to populate the evidence section of the checklists and then provide the checklists to the FDGS IV&amp;V Team. The FDGS Team will complete the reviewer section of the checklist and then send it directly to CMS and the state simultaneously, per MECT guidance. In addition to the checklist, the CPR will contain sections pertaining to overall engagement progress, remedial activities completed since the last CPR and an updated risk/issue registry.</p> <p>As this format changes under OBC and SMC, we will work with MLTC and CMS to define and produce appropriate reporting to support progress reporting objectives. A key element of reporting under OBC, which would likely carry forward in SMC, is the Intake Form. The Intake Form has a similar structure to the MECT checklists. We will review</p>

#	Requirement	FDGS Approach
		<p>stakeholder entries in the Intake Form before milestone reviews and add IV&amp;V input, as needed.</p> <p>We understand that you may have additional reporting needs, even as CMS has scaled back some of their reporting requirements. We will work with you to define and implement this additional reporting. We understand that any reporting, either on the Intake Form or otherwise defined, must be written objectively using evidence-based findings and references to best practices and industry standards. These writing practices support the objectives of clarity and concision that make actionable comments easily acted on.</p>
3.	<p><i>Must submit the monthly IV&amp;V report to CMS.</i></p>	<p>In order for the relationship between CMS and FDGS to be of value, our FDGS IV&amp;V Team's reports to CMS must be independent and objective. FDGS expects to provide ongoing reports directly to CMS throughout the engagement, which should align with information familiar to the state. Once submitted, the report is only then shared with the state agency.</p> <p>These reports fall into two groups, Monthly Status Reports and Certification Progress Reports. The FDGS Team will be submitting monthly status reports electronically to CMS. The monthly report will provide an executive summary of the previous month's events, important milestones achieved or missed (based on published project schedule), risk registry summary and a summary of deliverables. Lastly, the report will apprise CMS of upcoming events such as milestone reviews and efforts underway to provide the necessary documentation to CMS sufficiently in advance of the event.</p> <p>We provide a samples of IV&amp;V Monthly Status Reports from Nebraska and New York in <b>Appendix 4</b>.</p>
4.	<p><i>Must participate in meetings with CMS as directed by CMS or DHHS.</i></p>	<p>Collaboration is the cornerstone of our IV&amp;V efforts. The FDGS Team recognizes the importance of working within a collaborative environment. This extends to participation in any meeting in which CMS is present.</p> <p>The FDGS Team will present updates during standing meetings and will also prepare additional information and present this to CMS and all meeting attendees as necessary. It is our experience as an experienced IV&amp;V vendor that it is not only important to attend CMS meetings and present, as directed, but to view the other attendees as co-collaborators.</p> <p>We succeed as a group, not as individuals. The FDGS Team will maintain our current positive professional cooperative relationships with DHHS, the Project Management Office (PMO), implementation contractors and subcontractors.</p>
5.	<p><i>As directed by DHHS, must coordinate and participate in the planning, preparation, and performance of CMS</i></p>	<p>FDGS will work with DHHS to develop and execute the necessary certification activities for each of the named and proposed projects. We have supported many CMS reviews under MECT and OBC and are</p>



#	Requirement	FDGS Approach
	<p><i>project reviews (readiness reviews, certification reviews, etc.).</i></p>	<p>prepared to continue supporting milestone reviews under SMC such as the recently completed Nebraska DMA Final Certification Review.</p> <p>The FDGS Team will work with DHHS, the PMO and the appropriate implementation contractor to incorporate Milestone Reviews into the master project plan. The FDGS Team will validate that the appropriate milestone reviews are contained within the master project plan with subordinate activities identified and properly resourced. Each project plan will align with the system development life cycle for the related project.</p> <p>CMS reviews are complex tasks that, when run well, appear easy. The appearance of ease depends on thorough preparation. We have learned to prepare thoroughly through repeated efforts. Success starts with a plan.</p> <p>For CMS reviews, we work with DHHS, including the State Certification Lead and the Project PMO, to identify specific roles and responsibilities for each task in the plan, including document preparation and review, demonstration and presentation preparation and reviews, dry runs with all of the stakeholders, and question and answer follow up tracking during and after the milestone reviews. We will execute our responsibilities defined in the plan, validate that others do theirs and provide feedback if discrepancies arise.</p>
6.	<p><i>In preparation for certification milestone reviews, must evaluate documents and evidence along with any working modules / code applicable to that particular review, and complete the reviewer comments portion of the relevant Medicaid Enterprise Certification Checklists. The completed checklists are appended to the Certification Progress Report. Progress report must be delivered with the necessary lead time as required by CMS prior to the scheduled MMIS certification milestone review. The certification progress reports must be provided to CMS at the same time they are presented to the state</i></p>	<p>The Medicaid Enterprise Certification Toolkit provides 15 checklists to support the certification process, 10 aligned to a specific Medicaid business areas and five (5) general checklists. Taken together, these checklists describe the business objectives for a Medicaid Enterprise System. As an early IV&amp;V activity, the FDGS Team will work with DHHS, the PMO and the vendor(s) to review the certification checklists and tailor them, as necessary, to reflect the specific business objectives of the projects, defining applicable criteria from each checklist for the module or component under review. For example, some objectives may not apply to the project, while DHHS may also add additional business objectives unique to Nebraska.</p> <p>After we have tailored checklists to meet the unique requirements of the project, we will review these modifications with CMS to gain its agreement. It is critically important to certification that DHHS, its implementation contractor and CMS have a clear, consistent and shared view of the business objectives and certification criteria for each element of the project.</p> <p>Once the checklists are in place, we will monitor the implementation contractors' compliance with the checklists through deliverable reviews and periodic checklist reviews. Our approach is to integrate checklist compliance as part of our overall IV&amp;V process.</p> <p>In preparation for each milestone review, the state will populate the evidence section of the checklist with a summary of the solution's approach to each criterion and produce packets with supporting</p>

#	Requirement	FDGS Approach
		<p>evidence for each of the applicable criteria. The state will submit the checklists and evidence packets to IV&amp;V for review using an agreed-upon repository 4-6 weeks before a milestone review.</p> <p>FDGS has an evidence review and tracking tool that the state may opt to use. After submitting the checklists and evidence, FDGS will review the evidence, reply with any questions for clarification, and, after resolution, populate the reviewer section of the checklists. After completing the reviewer section of the checklists, FDGS will also complete the rest of the Progress Report sections. FDGS will then combine the checklists and Progress Report and submit these to CMS and the state simultaneously at least 2 weeks before the milestone review, per MECT guidance.</p> <p>Based on our experience, longer review cycles before the hard deadlines help facilitate more dialogue and clarifications, which can reduce the volume of findings, so we encourage and will work to support this kind of collaboration.</p> <p>OBC and SMC introduce changes to the structure of certification that could change the minimum requirements for states, but we can still support similar IV&amp;V activities under OBC and SMC to those we did under MECT, as desired. Under OBC and SMC, CMS will not require an IV&amp;V review of evidence and the Intake Form. However, the Intake Form contains a list of criteria, similar to the checklist, for which evidence documents must be created. While CMS no longer requires IV&amp;V document reviews, at your discretion, we can still review evidence documents for OBC and SMC certification criteria and provide the same kind of feedback we did under MECT. Even without required reporting to CMS, we have seen that an initial review by IV&amp;V can catch many issues that would not require state expertise to resolve, thereby maximizing the impact of state resources.</p>
7.	<p><i>Must periodically submit project progress data to the CMS dashboard on a schedule required by CMS.</i></p>	<p>Dashboards provide leadership and key stakeholders with a succinct picture of project status and health. They educate the reader as to a project's progress in achieving specific, measureable project objectives. FDGS has developed and maintains dashboards both for internal use and for our external engagements. FDGS teams have regularly supplied information for presentation on dashboards.</p> <p>Once CMS provides the FDGS Team with the necessary reporting metrics, submission format, frequency and location, the FDGS Team will begin providing/uploading the information.</p>
8.	<p><i>Must assess impacts of projects to MITA business, informational, and technical architecture maturity.</i></p>	<p>As part of the initiation and planning phase of the project, the FDGS Team reviews five MITA-related documents, including the State Self-Assessment (SS-A). The team's findings and recommendations will be included in appropriate reporting.</p> <p>The MECT checklists tie in to the MITA framework. Applicability of criteria sourced from MITA will be based on targeted maturity levels. Specific decisions on criteria applicability will be made during the joint</p>

#	Requirement	FDGS Approach
		<p>applicability assessment at project initiation and validated before each milestone. Applicable criteria will guide our assessment of MITA impacts.</p> <p>As we proceed through certification, progress on the applicable MITA-sourced criteria will show progress from the As-Is MITA maturity levels to the To-Be MITA maturity levels targeted in the MITA SS-A. FDGS will assess progress on these applicable criteria at each of the milestones and report on them in the checklists.</p> <p>As MITA evolves with the release of MITA 4.0 and a possible reorientation to an outcomes-based framework, we can provide recommendations for mapping criteria, evidence, and roadmaps to situate existing projects in the framework and facilitate this transition. At initiation, when we help you develop criteria, we will use our understanding of the MITA 4.0 framework to help align our draft criteria with a new potential MITA framework.</p>
9.	<p><i>Must track traceability of project activities and requirements through the entire project to CMS critical success factors and certification checklist criteria as applicable to the project to secure ongoing enhanced funding.</i></p>	<p>An early FDGS Team activity will be to validate requirements and trace project requirements to certification criteria. Requirements traceability will be a part of all of our reviews and an input in to the certification reviews.</p> <p>Once the requirements are reviewed and clarification received (as necessary) the FDGS Team will monitor the progress of addressing the requirements via the project designated traceability matrix. An important aspect of the on-going monitoring effort by the team is to validate that the solution being developed and the decisions being made during implementation, planning and development are in alignment with certification criteria, critical success factors and/or outcomes.</p> <p>FDGS will be monitoring the project schedule, participating as a regular attendee, reviewing state and vendor deliverables throughout the month and then assembling its findings in the Monthly IV&amp;V Status Report, which is provided to CMS and DHHS simultaneously.</p> <p>For MECT projects, the FDGS Team will utilize the MECT Certification Progress Report (CPR) template supplied by CMS. The FDGS Team will make use of the appropriate checklists, appropriateness based on the nature of the engagement. The FDGS team will indicate how the state and vendor(s) are doing in meeting the critical success factors. The FDGS Team will complete the checklists and then send the CPR to CMS and DHHS simultaneously. In addition to the checklist, the CPR will contain sections pertaining to overall engagement progress and remediation activities completed since the last CPR. Remediation activities may be necessary when at the time of the last checklist submission, expected success factors had not been realized. The report will also contain updated summary and detailed risk/issue registry information.</p>

#	Requirement	FDGS Approach
		<p>As these CSF's develop or transform in OBC and SMC, we will support the state in mapping previous CSF's to new outcomes. If we determine that the new outcomes will fully replace the CSF's, we will track progress of the outcomes using the Intake Form or a superseding document. As we progress through the project and certification lifecycle, the milestone reviews will serve as checkpoints for progress on meeting the outcomes, which may replace the CSF's. The evidence preparation and validation processes we follow in preparation for the milestone reviews support outcome progress tracking by requiring a clear explanation of how the system achieves a specific outcome.</p>
10.	<p><i>Must perform all functions required by CMS for all CMS reviews.</i></p>	<p>OBC and SMC introduce changes to the structure of certification that could change in minimum requirements for states, but we can still support similar IV&amp;V activities under OBC and SMC to those we did under MECT, as directed. Under OBC and SMC, CMS will not require an IV&amp;V review of evidence and the Intake Form, which mostly replaces the MECT checklists. Furthermore, there is no CMS Certification Progress Report. However, at your discretion, we can still review evidence documents for OBC and SMC certification criteria and provide the same kind of feedback we did under MECT projects and under SMC for the DMA project. Even without required reporting to CMS, we have seen that an initial review by IV&amp;V can catch many issues that would not require state expertise to resolve, thereby maximizing the impact of state resources.</p> <p>Consistent with our approach to milestone reviews in MECT, under OBC and SMC, FDGS will review certification criteria evidence documents. With the added flexibility for IV&amp;V, we can work with vendors more directly to improve these documents, as needed. We will also support project success with reviews of project documentation, such as management plans and schedules.</p> <p>In preparing for milestone reviews, we will serve as an intermediate level of quality checks after a vendor believes they are complete with tasks, like preparing evidence documents or demonstrations, and before they present their documentation to you and CMS. We will verify the quality of these representations to maximize the use of your time and avoid stakeholders presenting subpar information to you and CMS.</p> <p>We will use the significant insight into the project we gain from serving as IV&amp;V to enhance all stakeholders understanding of the project at critical junctures. During milestone reviews, we will attend and participate, as directed, including generally tracking and resolving stakeholder questions. While the bulk of the presentation will come from vendors and MLTC, we will answer CMS' questions of IV&amp;V specifically and, where directed, speak to IV&amp;V findings or add clarifications based on IV&amp;V reviews.</p> <p>We understand that prompt resolution of outstanding CMS questions from the milestone review expedites CMS approval. Following</p>

#	Requirement	FDGS Approach
		<p>milestone reviews, we will follow up and seek to resolve these questions.</p>
11.	<p><i>Must coordinate certification activities for the project. Must evaluate and make recommendations about the state artifacts that are required for MMIS certification milestone reviews.</i></p>	<p>FDGS will develop its own IV&amp;V Project Plan for the Nebraska engagement. The project plan will be modified (expanded) as necessary to accommodate the expected multiple engagement phases for the projects. It is our experience that a master project plan under the control of the PMO is the best way to facilitate coordination among distinct vendor project plans. The FDGS Team will review the individual state and vendor’s project plans (or master project plan if that be the case) to validate that the expected deliverables are accounted for, scheduled/sequenced and properly resourced.</p> <p>All individual project plans should align with certification lifecycle phases. We will conduct certification evidence document reviews prior to milestone reviews. We will make recommendations for improvements based on these reviews. Outside of the milestone review cycle, under OBC and SMC guidance, IV&amp;V can also review and provide recommendations on other state artifacts, as directed. The State and vendor deliverables are reviewed and reported on in the IV&amp;V Monthly Status Report.</p>
12.	<p><i>Must review all new or updated documentation, guidance, and rules promulgated by CMS applicable to the project and provide summary impacts to the project along with any recommendations.</i></p>	<p>Members of the FDGS Team as well as the larger Center of Excellence and Innovation’s Assessment Practice track CMS guidance releases on the CMS website. Our experts also stay informed through ongoing relationships with CMS and other industry stakeholders, including Human Services Information Technology Advisory Group (HSITAG.)</p> <p>These resources give us insight into the formal releases by CMS, as well as grounding expectations on upcoming releases. The Assessment Practice group meets on a bi-weekly basis, providing a forum for communicating changes in policies and information captured in discussions with CMS on other FDGS engagements. The composition of the Assessment Practice also includes our senior Security and Privacy resources. These are invaluable resources to the FDGS Team given the nature of the data being captured, stored and used in Nebraska.</p>
13.	<p><i>Must perform any IV&amp;V services and roles required by CMS or DHHS necessary to secure the enhanced funding.</i></p>	<p>FDGS understands the IV&amp;V tasks identified in the MECT and OBC guidance, as well as the likely direction under SMC. As discussed above, these include providing general oversight, as well as completing specific document reviews and completing checklists and progress reports on periodic bases and for each milestone review. FDGS also understands that other activities may arise, as defined by the state or CMS, to be necessary for the state to secure enhanced funding. As a collaborative partner with the state, the FDGS will work to include these within the defined project scope. Discussions of specific activities should occur on a one-off basis. FDGS will then update the scope document to reflect the inclusion of these additional activities, based on agreements reached in discussions around these individual activities.</p>



*Describe the bidder's understanding of CMS' expectations for an IV&V contractor and approach to compliance with CMS expectations. (RFP Section V, B.4.c.ii)*

FDGS has a demonstrated history of successful IV&V efforts, as outlined in **Section 1.8** describing our Corporate Experience. The FDGS Team takes the position that when functioning in the capacity of the IV&V contractor; they are functioning as a conduit of timely, accurate and objective information to CMS. FDGS works tirelessly to make certain that the relationship and information shared between FDGS and CMS is devoid of outside influence. As stated earlier in our response, we strive to develop and maintain a collaborative relationship with all key parties but FDGS clearly understands that the development and maintenance of the FDGS/CMS relationship is paramount. FDGS will follow CMS' expectations of the IV&V contractor laid out in the latest MECT guidance.

FDGS has a clear understanding of CMS's expectations of an IV&V contractor:

- Develop a work plan
- Review and make recommendations on management and technical aspects of the project
- Consult with stakeholders and assess user involvement and buy-in
- Conduct an analysis of past project performance to make recommendations for improvement
- Provide risk management assessment and capacity planning services
- Develop performance metrics for project performance tracking
- Complete reviewer section of checklists
- Complete periodic and milestone Progress Reports on appropriate timelines
- Maintain managerial and operational independence

*Describe the bidder's approach to assessing the impacts of a project on MITA maturity levels. (RFP Section V, B.4.c.iii)*

The FDGS Team will begin with its review of the State self-assessment, submitted March 19, 2015, as well as the updated roadmap completed in August, 2020. The assessment will indicate the present state and the desired state. The FDGS Team will then look at the particular phase of the projects and align the phases to the appropriate MITA business area(s).

The FDGS Team will review the functional and non-functional requirements associated to the phase's solution. The MECT checklists tie in to the MITA framework. Applicability of criteria sourced from MITA will be based on targeted maturity levels. Specific decisions on criteria applicability will be made during the joint applicability assessment at project initiation and validated before each milestone. Applicable criteria will guide our assessment of MITA impacts. As we proceed through certification, progress on the applicable MITA-sourced criteria will show progress from the As-Is MITA maturity levels to the To-Be MITA maturity levels targeted in the

MITA SS-A. FDGS will assess progress on these applicable criteria at each of the milestones and report on them in the checklists.

FDGS understands that DHHS needs change and evolve as the agency and its recipients do. We will take into account the updated MITA SS-A once it has been completed by DHHS, which is currently expected in the summer of 2022.

*Describe the bidder's approach to monitoring for documentation, guidance, and regulations from CMS. (RFP Section V, B.4.c.iv)*

Members of the FDGS Team, as well as the larger Center of Excellence's Assessment Practice, track CMS guidance releases on the CMS website. Our experts also stay informed through ongoing relationships with CMS and other industry stakeholders, including HSITAG. These resources give us insight into the formal releases by CMS, as well as grounding expectations on upcoming releases. The Assessment Practice group meets on a bi-weekly basis, providing a forum for commutating changes in policies and information captured in discussions with CMS on other FDGS engagements. The composition of the Assessment Practice also includes our senior Security and Privacy resources. These are invaluable resources to the FDGS Team given the nature of the data being captured, stored and used in Nebraska.

In addition, FDGS is a member of the Human Services IT Advisory Group (HSITAG). HSITAG partners with Federal agencies including CMS to improve communications – organizing webinars throughout the year educating attendees on proposed changes in policy and publications. The FDGS IV&V Team's participation with HSITAG and the assessment group keeps the team current on changes in CMS policy expectations that may impact the DHHS projects.



## 2.1.5 Operational and System Readiness

*Overview: The IV&V contractor is responsible for assessment of all testing performed throughout the lifecycle of the projects. The findings of the assessment are to be reported as part of the ongoing IV&V Status Meetings and Reports responsibilities.*

Thorough system testing is one of the most critical components of the SDLC and IV&V processes. During system testing, FDGS validates products, services and systems meet the needs of the customer and we verify that all outcomes comply with federal regulations, system requirements, and customer expectations. We start by identifying every step of the testing cycle, then we observe and document each testing cycle, and finally independently evaluate testing results. Our observations and independent assessments are presented to project teams and DHHS Leadership during status meetings. We also document findings and observations in formal status reports. When appropriate, we provide formal attestation to Center for Medicare and Medicaid Services (CMS) that all testing complied with and achieved CMS testing standards.

Operational and System Readiness defines the point at which a developed system, organization and affected stakeholders are sufficiently prepared to implement a change. Too often, insufficient preparation stems from a limited vision resulting in unsatisfied project goals and objectives. It is important to recognize that successful operational readiness goes far beyond the system and is the culmination of a process of preparation, review and scrutiny that span the project life cycle. Our proven methodology of a comprehensive System and Business Operations Readiness Review (SaBORR) ensures all aspects of the implementation are considered.

The FDGS Team has experience from both sides of the readiness picture – system readiness preparation and IV&V. This experience gives us strong perspectives to be effective and proactive in our approach to IV&V. Not only does FDGS follow proven methodologies, but a depth of expertise we call upon to facilitate project success. We bring:

- **Experience** – We understand both the IV&V process and have considerable demonstrated success
- **Skill** – Qualified, experienced staff are the core of our success
- **Depth of Resources** – We have acquired a library of refined tools and assets to facilitate IV&V project work to every project and are committed to the success of DHHS

*Address the bidder's approach to meeting each requirement in a table that contains the requirement and the bidder's approach to meeting the requirement. (RFP Section V, B.5.c.i)*

**Table 11** below details our approach to meeting each requirement for Operational and System Readiness.

**Table 11: Operational and System Readiness Requirements**

#	Requirement	FDGS Approach
1.	<p><i>Must assess project testing activities including test scenarios, cases, and results including traceability of testing to project requirements. Assessment must include whether additional test scenarios or cases are needed to sufficiently test the project requirements.</i></p>	<p>The FDGS staff assigned to this project are expert evaluators of the testing lifecycle. We are trained to observe and evaluate every step of the testing process from test creation through test outcome evaluation. We recognize that testing effectiveness and scope of work are governed by time and budget constraints. We also understand the balance between full test coverage and that which is sufficient to adequately test the project requirements. FDGS employs the following approach for assessment of vendor testing to confirm completeness, accuracy, and efficacy.</p> <p><b>Vendor Testing</b></p> <ul style="list-style-type: none"> <li>• Evaluate the vendor’s Test Plan(s) to verify inclusion and completeness of all required components to include goals and objectives, methods, approaches, test requirements (including data set and environment), detailed test descriptions, defect reporting and resolution process.</li> <li>• Assess vendor testing approach to confirm:             <ul style="list-style-type: none"> <li>○ Test planning is based on requirements and design specifications to meet intended purpose</li> <li>○ Test scheduling and resource allocation are adequate, appropriate and reasonable</li> <li>○ Testing phases (Unit testing, Integration testing, System testing, Acceptance Testing and Regression Testing) have clear entrance and exit criteria</li> <li>○ The configuration management plan is complete, maintained, and adhered to</li> <li>○ Validate the requirements traceability matrix to confirm that test cases adequately test system requirements and that all requirements are tested</li> <li>○ The detailed testing process is comprehensive and complete</li> <li>○ Defects are accurately captured, tracked, and resolved</li> </ul> </li> <li>• Review test preparations to validate that test environments replicate production environments, proper tools are employed, appropriate supporting processes are in place, and adequate resources (e.g. business, technical, and vendor staff) are allocated to support testing</li> <li>• Monitor test efforts to verify adherence to test procedures and witness record of test results</li> <li>• Review and assess executed tests to determine the completeness of testing, accuracy, and efficacy of vendor testing efforts</li> </ul>

#	Requirement	FDGS Approach
		<ul style="list-style-type: none"> <li>• Report overall testing findings so they may be shared with DHHS and the respective vendor</li> </ul> <p>FDGS uses industry standards, including IEEE, and professional best practices when assessing test methodologies for planning, preparation, execution and reporting on all test phases as documented in the vendor master test plan. FDGS collaborates closely with DHHS in the specific configuration of our assessment to confirm that all processes are thoroughly reviewed.</p> <p><b>UAT Testing</b></p> <ul style="list-style-type: none"> <li>• Evaluate the DHHS UAT Plan for completeness, reasonableness of approach, effectiveness and adherence to standards*</li> <li>• Assess the UAT schedule for structure and reasonableness of timing and resources</li> <li>• Verify presence of UAT Training Plan and validate adequate staff training</li> <li>• Verify the completeness, relevance, effectiveness and accuracy of testing environment, scenarios, scripts, and test cases</li> <li>• Validate that testing incorporates all appropriate stakeholders to verify proper perspectives and objectives</li> </ul> <p><b>Independent Testing</b></p> <p>This step may be performed at the request of DHHS to independently validate the quality of implementation contractor testing. Results from this independent testing would be compared to those obtained by the DDI vendor.</p> <ul style="list-style-type: none"> <li>• This process duplicates the testing process of the implementation contractor and includes:                         <ul style="list-style-type: none"> <li>○ Test planning</li> <li>○ Test environment preparation</li> <li>○ Test execution</li> <li>○ Defect Management</li> <li>○ Test Maintenance</li> <li>○ Test Reporting</li> </ul> </li> </ul> <p>*The standards employed in FDGS IV&amp;V projects are drawn from the following recognized standards bodies:</p> <ul style="list-style-type: none"> <li>• The Project Management Institute (PMI®)</li> <li>• The Institute of Electrical and Electronics Engineers, Inc. (IEEE)</li> <li>• The International Organization for Standardization (ISO)</li> <li>• The International Electrotechnical Commission (IEC)</li> </ul>

#	Requirement	FDGS Approach
2.	<p><i>Must assess defect resolution and retesting activities to validate defect was appropriately resolved</i></p>	<p>The FDGS Team is committed to confirming that the appropriate systems and controls are in place prior to system deployment. Determining the severity and appropriate level of resolution to system defects is a key element in operational readiness. Drawing on past experience and industry standards, FDGS will:</p> <ul style="list-style-type: none"> <li>• Validate that System and User Acceptance Test Plans contains valid processes and tools for defect classification, management, and reporting.</li> <li>• Verify the defect reporting tool:                             <ul style="list-style-type: none"> <li>○ Uniquely identifies the defect</li> <li>○ Defines fields required for each defect</li> <li>○ Identifies metrics and trends related to the defect</li> <li>○ Classifies and categorizes the defect level of severity</li> <li>○ Defines the resolution/mitigation strategy</li> <li>○ Captures the regression testing process and results</li> </ul> </li> <li>• Verify that defect resolution processes are aligned with the Master Test Plan</li> <li>• Review test configuration to validate that appropriate stakeholders are involved in test execution and tracking to account for all perspectives and objectives</li> <li>• Monitor vendor testing and UAT efforts to validate that identified defects are logged and classified according to project protocols</li> <li>• Periodically review the defect tracking tool to verify that the appropriate action has been taken to resolve or mitigate all recorded defects</li> </ul>
3.	<p><i>Must develop and submit a comprehensive System and Business Operations Readiness Review Plan work product for each project for Department approval a minimum of 90 days prior to the acceptance testing schedule date in the project work plan.</i></p>	<p>The purpose of Operational Readiness Review (ORR) is to satisfy DHHS, project leadership and federal partner oversight groups that the developed system is operationally ready and prepared to support the project requirements. By working with DHHS and vendor partners, FDGS develops a System and Business Operations Readiness Review Plan that defines the what, how, and timing of validating operational readiness.</p> <p>The core of our approach to the ORR Plan is a checklist process used for the development of a go-live recommendation and support of a go-live decision. The checklist process defines the necessary functionality and scenarios to determine readiness in the areas of:</p> <ul style="list-style-type: none"> <li>• System readiness</li> <li>• Staff training and support</li> <li>• Thorough defect management</li> <li>• Adequacy of security processes</li> </ul>

#	Requirement	FDGS Approach
		<p>FDGS includes the following content as part of our standard ORR Plan:</p> <ul style="list-style-type: none"> <li>• <b>Introduction and Purpose</b> – defines the project details, purpose, and the scope of intended use</li> <li>• <b>Roles and Responsibilities</b> – defines the teams, plans, and responsibilities</li> <li>• <b>Readiness Assessments</b> – defines the operational areas, activities to be conducted, and measurement processes and metrics; this entails sections for:                             <ul style="list-style-type: none"> <li>○ Organization Readiness</li> <li>○ User Readiness</li> <li>○ Data Readiness</li> <li>○ Technical Readiness</li> <li>○ Implementation Readiness</li> </ul> </li> <li>• <b>Criteria Assessment</b> – The criteria and thresholds for the determination of a Go/No-Go decision</li> </ul> <p>FDGS agrees to submit Readiness Review Plans no later than 90 days prior to the scheduled date of acceptance testing. We also recognize that different SDLC methodologies including waterfall, agile and hybrid bring with them nuances that may affect the review schedules. FDGS will work with DHHS and its vendors to adjust delivery of Readiness Review Plans where appropriate.</p>
4.	<p><i>Must conduct a system and business operational readiness review and assessment and provide the results to DHHS.</i></p>	<p>The FDGS Team conducts the Operational and System Readiness Review and Assessment according to the approved IV&amp;V Plan.</p> <p>FDGS includes the following components in the assessment:</p> <ul style="list-style-type: none"> <li>• <b>Introduction</b>– provides a summary of the project, including the business need, purpose of the report, approach to the review, and an executive summary of results</li> <li>• <b>Assessment Results</b> – The readiness review consists primarily of checklists used in conducting oversight of the implementation. The checklists include functionality, scenarios, factors for consideration, and observations for both business and system areas. The FDGS team employs the CMS checklists and directives, where applicable, and defines any additional source documentation beyond the physical review process</li> <li>• <b>References</b> – identifies any standards used in conducting the review process, defines common terms or acronyms used in the report, and identifies any additional references used in the assessment</li> </ul> <p>The FDGS Team will report the results of each review to DHHS and CMS in accordance with 45 CFR 95.626.</p>

*Describe the bidder's approach to operational and systems readiness. (RFP Section V, B.5.c.ii)*

FDGS works with the implementation contractor, the DHHS PMO, State personnel and interface partners to verify system environments are stable and ready to implement; staff are prepared to conduct the business of serving Nebraskans most vulnerable using the new operational systems; and required tools are in place to facilitate the transition. A Go/No-Go process facilitates the evaluation of implementation contractor readiness, identifies any incomplete tasks, outstanding items or concerns, and the risks related to not completing those tasks or resolving those items or concerns prior to Go-Live.

A final Go/No-Go meeting is conducted to assess the overall readiness for DHHS implementations. The respective implementation contractors and the FDGS Team present their Go/No-Go recommendations and, as appropriate, certification letter(s) that the systems are ready for implementation. State personnel make the final Go/No-Go decision based upon the evidence provided in advance of this meeting. There are several inputs that contribute to the Go/No-Go decision process, including:

- Implementation contractor status report
- IV&V Operational and Systems Readiness Report
- Open risks and issues
- Implementation contractor project plan and work plan
- Implementation contractor readiness checklist

In order to assess readiness, FDGS provides a wide array of criteria that is verified and validated using our IV&V readiness checklist. **Figure 7** crops a small excerpt from our IVV System and Business Operations Readiness Review (SaBORR) Checklist used on the Nebraska Data Management and Analytics (DMA) project.

Readiness Criteria Metadata		
Category	Sub Category	Criteria
Organization	Implementation Deliverables	Tracking of Deployment Checklist and adherence to schedule
Organization	Implementation Deliverables	Adherence to Quality Assurance Plan and Procedures
Organization	Configuration Management	Approval of the Configuration Management Plan
Organization	Configuration Management	Identification of Configuration Management record items

**Figure 7: Excerpt from the FDGS IV&V Readiness Checklist**

The fundamental purpose of the IV&V readiness checklist is to help key stakeholders determine if they are ready for system implementation. The IV&V readiness checklist serves as a mechanism to clearly understand the status of each readiness task, outstanding items and evaluate the risk of proceeding. The items on the IV&V readiness checklist can be used to assess if any item or combination of items exceeds the threshold and thus jeopardize the implementation of the system.

Our IV&V readiness checklist is an Excel spreadsheet that addresses various criteria including:

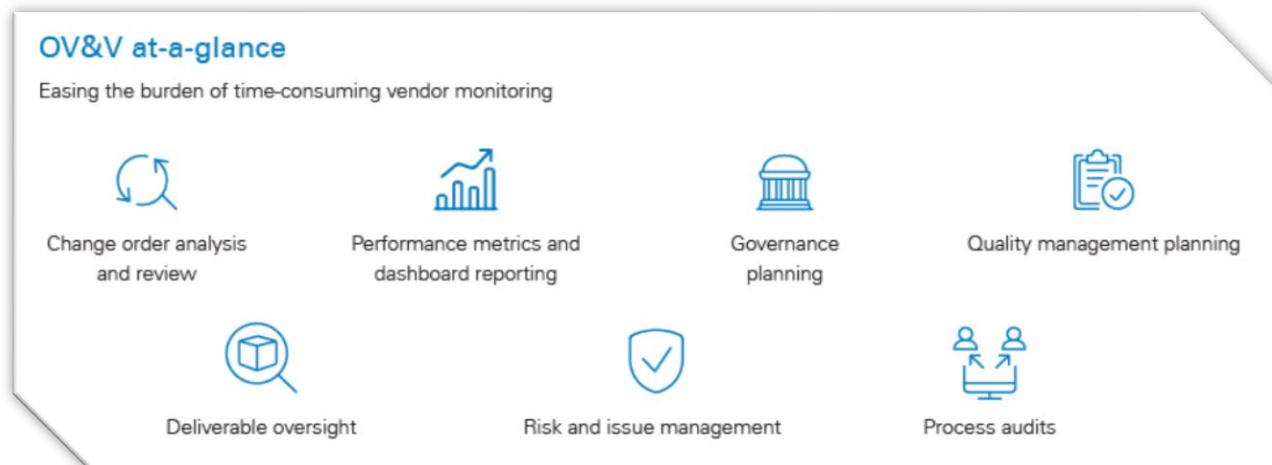
Operational	System
<ul style="list-style-type: none"><li>• Data</li></ul>	<ul style="list-style-type: none"><li>• Implementation</li></ul>
<ul style="list-style-type: none"><li>• Organization</li></ul>	<ul style="list-style-type: none"><li>• System</li></ul>
<ul style="list-style-type: none"><li>• User</li></ul>	<ul style="list-style-type: none"><li>• Technical</li></ul>

The IV&V readiness checklist provides both qualitative and quantitative measures of readiness that we track in the months and weeks leading up to implementation. FDGS can assist in defining parameters and criteria for acceptability and help determine the appropriate status. Some examples of acceptability criteria include:

- Percentage of staff that still need to complete a training course to be certified (Number of staff certified to date in relation to the total number of staff)
- Percentage of data converted successfully – did the data convert within the acceptable fallout threshold?
- Percentage of site preps completed

Once projects move into Maintenance and Operations, FDGS staff can shift to performing Operational Verification and Validation (OV&V) services. FDGS has a long history of providing OV&V services in other states so we are confident that we can help DHHS identify the most beneficial OV&V tasks. FDGS can supplement DHHS staff by taking on the time consuming deliverable reviews, change order analysis, vendor process reviews, and risk assessment and analysis. For larger scale projects, we can provide governance planning in a structured environment for managing the overall project. **Figure 8** provides an at-a-glance view of our OV&V service offerings.





**Figure 8: FDGS Operational Verification and Validation (OV&V) Services**

**Challenges of multi-vendor management**

As DHHS follows the roadmap of its Medicaid Enterprise improvements across multiple projects, you now have more vendors than ever to manage. OV&V from FDGS encompasses a variety of services designed to assist DHHS and its staff in monitoring and managing vendors and focusing on their operations and work products. With our OV&V services, you can overcome your biggest challenges in trying to manage multiple vendors internally. **Figure 9** includes examples of these challenges as each of the projects transitions into Maintenance and Operations.



**Figure 9: FDGS addresses the challenges of multiple vendor management and oversight needs as projects move into the Operations phase**

*Provide an example of a readiness review plan utilized for other projects. (RFP Section V, B.5.c.iii)*

An example of a readiness review plan is found as **Appendix 5**. This example was taken from the Nebraska DMA project.

- **Nebraska DMA – IVV System and Business Operations Readiness Review (SaBORR) Plan** – describes the plan to assess the status and coverage of the various activities and documentation necessary to determine if both the system and the business are ready for implementation to production.

*Provide examples of operation and system readiness review reports used on previous projects. (RFP Section V, B.5.c.iv)*

Examples of operation and system readiness review reports are found in **Appendix 6**.

- **Nebraska DMA – IVV System and Business Operations Readiness Review (SaBORR) Go Live Report** – is the result of assessing the status of selected readiness tasks, identifying outstanding items from the Design, Development and Implementation (DDI) phase and evaluate the risk of proceeding with implementation (Go/No-Go decision).
- **Indiana IEDSS – OVV Monthly IEDSS Operational Readiness Status Report** – FDGS provided an Operational Readiness Review report to Indiana on a monthly basis in preparation for the implementation of their Indiana Eligibility Determination and Services System (IEDSS). The document includes our observations in specific areas and highlights specific risks to the overall success of the implementation.

## 2.1.6 IV&V Deliverables and Work Products

*Overview: The IV&V contractor will submit one monthly deliverable for approval that represents all IV&V activities for the month for each project. The deliverable will include all of the IV&V work products for the month as well as the IV&V assessments of the project work products and deliverables.*

*The monthly deliverable will not be deemed approved until all work products are approved by DHHS.*

*Deliverable and work product review and approval processes will adhere to each project’s governance model.*

FDGS has broad experience and a methodology which has been proven highly effective in a portfolio management environment and has been applied to some of the largest system integrators in the country. Through our experience, we have developed templates, checklists, and best practices that are drawn upon to standardize processes and provide clear, integrated, uniform client reporting. These tools allow FDGS to effectively identify and consolidate findings across projects, identify key issues and deliver comprehensive yet concise client reports. Each month, FDGS reports on each project representing all IV&V activities and work products including assessments of vendor activities and deliverables.

*Address the bidder’s approach to meeting each requirement in a table that contains the requirement and the bidder’s approach to meeting the requirement. (RFP Section V, B.6.c.i)*

**Table 12** below details our approach to meeting each requirement for IV&V Deliverables and Work Products.

**Table 12: IV&V Deliverables and Work Products Requirements**

#	Requirement	FDGS Approach
1.	<p><i>For each project, must fulfil all IV&amp;V contractor responsibilities and submit a monthly deliverable including activities and work products completed within the month:</i></p> <ul style="list-style-type: none"> <li><i>• The monthly IV&amp;V report</i></li> <li><i>• Weekly status report materials for the month</i></li> <li><i>• IV&amp;V project work product and deliverable assessments completed within the month</i></li> <li><i>• Critical incident reports</i></li> <li><i>• Requirements traceability matrix updates</i></li> <li><i>• CMS and MITA compliance activities</i></li> <li><i>• IV&amp;V work plan updates</i></li> <li><i>• IV&amp;V work products</i></li> </ul>	<p>FDGS has a proven ability to deliver IV&amp;V reporting in a clear and timely fashion. Our methodology has proven effective on singular IV&amp;V engagements and within a portfolio management environment. We accomplish this with skilled and knowledgeable staff and the use of standard processes and templates, where possible.</p> <p>As discussed in earlier sections of this proposal, FDGS has established a close relationship with DHHS and its project vendors to foster project success. By establishing a spirit of collaboration, we integrate with existing work processes to make our efforts as transparent as possible facilitating the overall execution and delivery of all work efforts.</p> <p>By being part of the process and providing interim feedback according to the integrated project schedule, the FDGS approach promotes timeliness in the delivery of work products. We leverage these relationships to push each project toward successful implementation and to support achievement of DHHS’ goals.</p>

#	Requirement	FDGS Approach
		<p>FDGS also uses standard reporting and work product formats. Using this standardized approach allows FDGS to quickly and cleanly consolidate findings and information from multiple sources to a singular report. This style of reporting also provides a familiar view for the client which improves readability, eases navigation to find critical information, and employs standard metrics, where applicable.</p> <p>FDGS verifies the completion and timely delivery of all the reports within the scope of our work. The following approaches are used in support of contracted activities:</p> <p><b>Monthly IV&amp;V Report</b></p> <p>To facilitate timely integration and approval of monthly reporting, FDGS employs:</p> <ul style="list-style-type: none"> <li>• Standard, integrated reporting of inputs</li> <li>• Integration of IV&amp;V activities to facilitate timely delivery</li> </ul> <p>As the starting point for defining the Monthly IV&amp;V Report, FDGS uses the following structure:</p> <ul style="list-style-type: none"> <li>3.0 Executive Summary                         <ul style="list-style-type: none"> <li>▪ Report Summary</li> <li>▪ Engagement Information</li> <li>▪ Project Dashboard</li> </ul> </li> <li>4.0 Key Focus Areas                         <ul style="list-style-type: none"> <li>▪ Project Integrity</li> <li>▪ Solution Integrity</li> <li>▪ Certification</li> <li>▪ Other (as needed)</li> </ul> </li> <li>5.0 New Observations with Recommendations</li> <li>6.0 Appendix                         <ul style="list-style-type: none"> <li>▪ IV&amp;V Observations</li> <li>▪ IV&amp;V Activities</li> <li>▪ Other (as needed)</li> </ul> </li> </ul> <p>In addition to providing a summary of any of the activities listed immediately hereafter, FDGS includes, as an appendix, any work products completed, but not limited to:</p> <ul style="list-style-type: none"> <li>• Critical Incident Report(s)</li> <li>• Operational Readiness Assessment(s)</li> <li>• Requirements Traceability Matrix updates</li> <li>• CMS and MITA compliance reports</li> </ul>

#	Requirement	FDGS Approach
		<ul style="list-style-type: none"> <li>• IV&amp;V work plan updates</li> <li>• Other IV&amp;V work products</li> </ul> <p>Drawing on past experience and our experience specifically with DHHS, FDGS collaborates with DHHS to refine the existing report formats as needed to satisfy dynamic needs of the Department.</p> <p><b>Weekly Status Report Materials for the Month</b></p> <p>FDGS employs a standard approach to each project which facilitates the ease of integration when employed within a portfolio reporting environment. We continue to work with DHHS and the implementation vendor(s) to integrate IV&amp;V progress reporting within the scope of ongoing project meetings. As the basis of weekly reporting, FDGS includes:</p> <ul style="list-style-type: none"> <li>• A summary of the activities completed</li> <li>• A summary of the planned activities</li> <li>• A summary of the new observations and opportunities</li> <li>• Updates to the IV&amp;V schedule</li> <li>• Critical incidents</li> </ul> <p>Clarity and brevity are the key concepts behind our approach to weekly reporting as we believe it should not inhibit project progress.</p> <p><b>IV&amp;V Project Work Product and Deliverable Assessments</b></p> <p>FDGS utilizes a Deliverable Expectation Document (DED) process in the delivery of its own work products. When working with implementation vendors, we integrate our review efforts within the existing review processes and provide formal feedback. If a DED exists as part of the process, FDGS reviews vendor work in relation to conformance to the DED. For work products where no DED is present, FDGS works with vendors early in the review cycle to provide feedback to reduce the possibility of an unsatisfactory deliverable. We also work with vendors to establish a DED into their work deliverables for future work products.</p> <p>To facilitate a thorough review of vendor deliverables, particularly for more complex deliverables, the FDGS Team utilizes checklists tailored to DHHS needs and the specific deliverable requirements and content specific to each project.</p> <p><b>Critical Incident Reports</b></p> <p>FDGS draws from lessons learned on past projects to bring a selection of best practices for defining critical incidents, developing metrics and appropriate mitigation/resolution responses. The FDGS Team worked with DHHS to define a critical incident as a distinct event or situation that creates a significant risk of substantial or serious harm impacting either the solution functionality or the project timeline. We will continue</p>

#	Requirement	FDGS Approach
		<p>to work with DHHS to enhance identification and measurement criteria and to refine our tools for reporting of critical incidents.</p> <p><b>Requirements Traceability Matrix Updates</b></p> <p>FDGS employs a host of ISO standards to verify the quality, completeness, and traceability of project requirements. FDGS further verifies that that a comprehensive process for managing system requirements is in place during the entire System Development Life Cycle (SDLC) from design through testing and implementation. We evaluate the requirements management tool, the Requirements Traceability Matrix (RTM) and verify that the requirements are under configuration control to validate that the system is being built correctly in order to meet DHHS expectations and needs.</p> <p>As requirements are introduced or changed, FDGS verifies that the requirement is well written, properly tracked and the history of the requirement maintained. Based on findings, FDGS works collaboratively with DHHS and the implementation vendor(s) to complete changes to the RTM conforming to the project change control process. As part of our approach, FDGS:</p> <ul style="list-style-type: none"> <li>• Validates that requirements are managed properly throughout all phases the project life cycle</li> <li>• Verifies that existing and newly written requirements conform to SMART (Specific, Measurable, Achievable, Traceable, and Testable) principle</li> <li>• Verifies requirements are uniquely identified</li> <li>• Reviews RTM tracking mechanism to confirm requested changes and updates have been completed <b>and</b> completed properly</li> </ul> <p><b>CMS and MITA Compliance Activities</b></p> <p>FDGS is conversant with IV&amp;V requirements set forth in 45 CFR 95.610. We are also well experienced with conformance to MITA Standards. FDGS verifies that all reporting and the timing of report submission complies with the MECT, OBC, SMC or other agency standards. We also help in the preparation for and participate in any meetings with federal partners.</p> <p><b>IV&amp;V Work Plan Updates</b></p> <p>FDGS works closely with the PMO to integrate IV&amp;V Project work plans at project onset and report progress and changes. FDGS work plan development conforms to applicable PMI, HHS Enterprise Performance Life Cycle, and ISO standards. We practice iterative work plan development confirming project plan currency and actively communicate and report work plan updates in weekly, monthly and ad hoc reporting.</p>

#	Requirement	FDGS Approach
		<p><b>IV&amp;V Work Products</b></p> <p>FDGS utilizes a Deliverable Expectation Document (DED) process to eliminate ambiguity and set expectations for final work products. As the basis for our verification work, we employ appropriate industry standards and develop work product specific checklists. FDGS also incorporates internal quality assurance as part of our work product development process.</p>
2.	<p><i>Must perform work and submit work products and deliverables for State review and approval in accordance with the approved IV&amp;V work plan scheduled dates.</i></p>	<p>FDGS understands and agrees to adhere to the approved IV&amp;V work plan and its scheduled dates. We submit work products and deliverables for State review and approval in accordance with scheduled dates. In the initiation and planning phases of the project, FDGS works closely with the PMO to integrate the IV&amp;V work plan with the overall project work plan.</p>
3.	<p><i>Must provide a tracking capability for tracking of work product and deliverable submission and review status.</i></p>	<p>FDGS uses a Deliverable Tracking Tool to track all work products within the assigned project(s) to:</p> <ul style="list-style-type: none"> <li>• maintain a singular record of all project deliverables</li> <li>• monitor vendor deliverable dates to plan assessments</li> <li>• record all changes to the deliverable schedules</li> <li>• allows for adjustments to be made to all corresponding deliverables</li> </ul>
4.	<p><i>Must submit any changes to previously approved deliverables for approval through the review process.</i></p>	<p>FDGS complies with DHHS process for review and approval related to any recommended changes to previously approved deliverables. To minimize the number of instances where this occurs, FDGS works with the project leadership and DHHS vendors to integrate its review activities and provide proactive feedback within the existing review cycle.</p>



## 2.2 C. Organizational Staffing

### Section Highlights

- **FDGS proposes a consistent staff to fill key positions with Nebraska-specific IV&V experience**
- **Our team is organized to maximize the flexibility of our staff's skills and experience to efficiently and effectively assess and monitor multiple projects in different phases of implementation and operations**
- **FDGS Team structure allows for cost-effective, just-in-time staffing with the addition of as-needed SMEs**

*Overview: DHHS requires the contractor to provide highly qualified and Medicaid experienced personnel. Appropriate, skilled staff will reduce project risk. The key positions identified below must be the actual personnel who must fulfill the obligations of the terms of the RFP.*

*DHHS requires the following key positions for the scope of work contained in the RFP for each project. The identified positions are the key positions and do not necessarily identify all positions necessary for the scope of work. A position may be filled by more than one individual. IV&V staff can be shared between projects as long as five key staff are participating on each project, priorities are clearly defined, and tracking information is provided to ensure each role is performed satisfactorily.*

Beyond the tools, methodologies, and approaches, it is clearly the quality of the team members that help determine success on the project. FDGS prides itself on being able to offer a unique combination of business processing acumen and government programmatic subject matter expertise in order to confirm our solutions fit with the appropriate context of State business needs, financial constraints, and client services.

As shown in **Figure 10**, it is the combination of an experienced team that knows the Nebraska Medicaid enterprise and its staff, established and proven processes across multiple projects to keep each of them on target and the additional experience across multiple states and other IV&V projects similar in size and scope to this RFP, that makes FDGS the best choice to continue IV&V Services.



**Figure 10: FDGS brings People, Process and Experience specific to Nebraska's Medicaid Enterprise program**

To continue our success with DHHS and the State of Nebraska, FDGS proposes staff that you work with today to maintain consistency as we expand IV&V services to the new projects in scope with this RFP. Our team represents the real, hands-on, practical knowledge, experience and expertise required for each project. Our team brings methodologies, best practices, and tools from some of the latest projects in the country.

In addition to our experienced DMA IV&V team that knows Nebraska's goals, FDGS proposes new team members that bring new, innovative processes to align our methods in Nebraska with the future strategies of the Department. As a result, we understand what it takes to deliver IV&V services in a cost-effective manner and how to help DHHS implement the next set of Medicaid enterprise projects successfully.

The relevant qualifications, expertise, and experience of the staff at FDGS are truly unique, particularly in the areas of project management, change management, and organizational change not only in state government agencies, but in Nebraska specifically.

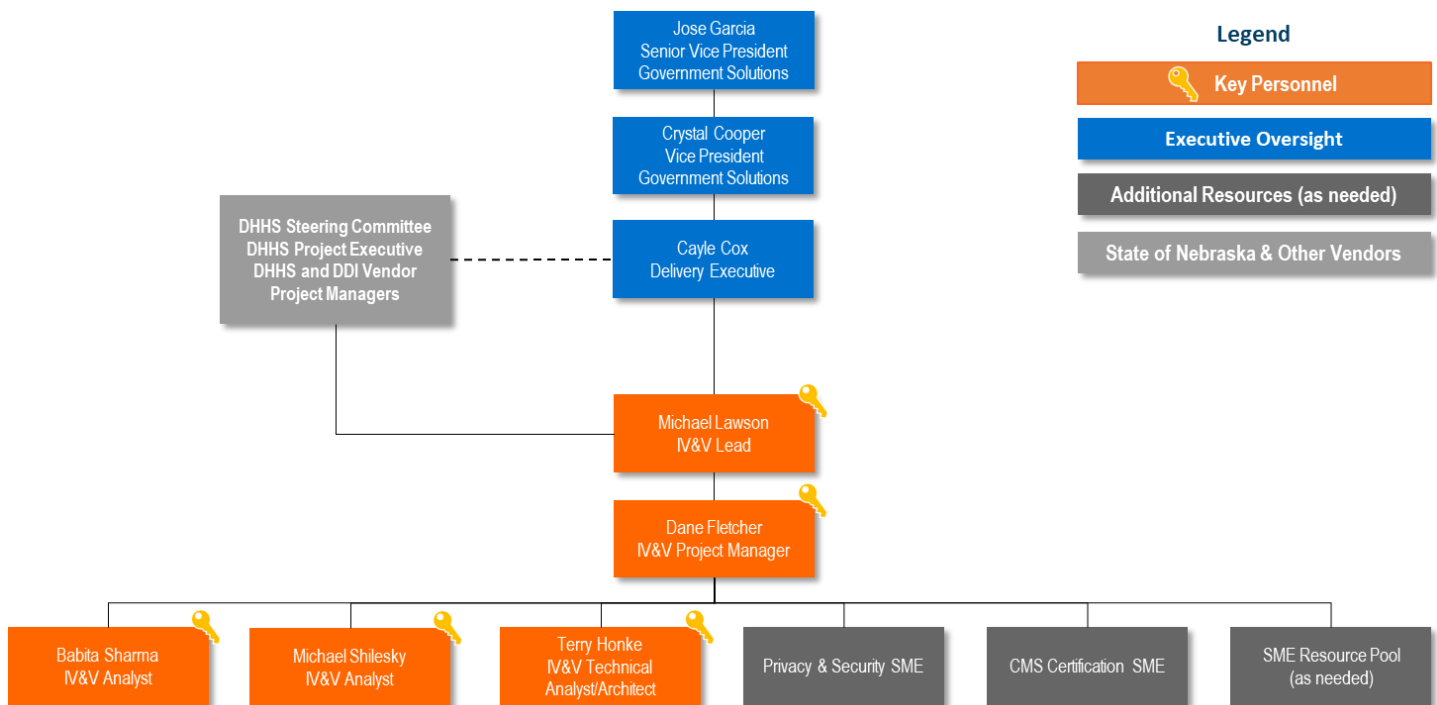
*Address the bidder's approach to meeting each requirement in a table that contains the requirement and the bidder's approach to meeting the requirement. (RFP Section V, C.3.i)*

**Table 13** documents our approach to each requirement for Organizational Staffing.

**Table 13: Organizational Staffing Requirements**

#	Requirement	FDGS Approach
1.	<p><i>Must provide an organizational structure which reflects coordinated activities among DHHS, IV&amp;V, and other contractors.</i></p>	<p>As illustrated in the organizational chart below, the FDGS Team is steeped with relevant experience to support the efforts of the multiple IV&amp;V projects as required by DHHS.</p> <p>Pursuant to the requirements outlined in this RFP, we have included an IV&amp;V Lead, an experienced project manager, two business analysts and a technical analyst to meet all requirements for the IV&amp;V projects.</p> <p>In addition, understanding the depth and breadth of in-flight projects and the optional projects on the horizon, we have included an additional complement of subject matter experts covering Medicaid, CMS Certifications, Privacy and Security and ACA/7 Conditions &amp; Standards. These additional resources will be utilized on an as needed basis to support the portfolio of projects DHHS may pursue.</p> <p>Please see the organizational chart AND STAFF BIOS at the end of this table showing our core team covering the key positions, executive leadership and oversight and subject matter experts available as needed to support each of the projects.</p> <p>FDGS understands the important roles the Key Personnel will have on this project. In addition, FDGS recognizes the importance of having a governance structure in place that optimizes efficiency in the delivery of IV&amp;V services.</p>
2.	<p><i>Must provide criminal background investigations on all personnel and follow-up investigations every five years. Must report any individuals who have criminal activity identified to DHHS.</i></p>	<p>Each new hire to FDGS must pass a rigorous background check before they are allowed to start work or gain access to FDGS systems, or begin work for our clients. FDGS has also mandated that staff complete drug screening prior to beginning work.</p> <p>We take our responsibility to keep employees and affiliates informed of applicable laws guarding confidential information very seriously. Privacy training is provided by Fiserv Corporate Security and is mandatory for new hires (during the first 90 days of employment) and annually thereafter for existing staff. All FDGS (Fiserv) employees, contractors, and subcontractors must complete an on-line training each year. This training covers Fiserv's security policy and clarifies exactly what constitutes disclosure of confidential information. The training also details the civil and criminal sanctions that can be applied to either FDGS or individuals responsible for a data breach, or both.</p> <p>As a matter of practice, FDGS consultants do not distribute or collect Personally Identifiable Information (PII) through non-encrypted transfer mechanisms. FDGS recognizes that in this age of technology it is our responsibility to confirm that government data is not</p>

#	Requirement	FDGS Approach
		compromised. We take this responsibility upon ourselves, and escalate breaches we encounter.
3.	<i>Must provide all key positions identified IV.C.1.</i>	FDGS has proposed names and resumes for all of the key positions required in the RFP. Resumes are included at the end of this section.
4.	<i>Must maintain an Organizational Chart and project contact list.</i>	FDGS understands and agrees to maintain an organizational chart and project contact list through the duration of the contract. See our proposed organizational chart following this table (see <b>Figure 11</b> ).
5.	<i>Must acquire DHHS approval for key staff and key staff replacements.</i>	We understand that key staff and any potential replacements must be approved by DHHS.
6.	<i>Must not reassign or replace key personnel without the prior written approval of DHHS.</i>	FDGS understands and agrees that key personnel will not be reassigned or replaced without discussion and approval of DHHS. If a staff member needs to be reassigned or replaced for any reason, we will work cooperatively with DHHS to provide acceptable replacement candidates who bring the same or higher qualifications and experience.
7.	<i>Must provide monthly IV&amp;V staff as proposed.</i>	We understand and agree to provide monthly IV&V staff as proposed.



**Figure 11: The FDGS Team brings deep program and system implementation knowledge to support Nebraska’s vision**

*Names and resumes of the bidder's key staff for the five key positions. (RFP Section V, C.3.ii)*



FDGS has carefully examined the minimum qualifications for each of the five key positions. We have also considered the skills and expertise we believe are necessary to successfully provide IV&V services across the DHHS Medicaid enterprise.

We approach defining a structure, selecting the right people and estimating staffing levels after considering the State's strategic goals and vision, the qualifications and experience of each staff member and our own past experience delivering successful projects. We also know that maintaining strong relationships and communicating transparently is key to a healthy project culture that leads to project success. This is why we selected and assembled a team that you are familiar with, who already strive every day to do just that, promoting a collaborative and productive work environment.

With a team consisting largely of people that are already delivering IV&V Services to the state of Nebraska, understanding of the stakeholder roles at the state and project level is already established. With a strong pool of experienced staff, our proposed core, key team can be expanded at critical project stages by drawing additional, targeted support from our specialized resource pools, in a manner already familiar with DHHS.

We understand the mechanisms by which work gets done, the requirements for the upcoming systems and the level of effort required to perform work requested in this RFP. To build our staffing plan estimates, we examined the scope of work in the RFP, incorporated our experience and leveraged other project artifacts and resources that influence planning activities, such as current organizational charts, departmental policies, project risks and constraints. We applied all of this information, experience and expertise to the estimation of staff types and levels necessary to minimize overall risk and achieve all of the Nebraska's goals and objectives.

We have included short staff biographies here to introduce you to the FDGS IV&V services team that exceeds the minimum qualifications required by the RFP. Resumes and the required references for all key positions are included at the end of this section.



## IV&V EXPERIENCE

*Nebraska DMA IV&V – Project  
Manager*

*Nebraska DMA IV&V – Business  
Analyst*

*Wisconsin DHS ICD-10  
Transition – SME and UAT  
Manager*



## RESPONSIBILITIES

Oversight of all IV&V projects

Develop, deliver and track  
project plans, deliverables,  
timelines and resources

Escalation point for client  
issues/concerns

Contract Management



## EDUCATION

*A.A. Business Administration,  
Central New Mexico Community  
College*

# Michael Lawson

## IV&V LEAD



*Michael is an experienced consultant, analyst, and subject matter expert in the healthcare industry who brings over 15 years of Medicaid expertise including fiscal agent operations, Medicaid Management Information Systems (MMIS), Independent Verification & Validation (IV&V) and Project Management Office (PMO) experience. He has experience with and expertise in the use of PMI and SCRUM PM methodologies encompassing the full system development lifecycle. His background has included User Acceptance Testing management and coordination, training development, requirements gathering and analysis, schedule management, technical analysis, development of Request for Proposal (RFP) requirements and project management.*

*Michael is a Certified Scrum Master.*

### 10+

years managing large scale health  
care projects

### 4+

 years of IV&V  
experience

### 15

years of Medicaid  
experience







## IV&V EXPERIENCE

NY IES/HIX Project

Massachusetts HIX/IES Entities



## RESPONSIBILITIES

- Management of master IV&V project schedule
- Production of weekly status reports
- Contributor to monthly status reports
- Attendance at weekly project management and planning meetings



## EDUCATION

B.A., Economics, Boston College

# Dane Fletcher

## PROJECT MANAGER



*Dane is a Senior Consultant and Project Manager that brings 25 years of experience, including establishing and optimizing multi-level partnering relationships, and managing cross-functional teams to achieve goals in enterprise client environments at the state and local agency level. 18 of these years have been in project/program management positions spanning the full system development lifecycle leveraging Project Management Institute PM methodologies and incorporating Prosci Change Management methodologies as and when appropriate. He is a collaborative leader of people and process and a strategic thinker who embodies a resourceful, solution-oriented work style and the ability to influence toward desired outcomes.*

### 15+

managing or in a key management position for a large-scale healthcare IT development project that encompasses the full SDLC

**3+** years of IV&V experience

### 7+

years of Medicaid-specific Experience







## IV&V EXPERIENCE

Nebraska DMA IV&V – IV&V Analyst

KMAP (Kansas Medicaid Assistance Program for State of Kansas) - Business System Analyst/Quality Assurance Analyst



## RESPONSIBILITIES

Assessment of plans, documentation and processes and creation of IV&V deliverables

Project monitoring and reporting activities



## EDUCATION

Bachelor of Business Studies, India

# Babita Sharma

## IV&V BUSINESS/TEST ANALYST



Babita is an experienced business analyst with both a business degree and more than 9 years of practical experience in IT business and functional analysis, data analysis and testing (applications, .NET and web-based applications). She has over three years of healthcare/Medicaid experience. She possesses an in-depth understanding of the Software Development Life Cycle (SDLC) and STLC (Software Testing Life cycle) including functional/quality analysis, planning, execution and test management from project definition to post-deployment. Babita is reliable, dedicated and self-motivated. She is committed to success and readily adapts to multiple tasks in a high-pressure environment. She brings excellent analytical, problem solving and organizational abilities. Babita is a certified scrum master, certified scrum product owner and is certified in both VBA and Oracle 8.

### 9+

years experience as a business and test analyst on large scale projects

### 4+

years of IV&V and QA experience

### 3+

years of Medicaid experience





## IV&V EXPERIENCE

*NE IV&V Services*

*New York Department of Health  
Integrated Eligibility System IV&V  
Project*



## RESPONSIBILITIES

Assessment of plans,  
documentation and processes  
and creation of IV&V  
deliverables

Project monitoring and reporting  
activities



## EDUCATION

*M.B.A., Global Technology  
Management, American  
InterContinental University*

*B.B.A., Hospitality & Tourism,  
James Madison University*

# Michael Shilesky

## IV&V BUSINESS/TEST ANALYST

PMP®



*Michael has more than 18 years of experience working with and for government health care systems. His extensive experience includes providing all levels of service from administrative assistant to project management office participation, leading JAD sessions, tracking change and reporting. Michael is a certified Scrum Master, conversant in multiple methodologies, with the knowledge, skills and abilities needed for the success of any project. He also holds a PMP certification and certification in scrum fundamentals.*

**18+**

years experience as a business  
and test analyst on large scale  
projects

**3+**

years of IV&V  
experience

**18+**

years of Medicaid  
experience





## IV&V EXPERIENCE

*Nebraska DMA IV&V – Technical Lead*

*Nebraska DHHS Modernization Medicaid Eligibility & Enrollment System – Technical Lead*



## RESPONSIBILITIES

Requirements gathering, analysis, and management

Analyze technical statistics, prepare the technical portions of deliverables

Identify and escalate issues and risks



## EDUCATION

*B.S., Business Administration (Computer Science), University Of Nebraska-Lincoln*

*A.S., Computer Technology, Southeast Community College*

# Terry Honke

## IV&V TECHNICAL ANALYST



*Terry has more than 40 years of experience in technical management and support of large-scale system projects. He has supported projects in Nebraska for 8 years, including serving as the Technical Lead on Nebraska DHHS Eligibility and Enrollment System and Data Management and Analytics projects. Terry is a certified Scrum Master. He has directed teams in enterprise architecture, quality control and application development.*

**40+**

years experience as a technical lead/solutions architect on large scale projects

**8+**

years of IV&V experience

**8+**

years of Medicaid experience



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*The bidder's staffing plan for each project. (RFP Section V, C.3.iii)*

We have included an IV&V Lead, experienced project manager, two business analysts and a technical analyst to successfully support each of the five IV&V projects. In addition, understanding the depth and breadth of in-flight projects and the potentially new projects on the horizon, we have included an additional complement of subject matter experts covering Medicaid, CMS Certifications, Privacy and Security, and ACA/7 Conditions Standards. These additional SME resources are utilized on an as needed basis to support the portfolio of IV&V projects DHHS may pursue.

**Table 14** provides responsibilities and activities for each key position across all planned projects. Our core team with the support of specific subject matter experts at the right time is able to support all of the projects in the Department's roadmap for this RFP.

**Table 14: FDGS Key Staff – Knowledgeable and experienced with Nebraska Medicaid Enterprise projects**

Name	Title	Primary Work and Responsibility
<b>Michael Lawson</b>	<b>IV&amp;V Lead</b>	<ul style="list-style-type: none"> <li>• Oversight of all IV&amp;V projects</li> <li>• Escalation point for client issues/concerns</li> <li>• Oversight of staffing</li> <li>• Contract management</li> </ul>
<b>Dane Fletcher</b>	<b>IV&amp;V Project Manager</b>	<ul style="list-style-type: none"> <li>• Management of master IV&amp;V project schedule</li> <li>• Production of weekly status reports</li> <li>• Contributor to monthly status reports</li> <li>• Attendance at weekly project management and planning meetings</li> </ul>
<b>Babita Sharma</b> <b>Michael Shilesky</b>	<b>IV&amp;V Business / Test Analyst</b>	<ul style="list-style-type: none"> <li>• Assessment lead of the implementation contractor's ability to meet respective project requirements</li> <li>• Contributor to IV&amp;V deliverables</li> <li>• Support of assessment of functional work products that support business process</li> <li>• Support for validation of requirements</li> <li>• Attendance at required meetings</li> </ul>
<b>Terry Honke</b>	<b>IV&amp;V Technical Analyst / Architect</b>	<ul style="list-style-type: none"> <li>• Validation of technical architecture for consistency with state and federal requirements, including CMS Seven Standards and Conditions and MITA</li> <li>• Identification of technical risks</li> <li>• Contributor to implementation contractor deliverable reviews and technical portions of IV&amp;V deliverables</li> <li>• Review of technical artifacts against enterprise architecture standards</li> </ul>



## Subject Matter Expert Resource Pools

FDGS maintains pools of highly skilled, specialized resources from which we draw from for additional, targeted support as necessary. These teams are available to support the projects associated with this contract as needed. These include:

- **CMS Certification** – We have a team of Certification and Compliance subject matter experts with expertise and experience supporting Evidence Package Preparation, Client Evidence Reviews, and KPI Process Development for OBC and SMC submissions.
- **Privacy and Security** – Our privacy and security specialists maintain safeguarding and protection of all user data and compliance with data standards, rules and regulations

*The bidder's organizational chart for each project team. (RFP Section V, C.3.iv)*

The FDGS Team is filled with relevant experience to support the efforts of multiple projects as required by DHHS. The structure facilitates collaboration and focus on what needs to be accomplished within the purview of each project's directives.

The organizational chart illustrated in **Figure 11** above outlines our proposed staffing covering the projects in scope for this RFP.

*DHHS has required a minimum of five key staff positions for each project. Describe the strategy and approach to maintain the appropriate number of staff for each project. (RFP Section V, C.3.v)*

For the FDGS project staff to be sustainable, we must bring strategic focus that speaks to the mission, vision, goals of DHHS. By naming staff with deep Nebraska program knowledge and experience with multiple states' eligibility and Medicaid implementations, we are committed to sustaining our staff to the levels outlined above.

Based on our knowledge of the current roadmap of five (5) projects in the RFP, as well as the clarification provided in *Addendum Two – Revised RFP Sections*, we estimate that the team will be allocated approximately 80% to the Integrated Eligibility & Enrollment / Benefits Management (IE&E/BM) project. The implementation or operational stage of the other four (4) projects are allocated at approximately 5% each.

We understand the requirements of each named project and have complemented core staff with requisite subject matter expertise throughout the life of DHHS' initiatives. Further, our Center of Excellence and Innovation (CoE&I), provided at no cost to DHHS, provides as needed support in the achievement of the FDGS IV&V requirements.

Our Government CoE&I is our intellectual capital hub and contains recommended practices, project management methods, tools and techniques, lessons learned, and sample deliverables from our previous projects. The FDGS Teams across the country avail themselves of these non-proprietary methodologies and tools to enhance productivity and provide a proactive and grounded footing in quality standards and measurements for our customers.

Finally, note that several team members are local or near to Lincoln, Nebraska. This serves to support continuity of service and facilitates Monday through Friday coverage for each project. In

addition, we have included SME support for each of the named DHHS initiatives. The addition of these staff allows for critical on-site coverage by multiple resources during key project operations. The FDGS IV&V Team is already supporting DHHS with the right skills and the right experience and we are eager to continue our relationship with our just-in-time resource staffing methodology.



### 2.2.1 Resumes

FDGS provides on the following pages the required resumes of our named staff for all of the key positions necessary to support the IV&V Services for this RFP.

- IV&V Lead Michael Lawson
- IV&V Project Manager Dane Fletcher
- IV&V Business Analysts Babita Sharma  
Michael Shilesky
- IV&V Technical Analyst Terry Honke

## Michael Lawson, IV&V Lead



### Program Expertise

- Medicaid

### Specializations

- Project Management
- IV&V
- MITA Assessment
- Testing

### Education and Memberships

- AA, Business Administration, Central NM Community College Certifications and Licenses
- Scrum Master

### Methodologies

- Agile
- Waterfall

### Professional Summary

Michael is an experienced consultant, analyst, and subject matter expert (SME) in the healthcare industry who brings over 15 years of Medicaid expertise including fiscal agent operations, Medicaid Management Information Systems (MMIS), Independent Verification & Validation (IV&V) and Project Management Office (PMO) experience. His background has included Project Management, User Acceptance Testing management and coordination, training development, requirements gathering and analysis, schedule management, technical analysis, development of Request for Proposal (RFP) requirements, Medicaid Information Technology Architecture (MITA) State Self-Assessments (SS-A), operations and system readiness assessments, and project management.

### Qualifications for this Role

- More than five years' experience in a supervisory or managing role on large scale IT healthcare projects
- Experience following standard project management methodology on multiple projects across several states
- Extensive Medicaid experience in multiple states (Nebraska, New Mexico, and Wisconsin)
- Over five years of IV&V experience on state Medicaid projects
- Experience with both PMI and Scrum methodologies

## **Experience**

### **First Data Government Solutions**

#### **Nebraska IV&V Services**

##### **Project Manager, 01/2019 - Present**

Mr. Lawson is supporting the Independent Verification & Validation (IV&V) of the Data Management & Analytics (DMA) module as the Project Manager leading a team of Business and Technical Analysts. He manages assessments of plans, processes, and creation of IV&V deliverables. He leads analysis of certification required artifacts to ensure that they comply with CMS standards and project needs. He delivers weekly, monthly and certification required progress reports. He is responsible for an independent assessment of operations and system readiness. He also leads project monitoring activities including risk assessments and is responsible for applying the Medicaid Enterprise Certification Life Cycle (MECL) and Streamlined Modular Certification (SMC) guidelines for this project. Mr. Lawson is also accountable for administrative duties of providing IV&V services including billing, invoicing, and personnel management.

#### **Nebraska IV&V Services**

##### **Business Analyst, 03/2017 – 01/2019**

Michael supported the Independent Verification & Validation (IV&V) of the Data Management & Analytics (DMA) module as a Business Analyst leading assessments of plans, processes, and creation of IV&V deliverables. He conducted in-depth analysis of certification required artifacts to ensure that they complied with CMS standards and project needs. He contributed to and created weekly, monthly and certification required progress reports. He participated in project monitoring activities including risk assessments and was responsible for applying the Medicaid Enterprise Certification Toolkit (MECT) for this project.

#### **Center of Excellence and Innovation**

##### **Government Consultant, 01/2016 – 02/2017**

Michael supported the internal Center of Excellence and Innovation, lending his MMIS Subject Matter expertise to the development, review, and enhancement of templates, tools, and methodologies. The artifacts maintained as part of our methodologies and processes are available to our staff at all times and part of our Day One solution.

### **CSG Government Solutions**

#### **Wisconsin Division of Health Services ICD-10 Transition, MITA 3.0 Assessment, MMIS Strategy & Procurement**

##### **Senior Consultant / SME / UAT Manager, 05/2013 – 12/2015**

Michael supported Wisconsin's Division of Health Services on multiple initiatives including:

- MITA 3.0 Assessment, MMIS Strategy and Procurement Approach - provided the CSG team with subject matter expertise on the Wisconsin Medicaid technical environment; documented requirements during the MITA SS-A workshops; coordinated high level and detailed requirements development

- ICD-10 Transition - provided User Acceptance Testing Management services; assisted in the development of business requirements; facilitated sessions to review and revise functional/non-functional requirements with DHCAA subject matter experts; maintained ICD-10 project plan; coordinated ICD-10 training development; provided IV&V services

## Xerox

### Multiple Projects, Multiple Positions, 10/2005 – 04/2013

- New Mexico Medicaid, Claims and Third Party Liability (TPL) Manager - Michael managed Medicaid claims processing and TPL Helpdesk. He was a subject matter expert (SME) for multiple Joint Application Design (JAD) sessions for gathering and defining requirements. He implemented Business Process Management (BPM) workflow and Change Control processes for all operational areas. He also verified and validated testing. He functioned as liaison for SAS70 audit. He managed multiple vendors providing systems administration and support.
- Claims, Third Party Liability and Provider Enrollment Manager - Michael managed all functions of mailroom, scanning, data entry, claims resolution, TPL, and provider enrollment. Michael served as a SME for Medicaid Information Technology Architecture (MITA) assessment, ICD-10 assessment, and HIPAA 5010 assessment.
- Additional roles included Continuous Quality Improvement Manager, Business Analyst, Claims Support and Third Party Liability Supervisor and Claims Support Supervisor

## References

Reference Data	Reference
<b>Company Name</b>	State of New Mexico/Human Services Department/Medical Assistance Division
<b>Contact Name</b>	Linda Gonzales
<b>Phone Number</b>	(505) 629-6278
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Reference Data	Reference
<b>Company Name</b>	Retired
<b>Contact Name</b>	Marise McFadden
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Reference Data	Reference
<b>Company Name</b>	Grant Thornton Public Sector LLC
<b>Contact Name</b>	Adnan Ali
<b>Phone Number</b>	(608) 886-4464
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## Dane Fletcher, IV&V Project Manager



### Program Expertise

- Medicaid
- Eligibility & Enrollment

### Specializations

- Project\Program Management
- Client Relationship Mgmt.
- Organizational Change Management
- Business Process Analysis and Design
- Performance Metrics & ROI Modeling Analysis
- MITA

### Education and Memberships

- B.A., Economics, Boston College

### Certifications and Licenses

- Prosci Change Management Professional
- Rational Unified Process (RUP)

### Professional Summary

Dane is a Senior Consultant and Project Manager that brings 25 years of experience, including establishing and optimizing multi-level partnering relationships, and managing cross-functional teams to achieve goals in enterprise client environments at the state and local agency level. 18 of these years have been in project/program management positions. He is a collaborative leader of people and process and a strategic thinker who embodies a resourceful, solution-oriented work style and the ability to influence toward desired outcomes.

### Qualifications for this Role

- 15 years managing or in a key management position for a large-scale healthcare IT development project that encompasses the full SDLC
- 3+ years of IV&V experience
- 7+ years of Medicaid experience
- 18 years of Project/Program management experience

### Experience

#### First Data Government Solutions

Commonwealth of Massachusetts, MA HIX/IES Procurement Project  
Business Lead, July 2019 – 10/2021

FDGS has been contracted by the Commonwealth of Massachusetts, Executive Office of Health and Human Services (EOHHS) to assess the current Mass Health Insurance Exchange (MA HIX) and MMIS platforms, and develop a technical roadmap and delivery strategy to support the associated procurements for the future One Medicaid solution.

Dane confirmed business objectives are met, and requirements are defined and validated across key stakeholders so as to be integrated with strategic plans that support the Commonwealth's future vision for Medicaid and Health & Human Services. Dane's responsibilities involved reviewing the current MA HIX and MMIS business architectures and validating the business requirements, alignment with program governance and policy and payment reform. He conducting stakeholder analysis for increased alignment of EOHHS strategic vision for One Medicaid solution.

### NY IES/HIX Project

#### IV&V Business Lead, 10/2018-5/2019

This state initiative involves the development of a new integrated eligibility system as well as integrating existing systems to facilitate innovation and comply with state and federal mandates and expectations. Dane's responsibilities included being accountable for the development and delivery of the IV&V IES and NYSOH monthly reports to client program leadership and Center for Medicaid Services (CMS). He worked to define, optimize, execute and communicate the process workflow that supported efforts across the IV&V project team, including the IES Program Office, NYSOH leadership, respective state agencies and contractors/subcontractors. He also supported the delivery of IES weekly project status reports and the management of documentation across IV&V and client repositories. Dane facilitated and participated in key IV&V project team and client meetings. He also reviewed MEET E&E checklists and IV&V Progress Reports for accuracy and completeness and supported milestone reviews.

### Berry Dunn, LLC

#### Commonwealth of West Virginia Bureau of Medicaid Services and Department of Human Services

#### Senior Consultant/Project Manager, Medicaid Practice, 2014–05/2018

Dane was Project Manager for the Innovation Accelerator Program (IAP) Data Analytic Technical Support Project to support the State in achieving their data analytic strategic objectives. He also supported the Medicaid Information Technology Architecture (MITA) State Self-Assessment (SS-A) Maintenance and Annual Update Assistance Project and the GAPMS Policy Assessment and Payment Reform Project.

### Massachusetts HIX/IES Entities

#### Quality Assurance Manager, 06/2014–03/2017

Dane interfaced with both Commonwealth and vendor counterparts across multiple end-to-end project release cycles to provide deliverable quality oversight, process improvement guidance and enforcement of program and project best practices. He contributed to the development and approval of a comprehensive suite of Deliverable Expectation Documents (DEDs) and worked collaboratively with the Massachusetts HIX Solution Architect and Release Manager from the Commonwealth to develop and test the adoption of a business requirements improvement plan that required the participation of Commonwealth agency business owners and other project stakeholders.

**Boston Children Hospital (BCH)**  
**Senior Project Manager, 01/2014–05/2014**

On the ICD-10 Program Team, Dane was responsible for the remediation efforts across 26 BCH foundations and departments that required cross-functional integration with clinical and operational areas from scheduling through billing and reporting.

**Athenahealth Client Operations**  
**Senior Program Manager, 12/2009–11/2013**

Dane managed multiple client relationships, serving as an integrated program manager for systems integration projects. Clients included OhioHealth Medical Specialty Foundation, Rockford Health Physicians, Highmark/Allegheny Health Network.

**Partners HealthCare System**  
**Senior Project Manager, 01/2009–11/2019**

Dane was responsible for the integration of the full life cycle software/hardware of Sunquest Pharmacy, Ominicell and HL7 interfaces at a new MGH Ambulatory Care Center.

**Microsoft Health Solutions Group**  
**Program Manager, 2006–2008**

Dane managed and successfully led the Program Office for Federal (DOD/VA) and Commercial Healthcare systems that scaled to support client objectives for the enterprise-wide integration of Microsoft clinical Identity and Access Management software products.

**References**

Reference Data	Reference
<b>Company Name</b>	Performance Guidance Group, Inc.
<b>Contact Name</b>	Stephen Coppola
<b>Phone Number</b>	781-856-6305
Reference Data	Reference
<b>Company Name</b>	Hanna Software Engineers
<b>Contact Name</b>	Leila Hanna
<b>Phone Number</b>	603-205-9716
Reference Data	Reference
<b>Company Name</b>	Dubay Associates
<b>Contact Name</b>	Piyush Duby
<b>Phone Number</b>	240-899-8669



## Babita Sharma, IV&V Business Analyst



### Program Expertise

- Medicaid/MMIS

### Specializations

- Business Process Analysis
- Internal Verification & Validation
- Testing (UAT, Smoke, Functional, Integration, Regression)

### Education and Memberships

- Bachelor of Business Studies, India

### Certifications and Licenses

- Oracle 8 and VB
- CSM
- CSPO

### Methodologies

- Agile
- Waterfall

### Professional Summary

Babita is an experienced business analyst with both a business degree and more than 9 years of practical experience in IT business and functional analysis, data analysis and testing (applications, .NET and web-based applications). She has over three years of healthcare/Medicaid experience. She possesses an in-depth understanding of the Software Development Life Cycle (SDLC) and STLC (Software Testing Life cycle) including functional/quality analysis, planning, execution and test management from project definition to post-deployment. Babita is reliable, dedicated and self-motivated. She is committed to success and readily adapts to multiple tasks in a high-pressure environment. She brings excellent analytical, problem solving and organizational abilities.

### Qualifications for this Role

- Over 9 years of experience as a business and test analyst on large-scale projects
- Over 4 years of IV&V and QA experience, including the NE DMA IV&V project
- Over 3 years of Medicaid experience

### Experience

#### First Data Government Solutions

##### Senior Business Analyst, 03/01/2021-Present

Babita is a Senior Business Analyst on multiple projects for the following products Paysol, remitONE and AuthentiCare. Her responsibilities and tasks include requirement gathering and analyses to create Business Requirement Document / Design documents and maintaining Business Requirement Documents throughout the life cycle of the project.

She also collaborates with systems development teams, architects, and client stakeholders across the organization to ensure successful implementation of the project. She performs gap analysis and testing. Babita applies systems engineering methodologies and discipline throughout the product and project lifecycle.

### State of Nebraska IV&V IV&V Analyst, 06/04/2020–02/2021

The State of Nebraska contracted FDGS to provide IV&V Services for a variety of Medicaid Enterprise projects, including Eligibility and Enrollment Solution and MMIS replacement modules Data Management and Analytics, Provider Screening and Enrollment, EDI Platform Migration, Capitation Processing, Centralized Provider Management and Long-Term Support Services Redesign. Babita supported the IV&V of the Data Management & Analytics (DMA) module as a Business Analyst leading assessment of plans, processes and creation of IV&V deliverables. She conducted in-depth analysis of certification-required artifacts to make sure that they comply with CMS standards and project needs. She contributed to and created, weekly, monthly and as-needed progress reports. She participated in project monitoring activities including risk assessments.

### DXC Technology (formerly Hewlett Packard Enterprise), Healthcare Payer Platform Solutions (HPPS) Business System Analyst/Quality Assurance Analyst – U.S. Healthcare Delivery, 01/2019–06/2019

This role supported DXC's modernization of existing best-in-class legacy Medicaid and commercial healthcare products into a multitenant, modular and cloud-enabled SAAS offering. The product was divided into several modules and Babita was part of the Managed Care Module, Claims Module, Provider Module, and Reference Data. Babita captured business needs in the form of user stories, story pointing and acceptance criteria. She worked with agile teams to refine user stories. She performed system, exploratory, user acceptance and functional testing for user stories developed within sprints and applied technical, Medicaid, and QA skills to assess product and code health to prevent production defects. Babita conducted test case reviews and gap remediation and performed multi-tenant testing to verify data security. She defined Release Test Plans and entry/exit criteria for user acceptance.

### KMAP (Kansas Medicaid Assistance Program for State of Kansas) Business System Analyst/Quality Assurance Analyst, 05/2016–08/2018

As part of the business operations team, Babita primarily supported the base MMIS system. Babita actively participated in the UAT testing for the Insight Dashboard Module (reporting analytics), Provider Module and Microsoft Dynamics CRM 2016 for a state call center. Babita's responsibilities included executing change service requests and performing smoke, functional, integration, regression and user acceptance testing. She tracked bugs and conducted follow-up testing also. Her role required a thorough understanding of software techniques, SDLC and STLC. She also applied her knowledge of HIPAA standards, EDI (Electronic data interchange), transaction syntax like ANSI X12 and EDI transactions using 834, 835 and 837. She verified

segments, elements and loops for ANSI X12 format and provided production support and testing of various claims types (HCFS 1500, UB92 INST Cross-Over claims, Inpatients Claims, Fee-for-Service and Encounters). She provided quality assurance and defect management including smoke test, SIT and UAT environments and participated in triage meetings, code reviews, production verification and post-production testing and support.

### eFundSystems LLC

#### Conversion & Procurement

Business Analyst, 11/2006–05/2007

This project involved converting the legacy system to newer technologies, involving an application for small non-profit organizations to help them with compliance and financial management. Babita was responsible for creating Business Requirement Documents (BRD) and liaising between stake holders and members of the technical team. She also managed the change request process, documented test cases, and tracked bug reports.

### Dibon solutions Inc.

#### Mortgage Loan Origination Process

Business Analyst, 05/2005–10/2006

This project automated the mortgage loan origination process from customer initiation to title transfer. Babita facilitated requirements gathering sessions with a committee of SMEs from various business areas including Mortgage Servicing & Loan Monitoring. She analyzed system design specifications and developed test cases for overall quality assurance testing. She also developed SQL queries for QA testing and developed test scenarios and cases.

## References

Reference Data	Reference
<b>Company Name</b>	Avid Systems
<b>Contact Name</b>	Lori Ramage Cain
<b>Phone Number</b>	402-525-1439
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Reference Data	Reference
<b>Company Name</b>	Gainwell Technologies
<b>Contact Name</b>	Riddhima Katuwal
<b>Phone Number</b>	802-430-4276
<b>Email Address</b>	ridhzma@gmail.com
Reference Data	Reference
<b>Company Name</b>	Gainwell Technologies
<b>Contact Name</b>	Sarmila Ganesan
<b>Phone Number</b>	785-580-6516
<b>Email Address</b>	sarmilag@gmail.com

## Michael Shilesky, IV&V Business Analyst



### Program Expertise

- Medicaid/MMIS Systems

### Specializations

- Business Analysis
- Process Improvement
- Risk Mitigation
- Software Documentation
- Change Management

### Education and Memberships

- M.B.A., Global Technology Management, American InterContinental University
- B.B.A., Hospitality & Tourism, James Madison University

### Certifications and Licenses

- SAFe 4.0 Scrum Master
- Scrum Fundamentals Certified (SFC), Scrum Study, Inc.
- Project Management Professional (PMP), Project Management Institute (PMI)

### Professional Summary

Michael has more than 18 years of experience working with and for government health care systems. His extensive experience includes providing all levels of service from administrative assistant to project management office participation, leading JAD sessions, tracking change, business analysis, IV&V and reporting. Michael is a certified Scrum Master, conversant in multiple methodologies, with the knowledge, skills and abilities needed for the success of any project.

### Qualifications for this Role

- 18 years of experience as a business and test analyst on large scale, public sector projects
- Over 3 years of IV&V experience
- Over 18 years of Medicaid experience

### Experience

#### First Data Government Solutions State of Nebraska IV&V Services Business Analyst, 06/2021–Present

Michael joined the current First Data IV&V team for the state of Nebraska Department of Medicaid Assistance (DMA) project with the Federal CMS Certification process for Nebraska and other business analyst duties. Michael has been attending meetings and tracking/reviewing NE project deliverables. Michael prepares weekly IV&V status reports and conducts business analysis on current state of Nebraska processes and other project documents.

### State of Delaware Electronic Visit Verification & Validation Project Control Analyst/Business Analyst, 09/2020 – 05/2021

Michael's main responsibility was developing, managing, and monitoring the master project schedule for First Data and the state of Delaware for the overall project. He performed project control analyst duties for the state of Delaware EVV AuthentiCare project such as scribing for project meetings, publishing meeting minutes, and monitoring and managing the risk register and issue log. Michael conducted business analysis for state of Delaware project deliverables and/or processes and participated in prototype testing for the AuthentiCare mobile phone app.

### New York Integrated Eligibility System/Health Benefit Exchange IV&V Services Project Control and Business Analyst, 10/2018 – 07/2020

This project involved integrating systems still functioning on their legacy systems to facilitate innovation and comply with state and federal mandates and expectations. His role involved managing meetings and preparing minutes, sharepoint repository management for document sharing and retention, maintaining and updating (weekly) the IV&V Project Plan,

### Deloitte (through Consultants at Your Services, Inc.) Indiana FSSA Eligibility Determination Security System PMO Business Analyst, 07/2017–10/2018

Michael attended Joint Application Design (JAD) sessions and took meeting minutes. He led efforts to track several change requests to approve the design, development and implementation within the allocated timeframe set in the project schedule. He ran weekly reports to provide status of open issues, risks, action items, change requests and project decisions and tracked action items. Michael also assisted the Data Conversion Track Lead and Batch Exceptions Track Lead by and tracking project deliverables.

### Diversified Services Network, Inc. Illinois HFS Pharmacy Benefit Management System DDI Project Project Support Analyst, 06/2014–05/2017

As a member of the Project Control Office, Michael managed daily project tasks and operations, including the project plan in Microsoft Project for the \$28 million project. He was responsible for tracking project deliverables/Point-of-Sale (POS) business rules. Michael developed and implemented project tracking tools (decision log, deliverable tracking spreadsheet, action items log). He tracked all action items and decisions associated with the PBMS DDI project.

### Georgia Department of Community Health Project Management Office, Information Technology Division Associate Project Manager, 11/2010–06/2014

Michael was responsible for a wide variety of project coordination tasks across multiple projects. He developed organizational charts, process flow charts and diagrams, tracked deliverables, action items and issues and instituted project management processes, principles, and methodology. He supported the ICD-10 Codes Remediation Project Plan maintained in Microsoft Project and analyzed and gathered business requirements and documentation. He

developed and implemented Communication Plans, Change Control Processes, and Risk Management Plans. Michael managed the Risk Committee, tracking risks and developing risk mitigation strategies and plans for all IT projects under the PMO. Michael was the designated DCH liaison to CMS, supporting development and submittal of Advanced Planning Documents (APDs), Planning Advanced Planning Documents (PAPDs) and Implementation Advanced Planning Documents (IAPDs) for federal funding approval. He was the point of contact for all departments outside of IT to submit their APDs or proposals to CMS for consideration.

**Medicaid Management Information System (MMIS) DDI Project  
 Program Administrator, 03/2006–11/2010**

Michael developed process flow/organizational charts and diagrams and scheduled approximately 3,000 meetings per month, handling logistics, and IT infrastructure and equipment set-up. Michael established project management methodology, processes and principles for the project and maintained, contributed to and monitored the overall project schedule/timeline, while tracking project deliverables, action items and issues. He coordinated User Acceptance Testing (UAT) and maintained the testing environments for the project. He supported business requirements gathering and mapping and development of APD, IAPD and PAPD within MMIS operations, to submit to federal CMS for consideration.

**References**

Reference Data	Reference
<b>Company Name</b>	IBM Global Solutions
<b>Contact Name</b>	Laura Killebrew
<b>Phone Number</b>	601-668-8599
<b>Email Address</b>	<a href="mailto:killebrew@yahoo.com">killebrew@yahoo.com</a>
Reference Data	Reference
<b>Company Name</b>	NTT Data Services, Inc.
<b>Contact Name</b>	Sherri Butler
<b>Phone Number</b>	217-381-6199
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Reference Data	Reference
<b>Company Name</b>	CSG Government Solutions, Inc.
<b>Contact Name</b>	Jay Edmondson
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<b>Email Address</b>	<a href="mailto:edmondson.jay@gmail.com">edmondson.jay@gmail.com</a>



## Terry Honke, IV&V Technical Analyst / Architect



### Program Expertise

- State of Nebraska Medicaid

### Specializations

- Emerging system technologies that include Privacy and Security

### Education and Memberships

- A.S. in Computer Technology, Southeast Community College, 1981
- B.S. in Business Administration (Computer Science), University Of Nebraska-Lincoln, 1979

### Certifications and Licenses

- Scrum Master (Scrum Alliance Certified/Jean Tabaka)
- Agile Methodology (ASCIT/Sally Elatta)
- Enterprise Architecture Center of Excellence

### Methodologies

- Agile

### Professional Summary

Terry has more than 40 years of experience in technical management and support of large-scale system projects. He has supported projects in Nebraska for 8 years, including serving as the Technical Lead on Nebraska DHHS Eligibility and Enrollment System and Data Management and Analytics projects. Terry is a certified Scrum Master. He has directed teams in enterprise architecture, quality control and application development.

### Qualifications for this Role

- 40 years of experience as Technical Lead/Solutions Architect on large-scale projects
- Over 8 years of IV&V experience
- Over 8 years of Medicaid experience

### Experience

#### First Data Government Solutions

Nebraska DHHS Data Management and Analytics

IV&V Technical Lead Analyst, 10/2017–11/2021

As an integral member of the FDGS Team, Terry advises the State on technical planning, requirements, solution architecture, design, development and implementation topics related to the new data warehouse system. He applied his professional knowledge and experience to promote innovative best practice discussions. Supported both State and colleagues with technical subjects and risk mitigation approaches. Supported and participated with all CMS Certification Review tasks and activities.



## Nebraska DHHS Modernization Medicaid Eligibility & Enrollment System IV&V Technical Lead Analyst, 01/2014–06/2016 & 01/2017-10/2017

As an integral member of the FDGS Team, Terry advises the State on technical planning, requirements, architecture, design, development and implementation topics related to the eligibility and enrollment systems. He uses his professional knowledge and experience to promote innovative best practice discussions. The project has allowed him to work closely with state business analysts to create and deliver attestation letters required for each round of testing associated with CMS Payment Error Rate Measurement (PERM) project. Each round of testing requires IV&V to attest to the quality control and quality assurance measures executed by the State prior to the submission process.

## IBM/Kenexa Corporation

### Director of Software Development, 04/2011–02/2013

Terry reported to the Vice President of Operation and functioned in a Scrum Master role. He directed and managed Scrum teams in Nebraska and India, and directed quality control and infrastructure teams. He provided governance and guidance on SOA web and mobile platforms, and was a member of the roadmap committee providing enterprise architectural oversight. He assisted with establishing product lifecycle management approaches and reduced post-deployment defects by instituting root cause analysis. He also replicated the application platform to the new European data center and implemented agile methodology and Scrum processes.

## Ameritas Life Insurance Corporation

### Manager of Group IT Shared Services Development Team, 01/2009–04/2011

Terry functioned as Scrum Master, establishing and managing the Shared Service Application Development team implementing elements of agile/SCRUM development and resource procurement. He established a Service Oriented Architecture (SOA) platform. He captured business requirements, defined solution architecture and managed BI warehouse reporting, EDI and operational support teams. He also facilitated change control board meetings and business planning sessions. Terry was the EDI and MAR compliance point of contact. He completed enterprise architecture center of excellence certification training and deployed the first WebSphere portal and SOA applications. He also formalized test and release methodology for WebSphere portal projects.

## National Research Corporation

### Director of Application Development, 07/2005–01/2009

Terry directed application development teams and handled resource procurement. He restructured individual developers into a comprehensive application development entity and implemented Agile/SCRUM software development methodology. He gathered executive business requirements to create an enterprise solution and architecture, and managed BI and database support, quality control and operational support teams. Terry was the SOX Development Officer and a member of the Internal Standards Committee. He established the corporate change board and holistic solution planning sessions, formalized the testing and

release methodology within the organization and implemented Microsoft SharePoint devices within operational and business teams.

## Blue Cross Blue Shield Nebraska

### Director of Product Development, 11/1998–07/2005

Terry executed the project charter and converted DOS claim processing system into Windows/Internet EDI HIPAA-based applications for both professional and institutional lines of business. He directed EDI product development involving joint venture between Blue Cross Blue Shield Nebraska and Blue Cross Blue Shield Kansas. Terry established Standard Operating Procedures (SOP) for product development to guarantee federal compliance with HIPAA and PHI mandates, and delivered four software products in a five-year period on time and within budget. He institutionalized Rational Unified Process/Iterative and formalized the UML project model along with the supporting Artifacts. He established a comprehensive product development team, and started holistic solution planning sessions based around solution architecture.

## References

Reference Data	Reference
<b>Company Name</b>	Treinen Associates
<b>Contact Name</b>	Alan Ashurst
<b>Phone Number</b>	720-220-8581
<b>Email Address</b>	asshurst@treinen.com
Reference Data	Reference
<b>Company Name</b>	Talking Leaves
<b>Contact Name</b>	Jeff Lee
<b>Phone Number</b>	704-999-1083
<b>Email Address</b>	leejd60@gmail.com
Reference Data	Reference
<b>Company Name</b>	Wave 2
<b>Contact Name</b>	Karen Zanetti
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## 2.3 D. Logistics

### Section Highlights

- **The FDGS Team is familiar with the DHHS working facilities.**
- **FDGS is equally capable of working on-site or remote.**

*Overview: DHHS will provide work space and access to desktop computers, printers and copiers for contractor staff members while on-site in Lincoln. DHHS will not provide parking. All IV&V work is to be stored on DHHS's provided repository. DHHS will provide a means by which contractor staff members may access the repository when contractor staff are off-site.*

The FDGS Team has supported DHHS since 2014 and throughout our working relationship we have continually tailored our staffing approach to meet Nebraska's needs. Prior to the pandemic we primarily worked on-site in Lincoln where repository access and collaboration was never an issue. When the pandemic struck we immediately shifted to a 100% remote working model without missing a beat. In the last 18 months, we dramatically expanded our use of virtual meetings, embraced remote collaboration tools, and utilized file repositories exclusively from offsite locations. We still look forward to face-to-face meetings in a post pandemic world but no matter what conditions the future brings FDGS will always make sure that Nebraska's IV&V needs met.

*Address the bidder's approach to meeting each requirement in a table that contains the requirement and the bidder's approach to meeting the requirement. (RFP Section V, D.3.i)*

**Table 15** documents our approach to each requirement for Logistics.

**Table 15: Approach to Logistics Requirements**

#	Requirement	FDGS Approach
1.	<i>Must store all work products in DHHS designated repository and using designated folder structure.</i>	FDGS agrees to store all work products in a DHHS designated repository. Furthermore, we will follow the state's folder structure and version controls standards when storing work products and documents.
2.	<i>Must have controlled access to all contractor facilities where any contract related work is performed in compliance with privacy and security requirements.</i>	FDGS complies with state security and technology standards. We will continue to access, and work from state computers using Citrix Desktop and we access the state's email system using Outlook Web Access (OWA). FDGS will use Citrix desktop and OWA in remote and on-site locations.

*Provide an overview and describe the bidder's facilities where contractor staff may perform work when not on-site in Lincoln. (RFP Section V, D.3.ii)*

We understand the significance of confidentiality and comply with all applicable federal and state regulations pertaining to protection of customer data. Fiserv/FDGS has a company-wide Information Security Policy in place that is aligned with ISO 27002, the International

Organization for Standardization's code that establishes guidelines and general principles for initiating, implementing, maintaining, and improving information security management in an organization. Our policy has been analyzed against the requirements of the Health Insurance Portability and Accountability Act (HIPAA) and is compliant.

FDGS complies with state security and technology standards by leveraging state provided resources to perform remote work. In Nebraska, we will use Citrix Desktop to access assigned workstation resources remotely. Outlook Web Access (OWA) will also be used to access state e-mail remotely.

While staff may perform work remotely, their actions are governed not only by the FDGS security and privacy policies, but also by the State's requirements regarding access to State systems.

## 2.4 E. Privacy and Security

### Section Highlights

- **FDGS complies with Federal and State privacy and security regulations**
- **FDGS provides a variety of privacy and security services**
- **FDGS Team is trained and recertified annually on security standards**

*Overview: The contractor must ensure that all contractor data use, exchange and exposure protects DHHS data and protected health information (PHI). Workforce privacy and security must be protected and State and Federal requirements must be met.*

IV&V vendors do not normally have access to PII or PHI, however, if this access is provided for any reason, FDGS is keenly aware of the importance of data security. As the largest processor of credit card transactions in the world, data privacy and security is a fundamental business practice for Fiserv/FDGS. We understand the significance of confidentiality and comply with all applicable federal and state regulations pertaining to protection of customer data.

FDGS has a company-wide Information Security Policy in place that is aligned with ISO 27002, the International Organization for Standardization’s code that establishes guidelines and general principles for initiating, implementing, maintaining, and improving information security management in an organization. Our policy has been analyzed against the requirements of the Health Insurance Portability and Accountability Act (HIPAA) and is compliant.

In addition, FDGS provides a variety of Privacy and Security services to the private industry and government agencies. These solutions are compliant with various standards including HIPAA, NIST and MARS-E. Our products and solutions span a variety of government services, many of which deal with various forms of data requiring special handling including PII, PHI, Tax data, financial data and employment data. FDGS currently provides security and privacy assessments to the state and will continue to comply with all applicable federal and state policies regarding data security and compliance. We will work with DHHS and its chosen implementation contractors to assess, identify and mitigate data security risks.

*Address the bidder’s approach to meeting each requirement in a table that contains the requirement and the bidder’s approach to meeting the requirement. (RFP Section V, E.3.i)*

**Table 16** documents our approach to each requirement for Privacy and Security.

**Table 16: Privacy and Security Requirements**

#	Requirement	FDGS Approach
1.	<i>Must develop and submit a Privacy and Security Plan work product that includes a description of how contractor safeguards all state information that is transmitted within contractors systems (i.e. email). The plan must be approved</i>	FDGS agrees to update the current Privacy and Security Plan and submit for the approval of DHHS to verify our staff follows proper security protocols. Our work product includes the following components covering information security as it pertains to the activities of FDGS staff in the execution of its required activities:

#	Requirement	FDGS Approach
	<i>by DHHS prior to the contractor having access to project materials.</i>	<ul style="list-style-type: none"> <li>• Introduction and Overview of Security Plan</li> <li>• Roles and Responsibilities (Security Management)</li> <li>• Security Processes and Procedures</li> <li>• (Information/Data) Classification and Control</li> <li>• Personnel Security (Managing People and the use of Information)</li> <li>• Physical Asset Security (including electronic and physical security)</li> <li>• Communication Security (including email and telecommunications)</li> <li>• Access Control (protecting passwords, access and data)</li> <li>• Monitoring System Access and Use</li> <li>• Incident Management</li> <li>• Disaster Recovery and Business Continuity</li> <li>• External Dependencies</li> <li>• Third Party Security</li> <li>• Operations Management</li> <li>• Compliance</li> <li>• Appendices - Sample Logs, Matrices, Training Information, Diagrams, Sample Forms, Sample Threat Levels, Glossary</li> </ul>
2.	<i>Must comply with all security and privacy laws, regulations, and policies, including HIPAA, and related breach notification laws and directives.</i>	FDGS complies with all applicable security and privacy laws, regulations, and policies, including HIPAA Privacy and Security rules, and related breach notification laws and directives as required by FDGS and DHHS.
3.	<i>Must provide initial and ongoing privacy and security and HIPAA compliance training to all employees and contract personnel assigned to the project prior to providing access to PHI.</i>	<p>Privacy training is provided by FDGS Corporate Security and is mandatory for new hires (during the first 90 days of employment) and annually thereafter for existing staff. All FDGS employees, contractors, and subcontractors must complete an on-line training each year that includes HIPAA compliance. This training covers FDGS' security policy and clarifies exactly what constitutes disclosure of confidential information. The training also details the civil and criminal sanctions that can be applied to either FDGS or individuals responsible for a data breach, or both.</p> <p>In addition, FDGS consultants typically undergo state Privacy and Security training to make sure that any particular state requirements are known and addressed.</p>
4.	<i>Must take all reasonable industry recognized methods to secure the system from un-authorized access.</i>	FDGS maintains commercially reasonable security standards and protocols to inhibit unauthorized access to DHHS systems and data. At a minimum, these include:



#	Requirement	FDGS Approach
		<ul style="list-style-type: none"> <li>• Hardened equipment per NIST and other industry guidelines that incorporate full disk encryption on all FDGS supplied equipment</li> <li>• Daily scanning for viruses and other malware</li> <li>• Periodic random testing of privacy and security training efficacy with required repetition of training for those who fail these checks – too many failures may result in disciplinary action up to and including dismissal</li> <li>• Automated Spam and Phishing detection at the enterprise level with Spam quarantining</li> <li>• Scanning of files, email and attachments for potential privacy and security issues (e.g. presence of social security or credit card numbers) – these files are generally prohibited from being stored, except in explicitly authorized locations</li> <li>• Generally, FDGS will not have direct access to state systems – instead using either state provided equipment or via an authorized remote access connection provided by the state</li> </ul>
5.	<p><i>Must permanently destroy all confidential data and protected health information entrusted to the contractor for the performance of the contract upon approval of DHHS.</i></p>	<p>FDGS plans to comply with this requirement by not allowing any confidential data or protected health information to be on its information technology systems.</p> <ul style="list-style-type: none"> <li>• This is automated via the above mentioned scanning and quarantine of files, emails and attachment which are suspect</li> <li>• Files containing PII are automatically removed by the FDGS Security Operations Center (SOC)</li> <li>• During project close, all retained documents are reviewed and any confidential data will be deleted – this review can also be performed at state request at any time</li> <li>• When a consultant leaves FDGS or a project for whatever reason, their files are transferred to their successor or manager</li> </ul>

*Description of the proposed strategy, methodology and capabilities for systems, operational and physical security. (RFP Section V, E.3.ii)*

Fiserv/FDGS policies have been reviewed and approved by these three broadly recognized assessors – SSAE 18/SOC 2 (Deloitte and Touche), PCI DSS (Trustwave) and GLBA (FFIEC) – as well as a many state, local, and customer assessors. The Information Security Policy framework is based upon the following: ISO 27002, PCI DSS, and PCI ADSS. Corporate security policies also include practices in FTC 16 CFR Part 314, Standards for Safeguarding Customer Information; Final Rule.

We have chosen this broader approach rather than the strict adherence to one standard because it enables a single, global Fiserv IT security policy that meets the full scope of legal and regulatory requirements across a diverse spectrum of products and services

Fiserv/FDGS has earned PCI compliance, as well as meeting the many requirements of state, federal and industry regulations through the controls of its defense-in-depth architecture. Fiserv/FDGS requires access controls on all applications, operating systems, databases, and network devices to verify that persons only have the minimal privileges they require. Data from disparate clients is logically segregated and safeguarded through these access controls.

There are formal processes in place for managers and data owners to grant, approve and terminate access, communicate passwords, enforce password complexity and expiration and perform password resets. Access privileges are based on job responsibilities and are regularly reviewed to confirm that only those people with a current need-to-know have access. Each ID is unique and is associated with a specific individual. Systems require multi-factor authentication.

From a network perspective, secure, encrypted communications are used for remote administration of production systems and applications. System standards/procedures include disabling all unneeded or unused services.

### Physical Security

While onsite, the FDGS Team understands the importance of additional physical security standards, such as:

- The importance of wearing an identification badge while on premises.
- The need to check in and out with security when entering or leaving.
- Ensuring anyone not wearing identification is not allowed to wander unaccompanied without being reported.

Our FDGS Team is trained and recertified annually on physical security standards and understands to report any potential breaches identified.

*Sample of a Privacy and Security Plan from a previous project. (RFP Section V, E.3.iii)*

FDGS is including our actual **Privacy and Security Plan** in **Appendix 7** from the current Nebraska IV&V project. This plan was reviewed and last updated in 2017.

Our plan encompasses a multitude of other documents relating to physical security, logical security, general operations, technical architecture, disaster recovery and business continuity. References to separate documents exist throughout the Privacy and Security Plan and such documents can be made available as requested. All documents are to be considered living documents that are updated as needed and correlated back to the full Privacy and Security Plan and controlled according to the approved configuration management process.

*Privacy and Security Plan template with instructions and procedures for completing the template. (RFP Section V, E.3.iv)*

While FDGS will update our existing Privacy and Security Plan for Nebraska IV&V Services, we are including **Appendix 8, a *Privacy and Security Plan template*** that could be used to govern IV&V activities and support DHHS objectives throughout the life of the contract. If appropriate, FDGS will work with DHHS to develop a new Privacy and Security Plan using another template chosen by the state such as MARS-E, CMS or a different state template.

*Description of how workforce privacy and security awareness is supported. (RFP Section V, E.3.v)*

All FDGS employees and contractors with access to customer data are required to sign-off on the Information Security End User Policy and the Standard Operating Procedure.

Privacy & Protection of Personal and Business Confidential Information. These documents are based on relevant sections of the Information Security Policy, with additional detail. The Information Security Policy itself is posted on the corporate intranet, accessible to all employees. By contract, third party vendors who have access to customer data must sign an amendment agreeing to meet or exceed Fiserv's security policies and standards, which includes employee training on those policies. In addition, Contractors must be trained on and agree to Third Party Employees Privacy/InfoSec Operating Procedures.



As stated above, workforce privacy and security awareness is supported through training provided by Fiserv Corporate Security and is mandatory for new hires (during the first 90 days of employment) and annually thereafter for existing staff. All FDGS employees, contractors, and subcontractors must complete an on-line training each year. This training covers Fiserv's security policy and clarifies exactly what constitutes disclosure of confidential information. The training also details the civil and criminal sanctions that can be applied to either FDGS or individuals responsible for a data breach, or both.

*Description of the approach to monitoring attempted security violations and the actions that will be taken when security violation attempts are made as well as breaches. (RFP Section V, E.3.vi)*

When we identify an information security risk, we follow an aggressive and disciplined process to remedy or mitigate the risk. Fiserv has established a corporate-wide Governance, Risk, & Compliance group, reporting up to the Senior Vice President of Enterprise Security, Risk, & Compliance through the our Security Operations Center (SOC), to identify and mitigate any information security risks. We mention this because security is not something we take lightly; it is a core tenet of our corporate structure. We train our staff annually and take specific measures to minimize security threats.

In our role as an IV&V contractor, our access to project sensitive information is always safeguarded. If we suspect any sort of violation we follow these protocols:

1. Report a security violation to the State Project Manager and FDGS Project Manager
2. Report the security violation to the FDGS Security Operations Center
3. Control any documentation and conduct an inventory of secured data
4. Provide a report of compromised data including the impacts
5. In cases of attempted intrusion, various mitigation strategies will be employed. These may include:
  - Account lockout
  - Additional hardening of equipment
  - Updates to firewall rules
  - Disciplinary action up to termination

FDGS takes extreme measures to verify our staff and our technologies are not impacted. For example, our staff has:

- Pre-employment background checks
- Annual security training
- Bit locker protected laptops
- Laptops with USB ports deactivated
- Security monitoring over email to validate Personally Identifiable Information (PII) is not distributed
- Mandates to only use encrypted flash drives
- Access to SMEs with broad and deep privacy and security related training and certification

The FDGS Team is knowledgeable and equipped to keep your data secure.

## Attachment A

### Business Requirements Traceability Matrix Request for Proposal Number 109035 O3

Bidders are instructed to complete a Business Requirements Traceability Matrix for independent verification and validation (IV&V) services. Bidders are required to describe in detail how their proposed solution meets the conformance specification outlined within each Business Requirement.

The traceability matrix is used to document and track the business requirements from the proposal through testing to verify that the requirement has been completely fulfilled. The contractor will be responsible for maintaining the contract set of Baseline Requirements.

The traceability matrix should indicate how the bidder intends to comply with the requirement and the effort required to achieve that compliance. It is not sufficient for the bidder to simply state that it intends to meet the requirements of the RFP. DHHS will consider any such response to the requirements in this RFP to be non-responsive and the bid may be rejected. The narrative should provide DHHS with sufficient information to differentiate the bidder's business solution from other bidders' solutions.

The bidder must ensure that the original requirement identifier and requirement description are maintained in the traceability matrix as provided by DHHS. Failure to maintain these elements may render the bid non-responsive and result in for rejection of the bidder. How to complete the traceability matrix:

Column Description	Bidder Responsibility
Req #	The unique identifier for the requirement as assigned by DHHS, followed by the specific requirement number. This column is dictated by this RFP and must not be modified by the bidder.
Requirement	The statement of the requirement to which the bidder must respond. This column is dictated by the RFP and must not be modified by the bidder.

***Project Management***

The detailed responses to each Project Management business requirement is included in our Technical Proposal, **Section 2.1.1 Project Management**.

Business Requirements	
Req #	Requirement
PM-1	Describe Bidder's proven methodology, approach, and process for Project Management of Medicaid IV&V activities,

Response:

FDGS has worked with multiple states verifying and validating that their systems are built according to defined specifications. With decades of rich first-hand experience at leveraging information technology methodologies and industry best practices that draw from standards such as CMMI, IEEE and PMI, we bring professionals that can assess work products and provide recommendations aimed at enhancing the overall quality and robustness of deliverables.

With our understanding of past DHHS projects and the future vision of DHHS, FDGS aligns our IV&V management methodology to the standard project phases as defined by the PMBOK and as reflected in **Figure 1** below. We understand DHHS' strategic goals and the roadmap to achieve them. We tailor our IV&V program management methodology to work with the agreed upon development methodology to include waterfall, prototyping, interactive/incremental, spiral, rapid application development (RAD), and agile methodology.



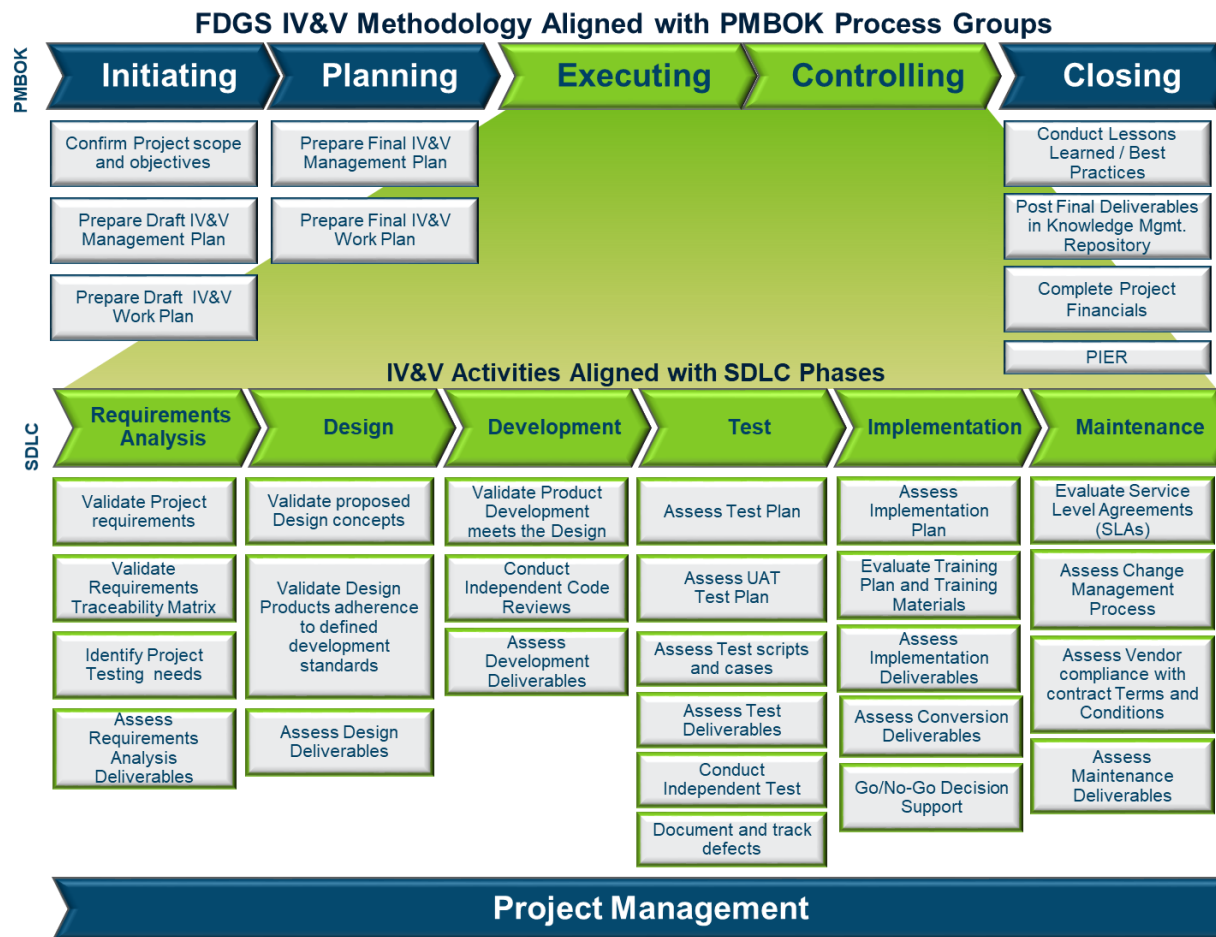


Figure 1: FDGS aligns with PMBOK and each SDLC phase

FDGS follows a structured IV&V project management approach as follows:

- **Initiate** – we confirm key project and IV&V objectives, secure staff and prepare a draft IV&V Management Plan and IV&V Work Plan
- **Plan** – we create and maintain a structure to accomplish the objectives and prepare the team to begin the phase or task. This includes finalization of both the IV&V Management Plan and the IV&V Work Plan.

- **Execute** – we coordinate the people to carry out the IV&V Management Plan and build the IV&V products/tools. In this phase, we:
  - Complete all IV&V tasks, including deliverable, progress and process reviews
  - Provide and use our IV&V tools, such as checklists and metrics
  - Prepare required IV&V deliverables, including deliverable review reports and IV&V Status Reports
  - Share our findings through defined communication processes and channels
- **Control** – we confirm that project objectives are met by monitoring and measuring progress and recommending corrective action as necessary. We apply consistent assessment and monitoring processes throughout design, development and implementation. We track and monitor progress of our IV&V tasks and deliverables, assess the progress and performance of the implementation contractors and adherence to the overall schedule and budget.
- **Close** – we assist the project in verifying that all deliverables meet requirements, the products have been tested, that there are no findings that would preclude final implementation and provide a recommendation for final approval/acceptance.

Our proposed project management methodology is directed to the accomplishment of four fundamental objectives:

- **Effective Communications** – Timely and accurate communication of issues and progress to all project participants throughout the duration of the project
- **Dynamic IV&V Project Management** – Estimating, planning, organizing, and managing the work to verify that quality work products are delivered on schedule and within budget
- **Proactive IV&V Quality Management** – Building the processes for evaluating progress, work products, and work processes to deliver quality end products that meet business objectives, client expectations and project requirements into our internal standards for deliverable and work product development
- **Comprehensive IV&V Risk Management** – Well-defined processes for anticipating, assessing and mitigating project risk areas. The proven practices developed by our staff over years of successfully conducting similar projects enable us to anticipate various types of risks and incorporate procedures to avoid or minimize areas of risk

The overall project management methodology is structured to meet these four objectives, as illustrated in **Table 1** below:

**Table 1: Techniques and Tools of the Project Management Objectives**

Objectives	Techniques	Tools
<b>1. Effective Communication</b>	<ul style="list-style-type: none"> <li>• Communication and management reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Standardized report formats</li> </ul>

			<ul style="list-style-type: none"> <li>• Communication plan with appropriate contact points and escalation procedures</li> <li>• Weekly and Monthly Status Reports</li> <li>• Document tracking system for procedures and reports</li> </ul>
	<b>2. Dynamic IV&amp;V Project Management</b>	<ul style="list-style-type: none"> <li>• Planning and organizing work</li> <li>• Documentation standards</li> <li>• Estimating and administering the work effort for the project</li> <li>• Managing project resources</li> <li>• Establishing project controls</li> <li>• Formalizing Change Control</li> </ul>	<ul style="list-style-type: none"> <li>• IV&amp;V Management Plan is completed to establish standards and procedures</li> <li>• MS Project to manage tasks, activities, dependencies, and schedule</li> <li>• MS Office software to support email and the development of deliverables and presentations</li> <li>• Resource allocation and scheduling plan and procedures</li> <li>• Change Control procedures and approval process</li> </ul>
	<b>3. Proactive IV&amp;V Quality Management</b>	<ul style="list-style-type: none"> <li>• Establishing standards and approved conventions</li> <li>• Issue Identification</li> <li>• Scope/Change Control Management</li> </ul>	<ul style="list-style-type: none"> <li>• Quality Checklist and Templates</li> <li>• Scheduled Quality Assurance checkpoint reviews</li> <li>• Quality Control work product evaluations</li> <li>• Issue Tracking System</li> <li>• Established change control, change approval and communication procedures</li> </ul>
	<b>4. Comprehensive IV&amp;V Risk Management</b>	<ul style="list-style-type: none"> <li>• Identifying and anticipating all components of risk – managerial, political, technical and financial</li> <li>• Developing risk evaluation and mitigation strategies from project outset</li> </ul>	<ul style="list-style-type: none"> <li>• Standardized risk assessment templates</li> <li>• Standardized assessment categories</li> <li>• Best Risk Management practices from prior projects</li> <li>• Ongoing risk monitoring (risk triggers) included in the project status reports</li> </ul>

	<ul style="list-style-type: none"> <li>• Conducting ongoing risk assessments</li> </ul>	
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FDGS applies a structured deliverable review and assessment methodology that our team has used on many prior IV&V engagements. This includes:

**Phase 1 – Information Gathering**

- **Validate Scope** – confirm why the assessment is being conducted, what areas, the timelines, schedules, types of communication, roles responsibilities, etc.
- **Collect Documents** – request for applicable historical documents, set up of repository and identify types of categories for your assessment type
- **Conduct Interviews** – schedule and conduct interviews with key staff/groups/divisions in applicable areas identified for the assessment(s), collect information

**Phase 2 – Analysis of Information**

- **Review documents to identify the good, the bad, and the ugly** – put into categories specific to assessment type
- **Analyze information by category** – identify common themes (i.e. how often they occur, performance measurements, policy or procedure gaps, age of equipment, skills gaps, defects, etc.)
- **Conduct Analysis on Alternatives** – Identify alternatives by research on other states, other departments, and national standards or there may also be an alternative to consider that research does not identify. Conduct the analysis including pros and cons, consideration of timelines and cost, Federal and state mandates, enterprise goals, etc.

**Phase 3 - Final Report**

- Document findings in accordance with specifications from the client and CMS
- Summarize findings and summarize the alternatives (what the possibilities are)
- Additionally, depending on the statement of work and type of assessment the final report may include the future vision, objectives, gaps between the future and current, recommendation report, a roadmap, implementation plan or change resistance plan

CMS is looking to IV&V contractors to serve a role in confirming that their requirements are met when supporting Medicaid transformation projects. FDGS remains independent from the vendors who are providing solutions for these transformations and we

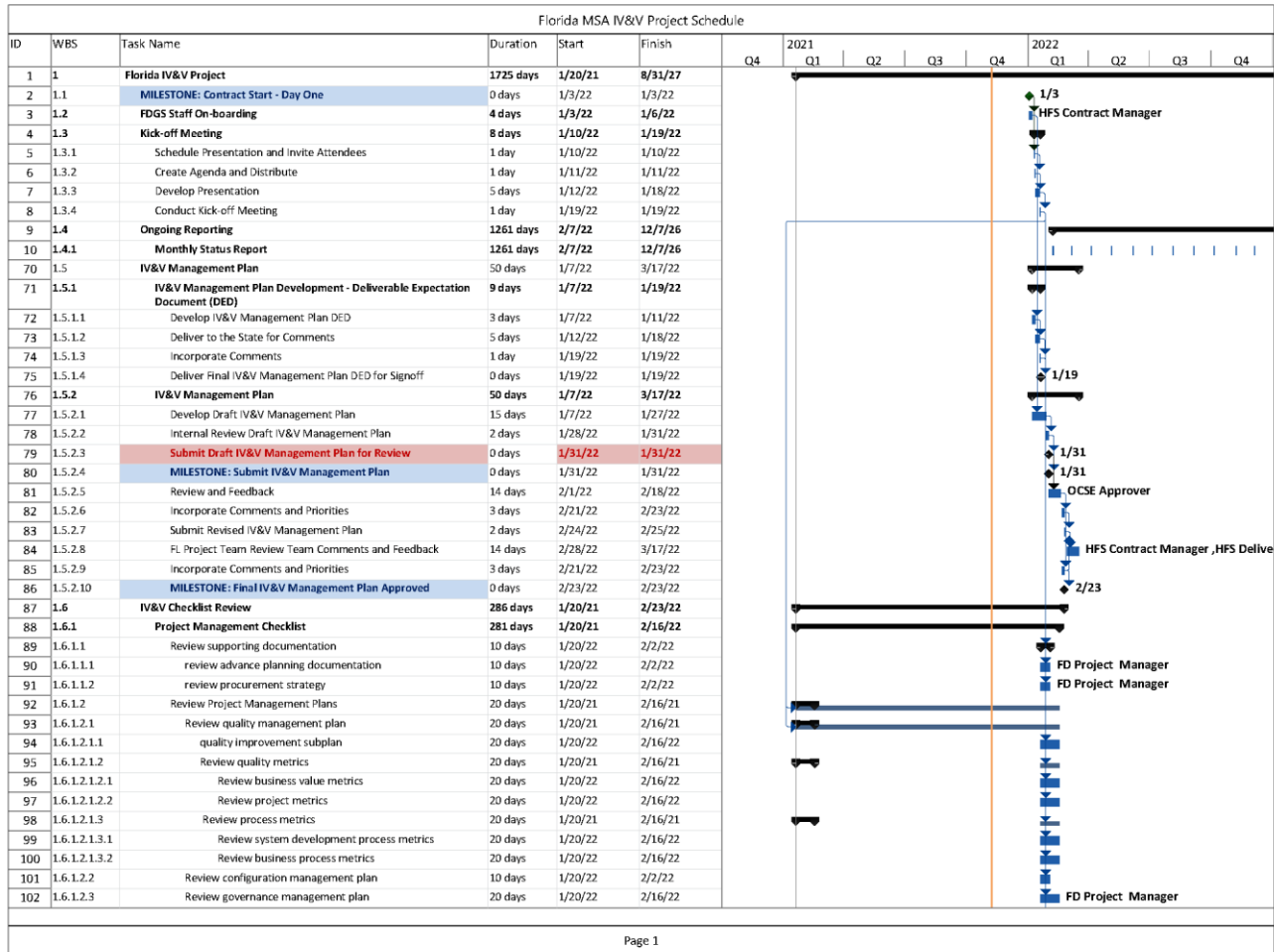
	<p>understand the outcomes that CMS is encouraging Nebraska to achieve. Our flexible IV&amp;V service offering is focused on helping Nebraska achieve its transformation of the Medicaid Enterprise to managed care while meeting CMS expectations.</p> <p>FDGS recognizes the importance of alignment to CMS standards and processes throughout the journey of system development. We use the following methods to keep the projects aligned with CMS where appropriate:</p> <ul style="list-style-type: none"> <li>• Work with the State to identify the most appropriate templates and artifacts to develop, based on the artifacts available in the CMS Opportunity to Network and Engage (CMS zONE)</li> <li>• Perform assessment of the implementation contractors' approaches and deliverables against MITA and the standards and conditions for Medicaid IT</li> <li>• Utilize the most recent certification guidance available from CMS including Medicaid Enterprise Certification Toolkit (MECT) version 2.3, Medicaid Eligibility and Enrollment Toolkit (MEET) version 1.1, Outcomes-Based Certification (OBC), and Streamlined Modular Certification (SMC)</li> </ul> <p>The FDGS Team creates a culture of accountability by measuring the vendor's achievements against DHHS' explicit goals and objectives and, where necessary, help clarify the desired outcomes to your contractors. We recognize that IV&amp;V's duty to complete mandatory IV&amp;V reporting on behalf of CMS must be balanced with the specific dynamics that pertain to Nebraska, and must ultimately be supportive of your defined strategy. Nebraska's vision for Medicaid transformation is an overarching consideration of FDGS when providing IV&amp;V oversight of your vendors. Our verification and validation practices are centered on protecting the interests of Nebraska citizens – clients you serve, your staff, and the economic interests of taxpayers.</p>
PM-2	Include an example of an IV&V project schedule utilized on similar projects.

Response:

FDGS has included an example of a project schedule on the following pages. This example was developed for our FDGS Florida Information Technology IV&V Project Proposal. Florida Department of Management Services (DMS), initiated a Request for Proposal (RFP) to provide Independent Verification and Validation (IV&V) services for Information Technology (IT) projects. The state issued the RFP May 18, 2021 to establish a new State Term Contract (STC) for use by all state agencies.

This example includes the baseline for the repeated IV&V activities and details for each of our IV&V projects. Our IV&V Lead and IV&V Project Manager begin with a baseline similar to this example and tailor it to the unique needs and timeline of each system implementation based on its current implementation phase or whether it has moved into Operations and Maintenance. Additional customization of the plan is necessary to accommodate unique technology and vendor timelines or constraints to align all project activities.

**Note:** Additional pages of our example project schedule are found in the Technical Proposal.



PM-3

Describe how the IV&V bidder's project management approach adapts to varying State governance models.



Response:

The FDGS IV&V project management approach can be calibrated to suit the needs of any organization or governance model as needed by DHHS. We bring the tools, templates and talent and apply the right amount of rigor to the processes as directed by our clients. As a leading provider for IV&V services in the healthcare industry we have seen vastly disparate service requests for IV&V. Some of our clients have taken the “kitchen sink” approach and included any augmentation services they needed and applied the title of IV&V, while other clients have taken an approach where they are only doing IV&V because they are required to, with minimalistic vendor involvement.

FDGS builds on the processes already established for the ongoing DMA Project and other prior projects incorporating and adapting as the governance needs and structure evolve in the project lifecycle. FDGS commends DHHS on establishing an Enterprise Project Management Office (EPMO) and looks forward to supporting the EPMO’s efforts to establish a standard approach to portfolio, program and project management. The complexity and dynamic nature of this and any large-scale project makes effective project management a mandatory ingredient for success.

From our numerous and wide-range of IV&V projects, we have found that the keys to project management success include the following:

- **Providing the right team** – skilled in project management and specific program areas with sound subject matter expertise
- **Providing an understanding of the business problem** – given the timeframes and mission critical nature of the projects, it is imperative to provide leadership assistance in prioritizing the work and maximizing productivity
- **Providing best practice solutions** – based on individual customer requirements, provide a proven set of methods, tools and procedures that can be customized to each project’s needs
- **Creating a partnership** – with DHHS to create shared project success criteria, provide the professionals and experience to validate the project success criteria, and stand with the client throughout the project to reach this goal
- **Mitigating Risk** – through our experience and commitment, we are able to add value and assist DHHS management in making informed decisions regarding risk mitigation, risk control, and project planning
- **Credentials** – of having a national government practice with highly skilled professionals who have worked on engagements in nearly every state. This depth of experience has led to the development of a comprehensive methodology for managing and executing successful, large-scale IV&V projects

The project teams follow a similar core approach to address the individual project needs, nature, and scope of the IV&V responsibilities. The FDGS Team will be staffed with skills necessary to address the business needs, the technology used, and development methodology employed.

PM-4	Address the bidder's approach to meeting each requirement in a table that contains the requirement and the contractor's approach to meeting the requirement.										
	<p>Response:</p> <p><b>Table 2</b> documents our approach to each requirement for Project Management.</p> <p style="text-align: center;"><b>Table 2: Project Management Requirements</b></p> <table border="1"> <thead> <tr> <th>#</th> <th>Requirement</th> <th>FDGS Approach</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td><i>Must develop and submit comprehensive IV&amp;V Project Management Plan(s) work product for Department approval a maximum of 30 days after the project start, and must manage and perform the IV&amp;V services in accordance with the IV&amp;V Project Management Plan(s).</i></td> <td> <p>The FDGS Team works collaboratively with DHHS and key stakeholders to develop and customize an IV&amp;V Project Management Plan (PMP) that integrates with, and meets the needs of each project. We understand the value of the PMP comes from the execution of the plan's content.</p> <p>This is not a deliverable that "sits on the shelf;" it is the guide for the entire FDGS Team with some key components that DHHS can also apply to enable programmatic oversight over the projects. FDGS is committed to delivering an IV&amp;V PMP that is practical and useful, applied consistently in the management of the IV&amp;V effort, and coordinated with other project plans.</p> <p>The sub-subsections of this plan detail how our IV&amp;V team handles Risks and Issues Management, Quality Management, Cost Management, Stakeholder Management, Change Management, staffing, and other sub-plans based on guidance from the Project Management Body of Knowledge (PMBOK®).</p> </td> </tr> <tr> <td>2.</td> <td><i>Must develop IV&amp;V project schedule(s) work products a maximum of 30 days after the projects' start and update weekly IV&amp;V schedules that coordinates IV&amp;V activities with project schedules.</i></td> <td> <p>FDGS works with DHHS and its partners to develop the baseline IV&amp;V project schedule, outlining the project tasks, roles, responsibilities and deliverables for each project. IV&amp;V schedules align to implementation contractor project schedules when available and provide the flexibility to modify workload as schedule changes occur. 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			<ul style="list-style-type: none"> <li>○ Identify any additional tasks and deliverables to add to WBS based on initial feedback from DHHS</li> <li>○ Identify predecessors and successors</li> <li>○ Incorporate tasks and due dates for all deliverables that require drafts and final submissions and review and approval periods</li> <li>• Assign resources to tasks and confirm that resources are not over allocated</li> <li>• Baseline approved work plan to track actual against baseline start and finish dates</li> <li>• Using Microsoft Project, review and update the work plan on a weekly basis to support currency, accuracy, and completeness as well as to facilitate timely progress and measurement tracking and reporting</li> <li>• Complete weekly updates to determine activities or tasks that may be at risk of budget or schedule variances and to allocate resources to address project risks, including: <ul style="list-style-type: none"> <li>○ Summary of key impacts and changes made since prior month and risks and issues associated with changes</li> <li>○ Percent complete for each task and subtask</li> <li>○ Actual hours by task and subtask</li> <li>○ Resource adjustments as necessary</li> <li>○ Gantt charts and various views showing planned start and end dates and durations of all tasks, subtasks, and major milestones and deliverables, including timeframes for review and approval of all deliverables and work products and exceed contract commitments</li> </ul> </li> <li>• Submit IV&amp;V schedule to DHHS for review and approval in accordance within 30 days after project start date</li> </ul>
	3.	<i>Must develop clear lines of communication and collaborative working relationships with project teams, project leadership, and CMS.</i>	FDGS plans to leverage relationships currently in place with DHHS, its vendor and CMS as a starting point for communications. As part of the IV&V Project management Plan, FDGS develops a Communication Plan to govern communications throughout the project life cycle. The purpose of the

			<p>Communication Plan is to identify the methods of exchanging information between the IV&amp;V Team and other project stakeholders. Good communication policies encompass information exchange and dissemination both internally to project participants and externally to parties with a vested interest in project progress. The Communication Plan identifies the formal communication approach and protocols that are employed to keep stakeholders informed throughout the duration of the project. As part of executing this communication plan, FDGS will:</p> <ul style="list-style-type: none"> <li>• Periodically assess the comprehensiveness of the Communication Plan and that is appropriately addresses all required contractors, partners, stakeholders and sponsors</li> <li>• Encourage participation from stakeholders early and often through planning and development to encourage “buy-in”</li> <li>• Collaborate with CMS through the gate review process</li> <li>• Devise a well-coordinated review process with stakeholders that includes result reporting</li> <li>• Evaluate if additional communications are required or additional communication protocols need to be established and enacted</li> <li>• Verify that there is timely and accurate communication of issues and progress to all project participants throughout the duration of the project</li> </ul>
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***Independent Assessment and Quality Assurance***

Business Requirements	
Req #	Requirement

IAQ-1	Address the bidder's approach to meeting each requirement in a table that contains the requirement and the bidder's approach to meeting the requirement.
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Response:

**Table 3** documents our approach to each requirement for Independent Assessment and Quality Assurance.

**Table 3: Independent Assessment and Quality Assurance Requirements**

#	Requirement	FDGS Approach
1.	<i>Must submit an IV&amp;V Management Plan for each project assigned, which includes specific information on what the contractor will do, periodic reviews, timelines, anticipated resources, estimated hours, and estimated/actual budget information.</i>	FDGS will update and expand the current IV&V Management Plan to take advantage of enhancements which have occurred since the current one was created. The new plan will also allow the FDGS Team to add additional information based on their current knowledge and insights from Nebraska DHHS Projects.
2.	<i>Must actively participate in the projects and provide ongoing assessments of the projects to proactively identify risks, issues, and opportunities along with associated recommendations for the project team.</i>	FDGS actively participates in each project. We provide verbal feedback during meetings and ongoing assessments of the project work products and deliverables to identify and document risks, issues, and IV&V observations. We will provide recommendations for mitigation and remediation as needed as well as for each IV&V observation.
3.	<i>Must assess the progress of the projects against the planned schedules, budgets, and resource utilizations. This will include periodic assessment of the project plan/schedule on a monthly or quarterly basis (schedule will be determined based on what is appropriate for the project timeline)</i>	<p>FDGS will review the work breakdown structure (WBS) provided by the project team to identify project tasks, work products and milestones. We will ensure that all deliverables are associated with levels of effort and required resources. We evaluate all assumptions and constraints, work plans, critical paths, phases, metrics, and trends, and summarize both internal and external schedule/project work plan dependencies.</p> <p>We will validate and verify the schedule by ensuring the project schedule is base lined, maintained, and managed accordingly. Once the schedule is the agreed-upon we will ensure start and finish dates are used to guide and monitor the project to completion. We will also ensure milestones are identified and accurately reported.</p> <p>FDGS will compare all of the details in the WBS against both preceding governance documentation and resulting work products. We will validate the WBS internally for correctly tabulated volumes of effort and metrics/trending. We will evaluate and make recommendations on the estimating and scheduling process of the project to confirm that the project budget and resources are adequate for the work breakdown structure and schedule. We</p>



		will review schedules to verify that adequate time and resources are assigned for planning, development, review, testing and rework.
4.	<i>Must assess the projects' resources, managerial responsibilities, and governance structure to identify gaps and provide recommendations.</i>	We will verify that a project management plan (PMP) is created and being followed. The PMP is the main planning document for a project and describes how major aspects of the project will be managed. This would include management responsibilities and governance structures. We will evaluate the project management plans and procedures to verify that they are developed, communicated, implemented, monitored and complete.
5.	<i>Must participate in all project meetings unless otherwise directed by DHHS.</i>	FDGS understands and agrees to participate in all project meetings as directed by DHHS.
6.	<i>Must perform an independent assessment of issues where the implementation contractors and DHHS' project management organization disagree and provide the results of the assessment and recommendation to DHHS leadership.</i>	FDGS will continually evaluate all assigned projects to ensure work is being done accurately, on schedule, and on budget. As an independent organization our evaluations and observations will not be swayed by alliances to DHHS's project management team or to contractors implementing work on the state's behalf. We will remain objective 3 <sup>rd</sup> party observers and when we identify issues we will document our findings in the IV&V observation log and report our concerns to DHHS leadership. Whenever possible we will provide possible solutions to each issue as well as pros and cons for the solutions we identify. FDGS will track all observations through resolution and update the log accordingly. For any issue on which DHHS and the vendor disagree, FDGS will perform an independent assessment, evaluate potential mitigation strategies provided, and recommend any additional resolution approaches. When appropriate we will set up and execute meetings to help resolve these issues.
7.	<i>Must perform one or more reviews of project deliverables and work products including but not limited to infrastructure, system documentation, design, working code, test scenarios, test cases, test results, plans, etc. and provide a detailed assessment of the quality of the deliverables and work products along with recommended changes. Assessment must include a recommendation</i>	With our previous experience in working with DHHS, the FDGS Team brings a knowledge base that enables us to verify that all deliverables reflect quality and adhere to applicable rules, regulations, laws and guidelines. This knowledge helps us to understand DHHS' project-specific needs and how to review and assess the work products and deliverables thus verifying completeness and that all requirements are met.  FDGS applies a structured deliverable review and assessment methodology that our team has used on many prior IV&V engagements. We will apply this

	<p><i>on whether DHHS should approve the work product or deliverable. Review must address at minimum the following attributes:</i></p> <ul style="list-style-type: none"> <li>• <i>Traceability and adherence to requirements</i></li> <li>• <i>Clarity</i></li> <li>• <i>Completeness</i></li> <li>• <i>Consistency</i></li> <li>• <i>Quality</i></li> <li>• <i>Adherence to applicable laws, rules, and guidelines</i></li> </ul>	<p>methodology to the review of different project deliverables. Our methodology is based on the following tenets:</p> <ul style="list-style-type: none"> <li>• <b>Participate in the full deliverable lifecycle</b> – FDGS works with project teams throughout the entire deliverable development, review, and comment and approval process, through submission of a recommendation for deliverable acceptance.</li> <li>• <b>Provide input and feedback on a flow basis</b> – This allows recommendations to be incorporated into subsequent versions of deliverables, which improves the quality of the final product and minimizes the time associated with final reviews.</li> <li>• <b>Incorporate our processes into the State process</b> – This provides a consistent and consolidated format where cosmetic and material deficiencies are documented.</li> <li>• <b>Produce thorough Deliverable Review and Assessment Reports</b> – FDGS reviews and assesses the readability, comprehensiveness, accuracy, level of detail, and quality of all required deliverables.</li> </ul>
8.	<p><i>Must assess project plans, processes and procedures to identify improvements and whether they are being followed.</i></p>	<p>We will review and assess project work plans, project management plans, and implementation contractor processes to verify they are being followed and identify potential improvements.</p>
9.	<p><i>Must assess project change orders for the following:</i></p> <ul style="list-style-type: none"> <li>• <i>The change order is following the approved change management plan and processes.</i></li> <li>• <i>The change order is within the scope of the existing contract.</i></li> <li>• <i>Cost and resource estimates for the change order are reasonable.</i></li> <li>• <i>Recommendations for alternate approaches to achieving the outcome of the change order.</i></li> </ul>	<p>When changes are proposed by the implementation contractor or DHHS, the proposed change orders must be analyzed. The process for handling Change Orders will be documented in the PMP and some of the initial steps are</p> <ul style="list-style-type: none"> <li>• Review draft change orders with respect to scope, level of effort, resources, schedule, cost, and impact to the existing Work Plan.</li> <li>• Confer with the Vendor team during the change order analysis process and determine whether the vendor provided sufficient alternatives</li> <li>• Meet with the appropriate implementation contractor representatives to request additional information or clarification.</li> </ul>

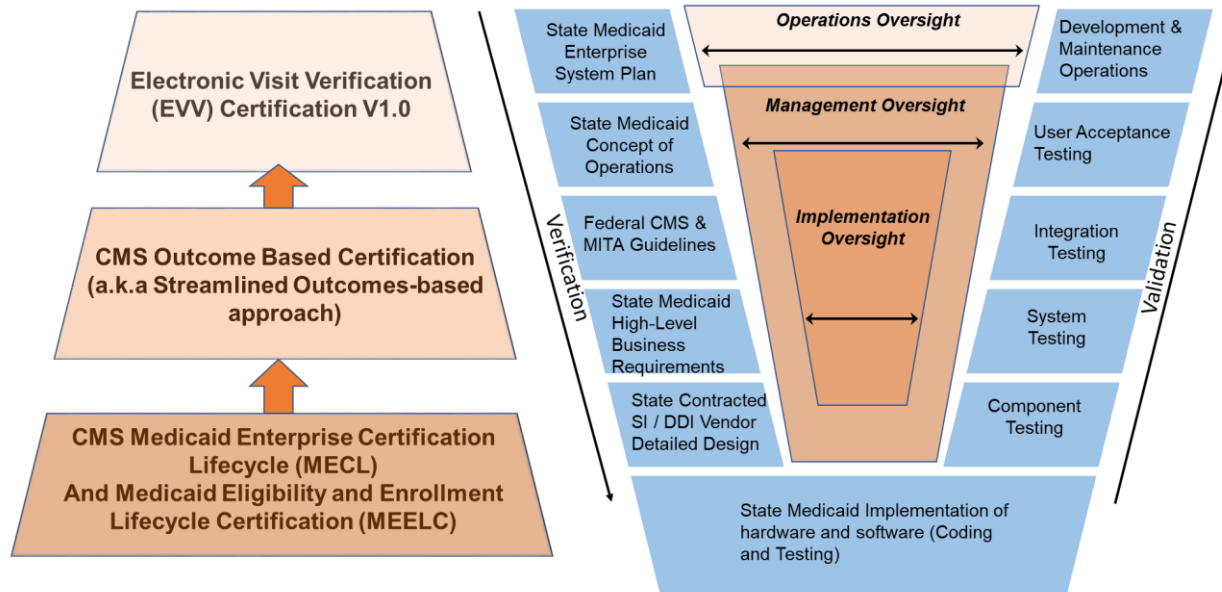
			<p>FDGS will use the following steps to conduct change order reviews:</p> <ul style="list-style-type: none"> <li>• Verify required information on the change order <ul style="list-style-type: none"> <li>○ Can the completion date be achieved? Are the start and end dates realistic and achievable?</li> </ul> </li> <li>• Validate the schedule to complete the change order <ul style="list-style-type: none"> <li>○ Can the overall completion date be achieved? Are the start and end dates realistic and achievable?</li> </ul> </li> <li>• Validate costs <ul style="list-style-type: none"> <li>○ Conduct an independent estimate of the total cost</li> <li>○ Compare effort to other similar efforts in the original work plan</li> <li>○ Determine the appropriateness of the hourly rate structure used for resources and tasks</li> <li>○ Are resources assigned to the appropriate role?</li> </ul> </li> <li>• Validate assumptions and constraints <ul style="list-style-type: none"> <li>○ Confirm that the assumptions and constraints that affect the overall estimate have been identified and explained</li> <li>○ Make recommendations for more details as appropriate</li> <li>○ Document findings that are not valid or otherwise introduce risk</li> </ul> </li> <li>• Analyze the impact on existing work plan <ul style="list-style-type: none"> <li>○ Does the change order negatively impact work already scheduled?</li> <li>○ Do resources have to be relocated to change order tasks?</li> </ul> </li> <li>• Document change order benefits and/or risks <ul style="list-style-type: none"> <li>○ Evaluate the cost of not implementing a change order</li> <li>○ Do the costs outweigh the quantifiable benefits?</li> <li>○ Does implementing the change order introduce any risk to the project?</li> </ul> </li> </ul>
	10.	<i>Must comply with IV&amp;V regulatory requirements detailed in 45 CFR 95.626.</i>	FDGS understands and agrees to be an independent IV&V vendor for DHHS.

	11.	<i>Must identify areas of un-necessary duplication and overlap between roles on the projects.</i>	As part of the IV&V review of roles and responsibilities of the project staffing, FDGS will assess whether there is any duplication and overlap between project roles and make recommendations on making changes for increasing efficacy and reducing costs. FDGS will apply this assessment at a programmatic level to identify potential duplication between projects.
	12.	<i>Must assess and verify requirement traceability throughout the project and system development lifecycle of the projects. Assessment and verification will occur periodically as appropriate for the project timeline</i>	<p>FDGS will validate that all requirements are correctly identified to verify the system meets the needs of the project and its stakeholders. We will ensure that all requirements are “traceable” through the SDLC phases: Requirements Analysis, Design, Development, Test, and Implementation phases. To accomplish this, the following steps will be undertaken:</p> <ul style="list-style-type: none"> <li>• Validate the requirements in the Requirements Traceability Matrix (RTM) incorporate traceability of the requirement at requirement validation checkpoints and throughout the entire project.</li> <li>• Make sure every requirement is uniquely identified by validating each major section of requirements is numbered hierarchically, and then individual requirements are uniquely identified within each section. This approach provides organization while keeping labels short, meaningful, and independent.</li> <li>• Remind the project team to report risk and issues identified during the RTM’s creation to the Issue and Risk Management Team and analyze the Issue and Risk Tracking Logs to ensure to the necessary updates were completed.</li> </ul> <p>Invariably, new requirements are identified once the initial gathering sessions complete, often the result of participants returning to their positions and looking at their business processes in a slightly different perspective. Inserting the occasional new requirement will not require a complete renumbering. FDGS will evaluate all new requirements in the same manner as any original requirement, with the exception of also considering impacts to other requirements, project cost, schedule and scope.</p>
	13.	<i>Must develop and monitor project performance metrics which allow tracking project completion against milestones.</i>	FDGS will develop and monitor project performance metrics which allow tracking to project completion milestones. Our team will work closely with DHHS to:

		<ul style="list-style-type: none"> <li>• Identify Metrics</li> <li>• Obtain benchmark data</li> <li>• Identify metrics owners</li> <li>• Set clearly defined goals for improvement ranges and tolerances.</li> <li>• Provide periodic meetings and progress reports as agreed upon</li> <li>• Complete formal project milestones review</li> <li>• Compare actual vs. planned start date for project tasks</li> <li>• Generate reports based on information gathered from the performance metrics and other measuring processes</li> </ul>
14.	<i>Must submit criteria for approval for defining a Critical Incident which could adversely affect the outcome of the projects.</i>	FDGS previously worked with DHHS and the project teams to develop criteria to define Critical Incidents as “a distinct event or situation that creates a significant risk of substantial or serious harm impacting either the solution functionality or the project timeline.” We will continue to work closely with DHHS to evolve this definition to meet the agency’s needs.
15.	<i>Must notify the Department immediately when the IV&amp;V Contractor discovers any Critical Incident. Provide a Contractor Critical Incident Report for each Critical Incident that summarizes the incident, how it may affect the project, notes any discrepancies found by the IV&amp;V Contractor and provides a proposed action plan to resolve the incident and mitigate its impact.</i>	FDGS will work directly with the State and each vendor Project Manager during Project Initiation to determine the proper cadence and communication channels for both actual and potential critical incidents. We will develop a critical incident report and process with steps from discovery through resolution, providing proposed action plans to aid a quick efficient resolution to mitigate impact.
16.	<i>Must interview and observe project management staff and developer staff and observe project meetings and activities to understand the process, procedures, and tools used.</i>	Through the use of meeting participation, interviews and documentation, FDGS will observe management and developer staff to better understand the processes, daily procedures and use of tools. This will be an ongoing activity.
17.	<i>Must review and analyze all applicable and available documentation for adherence to</i>	FDGS institutes our quality assurance methodologies from our Center of Excellence and Innovation to perform verification of software development tasks and processes to confirm they are well-defined, repeatable, and

		<p><i>accepted, contractually-defined industry standards.</i></p>	<p>consistent with contract requirements and industry standards. This includes validating quality standards and practices and performing assessments of items such as the following:</p> <ul style="list-style-type: none"> <li>• Technical Deliverables and Documentation</li> <li>• Medicaid System designs</li> <li>• Equipment Installation</li> <li>• Medicaid Testing Plans</li> <li>• Project management processes and reporting standards</li> </ul>
IAQ-2	<p>Describe the bidder's approach in detail to IV&amp;V including: a) project participation at the level of detail necessary to assess the project's health; b) risk, issue and opportunity management; c) deliverable review and reporting of deliverable findings</p>		
	<p>Response:</p> <p><i>a) Project participation at the level of detail necessary to assess the project's health</i></p> <p>FDGS recognizes that a large and complex project requires the engagement of team members to present a comprehensive and accurate view into project health. The figure below depicts the FDGS Team's approach to IV&amp;V relationships followed by each system feature during its development lifecycle. It focuses IV&amp;V rigor on what is critically important throughout the lifecycle, and ties together static testing activities (reviews, inspections) with the dynamic test effort.</p>		

## First Data Government Solutions V-Model for Medicaid Certification



Note: This V-Model supports CMS guidelines based on industry standards including IEEE-1012 and IEEE-15288

**Figure 2: The FDGS V-Model supporting all CMS Certification processes**

The FDGS IV&V team will monitor and assess project activities by observing meetings, conducting interviews, reviewing reports and analyzing trends. The FDGS IV&V team analyzes past project performance sufficient to identify and make recommendations for improvement. FDGS IV&V will examine all project artifacts, documents, and testing efforts to evaluate the effectiveness of the project management controls, procedures and methodologies. FDGS reviews project management and technical progress against the DHHS stakeholder and vendor baseline plans and against requirements.

By fostering an atmosphere of collaboration while maintaining our independence, our team is able to advise and promote results. The driving principle for our engagements is to provide you with the actionable intelligence to make the best decision to promote success of your project.



*b) Risk, issue, and opportunity management*

FDGS has proven experience with DHHS and an IV&V methodology that is highly effective across multiple types of large, complex state government projects. FDGS will continue to monitor risks, issues, and opportunities at both a macro and micro level to provide integrated support across DHHS projects. FDGS engages in daily oversight activities to assist DHHS in regular and ongoing vendor management activities. Daily interactions with vendor stakeholders lead to early identification of issues, risks, and opportunities that could impact the success of their respective engagements.

**Risk and Issue Management**

Risk is the possibility of the occurrence of any event that can affect the success of a project. Issue is an event that has already happened and has impacted the project. The FDGS Team will collaborate with DHHS and other stakeholders across projects to identify any known risks and issues early during the Initiation Phase of the project. We understand early detection allows each project the greatest chance of maintaining the schedule, scope and cost. Risk and Issue identification and management are ongoing throughout a project lifecycle, from the initial planning phase to project closing activities. FDGS also escalates any new risks or issues as they are identified, along with the corresponding mitigation plans and resolution options through appropriate, project approved channels.

All large, complex technology integration projects are subject to risks and issues because there is an inherent combination of uncertainty and constraints. Not all project risks or issues can be completely eliminated. However, project risks and issues can and must be managed and/or mitigated. To go beyond this initial identification of risks and issues, however, the agencies must view risk and issue management as a facet of quality, using basic techniques of analysis and measurement to verify that risks and issues are properly identified, classified, and managed. FDGS will ensure each project's risk management processes include these key components:

- **Identify** – Before risks can be managed, they must be identified. Identification discovers risks before they become problems and adversely affect a project. FDGS has developed techniques for surfacing risks by the application of a disciplined and systematic process that encourages project personnel to raise concerns and issues for subsequent analysis.
- **Analyze** – Analysis is the conversion of risk data into risk decision-making information. Analysis provides the basis for the Project Managers to work on the "right" risks. This step includes determining probability of occurrence to determine which risks warrant the highest level of attention.
- **Plan** – Planning turns risk information into decisions and actions (both present and future). Planning involves developing actions to address individual risks, prioritizing risk actions, establishing an owner to address each risk, and creating an integrated risk management plan. The plan for a specific risk could take many forms. Examples might include:
  - Mitigate the impact of the risk by developing a contingency plan (along with an identified triggering event) should the risk occur.

- Avoid a risk by changing the design or the development process.
- Accept the risk and take no further action, thus accepting the consequences if the risk occurs.
- Study the risk further to acquire more information and better determine the characteristics of the risk to enable decision-making.
- **Track** – Tracking consists of monitoring the status of risks and taking action to minimize any potential risk impacts. Appropriate risk metrics are identified and monitored to enable the evaluation of the status of risks themselves and of risk mitigation plans.
- **Control** – Risk control or abatement corrects for deviations from planned risk actions. Once risk metrics and triggering events have been chosen, there is nothing unique about risk control. Rather, risk control melds into project management and relies on project management processes to control risk action plans, correct for variations from plans, respond to triggering events, and improve risk management processes.
- **Communicate** – Risk communication lies at the center of the model to emphasize both its pervasiveness and its criticality. Without effective communication, the risk management approach cannot be viable. While communication facilitates interaction among the elements of the model, there are higher-level communications to consider as well. To be analyzed and managed correctly, risks must be communicated to and between the appropriate organizational levels and entities. Because communication is pervasive, our approach is to address it as integral to every risk management activity and not as something performed outside of, and as a supplement to, other activities.

FDGS will also ensure each project's issue management processes include these same key components and can be applied to issues arising from realized risks as well as those that emerge unexpectedly.

In addition, FDGS reviews risks and issues monthly at a minimum, to ensure compliance with the approved Risk and Issue Management Plan and the key components outlined above. In order to facilitate reviews and to effectively track the status of risks and issues, FDGS will use the project's approved Risk and Issue Management Tool or Register. As needed, we will conduct formal risk meetings with leadership to follow the progress of the risk and its probability, as well as the status of any mitigation or contingency strategies that have been executed or resolved. We will provide ongoing recommendations to improve the effectiveness of the mitigation plans and discuss these at weekly and monthly status meetings.

### **Opportunity Management**

Our experience not only proves our ability to help government agencies succeed, but it also gives us a wealth of insight and knowledge to directly benefit the newest Medicaid Enterprise projects in this RFP. Our well-rounded experience with many different systems in complex, multi- agency projects enables us to bring best practices, lessons learned, and proven methodologies and tools to help verify

each project learns from and takes advantage of the experiences our prior work for DHHS as well as those from other states. One such tool FDGS employs are IV&V Observations. IV&V Observations can be positive or negative.

Positive findings can be further designated as opportunities or “best practices.” FDGS understands that in a successful project, opportunities can be realized in various ways. Our teams, through detailed analysis, participation, and deliverables review were able to present recommendations and alternatives which have been able to help our clients realize various opportunities such as:

- Increased cost savings
- Increased project efficiency
- Improved product quality
- Improved delivery

Negative findings can be further designated as risks, issues, critical incidents, or general observation. IV&V provides an independent and unbiased perspective on the progress of module development and the integrity and functionality of the system. This perspective includes identification of observations as the module is planned, developed, and deployed and recommendations to effectively manage these items as described below.

- A “Critical Incident” is a distinct event or situation that creates a significant risk of substantial or serious harm impacting either the solution functionality or the project timeline.
- An “Issue” is a problem that is about to occur or is currently occurring and presumed to have detrimental effects on the project.
- A “Risk” is any unexpected event that might adversely affect people, processes, technology, and resources involved in a project.
- A “General Observation” is any potential impediment to project success which needs to be effectively managed and isn’t classified as a Critical Incident, Issue or Risk.

While FDGS provides a recommendation to address each observation, the DHHS project team then decides the appropriate action needed for resolution such as:

- Open a new Issue, Risk or Action Item
- Associate with an existing Issue, Risk or Action Item
- Acknowledge the IV&V observation but take no action

IV&V tracks each observation and recommendation to encourage the project team to effectively manage or avoid potential impediments to project success. FDGS has been able to help our clients realize better project efficiency, on-time delivery and cost savings, utilizing this model.

*c) Deliverable review and reporting of deliverable findings (RFP Section V, B.2.c.ii)*

The FDGS deliverable review and assessment methodology is a formal, structured process. This methodology is applied to the review of all vendor deliverables and any applicable DHHS artifacts. FDGS provides an independent, unbiased, and comprehensive evaluation of the deliverables and services. Our methodology is based on the following tenets:

- **Gather Information and prepare for assessment** – FDGS validates deliverable scope, requests applicable historical documents, and identifies applicable requirements and industry standards.
- **Participate in the full deliverable lifecycle** – FDGS work with the Vendor and DHHS project staff throughout the entire deliverable development, review, and comment and approval process, beginning with development of the Deliverable Expectation Document (DED) and continuing through submission of a recommendation for deliverable acceptance.
- **Provide input and feedback on a flow basis** – This allows recommendations to be incorporated into subsequent versions of deliverables, which improves the quality of the final product and minimizes the time associated with final reviews. Our ability to do this depends on whether deliverable reviews only occur during scheduled review periods.
- **Use a structured tool to document findings** – This provides a consistent and consolidated format for both FDGS and State reviewers and includes a place for the Vendor to respond with justification if they do not agree with the disposition of a deficiency or corresponding recommendations.
- **Produce thorough Deliverable Review and Assessment Reports** – FDGS reviews and assesses the readability, comprehensiveness, accuracy, level of detail, and quality of all required deliverables. These reviews are measured against the standards and requirements delineated in the approved DED.
- **Produce final Deliverable Review and Assessment** – This will allow each project the time to review and incorporate IV&V findings and recommendations into the deliverable approval process.

The FDGS team has integrated the IV&V deliverable review process with existing DHHS review processes, reducing an addition burden on DHHS projects managers and allowing for recommendations to be incorporated within the existing deliverable development lifecycle. We look forward to working with DHHS to improve these processes further as your needs evolve.

IAQ-3	Explain past challenges and common issues along with the recommendations provided to address the issues.								
	<p>Response:</p> <p>Risks and Issues arise on every project and during any phase of the lifecycle. Large, complex IT projects are inherently susceptible to full or partial failure due to them being late, over budget, having poor quality, lacking needed worker functionally, and/or not having implementation backing at the highest decision making levels.</p> <p>Concerns include schedule delays, changes in project scope, depth of deliverables, or newly identified requirements. They can also exist with designs, documentation, test scripts, environment configuration, data set-up, or business processes.</p> <p>Many such challenges have the potential to adversely impact the project if they are not resolved properly and in a timely fashion. <b>Table 4</b> lists how the FDGS Team brings a strong tracking and resolution process that effectively addresses these challenges before they impact the project.</p> <p style="text-align: center;"><b>Table 4: Challenges previously identified and resolved by FDGS IV&amp;V teams</b></p> <table border="1"> <thead> <tr> <th>Challenge</th> <th>Recommended Approach</th> </tr> </thead> <tbody> <tr> <td>System documentation requirements need to meet CMS Certification Review requirements.</td> <td> <ul style="list-style-type: none"> <li>• Review latest guidance from CMS</li> <li>• Assess the system documentation provided against the certification requirements</li> <li>• Use the CMS Opportunity to Network and Engage (CMS zONE) to assess how other states have met the requirements</li> </ul> </td> </tr> <tr> <td>Overall system performance</td> <td> <ul style="list-style-type: none"> <li>• Create Service Level Objectives</li> <li>• Implement formal performance tracking procedures</li> <li>• Invest in additional data gathering</li> <li>• Conduct system load testing earlier</li> <li>• Apply capacity planning/analysis techniques</li> </ul> </td> </tr> <tr> <td>Conversion Issues may occur.</td> <td> <ul style="list-style-type: none"> <li>• Involve team with test focus within the implementation/conversion plan</li> <li>• Conduct conversion testing with legacy data not “dummy” data</li> </ul> </td> </tr> </tbody> </table>	Challenge	Recommended Approach	System documentation requirements need to meet CMS Certification Review requirements.	<ul style="list-style-type: none"> <li>• Review latest guidance from CMS</li> <li>• Assess the system documentation provided against the certification requirements</li> <li>• Use the CMS Opportunity to Network and Engage (CMS zONE) to assess how other states have met the requirements</li> </ul>	Overall system performance	<ul style="list-style-type: none"> <li>• Create Service Level Objectives</li> <li>• Implement formal performance tracking procedures</li> <li>• Invest in additional data gathering</li> <li>• Conduct system load testing earlier</li> <li>• Apply capacity planning/analysis techniques</li> </ul>	Conversion Issues may occur.	<ul style="list-style-type: none"> <li>• Involve team with test focus within the implementation/conversion plan</li> <li>• Conduct conversion testing with legacy data not “dummy” data</li> </ul>
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		<ul style="list-style-type: none"> <li>• Provide early requirements for system migration</li> <li>• Include lessons learned involving conversions from legacy systems</li> </ul>	
	Quality of the delivered product	<ul style="list-style-type: none"> <li>• Involve the team in defining standards in advance</li> <li>• Confirm that standards are formally documented, easily accessible, and easily understandable</li> <li>• Provide early feedback on adherence to standards</li> <li>• Include adherence to standards as an item in walk-throughs</li> <li>• Conduct code reviews</li> <li>• Develop comprehensive test plan</li> <li>• Review results of unit and system testing</li> <li>• Review results of UAT</li> </ul>	
	Team assembled working together for the first time and has varying levels of development methodology understanding.	<ul style="list-style-type: none"> <li>• Provide appropriate training to fill knowledge gaps</li> <li>• Once team is established, use retrospect and storming early with team to make needs known.</li> </ul>	
	Ability of developers to complete system development within specified timeframes	<ul style="list-style-type: none"> <li>• Analyze sprint and/or release capacity</li> <li>• Identify changes in schedule</li> <li>• Assess backlog and determine Project is falling behind schedule</li> <li>• Discuss plan/approach to working through backlog</li> </ul>	

	<p>The FDGS Team will continue to follow the progress of the risk or issue and its probability, as well as the status of any mitigation/contingency strategies that have been executed or the issue has been resolved. We provide recommendations to improve the effectiveness of the mitigation plans and discuss these at the Weekly and Monthly Status Meetings. Our risk management approach centers around identifying and dealing with potential threats to the overall project. On a proactive basis, the FDGS Team helps DHHS formulate mitigation strategies to alleviate the impact of those threats.</p>
IAQ-4	<p>Provide examples of opportunities or positive risks reporting in past projects where the customer was able to capitalize.</p> <p>Response:</p> <p>We have worked closely with our clients to confirm risks are identified and managed in all phases of the project. We have also identified opportunities to help the client realize cost savings and benefits in other areas. Some examples of how opportunities or positive risks in past projects have allowed FDGS clients to capitalize are:</p> <ul style="list-style-type: none"> <li>• <b>Fair Hearing Information System (FHIS) Project Kick-Off</b> – FDGS identified an opportunity where the processes and documentation types used for the FHIS project kick-off could be leveraged by the NY IES project for future project/workstream kick-off meetings. The FHIS project kickoff presentations provided a good overview of goals and objective and a forum to present and discuss the System Development Life Cycle (SDLC) processes and set stakeholder expectations. It also provided participants with a clear understanding of the project along with descriptions and examples of functional requirements and user acceptance criteria.</li> <li>• <b>Nebraska Data Management and Analytics: Research Request</b> – FDGS identified a note included in the vendors cost proposal which indicated all required hardware, software, hosting and support to maintain the required environments was included in the price quoted. This provided the state an opportunity to avoid paying separate charges for those costs.</li> <li>• <b>Nebraska Data Management and Analytics: Deliverable Review</b> – FDGS provided templates and feedback to the state regarding the User Acceptance Testing (UAT) Plan. Once completed and proved, FDGS additionally identified an opportunity where the state could leverage the UAT Plan and lessons learned during DDI to develop a UAT Plan for operations.</li> <li>• <b>Nebraska Data Management and Analytics: Risk &amp; Issue Management</b> – FDGS observed some Risks, Action Items, Issues &amp; Decisions (RAID) items were potentially out of date and/or no longer relevant given there was a new approach to implementation and a new project timeline. This presented an opportunity where the project team conduct a review of the RAID log and closed several items.</li> </ul>



IAQ-5	<p>Provide examples of the bidder's deliverable review findings and issue assessments utilized on previous projects.</p> <p>Response:</p> <p>As part of our methodology, we complete comprehensive reviews and assessments for our clients. Some examples of past project reviews and assessments have been included in <b>Appendix 2</b>:</p> <ul style="list-style-type: none"><li>• <b>Indiana Eligibility Determination Services System (IEDSS) Project Schedule Review</b> - FDGS conducted an assessment of the vendor's project schedule. The report includes approach to analysis and documentation of all deficiencies. Included are recommendations provided on how to change the deliverables to correct the deficiencies.</li><li>• <b>Nebraska Data Management and Analytics IVV System and Business Operations Readiness Review (SaBORR) Go Live Report</b> – is the result of assessing the status of selected readiness tasks, identifying outstanding items from the Design, Development and Implementation (DDI) phase and evaluate the risk of proceeding with implementation (Go/No-Go decision).</li><li>• <b>Nebraska Data Management and Analytics Post Go-Live Stakeholder Interviews</b> – FDGS conducted interviews with project stakeholders to solicit feedback about several areas including:<ul style="list-style-type: none"><li>○ Go-live implementation</li><li>○ First production release</li><li>○ HIA governance committees</li><li>○ General concerns</li><li>○ Potential improvements</li></ul></li></ul> <p>The IV&amp;V team then provided recommendations to address the trends or concerns identified.</p>
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## IV&V Status Meetings and Reporting

Business Requirements							
Req #	Requirement						
IVV-1	Address the bidder's approach to meeting each requirement in a table that contains the requirement and the bidder's approach to meeting the requirement.						
	<p>Response:</p> <p><b>Table 5</b> below details our approach to meeting each requirement for IV&amp;V Status Meetings and Reporting.</p> <p style="text-align: center;"><b>Table 5: IV&amp;V Status Meetings and Reporting Requirements</b></p> <table border="1"> <thead> <tr> <th>#</th> <th>Requirement</th> <th>FDGS Approach</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td> <p><i>Must prepare and submit a weekly status report including activities for the previous week and upcoming activities for the next two weeks that includes the following information:</i></p> <ul style="list-style-type: none"> <li>• <i>Project meeting participation including an assessment of completed meetings and any recommendations for improvement.</i></li> <li>• <i>Planned project meetings for IV&amp;V participation.</i></li> <li>• <i>Project deliverable review activities.</i></li> <li>• <i>Risks, issues, and opportunities which are new or have been updated since the previous submission.</i></li> <li>• <i>Updated IV&amp;V schedule</i></li> <li>• <i>Critical incidents summarizing the incident, impact to the project, and a proposed action plan to address the incident.</i></li> <li>• <i>Other IV&amp;V activities as defined by DHHS.</i></li> </ul> </td> <td> <p>FDGS believes in keeping its customers well informed of IV&amp;V activities, and will continue to collaborate with DHHS to customize the structure and format requirements for weekly project status reports. FDGS recommends that, at a minimum, a weekly status report include the following:</p> <ul style="list-style-type: none"> <li>• Current Week Activities, including: <ul style="list-style-type: none"> <li>○ Project meeting participation</li> <li>○ Project deliverable review activities</li> <li>○ New IV&amp;V Observations (i.e. risks, issues, and opportunities including a recommendation to address the item)</li> <li>○ Updates to the IV&amp;V schedule</li> <li>○ Critical incidents summary with high level impact to the project, and proposed action plan to address the incident. For any Critical Incident, the FDGS team produces a separate report detailing the estimated impact to the project and a proposed action plan to address the incident; the report will be maintained until closure of the incident.</li> <li>○ Other opportunities for improvement</li> <li>○ Other IV&amp;V activities</li> </ul> </li> <li>• Upcoming Activities, including:</li> </ul> </td> </tr> </tbody> </table>		#	Requirement	FDGS Approach	1.	<p><i>Must prepare and submit a weekly status report including activities for the previous week and upcoming activities for the next two weeks that includes the following information:</i></p> <ul style="list-style-type: none"> <li>• <i>Project meeting participation including an assessment of completed meetings and any recommendations for improvement.</i></li> <li>• <i>Planned project meetings for IV&amp;V participation.</i></li> <li>• <i>Project deliverable review activities.</i></li> <li>• <i>Risks, issues, and opportunities which are new or have been updated since the previous submission.</i></li> <li>• <i>Updated IV&amp;V schedule</i></li> <li>• <i>Critical incidents summarizing the incident, impact to the project, and a proposed action plan to address the incident.</i></li> <li>• <i>Other IV&amp;V activities as defined by DHHS.</i></li> </ul>
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		<ul style="list-style-type: none"> <li>○ Planned project meetings for IV&amp;V participation</li> <li>○ Planned project deliverable review activities</li> <li>○ Other planned IV&amp;V activities</li> </ul>
2.	<i>Must submit each weekly status report by the DHHS established day and time. DHHS will allow a minimum of one business day from the end of the weekly reporting period for submission.</i>	FDGS understands and agrees to submit each weekly status report by the agreed upon day and time.
3.	<i>Must facilitate a weekly IV&amp;V status meeting with DHHS identified project leadership.</i>	<p>Weekly status meetings provide a forum for discussing the progress of the project. The FDGS Team validates that project status meetings are scheduled on a weekly basis with project sponsors, stakeholders and any other state or federal partners as required. We verify that status meetings cover the following items:</p> <ul style="list-style-type: none"> <li>• Overall and phase-specific project status</li> <li>• High priority risks and issues identified</li> <li>• Project Work Plan tasks that are upcoming and those that are behind schedule</li> <li>• Status and quality of project deliverables</li> </ul>
4.	<p><i>Must prepare and submit a maximum of five business days after month end a monthly IV&amp;V report that includes the following:</i></p> <ul style="list-style-type: none"> <li>• <i>Summary of IV&amp;V activities for the past month.</i></li> <li>• <i>Summary of IV&amp;V activities planned for the next month.</i></li> <li>• <i>IV&amp;V assessment of the overall project, schedule, budget, scope, and quality status in comparison to the project teams' reported status clearly identifying any differences along with the reasoning.</i></li> </ul>	<p>The FDGS Team will continue to produce an IV&amp;V Monthly Status Report, which includes a summary of IV&amp;V activities and assessments (deliverable and otherwise) completed during the reporting period in addition to any problems or issues that require management attention.</p> <p>The FDGS Team works with DHHS to validate and enhance the expectations, format, and communication channels for the status report. The status report includes an ongoing project scorecard or dashboard with key metrics to be jointly determined with DHHS. This indicator advises whether there are potential problems with scope, resources, budget or schedule or in the feasibility of achieving a project milestone or deliverable across all of the project components. It also provides recommendations for solutions and required follow-up actions.</p>

	<ul style="list-style-type: none"> <li>• <i>Additions or updates to executive level risks, issues, and opportunities along with further recommended actions.</i></li> <li>• <i>Summary assessment of project deliverables and work products reviewed in the last reporting period.</i></li> <li>• <i>Other IV&amp;V activities as defined by DHHS.</i></li> </ul>	Each IV&V Project Status Report includes a status of all current IV&V Observations. The Observations Log is the method by which project concerns and opportunities are documented and monitored through resolution at the summary level. This log provides a comprehensive history of concerns and opportunities that the project leadership can use for decision making purposes in status meetings, status reporting and executive meetings, briefings and/or reports.
5.	<i>Must facilitate a monthly IV&amp;V report meeting with DHHS identified leadership.</i>	FDGS facilitates and meets with DHHS management, identified stakeholders, and leadership to review content of the IV&V report related to both management and technical aspects of the projects.
6.	<i>Must create the agenda and take the minutes for any IV&amp;V meetings.</i>	FDGS understands and agrees to create the agenda and take the minutes for any scheduled IV&V meeting. The meeting agenda and subsequent minutes will be distributed to the participants and other stakeholders after agreement by the DHHS Project Manager. Historical meeting agendas and minutes will be stored in the appropriate repository.

IVV-2	Describe the bidder's process for capturing detailed status on project activities (i.e., scheduled tasks, risks, issues, staffing, communications, etc.) at a detailed level and reporting the information as needed based on the reporting audience.
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Response:

FDGS applied our years of experience to build our own IV&V tools and methodology, which is built on industry standards and CMS guidance. The scope of each project dictates the need for formal periodic status reporting to confirm that all project team members are kept informed of overall progress and direction of the project efforts. Using our proven methodology and tools, FDGS tailors each report type to the appropriate audience.

The observation log is the method by which project concerns and opportunities are documented and monitored through resolution at the summary level. This log provides a comprehensive history of concerns and opportunities that project leadership can use for decision making purposes in status meetings, status reporting and executive meetings, briefings and/or reports. The observation process is detailed in **Section 2.1.2 – Independent Assessment and Quality Assurance**. Each IV&V Monthly Status Report includes a status of all current IV&V Observations.

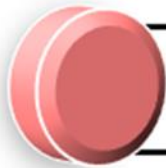
FDGS understands that schedule management encompasses the monitoring of project accomplishments against the project schedule, the scheduling of future and current tasks, and the evaluation of the type and level of resources assigned to project tasks. The primary tool for schedule management is the Master Project Work Plan. This may be one file for a project, or a Master Schedule capable of relating many subordinate schedules. The FDGS Team regularly analyzes the project schedule and report on the results in the status report. The following elements which may impact the project schedule may be reported:

- Number of tasks on the critical path that have started on time
- Number of tasks on the critical path that did not start on time
- Number of tasks on the critical path that have completed on time
- Number of tasks on the critical path that were not completed on time
- For tasks on the critical path that did not start or complete on time, number of days past the scheduled start or completion date
- Actual level of effort (work hours) compared to planned level of effort for tasks
- Actual resources/positions assigned to tasks compared to planned resources
- Any new tasks or changes in tasks that could affect the critical path
- Changes in task start dates or finish dates

Where the schedule allows, the FDGS team analyzes each project before inception to determine what if any other tools may provide our IV&V team and/or DHHS value. Examples of these additional tools are:

	<ul style="list-style-type: none"> <li>• <b>Health and Human Services Business Architecture (HHSBA)</b> – The FDGS-developed HHSBA product provides clients with a MITA-based tool to verify requirements, confirm compliance and minimize overall risk to the agency. The HHSBA is aligned with the CMS MITA 3.0 framework but is flexible enough for enterprise-wide efforts or for MMIS modules. In addition, it assists clients with making strategic business decisions and identifying opportunities for scalability in future system enhancements for the Medicaid Enterprise.</li> <li>• <b>Checklist Evidence Review Tracker (CERT)</b> – The FDGS’ MECT/MECL Evidence Tracker is a team collaboration application that facilitates the efficient completion of MECL Checklist projects. Our proprietary tool provides an enhanced set of operational components capable of streamlining work and communication between the client and the FDGS IV&amp;V Team as you prepare for milestone reviews. As checklist items are completed, the Checklist Tracker “job aid” alerts the IV&amp;V Team that a checklist item is ready for review. FDGS provides these additional MECT job aids, which are proven to support greater efficiency, collaboration and transparency to the complex checklists CMS requires. Our CERT tool is currently being evaluated to accommodate the latest OBC and SMC guidance and processes from CMS.</li> </ul>
IVV-3	<p>Describe the bidder’s methods for determining and reporting overall project, schedule, budget, scope and quality status (i.e. determining whether a project is red, yellow, or green, and providing defined criteria as to what constitutes each type of status)</p> <p>Response:</p> <p>As part of monitoring and measuring progress of the project, the FDGS Team produces a regular status report, including a summary of work activities and major accomplishments achieved during the reporting period in addition to any problems or issues that require management attention. The FDGS Team will work with DHHS to modify the currently produced status report to confirm that it provides the content expected in the correct format and clarifies communication channels for the status reports.</p> <p>The current status report includes an ongoing project summary and a scorecard or dashboard. Typically utilization of a “Red, Yellow, Green” scheme to indicate ‘Fatal, Problematic, and Adequate’, respectively; advises whether there are potential problems with scope, resources, budget or schedule or in the feasibility of achieving a project milestone or deliverable. It also provides recommendations for solutions and required follow-up actions.</p> <p>Definitions of the status values used in determining overall project health in the current Nebraska DMA IV&amp;V Monthly Status Report are included below in <b>Figure 3</b>.</p>





One or more critical incidents are noted and necessitate escalation to Executive Management or Executive Steering Committee.



All scope, budget, schedule or known project risks/issues are manageable; however one or more risks/issues may necessitate escalation to Executive Management or Executive Steering Committee for intervention and resolution.



All scope, budget, schedule or known project risks/issues are manageable by the project team. Risks are mitigated & issues are resolved within an appropriate period of time.

Figure 3: Stoplight values used for status reports

IVV-4

Provide the bidder's status report templates, including instructions and procedures for completing the templates.

Response:

FDGS believes in keeping the project leadership and stakeholders well-informed of project activities. Project status reporting will continue weekly and monthly to confirm that accurate information is provided on a timely basis. Status reports provide updates on project progress.

### **Weekly Status Reporting**

A Weekly Status Report includes the following:

- IV&V Observations identified during the reporting period including recommendations to address each observation
- Critical Incidents identified during the reporting period including recommendations to address each incident
- Activities completed during the reporting period including:
  - Meeting participation
  - Project deliverables reviewed
  - Other IV&V activities
- Activities to be completed during the next reporting period including:
  - Meeting participation
  - Project deliverables reviews
  - Other IV&V activities
- Updates to the IV&V Schedule
- Other opportunities for improvement

A sample Weekly Project Status Report template is provided in **Figure 4** below. FDGS will continue to work with DHHS to tailor the weekly status reports with unique reporting requirements for each implementation project in the Scope of Work.

**IV&V Weekly Status Report**



**Nebraska DHHS IV&V Services  
Weekly Status Report, Week Ending 04/29/2022**

Program Sponsor:		
Program Director:		
FD Delivery Director		
FD Project Manager		
Report Date	04/25/2022-04/29/2022	
Period Ending	04/29/2022	
<b>Overall Project Status</b>	<b>Yellow</b>	<b>Comment on assignment of current status for Red/Yellow/Green...</b>

**Status:**

Findings (Risks/Issues)	1)
Critical Incidents	1)
Opportunities	1)
IV&V Schedule Updates	•
IV&V Completed Activities	Participated in the following activities: Participated in the following meetings and work sessions: Conducted the following interviews: •
IV&V Upcoming Activities	•
Corrective Actions/ Mitigations	•

Figure 4: Weekly Project Status Report Template

## Monthly Status Reporting

As part of today's monitoring and measuring progress of the Data Management and Analytics (DMA) project, the FDGS Team produces a Monthly Status Report, which includes a summary of the current state of project effort.

The Monthly Status Report encompasses a broad view of the Nebraska DMA project and also includes specific summary data relative to the tasks performed. The Monthly Status Report includes the following information:

- Project Name and Information
- Executive Summary
- Task Summary
- IV&V project work product and deliverable assessments completed within the month
- Critical incident reports
- Requirements traceability matrix updates
- CMS and MITA compliance activities
- IV&V work plan updates
- Process and Technical Gap Management
- Risk Management

As the starting point for defining the Monthly IV&V Report, in order to outline the information above, FDGS uses the following structure:

- 1.0 Executive Summary
  - Report Summary
  - Engagement Information
  - Project Dashboard
- 2.0 Key Focus Areas
  - Project Integrity
  - Solution Integrity
  - Certification
  - Other

3.0 New Observations with Recommendations

4.0 Appendix

- IV&V Observations
- IV&V Activities
- Other

Each Monthly Status Report includes a status of all current project observations. The Observation Log is the method by which project issues are documented, communicated, and monitored through resolution at the summary level. This log provides a synopsis and history of issues that the project leadership can use for decision making purposes in status meetings, status reporting and executive meetings, briefings and/or reports.

A sample Monthly Project Status Report template is provided in **Figure 5** below. FDGS will continue to work with DHHS to tailor the monthly status reports with unique reporting requirements across all of the implementation projects in the Scope of Work.

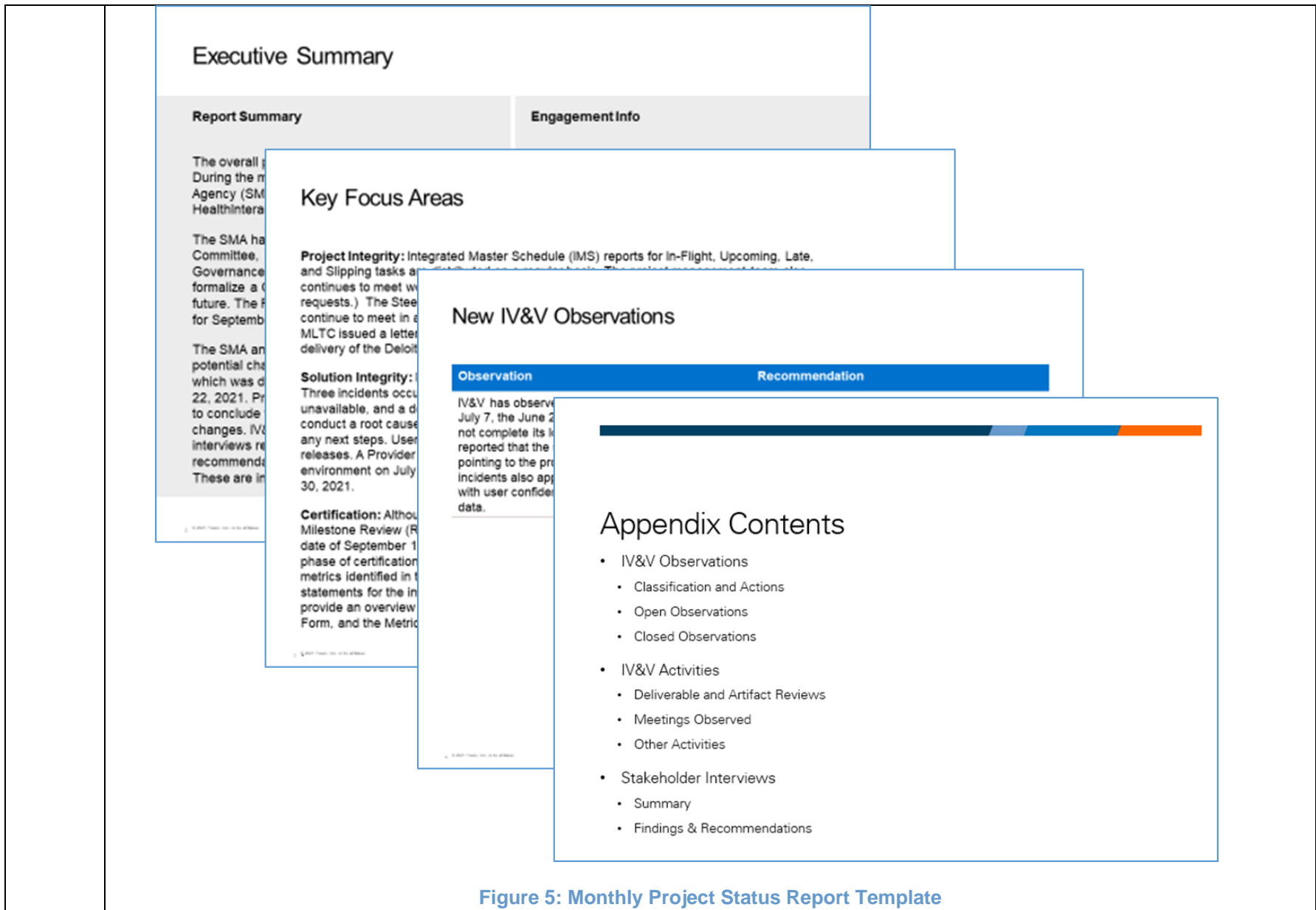


Figure 5: Monthly Project Status Report Template

IVV-5	Provide examples of similar weekly status reports used in previous projects.
	<p>Response:</p> <p>A Weekly Status Report provides an opportunity for to get support and decisions and address any concerns with the project sponsor. We work closely with our clients to tailor our weekly status reports to meet the specific needs of our clients and their projects. Below is a brief description of weekly reports, from past projects, which are included in <b>Appendix 3</b>:</p> <ul style="list-style-type: none"> <li>• <b>IV&amp;V Weekly Status Report – State of Nebraska</b> – The weekly status report tailored for Nebraska includes a section for each active IV&amp;V project in one comprehensive report. The report lists new critical incidents and observations identified including recommendations to resolve. The report also lists deliverables reviewed, project meetings observed and other activities which occurred during the reporting period as well as expected upcoming activities.</li> <li>• <b>IV&amp;V Weekly Status Report – State of New York Integrated Eligibility System (IES)</b> – This report was tailored for the project to provide a snapshot of weekly activities completed, planned activities for the upcoming week and new issues and risks for the current period to be discussed and included to the risk register. The report is presented in customer required format for presentation at the project weekly status meetings for stakeholders and sponsors.</li> </ul>
IVV-6	Provide examples of the IV&V's previous monthly status reports from other projects.

Response:

FDGS understands that a comprehensive monthly status report serves an important role in keeping project stakeholders, sponsors and staff updated and providing an overview of project progression from month to month. Below is a brief description of past project IV&V Monthly Status reports with examples of the actual report included in **Appendix 4**:

- **IV&V Monthly Status Report – State of Nebraska Data Management and Analytics (DMA)** – The Monthly Report tailored for Nebraska includes overall project health, summaries of key focus areas and new findings with recommendations to resolve. The report is presented in format easily consumable by executives and other stakeholders alike. The report also includes information on deliverables reviewed, project meetings observed and other activities which occurred during the reporting period. The report also includes a breakdown of all open observations and reflected progress that has been made towards each to date.
- **IV&V Monthly Status and Recommendations Report – State of New York Integrated Eligibility System (IES)** – The Monthly Status and Recommendations Report tailored for New York State IES is a detailed report providing, background status and overall health of the project with recommendation to keeps the project on track and on schedule. The report includes detailed information of deliverables reviewed by work stream, status and alternatives. Our IV&V team in New York also managed multiple, concurrent implementation projects similar to this RFP’s scope of work.



**CMS and MITA Compliance**

<b>Business Requirements</b>	
<b>Req #</b>	<b>Requirement</b>
CMC-1	Address the bidder's approach to meeting each requirement in a table that contains the requirement and the contractor's approach to meeting the requirement.

Response:

**Table 6** below details our approach to meeting each requirement for CMS and MITA Compliance.

**Table 6: CMS and MITA Compliance Requirements**

#	Requirement	FDGS Approach
1.	<p><i>Must provide IV&amp;V services for CMS in support of the MECL in accordance with guidance released in the MECT and guidance from CMS regarding Outcomes-Based Certification (OBC).</i></p>	<p>CMS sets forth three key activity sets in the MECT: conduct technical design reviews, perform project management reviews and prepare and submit certification progress reports to CMS. With regards to the technical design reviews, these artifacts will include Detail System Designs, Security &amp; Privacy (MARS-E), Requirements Tractability, and User Acceptance (which must include Performance Testing). In previous IV&amp;V engagements, FDGS has performed these technical design reviews and prepared the necessary artifacts which contained our findings and recommendations that were presented to CMS.</p> <p>In completing these tasks, FDGS recognizes the importance of maintaining its independence. Independence is best characterized as being both technical independence (reliance upon subject matter expertise on the team and within FDGS) and managerial independence (the team is internally directed in consultation with CMS but not directed by the client, vendor or stakeholders).</p> <p>FDGS recognizes with the release of the updated MECT, CMS expectations and guidance have changed. The FDGS Team will engage CMS and support DHHS in the development of a plan to get each project in scope for this RFP through the Operational and Certification Milestone reviews. The most important artifacts that need to be addressed are the Certification Progress Reports and the underlying checklists that are key components of the reports.</p> <p>For OBC and, if or when MLTC adopts SMC for other modules, FDGS will support the transition from MECT by providing suggested mapping of current work, gap analysis, and suggested outcomes to address gaps. We will also support oversight of the ongoing Key Performance Indicator (KPI) reporting.</p> <p>For OBC and SMC, FDGS will contribute to the development of new outcomes, as needed, and provide recommendations on adapting the</p>

			<p>outcomes to the Nebraska environment by applying our experience with OBC and SMC pilots, as well as lessons learned from the industry. This will facilitate an easier adoption of new guidance, identify early potential risk areas, and mitigate issues stemming from initial misalignment that can start a project off on the wrong foot.</p> <p>With a secure footing in OBC and SMC, we will support MLTC throughout the project lifecycle. OBC and SMC create more opportunities for hands-on engagement with a wider variety of project tasks. As your IV&amp;V vendor, FDGS will be able to provide structured document reviews with more direct feedback on areas of interest, as well as collaborating with stakeholders to improve these areas.</p> <p>Consistent with our approach to milestone reviews in MECT, under OBC and SMC, FDGS will review certification criteria evidence documents. With the added flexibility for IV&amp;V, we can work with vendors more directly to improve these documents, as needed. We will also support project success with reviews of project documentation, such as management plans and schedules.</p> <p>In preparing for milestone reviews, we will serve as an intermediate level of quality checks after a vendor believes they are complete with tasks, like preparing evidence documents or demonstrations, and before they present their documentation to you and CMS. We will verify the quality of these representations to maximize the use of your time and avoid stakeholders presenting subpar information to you and CMS.</p> <p>As IV&amp;V, we will use the significant insight into the project we gain from serving as IV&amp;V to enhance all stakeholders understanding of the project at critical junctures. During milestone reviews, we will attend and participate, as directed, including generally tracking and resolving stakeholder questions. While the bulk of the presentation will come from vendors and MLTC, we will answer CMS' questions of IV&amp;V specifically and, where directed, speak to IV&amp;V findings or add clarifications based on IV&amp;V reviews.</p> <p>We understand that prompt resolution of outstanding CMS questions from the milestone review expedites CMS approval. Following milestone reviews, we will follow up and seek to resolve these questions.</p>
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			<p>While OBC and SMC will reduce the number of milestone reviews, these processes add ongoing KPI reporting after go live. CMS expects KPI submissions on a quarterly basis starting at go live and running through the duration of operations. We have also observed that, while CMS does not have specific thresholds set for KPI's nationally, CMS looks to set baselines for individual states and to have explanations for apparent outlying KPI results.</p> <p>We will support the development, production, and review of these KPI's. Before go live, we will confirm the definition of the KPI's and coordinate with stakeholders to support a consistent understanding of these definitions. We will validate that a feasible and effective plan and process is in place for data to be available in a state-designated database and processed in a way to support the KPI's. Starting at go live, we will validate the data are collected, transmitted, and stored according to the plan. When the quarterly calculations are completed, we will validate the calculations and analyze for outliers. Based on this analysis, we will seek out explanations in order to be prepared to help you explain any outliers to CMS. This will help you make a more clear and convincing case to CMS for certification and expedite the granting of enhanced funding during the Certification Review.</p>
	2.	<p><i>Must periodically, as needed, produce exception based Certification Progress Reports in the format required by CMS. The report must utilize the MECT checklists and MMIS Critical Success Factors (CSFs) and must objectively illustrate the strengths and weaknesses of the project and provide recommendations for correcting any identified weakness.</i></p>	<p>The Medicaid Enterprise Certification Toolkit instructs the FDGS Team to produce quarterly Progress Reports and Progress Reports before each milestone. If these coincide, a decision between MLTC, CMS, and FDGS will determine whether FDGS produces a periodic and/or a milestone Progress Report.</p> <p>The FDGS Team will utilize the MECT Certification Progress Report template supplied by CMS. The FDGS Team will make use of the appropriate checklists and criteria based on the solution being addressed. We will validate the checklist and criteria selection with MLTC and CMS at the project initiation and before each milestone review to help maintain expectation alignment.</p> <p>A key checklist effort is the confirmation that the critical success factors are being address/satisfied with the solution. The expected sequence of events will be for the state to populate the evidence section of the checklists and</p>

			<p>then provide the checklists to the FDGS IV&amp;V Team. The FDGS Team will complete the reviewer section of the checklist and then send it directly to CMS and the state simultaneously, per MECT guidance. In addition to the checklist, the CPR will contain sections pertaining to overall engagement progress, remedial activities completed since the last CPR and an updated risk/issue registry.</p> <p>As this format changes under OBC and SMC, we will work with MLTC and CMS to define and produce appropriate reporting to support progress reporting objectives. A key element of reporting under OBC, which would likely carry forward in SMC, is the Intake Form. The Intake Form has a similar structure to the MECT checklists. We will review stakeholder entries in the Intake Form before milestone reviews and add IV&amp;V input, as needed.</p> <p>We understand that you may have additional reporting needs, even as CMS has scaled back some of their reporting requirements. We will work with you to define and implement this additional reporting. We understand that any reporting, either on the Intake Form or otherwise defined, must be written objectively using evidence-based findings and references to best practices and industry standards. These writing practices support the objectives of clarity and concision that make actionable comments easily acted on.</p>
	3.	<i>Must submit the monthly IV&amp;V report to CMS.</i>	<p>In order for the relationship between CMS and FDGS to be of value, our FDGS IV&amp;V Team's reports to CMS must be independent and objective. FDGS expects to provide ongoing reports directly to CMS throughout the engagement, which should align with information familiar to the state. Once submitted, the report is only then shared with the state agency.</p> <p>These reports fall into two groups, Monthly Status Reports and Certification Progress Reports. The FDGS Team will be submitting monthly status reports electronically to CMS. The monthly report will provide an executive summary of the previous month's events, important milestones achieved or missed (based on published project schedule), risk registry summary and a summary of deliverables. Lastly, the report will apprise CMS of upcoming events such as milestone reviews and efforts underway to provide the necessary documentation to CMS sufficiently in advance of the event.</p>

		We provide a samples of IV&V Monthly Status Reports from Nebraska and New York in <b>Appendix 4</b> .
4.	<i>Must participate in meetings with CMS as directed by CMS or DHHS.</i>	<p>Collaboration is the cornerstone of our IV&amp;V efforts. The FDGS Team recognizes the importance of working within a collaborative environment. This extends to participation in any meeting in which CMS is present.</p> <p>The FDGS Team will present updates during standing meetings and will also prepare additional information and present this to CMS and all meeting attendees as necessary. It is our experience as an experienced IV&amp;V vendor that it is not only important to attend CMS meetings and present, as directed, but to view the other attendees as co-collaborators.</p> <p>We succeed as a group, not as individuals. The FDGS Team will maintain our current positive professional cooperative relationships with DHHS, the Project Management Office (PMO), implementation contractors and subcontractors.</p>
5.	<i>As directed by DHHS, must coordinate and participate in the planning, preparation, and performance of CMS project reviews (readiness reviews, certification reviews, etc.).</i>	<p>FDGS will work with DHHS to develop and execute the necessary certification activities for each of the named and proposed projects. We have supported many CMS reviews under MECT and OBC and are prepared to continue supporting milestone reviews under SMC such as the recently completed Nebraska DMA Final Certification Review.</p> <p>The FDGS Team will work with DHHS, the PMO and the appropriate implementation contractor to incorporate Milestone Reviews into the master project plan. The FDGS Team will validate that the appropriate milestone reviews are contained within the master project plan with subordinate activities identified and properly resourced. Each project plan will align with the system development life cycle for the related project.</p> <p>CMS reviews are complex tasks that, when run well, appear easy. The appearance of ease depends on thorough preparation. We have learned to prepare thoroughly through repeated efforts. Success starts with a plan.</p> <p>For CMS reviews, we work with DHHS, including the State Certification Lead and the Project PMO, to identify specific roles and responsibilities for each task in the plan, including document preparation and review, demonstration and presentation preparation and reviews, dry runs with all of the</p>

			<p>stakeholders, and question and answer follow up tracking during and after the milestone reviews. We will execute our responsibilities defined in the plan, validate that others do theirs and provide feedback if discrepancies arise.</p>
	6.	<p><i>In preparation for certification milestone reviews, must evaluate documents and evidence along with any working modules / code applicable to that particular review, and complete the reviewer comments portion of the relevant Medicaid Enterprise Certification Checklists. The completed checklists are appended to the Certification Progress Report. Progress report must be delivered with the necessary lead time as required by CMS prior to the scheduled MMIS certification milestone review. The certification progress reports must be provided to CMS at the same time they are presented to the state</i></p>	<p>The Medicaid Enterprise Certification Toolkit provides 15 checklists to support the certification process, 10 aligned to a specific Medicaid business areas and five (5) general checklists. Taken together, these checklists describe the business objectives for a Medicaid Enterprise System. As an early IV&amp;V activity, the FDGS Team will work with DHHS, the PMO and the vendor(s) to review the certification checklists and tailor them, as necessary, to reflect the specific business objectives of the projects, defining applicable criteria from each checklist for the module or component under review. For example, some objectives may not apply to the project, while DHHS may also add additional business objectives unique to Nebraska.</p> <p>After we have tailored checklists to meet the unique requirements of the project, we will review these modifications with CMS to gain its agreement. It is critically important to certification that DHHS, its implementation contractor and CMS have a clear, consistent and shared view of the business objectives and certification criteria for each element of the project.</p> <p>Once the checklists are in place, we will monitor the implementation contractors' compliance with the checklists through deliverable reviews and periodic checklist reviews. Our approach is to integrate checklist compliance as part of our overall IV&amp;V process.</p> <p>In preparation for each milestone review, the state will populate the evidence section of the checklist with a summary of the solution's approach to each criterion and produce packets with supporting evidence for each of the applicable criteria. The state will submit the checklists and evidence packets to IV&amp;V for review using an agreed-upon repository 4-6 weeks before a milestone review.</p> <p>FDGS has an evidence review and tracking tool that the state may opt to use. After submitting the checklists and evidence, FDGS will review the evidence, reply with any questions for clarification, and, after resolution, populate the reviewer section of the checklists. After completing the reviewer</p>

			<p>section of the checklists, FDGS will also complete the rest of the Progress Report sections. FDGS will then combine the checklists and Progress Report and submit these to CMS and the state simultaneously at least 2 weeks before the milestone review, per MECT guidance.</p> <p>Based on our experience, longer review cycles before the hard deadlines help facilitate more dialogue and clarifications, which can reduce the volume of findings, so we encourage and will work to support this kind of collaboration.</p> <p>OBC and SMC introduce changes to the structure of certification that could change the minimum requirements for states, but we can still support similar IV&amp;V activities under OBC and SMC to those we did under MECT, as desired. Under OBC and SMC, CMS will not require an IV&amp;V review of evidence and the Intake Form. However, the Intake Form contains a list of criteria, similar to the checklist, for which evidence documents must be created. While CMS no longer requires IV&amp;V document reviews, at your discretion, we can still review evidence documents for OBC and SMC certification criteria and provide the same kind of feedback we did under MECT. Even without required reporting to CMS, we have seen that an initial review by IV&amp;V can catch many issues that would not require state expertise to resolve, thereby maximizing the impact of state resources.</p>
	7.	<i>Must periodically submit project progress data to the CMS dashboard on a schedule required by CMS.</i>	<p>Dashboards provide leadership and key stakeholders with a succinct picture of project status and health. They educate the reader as to a project's progress in achieving specific, measureable project objectives. FDGS has developed and maintains dashboards both for internal use and for our external engagements. FDGS teams have regularly supplied information for presentation on dashboards.</p> <p>Once CMS provides the FDGS Team with the necessary reporting metrics, submission format, frequency and location, the FDGS Team will begin providing/uploading the information.</p>
	8.	<i>Must assess impacts of projects to MITA business, informational, and technical architecture maturity.</i>	<p>As part of the initiation and planning phase of the project, the FDGS Team reviews five MITA-related documents, including the State Self-Assessment (SS-A). The team's findings and recommendations will be included in appropriate reporting.</p>



			<p>The MECT checklists tie in to the MITA framework. Applicability of criteria sourced from MITA will be based on targeted maturity levels. Specific decisions on criteria applicability will be made during the joint applicability assessment at project initiation and validated before each milestone. Applicable criteria will guide our assessment of MITA impacts.</p> <p>As we proceed through certification, progress on the applicable MITA-sourced criteria will show progress from the As-Is MITA maturity levels to the To-Be MITA maturity levels targeted in the MITA SS-A. FDGS will assess progress on these applicable criteria at each of the milestones and report on them in the checklists.</p> <p>As MITA evolves with the release of MITA 4.0 and a possible reorientation to an outcomes-based framework, we can provide recommendations for mapping criteria, evidence, and roadmaps to situate existing projects in the framework and facilitate this transition. At initiation, when we help you develop criteria, we will use our understanding of the MITA 4.0 framework to help align our draft criteria with a new potential MITA framework.</p>
	9.	<p><i>Must track traceability of project activities and requirements through the entire project to CMS critical success factors and certification checklist criteria as applicable to the project to secure ongoing enhanced funding.</i></p>	<p>An early FDGS Team activity will be to validate requirements and trace project requirements to certification criteria. Requirements traceability will be a part of all of our reviews and an input in to the certification reviews.</p> <p>Once the requirements are reviewed and clarification received (as necessary) the FDGS Team will monitor the progress of addressing the requirements via the project designated traceability matrix. An important aspect of the on-going monitoring effort by the team is to validate that the solution being developed and the decisions being made during implementation, planning and development are in alignment with certification criteria, critical success factors and/or outcomes.</p> <p>FDGS will be monitoring the project schedule, participating as a regular attendee, reviewing state and vendor deliverables throughout the month and then assembling its findings in the Monthly IV&amp;V Status Report, which is provided to CMS and DHHS simultaneously.</p> <p>For MECT projects, the FDGS Team will utilize the MECT Certification Progress Report (CPR) template supplied by CMS. The FDGS Team will make use of the appropriate checklists, appropriateness based on the nature</p>

			<p>of the engagement. The FDGS team will indicate how the state and vendor(s) are doing in meeting the critical success factors. The FDGS Team will complete the checklists and then send the CPR to CMS and DHHS simultaneously. In addition to the checklist, the CPR will contain sections pertaining to overall engagement progress and remediation activities completed since the last CPR. Remediation activities may be necessary when at the time of the last checklist submission, expected success factors had not been realized. The report will also contain updated summary and detailed risk/issue registry information.</p> <p>As these CSF's develop or transform in OBC and SMC, we will support the state in mapping previous CSF's to new outcomes. If we determine that the new outcomes will fully replace the CSF's, we will track progress of the outcomes using the Intake Form or a superseding document. As we progress through the project and certification lifecycle, the milestone reviews will serve as checkpoints for progress on meeting the outcomes, which may replace the CSF's. The evidence preparation and validation processes we follow in preparation for the milestone reviews support outcome progress tracking by requiring a clear explanation of how the system achieves a specific outcome.</p>
	10.	<p><i>Must perform all functions required by CMS for all CMS reviews.</i></p>	<p>OBC and SMC introduce changes to the structure of certification that could change in minimum requirements for states, but we can still support similar IV&amp;V activities under OBC and SMC to those we did under MECT, as directed. Under OBC and SMC, CMS will not require an IV&amp;V review of evidence and the Intake Form, which mostly replaces the MECT checklists. Furthermore, there is no CMS Certification Progress Report. However, at your discretion, we can still review evidence documents for OBC and SMC certification criteria and provide the same kind of feedback we did under MECT projects and under SMC for the DMA project. Even without required reporting to CMS, we have seen that an initial review by IV&amp;V can catch many issues that would not require state expertise to resolve, thereby maximizing the impact of state resources.</p> <p>Consistent with our approach to milestone reviews in MECT, under OBC and SMC, FDGS will review certification criteria evidence documents. With the added flexibility for IV&amp;V, we can work with vendors more directly to improve these documents, as needed. We will also support project success with</p>

			<p>reviews of project documentation, such as management plans and schedules.</p> <p>In preparing for milestone reviews, we will serve as an intermediate level of quality checks after a vendor believes they are complete with tasks, like preparing evidence documents or demonstrations, and before they present their documentation to you and CMS. We will verify the quality of these representations to maximize the use of your time and avoid stakeholders presenting subpar information to you and CMS.</p> <p>We will use the significant insight into the project we gain from serving as IV&amp;V to enhance all stakeholders understanding of the project at critical junctures. During milestone reviews, we will attend and participate, as directed, including generally tracking and resolving stakeholder questions. While the bulk of the presentation will come from vendors and MLTC, we will answer CMS' questions of IV&amp;V specifically and, where directed, speak to IV&amp;V findings or add clarifications based on IV&amp;V reviews.</p> <p>We understand that prompt resolution of outstanding CMS questions from the milestone review expedites CMS approval. Following milestone reviews, we will follow up and seek to resolve these questions.</p>
11.		<p><i>Must coordinate certification activities for the project. Must evaluate and make recommendations about the state artifacts that are required for MMIS certification milestone reviews.</i></p>	<p>FDGS will develop its own IV&amp;V Project Plan for the Nebraska engagement. The project plan will be modified (expanded) as necessary to accommodate the expected multiple engagement phases for the projects. It is our experience that a master project plan under the control of the PMO is the best way to facilitate coordination among distinct vendor project plans. The FDGS Team will review the individual state and vendor's project plans (or master project plan if that be the case) to validate that the expected deliverables are accounted for, scheduled/sequenced and properly resourced.</p> <p>All individual project plans should align with certification lifecycle phases. We will conduct certification evidence document reviews prior to milestone reviews. We will make recommendations for improvements based on these reviews. Outside of the milestone review cycle, under OBC and SMC guidance, IV&amp;V can also review and provide recommendations on other state</p>

			artifacts, as directed. The State and vendor deliverables are reviewed and reported on in the IV&V Monthly Status Report.
	12.	<i>Must review all new or updated documentation, guidance, and rules promulgated by CMS applicable to the project and provide summary impacts to the project along with any recommendations.</i>	<p>Members of the FDGS Team as well as the larger Center of Excellence and Innovation’s Assessment Practice track CMS guidance releases on the CMS website. Our experts also stay informed through ongoing relationships with CMS and other industry stakeholders, including Human Services Information Technology Advisory Group (HSITAG.)</p> <p>These resources give us insight into the formal releases by CMS, as well as grounding expectations on upcoming releases. The Assessment Practice group meets on a bi-weekly basis, providing a forum for commutating changes in policies and information captured in discussions with CMS on other FDGS engagements. The composition of the Assessment Practice also includes our senior Security and Privacy resources. These are invaluable resources to the FDGS Team given the nature of the data being captured, stored and used in Nebraska.</p>
	13.	<i>Must perform any IV&amp;V services and roles required by CMS or DHHS necessary to secure the enhanced funding.</i>	<p>FDGS understands the IV&amp;V tasks identified in the MECT and OBC guidance, as well as the likely direction under SMC. As discussed above, these include providing general oversight, as well as completing specific document reviews and completing checklists and progress reports on periodic bases and for each milestone review. FDGS also understands that other activities may arise, as defined by the state or CMS, to be necessary for the state to secure enhanced funding. As a collaborative partner with the state, the FDGS will work to include these within the defined project scope. Discussions of specific activities should occur on a one-off basis. FDGS will then update the scope document to reflect the inclusion of these additional activities, based on agreements reached in discussions around these individual activities.</p>
CMC-2	Describe the bidder’s understanding of CMS’ expectations for an IV&V contractor and approach to compliance with CMS expectations.		

	<p>Response:</p> <p>FDGS has a demonstrated history of successful IV&amp;V efforts, as outlined in <b>Section 1.8</b> describing our Corporate Experience. The FDGS Team takes the position that when functioning in the capacity of the IV&amp;V contractor; they are functioning as a conduit of timely, accurate and objective information to CMS. FDGS works tirelessly to make certain that the relationship and information shared between FDGS and CMS is devoid of outside influence. As stated earlier in our response, we strive to develop and maintain a collaborative relationship with all key parties but FDGS clearly understands that the development and maintenance of the FDGS/CMS relationship is paramount. FDGS will follow CMS' expectations of the IV&amp;V contractor laid out in the latest MECT guidance.</p> <p>FDGS has a clear understanding of CMS's expectations of an IV&amp;V contractor:</p> <ul style="list-style-type: none"> <li>• Develop a work plan</li> <li>• Review and make recommendations on management and technical aspects of the project</li> <li>• Consult with stakeholders and assess user involvement and buy-in</li> <li>• Conduct an analysis of past project performance to make recommendations for improvement</li> <li>• Provide risk management assessment and capacity planning services</li> <li>• Develop performance metrics for project performance tracking</li> <li>• Complete reviewer section of checklists</li> <li>• Complete periodic and milestone Progress Reports on appropriate timelines</li> <li>• Maintain managerial and operational independence</li> </ul>
CMC-3	<p>Describe the bidder's approach to assessing the impacts of a project on MITA maturity levels.</p> <p>Response:</p> <p>The FDGS Team will begin with its review of the State self-assessment, submitted March 19, 2015, as well as the updated roadmap completed in August, 2020. The assessment will indicate the present state and the desired state. The FDGS Team will then look at the particular phase of the projects and align the phases to the appropriate MITA business area(s).</p> <p>The FDGS Team will review the functional and non-functional requirements associated to the phase's solution. The MECT checklists tie in to the MITA framework. Applicability of criteria sourced from MITA will be based on targeted maturity levels. Specific decisions on criteria applicability will be made during the joint applicability assessment at project initiation and validated before each milestone. Applicable criteria will guide our assessment of MITA impacts. As we proceed through certification, progress on the applicable MITA-</p>

	<p>sourced criteria will show progress from the As-Is MITA maturity levels to the To-Be MITA maturity levels targeted in the MITA SS-A. FDGS will assess progress on these applicable criteria at each of the milestones and report on them in the checklists.</p> <p>FDGS understands that DHHS needs change and evolve as the agency and its recipients do. We will take into account the updated MITA SS-A once it has been completed by DHHS, which is currently expected in the summer of 2022.</p>
CMC-4	<p>Describe the bidder’s approach to monitoring for documentation, guidance, and regulations from CMS</p> <p>Response:</p> <p>Members of the FDGS Team, as well as the larger Center of Excellence’s Assessment Practice, track CMS guidance releases on the CMS website. Our experts also stay informed through ongoing relationships with CMS and other industry stakeholders, including HSITAG. These resources give us insight into the formal releases by CMS, as well as grounding expectations on upcoming releases. The Assessment Practice group meets on a bi-weekly basis, providing a forum for commutating changes in policies and information captured in discussions with CMS on other FDGS engagements. The composition of the Assessment Practice also includes our senior Security and Privacy resources. These are invaluable resources to the FDGS Team given the nature of the data being captured, stored and used in Nebraska.</p> <p>In addition, FDGS is a member of the Human Services IT Advisory Group (HSITAG). HSITAG partners with Federal agencies including CMS to improve communications – organizing webinars throughout the year educating attendees on proposed changes in policy and publications. The FDGS IV&amp;V Team’s participation with HSITAG and the assessment group keeps the team current on changes in CMS policy expectations that may impact the DHHS projects.</p>

***Operations and System Readiness***

<b>Business Requirements</b>	
<b>Req #</b>	<b>Requirement</b>
OSR-1	Address the bidder's approach to meeting each requirement in a table that contains the requirement and the bidder's approach to meeting the requirement.

Response:

**Table 7** below details our approach to meeting each requirement for Operational and System Readiness.

**Table 7: Operational and System Readiness Requirements**

#	Requirement	FDGS Approach
1.	<p><i>Must assess project testing activities including test scenarios, cases, and results including traceability of testing to project requirements. Assessment must include whether additional test scenarios or cases are needed to sufficiently test the project requirements.</i></p>	<p>The FDGS staff assigned to this project are expert evaluators of the testing lifecycle. We are trained to observe and evaluate every step of the testing process from test creation through test outcome evaluation. We recognize that testing effectiveness and scope of work are governed by time and budget constraints. We also understand the balance between full test coverage and that which is sufficient to adequately test the project requirements. FDGS employs the following approach for assessment of vendor testing to confirm completeness, accuracy, and efficacy.</p> <p><b>Vendor Testing</b></p> <ul style="list-style-type: none"> <li>• Evaluate the vendor’s Test Plan(s) to verify inclusion and completeness of all required components to include goals and objectives, methods, approaches, test requirements (including data set and environment), detailed test descriptions, defect reporting and resolution process.</li> <li>• Assess vendor testing approach to confirm: <ul style="list-style-type: none"> <li>○ Test planning is based on requirements and design specifications to meet intended purpose</li> <li>○ Test scheduling and resource allocation are adequate, appropriate and reasonable</li> <li>○ Testing phases (Unit testing, Integration testing, System testing, Acceptance Testing and Regression Testing) have clear entrance and exit criteria</li> <li>○ The configuration management plan is complete, maintained, and adhered to</li> <li>○ Validate the requirements traceability matrix to confirm that test cases adequately test system requirements and that all requirements are tested</li> </ul> </li> </ul>



			<ul style="list-style-type: none"> <li>○ The detailed testing process is comprehensive and complete</li> <li>○ Defects are accurately captured, tracked, and resolved</li> <li>● Review test preparations to validate that test environments replicate production environments, proper tools are employed, appropriate supporting processes are in place, and adequate resources (e.g. business, technical, and vendor staff) are allocated to support testing</li> <li>● Monitor test efforts to verify adherence to test procedures and witness record of test results</li> <li>● Review and assess executed tests to determine the completeness of testing, accuracy, and efficacy of vendor testing efforts</li> <li>● Report overall testing findings so they may be shared with DHHS and the respective vendor</li> </ul> <p>FDGS uses industry standards, including IEEE, and professional best practices when assessing test methodologies for planning, preparation, execution and reporting on all test phases as documented in the vendor master test plan. FDGS collaborates closely with DHHS in the specific configuration of our assessment to confirm that all processes are thoroughly reviewed.</p> <p><b>UAT Testing</b></p> <ul style="list-style-type: none"> <li>● Evaluate the DHHS UAT Plan for completeness, reasonableness of approach, effectiveness and adherence to standards*</li> <li>● Assess the UAT schedule for structure and reasonableness of timing and resources</li> <li>● Verify presence of UAT Training Plan and validate adequate staff training</li> <li>● Verify the completeness, relevance, effectiveness and accuracy of testing environment, scenarios, scripts, and test cases</li> <li>● Validate that testing incorporates all appropriate stakeholders to verify proper perspectives and objectives</li> </ul>
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			<p><b>Independent Testing</b></p> <p>This step may be performed at the request of DHHS to independently validate the quality of implementation contractor testing. Results from this independent testing would be compared to those obtained by the DDI vendor.</p> <ul style="list-style-type: none"> <li>• This process duplicates the testing process of the implementation contractor and includes: <ul style="list-style-type: none"> <li>○ Test planning</li> <li>○ Test environment preparation</li> <li>○ Test execution</li> <li>○ Defect Management</li> <li>○ Test Maintenance</li> <li>○ Test Reporting</li> </ul> </li> </ul> <p>*The standards employed in FDGS IV&amp;V projects are drawn from the following recognized standards bodies:</p> <ul style="list-style-type: none"> <li>• The Project Management Institute (PMI®)</li> <li>• The Institute of Electrical and Electronics Engineers, Inc. (IEEE)</li> <li>• The International Organization for Standardization (ISO)</li> <li>• The International Electrotechnical Commission (IEC)</li> </ul>
	2.	<i>Must assess defect resolution and retesting activities to validate defect was appropriately resolved</i>	<p>The FDGS Team is committed to confirming that the appropriate systems and controls are in place prior to system deployment. Determining the severity and appropriate level of resolution to system defects is a key element in operational readiness. Drawing on past experience and industry standards, FDGS will:</p> <ul style="list-style-type: none"> <li>• Validate that System and User Acceptance Test Plans contains valid processes and tools for defect classification, management, and reporting.</li> <li>• Verify the defect reporting tool:</li> </ul>

			<ul style="list-style-type: none"> <li>○ Uniquely identifies the defect</li> <li>○ Defines fields required for each defect</li> <li>○ Identifies metrics and trends related to the defect</li> <li>○ Classifies and categorizes the defect level of severity</li> <li>○ Defines the resolution/mitigation strategy</li> <li>○ Captures the regression testing process and results</li> <li>● Verify that defect resolution processes are aligned with the Master Test Plan</li> <li>● Review test configuration to validate that appropriate stakeholders are involved in test execution and tracking to account for all perspectives and objectives</li> <li>● Monitor vendor testing and UAT efforts to validate that identified defects are logged and classified according to project protocols</li> <li>● Periodically review the defect tracking tool to verify that the appropriate action has been taken to resolve or mitigate all recorded defects</li> </ul>
	3.	<p><i>Must develop and submit a comprehensive System and Business Operations Readiness Review Plan work product for each project for Department approval a minimum of 90 days prior to the acceptance testing schedule date in the project work plan.</i></p>	<p>The purpose of Operational Readiness Review (ORR) is to satisfy DHHS, project leadership and federal partner oversight groups that the developed system is operationally ready and prepared to support the project requirements. By working with DHHS and vendor partners, FDGS develops a System and Business Operations Readiness Review Plan that defines the what, how, and timing of validating operational readiness.</p> <p>The core of our approach to the ORR Plan is a checklist process used for the development of a go-live recommendation and support of a go-live decision. The checklist process defines the necessary functionality and scenarios to determine readiness in the areas of:</p> <ul style="list-style-type: none"> <li>● System readiness</li> <li>● Staff training and support</li> <li>● Thorough defect management</li> <li>● Adequacy of security processes</li> </ul>

			<p>FDGS includes the following content as part of our standard ORR Plan:</p> <ul style="list-style-type: none"> <li>• <b>Introduction and Purpose</b> – defines the project details, purpose, and the scope of intended use</li> <li>• <b>Roles and Responsibilities</b> – defines the teams, plans, and responsibilities</li> <li>• <b>Readiness Assessments</b> – defines the operational areas, activities to be conducted, and measurement processes and metrics; this entails sections for: <ul style="list-style-type: none"> <li>○ Organization Readiness</li> <li>○ User Readiness</li> <li>○ Data Readiness</li> <li>○ Technical Readiness</li> <li>○ Implementation Readiness</li> </ul> </li> <li>• <b>Criteria Assessment</b> – The criteria and thresholds for the determination of a Go/No-Go decision</li> </ul> <p>FDGS agrees to submit Readiness Review Plans no later than 90 days prior to the scheduled date of acceptance testing. We also recognize that different SDLC methodologies including waterfall, agile and hybrid bring with them nuances that may affect the review schedules. FDGS will work with DHHS and its vendors to adjust delivery of Readiness Review Plans where appropriate.</p>
	4.	<p><i>Must conduct a system and business operational readiness review and assessment and provide the results to DHHS.</i></p>	<p>The FDGS Team conducts the Operational and System Readiness Review and Assessment according to the approved IV&amp;V Plan.</p> <p>FDGS includes the following components in the assessment:</p> <ul style="list-style-type: none"> <li>• <b>Introduction</b>– provides a summary of the project, including the business need, purpose of the report, approach to the review, and an executive summary of results</li> <li>• <b>Assessment Results</b> – The readiness review consists primarily of checklists used in conducting oversight of the implementation. The checklists include functionality, scenarios, factors for consideration, and</li> </ul>

			<p>observations for both business and system areas. The FDGS team employs the CMS checklists and directives, where applicable, and defines any additional source documentation beyond the physical review process</p> <ul style="list-style-type: none"> <li>• <b>References</b> – identifies any standards used in conducting the review process, defines common terms or acronyms used in the report, and identifies any additional references used in the assessment</li> </ul> <p>The FDGS Team will report the results of each review to DHHS and CMS in accordance with 45 CFR 95.626.</p>
OSR-2	Describe the bidder's approach to operational and systems readiness.		

Response:

FDGS works with the implementation contractor, the DHHS PMO, State personnel and interface partners to verify system environments are stable and ready to implement; staff are prepared to conduct the business of serving Nebraskans most vulnerable using the new operational systems; and required tools are in place to facilitate the transition. A Go/No-Go process facilitates the evaluation of implementation contractor readiness, identifies any incomplete tasks, outstanding items or concerns, and the risks related to not completing those tasks or resolving those items or concerns prior to Go-Live.

A final Go/No-Go meeting is conducted to assess the overall readiness for DHHS implementations. The respective implementation contractors and the FDGS Team present their Go/No-Go recommendations and, as appropriate, certification letter(s) that the systems are ready for implementation. State personnel make the final Go/No-Go decision based upon the evidence provided in advance of this meeting. There are several inputs that contribute to the Go/No-Go decision process, including:

- Implementation contractor status report
- IV&V Operational and Systems Readiness Report
- Open risks and issues
- Implementation contractor project plan and work plan
- Implementation contractor readiness checklist

In order to assess readiness, FDGS provides a wide array of criteria that is verified and validated using our IV&V readiness checklist. **Figure 6** crops a small excerpt from our IVV System and Business Operations Readiness Review (SaBORR) Checklist used on the Nebraska Data Management and Analytics (DMA) project.

Readiness Criteria Metadata		
Category	Sub Category	Criteria
Organization	Implementation Deliverables	Tracking of Deployment Checklist and adherence to schedule
Organization	Implementation Deliverables	Adherence to Quality Assurance Plan and Procedures
Organization	Configuration Management	Approval of the Configuration Management Plan
Organization	Configuration Management	Identification of Configuration Management record items

**Figure 6: Excerpt from the FDGS IV&V Readiness Checklist**

The fundamental purpose of the IV&V readiness checklist is to help key stakeholders determine if they are ready for system implementation. The IV&V readiness checklist serves as a mechanism to clearly understand the status of each readiness task, outstanding items and evaluate the risk of proceeding. The items on the IV&V readiness checklist can be used to assess if any item or combination of items exceeds the threshold and thus jeopardize the implementation of the system.

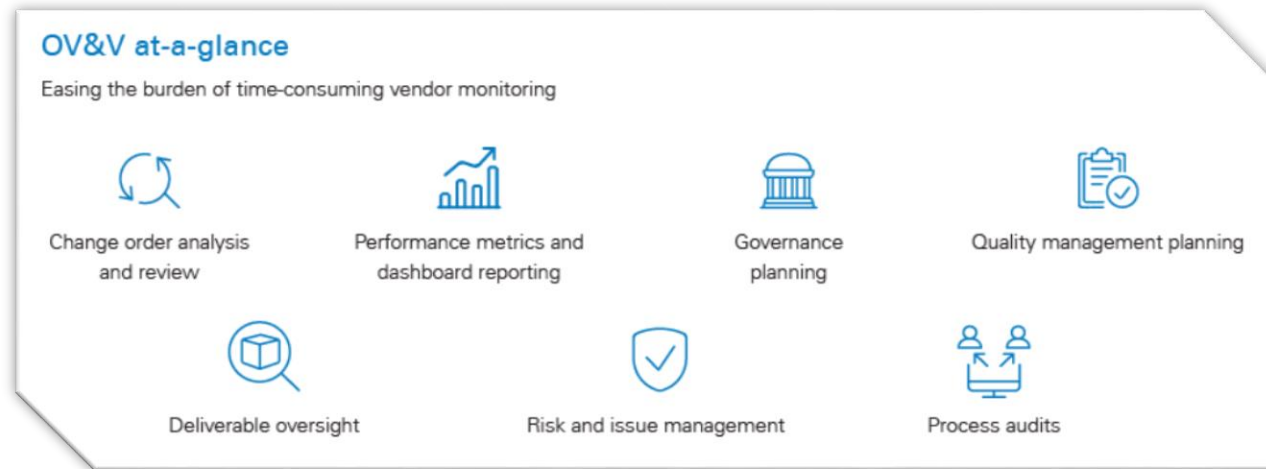
Our IV&V readiness checklist is an Excel spreadsheet that addresses various criteria including:

Operational	System
• Data	• Implementation
• Organization	• System
• User	• Technical

The IV&V readiness checklist provides both qualitative and quantitative measures of readiness that we track in the months and weeks leading up to implementation. FDGS can assist in defining parameters and criteria for acceptability and help determine the appropriate status. Some examples of acceptability criteria include:

- Percentage of staff that still need to complete a training course to be certified (Number of staff certified to date in relation to the total number of staff)
- Percentage of data converted successfully – did the data convert within the acceptable fallout threshold?
- Percentage of site preps completed

Once projects move into Maintenance and Operations, FDGS staff can shift to performing Operational Verification and Validation (OV&V) services. FDGS has a long history of providing OV&V services in other states so we are confident that we can help DHHS identify the most beneficial OV&V tasks. FDGS can supplement DHHS staff by taking on the time consuming deliverable reviews, change order analysis, vendor process reviews, and risk assessment and analysis. For larger scale projects, we can provide governance planning in a structured environment for managing the overall project. **Figure 7** provides an at-a-glance view of our OV&V service offerings.



**Figure 7: FDGS Operational Verification and Validation (OV&V) Services**

### Challenges of multi-vendor management

As DHHS follows the roadmap of its Medicaid Enterprise improvements across multiple projects, you now have more vendors than ever to manage. OV&V from FDGS encompasses a variety of services designed to assist DHHS and its staff in monitoring and managing vendors and focusing on their operations and work products. With our OV&V services, you can overcome your biggest challenges in



trying to manage multiple vendors internally. **Figure 8** includes examples of these challenges as each of the projects transitions into Maintenance and Operations.



**Figure 8: FDGS addresses the challenges of multiple vendor management and oversight needs as projects move into the Operations phase**

OSR-3	Provide an example of a readiness plan utilized for other projects.
	<p>Response:</p> <p>An example of a readiness review plan is found as <b>Appendix 5</b>. This example was taken from the Nebraska DMA project.</p> <ul style="list-style-type: none"> <li>• <b>Nebraska DMA – IVV System and Business Operations Readiness Review (SaBORR) Plan</b> – describes the plan to assess the status and coverage of the various activities and documentation necessary to determine if both the system and the business are ready for implementation to production.</li> </ul>
OSR-4	Provide examples of operation and system readiness review reports used on previous projects.

Response:

Examples of operation and system readiness review reports are found in **Appendix 6**.

- **Nebraska DMA – IVV System and Business Operations Readiness Review (SaBORR) Go Live Report** – is the result of assessing the status of selected readiness tasks, identifying outstanding items from the Design, Development and Implementation (DDI) phase and evaluate the risk of proceeding with implementation (Go/No-Go decision).
- **Indiana IEDSS – OVV Monthly IEDSS Operational Readiness Status Report** – FDGS provided an Operational Readiness Review report to Indiana on a monthly basis in preparation for the implementation of their Indiana Eligibility Determination and Services System (IEDSS). The document includes our observations in specific areas and highlights specific risks to the overall success of the implementation.

**IV&V Deliverables and Work Products**

<b>Business Requirements</b>	
<b>Req #</b>	<b>Requirement</b>
IDW-1	Address the bidder's approach to meeting each requirement in a table that contains the requirement and the bidder's approach to meeting the requirement.

Response:

**Table 8** below details our approach to meeting each requirement for IV&V Deliverables and Work Products.

**Table 8: IV&V Deliverables and Work Products Requirements**

#	Requirement	FDGS Approach
1.	<p><i>For each project, must fulfil all IV&amp;V contractor responsibilities and submit a monthly deliverable including activities and work products completed within the month:</i></p> <ul style="list-style-type: none"> <li>• <i>The monthly IV&amp;V report</i></li> <li>• <i>Weekly status report materials for the month</i></li> <li>• <i>IV&amp;V project work product and deliverable assessments completed within the month</i></li> <li>• <i>Critical incident reports</i></li> <li>• <i>Requirements traceability matrix updates</i></li> <li>• <i>CMS and MITA compliance activities</i></li> <li>• <i>IV&amp;V work plan updates</i></li> <li>• <i>IV&amp;V work products</i></li> </ul>	<p>FDGS has a proven ability to deliver IV&amp;V reporting in a clear and timely fashion. Our methodology has proven effective on singular IV&amp;V engagements and within a portfolio management environment. We accomplish this with skilled and knowledgeable staff and the use of standard processes and templates, where possible.</p> <p>As discussed in earlier sections of this proposal, FDGS has established a close relationship with DHHS and its project vendors to foster project success. By establishing a spirit of collaboration, we integrate with existing work processes to make our efforts as transparent as possible facilitating the overall execution and delivery of all work efforts.</p> <p>By being part of the process and providing interim feedback according to the integrated project schedule, the FDGS approach promotes timeliness in the delivery of work products. We leverage these relationships to push each project toward successful implementation and to support achievement of DHHS' goals.</p> <p>FDGS also uses standard reporting and work product formats. Using this standardized approach allows FDGS to quickly and cleanly consolidate findings and information from multiple sources to a singular report. This style of reporting also provides a familiar view for the client which improves readability, eases navigation to find critical information, and employs standard metrics, where applicable.</p> <p>FDGS verifies the completion and timely delivery of all the reports within the scope of our work. The following approaches are used in support of contracted activities:</p> <p><b>Monthly IV&amp;V Report</b></p>

			<p>To facilitate timely integration and approval of monthly reporting, FDGS employs:</p> <ul style="list-style-type: none"> <li>• Standard, integrated reporting of inputs</li> <li>• Integration of IV&amp;V activities to facilitate timely delivery</li> </ul> <p>As the starting point for defining the Monthly IV&amp;V Report, FDGS uses the following structure:</p> <ul style="list-style-type: none"> <li>3.0 Executive Summary <ul style="list-style-type: none"> <li>▪ Report Summary</li> <li>▪ Engagement Information</li> <li>▪ Project Dashboard</li> </ul> </li> <li>4.0 Key Focus Areas <ul style="list-style-type: none"> <li>▪ Project Integrity</li> <li>▪ Solution Integrity</li> <li>▪ Certification</li> <li>▪ Other (as needed)</li> </ul> </li> <li>5.0 New Observations with Recommendations</li> <li>6.0 Appendix <ul style="list-style-type: none"> <li>▪ IV&amp;V Observations</li> <li>▪ IV&amp;V Activities</li> <li>▪ Other (as needed)</li> </ul> </li> </ul> <p>In addition to providing a summary of any of the activities listed immediately hereafter, FDGS includes, as an appendix, any work products completed, but not limited to:</p> <ul style="list-style-type: none"> <li>• Critical Incident Report(s)</li> <li>• Operational Readiness Assessment(s)</li> <li>• Requirements Traceability Matrix updates</li> </ul>
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			<ul style="list-style-type: none"> <li>• CMS and MITA compliance reports</li> <li>• IV&amp;V work plan updates</li> <li>• Other IV&amp;V work products</li> </ul> <p>Drawing on past experience and our experience specifically with DHHS, FDGS collaborates with DHHS to refine the existing report formats as needed to satisfy dynamic needs of the Department.</p> <p><b>Weekly Status Report Materials for the Month</b></p> <p>FDGS employs a standard approach to each project which facilitates the ease of integration when employed within a portfolio reporting environment. We continue to work with DHHS and the implementation vendor(s) to integrate IV&amp;V progress reporting within the scope of ongoing project meetings. As the basis of weekly reporting, FDGS includes:</p> <ul style="list-style-type: none"> <li>• A summary of the activities completed</li> <li>• A summary of the planned activities</li> <li>• A summary of the new observations and opportunities</li> <li>• Updates to the IV&amp;V schedule</li> <li>• Critical incidents</li> </ul> <p>Clarity and brevity are the key concepts behind our approach to weekly reporting as we believe it should not inhibit project progress.</p> <p><b>IV&amp;V Project Work Product and Deliverable Assessments</b></p> <p>FDGS utilizes a Deliverable Expectation Document (DED) process in the delivery of its own work products. When working with implementation vendors, we integrate our review efforts within the existing review processes and provide formal feedback. If a DED exists as part of the process, FDGS reviews vendor work in relation to conformance to the DED. For work products where no DED is present, FDGS works with vendors early in the review cycle to provide feedback to reduce the possibility of an unsatisfactory deliverable. We also work with vendors to establish a DED into their work deliverables for future work products.</p>
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			<p>To facilitate a thorough review of vendor deliverables, particularly for more complex deliverables, the FDGS Team utilizes checklists tailored to DHHS needs and the specific deliverable requirements and content specific to each project.</p> <p><b>Critical Incident Reports</b></p> <p>FDGS draws from lessons learned on past projects to bring a selection of best practices for defining critical incidents, developing metrics and appropriate mitigation/resolution responses. The FDGS Team worked with DHHS to define a critical incident as a distinct event or situation that creates a significant risk of substantial or serious harm impacting either the solution functionality or the project timeline. We will continue to work with DHHS to enhance identification and measurement criteria and to refine our tools for reporting of critical incidents.</p> <p><b>Requirements Traceability Matrix Updates</b></p> <p>FDGS employs a host of ISO standards to verify the quality, completeness, and traceability of project requirements. FDGS further verifies that that a comprehensive process for managing system requirements is in place during the entire System Development Life Cycle (SDLC) from design through testing and implementation. We evaluate the requirements management tool, the Requirements Traceability Matrix (RTM) and verify that the requirements are under configuration control to validate that the system is being built correctly in order to meet DHHS expectations and needs.</p> <p>As requirements are introduced or changed, FDGS verifies that the requirement is well written, properly tracked and the history of the requirement maintained. Based on findings, FDGS works collaboratively with DHHS and the implementation vendor(s) to complete changes to the RTM conforming to the project change control process. As part of our approach, FDGS:</p> <ul style="list-style-type: none"> <li>• Validates that requirements are managed properly throughout all phases the project life cycle</li> </ul>
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			<ul style="list-style-type: none"> <li>• Verifies that existing and newly written requirements conform to SMART (Specific, Measurable, Achievable, Traceable, and Testable) principle</li> <li>• Verifies requirements are uniquely identified</li> <li>• Reviews RTM tracking mechanism to confirm requested changes and updates have been completed <b>and</b> completed properly</li> </ul> <p><b>CMS and MITA Compliance Activities</b></p> <p>FDGS is conversant with IV&amp;V requirements set forth in 45 CFR 95.610. We are also well experienced with conformance to MITA Standards. FDGS verifies that all reporting and the timing of report submission complies with the MECT, OBC, SMC or other agency standards. We also help in the preparation for and participate in any meetings with federal partners.</p> <p><b>IV&amp;V Work Plan Updates</b></p> <p>FDGS works closely with the PMO to integrate IV&amp;V Project work plans at project onset and report progress and changes. FDGS work plan development conforms to applicable PMI, HHS Enterprise Performance Life Cycle, and ISO standards. We practice iterative work plan development confirming project plan currency and actively communicate and report work plan updates in weekly, monthly and ad hoc reporting.</p> <p><b>IV&amp;V Work Products</b></p> <p>FDGS utilizes a Deliverable Expectation Document (DED) process to eliminate ambiguity and set expectations for final work products. As the basis for our verification work, we employ appropriate industry standards and develop work product specific checklists. FDGS also incorporates internal quality assurance as part of our work product development process.</p>
	2.	<p><i>Must perform work and submit work products and deliverables for State review and approval in accordance with the approved IV&amp;V work plan scheduled dates.</i></p>	<p>FDGS understands and agrees to adhere to the approved IV&amp;V work plan and its scheduled dates. We submit work products and deliverables for State review and approval in accordance with scheduled dates. In the initiation and planning phases of the project, FDGS works closely with the PMO to integrate the IV&amp;V work plan with the overall project work plan.</p>



	3.	<i>Must provide a tracking capability for tracking of work product and deliverable submission and review status.</i>	<p>FDGS uses a Deliverable Tracking Tool to track all work products within the assigned project(s) to:</p> <ul style="list-style-type: none"> <li>• maintain a singular record of all project deliverables</li> <li>• monitor vendor deliverable dates to plan assessments</li> <li>• record all changes to the deliverable schedules</li> <li>• allows for adjustments to be made to all corresponding deliverables</li> </ul>
	4.	<i>Must submit any changes to previously approved deliverables for approval through the review process.</i>	<p>FDGS complies with DHHS process for review and approval related to any recommended changes to previously approved deliverables. To minimize the number of instances where this occurs, FDGS works with the project leadership and DHHS vendors to integrate its review activities and provide proactive feedback within the existing review cycle.</p>

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

**FORM 10-K**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended: December 31, 2020

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number: 1-38962

**Fiserv, Inc.**

(Exact Name of Registrant as Specified in Its Charter)

Wisconsin  
(State or Other Jurisdiction of  
Incorporation or Organization)

39-1506125  
(I. R. S. Employer  
Identification No.)

255 Fiserv Drive Brookfield, WI 53045  
(Address of Principal Executive Offices and zip code)

(262) 879-5000  
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.01 per share	FISV	The NASDAQ Stock Market LLC
0.375% Senior Notes due 2023	FISV23	The NASDAQ Stock Market LLC
1.125% Senior Notes due 2027	FISV27	The NASDAQ Stock Market LLC
1.625% Senior Notes due 2030	FISV30	The NASDAQ Stock Market LLC
2.250% Senior Notes due 2025	FISV25	The NASDAQ Stock Market LLC
3.000% Senior Notes due 2031	FISV31	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The aggregate market value of the common stock of the registrant held by non-affiliates as of June 30, 2020 (the last trading day of the second fiscal quarter) was \$65,119,434,315 based on the closing price of the registrant's common stock on the NASDAQ Global Select Market on that date. The number of shares of the registrant's common stock, \$0.01 par value per share, outstanding at February 19, 2021 was 669,459,877.

#### **DOCUMENTS INCORPORATED BY REFERENCE**

Part III of this report incorporates information by reference to the registrant's proxy statement for its 2021 annual meeting of shareholders, which proxy statement will be filed with the Securities and Exchange Commission no later than 120 days after the close of the fiscal year ended December 31, 2020.

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## FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains “forward-looking statements” intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. Forward-looking statements include those that express a plan, belief, expectation, estimation, anticipation, intent, contingency, future development or similar expression, and can generally be identified as forward-looking because they include words such as “believes,” “anticipates,” “expects,” “could,” “should” or words of similar meaning. Statements that describe our future plans, objectives or goals are also forward-looking statements. The forward-looking statements in this report involve significant risks and uncertainties, and a number of factors, both foreseen and unforeseen, could cause actual results to differ materially from our current expectations. The factors that may affect our results include, among others, the following, many of which are, and will be, amplified by the COVID-19 pandemic: the duration and intensity of the COVID-19 pandemic including how quickly the global economy recovers from the impact of the pandemic; governmental and private sector responses to the COVID-19 pandemic and the impact of such responses on us; the impact of the COVID-19 pandemic on our employees, clients, vendors, operations and sales; the possibility that we may be unable to achieve expected synergies and operating efficiencies from the acquisition of First Data Corporation (“First Data”) within the expected time frames; the integration of First Data may be more difficult, time-consuming or costly than expected; profitability following the transaction may be lower than expected, including due to unexpected costs, charges or expenses resulting from the transaction; operating costs, customer loss and business disruption (including, without limitation, difficulties in maintaining relationships with employees, customers, clients or suppliers) may be greater than expected following the transaction; unforeseen risks relating to our liabilities or those of First Data may exist; our ability to meet expectations regarding the accounting and tax treatments of the transaction; our ability to compete effectively against new and existing competitors and to continue to introduce competitive new products and services on a timely, cost-effective basis; changes in customer demand for our products and services; the ability of our technology to keep pace with a rapidly evolving marketplace; the successful management of our merchant alliance program which involves several alliances not under our sole control; the impact of a security breach or operational failure on our business including disruptions caused by other participants in the global financial system; the failure of our vendors and merchants to satisfy their obligations; the successful management of credit and fraud risks in our business and merchant alliances; changes in local, regional, national and international economic or political conditions and the impact they may have on us and our customers; the effect of proposed and enacted legislative and regulatory actions affecting us or the financial services industry as a whole; our ability to comply with government regulations and applicable card association and network rules; the protection and validity of intellectual property rights; the outcome of pending and future litigation and governmental proceedings; our ability to successfully identify, complete and integrate acquisitions, and to realize the anticipated benefits associated with the same; the impact of our strategic initiatives; our ability to attract and retain key personnel; volatility and disruptions in financial markets that may impact our ability to access preferred sources of financing and the terms on which we are able to obtain financing or increase our cost of borrowing; adverse impacts from currency exchange rates or currency controls; changes in corporate tax and interest rates; and other factors identified in this Annual Report on Form 10-K for the year ended December 31, 2020 and in other documents that we file with the Securities and Exchange Commission. You should consider these factors carefully in evaluating forward-looking statements and are cautioned not to place undue reliance on such statements, which speak only as of the date of this report. We undertake no obligation to update forward-looking statements to reflect events or circumstances occurring after the date of this report. We are not including the information provided on the websites referenced herein as part of, or incorporating such information by reference into, this Annual Report on Form 10-K.

## PART I

In this report, all references to “we,” “us,” “our” and “Fiserv” refer to Fiserv, Inc. (“Fiserv”), and, unless the context otherwise requires, its consolidated subsidiaries.

### Item 1. Business

#### Overview

Fiserv, Inc. is a leading global provider of payments and financial services technology solutions. We are publicly traded on the NASDAQ Global Select Market and part of the S&P 500 Index. We serve clients around the globe, including banks, credit unions, other financial institutions, corporate clients and merchants. We help clients achieve best-in-class results through a commitment to innovation and excellence in areas including account processing and digital banking solutions; card issuer processing and network services; payments; e-commerce; merchant acquiring and processing; and the Clover<sup>®</sup> cloud-based point-of-sale (“POS”) solution. Most of the services we provide are necessary for our clients to operate their businesses and are, therefore, non-discretionary in nature. We service our global client base by working among our geographic teams across various regions: the United States and Canada; Europe, Middle East and Africa; Latin America; and Asia Pacific.

In 2020, we had \$14.9 billion in total revenue, \$1.9 billion in operating income and \$4.1 billion of net cash provided by operating activities from continuing operations. Processing and services revenue, which in 2020 represented 82% of our total revenue, is primarily generated from account- and transaction-based fees under multi-year contracts that generally have high renewal rates. We have operations and offices located both within the United States (the “U.S.” or “domestic”) and outside of the U.S. (“international”) with revenues from domestic and international products and services as a percentage of total revenue as follows for the years ended December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Total revenue	\$ 14,852	\$ 10,187	\$ 5,823
Domestic	87 %	88 %	94 %
International	13 %	12 %	6 %

We have grown our business by signing new clients, expanding the products and services we provide to existing clients, offering new and enhanced products and services developed through innovation and acquisition, and extending our capabilities geographically, all of which have enabled us to deliver a wide range of integrated products and services and created new opportunities for growth.

Our headquarters are located at 255 Fiserv Drive, Brookfield, Wisconsin 53045, and our telephone number is (262) 879-5000.

Effective in the first quarter of 2020, we realigned our reportable segments to reflect our new management structure and organizational responsibilities (“Segment Realignment”) following the July 2019 acquisition of First Data. Our operations are comprised of the Merchant Acceptance (“Acceptance”) segment, the Financial Technology (“Fintech”) segment and the Payments and Network (“Payments”) segment.

#### Acceptance

The businesses in our Acceptance segment provide a wide range of commerce-enabling solutions and serve merchants of all sizes around the world. These services include POS merchant acquiring and digital commerce services; mobile payment services; security and fraud protection products; Carat<sup>SM</sup>, our omnichannel commerce solution; and our cloud-based Clover POS platform. We distribute the products and services in the global Acceptance businesses through a variety of channels, including direct sales teams, strategic partnerships with agent sales forces, independent software vendors (“ISVs”), financial institutions, and other strategic partners in the form of joint venture alliances, revenue sharing alliances (“RSAs”), and referral agreements. Merchants, financial institutions and distribution partners in the Acceptance segment are frequently clients of our other segments.

Acceptance solutions enable businesses to securely accept consumers’ electronic payment transactions online or in-person. Payment transactions represent credit, debit, stored-value and loyalty payments, whether at a physical POS device, a mobile device such as a smart-phone or tablet, or an e-commerce transaction over the internet. Services include payment authorization; settlement; charge-back management; and solutions that secure payment data from end-to-end, including TransArmor<sup>®</sup>, our encryption, tokenization, and PCI compliance solution for data in-transit.

### *Omnichannel Commerce Solutions*

Our Carat solution is designed to enable large merchants to offer a simple and secure payment experience to their customers across multiple channels, including accepting e-commerce payments online or in-store and enabling consumer purchasing experiences such as curbside and in-store pickup (sometimes referred to as “omnichannel”). Through a single interface with the merchant, a variety of our solutions can be integrated, including omnichannel gateway, global payments acceptance, open foreign exchange multi-currency, advanced artificial intelligence-powered authorization optimization, fraud detection, and digital payouts. By offering a variety of payment and related services via a single interface, Carat enhances the payment experience for a customer, optimizes the value and quality of transactions for the merchant, and enables pioneering payment transactions such as voice-enabled commerce and payments via the connected car.

### *Clover from Fiserv*

Built for small and mid-sized businesses (“SMBs”), our cloud-based Clover POS platform is a comprehensive business-management solution that enables businesses to maximize their operating efficiencies, while allowing their customers to pay using a debit or credit card or via mobile payment options. The Clover platform includes hardware and software technology necessary to enable SMB merchants to accept payments, process transactions, provide online ordering, have an e-commerce presence, and generate consumer loyalty through Clover’s customer engagement tools. Clover is one of the largest open architecture platforms of commerce-enabling solutions and applications in the world. By integrating next-generation hardware and software applications, Clover has also become a leader in enabling omnichannel commerce solutions for SMBs, with touchless commerce through QR code-based payments, online ordering solutions, or a virtual terminal. Clover solutions also help small business owners gain faster access to capital through advanced access to receivables.

### *Distribution Channels and Partnerships*

Acceptance businesses distribute solutions and services through direct sales teams, as well as partnerships with hundreds of indirect non-bank sales forces, including independent sales agents, independent sales organizations (“ISOs”), ISVs, value-added retailers (“VARs”), and payment services providers (“PSPs”). Partnerships with ISOs, ISVs, VARs and PSPs provide specialized sales capabilities and integrated merchant technology solutions to support our partners, help them grow their business and manage their portfolios. Partner technology tools enable real-time access to portfolio activity and pricing management. We also provide marketing services, data analytics and other tools that enable partners to further expand their businesses through local communities, e-commerce channels, and specific industry verticals.

In addition, the businesses in our Acceptance segment leverage powerful sales capabilities for hundreds of financial institution and non-financial institution partners to distribute their products and solutions through strategic arrangements including joint venture alliances (merchant alliances), RSAs, and referral agreements. These strategic alliances combine our commerce-enabling technology, processing capabilities and management expertise with the distribution channels, footprint and customer relationships of our partners.

### ***Fintech***

The businesses in our Fintech segment provide financial institutions around the world with the technology solutions they need to run their operations, including products and services that enable financial institutions to process customer deposit and loan accounts and manage an institution’s general ledger and central information files. As a complement to the core account processing functionality, the businesses in the global Fintech segment also provide digital banking, financial and risk management, cash management, professional services and consulting, item processing and source capture, and other products and services that support numerous types of financial transactions. Some of the businesses in the Fintech segment provide products or services to corporate clients to facilitate the management of financial processes and transactions. Many of the products and services offered in the Fintech segment are integrated with products and services provided by our other segments.

### *Account Processing*

We provide account servicing and management technology products and services to our depository institution clients, as well as a range of integrated, value-added banking products and services. Account processing solutions enable a financial institution to operate systems that process customer deposit and loan accounts, an institution’s general ledger, central information files and other financial information. These solutions also include security, report generation and other features that financial institutions need to process transactions for their customers, as well as to facilitate compliance with applicable regulations. Although many of our clients obtain a majority of their processing requirements from us, our software design allows clients to start with one application and, as needed, add applications and features developed by us or by third parties. We support a broad range of client-owned peripheral devices manufactured by a variety of vendors, which reduce a new client’s initial conversion expenses, enhance existing clients’ ability to change technology and broaden our market opportunity.

The principal account processing solutions used by our bank clients are Cleartouch<sup>®</sup>, DNA<sup>®</sup>, Precision<sup>®</sup>, Premier<sup>®</sup> and Signature<sup>®</sup>. The principal account processing solutions primarily used by our credit union clients are Charlotte<sup>SM</sup>, CubicsPlus<sup>®</sup>, CUnify<sup>™</sup>, CUSA<sup>®</sup>, DataSafe<sup>®</sup>, DNA, Galaxy<sup>®</sup>, OnCU<sup>®</sup>, Portico<sup>®</sup>, Reliance<sup>®</sup>, Spectrum<sup>®</sup> and XP2<sup>®</sup>. The Signature and DNA solutions are available both domestically and internationally. Account processing solutions are offered primarily as an outsourced service or can be installed on client-owned computer systems or those hosted by third parties.

Our account processing business also provides consulting services, business operations services and related software products that enable the transition of check capture from branch and teller channels to digital self-service deposit channels, including mobile, merchant and ATM. Through the Fiserv<sup>®</sup> Clearing Network, we provide check clearing and image exchange services. Other products and services include image archive with online retrieval, in-clearings, exceptions and returns, statements and fraud detection.

#### *Financial and Risk Management Solutions*

Our Financial and Risk Management Solutions business provides products and services that deliver operating efficiencies and management insight that enable our clients to protect, manage and grow their businesses. Our Digital Efficiency Solutions include Frontier<sup>™</sup> (a reconciliation product), Nautilus<sup>®</sup> (a content management product) and Prologue<sup>™</sup> Financials, which combines enterprise performance management and financial control offerings to deliver budgeting and planning, financial accounting, and automated reconciliation and account certification tools to facilitate a robust assessment environment and efficient processes for our clients. These solutions are further complemented by fraud detection and mitigation through our Fraud and Financial Crimes Risk Management Solutions. Our Deposit Liquidity Solutions enable our clients to retain, monetize and grow their deposit account base while analyzing customer demand and providing for customer short-term liquidity. Our Commercial Payments Solutions provide financial institutions with the infrastructure they need to process, route and settle non-card-based electronic payments, including Automated Clearing House (“ACH”), wire and instant payments, and to efficiently manage associated information flows. Clients may use payment platform applications on a licensed or hosted basis, and as an add-on to existing legacy technology or as a stand-alone comprehensive modern payments platform.

#### *Digital Channels*

Our principal digital consumer and business banking products are Architect<sup>™</sup>, Corillian Online<sup>®</sup>, Corillian<sup>®</sup> Business Online, Mobiliti<sup>™</sup>, Mobiliti Business<sup>™</sup>, and SecureNow<sup>™</sup>. Our Corillian product suite supports multiple lines of banking businesses and has been designed to be highly scalable to meet the evolving needs of our clients. This structure enables our clients to deploy new services by adding and integrating applications, such as electronic bill payment, person-to-person payments and personal financial management tools, to any internet-connected point-of-presence. Our Mobiliti product suite provides a variety of mobile banking and payments services to our clients and their customers via mobile browser, downloadable application for smartphones and tablets, text message, and Amazon<sup>®</sup> Alexa<sup>®</sup> voice banking. Our Architect product suite supports online, mobile and tablet banking for retail and small business customers on a single platform. Each of these suites enables customers to complete balance inquiries, view their transaction history, make bill payments, and transfer funds between accounts and to other people. Our SecureNow product delivers real-time cybersecurity defense capability, integrates industry-leading controls into a single platform, and is pre-integrated with key Fiserv digital assets, including Corillian Online, Architect and other Fiserv platforms, for rapid deployment.

#### *Payments*

The businesses in our Payments segment provide financial institutions and corporate clients around the world with the products and services required to process digital payment transactions. This includes card transactions such as debit, credit and prepaid card processing and services; a range of network services, security and fraud protection products; card production and print services. In addition, the Payments segment businesses offer non-card digital payment software and services, including bill payment, account-to-account transfers, person-to-person payments, electronic billing, and security and fraud protection products. Clients of the global Payments segment businesses reflect a wide range of industries, including merchants, distribution partners and financial institution customers in our other segments.

#### *Network and Debit Processing*

Our network and debit processing business is a leader in electronic funds transfer services and provides a total payments solution through a variety of products and services. We provide financial institution clients with a full range of debit processing services, including ATM managed services; tokenization, loyalty and reward programs; customized authorization processing; gateway processing to payment networks; and risk management products. We own and operate the Accel<sup>®</sup>, STAR<sup>®</sup> and MoneyPass<sup>®</sup> networks, which serve financial institutions, providing access to funds at the point-of-sale and via ATMs, inclusive of CardFree Cash<sup>SM</sup> access as well as via EMV<sup>®</sup> chip and traditional magnetic stripe cards. Our debit processing also provides a range of security, risk and fraud management solutions, which incorporate machine-learning-based predictive



technology, that help financial institutions securely operate and grow their business by preventing fraud. Our networks' POS support delivers comprehensive coverage of PIN and PIN-less authentication support at physical and e-commerce merchants domestically. Our digital enablement capability provides our clients' customers with mobile-based, customizable card management and alert tools that drive engagement and revenue for card issuers, and our risk management tools and portfolio management services are integrated with real-time fraud decisioning.

#### *Output Solutions*

Our output solutions business provides business communication products and services to clients across a wide variety of industries, including financial services, healthcare, retail, utilities, and travel and entertainment. We provide various channels for clients to communicate, build relationships and maximize customer engagement and loyalty, while limiting costs of a personalized and integrated consumer experience. Our products and services include electronic document management through our electronic document delivery products and services; card manufacturing, personalization and mailing; statement production and mailing; design and fulfillment of direct mail services; forms distribution; laser printing and mailing; and branded merchandise.

#### *Electronic Payments*

Our electronic payments business is comprised of electronic bill payment and presentment services and other electronic payment services for businesses and consumers, such as person-to-person payments, account-to-account transfers, and account opening and funding. Our principal electronic bill payment and presentment product, CheckFree® RXP®, allows our clients' customers to: manage household bills via an easy-to-use, online tool; view billing and payment information; pay and manage all of their bills in one place; and complete same-day or next-day bill payments to a wide range of billers and others.

Our person-to-person payments and account-to-account transfer services allow consumers a convenient way to send and receive money while offering financial institutions the opportunity to generate new transaction-based revenue, attract new accounts and increase loyalty among existing customers. In addition to Popmoney®, a solution owned by Fiserv, we partner with Early Warning Services, LLC to offer a turnkey implementation of its Zelle® real-time person-to-person payments service. Our turnkey solution simplifies the implementation of Zelle by providing interface, risk management, alerting, settlement and other services to clients.

#### *Credit Processing*

Our credit processing business provides solutions to financial institutions and other issuers of credit, such as banks, group service providers, retailers and consumer finance companies, to enable them to process transactions on behalf of their customers. Depending on the market and our clients' needs, we deliver these solutions through our proprietary outsourced services platforms, software application licenses, or software-as-a-service hosted in the cloud. Our solutions in North America use our proprietary Optis<sup>SM</sup> platform to provide transaction authorization and posting, account maintenance and settlement. Our VisionPLUS<sup>TM</sup> software is used globally as both a processing solution and a licensed software solution that enables clients to process their own transactions, depending on the market. We also provide financial institutions with professional services and customer servicing, including call center solutions and back-office processing.

#### *Biller Solutions*

Our biller business provides electronic billing and payment services to companies that deliver bills to their customers, such as utilities, telephone and cable companies, lending institutions, and insurance providers, enabling our biller clients to reduce costs, collect payments faster through multiple channels, increase customer satisfaction, and provide customers flexible, easy-to-use ways to view and pay their bills. Our clients' customers access our electronic billing and payment systems by viewing or paying a bill through a financial institution's bill payment application, using a biller's website, mobile application, automated phone system or customer service representative, through [www.mycheckfree.com](http://www.mycheckfree.com), or by paying in-person at one of more than 30,000 nationwide walk-in payment locations operated by our agents. These diverse options allow our clients' customers to view and pay bills wherever, whenever and however they feel most comfortable. Furthermore, because our biller clients are able to receive all of these services from us, we can eliminate the operational complexity and expense of supporting multiple vendor systems or in-house developed systems.

#### *Prepaid Solutions*

Our prepaid solutions include stored value cards offered by our Gift Solutions and Money Network® businesses. Gift Solutions provides end-to-end, omnichannel solutions to securely implement and manage gift card programs that help clients drive revenue, engagement and loyalty. These solutions include physical and digital gift card fulfillment, program management, e-commerce gift card storefronts, security and fraud protection, transaction processing services, incentive and rebate cards as well

as reloadable and non-reloadable prepaid cards that may be used with a variety of mobile applications. The Money Network service simplifies payment distribution for organizations while reducing or eliminating expenses associated with issuing traditional paper checks. This service also provides consumers without bank accounts with fast, digital access to manage their money, including wages. Money Network solutions include Electronic Payroll Delivery, digital disbursements and corporate incentives as well as single-load and reloadable prepaid account options. Accountholders of the Money Network Electronic Payroll Delivery Service have access to a Money Network Card, Money Network Checks and a robust mobile app to manage their account anytime, anywhere.

## **Other**

### *Investment Services*

In 2020, we sold a majority interest of our Investment Services business, subsequently renamed as Tegra118 Wealth Solutions, Inc. (“Tegra118”), which is reported within Corporate and Other following the Segment Realignment. Our remaining minority ownership interest in Tegra118 is accounted for as an equity method investment. Tegra118 provides technology products and services to financial service organizations, including broker dealers, registered investment advisors, banks, asset managers and insurance companies that deliver financial advice and managed account products to U.S. retail investors. The business’ primary product, the Unified Wealth Platform, is a real-time portfolio management, trading and reporting system used by some of the largest brokerage firms and asset managers in the U.S. offering managed accounts.

### **Impact of COVID-19 Pandemic**

In 2019, a novel strain of coronavirus (“COVID-19”) was identified and has since continued to spread. In March 2020, the World Health Organization recognized the COVID-19 outbreak as a pandemic. In response to the COVID-19 pandemic, the governments of many countries, states, cities and other geographic regions have taken actions to prevent the spread of COVID-19, such as imposing travel restrictions and bans, quarantines, social distancing guidelines, shelter-in-place or lock-down orders and other similar limitations which adversely impacted the global economy in 2020. Additional information regarding the impact of the COVID-19 pandemic on our business can be found under the section titled “Recent Market Conditions” included within Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” of this Annual Report on Form 10-K and risks related to the COVID-19 pandemic can be found under Part I, Item 1A, “Risk Factors,” of this Annual Report on Form 10-K.

### **Our Strategy**

Our aspiration is to move money and information in a way that moves the world. Our purpose is to deliver superior value for our clients through leading technology, targeted innovation and excellence in everything we do. We are focused on operating businesses where we have: deep industry expertise that enables us to serve the market with high effectiveness; a strong competitive position, currently or via a clear path in the foreseeable future; long-term, trusted client relationships that are based on recurring services and transactions; differentiated solutions that deliver value to our clients through integration and innovation; and strong management to execute strategies in a disciplined manner. Consistent with this focus, we continue to operate our business in accordance with the following strategic framework:

- *Client Relationship Value.* We plan to increase the number and breadth of our client relationships by, among other actions: continuing to integrate our products and services; introducing new products and services that are aligned with market needs; combining products and services to deliver enhanced, integrated value propositions; and improving the quality of our client service and support.
- *Innovation.* We seek to be an innovation leader, utilizing our assets and capabilities to be at the forefront of our industry and enable our clients to deliver best-in-class results.
- *Operational Effectiveness and Integration of First Data.* We believe we can further improve the quality of our client delivery while reducing our costs by using the opportunities created by our size and scale and by effectively integrating the operations of First Data. By streamlining our overall cost structure, including the rationalization of duplicate costs, we expect to meet or exceed planned cost synergies and improve the quality of products and services that we provide to our clients.
- *Portfolio Management.* We expect to acquire businesses when we identify: a compelling strategic need, such as a product, service or technology that helps meet client demand; an opportunity to change industry dynamics; a way to achieve business scale; or similar considerations. We expect to divest businesses that are not in line with our market, product or financial strategies.

- *Capital Discipline.* We intend to make capital allocation decisions that offer the best prospects for our long-term growth and profitability, which may include, among other matters, internal investment, repayment of debt, repurchases of our own shares or acquisitions.

## **Servicing the Market**

The financial technology industry is highly dynamic, with new innovations entering the market and driving the expectations of our clients globally. The markets for our solutions have specific needs and requirements, with strong emphasis placed by clients on quality, security, service reliability, timely introduction of new capabilities and features, flexibility and value. This requires us to continue our strong emphasis on solution development to meet and exceed the specific needs of our clients. We believe that our financial strength and decades of specialized market knowledge enable us to support our clients to meet their changing preferences. In addition, we believe that our focus on quality, innovation, client service and our commitment of substantial resources to training and technical support helps us to identify and fulfill the needs of our clients.

## **Product Development**

To meet the changing technology needs of our clients, we continually develop, maintain and enhance our products and systems. Our development and technology operations apply the expertise of multiple teams to design, develop and maintain specialized processing systems. Our products and solutions are designed to meet the preferences and diverse requirements of the international, national, regional or local market-specific merchant and financial services environments of our clients. In developing our products, we use current software development principles, such as service-oriented architecture, to create efficiencies, and we stress interaction with and responsiveness to the needs of our clients.

## **Resources**

Our business depends on a variety of resources to operate including products and services provided to us by third parties. For example, we rely on our human capital resources for product development (including product design and coding), sales, operations (including customer service, technology support, security and compliance) and management; access to financial and telecommunication networks; computers, servers, mainframes and other data processing equipment; and Clover POS devices. We periodically review our resource requirements and sources, as well as our relationships with key vendors, to best meet the needs of our business including global sourcing efforts and alternate supplier resourcing. More information regarding our human capital resources can be found below under "Human Capital." We believe we have access to the resources necessary for our current business needs.

## **Intellectual Property**

We regard our software, transaction processing services and related products as proprietary, and we use a combination of patent, copyright, trademark and trade secret laws, internal security practices, employee confidentiality and assignment agreements, and third-party non-disclosure agreements to protect our intellectual property assets. Our patents cover innovations relating to numerous financial software and hardware products and services, and we continue, where appropriate, to seek and secure patents with respect to our ongoing innovations. We believe that we possess all proprietary rights necessary to conduct our business.

## **Competition**

The market for technology products and services in the industries we serve is fragmented, highly competitive, and served by a multitude of large and small firms. Our principal competitors include other vendors and providers of financial services technology and payment systems, data processing affiliates of large companies, processing centers owned or operated as user cooperatives, financial institutions, merchant acquirers, ISOs, ISVs, payments companies and payment network operators. Our competitors also include global and local IT product and services companies and payment service providers and processors. We expect competition to continue to increase as new companies enter our markets and existing competitors expand or consolidate their product lines and services. Some of these competitors possess substantial financial, sales and marketing resources and can compete with us in various ways, including through the use of integrated product offerings and through pricing and long-standing relationships. Depending on the product or service, competitive factors may include quality, security, innovation, breadth or novelty of features and functionality, client satisfaction, market opportunity, integration, agility, global reach, multiple distribution channels, service reliability and performance standards, timely introduction of new products and features, platform scalability and flexibility, and value. We believe that we compete favorably in each of these categories. Additional information about competition in our segments is provided below.

## **Acceptance**

Our Acceptance segment competes with merchant acquirers, including Fidelity National Information Services, Inc. (“FIS”), Global Payments Inc. (“Global Payments”), Nexi Payments S.p.A. and Worldline SA (“Worldline”), as well as with financial institutions that provide acquiring and processing services to businesses on their own, such as Paymentech, LLC, a subsidiary of JPMorgan Chase & Co.; Elavon Inc., a subsidiary of U.S. Bancorp; Barclaycard, a division of Barclays bank; and Bank of America Corporation. In many cases, our alliance and commercial partners, such as ISOs and ISVs, compete against each other. We also compete with merchant services providers like Square, Inc., Adyen N.V. and Stripe, Inc., and in Europe, our Acceptance segment also competes with a growing number of local providers who offer their services in multiple markets in the region. In addition, payment networks, such as Visa Inc. (“Visa”), Mastercard Incorporated (“Mastercard”) and American Express Company, and large technology, media and other providers are increasingly offering products and services that compete with our suite of merchant acquiring solutions.

## **Fintech**

Our products and services in the Fintech segment compete with large, diversified software and service companies and independent suppliers of software products. Existing and potential financial institution clients could also develop and use their own in-house systems. In addition, we compete with vendors that offer similar transaction processing products and services to financial institutions, including Computer Services, Inc., Finastra Limited, FIS, Infosys Ltd., International Business Machines Corporation, Jack Henry and Associates Inc. (“Jack Henry”), NCR Corporation, Oracle Corporation, SAP SE, Global Payments, Temenos AG, Q2 Holdings, Inc. (“Q2”) and nCino, Inc.

## **Payments**

The businesses in our Payments segment primarily compete with businesses that offer consumer payment solutions and a number of payment and card issuer processors, including ACI Worldwide, Inc., FIS, Jack Henry, Mastercard, Paymentus Corporation, PayPal Holdings, Inc., Q2, R.R. Donnelley & Sons Company, Global Payments, Visa, The Western Union Company and Worldline. In addition to traditional payments competitors, large technology, media and other emerging financial technology providers are increasingly seeking to provide alternative payment and financing solutions. Existing and potential financial institution and other corporate clients could also develop and use their own in-house systems or custom-designed solutions instead of our products and services.

## **Government Regulation**

Our operations, and the products and services that we offer, are subject to various U.S. federal, state and local regulation, as well as regulation outside the U.S., and to other rules, such as those promulgated by various payment networks and banking authorities. Failure to comply with these rules and regulations may result in the suspension or revocation of licenses or registrations, the limitation, suspension or termination of service and/or the imposition of civil and criminal penalties, including fines. In addition, we may be required, among other things, to make significant additional investments to comply with such rules and regulations, to modify our products or services or the manner in which they are provided, or to limit or change the amount or types of revenue we are able to generate.

**The Dodd-Frank Act.** The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (“Dodd-Frank Act”) in the U.S. resulted in significant changes to the regulation of the financial services industry. Among other things, the Dodd-Frank Act established the Consumer Financial Protection Bureau (“CFPB”) which is empowered to conduct rule-making and supervision related to, and enforcement of, “federal consumer financial laws,” some of which apply to products and services offered by our clients. The CFPB conducts direct examinations of, and has issued guidance that applies to, “supervised banks and nonbanks” as well as “supervised service providers” like us. The Dodd-Frank Act also: caps debit interchange rates for certain card issuers; prohibits debit payment card networks from restricting card issuers from contracting with other payment card networks; prohibits card issuers and payment networks from restricting the ability of merchants to direct the routing of debit card transactions; requires all debit card issuers in the U.S. to participate in at least two unaffiliated debit payment card networks; and generally prohibits network exclusivity arrangements for prepaid card and healthcare debit card issuers. These regulations impact our card processing businesses and our clients’ ability to generate revenue.

**Financial Institution Regulations.** Because a number of our businesses provide data processing services for financial institutions, we are subject to examination by the U.S. Federal Financial Institutions Examination Council (“FFIEC”), which is a formal interagency body empowered to examine significant service providers to financial institutions. The member agencies of the FFIEC include the Federal Reserve Board, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the National Credit Union Administration, and the CFPB. We are also subject to examination by the first three of these agencies which refer to themselves as the Federal Banking Agencies when acting together. A subsidiary that engages in

certain trust activities is subject to regulation, examination, and oversight by the Division of Banking of the Colorado Department.

Under the Second Payment Services Directive (2015/2366/EC) in the European Union (“E.U.”) (PSD2), a number of our subsidiaries hold either payment institution licenses or electronic money licenses in the E.U. member states in which such subsidiaries do business. As payment institutions or electronic money institutions, those subsidiaries are subject to regulation and oversight in the applicable E.U. member states, which includes, among other obligations, a requirement to maintain specified regulatory capital. In addition, several subsidiaries outside of the U.S. provide services such as merchant terminal leasing, debit processing, acquiring, issuing, factoring and/or settlement that make them subject to regulation by financial services supervisory agencies, including the Financial Conduct Authority (“FCA”) in the United Kingdom (“U.K.”), the Federal Financial Supervision Agency in Germany, the National Bank of Poland, the Reserve Bank of Australia, and the Monetary Authority of Singapore.

**Association and Network Rules.** We are subject to rules of Mastercard, Visa, INTERAC, PULSE and other payment networks. In order to provide processing services, a number of our subsidiaries are registered with Visa and/or Mastercard as service providers for member institutions. A number of our subsidiaries outside the U.S. are direct members or associate members of Visa and Mastercard for purposes of conducting merchant acquiring. Various subsidiaries are also processor level members of numerous debit and electronic benefits transaction networks or are otherwise subject to various network rules in connection with processing services and other services we provide. As such, we are subject to applicable card association, network and national scheme rules that could subject us to fines or penalties. We are subject to network operating rules promulgated by Nacha relating to payment transactions processed by us using the ACH network and to various federal and state laws regarding such operations, including laws pertaining to electronic benefits transactions.

**Privacy and Information Security Regulations.** We provide services that are subject to various federal, state and foreign privacy laws and regulations, as well as association and network privacy rules, which govern, among other things, the collection, processing, storage, deletion, use and disclosure of personal information. These laws and rules contain a variety of obligations including the safeguarding of personal information, the provision of notices and use and disclosure rights. The regulations and rules are complex and evolving and can provide for significant penalties or the suspension or termination of our member registrations or certifications for non-compliance.

In the U.S., we are subject to various federal and state privacy and security laws. The U.S. Gramm-Leach-Bliley Act (“GLBA”) requires financial institutions to explain their information sharing practices to their customers and to safeguard sensitive data. We are subject to the GLBA and have privacy and security obligations to our clients who are regulated by the GLBA. The U.S. Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), together with the HIPAA Privacy Rule, governs the use and disclosure of protected health information in healthcare treatment, payment and operations by covered entities. We have obligations under the California Consumer Privacy Act (the “CCPA”), which gives California consumers more control over the personal information businesses hold about them, as both a “business” and as a “service provider.” We are also subject to the U.S. Federal Trade Commission (“FTC”) Act, which empowers the FTC to prohibit unfair and deceptive privacy practices. In addition to the FTC Act, the FTC is also responsible for overseeing and enforcing the privacy provisions over certain aspects of the GLBA and the Fair Credit Reporting Act (“FCRA”), each of which is applicable to our businesses in certain circumstances. We are also subject to the separate security breach notification laws of each of the 50 states, the District of Columbia, Guam, Puerto Rico and the U.S. Virgin Islands.

In the E.U., we are subject to the General Data Protection Regulation (“GDPR”), a comprehensive approach to personal data protection with enforcement that can lead to penalties of up to the greater of twenty million Euro or four percent of a company’s global revenue. With the U.K.’s exit from the E.U. Single Market and Customs Union on December 31, 2020, there is uncertainty surrounding transfers of personal data from the E.U. to the U.K. There are currently transitional provisions in place stating that transfers of personal data from the E.U. to the U.K. will not be considered transfers of personal data to a third country for a transitional period of up to six months from January 1, 2021. If the transitional period ends without an appropriate resolution, transfers of personal data to the U.K. may be impacted. There are numerous additional privacy laws and regulations that apply to our businesses around the world which can provide for significant penalties. Some of these data protection laws, including the GDPR, restrict the international transfer of personal data absent lawfully recognized transfer mechanisms which can differ depending on the countries to which the data is being transferred.

**Money Transmission and Payment Instrument Licensing and Regulations.** We are subject to various U.S. federal, state and foreign laws and regulations governing money transmission and the issuance and sale of payment instruments, including some of our prepaid products. In the U.S., most states license money transmitters and issuers of payment instruments. Many states exercise authority over the operations of our services related to money transmission and payment instruments and, as part of this authority, subject us to periodic examinations. Many states require money transmitters, issuers of payment instruments and

their agents to comply with federal and state anti-money laundering laws and regulations and often require the licensee to maintain certain levels of net worth.

**Credit Reporting and Debt Collections Regulations.** TeleCheck, our check acceptance business, is subject to FCRA and various similar state laws. The collection business within our subsidiary TRS Recovery Services, Inc. (“TRS”) is subject to the U.S. federal Fair Debt Collection Practices Act and various similar state laws. TRS maintains licenses in a number of states in order to engage in collection in those states. TeleCheck and TRS are also subject to regulation, supervision and examination from the CFPB. Additional regulations may be imposed in the future, including laws regulating activities with respect to current or emerging technology such as automated dialers or pre-recorded messaging or calls to cellular phones, which could impair the collection by TRS of returned checks and those purchased under TeleCheck’s guarantee services. Moreover, reducing or eliminating access to or the use of certain information or proscribing the maintenance or use of consumer databases could reduce the effectiveness of TeleCheck’s risk management tools or otherwise increase its costs of doing business. In addition, several of our subsidiaries are subject to comparable local laws regarding collection activities and obtaining credit reports and our U.K. subsidiary described above also holds FCA licenses for debt collection activities.

**Unfair Trade Practice Regulations.** We and our clients are subject to various federal, state and foreign laws prohibiting unfair or deceptive trade practices. Various regulatory enforcement agencies, including the FTC and state attorneys general, have authority to take action against parties that engage in unfair or deceptive trade practices or violate other laws, rules and regulations. If we process payments for a merchant or other client in violation of laws, rules and regulations, we could be subject to enforcement actions and incur losses and liabilities that may impact our business.

**Anti-Money Laundering, Anti-Bribery, and Sanctions Regulations.** We are subject to anti-money laundering laws and regulations, including the Bank Secrecy Act (the “BSA”). Among other things, the BSA requires money services businesses (such as money transmitters, issuers of money orders and official checks, and providers of prepaid access) to develop and implement anti-money laundering programs. Our acquiring businesses outside the U.S. are subject to anti-money laundering laws and regulations in the countries where they operate. Our Money Network Financial, LLC subsidiary provides prepaid access for various open loop prepaid programs for which it is the program manager and therefore must meet the requirements of the Financial Crimes Enforcement Network.

We are subject to anti-corruption laws and regulations, including the U.S. Foreign Corrupt Practices Act (“FCPA”) and similar laws outside of the U.S. such as the U.K. Bribery Act, that prohibit the making or offering of improper payments to foreign government officials and political figures. The FCPA has a broad reach and requires maintenance of appropriate records and adequate internal controls to prevent and detect possible FCPA violations.

We are also subject to certain economic and trade sanctions programs that are administered by the U.S. Treasury Department’s Office of Foreign Assets Control (“OFAC”), which prohibit or restrict transactions to or from, or dealings with, specified countries, governments, individuals and entities that are specially-designated nationals of those countries, including narcotics traffickers and terrorists or terrorist organizations. Other group entities may be subject to additional local sanctions requirements in other relevant jurisdictions.

Similar anti-money laundering, counter terrorist financing and proceeds of crime laws apply to movements of currency and payments through electronic transactions and to dealings with persons specified in lists maintained by the country equivalents to OFAC lists in several other countries and require specific data retention obligations to be observed by intermediaries in the payment process. Our businesses in those jurisdictions are subject to those data retention obligations.

**Communications Laws.** We are subject to various federal and state laws that govern telephone calls and the issuance of text messages to clients and consumers in the U.S. as well as to regulations that impose requirements on marketing emails sent to U.S. residents. Our international subsidiaries are subject to equivalent laws in applicable jurisdictions.

**Indirect Regulatory Requirements.** A number of our clients are subject to various regulations and compliance obligations that do not apply directly to us but impact the services that we provide to our clients. To remain competitive, we have expended, and expect to expend in the future, significant resources to develop and update our products and services to assist our clients to meet various compliance obligations. In addition, independent auditors annually review many of our operations to provide internal control evaluations for our clients and their auditors.

## **Human Capital**

As of December 31, 2020, we had over 44,000 employees worldwide, approximately 17,000 of whom were employed outside the U.S. Successful execution of our strategy depends on attracting, developing and retaining highly qualified talent at all levels of our organization. We do this by focusing on our commitment to diversity and inclusion and employee development, retention, engagement and well-being.



## ***Diversity and Inclusion***

We are committed to cultivating a diverse, respectful and inclusive workplace. In 2020, we undertook a series of initiatives comprising our “Forward Together” plan to enhance our existing diversity and inclusion programs. Through this plan, we committed to:

- Improve diversity at all levels across the organization, including increasing the representation of women and minorities in leadership positions, requiring consideration of diverse candidates for senior leadership positions, dedicating talent acquisition resources focused on hiring diverse individuals and deepening relationships with historically Black colleges and universities, industry networks, and military and veterans’ organizations;
- Increase employee awareness through: education and participation in diversity and inclusion programs, such as inclusive leader assessment and coaching program to develop the competencies necessary to create an inclusive workplace; our Forward Together Accountability Pledge pursuant to which our senior leaders commit to advance our Forward Together plan; eight Employee Resource Groups (“ERGs”) across 10 countries for associates to connect, support each other and elevate their professional development; and a host of diversity and inclusion training courses available to all employees;
- Invest \$50 million to support Black- and minority-owned small businesses through financial assistance, technology solutions, strategic partnership and subject matter expertise; and
- Strengthen partnerships with organizations focused on human rights, racial equity and social justice including work by our ERGs with community organizations and groups to provide mentorship opportunities and serve as force multipliers for talent acquisition, employee engagement and diversity efforts.

## ***Development and Retention***

We are committed to creating a high-performance culture that consistently delivers excellence for our clients and long-term value for our shareholders while providing a workplace experience for our employees that values leadership, innovation, diversity and collaboration. Our performance management process promotes differentiation based on contributions toward our strategic business objectives and overall success. Career development is an important part of our overall value proposition for employees. We provide employees with opportunities to grow, regardless of job level, within the organization including through targeted online learning, our Leading Women program designed to accelerate the professional growth of female top talent, our Leading Fiserv program designed to develop critical leadership skills for frontline managers, and our Vision to Results leadership program focused on driving our One Fiserv approach to enterprise goals. We also focus on internal mobility and redeployment to ensure we provide talented employees the best opportunity for internal success while retaining their skill sets.

## ***Engagement***

To assess employee engagement, we seek and collect employee feedback through our annual Your Voice employee engagement survey, distributed to all associates worldwide. The survey focuses on the following categories: Engagement; Manager Effectiveness; Client Experience; Trust; Diversity and Inclusion; Communication and Teamwork; and Well-Being. More than 90% of our associates responded to the survey in 2020. Our engagement scores improved over the prior year and were higher than the comparable average benchmarks, most landing in the top decile of companies surveyed. These results are particularly notable given that the survey was completed in the midst of driving a transformational corporate integration and the global COVID-19 pandemic, which manifested in most of our associates working remotely. In addition to assessing engagement, the survey results enable us to gain insight into employee perspectives and issues which we use to enhance processes, set priorities and respond quickly to associate concerns.

## ***Well-Being and Safety***

We are focused on delivering a comprehensive and competitive benefits offering as part of our total rewards strategy. We provide associates with access to a holistic suite of well-being programs and benefits focused on physical, financial, social and emotional resources. These programs are supported by complementary policies such as paid parental and military service leave policies.

In response to the COVID-19 pandemic, we have taken a number of actions to protect the health, safety and well-being of our employees while continuing to serve our clients. These actions include, among others, requiring most of our employees to work

remotely, suspending non-essential travel, suspending all non-essential visitors to our facilities, disinfecting facilities and workspaces extensively and frequently, providing personal protective equipment to employees and requiring employees who must be present at our facilities to adhere to a variety of safety protocols. We expanded paid time-off for employees impacted by COVID-19, provided increased pay for certain employees involved in critical infrastructure who could not work remotely, and expanded our Fiserv Cares program to benefit employees in need around the world. We expect to continue such safety and wellness measures for the foreseeable future and may take further actions, or adapt these existing policies, as government authorities may require or recommend or as we may determine to be in the best interest of our employees, clients, vendors and shareholders.

### **Available Information**

Our website address is [www.fiserv.com](http://www.fiserv.com). We are not including the information provided on our website as a part of, or incorporating it by reference into, this Annual Report on Form 10-K. We make available free of charge (other than an investor's own internet access charges) through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to these reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the Securities and Exchange Commission.

### **Item 1A. Risk Factors**

You should carefully consider each of the risks described below, together with all of the other information contained in this Annual Report on Form 10-K, before making an investment decision with respect to our securities. If any of the following risks develop into actual events, our business, results of operations or financial condition could be materially and adversely affected, and you may lose all or part of your investment.

#### ***Competitive and Business Risks***

**We operate in a competitive business environment and may not be able to compete effectively.**

The markets for our products and services are highly competitive from new and existing competitors. Our principal competitors include other vendors and providers of financial services technology and payment systems, data processing affiliates of large companies, processing centers owned or operated as user cooperatives, financial institutions, independent sales organizations ("ISOs"), independent software vendors, payments companies and payment network operators. Our competitors vary in size and in the scope and breadth of the services they offer. Many of our larger existing and potential clients have historically developed their key applications in-house. As a result, we may compete against our existing or potential clients' in-house capabilities. In addition, we expect that the markets in which we compete will continue to attract new technologies and well-funded competitors, including large technology, telecommunication, media and other companies not historically in the financial services and payments industries, start-ups and international providers of products and services similar to ours. In addition, participants in the financial services, payments and technology industries may merge, create joint ventures or engage in other business combinations, alliances and consolidations that may strengthen their existing business services or create new payment services that compete with our services. We cannot provide any assurance that we will be able to compete successfully against current or future competitors or that competitive pressures faced by us in the markets in which we operate will not materially and adversely affect our business, results of operations and financial condition.

**If we fail to keep pace with technological change, we could lose clients or have trouble attracting new clients, and our ability to grow may be limited.**

The markets for our products and services are characterized by constant and rapid technological change, frequent introduction of new products and services, and increasing client expectations. Our ability to enhance our current products and services and to develop and introduce innovative products and services will significantly affect our future success. We may not be successful in developing, marketing or selling new products and services that meet these demands or achieve market acceptance. We must anticipate and respond to these changes in order to remain competitive within our relevant markets. For example, our ability to provide innovative point-of-sale technology to our merchant clients could have an impact on our merchant acquiring business, and new services and technologies that we develop may be impacted by industry-wide solutions and standards related to tokenization or other safety, fraud prevention and security technologies. If we are unable to anticipate or respond to technological changes or evolving industry standards on a timely basis, our ability to remain competitive could be materially adversely affected. In addition, the success of certain of our products and services rely, in part, on financial institutions, corporate and other third parties to promote the use of our products and services by their customers. If we are unsuccessful in offering products or services that gain market acceptance and compete effectively, or if third parties insufficiently promote our products and services, it would likely have a material adverse effect on our ability to retain existing clients, to attract new ones and to grow profitably.



**If we are unable to renew client contracts at favorable terms, we could lose clients and our results of operations and financial condition may be adversely affected.**

Failure to achieve favorable renewals of client contracts could negatively impact our business. At the end of the contract term, clients have the opportunity to renegotiate their contracts with us or to consider whether to engage one or more of our competitors to provide products and services or to perform the services in-house. Some of our competitors may offer more attractive prices, features or other services that we do not offer, and some clients may desire to perform the services themselves. Larger clients may be able to seek lower prices from us when they renew or extend a contract or the client's business has significant volume changes. In addition, larger clients may reduce the services we provide if they decide to move services in-house. Further, our small merchant business clients may seek reduced fees due to pricing competition, their own financial condition, or pressures from their customers. On some occasions, these factors result in lower revenue from a client than we had anticipated based on our previous agreement with that client. If we are not successful in achieving high renewal rates and favorable contract terms, our results of operations and financial condition may be materially and adversely affected.

**Our business depends, in part, on our merchant relationships and alliances, and if we are unable to maintain these relationships and alliances, our business may be adversely affected.**

Under our alliance program, a bank or other institution forms an alliance with us, generally on an exclusive basis, either contractually or through a separate legal entity. Merchant contracts may be contributed to the alliance by us and/or the bank or institution. The banks and other institutions generally provide card association sponsorship, clearing and settlement services and typically act as a merchant referral source when the institution has an existing banking or other relationship with such merchant. We provide transaction processing and related functions to the alliance. Both we and our alliance partners may also provide management, sales, marketing and other administrative services. The alliance structure allows us to be the processor for multiple financial institutions, any one of which may be selected by the merchant as its bank partner. Our merchant acquiring business depends, in part, on our merchant relationships, alliances and other distribution channels. There can be no guarantee that we will achieve growth in our merchant relationships, alliances or other distribution channels. In addition, our contractual arrangements with merchants and merchant alliance partners are for fixed terms and may allow for early termination upon the occurrence of certain events. There can be no assurance that we will be able to renew our contractual arrangements with these merchants or merchant alliance partners on similar terms or at all. The loss of merchant relationships or alliance partners could negatively impact our business and have a material adverse effect on our results of operations and financial condition.

**Changes in card association and debit network fees or products could increase costs or otherwise limit our operations.**

From time to time, card associations and debit networks, including the card networks which we own and operate, increase the processing and other fees (including what is commonly called "interchange fees") that they charge. It is possible that competitive and other pressures will result in us absorbing a portion of such increases in the future, or not being able to increase our own fees, which would increase our operating costs, reduce our profit margin, limit our growth, and adversely affect our business, results of operations and financial condition. In addition, the various card associations and networks prescribe certain capital requirements. Any increase in the capital level required would further limit our use of capital for other purposes.

**Consolidations in the banking and financial services industry could adversely affect our revenue by eliminating existing or potential clients and making us more dependent on fewer clients.**

Mergers, consolidations and failures of financial institutions reduce the number of our clients and potential clients, which could adversely affect our revenue. If our clients merge with or are acquired by other entities that are not our clients, or that use fewer of our services, they may discontinue or reduce their use of our services. Our alliance strategy could also be negatively affected by consolidations, especially where the financial institutions involved are committed to their internal merchant processing businesses that compete with us. It is also possible that the larger financial institutions that result from mergers or consolidations could have an increased ability to negotiate terms with us or could decide to perform in-house some or all of the services which we currently provide or could provide. Any of these developments could have a material adverse effect on our business, results of operations and financial condition.

***Operational and Security Risks***

**Security incidents or other technological risks involving our systems and data, or those of our clients, partners or vendors, could expose us to liability or damage our reputation.**

Our operations depend on receiving, storing, processing and transmitting sensitive information pertaining to our business, our employees, our clients and their customers. Under the card network rules, various federal, state and international laws, and client contracts, we are responsible for information provided to us by financial institutions, merchants, ISOs, third-party service providers and others. The confidentiality of such sensitive business information and personal consumer information residing on

our systems is critical to our business. Any unauthorized access, intrusion, infiltration, network disruption, denial of service or similar incident could disrupt the integrity, continuity, security and trust of our systems or data, or the systems or data of our clients, partners or vendors. These incidents are often difficult to detect and are constantly evolving. We expect that unauthorized parties will continue to attempt to gain access to our systems or facilities, and those of our clients, partners and vendors, through various means and with increasing sophistication. These events could create costly litigation, significant financial liability, increased regulatory scrutiny, financial sanctions and a loss of confidence in our ability to serve clients and cause current or potential clients to choose another service provider, all of which could have a material adverse impact on our business. In addition, we expect to continue to invest significant resources to maintain and enhance our information security and controls or to investigate and remediate any security vulnerabilities. Although we believe that we maintain a robust program of information security and controls and that none of the events that we have encountered to date have materially impacted us, we cannot be certain that the security measures and procedures we have in place to detect security incidents and protect sensitive data, including protection against unauthorized access and use by our employees, will be successful or sufficient to counter all current and emerging technological risks and threats. The impact of a material event involving our systems and data, or those of our clients, partners or vendors, could have a material adverse effect on our business, results of operations and financial condition.

**Operational failures and resulting interruptions in the implementation or availability of our products or services could harm our business and reputation.**

Our business depends heavily on the reliability of our processing and other systems. An operational failure and the resulting implementation delays or service interruption could harm our business or cause us to lose clients. An operational failure could involve the hardware, software, data, networks or systems upon which we rely to deliver our services and could be caused by our actions, the actions of third parties or events over which we may have limited or no control. Events that could cause operational failures include, but are not limited to, hardware and software defects or malfunctions, computer denial-of-service and other cyberattacks, human error, earthquakes, hurricanes, floods, fires, natural disasters, pandemics, power losses, disruptions in telecommunications services, fraud, military or political conflicts, terrorist attacks, computer viruses or other malware, or other events. In the event of operational failures or damage or disruption to our business due to these occurrences, we may not be able to successfully or quickly recover all of our critical business functions, assets and data through our business continuity program. Implementation delays, interruptions of service or hardware device defects could damage our relationship with clients and could cause us to incur substantial expenses, including those related to the payment of service credits, product recalls or other liabilities. A prolonged interruption of our services or network could cause us to experience data loss or a reduction in revenue, and significantly impact our clients' businesses and the customers they serve. In addition, a significant implementation delay, interruption of service or product recall could have a negative impact on our reputation and could cause our current and potential clients to choose another service provider. As a provider of payments solutions and other financial services, clients, regulators and others may require specific business continuity and disaster recovery plans including frequent testing of such plans. Meeting these various requirements may require a significant investment of time and money. Any of these developments could have a material adverse impact on our business, results of operations and financial condition.

**Disruptions of operations of other participants in the global financial system could prevent us from delivering our products and services.**

The operations and systems of many participants in the global financial system are interconnected. Many of the transactions involving our products and services rely on multiple participants in the global financial system to move funds and communicate information to the next participant in the transaction chain. A disruption for any reason of the operations of a participant in the global financial system could impact our ability to obtain or provide information or cause funds to be moved in a manner to successfully deliver our products and services. Although we work with other participants to avoid any disruptions, there is no assurance that such efforts will be effective. Such a disruption could lead to our inability to deliver products and services, reputational damage, lost clients and revenue, loss of clients' and their customers' confidence, as well as additional costs, all of which could have a material adverse effect on our business, results of operations and financial condition.

**We rely on third parties to provide products and services and if we are unable to obtain such products or services in the future or if these third parties fail to perform these services adequately, our business may be materially and adversely affected.**

We rely on third parties we do not control to provide us with products and services, including payment card networks, acquiring processors, payment card issuers, financial institutions and the Automated Clearing House ("ACH") network which transmit transaction data, process chargebacks and refunds, and perform clearing services in connection with our settlement activities. If, for example, such third parties stop providing clearing services or limit our volumes, we would need to find other financial institutions to provide those services. In the event these third parties fail to provide these services adequately or in a timely manner, including as a result of errors in their systems or events beyond their control, or refuse to provide these services on

terms acceptable to us or at all, and we are not able to find timely suitable alternatives, we may no longer be able to provide certain services to customers, which could expose us and our clients to information security, financial, compliance and reputational risks, among others, and have a material adverse effect on our results of operations and financial condition. In addition, if we are unable to renew our existing contracts with key vendors and service providers, we might not be able to replace the related product or service at all or at the same cost, which would negatively impact our results of operations.

**We may experience software defects, development delays or installation difficulties, which would harm our business and reputation and expose us to potential liability.**

Our services are based on sophisticated software and computer systems and we may encounter delays when developing new applications and services. Further, the software underlying our services may contain undetected errors or defects when first introduced or when new versions are released. We may also experience difficulties in installing or integrating our technology on systems or with other programs used by our clients. Defects in our software, errors or delays in the processing of electronic transactions or other difficulties could result in interruption of business operations, delay in market acceptance, additional development and remediation costs, diversion of technical and other resources, loss of clients or client data, negative publicity or exposure to liability claims. Although we attempt to limit our potential liability through disclaimers and limitation of liability provisions in our license and client agreements, we cannot be certain that these measures will successfully limit our liability.

### ***COVID-19 Pandemic Risks***

**Our business has been, and is likely to continue to be, adversely impacted by the coronavirus (COVID-19) pandemic.**

In response to the COVID-19 pandemic, the governments of many countries, states, cities and other geographic regions have taken actions to prevent the spread of COVID-19, such as imposing travel restrictions and bans, quarantines, social distancing guidelines, shelter-in-place or lock-down orders and other similar limitations. These measures have, among other matters, negatively impacted consumer and business spending and, as a result, our operating performance, primarily within our merchant acquiring and payment-related businesses, which earn transaction-based fees. The pandemic may continue to negatively impact transaction volumes, create economic uncertainty and financial market volatility, reduce economic activity, increase unemployment and cause a decline in consumer and business confidence, and could in the future further negatively impact the demand for our products and services, including merchant acquiring and payment processing. Ultimately, the extent of the impact of the COVID-19 pandemic on our future operational and financial performance will depend on, among other matters, the duration and intensity of the pandemic; the level of success of global vaccination efforts; governmental and private sector responses to the pandemic and the impact of such responses on us; and the impact of the pandemic on our employees, clients, vendors, operations and sales, all of which are uncertain and cannot be predicted.

Additional factors that could negatively impact us include:

- Payment processing risks associated with disruptions to merchant activity and business failures including chargeback risk. As an unprecedented number of merchants have been required to suspend or terminate their operations, there may be an increase in consumer chargebacks associated with processed transactions that merchant clients have submitted but have not fulfilled. Merchants may be unable to fund these chargebacks, potentially resulting in losses to us;
- Client payment risks. Clients may require additional time to pay us or fail to pay us at all, which could significantly increase the amount of accounts receivable and require us to record additional allowances for doubtful accounts. If clients cease operations or file for bankruptcy protection, we may experience lower revenue and earnings and have greater exposure to future transaction declines;
- Increased cyber and payment fraud risk, as cybercriminals attempt to profit from the disruption given increased online banking, e-commerce and other online activity;
- Disruption to our supply chain and third-party delivery service providers, including if the factories that manufacture our point-of-sale devices are temporarily closed or experience workforce shortages, if shipping services are interrupted or delayed, or if there are workforce shortages at our or third-party customer support, software development or technology hosting facilities;
- Increased risk of failing to meet client contractual obligations, including due to government orders or other restrictions that limit or prohibit us from providing client-facing services from regular service locations or the failure of our business continuity plans, which could cause loss of revenue, contractual penalties or potential legal disputes and associated costs; and
- Challenges to the availability and reliability of our solutions and services due to changes to normal operations, including the possibility of one or more clusters of COVID-19 cases occurring at our data, call or operations centers,

affecting our employees or affecting the systems or employees of our clients or other third parties on which we depend.

The COVID-19 pandemic has caused us to modify our business practices, including requiring a majority of our employees to work remotely, suspending non-essential travel, suspending all non-essential visitors to our facilities, disinfecting facilities and workspaces extensively and frequently, providing personal protective equipment to associates and requiring employees who must be present at our facilities to adhere to a variety of safety protocols. We expect to continue such safety measures for the foreseeable future and may take further actions, or adapt these existing policies, as government authorities may require or recommend or as we may determine to be in the best interest of our employees, clients and vendors. Such measures may impact our productivity or effectiveness, and there is no certainty that such measures will be sufficient to mitigate the risks posed by the COVID-19 pandemic, including the risks to the health of our employees. Further, the ability of our employees to get to work has been disrupted across multiple locations, both with respect to their own offices and client sites, due among other things to government work and travel restrictions, including mandatory shutdowns.

In response to the COVID-19 pandemic, federal, state, local and foreign governments have issued emergency orders and a significant number of new laws and regulations in a short period of time. These actions have impacted our current operations, including with respect to collection and consumer credit reporting activities, and we have experienced an increased volume of client support requests because many of the new laws impact our clients. We could be required to expend additional resources and incur additional costs to address regulatory requirements applicable to us or our clients, and we may not have the capacity to implement necessary changes within the times prescribed by applicable laws. There could be government initiatives to reduce or eliminate payments, costs or fees to merchants, or fees or other sources of revenue to financial institutions. Regulations may be unclear, difficult to interpret or in conflict with other applicable regulations. As a result, we may have to make judgments about how to comply with these new laws and regulators may not ultimately agree with how we implement applicable regulations. Failure to comply with any of these laws and regulations, including changing interpretations and the implementation of new, varying or more restrictive laws and regulations by federal, state, local or foreign governments, may result in financial penalties, lawsuits, reputational harm or change the manner in which we or our clients currently conduct some aspects of our business. In addition, during times of economic stress, there tends to be greater regulatory and governmental scrutiny of actions taken in response to such stress and an increased risk of both governmental and third-party litigation.

A lack of further recovery or deterioration in economic and market conditions resulting from the COVID-19 pandemic could negatively impact our ability to generate earnings and cash flows sufficient to service debt and meet lease and other obligations as they come due or to meet our financial debt covenants. The pandemic could also make obtaining financing more difficult or expensive, and our ability to access the long-term debt markets on favorable interest rate and other terms will depend on market conditions and the ratings assigned by the credit rating agencies to our indebtedness.

There are no comparable recent events that provide guidance as to the impacts the COVID-19 pandemic may continue to have, and, as a result, the ultimate impacts are highly uncertain and subject to change. The extent to which the pandemic or any resulting worsening of the global business and economic environment adversely impacts our business, results of operations, liquidity and financial condition will depend on future developments, which are highly uncertain and are difficult to predict, including, but not limited to, the duration and intensity of the COVID-19 pandemic, the actions taken to contain or limit the pandemic, including whether vaccination efforts are successful, and how quickly and to what extent pre-pandemic economic and operating conditions can resume. These factors may remain prevalent for a significant period of time even after the pandemic subsides, including due to a continued or prolonged recession in the U.S. or other major economies. The impacts of the COVID-19 pandemic could have a material adverse effect on our business, results of operations, liquidity or financial condition and heighten or exacerbate risks described in this Annual Report on Form 10-K.

#### ***Global Market Risks***

**Our business may be adversely affected by geopolitical and other risks associated with operations outside of the U.S. and, as we continue to expand internationally, we may incur higher than anticipated costs and may become more susceptible to these risks.**

We offer merchant acquiring, processing and issuing services outside of the U.S., including in the U.K., Germany, Argentina, India and Brazil. Our facilities outside of the U.S., and those of our suppliers and vendors, including manufacturing, customer support, software development and technology hosting facilities, are subject to risks, including natural disasters, public health crises, political crises, terrorism, war, political instability and other events outside of our or our suppliers' control. As we expand internationally and grow our client base outside of the U.S., we may face challenges due to the presence of more established competitors and our lack of experience in such non-U.S. markets, and we may incur higher than anticipated costs. If we are unable to successfully manage the risks associated with the international operation and expansion of our business, our results of operations and financial condition could be negatively impacted.

**The United Kingdom’s withdrawal from the European Union Single Market and Customs Union as part of the process known as “Brexit” could adversely affect our results of operations.**

Effective December 31, 2020, the U.K. left the E.U. Single Market and Customs Union and also ceased to be subject to international agreements the E.U. is a party to. On December 24, 2020, the E.U. and the U.K. agreed to the terms of a trade and cooperation agreement which sets out the terms of their future relationship (the “Trade Agreement”). As a result, and subject to the terms of the Trade Agreement, the rules of the E.U. Single Market and Customs Union relating to the free movement of persons, goods, services and capital between the U.K. and the E.U. ended, and the E.U. and the U.K. formed two separate markets and two distinct regulatory and legal spaces. Brexit may, among other outcomes, and subject to the terms of the Trade Agreement, disrupt the free movement of goods, services, data and people between the U.K. and the E.U., undermine bilateral cooperation in key policy areas, and significantly disrupt trade between the U.K. and the E.U. In addition, Brexit may lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines, going forward and subject to the terms of the Trade Agreement, which E.U. laws and regulations to maintain and which to amend or replace. The effects of Brexit will depend in part on any agreements, in addition to the Trade Agreement, which the E.U. and the U.K. reach to allow the U.S. and the E.U. to retain access to each other’s markets in areas not covered by the Trade Agreement.

The Trade Agreement offers U.K. and E.U. businesses preferential access to each other’s markets, ensuring imported goods will be free of tariffs and quotas. However, economic relations between the U.K. and the E.U. will now be on more restricted terms than existed previously. The Trade Agreement does not incorporate the full scope of the services sector, and businesses such as banking and finance face a more uncertain future. The U.K. and E.U. plan to put in place a regulatory dialogue on financial services based on a separate memorandum of understanding (“MoU”). Talks on the MoU are expected to begin by March 2021. At this time, we cannot predict the impact that the Trade Agreement and any future agreements on services, including the MoU, will have on our business and our clients, and it is possible that the terms of any new agreements (or a failure to reach such agreements) may adversely affect our operations and financial results. Given the lack of comparable precedent, it is unclear what financial, trade and legal implications the withdrawal of the U.K. from the E.U. will have and how such withdrawal will affect us.

In addition, Brexit may create additional uncertainty in currency exchange rate fluctuations that may result in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. We translate revenue denominated in foreign currency into U.S. dollars for our financial statements. During periods of a strengthening U.S. dollar, our reported international revenue and profit is reduced because foreign currencies translate into fewer U.S. dollars. Any of these effects of Brexit, among others, could materially adversely affect our relationships with our existing and future clients and vendors, which could have an adverse effect on our business, results of operations and business opportunities.

**Our business may be adversely impacted by U.S. and global market and economic conditions.**

For the foreseeable future, we expect to continue to derive revenue primarily from products and services we provide to the financial services industry and our merchant acquiring business. Given this focus, we are exposed to global economic conditions and adverse economic trends may accelerate the timing, or increase the impact of, risks to our financial performance. Such trends may include, but are not limited to, the following:

- declining economies, foreign currency fluctuations, social unrest, natural disasters, public health crises, including the occurrence of a contagious disease or illness, and the pace of economic recovery can change consumer spending behaviors, such as cross-border travel patterns, on which a significant portion of our revenues are dependent;
- low levels of consumer and business confidence typically associated with recessionary environments and those markets experiencing relatively high inflation and/or unemployment, may cause decreased spending by cardholders;
- budgetary concerns in the U.S. and other countries around the world could affect the U.S. and other specific sovereign credit ratings, impact consumer confidence and spending, and increase the risks of operating in those countries;
- emerging market economies tend to be more volatile than the more established markets we serve in the U.S. and Europe, and adverse economic trends, including high rates of inflation, may be more pronounced in such emerging markets;
- financial institutions may restrict credit lines to cardholders or limit the issuance of new cards to mitigate cardholder defaults;
- uncertainty and volatility in the performance of our clients’ businesses may make estimates of our revenues, rebates, incentives, and realization of prepaid assets less predictable;
- our clients may decrease spending for value-added services; and

- government intervention, including the effect of laws, regulations, and/or government investments in our clients, may have potential negative effects on our business and our relationships with our clients or otherwise alter their strategic direction away from our products.

A weakening in the economy or competition from other retailers could also force some retailers to close, resulting in exposure to potential credit losses and declines in transactions, and reduced earnings on transactions due to a potential shift to large discount merchants. Additionally, credit card issuers may reduce credit limits and become more selective in their card issuance practices.

A prolonged poor economic environment could result in significant decreases in demand by current and potential clients for our products and services and in the number and dollar amount of transactions we process or accounts we service, which could have a material adverse effect on our business, results of operations and financial condition.

**Potential tariffs or trade wars could increase the cost of our products, which could adversely impact the competitiveness of our products and our financial results.**

The U.S. has imposed tariffs on certain imports from China, including on some of our hardware devices manufactured in China. If the U.S. administration imposes additional tariffs, or if additional tariffs or trade restrictions are implemented by the U.S. or other countries, our hardware devices produced in China could be impacted. Although it is difficult to predict how current or future tariffs on items imported from China or elsewhere will impact our business, the cost of our products manufactured in China and imported into the U.S. or other countries could increase, which in turn could adversely affect the demand for these products and have a material adverse effect on our business and results of operations.

***Regulatory and Compliance Risks***

**If we or third parties with whom we partner or contract fail to comply with applicable laws and regulations, we could be subject to liability and our business could be harmed.**

If we or third parties with whom we partner or contract fail to comply with laws and regulations applicable to our business, including state and federal payment, cybersecurity, consumer protection, trade and data privacy laws and regulations, we could be exposed to litigation or regulatory proceedings, our client relationships and reputation could be harmed, and our ability to obtain new clients could be inhibited, which could have a material adverse impact on our business, results of operations and financial condition. Our clients are also subject to numerous laws and regulations applicable to banks, financial institutions and card issuers in the U.S. and abroad, and, consequently, we are at times affected by these federal, state, local and foreign laws and regulations. These laws and regulations are subject to frequent change, with new laws, regulations and interpretations thereof being implemented.

Certain of our subsidiaries are licensed as money transmitters and are required, among other matters, to demonstrate and maintain certain levels of net worth and liquidity and to file periodic reports. Our direct-to-consumer payments businesses are subject to state and federal regulations in the U.S., including state money transmission regulations, anti-money laundering regulations, economic and trade sanctions administered by the U.S. Treasury Department's Office of Foreign Asset Control ("OFAC") and certain privacy regulations, such as the U.S. Gramm-Leach-Bliley Act. Our Money Network Financial, LLC subsidiary provides prepaid access for various open loop prepaid programs for which it is the program manager and therefore must meet the requirements of the Financial Crimes Enforcement Network. We also have businesses that are subject to credit reporting and debt collection laws and regulations in the U.S. In addition, certain of our subsidiaries are subject to, among others, privacy, anti-money laundering, debt collection, and payment institution or electronic money licensing regulations outside the U.S.

We operate our business around the world, including in certain foreign countries with developing economies where companies often engage in business practices that are prohibited by laws applicable to us, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. These laws prohibit, among other things, improper payments or offers of payments to foreign governments and their officials and political parties for the purpose of obtaining or retaining business. We have implemented policies and training programs to discourage such practices; however, there can be no assurance that all of our employees, consultants and agents will comply with our policies and all applicable laws.

We are also subject to certain economic and trade sanctions programs, including those that are administered by OFAC, which prohibit or restrict transactions to or from, or dealings with, specified countries, their governments, individuals and entities that are specially-designated nationals of those countries, narcotics traffickers and terrorists or terrorist organizations. Similar anti-money laundering, counter terrorist financing and proceeds of crime laws apply to movements of currency and payments through electronic transactions and to dealings with persons specified in lists equivalent to OFAC lists in several other countries



and require specific data retention obligations to be observed by intermediaries in the payment process. Our businesses in those jurisdictions are subject to those data retention obligations.

The volume and complexity of these regulations will continue to increase our cost of doing business. Failure to comply with these laws and regulations, or changes in the regulatory environment, including changing interpretations and the implementation of new, varying or more restrictive laws and regulations by federal, state, local or foreign governments, may result in significant financial penalties, reputational harm, suspension or termination of our ability to provide certain services, or change or restrict the manner in which we currently conduct our business, all of which could have a material adverse impact on our business, results of operations and financial condition.

**If we fail to comply with the applicable requirements of the payment card networks and Nacha, they could seek to fine us, suspend us or terminate our registrations, which could adversely affect our business.**

In order to provide our transaction processing services, several of our subsidiaries are registered with Visa and Mastercard and other networks as members or service providers for member institutions. A number of our subsidiaries outside the U.S. are direct members or associate members of Visa and Mastercard for purposes of conducting merchant acquiring, and various subsidiaries are also processor level members of numerous debit and electronic benefits transaction networks. As such, we are subject to card association and network rules that could subject us or our clients to a variety of fines or penalties that may be levied by the card associations or networks for certain acts or omissions by us, acquiring clients, processing clients or merchants. In addition, we are subject to Nacha rules relating to payment transactions processed by us using the ACH network and to various federal and state laws regarding such operations, including laws pertaining to electronic benefits transactions, as well as the Payment Card Industry Data Security Standard enforced by the major card brands. The rules of Nacha and the card networks are set by their respective boards, some of which are our competitors, and the card network rules may be influenced by card issuers, some of which offer competing transaction processing services.

If we fail to comply with these rules, we could be fined and our member registrations or certifications could be suspended or terminated. The suspension or termination of our member registrations or certifications, or any changes to the association and network rules, that we do not successfully address, or any other action by the card networks to restrict our ability to process transactions over such networks, could limit our ability to provide transaction processing services to clients and result in a reduction of revenue or increased costs of operation, which, in either case, could have a material adverse effect on our business and results of operations.

**A heightened regulatory environment in the financial services industry may have an adverse impact on our clients and our business.**

Since the enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”), a number of substantial regulations affecting the supervision and operation of the financial services industry within the U.S. have been adopted, including those that establish the Consumer Financial Protection Bureau (“CFPB”). The CFPB has issued guidance that applies to, and conducts direct examinations of, “supervised banks and nonbanks” as well as “supervised service providers” like us. In addition, the CFPB regulates consumer financial products and services (including many offered by our clients), restricts debit card fees paid by merchants to certain issuer banks and allows merchants to offer discounts for different payment methods. CFPB rules, examinations and enforcement actions may require us to adjust our activities and may increase our compliance costs. Changes to the Dodd-Frank Act or regulations could adversely impact our debit network business. In addition, certain of our alliance partners are subject to regulation by federal and state authorities and, as a result, could pass through some of those compliance obligations to us.

To the extent this oversight or regulation negatively impacts the business, operations or financial condition of our clients, our business and results of operations could be materially and adversely affected because, among other matters, our clients could have less capacity to purchase products and services from us, could decide to avoid or abandon certain lines of business, or could seek to pass on increased costs to us by negotiating price reductions. Additional regulation, examination and oversight of us could require us to modify the manner in which we contract with or provide products and services to our clients; directly or indirectly limit how much we can charge for our services; require us to invest additional time and resources to comply with such oversight and regulations; or limit our ability to update our existing products and services, or require us to develop new ones. Any of these events, if realized, could have a material adverse effect on our business, results of operations and financial condition.

**Legislative or regulatory initiatives on cybersecurity and data privacy could adversely impact our business and financial results.**

Cybersecurity and data privacy risks have received heightened legislative and regulatory attention. For example, the General Data Protection Regulation (“GDPR”) extends the scope of the E.U. data protection law to all companies processing data of

E.U. residents, regardless of the company's location, subject to certain limitations. The law requires companies to meet stringent requirements regarding the handling of personal data. E.U. data protection law continues to develop and require significant changes to our policies and procedures. In July 2020, the Court of Justice of the European Union issued a decision in the case *Data Protection Commissioner v. Facebook Ireland Limited, and Maximillian Schrems* (the "Schrems II Decision") that invalidated the European Commission's adequacy decision for the E.U.-U.S. Privacy Shield Framework and placed additional safeguards necessary for transfers of personal data to the U.S., requiring companies and regulators to conduct case-by-case analyses to determine whether foreign protections concerning government access to transferred data meet E.U. standards. Our vendors and clients have been directly impacted by the Schrems II Decision, and our ability to transfer data outside the E.U. may be further impacted by the Schrems II Decision and determinations made by regulators in the E.U. We do not yet know the extent of this impact on our operations. We, along with our vendors and customers, rely on Standard Contractual Clauses ("SCCs") to transfer data out of the E.U. If the European Commission requires that new SCCs be signed to replace the existing SCCs, we will need to devote resources to entering into the appropriate SCCs to continue to engage in transfers of data as applicable. In addition, with the U.K.'s exit from the E.U. Single Market and Customs Union on December 31, 2020, there is uncertainty surrounding transfers of personal data from the E.U. to the U.K. The Trade Agreement provides that transfers of personal data from the E.U. to the U.K. will not be considered transfers of personal data to a third country during a transitional period of up to six months from January 1, 2021. If the transition period ends without an appropriate resolution, transfers of personal data from the E.U. to the U.K. may be impacted.

Our efforts to comply with E.U., U.K. and other privacy and data protection laws (such as the California Consumer Privacy Act, the California Privacy Rights Act taking effect in January 2023, the Brazilian General Data Protection Law and South Africa's Protection of Personal Information Act) could involve substantial expenses, divert resources from other initiatives and projects and limit the services we are able to offer. Further, failure to comply with applicable laws in this area could also result in fines, penalties and reputational damage.

In addition, U.S. banking agencies have proposed enhanced cyber risk management standards that would apply to us and our financial institution clients and that would address cyber risk governance and management, management of internal and external dependencies, and incident response, cyber resilience and situational awareness. Several states also have adopted or proposed cybersecurity laws targeting these issues, including the New York Cybersecurity Requirements for Financial Services Companies and the New York Shield Act to protect personal and private data. New York and Washington state have each proposed comprehensive privacy acts to govern the personal data of their residents. The U.S. government has also proposed federal privacy legislation. Legislation and regulations on cybersecurity, data privacy and data localization may compel us to enhance or modify our systems, invest in new systems or alter our business practices or our policies on data governance and privacy. If any of these outcomes were to occur, our operational costs could increase significantly.

**Failure to comply with state and federal antitrust requirements could adversely affect our business.**

Through our merchant alliances, we hold an ownership interest in several competing merchant acquiring businesses while serving as an electronic processor for those businesses. In order to satisfy state and federal antitrust requirements, we actively maintain an antitrust compliance program. Notwithstanding our compliance program, it is possible that perceived or actual violations of state or federal antitrust requirements could give rise to regulatory enforcement investigations or actions. Regulatory scrutiny of, or regulatory enforcement action in connection with, compliance with state and federal antitrust requirements could have a material adverse effect on our reputation and business.

**We may be sued for infringing the intellectual property rights of others.**

Third parties may claim that we are infringing their intellectual property rights. We expose ourselves to additional liability when we agree to defend or indemnify our clients against third-party infringement claims. If the owner of intellectual property establishes that we are, or a client which we are obligated to indemnify is, infringing its intellectual property rights, we may be forced to change our products or services, and such changes may be expensive or impractical, or we may need to seek royalty or license agreements from the owner of such rights. If we are unable to agree on acceptable terms, we may be required to discontinue the sale of key products or halt other aspects of our operations. We may also be liable for financial damages for a violation of intellectual property rights, and we may incur expenses in connection with indemnifying our clients against losses suffered by them. Any adverse result related to violation of third-party intellectual property rights could materially and adversely harm our business, results of operations and financial condition. Even if intellectual property claims brought against us are without merit, they may result in costly and time-consuming litigation and may require significant attention from our management and key personnel.

**Misappropriation of our intellectual property and proprietary rights could impair our competitive position.**

Our ability to compete depends upon proprietary systems and technology. We actively seek to protect our intellectual property and proprietary rights. Nevertheless, unauthorized parties may attempt to copy aspects of our services or to obtain and use



information that we regard as proprietary. The steps we have taken may not prevent misappropriation of technology. Agreements entered into for that purpose may not be enforceable or provide us with an adequate remedy. It is also possible that others will independently develop the same or similar technology. Further, we use open source software in connection with our solutions. Companies that incorporate open source software into their solutions have, from time to time, faced claims challenging the ownership of solutions developed using open source software. As a result, we could be subject to suits by parties claiming ownership of what we believe to be open source software. Effective patent, trademark, service mark, copyright and trade secret protection may not be available in every country in which our applications and services are made available. The laws of certain non-U.S. countries where we do business or contemplate doing business in the future may not recognize intellectual property rights or protect them to the same extent as do the laws of the U.S. Misappropriation of our intellectual property or potential litigation concerning such matters could have a material adverse effect on our business, results of operations and financial condition.

**Changes in tax laws and regulations could adversely affect our results of operations and cash flows from operations.**

Our operations are subject to tax by federal, state, local, and international taxing jurisdictions. Changes in tax laws or their interpretations in our significant tax jurisdictions could materially increase the amount of taxes we owe, thereby negatively impacting our results of operations as well as our cash flows from operations. For example, the U.S. Tax Cuts and Jobs Act of 2017 (the “Tax Act”) significantly revised the U.S. corporate income tax code by, among other things, lowering corporate income tax rates, implementing a territorial-type tax system and imposing repatriation tax on deemed repatriated earnings of foreign subsidiaries. Further analysis of the Tax Act or future tax laws, regulations or guidance from the Internal Revenue Service, the Securities and Exchange Commission or the Financial Accounting Standards Board could cause us to adjust current estimates in future periods, which could impact our earnings and have an adverse effect on our results of operations and cash flow. Furthermore, our implementation of new practices and processes designed to comply with changing tax laws and regulations could require us to make substantial changes to our business practices, allocate additional resources, and increase our costs, which could negatively affect our business, results of operations and financial condition.

**Unfavorable resolution of tax contingencies could adversely affect our results of operations and cash flows from operations.**

Our tax returns and positions are subject to review and audit by federal, state, local and international taxing authorities. An unfavorable outcome to a tax audit could result in higher tax expense, thereby negatively impacting our results of operations as well as our cash flows from operations. We have established contingency reserves for known tax exposures relating to deductions, transactions and other matters involving some uncertainty as to the proper tax treatment of the item. These reserves reflect what we believe to be reasonable assumptions as to the likely final resolution of each issue if raised by a taxing authority. While we believe that the reserves are adequate to cover reasonably expected tax risks, there is no assurance that, in all instances, an issue raised by a tax authority will be finally resolved at a financial cost not in excess of any related reserve. An unfavorable resolution, therefore, could negatively impact our effective tax rate, financial position, results of operations, and cash flows in the current and/or future periods.

***Organizational and Financial Risks***

**The failure to attract and retain key personnel could have a material adverse effect on our business.**

We depend on the experience, skill and contributions of our senior management and other key employees. If we fail to attract, motivate and retain highly qualified management, technical, compliance and sales personnel, our future success could be harmed. Our senior management provides strategic direction for our company, and if we lose members of our leadership team, our management resources may have to be diverted from other priorities to address this loss. Our products and services require sophisticated knowledge of the financial services industry, applicable regulatory and industry requirements, computer systems, and software applications, and if we cannot hire or retain the necessary skilled personnel, we could suffer delays in new product development, experience difficulty complying with applicable requirements or otherwise fail to satisfy our clients’ demands.

**Our merchants may be unable to satisfy obligations for which we may also be liable.**

We are subject to the risk of our merchants being unable to satisfy obligations for which we may also be liable. For example, we and our merchant acquiring alliances may be subject to contingent liability for transactions originally acquired by us that are disputed by the cardholder and charged back to the merchants. If we or the alliance is unable to collect this amount from the merchant because of the merchant’s insolvency or other reasons, we or the alliance will bear the loss for the amount of the refund paid to the cardholder. Although we have an active program to manage our credit risk and often mitigate our risk by obtaining collateral, a default on such obligations by one or more of our merchants could have a material adverse effect on our business and results of operations.

**Fraud by merchants or others could have a material adverse effect on our business, results of operations and financial condition.**

We may be subject to potential liability for fraudulent transactions, including electronic payment and card transactions or credits initiated by merchants or others. Examples of merchant fraud include when a merchant or other party knowingly uses a stolen or counterfeit credit, debit or prepaid card, card number or other credentials to record a false sales transaction, processes an invalid card or intentionally fails to deliver the merchandise or services sold in an otherwise valid transaction. Criminals are using increasingly sophisticated methods to engage in illegal activities such as counterfeiting and fraud. We also rely on ISOs to sell our merchant processing services, which they may do by contracting with their own sub-ISOs. We rely on these ISOs and sub-ISOs to exercise appropriate controls to avoid fraudulent transactions. It is possible that incidents of fraud could increase in the future. Failure to effectively manage risk and prevent fraud, or otherwise effectively administer our chargeback responsibilities, would increase our chargeback liability or expose us to fines or other liabilities. Increases in chargebacks, fines or other liabilities could have a material adverse effect on our business, results of operations and financial condition.

**Acquisitions subject us to risks, including assumption of unforeseen liabilities and difficulties in integrating operations.**

A major contributor to our growth in revenue and earnings since our inception has been our ability to identify, acquire and integrate complementary businesses. We anticipate that we will continue to seek to acquire complementary businesses, products and services. We may not be able to identify suitable acquisition candidates or complete acquisitions in the future, which could adversely affect our future growth; or businesses that we acquire may not perform as well as expected or may be more difficult or expensive to integrate and manage than expected, which could adversely affect our business and results of operations. We may not be able to integrate all aspects of acquired businesses successfully or realize the potential benefits of bringing them together. In addition, the process of integrating these acquisitions may disrupt our business and divert our resources.

In addition, acquisitions outside of the U.S. often involve additional or increased risks including, for example:

- managing geographically separated organizations, systems and facilities;
- integrating personnel with diverse business backgrounds and organizational cultures;
- complying with non-U.S. regulatory requirements;
- fluctuations in currency exchange rates;
- enforcement of intellectual property rights in some non-U.S. countries;
- difficulty entering new non-U.S. markets due to, among other things, consumer acceptance and business knowledge of these new markets; and
- general economic and political conditions.

These risks may arise for a number of reasons: we may not be able to find suitable businesses to acquire at affordable valuations or on other acceptable terms; we may face competition for acquisitions from other potential acquirers; we may need to borrow money or sell equity or debt securities to the public to finance acquisitions and the terms of these financings may be adverse to us; changes in accounting, tax, securities or other regulations could increase the difficulty or cost for us to complete acquisitions; we may incur unforeseen obligations or liabilities in connection with acquisitions; we may need to devote unanticipated financial and management resources to an acquired business; we may not realize expected operating efficiencies or product integration benefits from an acquisition; we could enter markets where we have minimal prior experience; and we may experience decreases in earnings as a result of non-cash impairment charges.

**We may be obligated to indemnify the purchasers of businesses pursuant to the terms of the relevant purchase and sale agreements.**

We have in the past and may in the future sell businesses. In connection with sales of businesses, we may make representations and warranties about the businesses and their financial affairs and agree to retain certain liabilities associated with our operation of the businesses prior to their sale. Our obligation to indemnify the purchasers and agreement to retain liabilities could have a material adverse effect on our business, results of operations and financial condition.

**Our balance sheet includes significant amounts of goodwill and intangible assets. The impairment of a significant portion of these assets would negatively affect our results of operations.**

Our balance sheet includes goodwill and intangible assets that represent 69% of our total assets at December 31, 2020. These assets consist primarily of goodwill and identified intangible assets associated with our acquisitions. On at least an annual basis, we assess whether there have been impairments in the carrying value of goodwill. In addition, we review intangible assets for impairment whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable. If the carrying value of the asset is determined to be impaired, then it is written down to fair value by a charge to operating earnings. An impairment of a significant portion of goodwill or intangible assets could have a material negative effect on our results of operations.

**Existing or future leverage may harm our financial condition and results of operations.**

At December 31, 2020, we had approximately \$20.7 billion of debt. We and our subsidiaries may incur additional indebtedness in the future. Our indebtedness could: decrease our ability to obtain additional financing for working capital, capital expenditures, general corporate or other purposes; limit our flexibility to make acquisitions; increase our cash requirements to support the payment of interest; limit our flexibility in planning for, or reacting to, changes in our business and our industry; and increase our vulnerability to adverse changes in general economic and industry conditions. Our ability to make payments of principal and interest on our indebtedness depends upon our future performance, which will be subject to general economic conditions and financial, business and other factors affecting our consolidated operations, many of which are beyond our control. In addition, if certain of our outstanding senior notes are downgraded to below investment grade, we may incur additional interest expense. If we are unable to generate sufficient cash flow from operations in the future to service our debt and meet our other cash requirements, we may be required, among other things: to seek additional financing in the debt or equity markets; to refinance or restructure all or a portion of our indebtedness; or to reduce or delay planned capital or operating expenditures. Such measures might not be sufficient to enable us to service our debt and meet our other cash requirements. In addition, any such financing, refinancing or sale of assets might not be available at all or on economically favorable terms.

**An increase in interest rates may negatively impact our operating results and financial condition.**

Certain of our borrowings, including borrowings under our revolving credit facility, term loan, foreign lines of credit and receivable securitization facility, are at variable rates of interest. An increase in interest rates would have a negative impact on our results of operations by causing an increase in interest expense. At December 31, 2020, we had approximately \$1.8 billion in variable rate debt, which includes \$1.3 billion on our term loan, \$166 million drawn on our revolving credit facility and lines of credit and \$425 million drawn on our accounts receivable securitization facility. Based on outstanding debt balances and interest rates at December 31, 2020, a 1% increase in variable interest rates would result in a decrease to annual pre-tax income of \$18 million.

**Our results of operations may be adversely affected by changes in foreign currency exchange rates.**

We are subject to risks related to changes in currency rates as a result of our investments in foreign operations and from revenues generated in currencies other than the U.S. dollar. Revenues and profit generated by such international operations will increase or decrease compared to prior periods as a result of changes in foreign currency exchange rates. From time to time, we utilize foreign currency forward contracts and other hedging instruments to mitigate the market value risks associated with foreign currency-denominated transactions and investments. These hedging strategies may not, however, eliminate all of the risks related to foreign currency translation, and we may forgo the benefits we would otherwise experience if currency exchange rates were to change in our favor. We have also issued foreign currency-denominated senior notes for which payments of interest and principal are to be made in foreign currency, and fluctuations in foreign currency exchange rates could cause the expense associated with such payments to increase. In addition, we may become subject to exchange control regulations that restrict or prohibit the conversion of our foreign revenue currencies into U.S. dollars. Any of these factors could decrease the value of revenues and earnings we derive from our international operations and have a material adverse effect on our business.

***First Data Acquisition Risks***

**The synergies attributable to the acquisition may vary from expectations.**

We may fail to realize the anticipated benefits and synergies expected from the acquisition, which could adversely affect our business, results of operations and financial condition. The success of the acquisition will depend, in significant part, on our ability to successfully integrate the acquired business, grow the revenue of the combined company and realize the anticipated strategic benefits and synergies from the combination. This growth and the anticipated benefits of the transaction may not be realized fully or may take longer to realize than expected. Actual operating, technological, strategic, synergy and revenue

opportunities may be less significant than expected or may take longer to achieve than anticipated. If we are not able to achieve these objectives and realize the anticipated benefits and synergies expected from the acquisition within the anticipated timing, our business, results of operations and financial condition may be adversely affected.

**We have incurred and expect to continue to incur substantial expenses related to the integration.**

We have incurred and expect to continue to incur substantial expenses in connection with the integration of First Data. There are a large number of processes, policies, procedures, operations, technologies and systems that may need to be integrated, including our business operating platforms, purchasing, accounting and finance, sales, payroll, pricing and benefits. While we have assumed that a certain level of expenses will be incurred, there are many factors beyond our control that could affect the total amount or the timing of the integration expenses. Moreover, many of the expenses that we will continue to incur are, by their nature, difficult to estimate accurately. These expenses could, particularly in the near term, exceed the savings that we expect to achieve from the elimination of duplicative expenses and the realization of economies of scale and cost savings. These integration expenses may result in us taking significant charges against earnings, and the amount and timing of such charges are uncertain at present.

**Our future results will be negatively impacted if we do not effectively manage our expanded operations.**

As a result of the acquisition, the size of our business has increased significantly. Our future success will depend, in part, upon our ability to manage this expanded business, which will pose substantial challenges for management, including challenges related to the management and monitoring of new operations; integrating complex systems, technology, networks and other assets in a seamless manner that minimizes any adverse impact on customers, suppliers, employees and other constituencies; potential unknown liabilities; and associated increased costs. We may also face increased scrutiny from governmental authorities as a result of the significant increase in the size of our business. Any of these issues could adversely affect our ability to maintain relationships with customers, suppliers, employees and other constituencies or achieve the anticipated benefits of the acquisition or could reduce our earnings or otherwise adversely affect our business and financial results.

**New Omaha Holdings L.P. may sell a substantial amount of our common stock as certain restrictions on sales expire, and these sales could cause the price of our common stock to fall.**

New Omaha Holdings L.P. (“New Omaha”) owns approximately 13% of our outstanding shares. New Omaha may sell its shares subject to certain limitations contained in the shareholder agreement between us and New Omaha. Under a registration rights agreement entered into in connection with the acquisition, we have granted New Omaha registration rights, which permit, among others, underwritten offerings. The registration rights agreement will terminate when the aggregate ownership percentage of the issued and outstanding shares of our common stock held by New Omaha and its affiliate transferees falls below 2% and such shares may be freely sold without restrictions.

**New Omaha may have influence over us and its interests may conflict with other shareholders.**

New Omaha owns approximately 13% of our issued and outstanding shares and is our largest shareholder. Under the shareholder agreement between us and New Omaha, New Omaha may designate a director to serve on our board of directors in accordance with the terms thereof until the aggregate ownership percentage of our issued and outstanding shares of common stock held by New Omaha and its affiliate transferees first falls below 5%. The shareholder agreement will terminate when the aggregate ownership percentage of our outstanding shares held by New Omaha and certain of its affiliates falls below 3%. Although there are various restrictions on New Omaha’s ability to take certain actions with respect to us and our shareholders (including certain standstill provisions for so long as New Omaha’s aggregate ownership percentage of the issued and outstanding shares of our common stock remains at or above 5%), New Omaha may seek to influence, and may be able to influence, us through its appointment of a director to our board of directors and its share ownership.

**Item 1B. Unresolved Staff Comments**

None.

**Item 2. Properties**

At December 31, 2020, we owned 20 properties and leased 161 properties globally. These locations are used for operational, sales, management and administrative purposes. As a normal part of our business operations, including in connection with the integration of companies that we acquire, we regularly review our real estate portfolio. We may choose to acquire or dispose of properties in order to maintain a real estate footprint designed to maximize collaboration, innovation and communication in ways that enable us to best serve our clients and to create more opportunities for professional growth and development for our associates.

**Item 3. Legal Proceedings**

In the normal course of business, we or our subsidiaries are named as defendants in lawsuits in which claims are asserted against us. In the opinion of management, the liabilities, if any, which may ultimately result from such lawsuits are not expected to have a material adverse effect on our consolidated financial statements.

**Item 4. Mine Safety Disclosures**

Not applicable.

## INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The names of our executive officers as of February 26, 2021, together with their ages, positions and business experience are described below:

<u>Name</u>	<u>Age</u>	<u>Title</u>
Frank J. Bisignano	61	President and Chief Executive Officer
Guy Chiarello	61	Chief Administrative Officer
Christopher M. Foskett	63	Executive Vice President, Global Sales
Robert W. Hau	55	Chief Financial Officer
Lynn S. McCreary	61	Chief Legal Officer and Secretary
Devin B. McGranahan	51	Executive Vice President, Senior Group President
Byron C. Vielehr	57	Chief Digital and Data Officer

*Mr. Bisignano* has served as Chief Executive Officer since July 2020 and a director and President since July 2019. He served as Chief Operating Officer from July 2019 until July 2020. Mr. Bisignano joined Fiserv as part of the acquisition of First Data Corporation, where he served as chief executive officer since 2013 and chairman since 2014. From 2005 to 2013, he held various executive positions with JPMorgan Chase & Co., a global financial services firm, including co-chief operating officer, chief executive officer of mortgage banking and chief administrative officer. From 2002 to 2005, Mr. Bisignano served as chief executive officer for Citigroup's Global Transactions Services business and a member of Citigroup's Management Committee.

*Mr. Chiarello* has served as Chief Administrative Officer since July 2019. Mr. Chiarello joined Fiserv as part of the acquisition of First Data Corporation, where he served as president since 2013. From 2008 to 2013, he served as chief information officer of JPMorgan Chase & Co., a global financial services firm. From 1985 to 2008, Mr. Chiarello served in various technology and leadership roles including chief information officer at Morgan Stanley, a global financial services firm.

*Mr. Foskett* has served as Executive Vice President, Global Sales since July 2019. Mr. Foskett joined Fiserv as part of the acquisition of First Data Corporation, where he served as executive vice president, head of corporate and business development since 2015 and co-head of global financial services since 2018. He joined First Data Corporation in 2014 as head of global, strategic and national accounts. From 2011 to 2014, Mr. Foskett served as managing director, head of North American treasury services and global head of sales for treasury services at JPMorgan Chase & Co., a global financial services firm. From 2009 to 2011, he was managing director, global head of financial institutions at National Australia Bank, an Australian financial institution. From 1991 to 2008, Mr. Foskett was managing director in Citigroup's Corporate & Investment Bank leading several global businesses. Prior to that, he was employed by Goldman Sachs & Co. and Merrill Lynch & Co. focusing on mergers and acquisitions.

*Mr. Hau* has served as Chief Financial Officer since 2016. Before joining Fiserv, Mr. Hau served as executive vice president and chief financial officer at TE Connectivity Ltd., a global technology and manufacturing company, from 2012 to 2016. From 2009 to 2012, he served as executive vice president and chief financial officer at Lennox International Inc., a provider of products and services in the heating, air conditioning, and refrigeration markets; and from 2006 to 2009, he served as vice president and chief financial officer for the aerospace business group of Honeywell International, Inc., a technology and manufacturing company. Mr. Hau joined Honeywell (initially AlliedSignal) in 1987 and served in a variety of senior financial leadership positions, including vice president and chief financial officer for the company's aerospace electronic systems unit and for its specialty materials business group.

*Ms. McCreary* has served as Chief Legal Officer and Secretary since 2013. Ms. McCreary joined Fiserv in 2010 as senior vice president and deputy general counsel. Prior to joining Fiserv, Ms. McCreary was a partner with the law firm of Bryan Cave LLP from 1996 to 2010, including serving as managing partner of its San Francisco, California office from its opening in 2008 to 2010. Ms. McCreary began her career in financial services with positions at Citicorp Person-to-Person and Metropolitan Life Insurance Company's mortgage subsidiary, Metmor Financial, Inc.

*Mr. McGranahan* has served as Executive Vice President, Senior Group President since 2018 and joined Fiserv in 2016 as group president, Billing and Payments Group. Before joining Fiserv, Mr. McGranahan served as a senior partner at McKinsey & Company, a global management consulting firm. While there, he held a variety of senior management roles, including leader of the global insurance practice from 2013 to 2016 and co-chair of the global senior partner election committee from 2013 to 2015. In addition, Mr. McGranahan served as co-leader of the North America financial services practice from 2009 to 2016. He joined McKinsey & Company in 1992 and served in a variety of other leadership positions prior to 2009, including leader of the North American property and casualty practice and managing partner of the Pittsburgh office.

*Mr. Vielehr* has served as Chief Digital and Data Officer since January 2021. He previously served as Executive Vice President, Senior Group President from 2019 to January 2021, Chief Administrative Officer from 2018 to 2019, and as Group President, Depository Institution Services Group from 2013 to 2018. Prior to joining Fiserv, from 2005 to 2013, Mr. Vielehr served in a succession of senior executive positions with The Dun & Bradstreet Corporation, a provider of commercial information and business insight solutions, most recently as president of international and global operations. He also previously served as president and chief operating officer of Northstar Systems International, Inc., a developer of wealth management software (now part of SEI Investments Company), from 2004 to 2005. Mr. Vielehr has more than 25 years of experience in the financial services and technology industries, including a variety of executive leadership roles at Merrill Lynch & Co. and Strong Capital Management.

**PART II****Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities****Market Price Information**

Our common stock is traded on the NASDAQ Global Select Market under the symbol “FISV.” At December 31, 2020, our common stock was held by 1,690 shareholders of record and by a significantly greater number of shareholders who hold shares in nominee or street name accounts with brokers. We have never paid dividends on our common stock and we do not anticipate paying dividends in the foreseeable future. For additional information regarding our expected use of capital, refer to the discussion in this report under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources.”

**Issuer Purchases of Equity Securities**

The table below sets forth information with respect to purchases made by or on behalf of us or any “affiliated purchaser” (as defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934) of shares of our common stock during the three months ended December 31, 2020:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs <sup>(1)</sup>	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs <sup>(1)</sup>
October 1-31, 2020	—	\$ —	—	7,486,000
November 1-30, 2020	—	—	—	67,486,000
December 1-31, 2020	1,818,000	110.04	1,818,000	65,668,000
Total	<u>1,818,000</u>		<u>1,818,000</u>	

<sup>(1)</sup> On August 8, 2018 and November 19, 2020, our board of directors authorized the purchase of up to 30.0 million and 60.0 million shares of our common stock, respectively. These authorizations do not expire.

In connection with the vesting of restricted stock awards, shares of common stock are delivered to the Company by employees to satisfy tax withholding obligations. The following table summarizes such purchases of common stock during the three months ended December 31, 2020:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs
October 1-31, 2020	—	\$ —	—	—
November 1-30, 2020	—	—	—	—
December 1-31, 2020	30,900 <sup>(1)</sup>	113.86	—	—
Total	<u>30,900</u>		<u>—</u>	

<sup>(1)</sup> Shares surrendered to us to satisfy tax withholding obligations in connection with the vesting of restricted stock awards issued to employees.

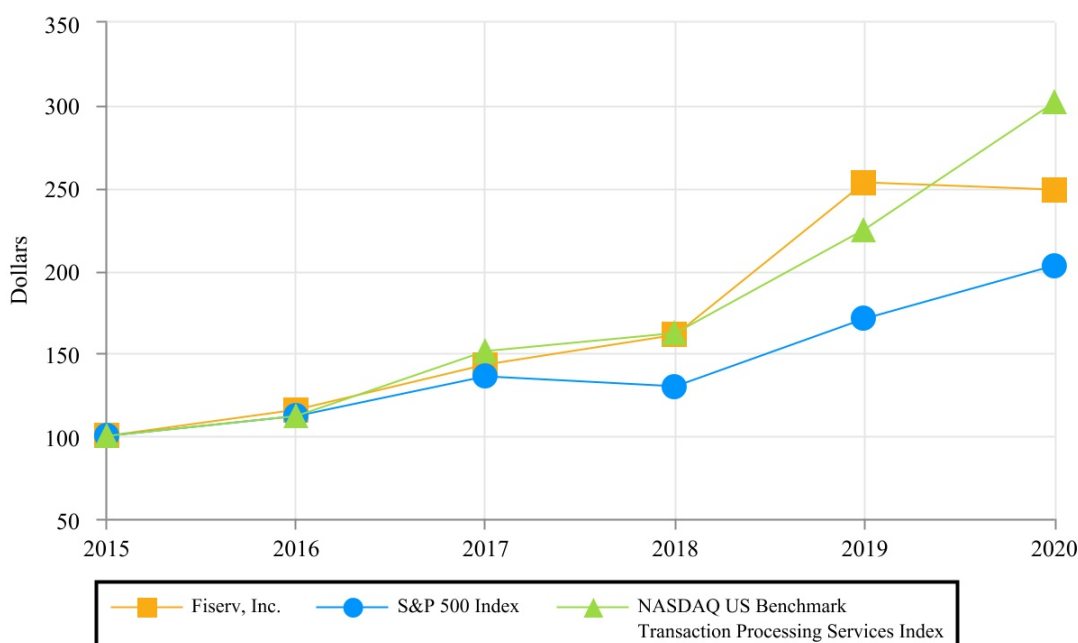


## Stock Performance Graph

The stock performance graph and related information presented below is not deemed to be “soliciting material” or to be “filed” with the Securities and Exchange Commission or subject to Regulation 14A or 14C under the Securities Exchange Act of 1934 or to the liabilities of Section 18 of the Securities Exchange Act of 1934 and will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent we specifically incorporate it by reference into such a filing.

The following graph compares the cumulative total shareholder return on our common stock for the five years ended December 31, 2020 with the S&P 500 Index and the NASDAQ US Benchmark Transaction Processing Services Index (the “Index”). Prior to September 21, 2020, the Index was known as the NASDAQ US Benchmark Financial Administration Index. The Index, as renamed, is identical to the NASDAQ US Benchmark Financial Administration Index prior to its name change on September 21, 2020. The graph assumes that \$100 was invested on December 31, 2015 in our common stock and each index and that all dividends were reinvested. No cash dividends have been declared on our common stock. The comparisons in the graph are required by the Securities and Exchange Commission and are not intended to forecast or be indicative of possible future performance of our common stock.

COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN AMONG FISERV, INC., S&P 500 INDEX, AND NASDAQ US BENCHMARK TRANSACTION PROCESSING SERVICES INDEX (ASSUMES INITIAL INVESTMENT OF \$100 AND REINVESTMENT OF DIVIDENDS)



	December 31,					
	2015	2016	2017	2018	2019	2020
Fiserv, Inc.	\$ 100	\$ 116	\$ 143	\$ 161	\$ 253	\$ 249
S&P 500 Index	100	112	136	130	171	203
NASDAQ US Benchmark Transaction Processing Services Index	100	112	151	162	225	302

**Item 6. Selected Financial Data**

The following data should be read in conjunction with the consolidated financial statements and accompanying notes and the sections entitled “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*” contained in this Annual Report on Form 10-K. The selected historical data presented below has been affected by the First Data and other acquisitions, dispositions and transactional gains recorded by our unconsolidated affiliates, debt financing activities, foreign currency fluctuations, the tax effects related to share-based payment awards and by the Tax Cuts and Jobs Act enacted in December 2017. In addition, effective January 1, 2020, we adopted Accounting Standards Update (“ASU”) No. 2016-13, *Financial Instruments - Credit Losses (Topic 326)*, using the required modified retrospective approach, which resulted in a cumulative-effect decrease to beginning retained earnings of \$45 million. Effective January 1, 2019, we adopted ASU No. 2016-02, *Leases (Topic 842)*, and its related amendments using the optional transition method applied to all leases. The adoption of the new lease standard resulted in the recognition of lease liabilities and right-of-use assets on the consolidated balance sheet beginning January 1, 2019. Under the optional transition approach, prior period amounts have not been restated. Effective January 1, 2018, we adopted ASU No. 2014-09, *Revenue from Contracts with Customers*, and its related amendments using the modified retrospective transition approach applied to all contracts. Under this transition approach, prior period amounts have not been restated. All per share amounts are presented on a split-adjusted basis to retroactively reflect the two-for-one stock split that was completed in the first quarter of 2018.

<b>(In millions, except per share data)</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Total revenue	\$ 14,852	\$ 10,187	\$ 5,823	\$ 5,696	\$ 5,505
Income from continuing operations	\$ 975	\$ 914	\$ 1,187	\$ 1,232	\$ 930
Income from discontinued operations, net of income taxes	—	—	—	14	—
Net income	975	914	1,187	1,246	930
Less: net income attributable to noncontrolling interests and redeemable noncontrolling interests	17	21	—	—	—
Net income attributable to Fiserv, Inc.	\$ 958	\$ 893	\$ 1,187	\$ 1,246	\$ 930
<b>Net income attributable to Fiserv, Inc. per share – basic:</b>					
Continuing operations	\$ 1.42	\$ 1.74	\$ 2.93	\$ 2.92	\$ 2.11
Discontinued operations	—	—	—	0.03	—
Total	\$ 1.42	\$ 1.74	\$ 2.93	\$ 2.95	\$ 2.11
<b>Net income attributable to Fiserv, Inc. per share – diluted:</b>					
Continuing operations	\$ 1.40	\$ 1.71	\$ 2.87	\$ 2.86	\$ 2.08
Discontinued operations	—	—	—	0.03	—
Total	\$ 1.40	\$ 1.71	\$ 2.87	\$ 2.89	\$ 2.08
Total assets	\$ 74,619	\$ 77,539	\$ 11,262	\$ 10,289	\$ 9,743
Long-term debt (including short-term and current maturities)	20,684	21,899	5,959	4,900	4,562
Fiserv, Inc. shareholders’ equity	32,330	32,979	2,293	2,731	2,541

## Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Management’s discussion and analysis of financial condition and results of operations is provided as a supplement to our consolidated financial statements and accompanying notes to help provide an understanding of our financial condition, the changes in our financial condition and our results of operations. Our discussion is organized as follows:

- *Overview.* This section contains background information on our company and the services and products that we provide, acquisitions and dispositions, our enterprise priorities, and the trends affecting our industry in order to provide context for management’s discussion and analysis of our financial condition and results of operations.
- *Critical accounting policies and estimates.* This section contains a discussion of the accounting policies that we believe are important to our financial condition and results of operations and that require judgment and estimates on the part of management in their application. In addition, all of our significant accounting policies, including critical accounting policies, are summarized in Note 1 to the accompanying consolidated financial statements.
- *Results of operations.* This section contains an analysis of our results of operations presented in the accompanying consolidated statements of income by comparing the results for the year ended December 31, 2020 to the results for the year ended December 31, 2019 and by comparing the results for the year ended December 31, 2019 to the results for the year ended December 31, 2018.
- *Liquidity and capital resources.* This section provides an analysis of our cash flows and a discussion of our outstanding debt and commitments at December 31, 2020.

### Overview

#### Company Background

We are a leading global provider of payments and financial services technology solutions. We provide account processing and digital banking solutions; card issuer processing and network services; payments; e-commerce; merchant acquiring and processing; and the Clover<sup>®</sup> cloud-based point-of-sale (“POS”) solution. We serve clients around the globe, including banks, credit unions, other financial institutions, corporate clients and merchants.

On July 29, 2019, we acquired First Data Corporation (“First Data”), a global leader in commerce-enabling technology and solutions for merchants, financial institutions and card issuers. Effective in the first quarter of 2020, we realigned our reportable segments to reflect our new management structure and organizational responsibilities (“Segment Realignment”) following the acquisition of First Data.

Our operations are comprised of the Merchant Acceptance (“Acceptance”) segment, the Financial Technology (“Fintech”) segment and the Payments and Network (“Payments”) segment. The consolidated financial statements include the financial results of First Data from the date of acquisition. Segment results for the years ended December 31, 2019 and 2018 have been restated to reflect the Segment Realignment.

The Acceptance segment provides a wide range of commerce-enabling solutions to merchants of all sizes and types around the world. These solutions include POS merchant acquiring and digital commerce services; mobile payment services; security and fraud protection products and services; Carat<sup>SM</sup>, our omnichannel commerce solution; and our cloud-based Clover POS platform, which includes a marketplace for proprietary and third-party business applications. The businesses in the Acceptance segment are subject to a modest level of seasonality, with the first quarter generally experiencing the lowest level of revenue and the fourth quarter experiencing the highest level of revenue.

The Fintech segment provides financial institutions around the world with technology solutions that enable them to process customer deposit and loan accounts and manage general ledger and central information files, as well as other products and services that support numerous types of financial transactions such as digital banking, financial and risk management, cash management, professional services and consulting, and item processing and source capture services. Our businesses in this segment also provide products and services to corporate clients to facilitate the management of financial processes and transactions.

The Payments segment primarily provides financial institutions and corporate clients with the products and services required to process digital payment transactions, including card transactions such as debit, credit and prepaid card processing and services, a range of network services, security and fraud protection products, card production and print services. In addition, our businesses in this segment offer non-card digital payment software and services, including bill payment, account-to-account transfers, person-to-person payments, electronic billing, and security and fraud protection products.

The majority of our revenue is generated from recurring account- and transaction-based fees under multi-year contracts with high renewal rates. Most of the services we provide within our segments are necessary for our clients to operate their businesses and are, therefore, non-discretionary in nature.

Corporate and Other supports the reportable segments described above, and consists of amortization of acquisition-related intangible assets, unallocated corporate expenses and other activities that are not considered when we evaluate segment performance, such as gains or losses on sales of businesses, costs associated with acquisition and divestiture activity, and our Output Solutions postage reimbursements. Corporate and Other also includes the historical results of our Investment Services business, of which we sold a 60% controlling interest in February 2020, as well as certain transition services revenue associated with various dispositions.

### ***Acquisitions and Dispositions***

We frequently review our portfolio to ensure we have the right set of businesses to execute on our strategy. We expect to acquire businesses when we identify: a compelling strategic need, such as a product, service or technology that helps meet client demand; an opportunity to change industry dynamics; a way to achieve business scale; or similar considerations. We expect to divest businesses that are not in line with our market, product or financial strategies.

#### ***Acquisitions***

On March 2, 2020, we acquired MerchantPro Express LLC (“MerchantPro”), an independent sales organization (“ISO”) that provides processing services, POS equipment and merchant cash advances to businesses across the United States. MerchantPro is included within the Acceptance segment and further expands our merchant services business. On March 18, 2020, we acquired Bypass Mobile, LLC (“Bypass”), an independent software vendor and innovator in enterprise POS systems for sports and entertainment venues, food service management providers and national restaurant chains. Bypass is included within the Acceptance segment and further enhances our omni-commerce capabilities, enabling enterprise businesses to deliver a seamless customer experience that spans physical and digital channels. On May 11, 2020, we acquired Inlet, LLC (“Inlet”), a provider of secure digital delivery solutions for enterprise and middle-market billers’ invoices and statements. Inlet is included within the Payments segment and further enhances our digital bill payment strategy. We acquired these businesses for an aggregate purchase price of \$167 million, net of \$2 million of acquired cash, and including earn-out provisions estimated at a fair value of \$45 million.

On July 29, 2019, we acquired First Data for a total purchase price of \$46.5 billion by acquiring 100% of the First Data stock that was issued and outstanding as of the date of acquisition. As a result of the acquisition, First Data stockholders received 286 million shares of common stock of Fiserv, Inc., at an exchange ratio of 0.303 shares of Fiserv, Inc. for each share of First Data common stock, with cash paid in lieu of fractional shares. We also converted 15 million outstanding First Data equity awards into corresponding equity awards relating to common stock of Fiserv, Inc. in accordance with the exchange ratio. In addition, concurrent with the closing of the acquisition, we made a cash payment of \$16.4 billion to repay existing First Data debt. We funded the transaction-related expenses and the repayment of First Data debt through a combination of available cash on-hand, proceeds from the issuance of senior notes, and term loan and revolving credit facility borrowings. The acquisition of First Data, included within the Acceptance and Payments segments, increases our footprint as a global payments and financial technology provider by expanding the portfolio of services provided to financial institutions, corporate and merchant clients and consumers.

On October 31, 2018, we acquired the debit card processing, ATM Managed Services, and MoneyPass<sup>®</sup> surcharge-free network of Elan Financial Services, a unit of U.S. Bancorp, for approximately \$659 million including post-closing working capital adjustments, estimated contingent consideration related to earn-out provisions and future payments under a transition services agreement in excess of estimated fair value. This acquisition, included within the Payments segment, deepens our presence in debit card processing, broadens our client reach and scale and provides new solutions to enhance the value proposition for our existing debit solution clients.

On January 22, 2021, we acquired Ondot Systems, Inc., a digital experience platform provider for financial institutions. This acquisition, to be included within the Payments segment, will further expand our digital capabilities, enhancing our suite of integrated solutions spanning card-based payments, digital banking platforms, core banking, and merchant solutions to enable clients of all sizes to deliver frictionless, digital-first and personalized experiences to their customers.

#### ***Dispositions***

Effective July 1, 2020, we and Bank of America (“BANA”) dissolved the Banc of America Merchant Services joint venture (“BAMS” or the “joint venture”), of which we maintained a 51% controlling ownership interest. Upon dissolution of the joint venture’s operations, the joint venture transferred a proportionate share of value, primarily the client contracts, to each party via

an agreed upon contractual separation. The remaining activities of the joint venture will consist of supporting the transition of the business to each party and an orderly wind down of remaining BAMS assets and liabilities. The revenues and expenses of the BAMS joint venture were consolidated into our financial results through the date of dissolution. The business transferred to us will continue to be operated and managed within our Acceptance segment.

We will continue to provide merchant processing and related services to former BAMS clients allocated to BANA, at BAMS pricing, through June 2023. We will also provide processing and other support services to new BANA merchant clients pursuant to a five-year non-exclusive agreement which, after June 2023, will also apply to the former BAMS clients allocated to BANA. In addition, both companies are entitled to certain transition services, at fair value, from each other through June 2023.

On February 18, 2020, we sold a 60% controlling interest of our Investment Services business, subsequently renamed as Tegra118, LLC (“Tegra118”), which is reported within Corporate and Other following the Segment Realignment. We received pre-tax proceeds of \$578 million, net of related expenses, resulting in a pre-tax gain on the sale of \$428 million, with a related tax expense of \$112 million. Our retained interest is accounted for as an equity method investment. On February 2, 2021, Tegra118 completed a merger with a third party, resulting in a dilution of our ownership interest in the combined new entity, Wealthtech Holdings, LLC.

In connection with the acquisition of First Data, we acquired two businesses which we intended to sell. In October 2019, we completed the sales, at acquired fair value, of these two businesses for aggregate proceeds of \$133 million.

On March 29, 2018, we sold a 55% controlling interest of our Lending Solutions business, which was reported within the Fintech segment, retaining 45% ownership interests in two joint ventures (the “Lending Joint Ventures”). In conjunction with this transaction, we entered into transition services agreements to provide, at fair value, various administration, business process outsourcing and data center related services for defined periods to the Lending Joint Ventures. We received gross sale proceeds of \$419 million from the transactions. In August 2019, the Sagent Auto, LLC joint venture, formerly known as Fiserv Automotive Solutions, LLC, completed a merger with a third party, resulting in the dilution of our ownership interest to 31% in the combined entity, defi SOLUTIONS Group, LLC. Our remaining ownership interest in the Lending Joint Ventures are accounted for as equity method investments. In addition, in January 2018, we completed the sale of the retail voucher business acquired in our 2017 acquisition of Monitise for proceeds of £37 million (\$50 million).

### ***Enterprise Priorities***

We aspire to move money and information in a way that moves the world by delivering superior value for our clients through leading technology, targeted innovation and excellence in everything we do. We achieve this through active portfolio management of our business, enhancing the overall value of our existing client relationships, improving operational effectiveness, being disciplined in our allocation of capital, and differentiating our products and services through innovation. Our long-term priorities are to (i) deliver integration value from the First Data acquisition; (ii) continue to build high-quality revenue while meeting our earnings goals; (iii) enhance client relationships with an emphasis on digital and payment solutions; and (iv) deliver innovation and integration which enables differentiated value for our clients.

### ***Industry Trends***

The global payments landscape continues to evolve, with rapidly advancing technologies and a steady expansion of digital payments, e-commerce and innovation in real-time payments infrastructure. Because of this growth, competition also continues to evolve. Business and consumer expectations continue to rise, with a focus on convenience and security. To meet these expectations, payments companies are focused on modernizing their technology, expanding the use of data and enhancing the customer experience.

### ***Financial Institutions***

The market for products and services offered by financial institutions continues to evolve rapidly. The traditional financial industry and other market entrants regularly introduce and implement new payment, deposit, risk management, lending and investment products, and the distinctions among the products and services traditionally offered by different types of financial institutions continue to narrow as they seek to serve the same customers. At the same time, the evolving global regulatory and cybersecurity landscape has continued to create a challenging operating environment for financial institutions. These conditions are driving heightened interest in solutions that help financial institutions win and retain customers, generate incremental revenue, comply with regulations and enhance operating efficiency. Examples of these solutions include electronic payments and delivery methods such as internet, mobile and tablet banking, sometimes referred to as “digital channels.”

The focus on digital channels by both financial institutions and their customers, as well as the growing volume and types of payment transactions in the marketplace, continues to elevate the data and transaction processing needs of financial institutions. We expect that financial institutions will continue to invest significant capital and human resources to process transactions, manage information, maintain regulatory compliance and offer innovative new services to their customers in this rapidly evolving and competitive environment. We anticipate that we will benefit over the long term from the trend of financial institutions moving from in-house technology to outsourced solutions as they seek to remain current on technology changes in an evolving marketplace. We believe that economies of scale in developing and maintaining the infrastructure, technology, products, services and networks necessary to be competitive in such an environment are essential to justify these investments, and we anticipate that demand for products that facilitate customer interaction with financial institutions, including electronic transactions through digital channels, will continue to increase, which we expect to create revenue opportunities for us.

In addition to the trends described above, the financial institutions marketplace has experienced change in composition as well. During the past 25 years, the number of financial institutions in the United States has declined at a relatively steady rate of approximately 3% per year, primarily as a result of voluntary mergers and acquisitions. Rather than reducing the overall market, these consolidations have transferred accounts among financial institutions. If a client loss occurs due to merger or acquisition, we receive a contract termination fee based on the size of the client and how early in the contract term the contract is terminated. These fees can vary from period to period with the variance depending on the quantum of financial institution merger activity in a given period and whether or not our clients are involved in the activity. Our focus on long-term client relationships and recurring, transaction-oriented products and services has also reduced the impact that consolidation in the financial services industry has had on us. We believe that the integration of our products and services creates a compelling value proposition for our clients by providing, among other things, new sources of revenue and opportunities to reduce their costs. Furthermore, we believe that our sizable and diverse client base, combined with our position as a leading provider of non-discretionary, recurring revenue-based products and services, gives us a solid foundation for growth.

### *Merchants*

The rapid growth in and globalization of mobile and e-commerce, driven by consumers' desire for simpler, more efficient shopping experiences, has created an opportunity for merchants to reach consumers in high-growth online and mobile settings, which often requires a merchant acquiring provider to enable and optimize the acceptance of payments. Merchants are demanding simpler, integrated and modern POS systems to help manage their everyday business operations. When combined with the ever-increasing ways a consumer can pay for goods and services, merchants have sought modern POS systems to streamline this complexity. Furthermore, merchants can now search, discover, compare, purchase and even install a new POS system through direct, digital-only experiences. This direct, digital-only channel is quickly becoming a source of new merchant acquisition opportunities, especially with respect to smaller merchants.

In addition, there are numerous software-as-a-service ("SaaS") solutions in the industry, many of which have chosen to integrate merchant acquiring within their software as a way to further monetize their client relationships. SaaS solutions that integrate payments are often referred to as Independent Software Vendors (or "ISVs"), and we believe there are thousands of these potential distribution partnership opportunities available to us.

We believe that our merchant acquiring products and solutions create compelling value propositions for merchant clients of all sizes, from small and mid-sized businesses (or "SMBs") to medium-sized regional businesses to global enterprise merchants, and across all verticals. Furthermore, we believe that our sizable and diverse client base, combined with valued partnerships with merchant acquiring businesses of small, medium and large financial institutions, and non-financial institutions, gives us a solid foundation for growth.

### *Recent Market Conditions*

In 2019, a novel strain of coronavirus ("COVID-19") was identified and has since continued to spread. In March 2020, the World Health Organization recognized the COVID-19 outbreak as a pandemic. In response to the COVID-19 pandemic, the governments of many countries, states, cities and other geographic regions have taken actions to prevent the spread of COVID-19, such as imposing travel restrictions and bans, quarantines, social distancing guidelines, shelter-in-place or lock-down orders and other similar limitations, adversely impacting global economic activity and contributing to significant volatility in financial markets. From time to time during the second half of 2020 and into 2021, some jurisdictions have eased restrictions in an effort to reopen their economies. While this has been successful in some places, others have had to reinstate restrictions to curb the spread of the virus.

We have taken several actions since the onset of the pandemic to protect the health, safety and well-being of our employees while maintaining business continuity. These actions include, among others, requiring a majority of our employees to work remotely, eliminating non-essential travel, suspending all non-essential visitors to our facilities, disinfecting facilities and workspaces extensively and frequently, providing personal protective equipment to associates and requiring employees who

must be present at our facilities to adhere to a variety of safety protocols. In addition, we have expanded paid time-off for employees impacted by COVID-19, provided increased pay for certain employees involved in critical infrastructure who could not work remotely, and expanded our Fiserv Cares program to benefit employees in need around the world. We expect to continue such safety measures for the foreseeable future and may take further actions, or adapt these existing policies, as government authorities may require or recommend or as we may determine to be in the best interest of our employees, clients and vendors.

Our operating performance is subject to global economic and market conditions, as well as their impacts on levels of consumer and business spending. As a result of the COVID-19 pandemic and the related decline in global economic activity, we experienced a significant decrease in payments volume and transactions beginning in late March 2020 that negatively impacted our merchant acquiring and payment-related businesses, which earn transaction-based fees, as well as modest declines in other businesses. Merchant acquiring transaction and payment volumes began to partially recover in May 2020 and continued to improve into July 2020; thereafter, the monthly volume growth rate as compared to the prior year stabilized for the balance of the year. While recent business trends demonstrate positive momentum, the uncertainty caused by the pandemic creates an economic environment where our future financial results remain difficult to anticipate. We currently expect payments volume and transactions to continue to improve throughout 2021.

Throughout 2020, we also took several actions to manage discretionary costs including, among others, limiting the hiring of new employees, limiting third-party spending and the temporary suspension of certain employee-related benefits, including company matching contributions to the Fiserv 401(k) Savings Plan as well as the discount on shares purchased under the Fiserv, Inc. Amended and Restated Employee Stock Purchase Plan. Effective January 1, 2021, company matching contributions were re-established to equal 100% on the first 1% contributed and 25% on the next 4% contributed for eligible participants. In addition, we reassessed and deferred certain capital expenditures that were originally planned for 2020. We will continue to monitor and assess developments related to COVID-19 and implement appropriate actions to minimize the risk to our operations of any material adverse developments. Ultimately, the extent of the impact of the COVID-19 pandemic on our future operational and financial performance will depend on, among other matters, the duration and intensity of the COVID-19 pandemic; governmental and private sector responses to the pandemic and the impact of such responses on us; the level of success of global vaccination efforts; and the impact of the pandemic on our employees, clients, vendors, operations and sales, all of which are uncertain and cannot be predicted.

### **Critical Accounting Policies and Estimates**

Our consolidated financial statements and accompanying notes have been prepared in accordance with accounting principles generally accepted in the United States, which require management to make estimates, judgments and assumptions that affect the reported amount of assets, liabilities, revenue and expenses. We continually evaluate the accounting policies and estimates that we use to prepare our consolidated financial statements, including for recently adopted accounting pronouncements, and base our estimates on historical experience and assumptions that we believe are reasonable in light of current circumstances. Actual amounts and results could differ materially from these estimates.

### **Acquisitions**

From time to time, we make strategic acquisitions that may have a material impact on our consolidated results of operations or financial position. We allocate the purchase price of acquired businesses to the assets acquired and liabilities assumed in the transaction at their estimated fair values. The estimates used to determine the fair value of long-lived assets, such as intangible assets, can be complex and require significant judgments. We use information available to us to make fair value determinations and engage independent valuation specialists, when necessary, to assist in the fair value determination of significant acquired long-lived assets. The determination of fair value requires estimates about discount rates, growth and retention rates, royalty rates, expected future cash flows and other future events that are judgmental in nature. While we use our best estimates and assumptions as a part of the purchase price allocation process, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of income. We are also required to estimate the useful lives of intangible assets to determine the amount of acquisition-related intangible asset amortization expense to record in future periods. We periodically review the estimated useful lives assigned to our intangible assets to determine whether such estimated useful lives continue to be appropriate. Additional information regarding our acquisitions is included in Note 4 to the consolidated financial statements.



## ***Goodwill and Intangible Assets***

We review the carrying value of goodwill for impairment annually, or more frequently if events or circumstances indicate the carrying value may not be recoverable. Goodwill is tested for impairment at a reporting unit level, which is one level below our reportable segments. When reviewing goodwill for impairment, we consider the prior test's amount of excess fair value over the carrying value of each reporting unit, the period of time since a reporting unit's last quantitative test, the extent a reorganization or disposition changes the composition of one or more of our reporting units, and other factors to determine whether or not to first perform a qualitative test. When performing a qualitative test, we assess numerous factors to determine whether it is more likely than not that the fair value of our reporting units are less than their respective carrying values. Examples of qualitative factors that we assess include our share price, our financial performance, market and competitive factors in our industry and other events specific to our reporting units. If we conclude that it is more likely than not that the fair value of a reporting unit is less than its carrying value, we perform a quantitative impairment test.

The quantitative impairment test compares the estimated fair value of the reporting unit to its carrying value, and recognizes an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, without exceeding the total amount of goodwill allocated to that reporting unit. We determine the fair value of a reporting unit using both a discounted cash flow analysis and a market approach. Determining the fair value of a reporting unit involves judgment and the use of significant estimates and assumptions, which include assumptions regarding the revenue growth rates and operating margins used to calculate estimated future cash flows, risk-adjusted discount rates and future economic and market conditions.

In connection with the Segment Realignment, certain of our reporting units changed in composition in which goodwill was allocated to such reporting units using a relative fair value approach. Accordingly, we performed an interim goodwill impairment assessment in the first quarter of 2020 for those reporting units impacted by the Segment Realignment and determined that our goodwill was not impaired based on an assessment of various qualitative factors, as described above. Our most recent annual impairment assessment of our reporting units in the fourth quarter of 2020 determined that our goodwill of \$36 billion was not impaired as the estimated fair values of the respective reporting units exceeded the carrying values. However, for four of our reporting units that were acquired as part of the First Data acquisition, with aggregate goodwill of \$12 billion, the excess of the respective reporting unit's fair value over carrying value ranged from 14 to 21 percent. If future operating performance is below our expectations or there are changes to forecasted revenue growth rates, risk-adjusted discount rates, effective income tax rates, or some combination thereof, a decline in the fair value of the reporting units could result in, and we may be required to record, a goodwill impairment charge. It is also reasonably possible that future developments related to the economic impact of the COVID-19 pandemic on certain of our recently acquired (recorded at fair value) First Data businesses, such as an increased duration and intensity of the pandemic and/or government-imposed shutdowns, prolonged economic downturn or recession, or lack of governmental support for recovery, could have a future material impact on one or more of the estimates and assumptions used to evaluate goodwill impairment. We have no accumulated goodwill impairment through December 31, 2020. Additional information regarding our goodwill is included in Note 8 to the consolidated financial statements.

We review intangible assets for impairment whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable. We review capitalized software development costs for impairment at each reporting date. Recoverability of intangible assets is assessed by comparing the carrying amount of the asset to either the undiscounted future cash flows expected to be generated by the asset or the net realizable value of the asset, depending on the type of asset. Determining future cash flows and net realizable values involves judgment and the use of significant estimates and assumptions regarding future economic and market conditions. Measurement of any impairment loss is based on estimated fair value. Given the significance of our goodwill and intangible asset balances, an adverse change in fair value could result in an impairment charge, which could be material to our consolidated financial statements.

## ***Revenue Recognition***

Revenue is measured based on consideration specified in a contract with a customer, and excludes any amounts collected on behalf of third parties. As a practical expedient, we do not adjust the transaction price for the effects of a significant financing component if, at contract inception, the period between customer payment and the transfer of goods or services is expected to be one year or less. Contracts with customers are evaluated on a contract-by-contract basis as contracts may include multiple types of goods and services as described below.

### ***Processing and Services***

Processing and services revenue is generated from account- and transaction-based fees for data processing, merchant transaction processing and acquiring, electronic billing and payment services, electronic funds transfer and debit/credit processing services; consulting and professional services; and software maintenance for ongoing client support.



We recognize processing and services revenues in the period in which the specific service is performed unless they are not deemed distinct from other goods or services, in which case revenue would then be recognized as control is transferred of the combined goods and services. Our arrangements for processing and services typically consist of an obligation to provide specific services to our customers on a when- and if-needed basis (a stand-ready obligation) and revenue is recognized from the satisfaction of the performance obligations in the amount billable to the customer. These services are typically provided under a fixed or declining (tier-based) price per unit based on volume of service; however, pricing for services may also be based on minimum monthly usage fees. Fees for our processing and services arrangements are typically billed and paid on a monthly basis.

#### *Product*

Product revenue is generated from print and card production sales, as well as software license sales. For software license agreements that are distinct, we recognize software license revenue upon delivery, assuming a contract is deemed to exist. Revenue for arrangements with customers that include significant customization, modification or production of software such that the software is not distinct is typically recognized over time based upon efforts expended, such as labor hours, to measure progress towards completion. For arrangements involving hosted licensed software for the customer, a software element is considered present to the extent the customer has the contractual right to take possession of the software at any time during the hosting period without significant penalty and it is feasible for the customer to either operate the software on their own hardware or contract with another vendor to host the software.

We also sell or lease hardware (POS devices) and other peripherals as part of our contracts with customers. Hardware typically consists of terminals or Clover devices. We do not manufacture hardware, rather we purchase hardware from third-party vendors and hold such hardware in inventory until purchased by a customer. We account for sales of hardware as a separate performance obligation and recognize the revenue at its standalone selling price when the customer obtains control of the hardware.

#### *Significant Judgments*

We use the following methods, inputs and assumptions in determining amounts of revenue to recognize. For multi-element arrangements, we account for individual goods or services as a separate performance obligation if they are distinct, the good or service is separately identifiable from other items in the arrangement, and if a customer can benefit from the good or service on its own or with other resources that are readily available to the customer. If these criteria are not met, the promised goods or services are accounted for as a combined performance obligation. Determining whether goods or services are distinct performance obligations that should be accounted for separately may require significant judgment.

Technology or service components from third parties are frequently embedded in or combined with our applications or service offerings. Whether we recognize revenue based on the gross amount billed to a customer or the net amount retained involves judgment that depends on the relevant facts and circumstances including the level of contractual responsibilities and obligations for delivering solutions to end customers.

The transaction price is determined based on the consideration to which we will be entitled in exchange for transferring products or services to the customer. We include any fixed charges within our contracts as part of the total transaction price. To the extent that variable consideration is not constrained, we include an estimate of the variable amount, as appropriate, within the total transaction price and update our assumptions over the duration of the contract. We may constrain the estimated transaction price in the event of a high degree of uncertainty as to the final consideration amount owed because of an extended length of time over which the fees may be adjusted. The transaction price (including any discounts or rebates) is allocated between distinct goods and services in a multi-element arrangement based on their relative standalone selling prices. For items that are not sold separately, we estimate the standalone selling prices using available information such as market conditions and internally approved pricing guidelines. Significant judgment may be required to determine standalone selling prices for each performance obligation and whether it depicts the amount we expect to receive in exchange for the related good or service.

Contract modifications occur when we and our customers agree to modify existing customer contracts to change the scope or price (or both) of the contract or when a customer terminates some, or all, of the existing services provided by us. When a contract modification occurs, it requires us to exercise judgment to determine if the modification should be accounted for as (i) a separate contract, (ii) the termination of the original contract and creation of a new contract, or (iii) a cumulative catch up adjustment to the original contract. Further, contract modifications require the identification and evaluation of the performance obligations of the modified contract, including the allocation of revenue to the remaining performance obligations and the period of recognition for each identified performance obligation.

Additional information regarding our revenue recognition policies is included in Note 3 to the consolidated financial statements.

## ***Income Taxes***

The determination of our provision for income taxes requires management's judgment in the use of estimates and the interpretation and application of complex tax laws, sometimes made more complex by our global footprint. Judgment is also required in assessing the timing and amounts of deductible and taxable items. We establish a liability for known tax exposures relating to deductions, transactions and other matters involving some uncertainty as to the proper tax treatment of the item. In establishing a liability for known tax exposures, assumptions are made in determining whether, and the extent to which, a tax position will be sustained. A tax benefit with respect to a tax position is recognized only when it is more likely than not to be sustained upon examination by the relevant taxing authority, based on its technical merits, considering the facts and circumstances available as of the reporting date. The amount of tax benefit recognized reflects the largest benefit that we believe is more likely than not to be realized on settlement with the relevant taxing authority. As new information becomes available, we evaluate our tax positions and adjust our liability for known tax exposures as appropriate.

We maintain net operating loss carryforwards in various taxing jurisdictions, resulting in the establishment of deferred tax assets. We establish a valuation allowance against our deferred tax assets when, based upon the weight of all available evidence, we believe it is more likely than not that some portion or all of the deferred tax assets will not be realized. In making this determination, we have considered the relative impact of all of the available positive and negative evidence regarding future sources of taxable income and available tax planning strategies. However, there could be a material impact to our effective tax rate if there is a significant change in our judgment. To the extent our judgment changes, the valuation allowances are then adjusted, generally through the provision for income taxes, in the period in which the change in facts and circumstances occurs. Additional information regarding our income taxes is included in Note 18 to the consolidated financial statements.

## **Results of Operations**

### ***Components of Revenue and Expenses***

The following summary describes the components of revenue and expenses as presented in our consolidated statements of income.

#### *Processing and Services*

Processing and services revenue, which in 2020 represented 82% of our total revenue, is primarily generated from account- and transaction-based fees under multi-year contracts. Processing and services revenue is most reflective of our business performance as a significant amount of our total operating profit is generated by these services. Cost of processing and services includes costs directly associated with providing services to clients and includes the following: personnel; equipment and data communication; infrastructure costs, including costs to maintain software applications; client support; certain depreciation and amortization; and other operating expenses.

#### *Product*

Product revenue, which in 2020 represented 18% of our total revenue, is primarily derived from print and card production sales, as well as software license sales and hardware (POS devices) sales. Cost of product includes costs directly associated with the products sold and includes the following: costs of materials and software development; hardware; personnel; infrastructure costs; certain depreciation and amortization; and other costs directly associated with product revenue.

#### *Selling, General and Administrative Expenses*

Selling, general and administrative expenses primarily consist of: salaries, wages, commissions and related expenses paid to sales personnel, administrative employees and management; advertising and promotional costs; certain depreciation and amortization; and other selling and administrative expenses.

#### ***Synergies from the First Data Acquisition***

Following the acquisition of First Data, we continue to implement our post-merger integration plans to achieve synergies from future expected economic benefits, including enhanced revenue growth from expanded capabilities and geographic presence as well as substantial cost savings from duplicative overhead, streamlined operations and enhanced operational efficiency. At December 31, 2020, we have achieved a significant portion of revenue and cost synergies and expect to meet or exceed our previously announced targets.

## Financial Results

The following table presents certain amounts included in our consolidated statements of income, the relative percentage that those amounts represent to revenue and the change in those amounts from year-to-year. This information should be read together with the consolidated financial statements and accompanying notes. The financial results presented below have been affected by the acquisition of First Data and other acquisitions, dispositions, debt financing activities, and foreign currency fluctuations. The amounts from the acquired First Data businesses were included in our results for the full year in 2020 and for the five months, since the July 29, 2019 acquisition date, in 2019.

(In millions) Year Ended December 31,				Percentage of Revenue <sup>(1)</sup>			Increase (Decrease)			
	2020	2019	2018	2020	2019	2018	2020 vs. 2019		2019 vs. 2018	
<b>Revenue:</b>										
Processing and services	\$ 12,215	\$ 8,573	\$ 4,975	82.2 %	84.2 %	85.4 %	\$ 3,642	42 %	\$ 3,598	72 %
Product	2,637	1,614	848	17.8 %	15.8 %	14.6 %	1,023	63 %	766	90 %
Total revenue	14,852	10,187	5,823	100.0 %	100.0 %	100.0 %	4,665	46 %	4,364	75 %
<b>Expenses:</b>										
Cost of processing and services	5,841	4,016	2,324	47.8 %	46.8 %	46.7 %	1,825	45 %	1,692	73 %
Cost of product	1,971	1,293	745	74.7 %	80.1 %	87.9 %	678	52 %	548	74 %
Sub-total	7,812	5,309	3,069	52.6 %	52.1 %	52.7 %	2,503	47 %	2,240	73 %
Selling, general and administrative	5,652	3,284	1,228	38.1 %	32.2 %	21.1 %	2,368	72 %	2,056	167 %
Gain on sale of businesses	(464)	(15)	(227)	(3.1)%	(0.1)%	(3.9)%	449	n/m	(212)	n/m
Total expenses	13,000	8,578	4,070	87.5 %	84.2 %	69.9 %	4,422	52 %	4,508	111 %
Operating income	1,852	1,609	1,753	12.5 %	15.8 %	30.1 %	243	15 %	(144)	(8)%
Interest expense, net	(709)	(473)	(189)	(4.8)%	(4.6)%	(3.2)%	236	50 %	284	150 %
Debt financing activities	—	(47)	(14)	— %	(0.5)%	(0.2)%	(47)	(100)%	33	236 %
Other income (expense)	28	(6)	5	0.2 %	(0.1)%	0.1 %	34	n/m	(11)	n/m
Income before income taxes and income from investments in unconsolidated affiliates	1,171	1,083	1,555	7.9 %	10.6 %	26.7 %	88	8 %	(472)	(30)%
Income tax provision	(196)	(198)	(378)	(1.3)%	(1.9)%	(6.5)%	(2)	(1)%	(180)	(48)%
Income from investments in unconsolidated affiliates	—	29	10	— %	0.3 %	0.2 %	(29)	(100)%	19	190 %
Net income	975	914	1,187	6.6 %	9.0 %	20.4 %	61	7 %	(273)	(23)%
Less: net income attributable to noncontrolling interests and redeemable noncontrolling interests	17	21	—	0.1 %	0.2 %	— %	(4)	(19)%	21	n/m
Net income attributable to Fiserv, Inc.	\$ 958	\$ 893	\$ 1,187	6.5 %	8.8 %	20.4 %	\$ 65	7 %	\$ (294)	(25)%

<sup>(1)</sup> Percentage of revenue is calculated as the relevant revenue, expense, income or loss amount divided by total revenue, except for cost of processing and services and cost of product amounts, which are divided by the related component of revenue.

(In millions)

Year Ended December 31,	Acceptance	Fintech	Payments	Corporate and Other	Total
<b>Total revenue:</b>					
2020	\$ 5,522	\$ 2,901	\$ 5,504	\$ 925	\$ 14,852
2019	2,571	2,942	3,909	765	10,187
2018	—	2,917	2,408	498	5,823
<b>Revenue growth:</b>					
2020	\$ 2,951	\$ (41)	\$ 1,595	\$ 160	\$ 4,665
2020 percentage	115 %	(1)%	41 %		46 %
2019	\$ 2,571	\$ 25	\$ 1,501	\$ 267	\$ 4,364
2019 percentage		1 %	62 %		75 %
<b>Operating income:</b>					
2020	\$ 1,427	\$ 992	\$ 2,361	\$ (2,928)	\$ 1,852
2019	764	885	1,658	(1,698)	1,609
2018	—	851	1,081	(179)	1,753
<b>Operating income growth:</b>					
2020	\$ 663	\$ 107	\$ 703	\$ (1,230)	\$ 243
2020 percentage	87 %	12 %	42 %		15 %
2019	\$ 764	\$ 34	\$ 577	\$ (1,519)	\$ (144)
2019 percentage		4 %	53 %		(8)%
<b>Operating margin:</b>					
2020	25.9 %	34.2 %	42.9 %		12.5 %
2019	29.7 %	30.1 %	42.4 %		15.8 %
2018	— %	29.2 %	44.9 %		30.1 %
<b>Operating margin growth: <sup>(1)</sup></b>					
2020	(380) bps	410 bps	50 bps		(330) bps
2019		90 bps	(250) bps		(1,430) bps

<sup>(1)</sup> Represents the basis point growth or decline in operating margin.

Operating margin percentages are calculated using actual, unrounded amounts.

#### Total Revenue

Total revenue increased \$4,665 million, or 46%, in 2020 and increased \$4,364 million, or 75%, in 2019 compared to the prior years, primarily driven by the incremental revenue from the First Data acquisition. The First Data acquisition, which was completed on July 29, 2019, contributed \$5,067 million and \$4,078 million of incremental revenue during 2020 and 2019, respectively, with \$3,114 million and \$2,571 million to the Acceptance segment, \$1,616 million and \$1,230 million to the Payments segment, and \$337 million and \$277 million to Corporate and Other, during 2020 and 2019, respectively. Conversely, dispositions reduced revenue by \$348 million and \$54 million in 2020 and 2019, respectively, compared to the prior years.

Revenue in our Acceptance segment increased \$2,951 million, or 115%, in 2020, driven by the acquisition of First Data on July 29, 2019, which contributed incremental revenue of \$3,114 million during the first seven months of 2020 and the entire \$2,571 million of Acceptance segment revenue in 2019. The dissolution of the BAMS joint venture on July 1, 2020 reduced Acceptance segment revenue growth in 2020 by 6% compared to 2019. In addition, revenue in our Acceptance segment, which earns transaction-based fees, was adversely affected by the economic impact of the COVID-19 pandemic in the last two weeks of March 2020 and throughout the remainder of the year. Merchant acquiring transaction and payment volumes began to partially recover in May 2020 and continued to improve into July 2020; thereafter, the monthly volume growth rate as compared to the prior year stabilized for the balance of the year.

Revenue in our Fintech segment decreased \$41 million, or 1%, in 2020 and increased \$25 million, or 1%, in 2019 compared to the prior years. Dispositions, including our remittance solutions business in December 2019 and Lending Solutions business in March 2018, reduced Fintech segment revenue growth by 1% and 2% in 2020 and 2019, respectively, compared to the prior years. Recurring revenue growth from higher processing volumes in 2020 was offset by a reduction of 2% from a decline in termination fee revenue. Fintech segment revenue growth in 2019 was driven by growth in our bank solutions business from new business, customer migrations from in-house technology to outsourced solutions and growth with existing customers across a range of products.

Revenue in our Payments segment increased \$1,595 million, or 41%, in 2020 and increased \$1,501 million, or 62%, in 2019 compared to the prior years. Revenue from acquired businesses, including First Data, contributed 41% and 57% to Payments segment revenue growth in 2020 and 2019, respectively. Payments segment revenue in 2020 was adversely affected by the COVID-19 pandemic while the remaining growth in 2019 was driven by expansion in our recurring revenue businesses, with our card services and electronic payments businesses contributing 4% and 1%, respectively.

Revenue at Corporate and Other increased \$160 million, or 21%, in 2020 and increased \$267 million, or 54%, in 2019 compared to the prior years. Postage revenue from the First Data acquisition contributed 44% and 56% to the Corporate and Other growth in 2020 and 2019, respectively, while the disposition of a 60% controlling interest of our Investment Services business reduced revenue growth by 19% in 2020.

#### *Total Expenses*

Total expenses increased \$4,422 million, or 52%, in 2020 and increased \$4,508 million, or 111%, in 2019 compared to the prior years. Total expenses as a percentage of total revenue was 87.5%, 84.2% and 69.9% in 2020, 2019 and 2018, respectively. Total expenses in 2020 and 2019 contain the incremental expenses, including acquired intangible asset amortization, of First Data from the date of acquisition, resulting in the overall significant increase in expenses compared to the prior years. The incremental expenses during 2020 from the First Data acquisition were primarily due to 2020 containing seven more months of expenses from First Data as compared to 2019. Total expenses were reduced by a \$428 million gain on sale of a 60% interest of our Investment Services business and a \$36 million gain on the dissolution of the BAMS joint venture in 2020, and a \$227 million gain on sale of a 55% interest of our Lending Solutions business in 2018.

Cost of processing and services as a percentage of processing and services revenue was 47.8%, 46.8% and 46.7% in 2020, 2019 and 2018, respectively. Expense management in our recurring revenue businesses favorably impacted cost of processing and services as a percentage of processing and services revenue in both 2020 and 2019 compared to the prior years. Conversely, cost of processing and services as a percentage of processing and services revenue increased in 2020 by approximately 200 basis points, from integration-related expenses associated with the First Data acquisition, including \$118 million of accelerated depreciation and amortization associated with the termination of certain vendor contracts, and by approximately 100 basis points from incremental First Data acquisition intangible amortization. Cost of processing and services as a percentage of processing and services revenue increased in 2019 by approximately 70 basis points from expenses shifting from cost of product to cost of processing as financial institutions continue to move from in-house technology to outsourced solutions, and by approximately 60 basis points from a non-cash impairment charge related to an international core processing platform. Client-focused incremental investments increased cost of processing and services as a percentage of processing and services revenue in 2018 by approximately 50 basis points.

Cost of product as a percentage of product revenue was 74.7%, 80.1% and 87.9% in 2020, 2019 and 2018, respectively. The reduction in cost of product as a percentage of product revenue in 2020 and 2019 was driven by the First Data acquisition. In addition, cost of product as a percentage of product revenue in 2019 decreased by approximately 400 basis points due to expenses shifting from cost of product to cost of processing and services as financial institutions continue to move from in-house technology to outsourced solutions, and increased by approximately 300 basis points from a decrease in higher-margin software license revenue as compared to 2018.

Selling, general and administrative expenses as a percentage of total revenue was 38.1%, 32.2% and 21.1% in 2020, 2019 and 2018, respectively. Incremental acquired intangible asset amortization from the First Data acquisition increased selling, general and administrative expenses as a percentage of total revenue by approximately 600 basis points in each of 2020 and 2019. Selling, general and administrative expenses as a percentage of total revenue in 2020 increased by approximately 120 basis points from higher integration-related expenses, which was largely offset by synergy related cost reductions. The remaining increase in 2019 was due to increased costs associated with the First Data acquisition, including integration-related expenses.

The gains on sale of businesses of \$464 million, \$15 million and \$227 million in 2020, 2019 and 2018, respectively, primarily resulted from the sale of a 60% interest of our Investment Services business in February 2020, the dissolution of the BAMS joint venture in July 2020, and the sale of a 55% interest of our Lending Solutions business in March 2018, including contingent consideration received in 2019.

### *Operating Income and Operating Margin*

Total operating income increased \$243 million, or 15%, in 2020 and decreased \$144 million, or 8%, in 2019 compared to the prior years. Total operating margin decreased to 12.5% in 2020 from 15.8% in 2019 and 30.1% in 2018.

Operating income in our Acceptance segment was \$764 million in 2019 and increased \$663 million, or 87%, in 2020, driven by the acquisition of First Data. Operating margin was 25.9% and 29.7% in 2020 and 2019, respectively, decreasing 380 basis points in 2020 compared to the prior year. Operating income and margin in our Acceptance segment, which earns transaction-based fees, was adversely affected in the last two weeks of March and throughout the remainder of 2020 due to the economic impact of the COVID-19 pandemic. Merchant acquiring transaction and payment volumes and related operating income began to partially recover in May 2020 and continued to improve into July 2020; thereafter, the monthly volume growth rate as compared to the prior year stabilized for the balance of the year.

Operating income in our Fintech segment increased \$107 million, or 12%, in 2020 and increased \$34 million, or 4%, in 2019 compared to the prior years. Operating margin was 34.2%, 30.1% and 29.2% in 2020, 2019 and 2018, respectively, increasing 410 basis points in 2020 and increasing 90 basis points in 2019 compared to the prior years. Fintech segment operating margin improvement in 2020 compared to 2019 was driven by expense management across the segment, including technology and vendor synergy savings of approximately 330 basis points and additional expense reductions attributable to the COVID-19 pandemic of approximately 120 basis points, partially offset by approximately 100 basis points from a reduction in contract termination fee revenue. Fintech segment operating margin improvement in 2019 compared to 2018 was driven by expense management efforts in our Fintech international businesses of approximately 100 basis points, partially offset by approximately 70 basis points from a reduction in higher-margin software license revenue. Client-focused incremental investments reduced Fintech segment operating margin in 2018 by approximately 40 basis points.

Operating income in our Payments segment increased \$703 million, or 42%, in 2020 and increased \$577 million, or 53%, in 2019 compared to the prior years. Operating margin was 42.9%, 42.4% and 44.9% in 2020, 2019 and 2018, respectively, increasing 50 basis points in 2020 and decreasing 250 basis points in 2019 compared to the prior years. The reduction in Payments segment operating margin in 2019 was primarily attributable to the acquisition of First Data, while the impact of cost synergies drove the margin expansion in 2020.

The operating loss in Corporate and Other increased \$1,230 million in 2020 and increased \$1,519 million in 2019 compared to the prior years. The increase in Corporate and Other operating loss was primarily due to the acquisition of First Data, including incremental amortization of acquired intangible assets of \$1,035 million and \$799 million in 2020 and 2019, respectively, incremental acquisition and integration-related costs of \$441 million and \$275 million in 2020 and 2019, respectively, and other First Data related corporate expenses since the date of acquisition. Corporate and Other was favorably impacted by gains from sales of businesses of \$464 million, \$15 million and \$227 million in 2020, 2019 and 2018, respectively, and negatively impacted in 2019 by a \$48 million non-cash impairment charge related to an international core processing platform.

### *Interest Expense, Net*

Interest expense, net increased \$236 million, or 50%, in 2020 and increased \$284 million, or 150%, in 2019 compared to prior years, primarily due to the June 2019 issuance of \$9.0 billion of fixed-rate senior notes, the July 2019 issuance of €1.5 billion and £1.05 billion of fixed-rate senior notes and the term loan borrowings that were incurred for the purpose of funding the repayment of certain indebtedness of First Data and its subsidiaries on the closing date of the acquisition, as well as the September 2018 issuance of \$2.0 billion of fixed-rate notes.

### *Debt Financing Activities*

In connection with the merger agreement entered into on January 16, 2019 to acquire First Data, we entered into a bridge facility commitment letter providing for a 364-day senior unsecured bridge term loan facility in an aggregate principal amount of \$17.0 billion for the purpose of refinancing certain indebtedness of First Data on the closing date of the acquisition. We recorded \$98 million of expense in 2019 associated with the bridge term loan facility and other refinancing and related activities in connection with the acquisition of First Data. In addition, in 2019 we recorded \$50 million of net foreign currency transaction gains related to our foreign currency-denominated debt. In 2018, we completed a cash tender offer for and redemption of our then-outstanding \$450 million aggregate principal amount of 4.625% senior notes due 2020, which resulted in a pre-tax loss on early debt extinguishment of \$14 million.

### Other Income (Expense)

Other income (expense) increased \$34 million in 2020 and decreased \$11 million in 2019 compared to prior years. Other income (expense) includes net foreign currency transaction gains and losses, gains or losses from a change in fair value of investments in certain equity securities, and amounts related to the release of risk under our non-contingent guarantee arrangements and changes in the provision of estimated credit losses associated with certain indebtedness of the Lending Joint Ventures. In addition, other income includes \$19 million in 2020 related to a pre-tax gain on the sale of certain lease receivables.

### Income Tax Provision

Income tax provision as a percentage of income before income from investments in unconsolidated affiliates was 16.7%, 18.3% and 24.3% in 2020, 2019 and 2018, respectively. The decrease in the effective tax rate in 2020 compared to 2019 was primarily the result of foreign income tax benefits from a subsidiary restructuring, partially offset by the impact of an increase in the United Kingdom corporate income tax rate from 17% to 19% in 2020. The decrease in the effective tax rate in 2019 compared to the prior year is primarily related to equity compensation-related tax benefits, as well as discrete benefits due to a loss from subsidiary restructuring.

### Income from Investments in Unconsolidated Affiliates

Our share of net income or loss from affiliates accounted for using the equity method of accounting, including merchant bank alliance affiliates from the acquisition of First Data, is reported as income from investments in unconsolidated affiliates and the related tax expense or benefit is reported within the income tax provision in the consolidated statements of income. Income from investments in unconsolidated affiliates, including acquired intangible asset amortization from valuations in purchase accounting, was \$0 million, \$29 million and \$10 million in 2020, 2019 and 2018, respectively.

### Net Income Attributable to Noncontrolling Interests

Net income attributable to noncontrolling interests and redeemable noncontrolling interests relates to the ownership interest of our alliance partners in our consolidated results, obtained through the acquisition of First Data. Net income attributable to noncontrolling interests, including acquired intangible asset amortization from valuations in purchase accounting, was \$17 million and \$21 million in 2020 and 2019, respectively.

### Net Income Per Share - Diluted

Net income attributable to Fiserv, Inc. per share-diluted was \$1.40, \$1.71 and \$2.87 in 2020, 2019 and 2018, respectively. Net income attributable to Fiserv, Inc. per share-diluted in 2020 included integration costs and acquired intangible asset amortization from the application of purchase accounting associated with the acquisition of First Data, as well as gains from the sale of a 60% interest of our Investment Services business in February 2020 and the dissolution of the BAMS joint venture in July 2020. Net income attributable to Fiserv, Inc. per share-diluted in 2019 included transaction costs and financing activities associated with the acquisition of First Data, as well as integration costs and acquired asset amortization after the date of acquisition. Net income attributable to Fiserv, Inc. per share-diluted was favorably impacted in 2018 by a gain on the sale of a 55% interest of our Lending Solutions business.

## Liquidity and Capital Resources

### General

Our primary liquidity needs in the ordinary course of business are to: (i) fund normal operating expenses; (ii) meet the interest and principal requirements of our outstanding indebtedness, including finance leases; and (iii) fund capital expenditures and operating lease payments. We believe these needs will be satisfied using cash flow generated by our operations, along with our cash and cash equivalents of \$906 million and available borrowings under our revolving credit facility of \$3.4 billion at December 31, 2020. The following table summarizes our operating cash flow and capital expenditure amounts for the years ended December 31, 2020 and 2019, respectively.

(In millions)	Year Ended December 31,		Increase (Decrease)	
	2020	2019	\$	%
Net income	\$ 975	\$ 914	\$ 61	
Depreciation and amortization	3,257	1,778	1,479	
Net foreign currency gain on financing activities	—	(50)	50	
Share-based compensation	369	229	140	
Deferred income taxes	71	47	24	
Gain on sale of businesses	(464)	(15)	(449)	
Income from investments in unconsolidated affiliates	—	(29)	29	
Distributions from unconsolidated affiliates	42	23	19	
Settlement of interest rate hedge contracts	—	(183)	183	
Non-cash impairment charges	124	48	76	
Net changes in working capital and other	(227)	33	(260)	
Operating cash flow	\$ 4,147	\$ 2,795	\$ 1,352	48 %
Capital expenditures, including capitalized software and other intangibles	\$ 900	\$ 721	\$ 179	25 %

Our net cash provided by operating activities, or operating cash flow, was \$4.1 billion in 2020, an increase of 48% compared with \$2.8 billion in 2019. This increase was primarily attributable to the acquisition of First Data. Net cash provided by operating activities in 2019 included a payment of \$183 million associated with the settlement of treasury lock agreements related to refinancing certain indebtedness assumed as part of the First Data acquisition.

Our current policy is to use our operating cash flow primarily to fund capital expenditures, share repurchases and acquisitions and to repay debt rather than to pay dividends. Our capital expenditures were approximately 6% and 7% of our total revenue in 2020 and 2019, respectively.

### Share Repurchases



In December 2020, New Omaha Holdings L.P. ("New Omaha"), a shareholder of ours, completed an underwritten secondary public offering of 20.1 million shares of our common stock (the "offering"). We repurchased from the underwriters 1.8 million shares of our common stock that were subject to the offering. The share repurchase totaled \$200 million and was funded with cash on hand. The repurchased shares were cancelled and no longer outstanding following the completion of the share repurchase. In 2019, we deferred share repurchases as of January 16, 2019 until the close of the First Data acquisition. We purchased a total of \$1.6 billion and \$394 million of our common stock in 2020 and 2019, respectively.

On November 19, 2020, our board of directors authorized the purchase of up to 60.0 million shares of our common stock. At December 31, 2020, we had approximately 65.7 million shares remaining under our current repurchase authorizations. Shares repurchased are generally held for issuance in connection with our equity plans.

### ***Acquisitions and Dispositions***

#### *Acquisitions*

On March 2, 2020, we acquired MerchantPro, an ISO that provides processing services, POS equipment and merchant cash advances to businesses across the United States. MerchantPro is included within the Acceptance segment and further expands our merchant services business. On March 18, 2020, we acquired Bypass, an ISO and innovator in enterprise POS systems for sports and entertainment venues, food service management providers and national restaurant chains. Bypass is included within the Acceptance segment and further enhances our omni-commerce capabilities, enabling enterprise businesses to deliver a seamless customer experience that spans physical and digital channels. On May 11, 2020, we acquired Inlet, a provider of secure digital delivery solutions for enterprise and middle-market billers' invoices and statements. Inlet is included within the Payments segment and further enhances our digital bill payment strategy. We acquired these businesses for an aggregate purchase price of \$167 million, net of \$2 million of acquired cash, and including earn-out provisions estimated at a fair value of \$45 million. We funded these acquisitions by utilizing a combination of available cash and existing availability under our revolving credit facility.



On July 29, 2019, we acquired First Data for a total purchase price of \$46.5 billion by acquiring 100% of the First Data stock that was issued and outstanding as of the date of acquisition. As a result of the acquisition, First Data stockholders received 286 million shares of common stock of Fiserv, Inc., at an exchange ratio of 0.303 shares of Fiserv, Inc. for each share of First Data common stock, with cash paid in lieu of fractional shares. We also converted 15 million outstanding First Data equity awards into corresponding equity awards relating to common stock of Fiserv, Inc. in accordance with the exchange ratio. In addition, concurrent with the closing of the acquisition, we made a cash payment of \$16.4 billion to repay existing First Data debt. We funded the transaction-related expenses and the repayment of First Data debt through a combination of available cash on-hand, proceeds from the issuance of senior notes, and term loan and revolving credit facility borrowings. The acquisition of First Data, included within the Acceptance and Payments segments, increases our footprint as a global payments and financial technology provider by expanding the portfolio of services provided to financial institutions, corporate and merchant clients and consumers.

On October 31, 2018, we acquired the debit card processing, ATM Managed Services, and MoneyPass<sup>®</sup> surcharge-free network of Elan Financial Services, a unit of U.S. Bancorp, for approximately \$659 million including post-closing working capital adjustments, estimated contingent consideration related to earn-out provisions and future payments under a transition services agreement in excess of estimated fair value. This acquisition, included within the Payments segment, deepens our presence in debit card processing, broadens our client reach and scale and provides new solutions to enhance the value proposition for our existing debit solution clients.

On January 22, 2021, we acquired Ondot Systems, Inc., a digital experience platform provider for financial institutions. This acquisition, to be included within the Payments segment, will further expand our digital capabilities, enhancing our suite of integrated solutions spanning card-based payments, digital banking platforms, core banking, and merchant solutions to enable clients of all sizes to deliver frictionless, digital-first and personalized experiences to their customers.

### *Dispositions*

Effective July 1, 2020, we and BANA dissolved the BAMS joint venture, of which we maintained a 51% controlling ownership interest. Upon dissolution of the joint venture's operations, the joint venture transferred a proportionate share of value, primarily the client contracts, to each party via an agreed upon contractual separation. The remaining activities of the joint venture will consist of supporting the transition of the business to each party and an orderly wind down of remaining BAMS assets and liabilities. The revenues and expenses of the BAMS joint venture were consolidated into our financial results through the date of dissolution. The business transferred to us will continue to be operated and managed within our Acceptance segment.

We will continue to provide merchant processing and related services to former BAMS clients allocated to BANA, at BAMS pricing, through June 2023. We will also provide processing and other support services to new BANA merchant clients pursuant to a five-year non-exclusive agreement which, after June 2023, will also apply to the former BAMS clients allocated to BANA. In addition, both companies are entitled to certain transition services, at fair value, from each other through June 2023.

On February 18, 2020, we sold a 60% controlling interest of our Investment Services business, subsequently renamed as Tegra118, LLC. We received pre-tax proceeds of \$578 million, net of related expenses, resulting in a pre-tax gain on the sale of \$428 million, with a related tax expense of \$112 million. The net proceeds from the sale were primarily used to repurchase shares of our common stock. On February 2, 2021, Tegra118 completed a merger with a third party, resulting in a dilution of our ownership interest in the combined new entity, Wealthtech Holdings, LLC.

In connection with the acquisition of First Data, we acquired two businesses which we intended to sell. In October 2019, we completed the sales, at acquired fair value, of these two businesses for aggregate proceeds of \$133 million.

On March 29, 2018, we sold a 55% controlling interest of our Lending Solutions business, retaining 45% ownership interests in two joint ventures. We received gross sale proceeds of \$419 million from the transactions. In August 2019, the Sagent Auto, LLC joint venture, formerly known as Fiserv Automotive Solutions, LLC, completed a merger with a third party, resulting in the dilution of our ownership interest to 31% in the combined entity, defi SOLUTIONS Group, LLC. The Lending Joint Ventures maintain variable-rate term loan facilities with aggregate outstanding borrowings of \$385 million in senior unsecured debt and variable-rate revolving credit facilities with an aggregate borrowing capacity of \$45 million with a syndicate of banks, which mature in March 2023. Outstanding borrowings on the revolving credit facilities at December 31, 2020 were \$13 million. We have guaranteed this debt of the Lending Joint Ventures and do not anticipate that the Lending Joint Ventures will fail to fulfill their debt obligations. We maintain a liability for the estimated fair value of our non-contingent obligations to stand ready to perform over the term of the guarantee arrangements with the Lending Joint Ventures. Such guarantees will be amortized in future periods over the contractual term, based upon amounts to be received by us for the respective guarantees. In addition, we

maintain a contingent liability representing the current expected credit losses to which we are exposed. This contingent liability is estimated based on certain financial metrics of the Lending Joint Ventures and historical industry data, which is used to develop assumptions of the likelihood the guaranteed parties will default and the level of credit losses in the event a default occurs. We have not made any payments under the guarantees, nor have we been called upon to do so. In addition, in January 2018, we completed the sale of the retail voucher business acquired in our 2017 acquisition of Monitise for proceeds of £37 million (\$50 million).

### Indebtedness

Our debt consisted of the following at December 31:

(In millions)	2020	2019
<b>Short-term and current maturities of long-term debt:</b>		
Lines of credit	\$ 144	\$ 150
Finance lease and other financing obligations	240	137
Total short-term and current maturities of long-term debt	<u>\$ 384</u>	<u>\$ 287</u>
<b>Long-term debt:</b>		
2.700% senior notes due June 2020	\$ —	\$ 850
4.750% senior notes due June 2021	400	400
3.500% senior notes due October 2022	700	700
3.800% senior notes due October 2023	1,000	1,000
0.375% senior notes due July 2023 (Euro-denominated)	612	559
2.750% senior notes due July 2024	2,000	2,000
3.850% senior notes due June 2025	900	900
2.250% senior notes due July 2025 (British Pound-denominated)	709	687
3.200% senior notes due July 2026	2,000	2,000
2.250% senior notes due June 2027	1,000	—
1.125% senior notes due July 2027 (Euro-denominated)	612	559
4.200% senior notes due October 2028	1,000	1,000
3.500% senior notes due July 2029	3,000	3,000
2.650% senior notes due June 2030	1,000	—
1.625% senior notes due July 2030 (Euro-denominated)	612	559
3.000% senior notes due July 2031 (British Pound-denominated)	709	687
4.400% senior notes due July 2049	2,000	2,000
Receivable securitized loan	425	500
Term loan facility	1,250	3,950
Unamortized discount and deferred financing costs	(155)	(160)
Revolving credit facility	22	174
Finance lease and other financing obligations	504	247
Total long-term debt	<u>\$ 20,300</u>	<u>\$ 21,612</u>

At December 31, 2020, our debt consisted primarily of \$18.3 billion of fixed rate senior notes and \$1.3 billion of variable rate term loan. Interest on our U.S. dollar-denominated senior notes is paid semi-annually, while interest on our Euro- and British Pound-denominated senior notes is paid annually. Interest on our revolving credit facility is paid weekly, or more frequently on occasion, and interest on our term loans is paid monthly. Our 4.75% senior notes due in June 2021 were classified in the consolidated balance sheet as long-term, as we have the intent to refinance this debt on a long-term basis and the ability to do so under our revolving credit facility, which expires in September 2023.

We were in compliance with all financial debt covenants during 2020. Our ability to meet future debt covenant requirements will depend on our continued ability to generate earnings and cash flows. As described below, the COVID-19 pandemic has created significant uncertainty as to general economic and market conditions. We expect to remain in compliance with all terms and conditions associated with our outstanding debt, including financial debt covenants.

## Senior Notes

We have outstanding \$18.3 billion of various fixed-rate senior notes, as described above. The indentures governing our senior notes contain covenants that, among other matters, limit (i) our ability to consolidate or merge with or into, or convey, transfer or lease all or substantially all of our properties and assets to, another person, (ii) our and certain of our subsidiaries' ability to create or assume liens, and (iii) our and certain of our subsidiaries' ability to engage in sale and leaseback transactions. We may, at our option, redeem the senior notes, in whole or from time to time in part, at any time prior to the applicable maturity date. The interest rate applicable to certain of the senior notes is subject to an increase of up to two percent in the event that the credit rating assigned to such notes is downgraded below investment grade.

On May 13, 2020, we completed an offering of \$2.0 billion of senior notes comprised of \$1.0 billion aggregate principal amount of 2.25% senior notes due in June 2027 and \$1.0 billion aggregate principal amount of 2.65% senior notes due in June 2030. The indentures governing the senior notes contain covenants that are substantially the same as those set forth in our senior notes described above. We used the net proceeds from these senior notes offerings to repay the outstanding principal balance of \$850 million under our 2.7% senior notes due in June 2020 and outstanding borrowings under our amended and restated revolving credit facility totaling \$1.1 billion.

On June 24, 2019 and July 1, 2019, we completed various offerings of senior notes for the purpose of funding the repayment of certain indebtedness of First Data and its subsidiaries on the closing date of the acquisition. Such offerings consisted of the following:

<b>(In millions)</b>	<b>Interest Rates</b>	<b>Maturities</b>	<b>Aggregate Principal Amount</b>	
U.S. dollar denominated senior notes	2.750% - 4.400%	July 2024 - 2049	\$	9,000
Euro denominated senior notes	0.375% - 1.625%	July 2023 - 2030	€	1,500
British Pound denominated senior notes	2.250% - 3.000%	July 2025 - 2031	£	1,050

We used a portion of the net proceeds from the senior note offerings described above in June 2019 to repay outstanding borrowings totaling \$790 million under our amended and restated revolving credit facility. On July 29, 2019, concurrent with the acquisition of First Data, we used the remaining net proceeds from the 2019 senior notes offerings described above, as well as the net proceeds of the term loan facility and a drawing on our revolving credit facility described below, to repay \$16.4 billion of existing First Data debt and to pay fees and our expenses related to such repayment, the First Data acquisition and related transactions.

In March 2019, we entered into treasury lock agreements ("Treasury Locks"), designated as cash flow hedges, in the aggregate notional amount of \$5.0 billion to manage exposure to fluctuations in benchmark interest rates. On June 24, 2019, concurrent with the issuance of the U.S. dollar-denominated senior notes described above, the Treasury Locks were settled resulting in a payment of \$183 million that will be amortized to earnings over the terms of the originally forecasted interest payments.

In June 2019, we entered into foreign exchange forward contracts to minimize foreign currency exposure to the Euro and British Pound upon settlement of the proceeds from the foreign currency-denominated senior notes, as described above. The foreign exchange forward contracts matured on July 1, 2019, concurrent with the closing of the offering of the foreign currency-denominated senior notes. We realized foreign currency transaction gains of \$3 million from these foreign exchange forward contracts. In addition, we held a portion of the proceeds from the issuance of these foreign currency-denominated senior notes in Euro- and British Pound-denominated cash and cash equivalents. We realized foreign currency transaction losses of \$19 million as a result of changes in the U.S. dollar equivalent of the Euro- and British Pound-denominated cash due to fluctuations in foreign currency exchange rates.

In September 2018, we completed an offering of \$2.0 billion of senior notes comprised of \$1.0 billion aggregate principal amount of 3.8% senior notes due in October 2023 and \$1.0 billion aggregate principal amount of 4.2% senior notes due in October 2028. We used the net proceeds from such offering to repay the outstanding principal balance of \$540 million under our then-existing term loan and the then-outstanding borrowings under our amended and restated revolving credit facility totaling \$1.1 billion. In addition, we commenced a cash tender offer in September 2018 for any and all of our then-outstanding \$450 million aggregate principal amount of 4.625% senior notes due October 2020. Upon expiration of the tender offer on September 26, 2018, \$246 million was tendered. In October 2018, we retired the remaining outstanding \$204 million aggregate principal amount of 4.625% senior notes. We recorded a pre-tax loss on early debt extinguishment of \$14 million during the year ended December 31, 2018 related to these activities.

### *Term Loan Facility*

On February 15, 2019, we entered into a term loan credit agreement with a syndicate of financial institutions pursuant to which such financial institutions committed to provide us with a senior unsecured term loan facility in an aggregate amount of \$5.0 billion, consisting of \$1.5 billion in commitments to provide loans with a term of three years and \$3.5 billion in commitments to provide loans with a term of five years. On July 29, 2019, concurrent with the closing of the acquisition of First Data, the term loan credit agreement was funded. Loans drawn under the term loan facility are subject to amortization at a quarterly rate of 1.25% for the first eight quarters and 1.875% each quarter thereafter (with loans outstanding under the five-year tranche subject to amortization at a quarterly rate of 2.5% after the fourth anniversary of the commencement of amortization), with accrued and unpaid amortization amounts required to be paid on the last business day in December of each year. Borrowings under the term loan facility bear interest at variable rates based on LIBOR or on a base rate, plus in each case, a specified margin based on our long-term debt rating in effect from time to time. The variable interest rate on the term loan facility borrowings was 1.41% at December 31, 2020. The term loan credit facility contains affirmative, negative and financial covenants, and events of default, that are substantially the same as those set forth in our existing amended revolving credit facility, as described below.

### *Revolving Credit Facility*

We maintain an amended and restated revolving credit facility, which matures in September 2023, with aggregate commitments available for \$3.5 billion of total capacity. Borrowings under the amended and restated revolving credit facility bear interest at a variable rate based on LIBOR or a base rate, plus in each case a specified margin based on our long-term debt rating in effect from time to time. The variable interest rate on the revolving credit facility borrowings was 1.18% at December 31, 2020. There are no significant commitment fees and no compensating balance requirements. The amended and restated revolving credit facility contains various restrictions and covenants that require us, among other things, to (i) limit our consolidated indebtedness as of the end of each fiscal quarter to no more than three and one-half times our consolidated net earnings before interest, taxes, depreciation, amortization, non-cash charges and expenses and certain other adjustments ("EBITDA") during the period of four fiscal quarters then ended, subject to certain exceptions, and (ii) maintain EBITDA of at least three times our consolidated interest expense as of the end of each fiscal quarter for the period of four fiscal quarters then ended.

On February 6, 2019, we entered into an amendment to our amended and restated revolving credit facility to (i) amend the maximum leverage ratio covenant to permit us to elect to increase the permitted maximum leverage ratio from three and one-half times our consolidated EBITDA to either four times or four and one-half times our consolidated EBITDA for a specified period following certain acquisitions and (ii) permit us to make drawings under the revolving credit facility on the closing date of our acquisition of First Data subject to only limited conditions. In November 2019, we elected to increase the permitted maximum leverage ratio to four times our consolidated EBITDA pursuant to the terms of the amendment described above.

### *Foreign Lines of Credit and Other Arrangements*

We maintain certain short-term lines of credit with foreign banks and alliance partners primarily to fund settlement activity. These arrangements are primarily associated with international operations and are in various functional currencies, the most significant of which are the Australian dollar, Polish zloty, Euro and Argentine peso. We had amounts outstanding on these lines of credit totaling \$144 million and \$150 million at a weighted-average interest rate of 21.98% and 13.42% at December 31, 2020 and 2019, respectively.

### *Receivable Securitized Loan*

We maintain a consolidated wholly-owned subsidiary, First Data Receivables, LLC ("FDR"). FDR is a party to certain receivables financing arrangements, including an agreement ("Receivables Financing Agreement") with certain financial institutions and other persons from time to time party thereto as lenders and group agents, pursuant to which certain of our wholly-owned subsidiaries have agreed to transfer and contribute receivables to FDR, and FDR in turn may obtain borrowings from the financial institutions and other lender parties to the Receivables Financing Agreement secured by liens on those receivables. FDR's assets are not available to satisfy the obligations of any other of our entities or affiliates, and FDR's creditors would be entitled, upon its liquidation, to be satisfied out of FDR's assets prior to any assets or value in FDR becoming available to us. FDR held \$811 million and \$773 million in receivables as part of the securitization program at December 31, 2020 and 2019, respectively. FDR utilized the receivables as collateral in borrowings of \$425 million and \$500 million as of December 31, 2020 and 2019, at an average interest rate of 1.00% and 2.61%, respectively. At December 31, 2020, the collateral capacity under the Receivables Financing Agreement was \$625 million, and the maximum borrowing capacity was \$500 million. The term of the Receivables Financing Agreement is through July 2022.

**Other**

Access to capital markets impacts our cost of capital, our ability to refinance maturing debt and our ability to fund future acquisitions. Our ability to access capital on favorable terms depends on a number of factors, including general market conditions, interest rates, credit ratings on our debt securities, perception of our potential future earnings and the market price of our common stock. As of December 31, 2020, we had a corporate credit rating of Baa2 with a stable outlook from Moody's Investors Service, Inc. ("Moody's") and BBB with a stable outlook from Standard & Poor's Ratings Services ("S&P") on our senior unsecured debt securities.

The interest rates payable on certain of our senior notes, our term loans and our revolving credit facility are subject to adjustment from time to time if Moody's or S&P changes the debt rating applicable to the notes. If the ratings from Moody's or S&P decrease below investment grade, the per annum interest rates on the senior notes are subject to increase by up to two percent. In no event will the total increase in the per annum interest rates exceed two percent above the original interest rates, nor will the per annum interest rate be reduced below the original interest rate applicable to the senior notes.

**Cash and Cash Equivalents**

Investments (other than those included in settlement assets) with original maturities of three months or less that are readily convertible to cash are considered to be cash equivalents. At December 31, 2020 and 2019, we held \$906 million and \$893 million in cash and cash equivalents, respectively.

The table below details the cash and cash equivalents at December 31:

(In millions)	2020			2019		
	Domestic	International	Total	Domestic	International	Total
Available	\$ 337	\$ 177	\$ 514	\$ 383	\$ 208	\$ 591
Unavailable <sup>(1)</sup>	57	335	392	130	172	302
Total	\$ 394	\$ 512	\$ 906	\$ 513	\$ 380	\$ 893

<sup>(1)</sup> Represents cash held primarily by our joint ventures that is not available to fund operations outside of those entities unless the board of directors for said entities declares a dividend, as well as cash held by certain other entities that are subject to foreign exchange controls in certain countries or regulatory capital requirements.

**Employee Termination Costs**

In connection with the acquisition of First Data, we continue to implement integration plans focused on reducing our overall cost structure, including eliminating duplicate costs. We recorded \$131 million and \$32 million of employee termination costs related to severance and other separation costs for terminated employees in connection with the acquisition of First Data during the years ended December 31, 2020 and 2019, respectively. Accrued employee severance and other separation costs of \$27 million at December 31, 2020 are expected to be paid within the next twelve months. We continue to evaluate operating efficiencies and anticipate incurring additional costs in connection with these activities, but are unable to estimate those amounts at this time as such plans are not yet finalized.

**Impact of COVID-19 Pandemic**

The COVID-19 pandemic has created significant uncertainty as to general global economic and market conditions. We believe we have adequate capital resources and sufficient access to external financing sources to satisfy our current and reasonably anticipated requirements for funds to conduct our operations and meet other needs in the ordinary course of our business. However, as the impact of the COVID-19 pandemic on the economy and our operations evolves, we will continue to assess our liquidity needs. The ability to continue to service debt and meet lease and other obligations as they come due is dependent on our continued ability to generate earnings and cash flows. A lack of continued recovery or further deterioration in economic and market conditions could materially affect our future access to our sources of liquidity, particularly our cash flows from operations.

We engage in regular communication with the banks that participate in our revolving credit facility. During these communications, none of the banks have indicated that they may be unable to perform on their commitments. We periodically review our banking and financing relationships, considering the stability of the institutions, pricing we receive on services and other aspects of the relationships. Based on these communications and our monitoring activities, we believe the likelihood of one of our banks not performing on its commitment is remote. As evidenced by our May 2020 senior notes offering described above, the long-term debt markets have historically provided us with a source of liquidity. Although we do not currently

anticipate an inability to obtain financing from long-term debt markets in the future, effects of the COVID-19 pandemic could make financing more difficult and/or expensive to obtain. Our ability to access the long-term debt markets on favorable interest rate and other terms also depends on the ratings assigned by the credit rating agencies to our indebtedness. As of December 31, 2020, we had a corporate credit rating of Baa2 with a stable outlook from Moody's Investors Service, Inc. and BBB with a stable outlook from Standard & Poor's Rating Services. In the event that the ratings of our outstanding long-term debt securities were substantially lowered or withdrawn for any reason, or if the ratings assigned to any new issue of long-term debt securities were significantly lower than those noted above, particularly if we no longer had investment grade ratings, our ability to access the debt markets could be adversely affected and our interest expense could increase under the terms of certain of our long-term debt securities.

### Off-Balance Sheet Arrangements and Contractual Obligations

We do not participate in, nor have we created, any off-balance sheet variable interest entities or other off-balance sheet financing. The following table details our contractual obligations at December 31, 2020:

(In millions)	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Long-term debt including interest <sup>(1) (2)</sup>	\$ 25,957	\$ 899	\$ 4,470	\$ 5,770	\$ 14,818
Minimum finance lease payments <sup>(1)</sup>	410	107	201	99	3
Minimum operating lease payments <sup>(1) (3)</sup>	657	136	223	152	146
Purchase obligations <sup>(1)</sup>	1,889	608	787	328	166
Income tax obligations	171	61	46	29	35
Total	<u>\$ 29,084</u>	<u>\$ 1,811</u>	<u>\$ 5,727</u>	<u>\$ 6,378</u>	<u>\$ 15,168</u>

<sup>(1)</sup> Interest, finance lease, operating lease and purchase obligations are reported on a pre-tax basis.

<sup>(2)</sup> The calculations assume that only mandatory debt repayments are made, no additional refinancing or lending occurs, except for our 4.75% notes due in June 2021 as we have the intent to refinance this debt on a long-term basis and the ability to do so under our revolving credit facility maturing in September 2023, and the variable rate on the revolving credit facility and term loans are priced at the rate in effect at December 31, 2020.

<sup>(3)</sup> Excludes \$30 million of legally binding minimum lease payments for finance leases that have been signed but not yet commenced.

### Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, interest rates, currency exchange rates, indices, correlations or other market factors, such as liquidity, will result in losses for a certain financial instrument or group of financial instruments. We are exposed to certain market risks, primarily from fluctuations in interest rates and foreign currency exchange rates. Our senior management actively monitors these risks.

#### Interest Rate Risk

In addition to existing cash balances and cash provided by operating activities, we use a combination of fixed- and variable-rate debt instruments to finance our operations. We are exposed to interest rate risk on certain of these debt obligations. We had fixed- and variable-rate debt, excluding finance leases and other financing obligations, with varying maturities for an aggregate carrying amount of \$18.3 billion and \$1.8 billion, respectively, at December 31, 2020. Our fixed-rate debt at December 31, 2020 primarily consisted of fixed-rate senior notes with a fair value of \$20.7 million, based on matrix pricing which considers readily observable inputs of comparable securities. The potential change in fair value of our fixed-rate senior notes from a hypothetical 1% change in market interest rates would not alone impact any decisions to repurchase our outstanding fixed-rate debt instruments before their maturity. Our variable-rate debt at December 31, 2020 primarily consisted of outstanding borrowings on our revolving credit facility, variable rate term loan, foreign lines of credit and debt associated with the receivables securitization agreement. Based on our outstanding debt balances and interest rates at December 31, 2020, a hypothetical 1% increase in market interest rates related to our variable-rate debt would increase annual interest expense by approximately \$18 million. This sensitivity analysis assumes the outstanding debt balances at December 31, 2020 and the change in market interest rates is applicable for an entire year.

In connection with processing electronic payments transactions, the funds we receive from subscribers are invested into short-term, highly liquid investments from the time we collect the funds until payments are made to the applicable recipients. Fluctuations in market interest rates affect the interest-related income that we earn on these investments. A hypothetical 1% decrease in market interest rates would decrease annual interest-related income related to settlement assets by approximately

\$30 million over the next twelve months. This sensitivity analysis assumes the subscriber fund balances at December 31, 2020 and the change in market interest rates is applicable for an entire year.

#### *Foreign Currency Risk*

We conduct business globally and are exposed to foreign currency risk from changes in the value of underlying assets and liabilities of our non-U.S. dollar-denominated foreign investments and foreign currency transactions. We manage the exposure to these risks through the use of foreign currency forward exchange contracts and non-derivative net investment hedges.

Our exposure to foreign currency exchange risks generally arise from our non-U.S. operations to the extent they are conducted in local currency. Approximately 13% and 12% of our total revenue was generated outside the U.S in 2020 and 2019, respectively. The major currencies to which our revenues are exposed are the Euro, the British Pound, the Indian Rupee and the Argentine Peso. A strengthening or weakening of the U.S. dollar relative to the currencies in which our revenue and profits are denominated by 10% would have resulted in a decrease or increase, respectively, in our reported pre-tax income as follows at December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>
Euro	\$ 7	\$ 7
British Pound	3	4
Indian Rupee	2	3
Argentine Peso	3	2
Other	5	9
Total increase or decrease	<u>\$ 20</u>	<u>\$ 25</u>

We have entered into foreign currency forward exchange contracts, which have been designated as cash flow hedges, to hedge foreign currency exposure to our operating costs in India. At December 31, 2020, the notional amount of these derivatives was approximately \$259 million, with a positive fair value of \$9 million. In addition, we designated our foreign currency-denominated senior notes as net investment hedges to reduce exposure to changes in the value of our net investments in certain foreign subsidiaries due to changes in foreign currency exchange rates.

Refer to Item 1A in Part I of this Annual Report on Form 10-K for an additional discussion of risks and potential risks of the COVID-19 pandemic on our business.

**Item 8. Financial Statements and Supplementary Data**

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**Fiserv, Inc.**  
**Consolidated Statements of Income**

**In millions, except per share data**  
**Year Ended December 31,**

	2020	2019	2018
<b>Revenue:</b>			
Processing and services <sup>(1)</sup>	\$ 12,215	\$ 8,573	\$ 4,975
Product	2,637	1,614	848
Total revenue	<u>14,852</u>	<u>10,187</u>	<u>5,823</u>
<b>Expenses:</b>			
Cost of processing and services	5,841	4,016	2,324
Cost of product	1,971	1,293	745
Selling, general and administrative	5,652	3,284	1,228
Gain on sale of businesses	(464)	(15)	(227)
Total expenses	<u>13,000</u>	<u>8,578</u>	<u>4,070</u>
Operating income	1,852	1,609	1,753
Interest expense, net	(709)	(473)	(189)
Debt financing activities	—	(47)	(14)
Other income (expense)	28	(6)	5
Income before income taxes and income from investments in unconsolidated affiliates	1,171	1,083	1,555
Income tax provision	(196)	(198)	(378)
Income from investments in unconsolidated affiliates	—	29	10
Net income	975	914	1,187
Less: net income attributable to noncontrolling interests and redeemable noncontrolling interests	17	21	—
Net income attributable to Fiserv, Inc.	<u>\$ 958</u>	<u>\$ 893</u>	<u>\$ 1,187</u>
Net income attributable to Fiserv, Inc. per share – basic	\$ 1.42	\$ 1.74	\$ 2.93
Net income attributable to Fiserv, Inc. per share – diluted	\$ 1.40	\$ 1.71	\$ 2.87
<b>Shares used in computing net income attributable to Fiserv, Inc. per share:</b>			
Basic	672.1	512.3	405.5
Diluted	683.4	522.6	413.7

<sup>(1)</sup> Includes processing and other fees charged to related party investments accounted for under the equity method of \$236 million, \$112 million and \$28 million for the years ended December 31, 2020, 2019 and 2018, respectively (see Notes 9 and 20).

**Fiserv, Inc.**  
**Consolidated Statements of Comprehensive Income**

<b>In millions</b>			
<b>Year Ended December 31,</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Net income	\$ 975	\$ 914	\$ 1,187
Other comprehensive (loss) income:			
Fair market value adjustment on cash flow hedges, net of income tax (provision) benefit of (\$2 million), \$46 million and \$2 million	5	(134)	(5)
Reclassification adjustment for net realized gains on cash flow hedges included in cost of processing and services, net of income tax benefit of \$0 million, \$0 million and \$0 million	(1)	(1)	(1)
Reclassification adjustment for net realized losses on cash flow hedges included in net interest expense, net of income tax provision of \$5 million, \$3 million and \$2 million	16	10	4
Unrealized losses on defined benefit pension plans, net of income tax benefit of \$2 million and \$1 million	(6)	(4)	—
Foreign currency translation	(186)	8	(11)
Total other comprehensive loss	(172)	(121)	(13)
Comprehensive income	\$ 803	\$ 793	\$ 1,174
Less: net income attributable to noncontrolling interests and redeemable noncontrolling interests	17	21	—
Less: other comprehensive income (loss) attributable to noncontrolling interests	35	(8)	—
Comprehensive income attributable to Fiserv, Inc.	<u>\$ 751</u>	<u>\$ 780</u>	<u>\$ 1,174</u>

See accompanying notes to consolidated financial statements.

**Fiserv, Inc.**  
**Consolidated Balance Sheets**

<b>In millions</b>	<b>2020</b>	<b>2019</b>
<b>December 31,</b>		
<b>Assets</b>		
Cash and cash equivalents	\$ 906	\$ 893
Trade accounts receivable, less allowance for doubtful accounts	2,482	2,782
Prepaid expenses and other current assets	1,310	1,503
Settlement assets	11,521	11,868
Total current assets	16,219	17,046
Property and equipment, net	1,628	1,606
Customer relationships, net	11,603	14,042
Other intangible assets, net	3,755	3,600
Goodwill	36,322	36,038
Contract costs, net	692	533
Investments in unconsolidated affiliates	2,756	2,720
Other long-term assets	1,644	1,954
Total assets	\$ 74,619	\$ 77,539
<b>Liabilities and Equity</b>		
Accounts payable and accrued expenses	\$ 3,186	\$ 3,080
Short-term and current maturities of long-term debt	384	287
Contract liabilities	546	492
Settlement obligations	11,521	11,868
Total current liabilities	15,637	15,727
Long-term debt	20,300	21,612
Deferred income taxes	4,389	4,247
Long-term contract liabilities	187	155
Other long-term liabilities	777	941
Total liabilities	41,290	42,682
<b>Commitments and Contingencies (see Note 19)</b>		
<b>Redeemable Noncontrolling Interests</b>	259	262
<b>Fiserv, Inc. Shareholders' Equity:</b>		
Preferred stock, no par value: 25.0 million shares authorized; none issued	—	—
Common stock, \$0.01 par value: 1,800.0 million shares authorized; 789.6 million shares issued	8	8
Additional paid-in capital	23,643	23,741
Accumulated other comprehensive loss	(387)	(180)
Retained earnings	13,441	12,528
Treasury stock, at cost, 120.5 million and 111.5 million shares	(4,375)	(3,118)
Total Fiserv, Inc. shareholders' equity	32,330	32,979
Noncontrolling interests	740	1,616
Total equity	33,070	34,595
Total liabilities and equity	\$ 74,619	\$ 77,539

See accompanying notes to consolidated financial statements.

**Fiserv, Inc.**  
**Consolidated Statements of Equity**

In millions	Fiserv, Inc. Shareholders' Equity								
	Number of Shares		Amount						
	Common Shares	Treasury Shares	Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Treasury Stock	Noncontrolling Interests	Total Equity
Balance at January 1, 2018	791	376	\$ 8	\$ 1,031	\$ (54)	\$ 10,240	\$ (8,494)	\$ —	\$ 2,731
Net income						1,187			1,187
Other comprehensive loss					(13)				(13)
Share-based compensation				73					73
Shares issued under stock plans		(3)		(47)			69		22
Purchases of treasury stock		26					(1,915)		(1,915)
Cumulative-effect adjustment of ASU 2014-09 adoption						208			208
Cumulative-effect adjustment of ASU 2017-12 adoption						3	(3)		—
Cumulative-effect adjustment of ASU 2018-02 adoption						(3)	3		—
Balance at December 31, 2018	791	399	8	1,057	(67)	11,635	(10,340)	—	2,293
Net income <sup>(1)</sup>						893		4	897
Shares issued to acquire First Data (see Note 4)		(286)		22,582			7,478	1,731	31,791
Distributions paid to noncontrolling interests <sup>(2)</sup>								(111)	(111)
Other comprehensive loss					(113)			(8)	(121)
Share-based compensation				229					229
Shares issued under stock plans		(5)		(127)			137		10
Purchases of treasury stock		4					(393)		(393)
Balance at December 31, 2019	791	112	8	23,741	(180)	12,528	(3,118)	1,616	34,595
Net income (loss) <sup>(1)</sup>						958		(22)	936
Measurement period adjustments related to First Data acquisition (see Note 4)								(126)	(126)
Distributions paid to noncontrolling interests <sup>(2)</sup>								(37)	(37)
Net adjustment to noncontrolling interests from dissolution (see Note 4)				(36)				(726)	(762)
Other comprehensive (loss) income					(207)			35	(172)
Share-based compensation				369					369
Shares issued under stock plans		(5)		(231)			178		(53)
Purchases of treasury stock		16					(1,635)		(1,635)
Retirement of treasury stock (see Note 20)	(2)	(2)		(200)			200		—
Cumulative-effect adjustment of ASU 2016-13 adoption						(45)			(45)
Balance at December 31, 2020	789	121	\$ 8	\$ 23,643	\$ (387)	\$ 13,441	\$ (4,375)	\$ 740	\$ 33,070

<sup>(1)</sup> The total net income presented in the consolidated statements of equity for the years ended December 31, 2020 and 2019 is different than the amount presented in the consolidated statements of income due to the net income attributable to redeemable noncontrolling interests of \$39 million and \$17 million, respectively, not included in equity.

<sup>(2)</sup> The total distributions presented in the consolidated statements of equity for the years ended December 31, 2020 and 2019 exclude \$42 million and \$7 million, respectively, in distributions paid to redeemable noncontrolling interests not included in equity. In addition, the total distributions presented in the consolidated statements of equity for the year ended December 31, 2020 exclude \$25 million in distributions to Bank of America related to the Banc of America Merchant Services Joint Venture (see Note 4) not included in equity.

See accompanying notes to consolidated financial statements.

**Fiserv, Inc.**  
**Consolidated Statements of Cash Flows**

In millions Year Ended December 31,	2020	2019	2018
<b>Cash flows from operating activities:</b>			
Net income	\$ 975	\$ 914	1,187
Adjustments to reconcile net income to net cash provided by operating activities from continuing operations:			
Depreciation and other amortization	1,077	615	382
Amortization of acquisition-related intangible assets	2,133	1,036	163
Amortization of financing costs, debt discounts and other	47	127	11
Net foreign currency gain on financing activities	—	(50)	—
Share-based compensation	369	229	73
Deferred income taxes	71	47	133
Gain on sale of businesses	(464)	(15)	(227)
Income from investments in unconsolidated affiliates	—	(29)	(10)
Distributions from unconsolidated affiliates	42	23	2
Settlement of interest rate hedge contracts	—	(183)	—
Non-cash impairment charges	124	48	3
Other operating activities	(16)	(3)	4
Changes in assets and liabilities, net of effects from acquisitions and dispositions:			
Trade accounts receivable	320	(7)	(108)
Prepaid expenses and other assets	(167)	(82)	(6)
Contract costs	(289)	(212)	(137)
Accounts payable and other liabilities	(146)	238	116
Contract liabilities	71	99	(34)
Net cash provided by operating activities from continuing operations	4,147	2,795	1,552
<b>Cash flows from investing activities:</b>			
Capital expenditures, including capitalized software and other intangibles	(900)	(721)	(360)
Proceeds from sale of businesses	579	51	419
Payments for acquisitions of businesses, net of cash acquired and including working capital adjustments	(139)	(16,005)	(712)
Distributions from unconsolidated affiliates	109	113	—
Purchases of investments	(1)	(45)	(3)
Other investing activities	11	5	(7)
Net cash used in investing activities from continuing operations	(341)	(16,602)	(663)
<b>Cash flows from financing activities:</b>			
Debt proceeds	8,897	20,030	5,039
Debt repayments	(10,918)	(5,043)	(4,005)
Short-term borrowings, net	(6)	—	—
Payments of debt financing, redemption and other costs	(16)	(247)	—
Proceeds from issuance of treasury stock	133	156	75
Purchases of treasury stock, including employee shares withheld for tax obligations	(1,826)	(561)	(1,946)
Distributions paid to noncontrolling interests and redeemable noncontrolling interests	(104)	(118)	—
Other financing activities	4	(26)	(5)
Net cash (used in) provided by financing activities from continuing operations	(3,836)	14,191	(842)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	16	1	—
Net change in cash, cash equivalents and restricted cash from continuing operations	(14)	385	47
Net cash flows from discontinued operations	—	133	43
Cash, cash equivalents and restricted cash, beginning balance	933	415	325
Cash, cash equivalents and restricted cash, ending balance	\$ 919	\$ 933	415
<b>Discontinued operations cash flow information:</b>			
Net cash used in operating activities	\$ —	\$ —	(7)
Net cash provided by investing activities	—	133	50
Net change in cash, cash equivalents and restricted cash from discontinued operations	\$ —	\$ 133	43

See accompanying notes to consolidated financial statements.

**Fiserv, Inc.**  
**Notes to Consolidated Financial Statements**

## **1. Summary of Significant Accounting Policies**

### **Description of the Business**

Fiserv, Inc. and its subsidiaries (collectively, the “Company”) provide payments and financial services technology solutions to clients worldwide. The Company provides account processing and digital banking solutions; card issuer processing and network services; payments; e-commerce; merchant acquiring and processing; and the Clover<sup>®</sup> cloud-based point-of-sale solution. The Company serves clients around the globe, including banks, credit unions, other financial institutions and merchants.

On July 29, 2019, the Company acquired First Data Corporation (“First Data”) by acquiring 100% of the First Data stock that was issued and outstanding as of the date of acquisition for a total purchase price of \$46.5 billion (see Note 4). First Data provides a wide-range of solutions to merchants, including retail point-of-sale merchant transaction processing and acquiring, e-commerce services, mobile payment services and the cloud-based Clover point-of-sale operating system, as well as technology solutions for bank and non-bank issuers. The consolidated financial statements include the financial results of First Data from the date of acquisition.

Effective in the first quarter of 2020, the Company realigned its reportable segments to reflect its new management structure and organizational responsibilities (“Segment Realignment”) following the acquisition of First Data. The Company’s reportable segments are Merchant Acceptance (“Acceptance”), Financial Technology (“Fintech”) and Payments and Network (“Payments”). Segment results for the years ended December 31, 2019 and 2018 have been restated to reflect the Segment Realignment. Additional information regarding the Company’s business segments is included in Note 21 to the consolidated financial statements.

### **Principles of Consolidation**

The consolidated financial statements include the accounts of Fiserv, Inc. and its subsidiaries in which the Company holds a controlling financial interest. Control is normally established when ownership and voting interests in an entity are greater than 50%. Investments in which the Company has significant influence but not control are accounted for using the equity method of accounting, for which the Company’s share of net income or loss is reported within income from investments in unconsolidated affiliates and the related tax expense or benefit is reported within the income tax provision in the consolidated statements of income. Significant influence over an affiliate’s operations generally coincides with an ownership interest in an entity of between 20% and 50%. All intercompany transactions and balances have been eliminated in consolidation.

The Company maintains majority controlling interests in certain entities, mostly related to consolidated merchant alliances (see Note 20). Noncontrolling interests represent the minority shareholders’ share of the net income or loss and equity in consolidated subsidiaries. The Company’s noncontrolling interests presented in the consolidated statements of income include net income attributable to noncontrolling interests and redeemable noncontrolling interests. Noncontrolling interests are presented as a component of equity in the consolidated balance sheets and reflect the minority shareholders’ share of acquired fair value in the consolidated subsidiaries, along with their proportionate share of the earnings or losses of the subsidiaries, net of dividends or distributions. Noncontrolling interests that are redeemable upon the occurrence of an event that is not solely within the Company’s control are presented outside of equity and are carried at their estimated redemption value if it exceeds the initial carrying value of the redeemable interest (see Note 13).

### **Stock Split**

On February 21, 2018, the Company’s board of directors declared a two-for-one stock split of the Company’s common stock and a proportionate increase in the number of its authorized shares of common stock. The additional shares were distributed on March 19, 2018 to shareholders of record at the close of business on March 5, 2018. The Company’s common stock began trading at the split-adjusted price on March 20, 2018. The impact on the consolidated balance sheet of the stock split was an increase of \$4 million to common stock and an offsetting reduction in additional paid-in capital.

### **Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ materially from those estimates.

See accompanying notes to consolidated financial statements.

## **Risks and Uncertainties**

In 2019, a novel strain of coronavirus (“COVID-19”) was identified and has since continued to spread. In March 2020, the World Health Organization recognized the COVID-19 outbreak as a pandemic. In response to the COVID-19 pandemic, the governments of many countries, states, cities and other geographic regions have taken actions to prevent the spread of COVID-19, such as imposing travel restrictions and bans, quarantines, social distancing guidelines, shelter-in-place or lock-down orders and other similar limitations, adversely impacting global economic activity and contributing to significant volatility in financial markets.

Global economic and market conditions impact levels of consumer and business spending, which have been negatively impacted as a result of the COVID-19 pandemic. Consequently, the Company’s operating performance, primarily within its merchant acquiring and payment-related businesses, which earn transaction-based fees, has been adversely affected, and may continue to be adversely affected, by the economic impact of the COVID-19 pandemic. The extent of the impact of the COVID-19 pandemic on the Company’s future operational and financial performance will depend on, among other matters, the duration and intensity of the pandemic; the level of success of global vaccination efforts; governmental and private sector responses to the pandemic and the impact of such responses on the Company; and the impact of the pandemic on the Company’s employees, clients, vendors, operations and sales, all of which are uncertain and cannot be predicted. These changing conditions may also affect the estimates and assumptions made by management. Such estimates and assumptions affect, among other things, the valuations of the Company’s long-lived assets, definite-lived intangible assets and equity method investments; the impairment assessment of goodwill; the Company’s deferred tax assets and related valuation allowances; the estimate of current expected credit losses; and certain pension plan assumptions. Changes in any assumptions used may result in an impairment or other charge that, if incurred, could have a material adverse impact on the Company’s results of operations, total assets and total equity in the period recognized. Events and changes in circumstances arising subsequent to December 31, 2020, including those resulting from the impacts of the COVID-19 pandemic, will be reflected in management’s estimates for future periods.

## **Revenue Recognition**

The Company generates revenue from the delivery of processing, service and product solutions. Revenue is measured based on consideration specified in a contract with a customer, and excludes any amounts collected on behalf of third parties. The Company recognizes revenue when it satisfies a performance obligation by transferring control over a product or service to a customer which may be at a point in time or over time. Additional information regarding the Company’s revenue recognition policies is included in Note 3 to the consolidated financial statements.

## **Cash and Cash Equivalents**

Cash and cash equivalents consist of cash and investments with original maturities of 90 days or less. Cash and cash equivalents are stated at cost in the consolidated balance sheets, which approximates market value. Cash and cash equivalents that were restricted from use due to regulatory or other requirements are included in other long-term assets in the consolidated balance sheets and totaled \$13 million and \$40 million at December 31, 2020 and 2019, respectively.

## **Allowance for Doubtful Accounts**

The Company analyzes the collectability of trade accounts receivable by considering historical bad debts, client creditworthiness, current economic trends, changes in client payment terms and collection trends when evaluating the adequacy of the allowance for doubtful accounts. Any change in the assumptions used in analyzing a specific account receivable may result in an additional allowance for doubtful accounts being recognized in the period in which the change occurs. The allowance for doubtful accounts was \$48 million and \$39 million at December 31, 2020 and 2019, respectively.

## **Leases**

Effective January 1, 2019, the Company adopted Accounting Standards Update (“ASU”) No. 2016-02, *Leases (Topic 842)* (“ASU 2016-02”), and its related amendments using the optional transition method applied to all leases. Prior period amounts have not been restated. Additional information about the Company’s lease policies and the related impact of the adoption is included in Notes 2 and 11 to the consolidated financial statements.

The Company maintains certain leasing receivables associated with its point-of-sale terminal leasing businesses. Leasing receivables are included in prepaid expenses and other current assets and other long-term assets in the consolidated balance sheets. Interest income on the Company’s leasing receivables is recognized using the effective interest method, and is included within product revenue in the consolidated statements of income. Initial direct costs are expensed as incurred if the fair value of the underlying asset is different from its carrying amount at the commencement date of the lease.

## Prepaid Expenses

Prepaid expenses represent advance payments for goods and services to be consumed in the future, such as maintenance, postage and insurance and totaled \$348 million at both December 31, 2020 and 2019.

## Settlement Assets and Obligations

Settlement assets and obligations result from timing differences between collection and fulfillment of payment transactions primarily associated with the Company's merchant acquiring services. Settlement assets represent cash received or amounts receivable from agents, payment networks, bank partners or directly from consumers. Settlement obligations represent amounts payable to merchants and payees. Certain merchant settlement assets that relate to settlement obligations are held by partner banks to which the Company does not have legal ownership but has the right to use the assets to satisfy the related settlement obligations. The Company records corresponding settlement obligations for amounts payable to merchants and for payment instruments not yet presented for settlement. Additional information regarding the Company's settlement assets and obligations is included in Note 6 to the consolidated financial statements.

## Reserve for Merchant Credit Losses

With respect to the Company's merchant acquiring business, the Company's merchant customers have the legal obligation to refund any charges properly reversed by the cardholder. However, in the event the Company is not able to collect the refunded amounts from the merchants, the Company may be liable for the reversed charges. The Company's risk in this area primarily relates to situations where the cardholder has purchased goods or services to be delivered in the future. The Company requires cash deposits, guarantees, letters of credit or other types of collateral from certain merchants to minimize this obligation. Collateral held by the Company is classified within settlement assets and the obligation to repay the collateral is classified within settlement obligations on the Company's consolidated balance sheets. The Company also utilizes a number of systems and procedures to manage merchant risk. Despite these efforts, the Company experiences some level of losses due to merchant defaults.

The aggregate merchant credit losses incurred by the Company was \$113 million and \$40 million for the years ended December 31, 2020 and 2019, respectively, included within cost of processing and services in the consolidated statements of income. The amount of collateral held by the Company was \$1.2 billion and \$510 million at December 31, 2020 and 2019, respectively. The Company maintains a reserve for merchant credit losses that are expected to exceed the amount of collateral held. The reserve includes an estimated amount for anticipated chargebacks and fraud events that have been incurred on merchants' payment transactions that have been processed but not yet reported to the Company ("IBNR Reserve"), as well as an allowance on refunded amounts to cardholders that have not yet been collected from the merchants. The IBNR Reserve, which is recorded within accounts payable and accrued expenses in the consolidated balance sheets, is based primarily on the Company's historical experience of credit losses and other relevant factors such as economic downturns or increases in merchant fraud. The aggregate merchant credit loss reserve was \$59 million and \$34 million at December 31, 2020 and 2019, respectively.

## Property and Equipment

Property and equipment is reported at cost. Depreciation of property and equipment is computed primarily using the straight-line method over the shorter of the estimated useful life of the asset or the leasehold period, if applicable. Property and equipment consisted of the following at December 31:

<u>(In millions)</u>	<u>Estimated Useful Lives</u>	<u>2020</u>	<u>2019</u>
Land	—	\$ 54	\$ 61
Data processing equipment	3 to 5 years	1,666	1,483
Buildings and leasehold improvements	5 to 40 years	555	540
Furniture and equipment	5 to 8 years	636	576
		<u>2,911</u>	<u>2,660</u>
Less: Accumulated depreciation		<u>(1,283)</u>	<u>(1,054)</u>
Total		<u>\$ 1,628</u>	<u>\$ 1,606</u>

Depreciation expense for all property and equipment totaled \$523 million, \$247 million and \$92 million in 2020, 2019 and 2018, respectively (see Note 17 for a description of accelerated depreciation under certain finance lease agreements).



## **Intangible Assets**

Customer related intangible assets represent customer contracts and relationships obtained as part of acquired businesses and are amortized using an accelerated amortization method which corresponds with the customer attrition rates used in the initial valuation of the intangibles over their estimated useful lives, generally ten to twenty years. Acquired software and technology represents software and technology intangible assets obtained as part of acquired businesses and is amortized using the straight-line method over their estimated useful lives, generally four to ten years. Trade names are amortized using the straight-line method over their estimated useful lives, generally eight to twenty years.

The Company continually develops, maintains and enhances its products and systems. Product development expenditures represented approximately 6% of the Company's total revenue in 2020 and 8% in both 2019 and 2018. Research and development costs incurred prior to the establishment of technological feasibility are expensed as incurred. Routine maintenance of software products, design costs and other development costs incurred prior to the establishment of a product's technological feasibility are also expensed as incurred. Costs are capitalized commencing when the technological feasibility of the software has been established.

Purchased software represents software licenses purchased from third parties and is amortized using the straight-line method over their estimated useful lives, generally three to five years. Additional information regarding the Company's identifiable intangible assets is included in Note 7 to the consolidated financial statements.

Capitalized software development costs represent the capitalization of certain costs incurred to develop new software or to enhance existing software which is marketed externally or utilized by the Company to process client transactions. Capitalized software development costs are amortized using the straight-line method over their estimated useful lives, generally five years.

The Company may, at its discretion, negotiate to pay an independent sales organization ("ISO") an agreed-upon up-front amount in exchange for the ISO's surrender of its right to receive commission payments from the Company related to future transactions of the ISO's referred merchants ("residual buyout"). The amount that the Company pays for these residual buyouts is capitalized and subsequently amortized using the straight-line method over the expected life of the merchant portfolios, generally six years to nine years.

## **Goodwill**

Goodwill represents the excess of purchase price over the fair value of identifiable assets acquired and liabilities assumed in a business combination. The Company evaluates goodwill for impairment on an annual basis, or more frequently if circumstances indicate possible impairment. Goodwill is tested for impairment at a reporting unit level, which is one level below our reportable segments. When assessing goodwill for impairment, the Company considers (i) the prior year's amount of excess fair value over the carrying value of each reporting unit, (ii) the period of time since a reporting unit's last quantitative test, (iii) the extent a reorganization or disposition changes the composition of one or more of the reporting units and (iv) other factors to determine whether or not to first perform a qualitative test. When performing a qualitative test, the Company assesses numerous factors to determine whether it is more likely than not that the fair value of its reporting units are less than their respective carrying values. Examples of qualitative factors that the Company assesses include its share price, its financial performance, market and competitive factors in its industry and other events specific to its reporting units. If the Company concludes that it is more likely than not that the fair value of a reporting unit is less than its carrying value, the Company performs a quantitative impairment test by comparing reporting unit carrying values to estimated fair values.

In connection with the Segment Realignment described above, certain of the Company's reporting units changed in composition as a result of which goodwill was allocated to such reporting units using a relative fair value approach. Accordingly, the Company performed an interim goodwill impairment assessment in the first quarter of 2020 for those reporting units impacted by the Segment Realignment and determined that its goodwill was not impaired based on an assessment of various qualitative factors, as described above. The Company's most recent annual impairment assessment of its reporting units in the fourth quarter of 2020 determined that its goodwill was not impaired as the estimated fair values exceeded the carrying values. However, it is reasonably possible that future developments related to the economic impact of the COVID-19 pandemic on certain of the Company's recently acquired (recorded at fair value) First Data businesses, such as an increased duration and intensity of the pandemic and/or government-imposed shutdowns, prolonged economic downturn or recession, or lack of governmental support for recovery, could have a future material impact on one or more of the estimates and assumptions used to evaluate goodwill impairment. There is no accumulated goodwill impairment for the Company through December 31, 2020. Additional information regarding the Company's goodwill is included in Note 8 to the consolidated financial statements.

## Asset Impairment

The Company reviews property and equipment, lease right-of-use (“ROU”) assets, intangible assets and its investments in unconsolidated affiliates for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. The Company reviews capitalized software development costs for impairment at each reporting date. Recoverability of property and equipment, ROU assets, capitalized software development costs and other intangible assets is assessed by comparing the carrying amount of the asset to either the undiscounted future cash flows expected to be generated by the asset or the net realizable value of the asset, depending on the type of asset. The Company assesses lease ROU assets that are exited in advance of the non-cancellable lease terms by comparing the carrying values of the ROU assets to the discounted cash flows from estimated sublease payments. The Company’s investments in unconsolidated affiliates are assessed by comparing the carrying amount of the investments to their estimated fair values and are impaired if any decline in fair value is determined to be other than temporary. Measurement of any impairment loss is based on estimated fair value.

## Fair Value Measurements

The Company applies fair value accounting for all assets and liabilities that are recognized or disclosed at fair value in its consolidated financial statements on a recurring basis. Fair value represents the amount that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities, the Company uses the hierarchy prescribed in Accounting Standards Codification (“ASC”) 820, *Fair Value Measurements*, and considers the principal or most advantageous market and the market-based risk measurements or assumptions that market participants would use in pricing the asset or liability. The three levels in the hierarchy are as follows:

- Level 1 – Quoted prices (unadjusted) for identical assets or liabilities in active markets that are accessible as of the measurement date.
- Level 2 – Inputs other than quoted prices within Level 1 that are observable either directly or indirectly, including but not limited to quoted prices in markets that are not active, quoted prices in active markets for similar assets or liabilities and observable inputs other than quoted prices such as interest rates or yield curves.
- Level 3 – Unobservable inputs reflecting management’s judgments about the assumptions that market participants would use in pricing the asset or liability, including assumptions about risk.

Additional information regarding the Company’s fair value measurements is included in Note 10 to the consolidated financial statements.

## Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses consisted of the following at December 31:

<b>(In millions)</b>	<b>2020</b>		<b>2019</b>	
Trade accounts payable	\$	437	\$	392
Client deposits		702		650
Accrued compensation and benefits		419		378
Accrued taxes		130		137
Accrued interest		220		224
Other accrued expenses		1,278		1,299
Total	\$	3,186	\$	3,080

## Foreign Currency

The United States (“U.S.”) dollar is the functional currency of the Company’s U.S.-based businesses and certain foreign-based businesses. Where the functional currency differs from the U.S. dollar, assets and liabilities are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Revenue and expenses are translated at the average exchange rates during the reporting period. Gains and losses from foreign currency translation are recorded as a separate component of accumulated other comprehensive loss. Gains and losses from foreign currency transactions are included in determining net income for the reporting period.

The Company has designated its Euro- and British Pound- denominated senior notes as net investment hedges to hedge a portion of its net investment in certain subsidiaries whose functional currencies are the Euro and the British Pound (see Note

14). Accordingly, foreign currency transaction gains or losses on the qualifying net investment hedge instruments are recorded as foreign currency translation within other comprehensive (loss) income in the consolidated statements of comprehensive income and will remain in accumulated other comprehensive loss on the consolidated balance sheet until the sale or complete liquidation of the underlying foreign subsidiaries.

### **Derivatives**

Derivatives are entered into for periods consistent with related underlying exposures and are recorded in the consolidated balance sheets as either an asset or liability measured at fair value. If the derivative is designated as a cash flow hedge, changes in the fair value of the derivative are recorded as a component of accumulated other comprehensive loss and recognized in the consolidated statements of income when the hedged item affects earnings. The Company's policy is to enter into derivatives with creditworthy institutions and not to enter into such derivatives for speculative purposes.

### **Employee Benefit Plans**

The Company maintains frozen defined benefit pension plans covering certain employees in Europe and the U.S. The Company recognizes actuarial gains/losses and prior service cost in the consolidated balance sheets and recognizes changes in these amounts during the year in which changes occur through other comprehensive (loss) income. The Company uses various assumptions when computing amounts relating to its defined benefit pension plan obligations and their associated expenses (including the discount rate and the expected rate of return on plan assets). Additional information regarding the Company's employee benefit plans is included in Note 15 to the consolidated financial statements.

### **Cost of Processing, Services and Product**

Cost of processing and services consists of costs directly associated with providing services to clients and includes the following: personnel; equipment and data communication; infrastructure costs, including costs to maintain software applications; client support; certain depreciation and amortization; and other operating expenses.

Cost of product consists of costs directly associated with the products sold and includes the following: costs of materials and software development; personnel; infrastructure costs; certain depreciation and amortization; and other costs directly associated with product revenue.

### **Selling, General and Administrative Expenses**

Selling, general and administrative expenses primarily consist of: salaries, wages, commissions and related expenses paid to sales personnel, administrative employees and management; advertising and promotional costs; certain depreciation and amortization; and other selling and administrative expenses.

### **Interest Expense, Net**

Interest expense, net consists of interest expense primarily associated with the Company's outstanding borrowings and finance lease obligations, as well as interest income primarily associated with the Company's investment securities. The Company recognized \$716 million, \$507 million and \$193 million of interest expense and \$7 million, \$34 million and \$4 million of interest income during the years ended December 31, 2020, 2019 and 2018, respectively.

### **Income Taxes**

Deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax basis, and net operating loss and tax credit carry-forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. A valuation allowance is recorded against deferred tax assets if it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Liabilities are established for unrecognized tax benefits, attributable to differences between a tax position taken or expected to be taken in a tax return and the benefit recognized in the financial statements. In establishing a liability for an unrecognized tax benefit, assumptions are made in determining whether, and the extent to which, a tax position will be sustained. A tax position is recognized only when it is more likely than not to be sustained upon examination by the relevant taxing authority, based on its technical merits. The amount of tax benefit recognized reflects the largest benefit the Company believes is more likely than not to be realized upon ultimate settlement. As additional information becomes available, the liability for unrecognized tax benefits is reevaluated and adjusted, as appropriate. Tax benefits ultimately realized can differ from amounts previously recognized due to uncertainties, with any such differences generally impacting the provision for income tax.

## Net Income Per Share

Net income per share attributable to Fiserv, Inc. in each period is calculated using actual, unrounded amounts. Basic net income per share is computed by dividing net income attributable to Fiserv, Inc. by the weighted-average number of common shares outstanding during the period. Diluted net income per share is computed by dividing net income attributable to Fiserv, Inc. by the weighted-average number of common shares and common stock equivalents outstanding during the period. Common stock equivalents consist of outstanding stock options, unvested restricted stock units and unvested restricted stock awards, and are computed using the treasury stock method. The Company excluded 1.3 million weighted-average shares in 2020 and 1.1 million in both 2019 and 2018 from the calculations of common stock equivalents for anti-dilutive stock options. The computation of shares used in calculating basic and diluted net income per share is as follows at December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Weighted-average common shares outstanding used for the calculation of net income attributable to Fiserv, Inc. per share – basic	672.1	512.3	405.5
Common stock equivalents	11.3	10.3	8.2
Weighted-average common shares outstanding used for the calculation of net income attributable to Fiserv, Inc. per share – diluted	683.4	522.6	413.7

## Supplemental Cash Flow Information

<b>(In millions)</b>			
<b>Year Ended December 31,</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Interest paid	\$ 673	\$ 291	\$ 165
Income taxes paid	156	197	259
Treasury stock purchases settled after the balance sheet date	—	6	26
Distribution of nonmonetary assets (see Note 4)	726	—	—
Financed software arrangements	308	—	—

## 2. Recent Accounting Pronouncements

### Recently Adopted Accounting Pronouncements

In 2018, the Financial Accounting Standards Board (“FASB”) issued ASU No. 2018-15, *Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* (“ASU 2018-15”), which aligns the requirements for capitalizing implementation costs incurred in a cloud computing hosting arrangement that is a service contract within the requirements under ASC 350 for capitalizing implementation costs incurred to develop or obtain internal-use software. For public entities, ASU 2018-15 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. Entities are permitted to apply either a retrospective or prospective transition approach to adopt the guidance. The Company adopted ASU 2018-15 effective January 1, 2020 using a prospective approach, and the adoption did not have a material impact on its consolidated financial statements.

In 2018, the FASB issued ASU No. 2018-14, *Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20): Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans* (“ASU 2018-14”), which removes, clarifies and adds certain disclosure requirements of ASC Topic 715, *Compensation - Retirement Benefits*. ASU 2018-14 is effective for fiscal years ending after December 15, 2020, with early adoption permitted. Entities must apply the disclosure updates retrospectively. The Company adopted ASU 2018-14 for the year ended December 31, 2020, and the adoption did not have a material impact on its disclosures.

In 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement* (“ASU 2018-13”), which removes, modifies, and adds certain disclosure requirements of ASC Topic 820, *Fair Value Measurement*. ASU 2018-13 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2019 with the additional disclosures required to be applied prospectively and the modified and removed disclosures required to be applied retrospectively to all periods presented. The Company adopted ASU 2018-13 effective January 1, 2020, and the adoption did not have a material impact on its disclosures.

In 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326)* (“ASU 2016-13” or “CECL”), which prescribes an impairment model for most financial instruments based on expected losses rather than incurred losses. Under this model, an estimate of expected credit losses over the contractual life of the instrument is to be recorded as of the end of a reporting period as an allowance to offset the amortized cost basis, resulting in a net presentation of the amount expected to be collected on the financial instrument. For public entities, ASU 2016-13 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2019. For most instruments, entities must apply the standard using a cumulative-effect adjustment to beginning retained earnings as of the beginning of the fiscal year of adoption.

The Company adopted ASU 2016-13 effective January 1, 2020 using the required modified retrospective approach, which resulted in a cumulative-effect decrease to beginning retained earnings of \$45 million. Financial assets and liabilities held by the Company subject to the “expected credit loss” model prescribed by CECL include trade and other receivables, net investments in leases, settlement assets and other credit exposures such as financial guarantees not accounted for as insurance.

In 2016, the FASB issued ASU No. 2016-02, which requires lessees to recognize a lease liability and a ROU asset for each lease with a term longer than twelve months and adds new presentation and disclosure requirements for both lessees and lessors. The accounting guidance for lessors remains largely unchanged. The recognized liability is measured at the present value of lease payments not yet paid, and the corresponding asset represents the lessee’s right to use the underlying asset over the lease term and is based on the liability, subject to certain adjustments. For income statement and statement of cash flow purposes, the standard retains the dual model with leases classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. The standard prescribes a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. ASU No. 2016-02 was subsequently amended by ASU No. 2018-01, *Land Easement Practical Expedient for Transition to Topic 842*; ASU No. 2018-10, *Codification Improvements to Topic 842*; ASU No. 2018-11, *Leases (Topic 842) - Targeted Improvements* (“ASU 2018-11”); ASU No. 2018-20, *Narrow-Scope Improvements for Lessors*; and ASU No. 2019-01, *Leases (Topic 842) - Codification Improvements*. ASU No. 2018-11 provides an additional transition method allowing entities to initially apply the new lease standard at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. For public entities, ASU 2016-02 is effective for annual and interim periods beginning after December 15, 2018.

The Company adopted ASU No. 2016-02 effective January 1, 2019 using the optional transition method in ASU 2018-11. Under this method, the Company has not adjusted its comparative period financial statements for the effects of the new standard or made the new, expanded required disclosures for periods prior to the effective date. The Company elected the package of practical expedients permitted under the transition guidance in ASU 2016-02 to not reassess prior conclusions related to contracts containing leases, lease classification and initial direct costs. The Company also elected the practical expedient not to separate the non-lease components of a contract from the lease component to which they relate.

The adoption of the new lease standard resulted in the recognition of lease liabilities of \$383 million and ROU assets of \$343 million, which include the impact of existing deferred rents and tenant improvement allowances on the consolidated balance sheet as of January 1, 2019 for real and personal property operating leases. The adoption of ASU 2016-02 did not have a material impact on the Company’s consolidated statements of income or consolidated statements of cash flows.

In 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (“ASU 2014-09”), to clarify the principles of recognizing revenue and to create common revenue recognition guidance between U.S. generally accepted accounting principles and International Financial Reporting Standards. ASU 2014-09 outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific requirements. It also includes guidance on accounting for the incremental costs of obtaining and costs incurred to fulfill a contract with a customer. The core principle of the revenue model is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This model involves a five-step process for achieving that core principle, along with comprehensive disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. For public entities, the new revenue standard is effective for annual and interim periods beginning after December 15, 2017. Entities have the option of adopting this new guidance using either a full retrospective or a modified approach with the cumulative effect of applying the guidance recognized at the date of initial application.

The Company adopted ASU 2014-09 effective January 1, 2018 using the modified retrospective transition approach applied to all contracts, which resulted in a cumulative-effect increase in the opening balance of retained earnings of \$208 million, primarily related to the deferral of incremental sales commissions incurred in obtaining contracts in prior periods.

### *Recently Issued Accounting Pronouncements*

In 2020, the FASB issued ASU No. 2020-01, *Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815): Clarifying the Interactions between Topic 321, Topic 323, and Topic 815* (“ASU 2020-01”), which clarifies certain interactions between the guidance to account for certain equity securities, investments under the equity method of accounting, and forward contracts or purchased options to purchase securities under Topic 321, Topic 323 and Topic 815. For public entities, ASU 2020-01 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2020. The adoption of ASU 2020-01 will not have a material impact on the Company’s consolidated financial statements or disclosures.

In 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (“ASU 2019-12”), which introduces a number of amendments that are designed to simplify the application of accounting for income taxes. Such amendments include removing certain exceptions for intraperiod tax allocation, interim reporting when a year-to-date loss exceeds the anticipated loss, reflecting the effect of an enacted change in tax laws or rates in the annual effective tax rate and recognition of deferred taxes related to outside basis differences for ownership changes in investments. ASU 2019-12 also provides clarification related to when a step up in the tax basis of goodwill should be considered part of the business combination in which the book goodwill was originally recognized and when it should be considered a separate transaction. In addition, ASU 2019-12 provides guidance on the recognition of a franchise tax (or similar tax) that is partially based on income as an income-based tax and accounting for any incremental amount incurred as a non-income-based tax. For public entities, ASU 2019-12 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. The adoption of ASU 2019-12 will not have a material impact on the Company’s consolidated financial statements.

### **3. Revenue Recognition**

#### **Significant Accounting Policy**

ASU 2014-09 and its related amendments (collectively known as “ASC 606”) outlines a single comprehensive model to use in accounting for revenue arising from contracts with customers. The core principle, involving a five-step process, of the revenue model is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services.

Revenue is measured based on consideration specified in a contract with a customer, and excludes any amounts collected on behalf of third parties. Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by the Company from a customer, are excluded from revenue. Shipping and handling activities associated with outbound freight after control over a product has transferred to a customer are accounted for as a fulfillment activity and recognized as revenue at the point in time at which control of the goods transfers to the customer. As a practical expedient, the Company does not adjust the transaction price for the effects of a significant financing component if, at contract inception, the period between customer payment and the transfer of goods or services is expected to be one year or less.

#### **Nature of Goods and Services**

The Company’s operations are comprised of the Acceptance segment, the Fintech segment and the Payments segment. Additional information regarding the Company’s reportable segments is included in Note 21. The following is a description of principal activities from which the Company generates its revenue. Contracts with customers are evaluated on a contract-by-contract basis as contracts may include multiple types of goods and services as described below.

#### *Processing and Services*

Processing and services revenue is generated from account- and transaction-based fees for data processing, merchant transaction processing and acquiring, electronic billing and payment services, electronic funds transfer and debit/credit processing services; consulting and professional services; and software maintenance for ongoing client support.

The Company recognizes processing and services revenues in the period in which the specific service is performed unless they are not deemed distinct from other goods or services in which revenue would then be recognized as control is transferred of the combined goods and services. The Company’s arrangements for processing and services typically consist of an obligation to provide specific services to its customers on a when and if needed basis (a stand-ready obligation) and revenue is recognized from the satisfaction of the performance obligations in the amount billable to the customer. These services are typically provided under a fixed or declining (tier-based) price per unit based on volume of service; however, pricing for services may

also be based on minimum monthly usage fees. Fees for the Company's processing and services arrangements are typically billed and paid on a monthly basis.

#### *Product*

Product revenue is generated from print and card production sales, as well as software license sales. For software license agreements that are distinct, the Company recognizes software license revenue upon delivery, assuming a contract is deemed to exist. Revenue for arrangements with customers that include significant customization, modification or production of software such that the software is not distinct is typically recognized over time based upon efforts expended, such as labor hours, to measure progress towards completion. For arrangements involving hosted licensed software for the customer, a software element is considered present to the extent the customer has the contractual right to take possession of the software at any time during the hosting period without significant penalty and it is feasible for the customer to either operate the software on their own hardware or contract with another vendor to host the software. In certain instances, the Company may offer extended payment terms beyond one year. To the extent a significant financing component exists, it is calculated as the difference between the promised consideration and the present value of the software license fees utilizing a discount rate reflective of a separate financing transaction, and is recognized as interest income over the extended payment period. The cash selling price of the software license fee is recognized as revenue at the point in time when the software is transferred to the customer.

The Company also sells or leases hardware (POS devices) and other peripherals as part of its contracts with customers. Hardware typically consists of terminals or Clover devices. The Company does not manufacture hardware, rather it purchases hardware from third-party vendors and holds such hardware in inventory until purchased by a customer. The Company accounts for sales of hardware as a separate performance obligation and recognizes the revenue at its standalone selling price when the customer obtains control of the hardware.

#### **Significant Judgments in Application of the Guidance**

The Company uses the following methods, inputs and assumptions in determining amounts of revenue to recognize:

##### *Identification of Performance Obligations*

To identify its performance obligations, the Company considers all of the goods or services promised in the contract regardless of whether they are explicitly stated or are implied by customary business practices. For multi-element arrangements, the Company accounts for individual goods or services as a separate performance obligation if they are distinct, the good or service is separately identifiable from other items in the arrangement and if a customer can benefit from it on its own or with other resources that are readily available to the customer. If these criteria are not met, the promised goods or services are accounted for as a combined performance obligation. Determining whether goods or services are distinct performance obligations that should be accounted for separately may require significant judgment.

Technology or service components from third parties are frequently embedded in or combined with the Company's applications or service offerings. Whether the Company recognizes revenue based on the gross amount billed to a customer or the net amount retained involves judgment that depends on the relevant facts and circumstances including the level of contractual responsibilities and obligations for delivering solutions to end customers.

##### *Determination of Transaction Price*

The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring products or services to the customer. The Company includes any fixed charges within its contracts as part of the total transaction price. To the extent that variable consideration is not constrained, the Company includes an estimate of the variable amount, as appropriate, within the total transaction price and updates its assumptions over the duration of the contract.

##### *Assessment of Estimates of Variable Consideration*

Many of the Company's contracts with customers contain some component of variable consideration; however, the constraint will generally not result in a reduction in the estimated transaction price for most forms of variable consideration. The Company may constrain the estimated transaction price in the event of a high degree of uncertainty as to the final consideration amount owed because of an extended length of time over which the fees may be adjusted.

##### *Allocation of Transaction Price*

The transaction price (including any discounts or rebates) is allocated between separate goods and services in a multi-element arrangement based on their relative standalone selling prices. The standalone selling prices are determined based on the prices at which the Company separately sells each good or service. For items that are not sold separately, the Company estimates the



standalone selling prices using available information such as market conditions and internally approved pricing guidelines. In instances where there are observable selling prices for professional services and support and maintenance, the Company may apply the residual approach to estimate the standalone selling price of software licenses. Significant judgment may be required to determine standalone selling prices for each performance obligation and whether it depicts the amount the Company expects to receive in exchange for the related good or service.

#### Contract Modifications

Contract modifications occur when the Company and its customers agree to modify existing customer contracts to change the scope or price (or both) of the contract or when a customer terminates some, or all, of the existing services provided by the Company. When a contract modification occurs, it requires the Company to exercise judgment to determine if the modification should be accounted for as (i) a separate contract, (ii) the termination of the original contract and creation of a new contract, or (iii) a cumulative catch up adjustment to the original contract. Further, contract modifications require the identification and evaluation of the performance obligations of the modified contract, including the allocation of revenue to the remaining performance obligations and the period of recognition for each identified performance obligation.

#### Disaggregation of Revenue

The tables below present the Company's revenue disaggregated by type of revenue, including a reconciliation with its reportable segments. The Company's disaggregation of revenue for the years ended December 31, 2019 and 2018 have been restated to reflect the Segment Realignment. The majority of the Company's revenue is earned domestically, with revenue generated outside the United States comprising approximately 13%, 12% and 6% of total revenue in 2020, 2019 and 2018, respectively.

(In millions)

Year Ended December 31, 2020	Reportable Segments				Total
	Acceptance	Fintech	Payments	Corporate and Other	
<b>Type of Revenue</b>					
Processing	\$ 4,696	\$ 1,426	\$ 4,348	\$ 58	\$ 10,528
Hardware, print and card production	714	51	771	—	1,536
Professional services	29	465	233	1	728
Software maintenance	—	563	3	2	568
License and termination fees	28	189	68	—	285
Output solutions postage	—	—	—	864	864
Other	55	207	81	—	343
Total Revenue	<u>\$ 5,522</u>	<u>\$ 2,901</u>	<u>\$ 5,504</u>	<u>\$ 925</u>	<u>\$ 14,852</u>

(In millions)

Year Ended December 31, 2019	Reportable Segments				Total
	Acceptance	Fintech	Payments	Corporate and Other	
<b>Type of Revenue</b>					
Processing	\$ 2,205	\$ 1,382	\$ 3,110	\$ 166	\$ 6,863
Hardware, print and card production	323	51	458	—	832
Professional services	4	483	172	10	669
Software maintenance	—	570	3	15	588
License and termination fees	9	255	59	2	325
Output solutions postage	—	—	—	572	572
Other	30	201	107	—	338
Total Revenue	<u>\$ 2,571</u>	<u>\$ 2,942</u>	<u>\$ 3,909</u>	<u>\$ 765</u>	<u>\$ 10,187</u>

(In millions)

Year Ended December 31, 2018	Reportable Segments			Total
	Fintech	Payments	Corporate and Other	
<b>Type of Revenue</b>				
Processing	\$ 1,345	\$ 1,900	\$ 163	\$ 3,408
Hardware, print and card production	41	304	—	345
Professional services	483	86	8	577
Software maintenance	577	3	15	595
License and termination fees	277	32	4	313
Output solutions postage	—	—	308	308
Other	194	83	—	277
Total Revenue	<u>\$ 2,917</u>	<u>\$ 2,408</u>	<u>\$ 498</u>	<u>\$ 5,823</u>

#### Contract Balances



The following table provides information about contract assets and contract liabilities from contracts with customers at December 31:

<u>(In millions)</u>	<u>2020</u>		<u>2019</u>		<u>2018</u>	
Contract assets	\$	433	\$	382	\$	171
Contract liabilities		733		647		469

Contract assets, reported within other long-term assets in the consolidated balance sheets, primarily result from revenue being recognized where payment is contingent upon the transfer of services to a customer over the contractual period. Contract liabilities primarily relate to advance consideration received from customers (deferred revenue) for which transfer of control occurs, and therefore revenue is recognized, as services are provided. Contract balances are reported in a net contract asset or liability position on a contract-by-contract basis at the end of each reporting period.

During the year ended December 31, 2020, contract assets and contract liabilities increased primarily due to customer discounts and deferred conversion revenue associated with long-term contracts obtained during the year. The Company recognized \$492 million of revenue during the year ended December 31, 2020 that was included in the contract liabilities balance at the beginning of the period.

During the year ended December 31, 2019, contract assets and contract liabilities increased \$153 million and \$117 million, respectively, due to the acquisition of First Data. The Company recognized \$380 million of revenue during the year ended December 31, 2019 that was included in the contract liabilities balance at the beginning of the period.

#### **Transaction Price Allocated to Remaining Performance Obligations**

The following table includes estimated processing, services and product revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at December 31, 2020:

<u>(In millions)</u>	
<b>Year Ending December 31,</b>	
2021	\$ 2,000
2022	1,658
2023	1,355
2024	982
Thereafter	1,825

The Company applies the optional exemption under ASC 606 and does not disclose information about remaining performance obligations for account- and transaction-based processing fees that qualify for recognition under the as-invoiced practical expedient. These multi-year contracts contain variable consideration for stand-ready performance obligations for which the exact quantity and mix of transactions to be processed are contingent upon the customer's request. The Company also applies

the optional exemptions under ASC 606 and does not disclose information for variable consideration that is a sales-based or usage-based royalty promised in exchange for a license of intellectual property or that is allocated entirely to a wholly unsatisfied performance obligation or to a wholly unsatisfied promise to transfer a distinct good or service in a series. The amounts disclosed above as remaining performance obligations consist primarily of fixed or monthly minimum processing fees and maintenance fees under contracts with an original expected duration of greater than one year.

#### Contract Costs

The Company incurs incremental costs to obtain a contract as well as costs to fulfill contracts with customers that are expected to be recovered. These costs consist primarily of sales commissions incurred only if a contract is obtained, and customer conversion or implementation related costs. Capitalized sales commissions and conversion or implementation costs were as follows at December 31:

<u>(In millions)</u>	<u>2020</u>	<u>2019</u>
Capitalized sales commissions	\$ 402	\$ 357
Capitalized conversion or implementation costs	290	176

Capitalized contract costs are amortized based on the transfer of goods or services to which the asset relates. The amortization period also considers expected customer lives and whether the asset relates to goods or services transferred under a specific anticipated contract. These costs are primarily included in selling, general and administrative expenses and totaled \$124 million, \$105 million and \$106 million during the years ended December 31, 2020, 2019 and 2018, respectively. Impairment losses recognized during the years ended December 31, 2020, 2019 and 2018 related to capitalized contract costs were not significant.

#### 4. Acquisitions and Dispositions

##### *Acquisition of First Data*

On July 29, 2019, the Company acquired First Data, a global leader in commerce-enabling technology and solutions for merchants, financial institutions and card issuers, by acquiring 100% of the First Data stock that was issued and outstanding as of the date of acquisition. The acquisition, included within the Acceptance and Payments segments, increases the Company's footprint as a global payments and financial technology provider by expanding the portfolio of services provided to financial institutions, corporate and merchant clients and consumers.

As a result of the acquisition, First Data stockholders received 286 million shares of common stock of Fiserv, Inc., at an exchange ratio of 0.303 shares of Fiserv, Inc. for each share of First Data common stock, with cash paid in lieu of fractional shares. The Company also converted 15 million outstanding First Data equity awards into corresponding equity awards relating to common stock of Fiserv, Inc. in accordance with the exchange ratio as described in further detail within Note 16. In addition, concurrent with the closing of the acquisition, the Company made a cash payment of \$16.4 billion to repay existing First Data debt. The Company funded the transaction-related expenses and the repayment of First Data debt through a combination of available cash on-hand and proceeds from debt issuances as discussed in Note 12.

The total purchase price paid for First Data is as follows:

<u>(In millions)</u>		
Fair value of stock exchanged for shares of Fiserv, Inc. <sup>(1)</sup>	\$	29,293
Repayment of First Data debt		16,414
Fair value of vested portion of First Data stock awards exchanged for Fiserv, Inc. awards <sup>(2)</sup>		768
Total purchase price	<u>\$</u>	<u>46,475</u>

<sup>(1)</sup> The fair value of the 286 million shares of the Company's common stock issued as of the acquisition date was determined based on a per share price of \$102.30, which was the closing price of the Company's common stock on July 26, 2019, the last trading day before the acquisition closed the morning of July 29, 2019. This includes a nominal amount of cash paid in lieu of fractional shares.

<sup>(2)</sup> Represents the portion of the fair value of the replacement awards related to services provided prior to the acquisition. The remaining portion of the fair value is associated with future service and will be recognized as expense over the future service period. See Note 16 for additional information.

The acquisition was accounted for as a business combination using the acquisition method of accounting in accordance with ASC 805, *Business Combinations* ("ASC 805"). The purchase price was allocated to the assets acquired and liabilities assumed

based on the estimated fair values at the date of acquisition. The excess of the purchase price over the fair value of the net assets acquired was allocated to goodwill, none of which is deductible for tax purposes. Goodwill is primarily attributed to synergies from future expected economic benefits, including enhanced revenue growth from expanded capabilities and geographic presence as well as substantial cost savings from duplicative overhead, streamlined operations and enhanced operational efficiency.

The assets and liabilities of First Data have been measured at estimated fair value as of the acquisition date. During the current year through the measurement period ended July 29, 2020, the Company identified and recorded measurement period adjustments to the preliminary purchase price allocation, which were the result of additional analysis performed and information identified based on facts and circumstances that existed as of the acquisition date. These measurement period adjustments resulted in an increase to goodwill of \$304 million. The offsetting amounts to the change in goodwill were primarily related to customer relationship intangible assets, noncontrolling interests, property and equipment, payables and accrued expenses including legal contingency reserves, and deferred income taxes. The Company recorded a measurement period adjustment of \$155 million to reduce the fair value of customer relationship intangible assets as a result of refinements to attrition rates. A measurement period adjustment of \$126 million was recorded to reduce the fair value of noncontrolling interests based on changes to the fair value of the underlying customer relationship intangible assets and the incorporation of additional facts and circumstances that existed as of the acquisition date. A measurement period adjustment of \$25 million was recorded to reduce the fair value of property and equipment to the estimated fair value of certain real property acquired. Measurement period adjustments were recorded to increase payables and accrued expenses by \$37 million, reduce investments in unconsolidated affiliates by \$23 million, and increase other long-term liabilities by \$21 million. The remaining \$169 million of adjustments were primarily comprised of deferred tax adjustments related to the measurement period adjustments. Such measurement period adjustments did not have a material impact on the consolidated statements of income. The allocation of purchase price recorded for First Data was finalized in the third quarter of 2020 as follows:

**(In millions)**

<b>Assets acquired <sup>(1)</sup></b>	
Cash and cash equivalents	\$ 310
Trade accounts receivable	1,747
Prepaid expenses and other current assets	1,047
Settlement assets	10,398
Property and equipment	1,156
Customer relationships	13,458
Other intangible assets	2,814
Goodwill	30,811
Investments in unconsolidated affiliates	2,676
Other long-term assets	1,191
Total assets acquired	<u>\$ 65,608</u>
<b>Liabilities assumed <sup>(1)</sup></b>	
Accounts payable and accrued expenses	\$ 1,613
Short-term and current maturities of long-term debt <sup>(2)</sup>	243
Contract liabilities	71
Settlement obligations	10,398
Deferred income taxes	3,671
Long-term contract liabilities	16
Long-term debt and other long-term liabilities <sup>(3)</sup>	1,261
Total liabilities assumed	<u>\$ 17,273</u>
<b>Net assets acquired</b>	<u>\$ 48,335</u>
Redeemable noncontrolling interests	252
Noncontrolling interests	1,608
Total purchase price	<u>\$ 46,475</u>

<sup>(1)</sup> In connection with the acquisition of First Data, the Company acquired two businesses which it intended to sell and subsequently sold in October 2019. Therefore, such businesses were classified as held for sale and were included within prepaid expenses and other current assets and accounts payable and accrued expenses in the above allocation of purchase price (see Note 5).

<sup>(2)</sup> Includes foreign lines of credit, current portion of finance lease obligations and other financing obligations (see Note 12).

<sup>(3)</sup> Includes the receivable securitized loan and the long-term portion of finance lease obligations (see Note 12).

The fair values of the assets acquired and liabilities assumed were determined using the income and cost approaches. In many cases, the determination of the fair values required estimates about discount rates, growth and attrition rates, future expected cash flows and other future events that are judgmental. The fair value measurements were primarily based on significant inputs that are not observable in the market and thus represent a Level 3 measurement of the fair value hierarchy as defined in ASC 820, *Fair Value Measurements*. Intangible assets consisting of customer relationships, technology and trade names were valued using the multi-period excess earnings method (“MEEM”), or the relief from royalty (“RFR”) method, both are forms of the income approach. A cost and market approach was applied, as appropriate, for property and equipment, including land.

- Customer relationship intangible assets were valued using the MEEM method. The significant assumptions used include the estimated annual net cash flows (including appropriate revenue and profit attributable to the asset, retention rate, applicable tax rate, and contributory asset charges, among other factors), the discount rate, reflecting the risks inherent in the future cash flow stream, an assessment of the asset’s life cycle, and the tax amortization benefit, among other factors.
- Technology and trade name intangible assets were valued using the RFR method. The significant assumptions used include the estimated annual net cash flows (including appropriate revenue attributable to the asset, applicable tax rate,



royalty rate, and other factors such as technology related obsolescence rates), the discount rate, reflecting the risks inherent in the future cash flow stream, and the tax amortization benefit, among other factors.

- The cost approach, which estimates value by determining the current cost of replacing an asset with another of equivalent economic utility, was used, as appropriate, for property and equipment. The cost to replace a given asset reflects the estimated reproduction or replacement cost for the property, less an allowance for loss in value due to depreciation.
- The market approach, which estimates value by leveraging comparable land sale data/listings and qualitatively comparing them to the in-scope properties, was used to value the land.
- An income approach was applied to derive fair value for both consolidated investments with a noncontrolling interest and equity method investments accounted for under the equity method of accounting. The significant assumptions used include the estimated annual cash flows, the discount rate, the long-term growth rate, and operating margin, among other factors.

The Company believes that the information provided a reasonable basis for estimating the fair values of the acquired assets and assumed liabilities.

The amounts allocated to intangible assets are as follows:

<b>(In millions)</b>	<b>Gross Carrying Amount</b>	<b>Weighted-Average Useful Life</b>
Customer relationships	\$ 13,458	15 years
Acquired software and technology	2,324	7 years
Trade names	490	9 years
Total	<u>\$ 16,272</u>	14 years

The financial results of First Data are included in the consolidated results of the Company from July 29, 2019, the date of acquisition. For the year ended December 31, 2019, the results of operations for First Data, included within the accompanying consolidated statement of income, consisted of \$4.1 billion of revenue and \$1.0 billion of operating income.

The Company incurred transaction expenses of approximately \$175 million for the year ended December 31, 2019. Approximately \$77 million of these expenses were included in selling, general and administrative expenses and \$98 million were included in debt financing activities within the Company's consolidated statement of income for the year ended December 31, 2019.

The following unaudited supplemental pro forma combined financial information presents the Company's results of operations for the years ended December 31, 2019 and 2018 as if the acquisition of First Data had occurred on January 1, 2018. The pro forma financial information is presented for comparative purposes only and is not necessarily indicative of the Company's operating results that may have actually occurred had the acquisition of First Data been completed on January 1, 2018. In addition, the unaudited pro forma financial information does not give effect to any anticipated cost savings, operating efficiencies or other synergies that may be associated with the acquisition, or any estimated costs that have been or will be incurred by the Company to integrate the assets and operations of First Data.

<b>(In millions, except for per share data)</b>	<b>2019</b>		<b>2018</b>	
Total revenue	\$	15,775	\$	15,284
Net income		1,520		1,125
Net income attributable to Fiserv, Inc.		1,457		1,040
Net income per share attributable to Fiserv, Inc.:				
Basic	\$	2.14	\$	1.50
Diluted	\$	2.10	\$	1.47

The unaudited pro forma financial information reflects pro forma adjustments to present the combined pro forma results of operations as if the acquisition had occurred on January 1, 2018 to give effect to certain events the Company believes to be directly attributable to the acquisition. These pro forma adjustments primarily include:

- a net increase in amortization expense that would have been recognized due to acquired intangible assets;
- an adjustment to interest expense to reflect (i) the additional borrowings of the Company in conjunction with the acquisition and (ii) the repayment of First Data's historical debt in conjunction with the acquisition;

- a reduction in expenses for the year ended December 31, 2019 and a corresponding increase in the year ended December 31, 2018 for acquisition-related transaction costs and other one-time costs directly attributable to the acquisition;
- a reduction in operating revenues due to the elimination of deferred revenues assigned no value at the acquisition date;
- an adjustment to stock compensation expense to reflect the cost of the replacement awards as if they had been issued on January 1, 2018; and
- the related income tax effects of the adjustments noted above.

*Acquisition of Elan Assets*

On October 31, 2018, the Company acquired the debit card processing, ATM Managed Services, and MoneyPass® surcharge-free network of Elan Financial Services, a unit of U.S. Bancorp (“Elan”), for approximately \$659 million. Such purchase price includes an initial cash payment of \$691 million, less post-closing working capital adjustments of \$57 million, plus contingent consideration related to earn-out provisions estimated at a fair value of \$12 million (see Note 10) and future payments under a transition services agreement estimated to be in excess of fair value of \$13 million. This acquisition, included within the Payments segment, deepens the Company’s presence in debit card processing, broadens its client reach and scale and provides new solutions to enhance the value proposition for its existing debit solution clients.

During 2019, the Company identified and recorded measurement period adjustments to the preliminary purchase price allocation, which were the result of additional analysis performed and information identified based on facts and circumstances that existed as of the acquisition date. The measurement period adjustments resulted in a decrease in goodwill of \$24 million with an offset to intangible assets and prepaid expenses and other current assets. The following allocation of purchase price for Elan was finalized in 2019:

<b>(In millions)</b>	
Trade accounts receivable	\$ 20
Prepaid expenses and other current assets	98
Property and equipment	9
Intangible assets	373
Goodwill	214
Accounts payable and other current liabilities	(55)
Total purchase price	<u>\$ 659</u>

Goodwill, deductible for tax purposes, is primarily attributed to synergies, including the migration of Elan’s clients to the Company’s debit platform, and the anticipated value created by selling the Company’s products and services outside of card payments to Elan’s existing client base. The amounts allocated to intangible assets are as follows:

<b>(In millions)</b>	<b>Gross Carrying Amount</b>	<b>Weighted-Average Useful Life</b>
Customer relationships	\$ 370	15 years
Trade name	3	8 years
Total	<u>\$ 373</u>	15 years

In conjunction with the acquisition, the Company entered into a transition services agreement for the provision of certain processing, network, administrative and managed services for a period of two years. The financial results of Elan are included in the consolidated results of the Company from October 31, 2018, the date of acquisition. For the year ended December 31, 2018, the results of operations for Elan, included within the accompanying consolidated statement of income, consisted of \$29 million of revenue and \$6 million of operating income. Pro forma information for this acquisition is not provided because it did not have a material effect on the Company’s consolidated results of operations.

*Other Acquisitions*

On March 2, 2020, the Company acquired MerchantPro Express LLC (“MerchantPro”), an independent sales organization that provides processing services, point-of-sale equipment and merchant cash advances to businesses across the United States. MerchantPro is included within the Acceptance segment and further expands the Company’s merchant services business. On March 18, 2020, the Company acquired Bypass Mobile, LLC (“Bypass”), an independent software vendor and innovator in enterprise point-of-sale systems for sports and entertainment venues, food service management providers and national

restaurant chains. Bypass is included within the Acceptance segment and further enhances the Company's omni-commerce capabilities, enabling enterprise businesses to deliver a seamless customer experience that spans physical and digital channels. On May 11, 2020, the Company acquired Inlet, LLC ("Inlet"), a provider of secure digital delivery solutions for enterprise and middle-market billers' invoices and statements. Inlet is included within the Payments segment and further enhances the Company's digital bill payment strategy.

The Company acquired these businesses for an aggregate purchase price of \$167 million, net of \$2 million of acquired cash, and including earn-out provisions estimated at a fair value of \$45 million (see Note 10). The purchase price allocations for these acquisitions resulted in software and customer intangible assets totaling approximately \$46 million, residual buyout intangible assets of approximately \$35 million, goodwill of approximately \$90 million, and net assumed liabilities of approximately \$4 million. The purchase price allocation for the MerchantPro acquisition was finalized in the third quarter of 2020, and for the Bypass and Inlet acquisitions in the fourth quarter of 2020. Measurement period adjustments did not have a material impact on the consolidated statements of income. The goodwill recognized from these transactions is primarily attributed to synergies and the anticipated value created by selling the Company's products and services to the acquired businesses' existing client base. Approximately \$36 million of goodwill is expected to be deductible for tax purposes.

The amounts allocated to intangible assets are as follows:

<b>(In millions)</b>	<b>Gross Carrying Amount</b>	<b>Weighted-Average Useful Life</b>
Customer relationships	\$ 32	14 years
Residual buyouts	35	9 years
Acquired software and technology	14	8 years
Total	<u>\$ 81</u>	11 years

The results of operations for these acquired businesses have been included in the accompanying consolidated statements of income from the dates of acquisition. Pro forma information for these acquisitions is not provided because they did not have a material effect on the Company's consolidated results of operations.

On January 22, 2021, the Company acquired Ondot Systems, Inc., a digital experience platform provider for financial institutions. This acquisition, to be included within the Payments segment, will further expand the Company's digital capabilities, enhancing its suite of integrated solutions spanning card-based payments, digital banking platforms, core banking, and merchant solutions to enable clients of all sizes to deliver frictionless, digital-first and personalized experiences to their customers.

#### *Dispositions*

Effective July 1, 2020, the Company and Bank of America ("BANA") dissolved the Banc of America Merchant Services joint venture ("BAMS" or the "joint venture"), of which the Company maintained a 51% controlling ownership interest. Upon dissolution of the joint venture's operations, the joint venture transferred a proportionate share of value, primarily the client contracts, to each party via an agreed upon contractual separation. The remaining activities of the joint venture will consist of supporting the transition of the business to each party and an orderly wind down of remaining BAMS assets and liabilities. Pursuant to the separation agreement, the joint venture retains the responsibility for certain contingencies that may arise from pre-dissolution activities, including potential credit losses for specified merchants in excess of established reserves and certain legal claims and contingencies. The Company may be obligated to fund a proportionate share of any such losses as incurred.

The transfer of value to BANA was accounted for at fair value as a non pro rata distribution of nonmonetary assets, resulting in the recognition of a pre-tax gain of \$36 million, with a related tax expense of \$13 million. The pre-tax gain included the revaluation of client contracts allocated to BANA to a fair value of \$700 million, as well as an estimated \$24 million for certain additional consideration due from the Company to BANA in connection with the dissolution. The pre-tax net gain is recorded within gain on sale of businesses and the tax expense is recorded within the income tax provision in the consolidated statement of income for the year ended December 31, 2020. Noncontrolling interests of the Company have been reduced by \$726 million and the Company's additional paid-in capital was reduced by \$36 million to account for the wind down of the joint venture and the transfer of a proportionate share of the joint venture's fair value to BANA. The transfer of value to the Company was accounted for at carryover basis as the Company maintains control of such assets. The business transferred to the Company will continue to be operated and managed within the Company's Acceptance segment.

The fair value of the client contracts upon dissolution of the joint venture was determined using the MEEM method, a form of the income approach. The determination of the fair values required estimates about discount rates, growth and attrition rates,

future expected cash flows and other future events that are judgmental in nature. The fair value measurements were primarily based on significant inputs that are not observable in the market and thus represent a Level 3 measurement of the fair value hierarchy as defined in ASC 820, *Fair Value Measurements*. The significant assumptions used include the estimated annual net cash flows (including appropriate revenue and profit attributable to the asset, retention rate, applicable tax rate, and contributory asset charges, among other factors), the discount rate, reflecting the risks inherent in the future cash flow stream, an assessment of the asset's life cycle, and the tax amortization benefit, among other factors.

The Company will continue to provide merchant processing and related services to former BAMS clients allocated to BANA, at BAMS pricing, through June 2023. The Company will also provide processing and other support services to new BANA merchant clients pursuant to a five-year non-exclusive agreement which, after June 2023, will also apply to the former BAMS clients allocated to BANA. In addition, both the Company and BANA are entitled to certain transition services, at fair value, from each other through June 2023.

On February 18, 2020, the Company sold a 60% controlling interest of its Investment Services business, subsequently renamed as Tegra118, LLC ("Tegra118"), which is reported within Corporate and Other following the Segment Realignment. The Company received pre-tax proceeds of \$578 million, net of related expenses, resulting in a pre-tax gain on the sale of \$428 million, with the related tax expense of \$112 million recorded through the income tax provision, in the consolidated statement of income for the year ended December 31, 2020. The pre-tax gain included \$176 million related to the remeasurement of the Company's 40% retained interest based upon the enterprise value of the business. The revenues, expenses and cash flows of the Investment Services business were consolidated into the Company's financial results through the date of the sale transaction. In conjunction with the sale transaction, the Company also entered into transition services agreements to provide, at fair value, various administration, business process outsourcing, technical and data center related services for defined periods to Tegra118 (see Note 20). The Company's remaining ownership interest in Tegra118 is accounted for as an equity method investment (see Note 9). On February 2, 2021, Tegra118 completed a merger with a third party, resulting in a dilution of the Company's ownership interest in the combined new entity, Wealthtech Holdings, LLC.

On March 29, 2018, the Company sold a 55% controlling interest of each of Fiserv Automotive Solutions, LLC and Fiserv LS LLC, which were subsidiaries of the Company that owned its Lending Solutions business (collectively, the "Lending Joint Ventures"). The Lending Joint Ventures, which were reported within the Fintech segment, included all of the Company's automotive loan origination and servicing products, as well as its LoanServ™ mortgage and consumer loan servicing platform. The Company received gross sale proceeds of \$419 million from the transactions. In 2018, the Company recognized a pre-tax gain on the sale of \$227 million, with the related tax expense of \$77 million recorded through the income tax provision, in the consolidated statement of income. The pre-tax gain included \$124 million related to the remeasurement of the Company's 45% retained interests based upon the estimated enterprise value of the Lending Joint Ventures. In 2019, the Company recognized a pre-tax gain on the sale of \$10 million, with the related tax expense of \$2 million recorded through the income tax provision, as contingent special distribution provisions within the transaction agreement were resolved and thereby realized. In August 2019, the Sagent Auto, LLC joint venture, formerly known as Fiserv Automotive Solutions, LLC, completed a merger with a third party, resulting in a dilution of the Company's ownership interest in the combined entity, defi SOLUTIONS Group, LLC ("defi SOLUTIONS"). The Company recognized a pre-tax gain of \$14 million within income from investments in unconsolidated affiliates in the consolidated statement of income, with related tax expense of \$3 million, in 2019, reflecting the Company's 31% ownership interest in defi SOLUTIONS. The Company's remaining ownership interests in the Lending Joint Ventures are accounted for as equity method investments (see Note 9). See Note 20 for information regarding transition service agreements with the Lending Joint Ventures.

## 5. Discontinued Operations

In connection with the acquisition of First Data, the Company acquired two businesses, which it intended to sell. In October 2019, the Company completed the sales, at acquired fair value, of these two businesses for aggregate proceeds of \$133 million. The sale proceeds are presented within discontinued operations in the consolidated statement of cash flows since the businesses were never considered part of the Company's ongoing operations. The financial results of these businesses from the date of acquisition were not significant.

In January 2018, the Company completed the sale of the retail voucher business, MyVoucherCodes, acquired as part of its acquisition of Monitise plc in September 2017 for proceeds of £37 million (\$50 million). The corresponding proceeds received in 2018 are presented within discontinued operations since the business was never considered part of the Company's ongoing operations. There was no impact to operating income or gain/loss recognized on the sale in 2018. Cash flows from discontinued operations in 2018 also included tax payments of \$7 million related to income recognized in 2017 from a litigation settlement related to a prior disposition.



## 6. Settlement Assets and Obligations

Settlement assets and obligations represent intermediary balances arising from the settlement process which involves the transferring of funds between card issuers, payment networks, merchants and consumers. The Company records settlement assets and obligations upon processing a payment transaction. Settlement assets represent amounts receivable from agents and from payment networks for submitted merchant transactions, and funds received by the Company in advance of paying to the merchant or payee. Settlement obligations represent the unpaid amounts that are due to merchants or payees for their payment transactions.

The principal components of the Company's settlement assets and obligations were as follows at December 31:

(In millions)	2020	2019
<b>Settlement assets</b>		
Cash and cash equivalents	\$ 1,825	\$ 1,656
Receivables	9,696	10,212
Total settlement assets	<u>\$ 11,521</u>	<u>\$ 11,868</u>
<b>Settlement obligations</b>		
Payment instruments outstanding	\$ 483	\$ 345
Card settlements due to merchants	11,038	11,523
Total settlement obligations	<u>\$ 11,521</u>	<u>\$ 11,868</u>

The changes in settlement assets and obligations are presented on a net basis within operating activities in the consolidated statements of cash flows. However, because the changes in the settlement assets balance exactly offset changes in settlement obligations, the activity nets to zero.

## 7. Intangible Assets

Identifiable intangible assets consisted of the following at December 31:

(In millions)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
<b>2020</b>			
Customer relationships	\$ 15,271	\$ 3,668	\$ 11,603
Acquired software and technology	2,562	879	1,683
Trade names	618	172	446
Purchased software	913	207	706
Capitalized software and other intangibles	1,332	412	920
Total	<u>\$ 20,696</u>	<u>\$ 5,338</u>	<u>\$ 15,358</u>

(In millions)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
<b>2019</b>			
Customer relationships	\$ 16,187	\$ 2,145	\$ 14,042
Acquired software and technology	2,607	639	1,968
Trade names	620	105	515
Purchased software	680	173	507
Capitalized software and other intangibles	942	332	610
Total	<u>\$ 21,036</u>	<u>\$ 3,394</u>	<u>\$ 17,642</u>

Gross software development costs capitalized for new products and enhancements to existing products totaled \$462 million, \$339 million and \$193 million in 2020, 2019 and 2018, respectively.

Amortization expense associated with the above identifiable intangible assets was as follows for the years ended December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Amortization expense	\$ 2,563	\$ 1,299	\$ 347

Amortization expense during the year ended December 31, 2020 includes \$56 million of accelerated amortization associated with the termination of certain vendor contracts (see Note 17).

The Company estimates that annual amortization expense with respect to intangible assets recorded at December 31, 2020 will be as follows:

<b>(In millions)</b>	
<b>Year Ending December 31,</b>	
2021	\$ 2,451
2022	2,262
2023	2,010
2024	1,616
2025	1,342
Thereafter	5,677
<b>Total</b>	<b>\$ 15,358</b>

## 8. Goodwill

The following table presents changes in goodwill during 2020 and 2019. Prior period amounts have been restated to reflect the Segment Realignment.

<b>(In millions)</b>	<b>Reportable Segments</b>				
	<b>Acceptance</b>	<b>Fintech</b>	<b>Payments</b>	<b>Corporate and Other</b>	<b>Total</b>
Goodwill - December 31, 2018	\$ —	\$ 2,102	\$ 3,380	\$ 220	\$ 5,702
Acquisitions and valuation adjustments	21,178	2	9,302	—	30,482
Dispositions	—	(2)	—	—	(2)
Goodwill reclassified to assets held for sale	—	—	—	(220)	(220)
Foreign currency translation	11	2	63	—	76
Goodwill - December 31, 2019	21,189	2,104	12,745	—	36,038
Acquisitions and valuation adjustments	332	—	62	—	394
Foreign currency translation	(113)	4	(1)	—	(110)
Goodwill - December 31, 2020	<u>\$ 21,408</u>	<u>\$ 2,108</u>	<u>\$ 12,806</u>	<u>\$ —</u>	<u>\$ 36,322</u>

In December 2019, the Company entered into a definitive agreement to sell a 60% controlling interest of its Investment Services business, and subsequently completed the sale on February 18, 2020, which is reported within Corporate and Other following the Segment Realignment (see Note 4). As a result, the corresponding assets of the Investment Services business, including \$220 million of goodwill, were classified as held for sale within prepaid expenses and other current assets in the Company's consolidated balance sheet at December 31, 2019.

## 9. Investments in Unconsolidated Affiliates

The Company maintains investments in various affiliates that are accounted for as equity method investments at both December 31, 2020 and 2019, the most significant of which are related to the Company's merchant bank alliance affiliates. The Company's share of net income or loss from these investments is reported within income from investments in unconsolidated affiliates and the related tax expense or benefit is reported within the income tax provision in the consolidated statements of income.

### Merchant Alliances

The Company maintains ownership interests of significant influence in various merchant alliances and strategic investments in companies in related markets. A merchant alliance, as it pertains to investments accounted for under the equity method, is an agreement between the Company and a financial institution that combines the processing capabilities and management expertise of the Company with the visibility and distribution channel of the bank. A merchant alliance acquires credit and debit card transactions from merchants. The Company provides processing and other services to the alliance and charges fees to the alliance primarily based on contractual pricing (see Note 20). The Company's investment in its merchant alliances was \$2.4 billion and \$2.5 billion at December 31, 2020 and 2019, respectively, and is reported within investments in unconsolidated affiliates in the consolidated balance sheets.

### Other Equity Method Investments

Following the sale of a controlling financial interest of the Investment Services business (see Note 4), as of December 31, 2020, the Company maintained a 40% ownership interest in Tegra 118 which is accounted for as an equity method investment. The Company also maintains a 45% ownership interest in Sagent M&C, LLC (formerly known as Fiserv LS, LLC) and a 31% ownership interest in defi SOLUTIONS, which are accounted for as equity method investments (see Note 4). The Company's aggregate investment in these entities was \$212 million and \$56 million at December 31, 2020 and 2019, respectively, and is reported within investments in unconsolidated affiliates in the consolidated balance sheets.

The Lending Joint Ventures maintain variable-rate term loan facilities with aggregate outstanding borrowings of \$385 million in senior unsecured debt and variable-rate revolving credit facilities with an aggregate borrowing capacity of \$45 million with a syndicate of banks, which mature in March 2023. Outstanding borrowings on the revolving credit facilities at December 31, 2020 were \$13 million. The Company has guaranteed this debt of the Lending Joint Ventures and does not anticipate that the Lending Joint Ventures will fail to fulfill their debt obligations. See Note 10 for additional information regarding the Company's debt guarantee arrangements with the Lending Joint Ventures.

### Summary of Financial Information

The following tables present a summary of financial information for the Company's unconsolidated affiliates accounted for under the equity method of accounting:

**(In millions)**

<b>December 31,</b>	<b>2020</b>	<b>2019</b>
Total current assets	\$ 5,534	\$ 4,288
Total long-term assets	769	1
<b>Total assets</b>	<b>\$ 6,303</b>	<b>\$ 4,289</b>
Total current liabilities	\$ 5,478	\$ 4,243
Total long-term liabilities	336	—
<b>Total liabilities</b>	<b>\$ 5,814</b>	<b>\$ 4,243</b>

The primary components of assets and liabilities are settlement asset and obligation related accounts similar to those described in Note 6 to the consolidated financial statements.

**(In millions)**

<b>Year Ended December 31,</b>	<b>2020</b>	<b>2019</b>
Total revenue	\$ 963	\$ 467
Total expenses	597	249
<b>Operating income</b>	<b>\$ 366</b>	<b>\$ 218</b>
Net income	\$ 351	\$ 215

The Company's share of investee's net income or loss includes the amortization basis difference between the estimated fair value and the underlying book value of equity method intangible assets.

The Company classifies distributions from its investments accounted for using the equity method in the consolidated statements of cash flows using the cumulative earnings approach. Under this approach, distributions received from

unconsolidated affiliates are classified as cash flows from operating activities to the extent that the cumulative distributions do not exceed the cumulative earnings on the investment. To the extent the current period distribution exceeds the cumulative earnings on the investment, the distribution is considered a return of investment and is classified as cash flows from investing activities. The Company received cash distributions from unconsolidated affiliates of \$151 million, \$136 million and \$2 million, of which \$109 million, \$113 million and \$0 million were recorded as cash flows from investing activities in the Company's consolidated statements of cash flows during 2020, 2019 and 2018, respectively.

The Company also maintains investments in various equity securities without a readily determinable fair value. Such investments totaled \$160 million and \$167 million at December 31, 2020 and 2019, respectively, and are included within other long-term assets in the Company's consolidated balance sheets. The Company reviews these investments each reporting period to determine whether an impairment or observable price change for the investment has occurred. When such events or changes occur, the Company evaluates the fair value compared to its cost basis in the investment. Gains or losses from a change in fair value are included within other income (expense) in the consolidated statement of income for the period. Adjustments made to the values recorded for these equity securities during 2020, 2019 and 2018 were not significant.

## 10. Fair Value Measurements

The fair values of cash equivalents, trade accounts receivable, settlement assets and obligations, accounts payable, and client deposits approximate their respective carrying values due to the short period of time to maturity. The Company's derivative instruments are measured on a recurring basis based on foreign currency spot rates and forwards quoted by banks and foreign currency dealers and are marked-to-market each period (see Note 14). Contingent consideration related to the 2020 acquisitions of MerchantPro and Bypass and 2018 acquisition of Elan (see Note 4) is estimated based on the present value of a probability-weighted assessment approach derived from the likelihood of achieving the earn-out criteria. The fair value of the Company's contingent liability for current expected credit losses associated with its debt guarantees, as further described below, is estimated based on assumptions of future risk of default and the corresponding level of credit losses at the time of default.

Assets and liabilities measured at fair value on a recurring basis consisted of the following at December 31:

(In millions)	Classification	Fair Value Hierarchy	Fair Value	
			2020	2019
<b>Assets</b>				
Cash flow hedges	Prepaid expenses and other current assets	Level 2	\$ 9	\$ 4
<b>Liabilities</b>				
Contingent consideration	Accounts payable and accrued expenses	Level 3	\$ 46	\$ —
Contingent consideration	Other long-term liabilities	Level 3	—	1
Contingent debt guarantee	Other long-term liabilities	Level 3	8	—

The Company's senior notes are recorded at amortized cost, but measured at fair value for disclosure purposes. The estimated fair value of senior notes was based on matrix pricing which considers readily observable inputs of comparable securities (Level 2 of the fair value hierarchy). The carrying value of the Company's term loan credit agreement, revolving credit facility borrowings, foreign lines of credit and debt associated with the receivables securitization agreement approximates fair value as these instruments have variable interest rates and the Company has not experienced any change to its credit ratings (Level 2 of the fair value hierarchy). The estimated fair value of total debt, excluding finance leases and other financing obligations, was \$22.5 billion and \$22.6 billion at December 31, 2020 and 2019, respectively, and the carrying value was \$19.9 billion and \$21.5 billion at December 31, 2020 and 2019, respectively.

The Company maintains a liability for its non-contingent obligations to perform over the term of its debt guarantee arrangements with the Lending Joint Ventures (see Note 9), which is reported primarily within other long-term liabilities in the consolidated balance sheets. The non-contingent component of the Company's debt guarantee arrangements is recorded at amortized cost but measured at fair value for disclosure purposes. The carrying value of the Company's non-contingent liability of \$18 million and \$26 million approximates the fair value at December 31, 2020 and 2019, respectively (Level 3 of the fair value hierarchy). Such guarantees will be amortized in future periods over the contractual term. In addition, the Company has recorded, in conjunction with the adoption of CECL, a contingent liability (\$8 million at December 31, 2020, as reported within other long-term liabilities in the consolidated balance sheet), representing the current expected credit losses to which the Company is exposed. This contingent liability is estimated based on certain financial metrics of the Lending Joint Ventures and historical industry data, which is used to develop assumptions of the likelihood the guaranteed parties will default and the level of credit losses in the event a default occurs (Level 3 of the fair value hierarchy). The Company recognized \$13 million,

\$7 million and \$5 million during the years ended December 31, 2020, 2019 and 2018, respectively, within other income (expense) in its consolidated statements of income related to its release from risk under the non-contingent guarantees as well as a change in the provision of estimated credit losses associated with the indebtedness of the Lending Joint Ventures. The Company has not made any payments under the guarantees, nor has it been called upon to do so.

In addition, certain of the Company's non-financial assets are measured at fair value on a non-recurring basis, including property and equipment, lease ROU assets, equity securities without a readily determinable fair value, goodwill and other intangible assets, and are subject to fair value adjustment in certain circumstances. Additional information about fair value adjustments recorded on a non-recurring basis during the years ended December 31, 2020 and 2019 is included in Note 17 to the consolidated financial statements.

## 11. Leases

The Company adopted ASU 2016-02 and its related amendments (collectively known as "ASC 842") effective January 1, 2019 using the optional transition method in ASU 2018-11. Therefore, the reported results and financial position as of and for the years ended December 31, 2020 and 2019 reflect the application of ASC 842, while the reported results for the year ended December 31, 2018 were not adjusted and continue to be reported under the accounting guidance, ASC 840, *Leases*, in effect for this prior period.

### *Company as Lessee*

The Company primarily leases office space, data centers and equipment from third parties. The Company determines if a contract is a lease at inception. A contract contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The lease term begins on the commencement date, which is the date the Company takes possession of the asset, and may include options to extend or terminate the lease when it is reasonably certain that the option will be exercised. Many of the Company's leases contain renewal options for varying periods, which can be exercised at the Company's sole discretion. Leases are classified as operating or finance leases based on factors such as the lease term, lease payments, and the economic life, fair value and estimated residual value of the asset. Certain leases include options to purchase the leased asset at the end of the lease term, which is assessed as a part of the Company's lease classification determination. The Company elected the package of practical expedients permitted under the transition guidance within ASU 2016-02 to not reassess prior conclusions related to contracts containing leases, lease classification and initial direct costs. The Company's leases have remaining lease terms ranging from one month to 17 years.

The Company uses the right-of-use model to account for its leases. ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized on the commencement date based on the present value of lease payments over the lease term. ROU assets are based on the lease liability and are increased by prepaid lease payments and decreased by lease incentives received. For leases where the Company is reasonably certain to exercise a renewal option, such option periods have been included in the determination of the Company's ROU assets and lease liabilities. Certain leases require the Company to pay taxes, insurance, maintenance and other operating expenses associated with the leased asset. Such amounts are not included in the measurement of the ROU assets and lease liabilities to the extent they are variable in nature. These variable lease costs are recognized as variable lease expenses when incurred. As a practical expedient, lease agreements with lease and non-lease components are accounted for as a single lease component for all asset classes. The Company estimates contingent lease incentives when it is probable that the Company is entitled to the incentive at lease commencement. The Company elected the short-term lease recognition exemption for all leases that qualify. Therefore, leases with an initial term of 12 months or less are not recorded on the balance sheet; instead, lease payments are recognized as lease expense on a straight-line basis over the lease term. The depreciable life of the ROU assets and leasehold improvements are limited by the expected lease term unless the Company is reasonably certain of a transfer of title or purchase option. The Company uses its incremental borrowing rate to discount future lease payments in the calculation of the lease liability and ROU asset based on the information available on the commencement date for each lease. The Company's leases typically do not provide an implicit rate. The determination of the incremental borrowing rate requires judgment and is determined using the Company's current unsecured borrowing rate, adjusted for various factors such as collateralization, currency and term to align with the terms of the lease.

### Lease Balances

<b>(In millions)</b> <b>December 31,</b>	<b>2020</b>		<b>2019</b>	
<b>Assets</b>				
Operating lease assets <sup>(1)</sup>	\$	504	\$	684
Finance lease assets <sup>(2)</sup>		267		235
Total lease assets	\$	771	\$	919
<b>Liabilities</b>				
<b>Current</b>				
Operating lease liabilities <sup>(1)</sup>	\$	125	\$	140
Finance lease liabilities <sup>(2)</sup>		104		78
<b>Noncurrent</b>				
Operating lease liabilities <sup>(1)</sup>		471		603
Finance lease liabilities <sup>(2)</sup>		271		144
Total lease liabilities	\$	971	\$	965

<sup>(1)</sup> Operating lease assets are included within other long-term assets, and operating lease liabilities are included within accounts payable and accrued expenses (current portion) and other long-term liabilities (noncurrent portion) in the consolidated balance sheets.

<sup>(2)</sup> Finance lease assets are included within property and equipment, net and finance lease liabilities are included within short-term and current maturities of long-term debt (current portion) and long-term debt (noncurrent portion) in the consolidated balance sheets.

### Components of Lease Cost

<b>(In millions)</b> <b>Year Ended December 31,</b>	<b>2020</b>		<b>2019</b>	
Operating lease cost <sup>(1)</sup>	\$	198	\$	207
Finance lease cost <sup>(2)</sup>				
Amortization of right-of-use assets		150		40
Interest on lease liabilities		21		8
Total lease cost	\$	369	\$	255

<sup>(1)</sup> Operating lease expense is included within cost of processing and services, cost of product and selling, general and administrative expense, dependent upon the nature and use of the ROU asset, in the consolidated statements of income. Operating lease expense includes approximately \$50 million and \$56 million of variable lease costs for the years ended December 31, 2020 and 2019, respectively.

<sup>(2)</sup> Finance lease expense is recorded as depreciation and amortization expense within cost of processing and services, cost of product and selling, general and administrative expense, dependent upon the nature and use of the ROU asset, and interest expense, net in the consolidated statements of income. Finance lease expense includes \$62 million of accelerated amortization associated with the termination of certain vendor contracts during the year ended December 31, 2020 (see Note 17).

Rent expense for all operating leases was \$118 million during the year ended December 31, 2018.

### Supplemental Cash Flow Information

(In millions)

Year Ended December 31,	2020	2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 155	\$ 139
Operating cash flows from finance leases	21	8
Financing cash flows from finance leases	187	37
Right-of-use assets obtained in exchange for lease liabilities: <sup>(1)</sup>		
Operating leases	\$ 46	\$ 441
Finance leases	399	288

<sup>(1)</sup> Amounts in 2019 include the right-of-use assets and lease liabilities obtained through the acquisition of First Data.

### Lease Term and Discount Rate

December 31,	2020	2019
Weighted-average remaining lease term:		
Operating leases	6 years	7 years
Finance leases	4 years	3 years
Weighted-average discount rate:		
Operating leases	2.9 %	3.0 %
Finance leases	3.5 %	3.5 %

### Maturity of Lease Liabilities

Future minimum rental payments on leases with initial non-cancellable lease terms in excess of one year were due as follows at December 31, 2020:

(In millions)

Year Ending December 31,	Operating Leases <sup>(1)</sup>	Finance Leases <sup>(2)</sup>
2021	\$ 136	\$ 107
2022	120	103
2023	103	98
2024	86	71
2025	66	28
Thereafter	146	3
Total lease payments	657	410
Less: Interest	(61)	(35)
Present value of lease liabilities	\$ 596	\$ 375

<sup>(1)</sup> Operating lease payments include \$6 million related to options to extend lease terms that are reasonably certain of being exercised.

<sup>(2)</sup> Finance lease payments exclude \$30 million of legally binding minimum lease payments for leases signed but not yet commenced. Finance leases that have been signed but not yet commenced are for equipment and will commence in 2021 with lease terms of up to 6 years.

### Company as Lessor

The Company owns certain point-of-sale ("POS") terminal equipment which it leases to merchants. Leases are classified as operating or sales-type leases based on factors such as the lease term, lease payments, and the economic life, fair value and estimated residual value of the asset. The terms of the leases typically range from one month to five years. For operating leases,

the minimum lease payments received are recognized as lease income on a straight-line basis over the lease term and the leased asset is included in property and equipment, net in the consolidated balance sheets and depreciated over its estimated useful life. For sales-type leases, selling profit is recognized at the commencement date of the lease to the extent the fair value of the underlying asset is different from its carrying amount. Selling profit is directly impacted by the Company's estimate of the amount to be derived from the residual value of the asset at the end of the lease term. The residual value of the asset is computed using various assumptions, including the expected fair value of the underlying asset at the end of the lease term. Unearned income is recognized as interest income over the lease term. For sales-type leases, the Company derecognizes the carrying amount of the underlying leased asset and recognizes a net investment in the leased asset in the consolidated balance sheets. The net investment in a leased asset is computed based on the present value of the minimum lease payments not yet received and the present value of the residual value of the asset.

#### Components of Lease Income

**(In millions)**

<b>Year Ended December 31,</b>	<b>2020</b>	<b>2019</b>
Sales-type leases:		
Selling profit <sup>(1)</sup>	\$ 48	\$ 20
Interest income <sup>(1)</sup>	76	33
Operating lease income <sup>(2)</sup>	257	36

<sup>(1)</sup> Selling profit includes \$106 million and \$48 million recorded within product revenue with a corresponding charge of \$58 million and \$28 million recorded in cost of product in the consolidated statements of income for the years ended December 31, 2020 and 2019, respectively. Interest income is included within product revenue in the consolidated statements of income.

<sup>(2)</sup> Operating lease income includes a nominal amount of variable lease income and is included within product revenue in the consolidated statements of income for each of the years ended December 31, 2020 and 2019.

#### Components of Net Investment in Sales-Type Leases

**(In millions)**

<b>December 31,</b>	<b>2020</b>	<b>2019</b>
Minimum lease payments	\$ 355	\$ 376
Residual values	23	34
Less: Unearned interest income	(141)	(160)
Net investment in leases <sup>(1)</sup>	<u>\$ 237</u>	<u>\$ 250</u>

<sup>(1)</sup> Net investments in leased assets are included within prepaid expenses and other current assets (current portion) and other long-term assets (noncurrent portion) in the consolidated balance sheets.

#### Maturities of Future Minimum Lease Payment Receivables

Future minimum lease payments receivable on sales-type leases were as follows at December 31, 2020:

**(In millions)**

<b>Year Ending December 31,</b>	<b>Sales-Type Leases</b>
2021	\$ 153
2022	114
2023	63
2024	22
2025	3
Thereafter	—
Total minimum lease payments	<u>\$ 355</u>



### Lease Payment Receivables Portfolio

The Company accounts for lease payment receivables in connection with POS terminal equipment as a single portfolio. The Company recognizes an allowance for expected credit losses on lease payment receivables at the commencement date of the lease by considering the term, geography and internal credit risk ratings of such lease. The internal credit risk ratings are established based on lessee specific risk factors, such as FICO score, number of years the lessee has been in business and the nature of the lessee's industry, which are considered indicators of the likelihood a lessee may default in the future. The established reserve for estimated credit losses on lease payment receivables upon adoption of ASU 2016-13 on January 1, 2020 was \$56 million. Such reserve for estimated credit losses at December 31, 2020 was \$64 million.

The Company determines delinquency status on lease payment receivables based on the number of calendar days past due. The Company considers lease payments that are 90 days or less past due as performing. Lease payments that are greater than 90 days past due are placed on non-accrual status in which interest income is no longer recognized. Lease payment receivables are fully written off in the period they become delinquent greater than 180 days past due. The amortized cost balance of net investment leases at December 31, 2020 and 2019 was \$237 million and \$250 million, respectively. Lease payment receivables that were determined to be on non-accrual status were nominal at each of December 31, 2020 and 2019.

## 12. Debt

The Company's debt consisted of the following at December 31:

(In millions)	2020	2019
<b>Short-term and current maturities of long-term debt:</b>		
Lines of credit	\$ 144	\$ 150
Finance lease and other financing obligations	240	137
Total short-term and current maturities of long-term debt	<u>\$ 384</u>	<u>\$ 287</u>
<b>Long-term debt:</b>		
2.700% senior notes due June 2020	\$ —	\$ 850
4.750% senior notes due June 2021	400	400
3.500% senior notes due October 2022	700	700
3.800% senior notes due October 2023	1,000	1,000
0.375% senior notes due July 2023 (Euro-denominated)	612	559
2.750% senior notes due July 2024	2,000	2,000
3.850% senior notes due June 2025	900	900
2.250% senior notes due July 2025 (British Pound-denominated)	709	687
3.200% senior notes due July 2026	2,000	2,000
2.250% senior notes due June 2027	1,000	—
1.125% senior notes due July 2027 (Euro-denominated)	612	559
4.200% senior notes due October 2028	1,000	1,000
3.500% senior notes due July 2029	3,000	3,000
2.650% senior notes due June 2030	1,000	—
1.625% senior notes due July 2030 (Euro-denominated)	612	559
3.000% senior notes due July 2031 (British Pound-denominated)	709	687
4.400% senior notes due July 2049	2,000	2,000
Receivable securitized loan	425	500
Term loan facility	1,250	3,950
Unamortized discount and deferred financing costs	(155)	(160)
Revolving credit facility	22	174
Finance lease and other financing obligations	504	247
Total long-term debt	<u>\$ 20,300</u>	<u>\$ 21,612</u>

Annual maturities of the Company's total debt were as follows at December 31, 2020:

<b>(In millions)</b>	
<b>Year Ending December 31,</b>	
2021	\$ 384
2022	1,323
2023	2,222
2024	3,329
2025	1,643
Thereafter	11,938
Total principal payments	20,839
Unamortized discount and deferred financing costs	(155)
Total debt	<u>\$ 20,684</u>

#### Senior Notes

The Company has outstanding \$18.3 billion of various fixed-rate senior notes, as described above. The indentures governing the Company's senior notes contain covenants that, among other matters, limit (i) the Company's ability to consolidate or merge with or into, or convey, transfer or lease all or substantially all of its properties and assets to, another person, (ii) the Company's and certain of its subsidiaries' ability to create or assume liens, and (iii) the Company's and certain of its subsidiaries' ability to engage in sale and leaseback transactions. The Company may, at its option, redeem the senior notes, in whole or, from time to time, in part, at any time prior to the applicable maturity date. Interest on the Company's U.S. dollar-denominated senior notes is paid semi-annually, while interest on its Euro- and British Pound-denominated senior notes is paid annually. The interest rate applicable to certain of the senior notes is subject to an increase of up to two percent in the event that the credit rating assigned to such notes is downgraded below investment grade.

On May 13, 2020, the Company completed an offering of \$2.0 billion of senior notes comprised of \$1.0 billion aggregate principal amount of 2.25% senior notes due in June 2027 and \$1.0 billion aggregate principal amount of 2.65% senior notes due in June 2030. The senior notes pay interest semi-annually on June 1 and December 1, commencing on December 1, 2020. The indentures governing these senior notes contain covenants that are substantially the same as those set forth in the Company's senior notes described above. The Company used the net proceeds from these senior notes offerings to repay the outstanding principal balance of \$850 million under its 2.7% senior notes due in June 2020 and outstanding borrowings under its amended and restated revolving credit facility totaling \$1.1 billion.

On June 24, 2019 and July 1, 2019, the Company completed various offerings of senior notes for the purpose of funding the repayment of certain indebtedness of First Data and its subsidiaries on the closing date of the acquisition (see Note 4). Such offerings consisted of the following:

<b>(In millions)</b>	<b>Interest Rates</b>	<b>Maturities</b>	<b>Aggregate Principal Amount</b>	
U.S. dollar denominated senior notes	2.750% - 4.400%	July 2024 - 2049	\$	9,000
Euro denominated senior notes	0.375% - 1.625%	July 2023 - 2030	€	1,500
British Pound denominated senior notes	2.250% - 3.000%	July 2025 - 2031	£	1,050

The Company used a portion of the net proceeds from the 2019 senior note offerings described above in June 2019 to repay outstanding borrowings totaling \$790 million under the Company's amended and restated revolving credit facility. On July 29, 2019, concurrent with the acquisition of First Data, the Company used the remaining net proceeds from the 2019 senior notes offerings described above, as well as the net proceeds of the term loan facility and a drawing on its revolving credit facility described below, to repay \$16.4 billion of existing First Data debt and to pay fees and expenses related to such repayment, the First Data acquisition and related transactions.

At December 31, 2020, the 4.75% senior notes due in June 2021 were classified in the consolidated balance sheet as long-term and within the debt maturity schedule above as maturing in September 2023, the date that the Company's revolving credit facility expires, as the Company has the intent to refinance this debt on a long-term basis and the ability to do so under its revolving credit facility.

### *Term Loan Facility*

On February 15, 2019, the Company entered into a term loan credit agreement with a syndicate of financial institutions pursuant to which such financial institutions committed to provide the Company with a senior unsecured term loan facility in an aggregate amount of \$5.0 billion, consisting of \$1.5 billion in commitments to provide loans with a term of three years and \$3.5 billion in commitments to provide loans with a term of five years. On July 29, 2019, concurrent with the closing of the acquisition of First Data, the term loan credit agreement was funded. Loans drawn under the term loan facility are subject to amortization at a quarterly rate of 1.25% for the first eight quarters and 1.875% each quarter thereafter (with loans outstanding under the five-year tranche subject to amortization at a quarterly rate of 2.5% after the fourth anniversary of the commencement of amortization), with accrued and unpaid amortization amounts required to be paid on the last business day in December of each year. Borrowings under the term loan facility bear interest at variable rates based on LIBOR or on a base rate, plus in each case, a specified margin based on the Company's long-term debt rating in effect from time to time. The variable interest rate on the term loan facility borrowings was 1.41% at December 31, 2020. The term loan credit facility contains affirmative, negative and financial covenants, and events of default, that are substantially the same as those set forth in the Company's existing amended revolving credit facility, as described below.

### *Revolving Credit Facility*

The Company maintains an amended and restated revolving credit facility, which matures in September 2023, with aggregate commitments available for \$3.5 billion of total capacity. Borrowings under the amended and restated revolving credit facility bear interest at a variable rate based on LIBOR or a base rate, plus in each case a specified margin based on the Company's long-term debt rating in effect from time to time. The variable interest rate on the revolving credit facility borrowings was 1.18% at December 31, 2020. There are no significant commitment fees and no compensating balance requirements. The amended and restated revolving credit facility contains various restrictions and covenants that require the Company, among other things, to (i) limit its consolidated indebtedness as of the end of each fiscal quarter to no more than three and one-half times the Company's consolidated net earnings before interest, taxes, depreciation, amortization, non-cash charges and expenses and certain other adjustments ("EBITDA") during the period of four fiscal quarters then ended, subject to certain exceptions, and (ii) maintain EBITDA of at least three times its consolidated interest expense as of the end of each fiscal quarter for the period of four fiscal quarters then ended.

On February 6, 2019, the Company entered into an amendment to its amended and restated revolving credit facility to (i) amend the maximum leverage ratio covenant to permit it to elect to increase the permitted maximum leverage ratio from three and one-half times the consolidated EBITDA to either four times or four and one-half times the Company's consolidated EBITDA for a specified period following certain acquisitions and (ii) permit it to make drawings under the revolving credit facility on the closing date of its acquisition of First Data subject to only limited conditions. In November 2019, the Company elected to increase the permitted maximum leverage ratio to four times the Company's consolidated EBITDA pursuant to the terms of the amendment described above. The Company was in compliance with all financial debt covenants during 2020.

### *Foreign Lines of Credit and Other Arrangements*

The Company maintains certain short-term lines of credit with foreign banks and alliance partners primarily to fund settlement activity. These arrangements are primarily associated with international operations and are in various functional currencies, the most significant of which are the Australian dollar, Polish zloty, Euro and Argentine peso. The Company had amounts outstanding on these lines of credit totaling \$144 million and \$150 million at a weighted-average interest rate of 21.98% and 13.42% at December 31, 2020 and 2019, respectively.

### *Receivable Securitized Loan*

The Company maintains a consolidated wholly-owned subsidiary, First Data Receivables, LLC ("FDR"). FDR is a party to certain receivables financing arrangements, including an agreement ("Receivables Financing Agreement") with certain financial institutions and other persons from time to time party thereto as lenders and group agents, pursuant to which certain wholly-owned subsidiaries of the Company have agreed to transfer and contribute receivables to FDR, and FDR in turn may obtain borrowings from the financial institutions and other lender parties to the Receivables Financing Agreement secured by liens on those receivables. FDR's assets are not available to satisfy the obligations of any other entities or affiliates of the Company, and FDR's creditors would be entitled, upon its liquidation, to be satisfied out of FDR's assets prior to any assets or value in FDR becoming available to the Company. The receivables held by FDR are recorded within trade accounts receivable, net in the Company's consolidated balance sheets. FDR held \$811 million and \$773 million in receivables as part of the securitization program at December 31, 2020 and 2019, respectively. FDR utilized the receivables as collateral in borrowings of \$425 million and \$500 million as of December 31, 2020 and 2019, respectively, at an average interest rate of 1.00% and 2.61%, respectively.

At December 31, 2020, the collateral capacity under the Receivables Financing Agreement was \$625 million, and the maximum borrowing capacity was \$500 million. The term of the Receivables Financing Agreement is through July 2022.

#### *Deferred Financing Costs*

Deferred financing costs are amortized as a component of interest expense, net over the term of the underlying debt using the effective interest method. Deferred financing costs related to the Company's senior notes, term loan and receivable securitized loan totaled \$117 million and \$120 million at December 31, 2020 and 2019, respectively, and are reported as a direct reduction of the related debt instrument in the consolidated balance sheets. Deferred financing costs related to the Company's revolving credit facility are reported in other long-term assets in the consolidated balance sheets and totaled \$5 million and \$7 million at December 31, 2020 and 2019, respectively.

#### *Debt Financing Activities*

On January 16, 2019, in connection with the definitive merger agreement to acquire First Data (see Note 4), the Company entered into a bridge facility commitment letter pursuant to which a group of financial institutions committed to provide a 364-day senior unsecured bridge term loan facility in an aggregate principal amount of \$17.0 billion for the purpose of funding the repayment of certain indebtedness of First Data and its subsidiaries on the closing date of the acquisition of First Data, making cash payments in lieu of fractional shares as part of the acquisition consideration and paying fees and expenses related to the acquisition, the refinancing and the related transactions. The Company recorded \$98 million of expenses, reported within debt financing activities in the consolidated statements of income, related to the bridge term loan facility during the year ended December 31, 2019. The aggregate commitments of \$17.0 billion under the bridge facility commitment letter were replaced with a corresponding amount of permanent financing through the term loan credit agreement and issuance of senior notes, as described above, resulting in the termination of the bridge term loan facility effective July 1, 2019.

In June 2019, the Company entered into foreign exchange forward contracts to minimize foreign currency exposure to the Euro and British Pound upon settlement of the proceeds from the foreign currency-denominated senior notes, as described above. The foreign exchange forward contracts matured on July 1, 2019, concurrent with the closing of the offering of the foreign currency-denominated senior notes. The Company realized foreign currency transaction gains of \$3 million, reported within debt financing activities in the consolidated statement of income during the year ended December 31, 2019, from these foreign exchange forward contracts. Further, upon completion of the acquisition of First Data, the Company designated its Euro- and British Pound-denominated senior notes as net investment hedges to hedge a portion of its net investment in certain Euro- and British Pound-denominated subsidiaries (see Note 14). Prior to designating the foreign currency-denominated senior notes as net investment hedges, the Company realized foreign currency transaction gains of \$69 million, reported within debt financing activities in the consolidated statement of income during the year ended December 31, 2019, as a result of changes in the U.S. dollar equivalent of the Euro- and British Pound-denominated senior notes due to fluctuations in foreign currency exchange rates. In addition, the Company held a portion of the proceeds from the issuance of these foreign currency-denominated senior notes in Euro- and British Pound-denominated cash and cash equivalents. The Company realized foreign currency transaction losses of \$19 million, reported within debt financing activities in the consolidated statement of income during the year ended December 31, 2019, as a result of changes in the U.S. dollar equivalent of the Euro- and British Pound-denominated cash due to fluctuations in foreign currency exchange rates.

In September 2018, the Company completed an offering of \$2.0 billion of senior notes comprised of \$1.0 billion aggregate principal amount of 3.8% senior notes due in October 2023 and \$1.0 billion aggregate principal amount of 4.2% senior notes due in October 2028. The Company used the net proceeds from such offering to repay the outstanding principal balance of \$540 million under its then-existing term loan and the then-outstanding borrowings under its amended and restated revolving credit facility totaling \$1.1 billion. In addition, the Company commenced a cash tender offer in September 2018 for any and all of its then-outstanding \$450 million aggregate principal amount of 4.625% senior notes due October 2020. Upon expiration of the tender offer on September 26, 2018, \$246 million was tendered. In October 2018, the Company retired the remaining outstanding \$204 million aggregate principal amount of 4.625% senior notes. The Company recorded a pre-tax loss, reported within debt financing activities in the consolidated statements of income, on early debt extinguishment of \$14 million during the year ended December 31, 2018 related to these activities.

### **13. Redeemable Noncontrolling Interests**

The Company maintains two redeemable noncontrolling interests which are presented outside of equity and carried at their estimated redemption values. Each minority partner owns 1% of the equity in the joint venture; in addition, each minority partner is entitled to a contractually determined share of the entity's income. The agreements contain redemption features whereby interests held by the minority partner are redeemable either (i) at the option of the holder or (ii) upon the occurrence of an event that is not solely within the Company's control. The minority interests have a total estimated redemption value of \$259 million at December 31, 2020, which may be terminated by either party for convenience any time after September 1, 2021 and

December 31, 2024, respectively. In the event of termination for cause, as a result of a change in control, or for convenience after the predetermined date, the Company may be required to purchase the minority partner membership interests at a price equal to the fair market value of the minority interest.

The following table presents a summary of the redeemable noncontrolling interests activity during the years ended December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>
Balance at beginning of year	\$ 262	\$ —
Acquired First Data interests (see Note 4)	—	252
Distributions paid to redeemable noncontrolling interests	(42)	(7)
Share of income	39	17
Balance at end of year	<u>\$ 259</u>	<u>\$ 262</u>

#### 14. Accumulated Other Comprehensive Loss

Changes in accumulated other comprehensive loss by component, net of income taxes, consisted of the following:

<b>(In millions)</b>	<b>Year Ended December 31, 2020</b>			
	<b>Cash Flow Hedges</b>	<b>Foreign Currency Translation</b>	<b>Pension Plans</b>	<b>Total</b>
Balance at December 31, 2019	\$ (141)	\$ (33)	\$ (6)	\$ (180)
Other comprehensive (loss) income before reclassifications	5	(221)	(6)	(222)
Amounts reclassified from accumulated other comprehensive loss	15	—	—	15
Net current-period other comprehensive (loss) income	20	(221)	(6)	(207)
Balance at December 31, 2020	<u>\$ (121)</u>	<u>\$ (254)</u>	<u>\$ (12)</u>	<u>\$ (387)</u>

<b>(In millions)</b>	<b>Year Ended December 31, 2019</b>			
	<b>Cash Flow Hedges</b>	<b>Foreign Currency Translation</b>	<b>Pension Plans</b>	<b>Total</b>
Balance at December 31, 2018	\$ (16)	\$ (49)	\$ (2)	\$ (67)
Other comprehensive (loss) income before reclassifications	(134)	16	(4)	(122)
Amounts reclassified from accumulated other comprehensive loss	9	—	—	9
Net current-period other comprehensive (loss) income	(125)	16	(4)	(113)
Balance at December 31, 2019	<u>\$ (141)</u>	<u>\$ (33)</u>	<u>\$ (6)</u>	<u>\$ (180)</u>

The Company has entered into forward exchange contracts, which have been designated as cash flow hedges, to hedge foreign currency exposure to the Indian Rupee. The notional amount of these derivatives was \$259 million and \$178 million, and the fair value totaling \$9 million and \$4 million is reported primarily in prepaid expenses and other current assets in the consolidated balance sheets at December 31, 2020 and 2019, respectively. Based on the amounts recorded in accumulated other comprehensive loss at December 31, 2020, the Company estimates that it will recognize gains of approximately \$8 million in cost of processing and services during the next twelve months as foreign exchange forward contracts settle.

In March 2019, the Company entered into treasury lock agreements (“Treasury Locks”), designated as cash flow hedges, in the aggregate notional amount of \$5.0 billion to manage exposure to fluctuations in benchmark interest rates in anticipation of the issuance of fixed rate debt in connection with the refinancing of certain indebtedness of First Data and its subsidiaries. In June 2019, concurrent with the issuance of U.S dollar-denominated senior notes (see Note 12), the Treasury Locks were settled

resulting in a payment, included in cash flows from operating activities, of \$183 million recorded in accumulated other comprehensive loss, net of income taxes, that will be amortized to earnings over the terms of the originally forecasted interest payments. Based on the amounts recorded in accumulated other comprehensive loss at December 31, 2020, the Company estimates that it will recognize approximately \$20 million in interest expense, net during the next twelve months related to settled interest rate hedge contracts.

To reduce exposure to changes in the value of the Company's net investments in certain of its foreign currency-denominated subsidiaries due to changes in foreign currency exchange rates, the Company uses its foreign currency-denominated debt as an economic hedge of its net investments in such foreign currency-denominated subsidiaries. In conjunction with the acquisition of First Data (see Note 4), the Company designated its Euro- and British Pound-denominated senior notes (see Note 12) as net investment hedges to hedge a portion of its net investment in certain subsidiaries whose functional currencies are the Euro and the British Pound. Accordingly, foreign currency transaction gains or losses on the qualifying net investment hedge instruments are recorded as foreign currency translation within other comprehensive (loss) income in the consolidated statements of comprehensive income and will remain in accumulated other comprehensive loss in the consolidated balance sheets until the sale or complete liquidation of the underlying foreign subsidiaries. The Company recorded a foreign currency translation loss, net of tax, of \$151 million and \$62 million in other comprehensive (loss) income from the Euro- and British Pound-denominated senior notes during the years ended December 31, 2020 and 2019, respectively.

## 15. Employee Benefit Plans

### Defined Contribution Plans

The Company and its subsidiaries maintain defined contribution savings plans covering the majority of their employees. Under the plans, eligible participants may elect to contribute a specified percentage of their salaries and the Company makes matching contributions, each subject to certain limitations. The plans provide tax-deferred amounts for each participant, consisting of employee elective contributions, company matching and discretionary company contributions. In response to the COVID-19 pandemic, the Company has taken several actions since the onset of the pandemic to manage discretionary costs, including the temporary suspension of certain employee-related benefits such as company matching contributions to the plans during most of 2020. Expenses for company contributions under these plans totaled \$38 million, \$65 million and \$44 million in 2020, 2019 and 2018, respectively. Effective January 1, 2021, company matching contributions were re-established to equal 100% on the first 1% contributed and 25% on the next 4% contributed for eligible participants.

In connection with the acquisition of First Data (see Note 4), the Company assumed defined contribution savings plans and defined contribution pension plans covering substantially all employees of the former First Data. Effective January 1, 2020, the 401(k) Savings Plan of Fiserv, Inc. (the "Plan") was amended to freeze the Plan to new participants and contributions and to allow for the merger of the Plan into the surviving Fiserv 401(k) Savings Plan (f/k/a the First Data Corporation Incentive Savings Plan) ("New Fiserv Plan") for the purpose of providing a single plan covering current and former employees of both companies and their affiliates. Participants in the Plan became eligible to make salary reduction contributions in the New Fiserv Plan effective January 1, 2020. The merger of the Plan into the New Fiserv Plan was completed in the third quarter of 2020.

### Defined Benefit Plans

The Company maintains noncontributory defined benefit pension plans covering a portion of the employees in the United Kingdom ("U.K."), the U.S., Germany and Austria. The majority of these plans are frozen and provide benefits to eligible employees based on an employee's average final compensation and years of service.

The following table provides a reconciliation of benefit obligations, plan assets and the funded status of these defined benefit plans as of and for the years ended December 31:

(In millions)	U.K. plan		U.S. and other plans	
	2020	2019	2020	2019
<b>Change in projected benefit obligations:</b>				
Balance at beginning of year	\$ (672)	\$ —	\$ (225)	\$ —
Acquired First Data plans (see Note 4)	—	(687)	—	(219)
Interest cost	(14)	(6)	(6)	(3)
Actuarial gain (loss)	(93)	28	(18)	(15)
Benefits paid	30	12	13	12
Foreign currency translation	(28)	(19)	(2)	—
Balance at end of year	\$ (777)	\$ (672)	\$ (238)	\$ (225)
<b>Change in fair value of plan assets:</b>				
Balance at beginning of year	\$ 860	\$ —	\$ 167	\$ —
Acquired First Data plans (see Note 4)	—	866	—	160
Actual return on plan assets	110	(19)	22	19
Company contribution	—	—	5	—
Benefits paid	(30)	(12)	(13)	(12)
Foreign currency translation	34	25	—	—
Balance at end of year	\$ 974	\$ 860	\$ 181	\$ 167
<b>Funded status of the plans</b>	<b>\$ 197</b>	<b>\$ 188</b>	<b>\$ (57)</b>	<b>\$ (58)</b>

The funded status of the defined benefit plans is recognized as an asset or a liability within other long-term assets or within other long-term liabilities in the consolidated balance sheets.

### Projected Benefit Obligations

The Company records amounts relating to its defined benefit pension plan obligations and their associated expenses based on calculations which include actuarial assumptions, including the discount rate and the expected rate of return on plan assets. Changes in any of the assumptions and the amortization of differences between the assumptions and actual experience will affect the amount of pension expense in future periods. The Company reviews its actuarial assumptions at least annually and modifies the assumptions based on current rates and trends, as appropriate. The effects of modifications are recognized immediately within the consolidated balance sheets, and are generally amortized to operating income over future periods, with the deferred amount recorded in accumulated other comprehensive loss within the consolidated balance sheets. The Company's funding policy is to contribute quarterly an amount as recommended by the plans' independent actuaries. Company contributions under these plans totaled \$5 million in 2020 and are expected to be nominal in 2021. The Company employs a building block approach in determining the expected long-term rate of return for plan assets with proper consideration of diversification and re-balancing. Historical markets are studied and long-term historical relationships between equities and fixed-income securities are preserved consistent with the widely accepted capital market principle that assets with higher volatility generate a greater return over the long run. Current market factors such as inflation and interest rates are evaluated before long-term capital market assumptions are determined. Peer data and historical returns are reviewed to check for reasonableness and appropriateness.

The weighted-average rate assumptions used in the measurement of the Company's projected benefit obligations and net periodic benefit expense as of and for the years ended December 31 were as follows:

	<b>Projected Benefit Obligations</b>		<b>Net Periodic Benefit Expense</b>	
	<b>2020</b>	<b>2019</b>	<b>2020</b>	<b>2019</b>
Discount rate	1.56 %	2.28 %	1.95 %	2.16 %
Expected long-term return on plan assets	n/a	n/a	2.84 %	2.83 %

The estimated future benefit payments are expected to be as follows:

**(In millions)**

**Year Ending December 31,**

2021	\$	32
2022		33
2023		36
2024		36
2025		37
2026-2030		200

#### Plan Assets

The Company's investment strategy for the U.K. plan is to allocate the assets into two pools: (i) off-risk assets whereby the focus is risk management, protection and insurance relative to the liability target invested in, but not limited to, debt, U.K. government bonds and U.K. government index-linked bonds; and (ii) on-risk assets whereby the focus is on return generation and taking risk in a controlled manner. Such assets could include equities, government bonds, high-yield bonds, property, commodities or hedge funds. The Company's target allocation for the U.K. plan is 50% on-risk assets and 50% off-risk assets. Investment risk is measured and monitored on an ongoing basis through quarterly investment portfolio reviews, annual liability measurements, and periodic asset and liability studies. The Company's investment strategy for the U.S. plan employs a total return investment approach whereby a mix of equities and fixed income investments are used to maximize the long-term return of plan assets for a prudent level of risk. The investment portfolio contains a diversified blend of equity and fixed-income investments. The Company sets an allocation mix necessary to support the underlying plan liabilities as influenced significantly by the demographics of the participants and the frozen nature of the plan. The Company's target allocation for the U.S. plan based on the investment policy at December 31, 2020 was 50% on-risk assets and 50% off-risk assets.

The following table sets forth the Company's plan assets carried and measured at fair value on a recurring basis at December 31:

**(In millions)**

<b>2020</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Cash and cash equivalents	\$ 24	\$ —	\$ —
Equity securities <sup>(1)</sup>	20	175	—
Fixed income securities <sup>(2)</sup>	213	165	—
Other investments <sup>(3)</sup>	326	(4)	9
Total investments at fair value	<u>\$ 583</u>	<u>\$ 336</u>	<u>\$ 9</u>

**(In millions)**

<b>2019</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Cash and cash equivalents	\$ 17	\$ —	\$ —
Equity securities <sup>(1)</sup>	134	123	—
Fixed income securities <sup>(2)</sup>	188	214	—
Other investments <sup>(3)</sup>	315	(22)	10
Total investments at fair value	<u>\$ 654</u>	<u>\$ 315</u>	<u>\$ 10</u>

<sup>(1)</sup> Equity securities primarily consist of domestic, international and global equity pooled funds.

<sup>(2)</sup> Fixed income securities primarily consist of debt securities issued by U.S. and foreign government agencies and debt obligations issued by a variety of private and public corporations.

<sup>(3)</sup> Other investments primarily consist of index linked government bonds, derivatives and other investments.



In addition to the investments presented within the fair value hierarchy table above, the Company's plan assets include investments in various hedge funds that are measured at fair value using the net asset value per share (or its equivalent) practical expedient. Such investments totaled \$227 million and \$48 million at December 31, 2020 and 2019, respectively.

#### Net Periodic Benefit Cost

The components of net periodic benefit expense were as follows for the years ended December 31:

<u>(In millions)</u>	<u>2020</u>		<u>2019</u>	
Interest cost	\$	20	\$	9
Expected return on plan assets		(24)		(10)
Net periodic benefit income	\$	(4)	\$	(1)

## **16. Share-Based Compensation**

The Company recognizes the fair value of share-based compensation awards granted to employees in cost of processing and services, cost of product, and selling, general and administrative expense in its consolidated statements of income.

The Company's share-based compensation awards are typically granted in the first quarter of the year and primarily consist of the following:

*Stock Options* – The Company grants stock options to employees and non-employee directors at exercise prices equal to the fair market value of the Company's stock on the dates of grant. Stock option grants generally vest over a three- or four-year period. All stock options expire ten years from the date of the award. The Company recognizes compensation expense for the fair value of the stock options over the requisite service period of the stock option award.

*Restricted Stock Units and Awards* – The Company grants restricted stock units and awards to employees and non-employee directors. Restricted stock unit and award grants generally vest over a three- or four-year period. The Company recognizes compensation expense for restricted stock units and awards based on the market price of the common stock on the grant date over the period during which the units and awards vest.

*Performance Share Units and Awards* – The Company grants performance share units and awards to employees. The number of shares issued at the end of the performance period is determined by the level of achievement of pre-determined performance and market goals, including earnings, revenue growth, synergy attainment and shareholder return. The Company recognizes compensation expense on performance share units and awards ratably over the requisite three-year performance period of the award to the extent management views the performance goals as probable of attainment. The Company recognizes compensation expense for the fair value of the shareholder return component over the requisite service period of the award.

*Employee Stock Purchase Plan* – The Company maintains an employee stock purchase plan that allows eligible employees to purchase a limited number of shares of common stock each quarter through payroll deductions at a discount of the closing price of the Company's common stock on the last business day of each calendar quarter. Effective January 1, 2020, the employee discount under the employee stock purchase plan was modified from 15% to 10%. In addition, the Company temporarily suspended the employee discount, effective April 9, 2020, to help manage discretionary costs in response to the COVID-19 pandemic. Effective January 1, 2021, the discount under the employee stock purchase plan was re-established at 5%, which is considered noncompensatory and therefore does not give rise to recognizable compensation cost.

The Company recognized \$369 million, \$229 million and \$73 million of share-based compensation expense during the years ended December 31, 2020, 2019 and 2018, respectively. At December 31, 2020, the total remaining unrecognized compensation cost for unvested stock options, restricted stock units and awards and performance share units and awards, net of estimated forfeitures, of \$276 million is expected to be recognized over a weighted-average period of 2.1 years. During the years ended December 31, 2020, 2019 and 2018, stock options to purchase 2.6 million, 4.7 million and 2.7 million shares, respectively, were exercised.

### Acquisition of First Data

Upon the completion of the First Data acquisition on July 29, 2019 (see Note 4), First Data's equity awards, whether vested or unvested, were either settled in shares of the Company's common stock or converted into equity awards denominated in shares of the Company's common stock based on a defined exchange ratio of 0.303, as described below.

First Data time-vesting awards that were granted at or prior to the initial public offering of First Data (the "First Data IPO") were accelerated in full in accordance with their terms, except for certain executive officer awards and certain awards held by retirement-eligible employees, which were not accelerated and instead converted into equity awards denominated in shares of the Company's common stock. Each such time-vesting, pre-IPO restricted stock and restricted stock unit award was settled in shares of the Company's common stock based on the exchange ratio. Each time-vesting, pre-IPO stock option award was converted into an option to purchase a number of shares of the Company's common stock based on the exchange ratio with an exercise price per share equal to the exercise price per share of such stock option award immediately prior to the completion of the acquisition divided by the exchange ratio.

First Data equity awards granted at the time of the First Data IPO that were subject to vesting solely upon achievement of a \$32 price per share of First Data common stock were converted into equity awards denominated in shares of the Company's common stock and remained eligible to vest upon satisfaction of an adjusted target price per share of the Company's common stock equal to the existing First Data target price divided by the exchange ratio. Such awards vested during the third quarter of 2019. Each restricted stock and restricted stock unit award that was a performance-vesting IPO award was converted into an award denominated in shares of the Company's common stock based on the exchange ratio, and each stock option award that was a performance-vesting award was converted into an option to purchase a number of shares of the Company's common stock based on the exchange ratio with an exercise price per share equal to the exercise price per share of such stock option award immediately prior to the completion of the acquisition divided by the exchange ratio. As converted, the performance-vesting awards continued to be governed by the same terms and conditions as were applicable prior to the acquisition and vested during the year ended December 31, 2019 upon satisfaction of the adjusted performance condition.

The remaining existing First Data equity awards, whether vested or unvested, were converted into equity awards denominated in shares of the Company's common stock based on the exchange ratio, with an exercise price per share for option awards equal to the exercise price per share of such stock option award immediately prior to the completion of the acquisition divided by the exchange ratio, and will continue to be governed by generally the same terms and conditions as were applicable prior to the acquisition; provided that, subject to compliance with Section 409A of the Internal Revenue Code, such awards will accelerate upon a covered termination as defined in the merger agreement.

The portion of the fair value of the replacement awards related to services provided prior to the acquisition was \$768 million and was accounted for as consideration transferred. The remaining portion of the fair value of \$467 million is associated with future service and was recognized as compensation expense, net of estimated forfeitures, over the weighted-average remaining vesting period of 1.2 years. The fair value of options that the Company assumed in connection with the acquisition of First Data were estimated using the Black-Scholes model with the following assumptions:

Expected life (in years)	2.5
Average risk-free interest rate	1.9 %
Expected volatility	27.4 %
Expected dividend yield	0 %

The Company determined the expected life of stock options using a midpoint approach considering the vesting schedule, contractual terms and current option life-to-date. The risk-free interest rate was based on the U.S. treasury yield curve in effect as of the acquisition date. Expected volatility was determined using a weighted-average of the implied volatility and the mean reversion volatility of the Company's stock at the time of conversion.

### Share-Based Compensation Activity

The weighted-average estimated fair value of stock options granted during 2020, 2019 and 2018 was \$35.02, \$28.52 and \$22.48 per share, respectively. The fair values of stock options granted were estimated on the date of grant using a binomial option-pricing model with the following assumptions:

	2020	2019	2018
Expected life (in years)	6.4	6.4	6.3
Average risk-free interest rate	1.8 %	2.7 %	2.2 %
Expected volatility	28.3 %	28.5 %	28.3 %
Expected dividend yield	0 %	0 %	0 %

The Company determined the expected life of stock options using historical data. The risk-free interest rate was based on the U.S. treasury yield curve in effect as of the grant date. Expected volatility was determined using weighted-average implied market volatility combined with historical volatility. The Company believes that a blend of historical volatility and implied volatility better reflects future market conditions and better indicates expected volatility than purely historical volatility.

A summary of stock option activity is as follows:

	Shares (In thousands)	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (In millions)
Stock options outstanding - December 31, 2019	15,989	\$ 42.83		
Granted	1,522	112.65		
Forfeited	(186)	93.66		
Exercised	(2,636)	35.07		
Stock options outstanding - December 31, 2020	<u>14,689</u>	<u>\$ 50.82</u>	<u>4.60</u>	<u>\$ 926</u>
Stock options exercisable - December 31, 2020	<u>12,222</u>	<u>\$ 41.14</u>	<u>3.79</u>	<u>\$ 889</u>

A summary of restricted stock unit and performance share unit activity is as follows:

	Restricted Stock Units		Performance Share Units	
	Shares (In thousands)	Weighted- Average Grant Date Fair Value	Shares (In thousands)	Weighted- Average Grant Date Fair Value
Units - December 31, 2019	6,869	\$ 93.80	2,328	\$ 94.61
Granted	1,671	111.27	—	—
Forfeited	(293)	94.33	(28)	90.41
Vested	(3,450)	95.86	(479)	92.62
Units - December 31, 2020	<u>4,797</u>	<u>\$ 98.29</u>	<u>1,821</u>	<u>\$ 95.20</u>

A summary of restricted stock award activity is as follows:

	Restricted Stock Awards	
	Shares (In thousands)	Weighted-Average Grant Date Fair Value
Awards - December 31, 2019	48	\$ 102.30
Granted	—	—
Forfeited	—	—
Vested	(48)	102.30
Awards - December 31, 2020	<u>—</u>	<u>\$ —</u>

The table below presents additional information related to stock option and restricted stock unit activity:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Total intrinsic value of stock options exercised	\$ 194	\$ 331	\$ 147
Fair value of restricted stock units vested	454	198	37
Income tax benefit from stock options exercised and restricted stock units vested	156	126	43
Cash received from stock options exercised	83	104	29

At December 31, 2020, 30.5 million share-based awards were available for grant under the Amended and Restated Fiserv, Inc. 2007 Omnibus Incentive Plan. Under its employee stock purchase plan, the Company issued 0.5 million shares in 2020, 0.6 million shares in 2019 and 0.7 million shares in 2018. At December 31, 2020, there were 24.2 million shares available for issuance under the employee stock purchase plan.

## 17. Restructuring and Other Charges

In connection with the acquisition of First Data, the Company continues to implement integration plans focused on reducing the Company's overall cost structure, including reducing vendor spend and eliminating duplicate costs. The Company recorded restructuring charges related to certain of these integration activities of \$303 million and \$56 million, primarily reported in cost of processing and service and selling, general and administrative expenses within the consolidated statements of income, based upon committed actions during the years ended December 31, 2020 and 2019, respectively. The Company continues to evaluate operating efficiencies and anticipates incurring additional costs in connection with these activities, but is unable to estimate those amounts at this time as such plans are not yet finalized.

### *Employee Termination Costs*

The Company recorded \$131 million and \$32 million of employee termination costs related to severance and other separation costs for terminated employees in connection with the acquisition of First Data during the years ended December 31, 2020 and 2019, respectively. The following table summarizes the changes in the reserve related to the Company's employee severance and other separation costs during the years ended December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>
Balance at beginning of year	\$ 14	\$ —
Severance and other separation costs	131	32
Cash payments	(118)	(18)
Balance at end of year	\$ 27	\$ 14

The employee severance and other separation costs accrual balance of \$27 million at December 31, 2020 is expected to be paid within the next twelve months. In addition, the Company recorded \$48 million and \$23 million of share-based compensation costs during the years ended December 31, 2020 and 2019, respectively, related to the accelerated vesting of equity awards for terminated employees.

### *Facility Exit Costs*

The Company has identified certain leased facilities that have been or will be exited in the future as part of the Company's efforts to reduce facility costs. During 2020, the Company permanently vacated certain of these leased facilities in advance of the non-cancellable lease terms. In conjunction with the exit of these leased facilities, the Company assessed the respective operating lease ROU assets for impairment by comparing the carrying values of the ROU assets to the discounted cash flows from estimated sublease payments (Level 3 of the fair value hierarchy). In addition, the Company assessed certain property and equipment associated with the leased facilities for impairment. As a result, the Company recorded non-cash impairment charges of \$124 million, reported in selling, general and administrative expense within the consolidated statement of income during the year ended December 31, 2020, associated with the early exit of these leased facilities. In addition, the Company recorded facility exit and related costs during the year ended December 31, 2019, primarily related to relocation costs and lease exit or termination fees, as well as ongoing operating expenses of certain vacated facilities; however, such costs were not significant.

### *Other Costs*

During 2020, in connection with initiatives to reduce the Company's overall cost structure following the acquisition of First Data, the Company terminated certain of its existing lease agreements to upgrade and consolidate its computing infrastructure.

The Company upgraded or replaced certain leased hardware under separate, new lease agreements, resulting in the early termination and disposal of existing hardware under the current lease agreements. As such, the Company has adjusted the amortization period for these existing lease agreements to coincide with the modified remaining term. Finance lease expense during the year ended December 31, 2020 includes \$62 million of accelerated amortization associated with the termination of these vendor contracts. In addition, the Company executed similar terminations to certain of its existing software financing agreements. Amortization expense during the year ended December 31, 2020 includes \$56 million of accelerated amortization associated with the termination of these vendor contracts.

During 2019, the Company recorded a \$48 million non-cash impairment charge, reported primarily in cost of processing and services within the consolidated statements of income, associated with an international core account processing platform. Such impairment charge primarily related to the write-off of certain of the Fintech segment's purchased and capitalized software development costs; however, are presented within Corporate and Other as such charge was excluded from the Company's measure of the Fintech segment's operating performance.

## 18. Income Taxes

Substantially all of the Company's pre-tax earnings are derived from domestic operations in all periods presented. The income tax provision was as follows for the years ended December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
<b>Components of income tax provision (benefit):</b>			
Current:			
Federal	\$ (25)	\$ 25	\$ 189
State	71	69	39
Foreign	79	57	17
	<u>125</u>	<u>151</u>	<u>245</u>
Deferred:			
Federal	189	118	110
State	(34)	(18)	24
Foreign	(84)	(53)	(1)
	<u>71</u>	<u>47</u>	<u>133</u>
Income tax provision	<u>\$ 196</u>	<u>\$ 198</u>	<u>\$ 378</u>

A reconciliation of the statutory federal income tax rate to the Company's effective income tax rate is as follows for the years ended December 31:

	<b>2020</b>	<b>2019</b>	<b>2018</b>
Statutory federal income tax rate	21.0 %	21.0 %	21.0 %
State income taxes, net of federal effect	2.0 %	3.7 %	3.2 %
Tax expense due to federal tax reform	— %	— %	1.2 %
Enacted United Kingdom tax rate change	2.8 %	— %	— %
Foreign derived intangibles income deduction	(3.2)%	(0.2)%	(0.2)%
Excess tax benefit from share-based awards	(3.9)%	(5.1)%	(2.2)%
Sale of businesses and subsidiary restructuring	0.7 %	(2.6)%	1.3 %
Unrecognized tax benefits	(1.0)%	(0.1)%	— %
Nondeductible executive compensation	2.0 %	1.0 %	0.2 %
Valuation Allowance	(1.7)%	0.3 %	— %
Other, net	(2.0)%	0.3 %	(0.2)%
Effective income tax rate	<u>16.7 %</u>	<u>18.3 %</u>	<u>24.3 %</u>

Significant components of deferred tax assets and liabilities consisted of the following at December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>
Accrued expenses	\$ 189	\$ 303
Share-based compensation	185	216
Net operating loss and credit carry-forwards	1,158	1,444
Foreign tax credits on undistributed earnings	—	289
Leasing liabilities	171	219
Other	76	65
Subtotal	1,779	2,536
Valuation allowance	(888)	(1,145)
Total deferred tax assets	891	1,391
Capitalized software development costs	(614)	(622)
Intangible assets	(2,993)	(3,297)
Property and equipment	(198)	(143)
Capitalized commissions	(87)	(86)
Investments in joint ventures	(908)	(841)
Leasing right-of-use assets	(141)	(205)
Other	(311)	(332)
Total deferred tax liabilities	(5,252)	(5,526)
Total	\$ (4,361)	\$ (4,135)

In connection with the acquisition of First Data (see Note 4), the Company recorded \$3.7 billion of deferred tax liabilities for the deferred tax effects associated with the fair value of assets acquired and liabilities assumed using the applicable tax rates, with a corresponding adjustment to goodwill. During the current year through the measurement period ended July 29, 2020, the Company recognized an incremental increase of \$136 million to deferred tax liabilities related to measurement period adjustments, with a corresponding adjustment to goodwill. The measurement period adjustments to the preliminary First Data purchase price allocation were the result of additional analysis performed and information identified based on facts and circumstances that existed as of the acquisition date.

The Company recorded a valuation allowance of \$888 million and \$1.1 billion at December 31, 2020 and 2019, respectively, against its deferred tax assets. The decrease in the valuation allowance in 2020 is primarily the result of a subsidiary restructuring. Substantially all of the acquired First Data valuation allowance relates to certain foreign and state net operating loss carryforwards.

Deferred tax assets and liabilities are reported in the consolidated balance sheets as follows at December 31:

<b>(In millions)</b>	<b>2020</b>	<b>2019</b>
Noncurrent assets	\$ 28	\$ 112
Noncurrent liabilities	(4,389)	(4,247)
Total	\$ (4,361)	\$ (4,135)

Noncurrent deferred tax assets are included in other long-term assets in the consolidated balance sheets at December 31, 2020 and 2019.

The following table presents the amounts of federal, state and foreign net operating loss carryforwards and general business credit carryforwards at December 31:

<b>(In millions)</b>	<b>2020</b>		<b>2019</b>	
<b>Net operating loss carryforwards: <sup>(1)</sup></b>				
Federal	\$	443	\$	1,674
State		3,944		4,636
Foreign		3,343		3,201
<b>General business credit carryforwards <sup>(2)</sup></b>		<b>41</b>		<b>57</b>

<sup>(1)</sup> At December 31, 2020, the Company had federal net operating loss carryforwards of \$443 million, most of which expire in 2021 through 2037, state net operating loss carryforwards of \$3.9 billion, most of which expire in 2021 through 2040, and foreign net operating loss carryforwards of \$3.3 billion, of which \$263 million expire in 2021 through 2040, and the remainder of which do not expire.

<sup>(2)</sup> At December 31, 2020, the Company had general business credit carryforwards of \$41 million which expire in 2025 through 2038.

The Company asserts that its investment in its foreign subsidiaries is intended to be indefinitely reinvested with limited exceptions for select foreign subsidiaries. Undistributed historical and future earnings of its foreign subsidiaries are not considered to be indefinitely reinvested. Should these earnings be distributed in the future in the form of dividends or otherwise, the Company may be subject to foreign taxes. The Company has the ability and intent to limit distributions so as to not make a distribution in excess of its investment in those subsidiaries. The Company will continue to monitor its global cash requirements and the need to recognize a deferred tax liability.

Unrecognized tax benefits were as follows at December 31:

<b>(In millions)</b>	<b>2020</b>		<b>2019</b>		<b>2018</b>	
<b>Unrecognized tax benefits - Beginning of year</b>	<b>\$</b>	<b>145</b>	<b>\$</b>	<b>49</b>	<b>\$</b>	<b>42</b>
Increases for assumed tax positions related to First Data		—		82		—
Increases for tax positions taken during the current year		9		8		3
Increases for tax positions taken in prior years		53		16		20
Decreases for tax positions taken in prior years		(23)		(2)		(8)
Decreases for settlements		(2)		(1)		—
Lapse of the statute of limitations		(11)		(7)		(8)
<b>Unrecognized tax benefits - End of year</b>	<b>\$</b>	<b>171</b>	<b>\$</b>	<b>145</b>	<b>\$</b>	<b>49</b>

At December 31, 2020, unrecognized tax benefits of \$116 million, net of federal and state benefits, would affect the effective income tax rate if recognized. The Company believes it is reasonably possible that the liability for unrecognized tax benefits may decrease by up to \$61 million over the next twelve months as a result of possible closure of federal tax audits, potential settlements with certain states and foreign countries, and the lapse of the statute of limitations in various state and foreign jurisdictions.

The Company classifies interest expense and penalties related to income taxes as components of its income tax provision. The income tax provision included interest expense and penalties on unrecognized tax benefits of \$3 million in 2020, \$2 million in 2019 and \$1 million in 2018. Accrued interest expense and penalties related to unrecognized tax benefits totaled \$22 million and \$19 million at December 31, 2020 and 2019, respectively.

The Company's U.S. federal income tax returns for 2016 through 2020, and tax returns in certain states and foreign jurisdictions for 2005 through 2020, remain subject to examination by taxing authorities. In connection with the acquisition of First Data, the Company is subject to income tax examination from 2009 forward in relation to First Data's U.S. federal income tax return. State and local examinations are substantially complete through 2010 in relation to First Data's state and local tax filings. Foreign jurisdictions generally remain subject to examination by their respective authorities from 2010 forward in relation to First Data's foreign tax filings, none of which are considered significant jurisdictions.

During the third quarter of 2020, the U.S. Department of Treasury released certain proposed and final regulations relating to provisions that were enacted under the Tax Cuts and Jobs Act of 2017. The new regulations did not have a material impact on the Company's consolidated financial statements.

The Company accounts for research and development costs in accordance with ASC subtopic 730-10, *Research and Development* (“ASC 730-10”). Under ASC 730-10, all research and development costs are charged to expense as incurred. Company-sponsored research and development costs related to both present and future products are expensed in the period incurred. In September 2017, the Internal Revenue Service issued Directive LB&I-04-0917-005 pertaining to the allowance of the credit for increasing research activities under Internal Revenue Code section 41 allowing a safe harbor for LB&I taxpayers reporting research and development costs under ASC 730-10. During the year ended December 31, 2020, the Company incurred \$150 million of research and development costs related to First Data.

## **19. Commitments and Contingencies**

### *Litigation*

In the normal course of business, the Company or its subsidiaries are named as defendants in lawsuits in which claims are asserted against the Company. In addition, the Company assumed certain legal proceedings in connection with the acquisition of First Data (see Note 4) primarily associated with its merchant business including claims associated with alleged processing errors and a tax matter. In 2020, the Company resolved a matter with the Federal Trade Commission related to a U.S.-based wholesale independent sales organization resulting in a payment of \$40 million, for which the Company previously had accrued. The Company maintained reserves of \$32 million and \$43 million at December 31, 2020 and 2019, respectively, related to its various legal proceedings, primarily associated with the Company’s merchant business as described above. The Company’s estimate of the possible range of exposure for various litigation matters in excess of amounts accrued is \$0 million to approximately \$60 million. In the opinion of management, the liabilities, if any, which may ultimately result from such lawsuits are not expected to have a material adverse effect on the Company’s consolidated financial statements.

### *Electronic Payments Transactions*

In connection with the Company’s processing of electronic payments transactions, funds received from subscribers are invested from the time the Company collects the funds until payments are made to the applicable recipients. These subscriber funds are invested in short-term, highly liquid investments. Subscriber funds, which are not included in the Company’s consolidated balance sheets, can fluctuate significantly based on consumer bill payment and debit card activity and totaled approximately \$1.7 billion and \$2.0 billion at December 31, 2020 and 2019, respectively.

### *Indemnifications and Warranties*

The Company may indemnify its clients from certain costs resulting from claims of patent, copyright or trademark infringement associated with its clients’ use of the Company’s products or services. The Company may also warrant to clients that its products and services will operate substantially in accordance with identified specifications. From time to time, in connection with sales of businesses, the Company agrees to indemnify the buyers of such businesses for liabilities associated with the businesses that are sold. Payments, net of recoveries, under such indemnification or warranty provisions were not material to the Company’s consolidated results of operations or financial position.

## **20. Related Party Transactions**

### *Merchant Alliances*

A significant portion of the Company’s business is conducted through merchant alliances between the Company and financial institutions (see Note 9). To the extent the Company maintains a controlling financial interest in an alliance, the alliance’s financial statements are consolidated with those of the Company and the related processing fees are treated as an intercompany transaction and eliminated in consolidation. To the extent the Company has significant influence but not control in an alliance, the Company uses the equity method of accounting to account for its investment in the alliance. As a result, the Company’s consolidated revenues include processing fees, administrative service fees, and other fees charged to alliances accounted for under the equity method. Such fees totaled \$183 million and \$76 million for the years ended December 31, 2020 and 2019, respectively. No directors or officers of the Company have ownership interests in any of the alliances. The formation of each of these alliances generally involves the Company and the bank contributing contractual merchant relationships to the alliance and a cash payment from one owner to the other to achieve the desired ownership percentage for each. The Company and the bank enter into a long-term processing service agreement as part of the negotiation process. This agreement governs the Company’s provision of transaction processing services to the alliance. At December 31, 2020 and 2019, the Company had approximately \$37 million and \$35 million, respectively, of amounts due from unconsolidated merchant alliances included within trade accounts receivable, net in the Company’s consolidated balance sheets.

Effective July 1, 2020, the Company and Bank of America dissolved their BAMS joint venture, of which the Company maintained a 51% controlling ownership interest. Upon dissolution of the joint venture’s operations, the joint venture transferred a proportionate share of value, primarily the client contracts, to each party via an agreed upon contractual separation.



The revenues and expenses of the BAMS joint venture were consolidated into the Company's financial results through the date of dissolution. See Note 4 for additional information.

#### *Joint Venture Transition Services Agreements*

Pursuant to certain transition services agreements, the Company provides, at fair value, various administration, business process outsourcing, and technical and data center related services for defined periods to the Lending Joint Ventures and Tegra 118 (see Note 4). Amounts transacted through these agreements totaled \$58 million, \$36 million and \$30 million during the years ended December 31, 2020, 2019 and 2018, respectively, and were primarily recognized as processing and services revenue in the Company's consolidated statements of income.

#### *Share Repurchase*

On December 14, 2020, New Omaha Holdings L.P. ("New Omaha"), a shareholder of the Company, completed an underwritten secondary public offering of 20.1 million shares of Fiserv, Inc. common stock (the "offering"). The Company did not sell any shares in, nor did it receive any proceeds from, the offering. New Omaha received all of the net proceeds from the offering. In connection with the offering, the Company repurchased from the underwriters 1.8 million shares of its common stock that were subject to the offering, at a price equal to the price per share paid by the underwriters to New Omaha in the offering (the "share repurchase"). The share repurchase totaled \$200 million and was funded with cash on hand. The repurchased shares were cancelled and no longer outstanding following the completion of the share repurchase. Prior to the offering, New Omaha owned approximately 16% of the Company's outstanding shares of common stock, and following the offering, New Omaha owned approximately 13% as of December 31, 2020.

## **21. Business Segment Information**

Following the Segment Realignment (see Note 1), the Company's operations are comprised of the Acceptance segment, the Fintech segment and the Payments segment.

The businesses in the Acceptance segment provide a wide range of commerce-enabling solutions to merchants of all sizes around the world. These solutions include point-of-sale merchant acquiring and digital commerce services; mobile payment services; security and fraud protection products; Carat<sup>SM</sup>, the Company's omnichannel commerce ecosystem; and the Company's cloud-based Clover point-of-sale platform, which includes a marketplace for proprietary and third-party business applications. The products and services in the global Acceptance businesses are distributed through a variety of channels, including through direct sales teams, strategic partnerships with agent sales forces, independent software vendors, financial institutions and other strategic partners in the form of joint venture alliances, revenue sharing alliances and referral agreements. Many merchants, financial institutions and distribution partners within the Acceptance segment are also clients of the Company's other segments.

The businesses in the Fintech segment provide financial institutions around the world with the technology solutions they need to run their operations, including products and services that enable financial institutions to process customer deposit and loan accounts, as well as management of an institution's general ledger and central information files. As a complement to the core account processing functionality, the businesses in the global Fintech segment also provide digital banking, financial and risk management, cash management, professional services and consulting, item processing and source capture, and other products and services that support numerous types of financial transactions. In addition, some of the businesses in the Fintech segment provide products or services to corporate clients to facilitate the management of financial processes and transactions. Many of the products and services offered in the Fintech segment are integrated with solutions from the Company's other segments.

The businesses in the Payments segment provide financial institutions and corporate clients around the world with the products and services required to process digital payment transactions. This includes card transactions such as debit, credit and prepaid card processing and services, a range of network services, security and fraud protection products, card production and print services. In addition, the Payments segment businesses offer non-card digital payment software and services, including bill payment, account-to-account transfers, person-to-person payments, electronic billing, and security and fraud protection products. Clients of the global Payments segment businesses reflect a wide range of industries, including merchants, distribution partners and financial institution customers in the Company's other segments.

Corporate and Other supports the reportable segments described above, and consists of amortization of acquisition-related intangible assets, unallocated corporate expenses and other activities that are not considered when management evaluates segment performance, such as gains or losses on sales of businesses, costs associated with acquisition and divestiture activity, and the Company's Output Solutions postage reimbursements. Corporate and Other also includes the historical results of the Company's Investment Services business, of which the Company sold a 60% controlling interest in February 2020 (see Note 4), as well as certain transition services revenue associated with various dispositions.

Operating results for each segment are presented below and include the results of First Data from July 29, 2019, the date of acquisition. Segment results for the years ended December 31, 2019 and 2018 have been restated to reflect the Segment Realignment.

<b>(In millions)</b>	<b>Acceptance</b>		<b>Fintech</b>		<b>Payments</b>		<b>Corporate and Other</b>		<b>Total</b>	
<b>2020</b>										
Processing and services revenue	\$	4,736	\$	2,714	\$	4,702	\$	63	\$	12,215
Product revenue		786		187		802		862		2,637
Total revenue		5,522		2,901		5,504		925		14,852
Operating income (loss) <sup>(1)</sup>		1,427		992		2,361		(2,928)		1,852
Capital expenditures, including capitalized software and other intangibles		227		183		242		248		900
Depreciation and amortization expense		239		202		248		2,568		3,257
<b>2019</b>										
Processing and services revenue	\$	2,215	\$	2,737	\$	3,431	\$	190	\$	8,573
Product revenue		356		205		478		575		1,614
Total revenue		2,571		2,942		3,909		765		10,187
Operating income (loss)		764		885		1,658		(1,698)		1,609
Capital expenditures, including capitalized software and other intangibles		147		182		196		196		721
Depreciation and amortization expense		146		191		204		1,237		1,778
<b>2018</b>										
Processing and services revenue	\$	—	\$	2,692	\$	2,101	\$	182	\$	4,975
Product revenue		—		225		307		316		848
Total revenue		—		2,917		2,408		498		5,823
Operating income (loss) <sup>(1)</sup>		—		851		1,081		(179)		1,753
Capital expenditures, including capitalized software and other intangibles		—		153		67		140		360
Depreciation and amortization expense		—		185		81		290		556

<sup>(1)</sup> Corporate and Other includes gains of \$428 million from the sale of a 60% interest of the Company's Investment Services business and \$36 million on the dissolution of BAMS in 2020, as well as a gain of \$227 million from the sale of a 55% interest of the Company's Lending Solutions business in 2018.

## 22. Quarterly Financial Data (unaudited)

Quarterly financial data for 2020 and 2019 was as follows:

(In millions, except per share data)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
<b>2020</b>					
Total revenue	\$ 3,769	\$ 3,465	\$ 3,786	\$ 3,832	\$ 14,852
Cost of processing and services	1,635	1,466	1,387	1,353	5,841
Cost of product	532	454	481	504	1,971
Selling, general and administrative expenses	1,404	1,377	1,412	1,459	5,652
(Gain) loss on sale of businesses	(431)	3	(36)	—	(464)
Total expenses	3,140	3,300	3,244	3,316	13,000
Operating income	629	165	542	516	1,852
Net income	377	9	276	313	975
Net income attributable to Fiserv, Inc.	392	2	264	300	958
Comprehensive (loss) income attributable to Fiserv, Inc.	(239)	169	77	744	751
Net income attributable to Fiserv, Inc. per share: <sup>(1)</sup>					
Basic	\$ 0.58	\$ —	\$ 0.39	\$ 0.45	\$ 1.42
Diluted	\$ 0.57	\$ —	\$ 0.39	\$ 0.44	\$ 1.40
<b>2019 <sup>(2)</sup></b>					
Total revenue	\$ 1,502	\$ 1,512	\$ 3,128	\$ 4,045	\$ 10,187
Cost of processing and services	624	617	1,204	1,571	4,016
Cost of product	174	168	413	538	1,293
Selling, general and administrative expenses	341	343	1,137	1,463	3,284
Gain on sale of businesses	(10)	—	—	(5)	(15)
Total expenses	1,129	1,128	2,754	3,567	8,578
Operating income	373	384	374	478	1,609
Net income	225	223	225	241	914
Net income attributable to Fiserv, Inc.	225	223	198	247	893
Comprehensive income attributable to Fiserv, Inc.	207	115	12	446	780
Net income attributable to Fiserv, Inc. per share: <sup>(1)</sup>					
Basic	\$ 0.58	\$ 0.57	\$ 0.34	\$ 0.36	\$ 1.74
Diluted	\$ 0.56	\$ 0.56	\$ 0.33	\$ 0.36	\$ 1.71

<sup>(1)</sup> Net income attributable to Fiserv, Inc. per share in each period is calculated using actual, unrounded amounts.

<sup>(2)</sup> Includes the results of First Data from July 29, 2019, the date of acquisition.

**Fiserv, Inc.**  
**Schedule II — Valuation and Qualifying Accounts**  
(In millions)

Description	Balance at Beginning of Period	Additions		Deductions	Balance at End of Period
		Charged to Costs and Expenses	Charged to Other Accounts		
<b>Year ended December 31, 2020</b>					
Deferred tax asset valuation allowance	\$ 1,145	6	64	(327) <sup>(2)</sup>	\$ 888
<b>Year ended December 31, 2019</b>					
Deferred tax asset valuation allowance <sup>(1)</sup>	\$ 101	8	1,036	—	\$ 1,145
<b>Year ended December 31, 2018</b>					
Deferred tax asset valuation allowance	\$ 103	1	(3)	—	\$ 101

<sup>(1)</sup> Includes the valuation allowance adjustment associated with the acquisition of First Data.

<sup>(2)</sup> The decrease in the deferred tax asset valuation allowance is primarily due to a subsidiary restructuring.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Fiserv, Inc:

### Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Fiserv, Inc. and subsidiaries (the “Company”) as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, equity, and cash flows, for each of the three years in the period ended December 31, 2020, and the related notes and the schedule listed in Item 15 (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2021, expressed an unqualified opinion on the Company’s internal control over financial reporting.

### Change in Accounting Principle

As discussed in Note 2 to the financial statements, the Company has changed its method of accounting for leases as of January 1, 2019 due to the adoption of Accounting Standards Update No. 2016-02, *Leases* (Topic 842) using the modified retrospective method.

### Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

### Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

#### ***Revenue – Refer to Note 3 to the consolidated financial statements***

##### *Critical Audit Matter Description*

The Company generates revenue from the delivery of processing, service and product solutions. Revenue is measured based on consideration specified in a contract with a customer, and the Company recognizes revenue when it satisfies a performance obligation by transferring control over a product or service to a customer, which may be at a point in time or over time. The Company’s revenue consists of a significant volume of transactions sourced from multiple systems and applications. The processing of such transactions and recording of revenue is system-driven and based on contractual terms with customers. In addition, contract modifications occur when the Company and its customers agree to modify existing customer contracts to

change the scope or price (or both) of the contract. Contract modifications also occur when a customer terminates some, or all, of the existing services provided by the Company, which may result in the customer paying a termination fee to the Company based upon the terms in the initial contract. When a contract modification occurs, it requires the Company to exercise judgment to determine if the modification should be accounted for as: (i) a separate contract, (ii) the termination of the original contract and creation of a new contract, or (iii) a cumulative catch up adjustment to the original contract. Further, contract modifications require the identification and evaluation of the performance obligations of the modified contract, including the allocation of consideration to the remaining performance obligations and the period of recognition for each identified performance obligation.

We identified the complexity of revenue processing and revenue recognition, including customer contract modifications, as a critical audit matter because of the increased extent of effort and involvement of professionals in our firm having expertise in information technology (IT) to identify, test, and evaluate the Company's systems and automated controls and the management judgments necessary to determine the appropriate accounting. This required an increased extent of effort and a high degree of auditor judgment when performing audit procedures to evaluate whether revenue transactions were recognized appropriately.

#### *How the Critical Audit Matter Was Addressed in the Audit*

Our audit procedures related to revenue recognition included the following, among others:

- We evaluated management's significant accounting policies.
- We tested internal controls within the relevant revenue business processes, including those in place to reconcile the various reports extracted from the IT systems to the Company's general ledger and those related to the Company's accounting for contract modifications.
- With the assistance of professionals in our firm having expertise in IT, we:
  - Identified the relevant systems used to process revenue transactions and tested the general IT controls over each of these systems, including testing of user access controls, change management controls, and IT operations controls.
  - Tested system interface controls and automated controls within the relevant revenue streams, as well as the controls designed to assess the accuracy and completeness of revenue.
- We developed expectations of revenue at a disaggregated level based on historical transaction prices and current year volumes. We compared those estimates to revenue recognized by the Company.
- For a sample of revenue transactions, we tested selected transactions by agreeing the amounts of revenue recognized to source documents and testing the mathematical accuracy of the recorded revenue.
- We selected a sample of significant customer contract modifications and performed the following procedures:
  - Obtained and read the customer contracts.
  - Evaluated whether the contract represented a new contract or a contract modification and, if applicable, assessed the treatment of any change in scope or price.
  - Tested management's identification of remaining performance obligations.
  - Recalculated the transaction price and assessed the appropriateness of the allocation of transaction price to each performance obligation.
  - Assessed the pattern of delivery for each distinct performance obligation.

#### ***Banc of America Merchant Services – Joint Venture Dissolution – Refer to Note 4 to the consolidated financial statements***

##### *Critical Audit Matter Description*

The Company and Bank of America previously announced the planned dissolution of the Banc of America Merchant Services ("BAMS") joint venture. Effective July 1, 2020, the Company and Bank of America dissolved the BAMS joint venture, of which the Company maintained a 51% controlling ownership interest. Due to the nature of the transaction, the dissolution was accounted for as a non-pro-rata distribution of value to Bank of America, which was accounted for at fair value resulting in the recognition of a pre-tax gain of \$36 million for the Company. In determining the fair value, the Company obtained assistance from a third-party valuation specialist to measure the fair value of the client contracts intangible assets. The determination of fair value of the client contracts intangible assets required the Company to make significant judgments and assumptions related to expected future cash flows, revenue growth, retention rates and discount rate.

We identified the dissolution of the BAMS joint venture as a critical audit matter because of the significant estimates and assumptions made by the Company and the complexities of the technical accounting for the dissolution. The transaction required a high degree of auditor judgment and an increased extent of effort, including the need to involve our specialists when performing audit procedures to evaluate the reasonableness of the Company's client contracts intangible assets attrition valuation assumptions and discount rate, as well as to analyze the associated non-pro rata fair value accounting treatment relating to the transaction.

*How the Critical Audit Matter Was Addressed in the Audit*

Our audit procedures related to the technical accounting and valuation of the BAMS joint venture dissolution transaction included the following, among others:

- We tested the overall accounting treatment of the transaction's key provisions through review of the separation agreement to evaluate that the transaction was recorded appropriately under U.S. GAAP with the assistance of professionals in our firm having expertise in dissolution transactions.
- We evaluated the reasonableness of management's expected future cash flows utilized in determining the fair value of the client contracts intangible assets by comparing the projections to the Company's historical results, industry data and other publicly available data.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodologies and (2) the retention rates and discount rate associated with the client contracts intangible assets by:
  - Assessing the appropriateness of the valuation methodologies.
  - Developing independent estimates for the retention rates and discount rate, and comparing those to the estimates selected by management.

We tested the effectiveness of internal controls over the valuation and the technical accounting treatment of the transaction.

***Goodwill - Certain Reporting Units – Refer to Notes 1 and 8 to the consolidated financial statements***

*Critical Audit Matter Description*

The Company's evaluation of goodwill for impairment involves the comparison of the fair value of each reporting unit to its carrying value. The Company determines the fair value of its reporting units using both a discounted cash flow model and a market approach. The determination of fair value using the discounted cash flow model requires management to make significant estimates and assumptions, which include assumptions related to revenue growth rates and discount rates. The goodwill balance was \$36,322 million as of December 31, 2020, of which \$30,811 million was acquired as a result of the July 29, 2019 acquisition of First Data Corporation ("First Data"). For all reporting units, the fair values exceeded the carrying values and therefore, no impairment was recognized.

Four of the reporting units that were acquired as part of the First Data acquisition had goodwill balances of \$813 million, \$1,602 million, \$1,904 million and \$7,979 million, respectively, and their fair values exceeded their carrying values as of the annual assessment date by a range of 14% to 21%. Revenue growth rates and discounts rates for these four reporting units are sensitive to significant and long-term deterioration in the macroeconomic environment, industry or market conditions.

We identified goodwill for these four reporting units as a critical audit matter because of the significant estimates and assumptions management makes to estimate the fair value of these reporting units and the sensitivity of operations to changes in the macroeconomic environment, industry or market conditions. This required a high degree of auditor judgment and an increased extent of effort, including the need to involve professionals in our firm having expertise in valuation, when performing audit procedures to evaluate the reasonableness of management's estimates and assumptions related to revenue growth rates and selection of the discount rates.

*How the Critical Audit Matter Was Addressed in the Audit*

Our audit procedures related to the revenue growth rates and the selection of discount rates for the four reporting units included the following, among others:

- We tested the effectiveness of controls over management’s goodwill impairment evaluation, including those over the determination of the fair value of these reporting units, specifically controls related to management’s forecasts and selection of the discount rates.
- We evaluated management’s ability to accurately forecast by comparing actual results to management’s historical forecasts.
- We evaluated the reasonableness of management’s forecasts by comparing the forecasts to (1) historical results, (2) expected results at the time of the First Data acquisition, (3) industry reports containing analyses of the Company’s and its competitors’ products and (4) forecasted information included in Company press releases as well as in analyst and industry reports of the Company and companies in its peer group.
- With the assistance of professionals in our firm having expertise in valuation, we evaluated the discount rates, including testing the underlying source information and the mathematical accuracy of the calculations and developing a range of independent estimates and comparing those to the discount rates selected by management.

/s/ Deloitte & Touche LLP

Milwaukee, Wisconsin  
February 26, 2021

We have served as the Company’s auditor since 1985.



**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

Not applicable.

**Item 9A. Controls and Procedures**

*(a) Disclosure Controls and Procedures*

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934). Based on this evaluation, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2020.

*(b) Management Report on Internal Control Over Financial Reporting*

**Management’s Annual Report on Internal Control Over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in conditions.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2020. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control – Integrated Framework (2013)*. Based on management’s assessment, our management believes that, as of December 31, 2020, our internal control over financial reporting was effective based on those criteria.

Our independent registered public accounting firm has issued their attestation report on our internal control over financial reporting. The report is included below under the heading “Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting.”

*(c) Changes in Internal Control Over Financial Reporting*

There was no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2020 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

*(d) Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting*

Our independent registered public accounting firm, Deloitte & Touche LLP, assessed the effectiveness of our internal control over financial reporting and has issued their report as set forth below.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Fiserv, Inc.:

### Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Fiserv, Inc. and subsidiaries (the “Company”) as of December 31, 2020, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2020, of the Company and our report dated February 26, 2021, expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the Company’s adoption of a new accounting standard.

### Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

Milwaukee, Wisconsin  
February 26, 2021

**Item 9B. Other Information**

None.

**PART III****Item 10. Directors, Executive Officers and Corporate Governance**

Except for information concerning our executive officers included in Part I of this Form 10-K under the caption “Information About Our Executive Officers,” which is incorporated by reference herein, and the information regarding our Code of Conduct below, the information required by Item 10 is incorporated by reference to the information set forth under the captions “Our Board of Directors – Who We Are,” “Our Board of Directors – How We Are Selected, Elected and Evaluated,” and “Our Board of Directors – How We Are Organized – Our Committees – Audit Committee” in our definitive proxy statement for our 2021 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission no later than 120 days after the close of the fiscal year ended December 31, 2020.

Our board of directors has adopted a Code of Conduct and Business Ethics (“Code of Conduct”) that applies to all of our directors and employees, including our chief executive officer, chief financial officer, chief accounting officer and other persons performing similar functions as well as our other executive officers. We have posted a copy of our Code of Conduct on the “About – Investor Relations – Corporate Governance – Governance Documents” section of our website at [www.fiserv.com](http://www.fiserv.com). We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K regarding amendments to, or waivers from, the Code of Conduct by posting such information on the “About – Investor Relations” section of our website at [www.fiserv.com](http://www.fiserv.com). We are not including the information contained on our website as part of, or incorporating it by reference into, this report.

**Item 11. Executive Compensation**

The information required by Item 11 is incorporated by reference to the information set forth under the captions “Our Board of Directors – How We Are Paid,” “Compensation Discussion and Analysis,” “Compensation Committee Report,” “Compensation Committee Interlocks and Insider Participation,” “Executive Compensation,” and “Pay Ratio” in our definitive proxy statement for our 2021 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission no later than 120 days after the close of the fiscal year ended December 31, 2020.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information set forth under the caption “Our Shareholders – Common Stock Ownership” in our definitive proxy statement for our 2021 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission no later than 120 days after the close of the fiscal year ended December 31, 2020, is incorporated by reference herein.

**Equity Compensation Plan Information**

The table below sets forth information with respect to compensation plans under which equity securities are authorized for issuance as of December 31, 2020.

	(a)	(b)	(c)
<b>Plan Category</b>	<b>Number of shares to be issued upon exercise of outstanding options, warrants and rights</b>	<b>Weighted-average exercise price of outstanding options, warrants and rights</b>	<b>Number of shares remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</b>
Equity compensation plans approved by our shareholders <sup>(1)</sup>	10,151,547 <sup>(2)</sup>	56.59 <sup>(3)</sup>	30,452,373 <sup>(4)</sup>
Equity compensation plans not approved by our shareholders	N/A	N/A	N/A
<b>Total</b> <sup>(5)</sup>	10,151,547 <sup>(2)</sup>	56.59 <sup>(3)</sup>	30,452,373 <sup>(4)</sup>

<sup>(1)</sup> Columns (a) and (c) of the table above do not include 2,436,442 unvested restricted stock units outstanding under the Amended and Restated Fiserv, Inc. 2007 Omnibus Incentive Plan (the “Incentive Plan”) or 24,230,938 shares authorized for issuance under the Fiserv, Inc. Amended and Restated Employee Stock Purchase Plan.

- (2) Consists of options outstanding under the Incentive Plan; 149,132 shares subject to performance share units under the Incentive Plan at the actual award level where the conditions to vesting have been satisfied; 1,027,049 shares subject to performance share units under the Incentive Plan at the target award level where the conditions to vesting have not yet been satisfied; and 98,924 shares subject to non-employee director deferred compensation notional units under the Incentive Plan.
- (3) Represents the weighted-average exercise price of outstanding options under the Incentive Plan and does not take into account outstanding performance share units or non-employee director deferred compensation notional units under the Incentive Plan.
- (4) Reflects the number of shares available for future issuance under the Incentive Plan.
- (5) This table does not include 5,812,408 options outstanding under the 2007 Stock Incentive Plan for Key Employees of First Data Corporation and its Affiliates (the “2007 First Data Plan”) and the First Data Corporation 2015 Omnibus Incentive Plan (the “2015 First Data Plan” and together with the 2007 First Data Plan, the “First Data Plans”) as of December 31, 2020 at a weighted-average exercise price of \$42.00. We assumed the First Data Plans in connection with our acquisition of First Data Corporation on July 29, 2019 and converted certain outstanding First Data equity awards into corresponding equity awards relating to common stock of Fiserv, Inc. in accordance with an exchange ratio in the merger agreement as further described in Note 4 to the accompanying consolidated financial statements. This table also does not include 2,906,696 shares of restricted stock and restricted stock units outstanding under the 2015 First Data Plan, as of December 31, 2020. No additional equity awards will be made under the First Data Plans.

### **Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information required by Item 13 is incorporated by reference to the information set forth under the captions “Our Board of Directors – How We Are Organized – Our Independence,” and “Our Board of Directors – How We Govern – Review, Approval or Ratification of Transactions with Related Persons,” in our definitive proxy statement for our 2021 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission no later than 120 days after the close of the fiscal year ended December 31, 2020.

### **Item 14. Principal Accounting Fees and Services**

The information required by Item 14 is incorporated by reference to the information set forth under the captions “Independent Registered Public Accounting Firm and Fees” and “Audit Committee Pre-Approval Policy” in our definitive proxy statement for our 2021 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission no later than 120 days after the close of the fiscal year ended December 31, 2020.

**PART IV****Item 15. Exhibits, Financial Statement Schedules***Financial Statement Schedules*

Financial statement schedules have been omitted because they are not applicable or the required information is shown in the consolidated financial statements or accompanying notes.

*Exhibits*

The exhibits listed in the accompanying exhibit index are filed as part of this Annual Report on Form 10-K.

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Exhibit Description</b>
2.1	<a href="#">Agreement and Plan of Merger, dated as of January 16, 2019, among Fiserv, Inc., 300 Holdings, Inc. and First Data Corporation (1)</a>
3.1	<a href="#">Restated Articles of Incorporation (2)</a>
3.2	<a href="#">Amended and Restated By-laws (3)</a>
4.1	<a href="#">Description of Securities of the Registrant (4)</a>
4.2	<a href="#">Third Amended and Restated Credit Agreement, dated as of September 19, 2018, among Fiserv, Inc. and the financial institutions party thereto (5)</a>
4.3	<a href="#">Amendment No. 1 to Third Amended and Restated Credit Agreement, dated as of February 6, 2019, among Fiserv, Inc. and the financial institutions party thereto (6)</a>
4.4	<a href="#">Amendment No. 2 to Third Amended and Restated Credit Agreement, dated as of February 15, 2019, among Fiserv, Inc. and the financial institutions party thereto (7)</a>
4.5	<a href="#">Amendment No. 3 to Revolving Credit Agreement, dated as of July 26, 2019, among Fiserv, Inc. and the financial institutions party thereto (8)</a>
4.6	<a href="#">Indenture, dated as of November 20, 2007, by and among Fiserv, Inc., the guarantors named therein and U.S. Bank National Association (9)</a>
4.7	<a href="#">Eighth Supplemental Indenture, dated as of June 14, 2011, among Fiserv, Inc., the guarantors named therein and U.S. Bank National Association (10)</a>
4.8	<a href="#">Tenth Supplemental Indenture, dated as of September 25, 2012, among Fiserv, Inc., the guarantors named therein and U.S. Bank National Association (11)</a>
4.9	<a href="#">Thirteenth Supplemental Indenture, dated as of May 22, 2015, between Fiserv, Inc. and U.S. Bank National Association (12)</a>
4.10	<a href="#">Fourteenth Supplemental Indenture, dated as of September 25, 2018, between Fiserv, Inc. and U.S. Bank National Association (13)</a>
4.11	<a href="#">Fifteenth Supplemental Indenture, dated as of September 25, 2018, between Fiserv, Inc. and U.S. Bank National Association (13)</a>
4.12	<a href="#">Sixteenth Supplemental Indenture, dated as of June 24, 2019, between Fiserv, Inc. and U.S. Bank National Association (14)</a>
4.13	<a href="#">Seventeenth Supplemental Indenture, dated as of June 24, 2019, between Fiserv, Inc. and U.S. Bank National Association (14)</a>
4.14	<a href="#">Eighteenth Supplemental Indenture, dated as of June 24, 2019, between Fiserv, Inc. and U.S. Bank National Association (14)</a>
4.15	<a href="#">Nineteenth Supplemental Indenture, dated as of June 24, 2019, between Fiserv, Inc. and U.S. Bank National Association (14)</a>
4.16	<a href="#">Twentieth Supplemental Indenture, dated as of July 1, 2019, between Fiserv, Inc. and U.S. Bank National Association (15)</a>
4.17	<a href="#">Twenty-First Supplemental Indenture, dated as of July 1, 2019, between Fiserv, Inc. and U.S. Bank National Association (15)</a>
4.18	<a href="#">Twenty-Second Supplemental Indenture, dated as of July 1, 2019, between Fiserv, Inc. and U.S. Bank National Association (15)</a>
4.19	<a href="#">Twenty-Third Supplemental Indenture, dated as of July 1, 2019, between Fiserv, Inc. and U.S. Bank National Association (15)</a>

4.20	<a href="#">Twenty-Fourth Supplemental Indenture, dated as of July 1, 2019, between Fiserv, Inc. and U.S. Bank National Association (15)</a>
4.21	<a href="#">Twenty-Fifth Supplemental Indenture, dated as of May 13, 2020, between Fiserv, Inc. and U.S. Bank National Association (16)</a>
4.22	<a href="#">Twenty-Sixth Supplemental Indenture, dated as of May 13, 2020, between Fiserv, Inc. and U.S. Bank National Association (16)</a>
4.23	<a href="#">Agency Agreement, dated as of July 1, 2019, by and among Fiserv, Inc., Elavon Financial Services DAC, UK Branch, and U.S. Bank National Association (15)</a>
4.24	<a href="#">Shareholder Agreement, dated as of January 16, 2019, between Fiserv, Inc. and New Omaha Holdings L.P. (1)</a>
4.25	<a href="#">Registration Rights Agreement, dated as of January 16, 2019, between Fiserv, Inc. and New Omaha Holdings L.P. (1)</a>
4.26	<a href="#">Amendment to the Shareholder Agreement and Registration Rights Agreement, dated as of September 9, 2019, by and between New Omaha Holdings L.P. and Fiserv, Inc. (17)</a>
4.27	<a href="#">Term Loan Credit Agreement, dated as of February 15, 2019, among Fiserv, Inc. and the financial institutions party thereto (7)</a>
4.28	<a href="#">Amendment No. 1 to Term Loan Credit Agreement, dated as of July 26, 2019 (8)</a>
	Pursuant to Item 601(b)(4)(iii) of Regulation S-K, the Company agrees to furnish to the Securities and Exchange Commission, upon request, any instrument defining the rights of holders of long-term debt that is not filed as an exhibit to this Form 10-K.
10.1	<a href="#">Amended and Restated Fiserv, Inc. 2007 Omnibus Incentive Plan (18)*</a>
	Amended and Restated Fiserv, Inc. 2007 Omnibus Incentive Plan Forms of Award Agreements
10.2	<a href="#">- Form of Restricted Stock Unit Agreement (Non-Employee Director) (19)*</a>
10.3	<a href="#">- Form of Restricted Stock Unit Agreement (Employee-E) (20)*</a>
10.4	<a href="#">- Form of Restricted Stock Unit Agreement (Employee-SO) (4)*</a>
10.5	<a href="#">- Form of Restricted Stock Unit Agreement (Employee-ST) (4)*</a>
10.6	<a href="#">- Form of Non-Qualified Stock Option Agreement (Non-Employee Director-LE) (19)*</a>
10.7	<a href="#">- Form of First Amendment to Non-Qualified Stock Option Agreement (Non-Employee Director - LE) (21)*</a>
10.8	<a href="#">- Form of Non-Qualified Stock Option Agreement (Non-Employee Director - EE) (21)*</a>
10.9	<a href="#">- Form of Second Amendment to Non-Qualified Stock Option Agreement (Non-Employee Director - LE/EE) (22)*</a>
10.10	<a href="#">- Form of Non-Qualified Stock Option Agreement (Non-Employee Director - N) (22)*</a>
10.11	<a href="#">- Form of Stock Option Agreement (Employee-F) (20)*</a>
10.12	<a href="#">- Form of Amendment to Stock Option Agreement (Employee-F) (23)*</a>
10.13	<a href="#">- Form of Stock Option Agreement (Employee-E) (20)*</a>
10.14	<a href="#">- Form of Stock Option Agreement (Employee-N) (20)*</a>
10.15	<a href="#">- Form of Stock Option Agreement (Employee-SO) (4)*</a>
10.16	<a href="#">- Form of Stock Option Agreement (Employee-ST) (4)*</a>
10.17	<a href="#">- Form of Performance Share Unit Agreement (Employee-PR) (20)*</a>
10.18	<a href="#">- Form of Performance Share Unit Agreement (Employee-E) (20)*</a>
10.19	<a href="#">Form of Performance Share Unit Agreement (Employee-SO)*</a>
10.20	<a href="#">Form of Performance Share Unit Agreement (Employee-ST)*</a>
10.21	<a href="#">2007 Stock Incentive Plan for Key Employees of First Data Corporation and its Affiliates (24)*</a>
	2007 Stock Incentive Plan for Key Employees of First Data Corporation and its Affiliates Forms of Award Agreements
10.22	<a href="#">- Form of Stock Option Agreement for Executive Committee Members (25)*</a>
10.23	<a href="#">- Form of Stock Option Agreement for U.S. Employees effective for grants in or after January 2014 (25)*</a>
10.24	<a href="#">First Data Corporation 2015 Omnibus Incentive Plan (24)*</a>
	First Data Corporation 2015 Omnibus Incentive Plan Forms of Award Agreements
10.25	<a href="#">- Form of Option Agreement for Management Committee and Directors (25)*</a>

10.26	<a href="#">- Form of Option Grant Notice and Option Grant Agreement (25)*</a>
10.27	<a href="#">- Form of Restricted Stock Award Agreement (25)*</a>
10.28	<a href="#">Amended and Restated Employment Agreement, dated December 22, 2008, between Fiserv, Inc. and Jeffery W. Yabuki (26)*</a>
10.29	<a href="#">Amendment No. 1 to Amended and Restated Employment Agreement, dated February 26, 2009, between Fiserv, Inc. and Jeffery W. Yabuki (27)*</a>
10.30	<a href="#">Amendment No. 2 to Amended and Restated Employment Agreement, dated December 30, 2009, between Fiserv, Inc. and Jeffery W. Yabuki (28)*</a>
10.31	<a href="#">Amendment No. 3 to Amended and Restated Employment Agreement, dated March 29, 2016, between Fiserv, Inc. and Jeffery W. Yabuki (29)*</a>
10.32	<a href="#">Transition Agreement, dated as of May 7, 2020, between Fiserv, Inc. and Jeffery W. Yabuki* (30)</a>
10.33	<a href="#">Employment Agreement, dated February 23, 2010, between Fiserv, Inc. and Lynn S. McCreary (31)*</a>
10.34	<a href="#">Amendment No. 1 to Employment Agreement, dated July 1, 2013, between Fiserv, Inc. and Lynn S. McCreary (31)*</a>
10.35	<a href="#">Employment Agreement, dated November 7, 2013, between Fiserv, Inc. and Byron C. Vielehr (32)*</a>
10.36	<a href="#">Form of Amended and Restated Key Executive Employment and Severance Agreement, between Fiserv, Inc. and each of Lynn McCreary and Byron Vielehr (26)*</a>
10.37	<a href="#">Letter Agreement, effective February 10, 2016, between Fiserv, Inc. and Robert W. Hau (33)*</a>
10.38	<a href="#">Form of Key Executive Employment and Severance Agreement between Fiserv, Inc. and Robert W. Hau (34)*</a>
10.39	<a href="#">Letter Agreement, effective October 31, 2016, between Fiserv, Inc. and Devin B. McGranahan (20)*</a>
10.40	<a href="#">Key Executive Employment and Severance Agreement, dated October 31, 2016, between Fiserv, Inc. and Devin B. McGranahan (20)*</a>
10.41	<a href="#">Employment Agreement, dated January 16, 2019, between Fiserv, Inc. and Frank J. Bisignano (8)*</a>
10.42	<a href="#">Amendment to Employment Agreement, dated as of May 7, 2020, between Fiserv, Inc. and Frank J. Bisignano (30)*</a>
10.43	<a href="#">Key Executive Employment and Severance Agreement, dated January 16, 2019, between Fiserv, Inc. and Frank J. Bisignano (8)*</a>
10.44	<a href="#">First Data Corporation Severance/Change in Control Policy (Management Committee Level) as amended and restated effective January 1, 2015 (35)*</a>
10.45	<a href="#">Fiserv, Inc. Amended and Restated Non-Qualified Deferred Compensation Plan (4)*</a>
10.46	<a href="#">Form of Non-Employee Director Indemnity Agreement (36)</a>
10.47	<a href="#">Fiserv, Inc. Non-Employee Director Deferred Compensation Plan (22)*</a>
10.48	<a href="#">Non-Employee Director Compensation Schedule*</a>
21.1	<a href="#">Subsidiaries of Fiserv, Inc.</a>
23.1	<a href="#">Consent of Independent Registered Public Accounting Firm</a>
31.1	<a href="#">Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</a>
31.2	<a href="#">Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</a>
32.1	<a href="#">Certification of the Chief Executive Officer and the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</a>
101.INS**	Inline XBRL Instance Document - The XBRL Instance Document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document.
101.SCH**	Inline XBRL Taxonomy Extension Schema Document
101.CAL**	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF**	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB**	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE**	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

\* This exhibit is a management contract or compensatory plan or arrangement.

\*\* Filed with this Annual Report on Form 10-K are the following documents formatted in iXBRL (Inline Extensible Business Reporting Language): (i) the Consolidated Statements of Income for the years ended December 31, 2020, 2019,

and 2018, (ii) the Consolidated Statements of Comprehensive Income for the years ended December 31, 2020, 2019, and 2018, (iii) the Consolidated Balance Sheets at December 31, 2020 and 2019, (iv) the Consolidated Statements of Equity for the years ended December 31, 2020, 2019, and 2018, (v) the Consolidated Statements of Cash Flows for the years ended December 31, 2020, 2019, and 2018, and (vi) Notes to Consolidated Financial Statements.

- (1) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on January 18, 2019, and incorporated herein by reference.
- (2) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on February 27, 2018, and incorporated herein by reference.
- (3) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on November 2, 2020, and incorporated herein by reference.
- (4) Previously filed as an exhibit to the Company's Annual Report on Form 10-K filed on February 27, 2020, and incorporated herein by reference.
- (5) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on September 20, 2018, and incorporated herein by reference.
- (6) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on February 7, 2019, and incorporated herein by reference.
- (7) Previously filed as an exhibit to the Company's Annual Report on Form 10-K filed on February 21, 2019, and incorporated herein by reference.
- (8) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on July 29, 2019, and incorporated herein by reference.
- (9) Previously filed as an exhibit to the Company's Registration Statement on Form S-3 (File No. 333-147309) filed on November 13, 2007, and incorporated herein by reference.
- (10) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on June 14, 2011, and incorporated herein by reference.
- (11) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on September 25, 2012, and incorporated herein by reference.
- (12) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on May 22, 2015, and incorporated herein by reference.
- (13) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on September 25, 2018, and incorporated herein by reference.
- (14) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on June 24, 2019, and incorporated herein by reference.
- (15) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on July 1, 2019, and incorporated herein by reference.
- (16) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on May 13, 2020, and incorporated herein by reference.
- (17) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on September 9, 2019, and incorporated herein by reference.
- (18) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q filed on May 2, 2018, and incorporated herein by reference.
- (19) Previously filed as an exhibit to the Company's Annual Report on Form 10-K filed on February 24, 2012, and incorporated herein by reference.
- (20) Previously filed as an exhibit to the Company's Annual Report on Form 10-K filed on February 23, 2017, and incorporated herein by reference.



- (21) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q filed on August 2, 2017, and incorporated herein by reference.
- (22) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on December 1, 2017, and incorporated herein by reference.
- (23) Previously filed as an exhibit to the Company's Annual Report on Form 10-K filed on February 20, 2015, and incorporated herein by reference.
- (24) Previously filed as an exhibit to the Company's Post-Effective Amendment No. 1 on Form S-8 to the Form S-4 Registration Statement of Fiserv, Inc. filed July 29, 2019, and incorporated herein by reference.
- (25) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q filed on November 7, 2019, and incorporated herein by reference.
- (26) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on December 23, 2008, and incorporated herein by reference.
- (27) Previously filed as an exhibit to the Company's Annual Report on Form 10-K filed on February 27, 2009, and incorporated herein by reference.
- (28) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on December 30, 2009, and incorporated herein by reference.
- (29) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on April 1, 2016, and incorporated herein by reference.
- (30) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q filed on May 8, 2020, and incorporated herein by reference.
- (31) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q filed on October 30, 2013, and incorporated herein by reference.
- (32) Previously filed as an exhibit to the Company's Annual Report on Form 10-K filed on February 20, 2014, and incorporated herein by reference.
- (33) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on February 16, 2016, and incorporated herein by reference.
- (34) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q filed on May 6, 2016, and incorporated herein by reference.
- (35) Previously filed as an exhibit to First Data Corporation's Annual Report on Form 10-K filed on February 27, 2015 and incorporated herein by reference.
- (36) Previously filed as an exhibit to the Company's Annual Report on Form 10-K filed on February 28, 2008, and incorporated herein by reference.

**Item 16. Form 10-K Summary**

None.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on February 26, 2021.

FISERV, INC.

By: /s/ Frank J. Bisignano

Frank J. Bisignano

President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 26, 2021.

<u>Name</u>	<u>Capacity</u>
<u>/s/ Denis J. O'Leary</u> Denis J. O'Leary	Chairman of the Board
<u>/s/ Frank J. Bisignano</u> Frank J. Bisignano	Director, President and Chief Executive Officer (Principal Executive Officer)
<u>/s/ Robert W. Hau</u> Robert W. Hau	Chief Financial Officer (Principal Financial Officer)
<u>/s/ Kenneth F. Best</u> Kenneth F. Best	Chief Accounting Officer (Principal Accounting Officer)
<u>/s/ Alison Davis</u> Alison Davis	Director
<u>/s/ Henrique De Castro</u> Henrique De Castro	Director
<u>/s/ Harry F. DiSimone</u> Harry F. DiSimone	Director
<u>/s/ Dennis F. Lynch</u> Dennis F. Lynch	Director
<u>/s/ Heidi G. Miller</u> Heidi G. Miller	Director
<u>/s/ Scott C. Nuttall</u> Scott C. Nuttall	Director
<u>/s/ Doyle R. Simons</u> Doyle R. Simons	Director
<u>/s/ Kevin M. Warren</u> Kevin M. Warren	Director

**FISERV, INC. 2007 OMNIBUS INCENTIVE PLAN  
PERFORMANCE SHARE UNIT AWARD MEMORANDUM –  
SENIOR OFFICER (SO RET)**

**Employee:** *[FIRST NAME] [LAST NAME]*

**Grant Date:** *[GRANT DATE]*

**Target Units:** *[NUMBER OF SHARES AT TARGET]*

**Performance Period:** *[PERFORMANCE PERIOD]*

**Performance Formula:**

*[PERFORMANCE FORMULA]*

**Performance Goal(s):**

*[PERFORMANCE GOALS]*

**Additional terms and conditions of your Award are included in the Performance Share Unit Agreement. As a condition to your receipt of Shares, you must log on to Fidelity's website at [www.netbenefits.fidelity.com](http://www.netbenefits.fidelity.com) and accept the terms and conditions of this Award within 120 calendar days of your Award Grant Date. If you do not accept the terms and conditions of this Award within such time at [www.netbenefits.fidelity.com](http://www.netbenefits.fidelity.com), this Award will be forfeited and immediately terminate.**

**Note: Sections 4(c) and 5(b) of the Performance Share Unit Agreement contains provisions that restrict your activities. These provisions apply to you and, by accepting this Award, you agree to be bound by these restrictions.**

## PERFORMANCE SHARE UNIT AGREEMENT

Pursuant to the Fiserv, Inc. 2007 Omnibus Incentive Plan (the "Plan"), Fiserv, Inc., a Wisconsin corporation (the "Company"), has granted you Performance Share Units (the "Award") entitling you to receive such number of shares of Company common stock (the "Shares") as set forth in the Award Memorandum on the terms and conditions set forth in this agreement (this "Agreement"), the Award Memorandum and the terms of the Plan. Capitalized terms used in this Agreement and not defined herein shall have the meanings set forth in the Plan.

In the event of a conflict between the terms of this Agreement or the Award Memorandum and the terms of the Plan, the terms of the Plan shall govern. In the event of a conflict between the terms of this Agreement and the Award Memorandum, the terms of this Agreement shall govern.

1. **Grant Date.** The Award is granted to you on the Grant Date set forth in the Award Memorandum.
2. **Vesting.** This Award will vest (if at all) as specified in the Award Memorandum on the date the Compensation Committee certifies the level of achievement of the Performance Goal(s) (the "Vesting Date"), provided you remain in employment through the Vesting Date. Subject to any deferral election then in effect, the Shares subject to this Award will be issued as indicated in this Agreement. This Award also may continue to vest following your Retirement (as defined below), death or Disability as described in Sections 5(a) and (b).
3. **Termination of Award.** Your Award (except for the provisions of Section 4) shall terminate in all events on the earliest of (a) the date upon which vesting is no longer permitted pursuant to Section 5, (b) the date the Shares due hereunder have been issued to you, or (c) your failure to accept the terms of this Agreement, the Award Memorandum and the Plan within the time period and in the manner specified in this Agreement.

#### 4. **Confidential Information, Non-Competition and Related Covenants.**

##### (a) Definitions.

- (i) "Fiserv" means the Company, its direct and indirect Subsidiaries, affiliated entities, successors, and assigns.
- (ii) "Confidential Information" means all trade secrets, Innovations (as defined below), confidential or proprietary business information and data, computer software, and database technologies or technological information, formulae, templates, algorithms, designs, process and systems information, processes, intellectual property rights, marketing plans, client lists and specifications, pricing and cost information and any other confidential information of Fiserv or its clients, vendors or subcontractors that relates to the business of Fiserv or to the business of any client, vendor or subcontractor of Fiserv or any other party with whom Fiserv agrees to hold information in confidence, whether patentable, copyrightable or protectable as a trade secret or not, except: (A) information that is, at the time of disclosure, in the public domain or that is subsequently published or otherwise becomes part of the public domain through no fault of yours; or (B) information that is disclosed by you under order of law or governmental regulation; provided, however, that you agree to notify the General Counsel of Fiserv upon receipt of any request for disclosure as soon as possible prior to any such disclosure so that appropriate safeguards may be maintained.
- (iii) "Competing Product or Service" means any product or service that is sold in competition with, or is being developed and that will compete with, a product or service developed, manufactured, or sold by Fiserv. For purposes of this Section 4, Competing Products or Services as to you are limited to products and/or services with respect to which you participated in the development, planning, testing, sale, marketing or evaluation on behalf

of Fiserv during any part of your employment with Fiserv, or after the termination of your employment, during any part of the 24 months preceding the termination of your employment with Fiserv, or for which you supervised one or more Fiserv employees, units, divisions or departments in doing so.

- (iv) "Competitor" means an individual, business or any other entity or enterprise engaged or having publicly announced its intent to engage in the sale or marketing of any Competing Product or Service.
  - (v) "Innovations" means all developments, improvements, designs, original works of authorship, formulas, processes, software programs, databases, and trade secrets, whether or not patentable, copyrightable or protectable as trade secrets, that you, either by yourself or jointly with others, create, modify, develop, or implement during the period of your employment with Fiserv that relate in any way to Fiserv's business.
  - (vi) "Moral Rights" means any rights to claim authorship of a work of authorship, to object to or prevent the modification of any such work of authorship, or to withdraw from circulation or control the publication or distribution of any such work of authorship.
  - (vii) "Client" means any person, association or entity: (A) for which you directly performed services or for which you supervised others in performing services with Fiserv, during any part of your employment with Fiserv, or after the termination of your employment, during any part of the 24 months preceding the termination of your employment with Fiserv; or (B) about which you have Confidential Information as a result of your employment with Fiserv.
  - (viii) "Prospective Client" means any client: (A) with which Fiserv was in active business discussions or negotiations at any time during any part of your employment with Fiserv, or after the termination of your employment, during any part of the 24 months preceding the termination of your employment with Fiserv, in which you participated or for which you directly performed services or for which you supervised others in performing services with Fiserv; or (B) about which you have Confidential Information as a result of your employment with Fiserv.
- (b) During your employment, Fiserv will provide you with Confidential Information relating to Fiserv, its business and clients, the disclosure or misuse of which would cause severe and irreparable harm to Fiserv. You agree that all Confidential Information is and shall remain the sole and absolute property of Fiserv. Upon the termination of your employment for any reason, you shall immediately return to Fiserv all documents and materials that contain or constitute Confidential Information, in any form whatsoever, including but not limited to, all copies, abstracts, electronic versions, and summaries thereof. You further agree that, without the written consent of the Chief Executive Officer of the Company or, in the case of the Chief Executive Officer of the Company, without the written approval of the Board of Directors of the Company:
- (i) You will not disclose, use, copy or duplicate, or otherwise permit the use, disclosure, copying or duplication of any Confidential Information of Fiserv, other than in connection with the authorized activities conducted in the course of your employment with Fiserv. You agree to take all reasonable steps and precautions to prevent any unauthorized disclosure, use, copying or duplication of Confidential Information.
  - (ii) All Innovations are and shall remain the sole and absolute property of Fiserv. You will provide all assistance requested by Fiserv, at its expense, in the preservation of its interest in any Innovations in any country, and hereby assign and agree to assign to Fiserv all rights, title and interest in and to all worldwide patents, patent applications, copyrights, trade secrets and other intellectual property rights in any Innovation. You also assign and

agree to assign to Fiserv, or, where applicable, to waive, which waiver shall inure to the benefit of Fiserv and its assigns, all Moral Rights in any Innovation.

(iii) Notwithstanding the preceding statements, you understand that, pursuant to 18 U.S.C. §1833(b)(1) and §1833(b)(2):

(A) An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that (I) is made (x) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney and (y) solely for the purpose of reporting or investigating a suspected violation of law; or (II) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

(B) An individual who files a lawsuit for retaliation by the Company for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual (I) files any document containing the trade secret under seal and (II) does not disclose the trade secret, except pursuant to court order.

You understand that if you are found to have wrongfully misappropriated a trade secret, you may be liable to the Company for, among other things, exemplary damages and attorneys' fees.

(c) You agree that, without the written consent of the Chief Executive Officer of the Company or, in the case of the Chief Executive Officer of the Company, without the written approval of the Board of Directors of the Company, you shall not engage in any of the conduct described in subsections (i) or (ii), below, either directly or indirectly, or as an employee, contractor, consultant, partner, officer, director or stockholder, other than a stockholder of less than 5% of the equities of a publicly traded corporation, or in any other capacity for any person, firm, partnership or corporation:

- (i) During the time of your employment with Fiserv, you will not: (A) perform duties as or for a Competitor, Client or Prospective Client of Fiserv (except to the extent required by your employment with Fiserv); or (B) participate in the inducement of or otherwise encourage Fiserv employees, clients, or vendors to currently and/or prospectively breach, modify, or terminate any agreement or relationship they have or had with Fiserv.
- (ii) For a period of 12 months following the date of termination of your employment, you will not: (A) perform duties as or for a Competitor, Client or Prospective Client of Fiserv that are the same as or similar to the duties performed by you for Fiserv at any time during any part of the 24 month period preceding the termination of your employment with Fiserv; (B) participate in the inducement of or otherwise encourage Fiserv employees, clients, or vendors to currently and/or prospectively breach, modify, or terminate any agreement or relationship they have or had with Fiserv during any part of the 24 month period preceding the termination of your employment with Fiserv; or (C) participate voluntarily or provide assistance or information to any person or entity either negotiating with Fiserv involving a Competing Product or Service, or concerning a potential or existing business or legal dispute with Fiserv, including, but not limited to, litigation, except as may be required by law.

No provision of these subsections (i) and (ii) shall apply to restrict your conduct, or trigger any reimbursement obligations under this Agreement, in any jurisdiction where such provision is, on its face, unenforceable and/or void as against public policy, unless the provision may be construed or deemed amended to be enforceable and compliant with public policy, in which case the provision will apply as construed or deemed amended.

- (d) You acknowledge and agree that compliance with this Section 4 and, if applicable, Section 5(b)(ii)(B) is necessary to protect the Company, and that a breach of any of this Section 4 or Section 5(b)(ii)(B) will result in irreparable and continuing damage to the Company for which there will be no adequate remedy at law. In the event of a breach of this Section 4, or any part thereof, the Company, and its successors and assigns, shall be entitled to injunctive relief and to such other and further relief as is proper under the circumstances. The Company may institute and prosecute proceedings in any Court of competent jurisdiction either in law or in equity to obtain damages for any such breach of this Section 4 or Section 5(b)(ii)(B), or to enjoin you from performing services in breach of Section 4. You hereby agree to submit to the jurisdiction of any Court of competent jurisdiction in any disputes that arise under this Agreement.
- (e) You further agree that, in the event of your breach of this Section 4 or in accordance with Section 5(b)(iii)(C), the Company shall also be entitled to recover the value of all amounts previously paid or payable and any shares (or the current value of any shares) delivered or deliverable to you pursuant to any Fiserv bonus program, this Agreement, and any other Fiserv plan or arrangement.
- (f) You agree that the terms of this Agreement shall survive the termination of your employment with the Company.
- (g) YOU HAVE READ THIS SECTION 4 AND SECTION 5(b) AND AGREE THAT THE CONSIDERATION PROVIDED BY THE COMPANY IS FAIR AND REASONABLE AND FURTHER AGREE THAT GIVEN THE IMPORTANCE TO THE COMPANY OF ITS CONFIDENTIAL AND PROPRIETARY INFORMATION, THE POST-EMPLOYMENT RESTRICTIONS ON YOUR ACTIVITIES ARE LIKEWISE FAIR AND REASONABLE.

5. **Termination of Employment.**

- (a) **Vesting.** If you cease to be an employee of the Company or any Subsidiary of the Company for any reason (a "Termination Event") prior to the Vesting Date, then the Award shall terminate on the date on which such Termination Event occurs; provided that, if the reason for your Termination Event is:
  - (i) Death or Disability, then the number of Shares issuable under this Award, if any, shall be determined after the end of the 3-Year Performance Period as if you had not terminated employment based on actual performance.
  - (ii) Retirement within 12 months prior to the last day of the 3-Year Performance Period, then the number of Shares issuable under this Award, if any, shall be determined after the end of the 3-Year Performance Period as if you had not terminated employment based on actual performance.

If you are regularly scheduled to work less than 20 hours per calendar week for the Company or any Subsidiary of the Company, you will be deemed to have experienced a Termination Event.

(b) **Retirement.**

- (i) For purposes of this Section 5, "Retirement" means the cessation of service as an employee, for any reason other than death, Disability or termination for Cause, if:
  - (A) you are at least 60 years of age and have at least 10 years of continuous service with the Company and its Subsidiaries;
  - and

(B) you have provided for an orderly transition of your duties to a successor, including by: (1) providing notice to the Chief Executive Officer of the Company (or in the case of the Chief Executive Officer, to the Chairman or Lead Director of the Board of Directors of the Company as the case may be) that you are considering retirement sufficiently in advance of your anticipated retirement date; and (2) assisting with the identification and selection of, and transition of your duties to, a successor ((1) and (2) being referred to herein collectively as the "Specified Transition Requirements").

If you satisfy the requirements of clauses (A) and (B) above, your cessation of service will be deemed to be a qualifying Retirement; provided that, the Compensation Committee may determine, within 30 days after your cessation of service, that you failed to satisfy any Specified Transition Requirement. By way of example only, this could result from providing too short of notice or not providing an adequate amount of transition assistance.

(ii) Notwithstanding the foregoing:

(A) If you receive written notification from the Compensation Committee that you failed to satisfy any Specified Transition Requirement, then any portion of the Award that is unvested as of the date of such notification shall terminate as of such date.

(B) In addition to the obligations set forth in Section 4 for the period set forth therein, while any portion of this Award remains unvested and for one year after the last vesting event of any equity award held by you at the time of Retirement (the "Restricted Period"), you may not:

(1) perform work of any kind for a Competitor, including as an employee, board member, consultant or otherwise;

(2) perform work for a non-Competitor other than as permitted by clause (ii)(C) below; or

(3) violate any post-employment covenant applicable to you under any agreement in effect with, or policy of, the Company or any of its Subsidiaries (each of (1)-(3) being a "Post-Retirement Violation").

(C) During the Restricted Period you may work for a non-Competitor; provided that you may not have a role or responsibilities similar to or greater than those which you had while employed by the Company. For the sake of clarity, work for a non-profit and service as a director for a non-Competitor are expressly permitted.

(D) While this Award is outstanding, as a condition to continued vesting, upon request of the Company, you must certify that you have not engaged in a Post-Retirement Violation and must provide such information as the Company requests in order to verify such certification.

(iii) Without limiting any other provision of this Agreement, including Section 4 as applicable, if a Post-Retirement Violation occurs:

(A) vesting of any unvested portion of the Award shall immediately cease;

(B) any Shares received upon vesting after the Post-Retirement Violation are subject to recoupment (either the actual shares or the current value thereof) if the Post-Retirement Violation was of the nature described in (ii)(B)(2) above;



(C) the remedies available to the Company under Section 4(e), including recoupment of Shares, shall apply if the Post-Retirement Violation was of the nature described in (ii)(B)(1) or (3) above and occurred during the first 12 months following Retirement; and

(D) any Shares received upon vesting after Retirement are subject to recoupment (either the actual shares or the current value thereof) if the Post-Retirement Violation was of the nature described in (ii)(B)(1) or (3) above and occurred after the one-year anniversary of your Retirement.

(iv) All determinations regarding whether you have engaged in a Post-Retirement Violation shall be made by the Compensation Committee.

(v) If you die after Retirement and prior to the date that this Award vests, then the provisions of Sections 5(a) and (b) shall continue to apply as if you had not died.

(c) **Change of Control.** If a Change of Control of the Company occurs prior to the end of the 3-Year Performance Period, then:

(i) As of the date of the Change of Control, the number Performance Share Units that may be earned will be fixed and determined based on (A) the actual performance for any Performance Periods that have been completed as of the date of the Change of Control and (B) achievement of 150% of target (or where there is no target, assuming the Performance Goal had been met) for any other Performance Periods that have not been completed as of the date of the Change of Control (irrespective of the actual achievement of the Performance Goals as of such date); and

(ii) Such Performance Shares Units will become vested as of the last day of the 3-Year Performance Period if you remain employed until such date, except as otherwise provided in clause (iii) below, and shall be settled in accordance with Section 7 in the year following the end of the 3-Year Performance Period; or

(iii) If your employment terminates before the end of the 3-Year Performance Period due to your Retirement (determined solely under Section 5(b)(i)(A)), death, Disability, termination by the Company without Cause or your termination of your employment for Good Reason (as hereinafter defined), then the Performance Share Units shall be vested upon such termination of employment and shall be settled in accordance with Section 7 in the year following the end of the 3-Year Performance Period.

“**Good Reason**” means your suffering any of the following events without your consent: (x) significant or material lessening of your responsibilities; (y) a reduction in your annual base salary or a material reduction in the level of incentive compensation for which you have been eligible during the two years immediately prior to the occurrence of the Change of Control and/or a material adverse change in the conditions governing receipt of such incentive compensation from those that prevailed prior to the occurrence of the Change of Control; or (z) the Company requiring you to be based anywhere other than within 50 miles of your place of employment at the time of the occurrence of the Change of Control, except for reasonably required travel to an extent substantially consistent with your business travel obligations.

(d) **Service as Director.** For purposes of this Agreement, an employee of the Company, if also serving as a director, will not be deemed to have terminated employment for purposes of this

Agreement until his or her service as a director ends, and his or her years of service will be deemed to include years of service as a director.

- (e) **Termination for Cause.** Notwithstanding anything herein to the contrary, if you are terminated from employment by the Company for Cause, then this Award will forfeit immediately without vesting as of the date of such termination.
  - (f) **No Further Obligation.** The Company will have no further obligations to you under this Agreement if the Award terminates as provided herein.
  - (g) **Separation Agreement.** The provisions of this Section 5 are subject to (and may be amended by) the terms of a written separation agreement entered into between you and the Company or any of its Subsidiaries.
6. **Deferral of Performance Share Units.** If you are eligible to, and properly elect to, defer delivery of all or part of the Shares otherwise issuable under this Award, such deferral will be governed by the Performance Share Unit Deferral Election Form executed by you separately from this Agreement.
7. **Issuance of Shares.** The Company, or its transfer agent, will issue and deliver the Shares to you as soon as practicable after the Vesting Date (pursuant to the terms hereof) with respect to such Shares, or, if a deferral election was made, at the time specified in the Deferral Election Form. If you die before the Company has distributed the Shares due with respect to the vested Performance Share Units, the Company will issue the Shares to your estate or in accordance with applicable laws of descent and distribution. The Shares will be issued and delivered in book entry form, and the Company will not be liable for damages relating to any delays in making an appropriate book entry or any mistakes or errors in the making of the book entry; provided that the Company shall correct any errors caused by it. Any such book entry will be subject to such stop transfer orders and other restrictions as the Company may deem advisable under (a) the Plan and any agreement between you and the Company with respect to this Award or the Shares, (b) any applicable federal or state laws, and/or (c) the rules, regulations and other requirements of the Securities and Exchange Commission ("SEC") or any stock exchange upon which the Shares are listed. The Company may cause an appropriate book entry notation to be made with respect to the Shares to reference any of the foregoing restrictions.
8. **Non-Transferability of Award.** Except as provided in the Plan, this Agreement and the Award Memorandum, until the Shares have been issued under this Award, this Award and the Shares issuable hereunder and the rights and privileges conferred hereby may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated (by operation of law or otherwise). Upon any attempt to transfer, assign, pledge, hypothecate or otherwise dispose of this Award, or of any right or privilege conferred hereby, contrary to the provisions of the Plan or of this Agreement, or upon any attempted sale under any execution, attachment or similar process upon the rights and privileges conferred hereby, this Award and the rights and privileges conferred hereby shall immediately become null and void.
9. **Conditions to Issuance of Shares.** The Shares issued to you hereunder may be either previously authorized but unissued shares or issued shares which have been reacquired by the Company. The Company shall not be required to issue any Shares hereunder prior to fulfillment of all of the following conditions: (a) the admission of such Shares to listing on all stock exchanges on which such class of stock is then listed; (b) the completion of any registration or other qualification of such Shares under any state or federal law or under the rulings or regulations of the SEC or any other governmental regulatory body, which the compensation committee of the Board of Directors (the "Compensation Committee") shall, in its discretion, deem necessary or advisable; (c) the obtaining of any approval or other clearance from any state or federal governmental agency, which the Compensation Committee shall, in its discretion, determine to be necessary or advisable; (d) the lapse of such reasonable period of time following the date of vesting of the Award or the payment event specified in a deferral

election as the Compensation Committee may establish from time to time for reasons of administrative convenience (provided that any such period shall be in compliance with Code Section 409A); and (e) your acceptance of the terms and conditions of this Agreement, the Award Memorandum and the Plan within the time period and in the manner specified in this Agreement.

10. **Dividends; No Rights as Shareholder.** If the Company declares a cash dividend and the dividend record date occurs prior to the date the Vesting Date, you will be credited with an additional number of Target Units on the date the cash dividends are paid to the Company shareholders equal to (a) the amount of cash dividends payable with respect to a number of shares of stock equal to your Target Units divided by (b) the Fair Market Value of a Share on the date the dividend is paid. Until this Award vests and the Shares are issued to you, you shall have no rights as a shareholder of the Company with respect to the Shares. Specifically, you understand and agree that you do not have voting rights or, except as provided in this Section 10, the right to receive dividends or any other distributions paid with respect to shares of Company common stock by virtue of this Award or the Shares subject hereto.
11. **Addresses for Notices.** Any notice to be given to the Company under the terms of this Agreement shall be addressed to the Company as follows: Corporate Secretary, Fiserv, Inc., 255 Fiserv Drive, Brookfield, WI 53045, or at such other address as the Company may hereafter designate in writing. Any notice to be given to you shall be addressed to you at the address set forth in the Company's records from time to time.
12. **Captions; Agreement Severable.** Captions provided herein are for convenience only and are not to serve as a basis for interpretation or construction of this Agreement. In the event that any provision in this Agreement shall be held invalid or unenforceable, such provision shall be severable from, and such invalidity or unenforceability shall not be construed to have any effect on, the remaining provisions of this Agreement.
13. **Securities and Tax Representations.**
  - (a) You acknowledge receipt of the prospectus under the Registration Statement on Form S-8 with respect to the Plan filed by the Company with the SEC. You represent and agree that you will comply with all applicable laws and Company policies relating to the Plan, this Agreement and any disposition of Shares and that upon the acquisition of any Shares subject to this Award, you will make or enter into such written representations, warranties and agreements as the Company may reasonably request to comply with applicable securities laws or this Agreement.
  - (b) You represent and warrant that you understand the federal, state and local income and employment tax consequences associated with the granting of the Award, the vesting of the Award, the deferral of all or a portion of the Shares otherwise issuable upon vesting of the Award, and the subsequent sale or other disposition of any Shares. You understand and agree that when this Award vests and Shares are issued, and you thereby realize gross income (if any) taxable as compensation in respect of such vesting or issuance, the Company will be required to withhold federal, state and local taxes on the full amount of the compensation income realized by you and may also be required to withhold other amounts as a result of such vesting. You also understand and agree that the Company may be required to withhold certain payroll taxes in connection with your Retirement or your termination due to Disability prior to the issuance of Shares. You hereby agree to provide the Company with cash funds or Shares equal in value to the federal, state and local payroll and income taxes and other amounts required to be withheld by the Company or its Subsidiary in respect of any compensation income or wages in relation to the Award or make other arrangements satisfactory to the Company regarding such amounts, which may include deduction of such taxes from other wages owed to you by the Company or its Subsidiaries. All matters with respect to the total amount to be withheld shall be determined by the Company in its sole discretion.

14. **Market Stand-Off.** The Company reserves the right to impose restrictions on dispositions in connection with any underwritten public offering by the Company of its equity securities pursuant to an effective registration statement filed under the Securities Act of 1933, as amended. Upon receipt of written notice from the Company of a trading restriction, you agree that you shall not directly or indirectly sell, make any short sale of, loan, hypothecate, pledge, offer, grant or sell any option or other contract for the purchase of, purchase any option or other contract for the sale of, or otherwise dispose of or transfer or agree to engage in any of the foregoing transactions with respect to, any Shares acquired under this Award without the prior written consent of the Company. Such restriction shall be in effect for such period of time following the date of the final prospectus for the offering as may be determined by the Company. In no event, however, shall such period exceed one hundred eighty (180) days.

15. **General Provisions.**

- (a) None of the Plan, this Agreement or the Award Memorandum confers upon you any right to continue to be employed by the Company or any Subsidiary of the Company or limits in any respect any right of the Company or any Subsidiary of the Company to terminate your employment at any time, without liability.
- (b) This Agreement, the Award Memorandum, the Plan and the Restricted Stock Unit Deferral Election Form, if any, contain the entire agreement between the Company and you relating to the Award and the Shares and supersede all prior agreements or understandings relating thereto.
- (c) This Agreement and the Award Memorandum may only be modified, amended or cancelled as provided in the Plan.
- (d) If any one or more provisions of this Agreement or the Award Memorandum is found to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.
- (e) Any remedies available to the Company under the Plan or this Agreement are cumulative and are in addition to, and are not affected by, the other rights and remedies available to the Company under the Plan, this Agreement, by law or otherwise.
- (f) This Agreement and the Award Memorandum shall be governed by and construed in accordance with the laws of the State of Wisconsin, without regard to conflict of law provisions.
- (g) The Company agrees, and you agree, to be subject to and bound by all of the terms and conditions of the Plan. The Prospectus for the Plan is accessible on the Company's administrative agent's website ([www.netbenefits.fidelity.com](http://www.netbenefits.fidelity.com)) in the "forms library" and a paper copy is available upon request.
- (h) This Agreement and the Award Memorandum shall be binding upon and inure to the benefit of any successor or assign of the Company and to any heir, distributee, executor, administrator or legal representative entitled by law to your rights hereunder.
- (i) You understand that, under the terms of the Plan, this Agreement and the Award Memorandum, the Company may cancel or rescind this Award and/or the Shares in certain circumstances.

**By selecting the "I accept" box on the website of our administrative agent, you acknowledge your acceptance of, and agreement to be bound by, this Agreement, the Award Memorandum and the Plan.**

**Your acceptance of the terms of this Agreement, the Award Memorandum and the Plan through our administrative agent's website is a condition to your receipt of Shares. You must log on to our administrative agent's website and accept the terms and conditions of this Agreement, the Award Memorandum and the Plan within 120 calendar days of your Award Grant Date. If you do not accept the terms and conditions of this Agreement, the Award Memorandum and the Plan within such time, this Award will be forfeited and immediately terminate.**

FISERV, INC. 2007 OMNIBUS INCENTIVE PLAN  
PERFORMANCE SHARE UNIT AWARD MEMORANDUM –  
STANDARD (ST RET)

Employee: *[FIRST NAME] [LAST NAME]*

Grant Date: *[GRANT DATE]*

Target Units: *[NUMBER OF SHARES AT TARGET]*

Performance Period: *[PERFORMANCE PERIOD]*

Performance Formula:

*[PERFORMANCE FORMULA]*

Performance Goal(s):

*[PERFORMANCE GOALS]*

Additional terms and conditions of your Award are included in the Performance Share Unit Agreement. As a condition to your receipt of Shares, you must log on to Fidelity's website at [www.netbenefits.fidelity.com](http://www.netbenefits.fidelity.com) and accept the terms and conditions of this Award within 120 calendar days of your Award Grant Date. If you do not accept the terms and conditions of this Award within such time at [www.netbenefits.fidelity.com](http://www.netbenefits.fidelity.com), this Award will be forfeited and immediately terminate.

**Note:** Sections 4(c) and 5(b) of the Performance Share Unit Agreement contains provisions that restrict your activities. These provisions apply to you and, by accepting this Award, you agree to be bound by these restrictions.

## PERFORMANCE SHARE UNIT AGREEMENT

Pursuant to the Fiserv, Inc. 2007 Omnibus Incentive Plan (the "Plan"), Fiserv, Inc., a Wisconsin corporation (the "Company"), has granted you Performance Share Units (the "Award") entitling you to receive such number of shares of Company common stock (the "Shares") as set forth in the Award Memorandum on the terms and conditions set forth in this agreement (this "Agreement"), the Award Memorandum and the terms of the Plan. Capitalized terms used in this Agreement and not defined herein shall have the meanings set forth in the Plan.

In the event of a conflict between the terms of this Agreement or the Award Memorandum and the terms of the Plan, the terms of the Plan shall govern. In the event of a conflict between the terms of this Agreement and the Award Memorandum, the terms of this Agreement shall govern.

1. **Grant Date.** The Award is granted to you on the Grant Date set forth in the Award Memorandum.
2. **Vesting.** This Award will vest (if at all) as specified in the Award Memorandum on the date the Compensation Committee certifies the level of achievement of the Performance Goal(s) (the "Vesting Date"), provided you remain in employment through the Vesting Date. Subject to any deferral election then in effect, the Shares subject to this Award will be issued as indicated in this Agreement. This Award also may continue to vest following your Retirement (as defined below), death or Disability as described in Sections 5(a) and (b).
3. **Termination of Award.** Your Award (except for the provisions of Section 4) shall terminate in all events on the earliest of (a) the date upon which vesting is no longer permitted pursuant to Section 5, (b) the date the Shares due hereunder have been issued to you, or (c) your failure to accept the terms of this Agreement, the Award Memorandum and the Plan within the time period and in the manner specified in this Agreement.
4. **Confidential Information, Non-Competition and Related Covenants.**

(a) Definitions.

- (i) "Fiserv" means the Company, its direct and indirect Subsidiaries, affiliated entities, successors, and assigns.
- (ii) "Confidential Information" means all trade secrets, Innovations (as defined below), confidential or proprietary business information and data, computer software, and database technologies or technological information, formulae, templates, algorithms, designs, process and systems information, processes, intellectual property rights, marketing plans, client lists and specifications, pricing and cost information and any other confidential information of Fiserv or its clients, vendors or subcontractors that relates to the business of Fiserv or to the business of any client, vendor or subcontractor of Fiserv or any other party with whom Fiserv agrees to hold information in confidence, whether patentable, copyrightable or protectable as a trade secret or not, except: (A) information that is, at the time of disclosure, in the public domain or that is subsequently published or otherwise becomes part of the public domain through no fault of yours; or (B) information that is disclosed by you under order of law or governmental regulation; provided, however, that you agree to notify the General Counsel of Fiserv upon receipt of any request for disclosure as soon as possible prior to any such disclosure so that appropriate safeguards may be maintained.
- (iii) "Competing Product or Service" means any product or service that is sold in competition with, or is being developed and that will compete with, a product or service developed, manufactured, or sold by Fiserv. For purposes of this Section 4, Competing Products or

Services as to you are limited to products and/or services with respect to which you participated in the development, planning, testing, sale, marketing or evaluation on behalf of Fiserv during any part of your employment with Fiserv, or after the termination of your employment, during any part of the 24 months preceding the termination of your employment with Fiserv, or for which you supervised one or more Fiserv employees, units, divisions or departments in doing so.

- (iv) "Competitor" means an individual, business or any other entity or enterprise engaged or having publicly announced its intent to engage in the sale or marketing of any Competing Product or Service.
  - (v) "Innovations" means all developments, improvements, designs, original works of authorship, formulas, processes, software programs, databases, and trade secrets, whether or not patentable, copyrightable or protectable as trade secrets, that you, either by yourself or jointly with others, create, modify, develop, or implement during the period of your employment with Fiserv that relate in any way to Fiserv's business.
  - (vi) "Moral Rights" means any rights to claim authorship of a work of authorship, to object to or prevent the modification of any such work of authorship, or to withdraw from circulation or control the publication or distribution of any such work of authorship.
  - (vii) "Client" means any person, association or entity: (A) for which you directly performed services or for which you supervised others in performing services with Fiserv, during any part of your employment with Fiserv, or after the termination of your employment, during any part of the 24 months preceding the termination of your employment with Fiserv; or (B) about which you have Confidential Information as a result of your employment with Fiserv.
  - (viii) "Prospective Client" means any client: (A) with which Fiserv was in active business discussions or negotiations at any time during any part of your employment with Fiserv, or after the termination of your employment, during any part of the 24 months preceding the termination of your employment with Fiserv, in which you participated or for which you directly performed services or for which you supervised others in performing services with Fiserv; or (B) about which you have Confidential Information as a result of your employment with Fiserv.
- (b) During your employment, Fiserv will provide you with Confidential Information relating to Fiserv, its business and clients, the disclosure or misuse of which would cause severe and irreparable harm to Fiserv. You agree that all Confidential Information is and shall remain the sole and absolute property of Fiserv. Upon the termination of your employment for any reason, you shall immediately return to Fiserv all documents and materials that contain or constitute Confidential Information, in any form whatsoever, including but not limited to, all copies, abstracts, electronic versions, and summaries thereof. You further agree that, without the written consent of the Chief Executive Officer of the Company or, in the case of the Chief Executive Officer of the Company, without the written approval of the Board of Directors of the Company:
- (i) You will not disclose, use, copy or duplicate, or otherwise permit the use, disclosure, copying or duplication of any Confidential Information of Fiserv, other than in connection with the authorized activities conducted in the course of your employment with Fiserv. You agree to take all reasonable steps and precautions to prevent any unauthorized disclosure, use, copying or duplication of Confidential Information.
  - (ii) All Innovations are and shall remain the sole and absolute property of Fiserv. You will provide all assistance requested by Fiserv, at its expense, in the preservation of its interest



in any Innovations in any country, and hereby assign and agree to assign to Fiserv all rights, title and interest in and to all worldwide patents, patent applications, copyrights, trade secrets and other intellectual property rights in any Innovation. You also assign and agree to assign to Fiserv, or, where applicable, to waive, which waiver shall inure to the benefit of Fiserv and its assigns, all Moral Rights in any Innovation.

- (iii) Notwithstanding the preceding statements, you understand that, pursuant to 18 U.S.C. §1833(b)(1) and §1833(b)(2):
- (A) An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that (I) is made (x) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney and (y) solely for the purpose of reporting or investigating a suspected violation of law; or (II) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.
  - (B) An individual who files a lawsuit for retaliation by the Company for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual (I) files any document containing the trade secret under seal and (II) does not disclose the trade secret, except pursuant to court order.

You understand that if you are found to have wrongfully misappropriated a trade secret, you may be liable to the Company for, among other things, exemplary damages and attorneys' fees.

- (c) You agree that, without the written consent of the Chief Executive Officer of the Company or, in the case of the Chief Executive Officer of the Company, without the written approval of the Board of Directors of the Company, you shall not engage in any of the conduct described in subsections (i) or (ii), below, either directly or indirectly, or as an employee, contractor, consultant, partner, officer, director or stockholder, other than a stockholder of less than 5% of the equities of a publicly traded corporation, or in any other capacity for any person, firm, partnership or corporation:
- (i) During the time of your employment with Fiserv, you will not: (A) perform duties as or for a Competitor, Client or Prospective Client of Fiserv (except to the extent required by your employment with Fiserv); or (B) participate in the inducement of or otherwise encourage Fiserv employees, clients, or vendors to currently and/or prospectively breach, modify, or terminate any agreement or relationship they have or had with Fiserv.
  - (ii) For a period of 12 months following the date of termination of your employment, you will not: (A) perform duties as or for a Competitor, Client or Prospective Client of Fiserv that are the same as or similar to the duties performed by you for Fiserv at any time during any part of the 24 month period preceding the termination of your employment with Fiserv; (B) participate in the inducement of or otherwise encourage Fiserv employees, clients, or vendors to currently and/or prospectively breach, modify, or terminate any agreement or relationship they have or had with Fiserv during any part of the 24 month period preceding the termination of your employment with Fiserv; or (C) participate voluntarily or provide assistance or information to any person or entity either negotiating with Fiserv involving a Competing Product or Service, or concerning a potential or existing business or legal dispute with Fiserv, including, but not limited to, litigation, except as may be required by law.

No provision of these subsections (i) and (ii) shall apply to restrict your conduct, or trigger any reimbursement obligations under this Agreement, in any jurisdiction where such provision is, on its face, unenforceable and/or void as against public policy, unless the provision may be construed or deemed amended to be enforceable and compliant with public policy, in which case the provision will apply as construed or deemed amended.

- (d) You acknowledge and agree that compliance with this Section 4 and, if applicable, Section 5(b)(ii) is necessary to protect the Company, and that a breach of any of this Section 4 or Section 5(b)(ii) will result in irreparable and continuing damage to the Company for which there will be no adequate remedy at law. In the event of a breach of this Section 4, or any part thereof, the Company, and its successors and assigns, shall be entitled to injunctive relief and to such other and further relief as is proper under the circumstances. The Company may institute and prosecute proceedings in any Court of competent jurisdiction either in law or in equity to obtain damages for any such breach of this Section 4 or Section 5(b)(ii), or to enjoin you from performing services in breach of Section 4. You hereby agree to submit to the jurisdiction of any Court of competent jurisdiction in any disputes that arise under this Agreement.
- (e) You further agree that, in the event of your breach of this Section 4 or in accordance with Section 5(b)(v)(C), the Company shall also be entitled to recover the value of all amounts previously paid or payable and any shares (or the current value of any shares) delivered or deliverable to you pursuant to any Fiserv bonus program, this Agreement, and any other Fiserv plan or arrangement.
- (f) You agree that the terms of this Agreement shall survive the termination of your employment with the Company.
- (g) YOU HAVE READ THIS SECTION 4 AND SECTION 5(b) AND AGREE THAT THE CONSIDERATION PROVIDED BY THE COMPANY IS FAIR AND REASONABLE AND FURTHER AGREE THAT GIVEN THE IMPORTANCE TO THE COMPANY OF ITS CONFIDENTIAL AND PROPRIETARY INFORMATION, THE POST-EMPLOYMENT RESTRICTIONS ON YOUR ACTIVITIES ARE LIKEWISE FAIR AND REASONABLE.

#### 5. Termination of Employment.

- (a) **Vesting.** If you cease to be an employee of the Company or any Subsidiary of the Company for any reason (a "Termination Event") prior to the Vesting Date, then the Award shall terminate on the date on which such Termination Event occurs; provided that, if the reason for your Termination Event is:
  - (i) Death or Disability, then the number of Shares issuable under this Award, if any, shall be determined after the end of the 3-Year Performance Period as if you had not terminated employment, based on actual performance.
  - (ii) Retirement within 12 months prior to the last day of the 3-Year Performance Period, then the number of Shares issuable under this Award, if any, shall be determined after the end of the 3-Year Performance Period as if you had not terminated employment based on actual performance.

If you are regularly scheduled to work less than 20 hours per calendar week for the Company or any Subsidiary of the Company, you will be deemed to have experienced a Termination Event.

- (b) **Retirement.**

(i) For purposes of this Section 5, "Retirement" means the cessation of service as an employee, for any reason other than death, Disability or termination for Cause, if:

(A) you are at least 60 years of age and have at least 10 years of continuous service with the Company and its Subsidiaries;  
and

(B) you have provided advance notice of your retirement as described below, unless a shorter period is approved by the Company's Chief Executive Officer, Chief Human Resources Officer or their respective designees:

(1) If you are employed at the Vice President level or below, you have provided at least 6 months' advance notice of your retirement; or

(2) If you are employed at the Senior Vice President level or above, you have provided at least 12 months' advance notice of your retirement.

The Chief Executive Officer or Chief Legal Officer of the Company shall make a determination if there is a question as to the level of an employee and the applicable notice requirement.

(ii) If you are employed at the Director level or higher as of the date of your Retirement, in addition to the obligations set forth in Section 4 for the period set forth therein, while any portion of this Award remains unvested and for one year after the last vesting event of any equity award held by you at the time of Retirement (the "Restricted Period"), you may not:

(1) perform work of any kind for a Competitor, including as an employee, board member, consultant or otherwise;

(2) perform work for a non-Competitor other than as permitted by clause (iii) below; or

(3) violate any post-employment covenant applicable to you under any agreement in effect with, or policy of, the Company or any of its Subsidiaries (each of (1)-(3) being a "Post-Retirement Violation").

(iii) During the Restricted Period you may work for a non-Competitor; provided that you may not have a role or responsibilities similar to or greater than those which you had while employed by the Company. For the sake of clarity, work for a non-profit and service as a director for a non-Competitor are expressly permitted.

(iv) While this Award is outstanding, as a condition to continued vesting, upon request of the Company, you must certify that you have not engaged in a Post-Retirement Violation and must provide such information as the Company requests in order to verify such certification.

(v) Without limiting any other provision of this Agreement, including Section 4 as applicable, if a Post-Retirement Violation occurs:

(A) vesting of any unvested portion of the Award shall immediately cease;

- (B) any Shares received upon vesting after a Post-Retirement Violation are subject to recoupment (either the actual shares or the current value thereof) if the Post-Retirement Violation was of the nature described in (ii)(2) above;
- (C) the remedies available to the Company under Section 4(e), including recoupment of Shares, shall apply if the Post-Retirement Violation was of the nature described in (ii)(1) or (3) above and occurred during the first 12 months following Retirement; and
- (D) any Shares received upon vesting after Retirement are subject to recoupment (either the actual shares or the current value thereof) if the Post-Retirement Violation was of the nature described in (ii)(1) or (3) above and occurred after the one-year anniversary of your Retirement.
- (vi) All determinations regarding whether you have engaged in a Post-Retirement Violation shall be made by the Compensation Committee.
- (vii) If you die after Retirement and prior to the date that this Award vests, then the provisions of Sections 5(a) and (b) shall continue to apply as if you had not died.
- (c) **Change of Control.** If a Change of Control of the Company occurs prior to the end of the 3-Year Performance Period, then:
- (i) As of the date of the Change of Control, the number Performance Share Units that may be earned will be fixed and determined based on (A) the actual performance for any Performance Periods that have been completed as of the date of the Change of Control and (B) achievement of 150% of target (or where there is no target, assuming the Performance Goal had been met) for any other Performance Periods that have not been completed as of the date of the Change of Control (irrespective of the actual achievement of the Performance Goals as of such date); and
- (ii) Such Performance Shares Units will become vested as of the last day of the 3-Year Performance Period if you remain employed until such date, except as otherwise provided in clause (iii) below, and shall be settled in accordance with Section 7 in the year following the end of the 3-Year Performance Period; or
- (iii) If your employment terminates before the end of the 3-Year Performance Period due to your Retirement (determined solely under Section 5(b)(i)(A)), death, Disability, termination by the Company without Cause or your termination of your employment for Good Reason (as hereinafter defined), then the Performance Share Units shall be vested upon such termination of employment and shall be settled in accordance with Section 7 in the year following the end of the 3-Year Performance Period.

“**Good Reason**” means your suffering any of the following events without your consent: (x) significant or material lessening of your responsibilities; (y) a reduction in your annual base salary or a material reduction in the level of incentive compensation for which you have been eligible during the two years immediately prior to the occurrence of the Change of Control and/or a material adverse change in the conditions governing receipt of such incentive compensation from those that prevailed prior to the occurrence of the Change of Control; or (z) the Company requiring you to be based anywhere other than within 50 miles of your place of employment at the time of the occurrence of the Change of Control, except for reasonably required travel to an extent substantially consistent with your business travel obligations.

- (d) **Service as Director.** For purposes of this Agreement, an employee of the Company, if also serving as a director, will not be deemed to have terminated employment for purposes of this Agreement until his or her service as a director ends, and his or her years of service will be deemed to include years of service as a director.
  - (e) **Termination for Cause.** Notwithstanding anything herein to the contrary, if you are terminated from employment by the Company for Cause, then this Award will forfeit immediately without vesting as of the date of such termination.
  - (f) **No Further Obligation.** The Company will have no further obligations to you under this Agreement if the Award terminates as provided herein.
  - (g) **Separation Agreement.** The provisions of this Section 5 are subject to (and may be amended by) the terms of a written separation agreement entered into between you and the Company or any of its Subsidiaries.
6. **Deferral of Performance Share Units.** If you are eligible to, and properly elect to, defer delivery of all or part of the Shares otherwise issuable under this Award, such deferral will be governed by the Performance Share Unit Deferral Election Form executed by you separately from this Agreement.
7. **Issuance of Shares.** The Company, or its transfer agent, will issue and deliver the Shares to you as soon as practicable after the Vesting Date (pursuant to the terms hereof) with respect to such Shares, or, if a deferral election was made, at the time specified in the Deferral Election Form. If you die before the Company has distributed the Shares due with respect to the vested Performance Share Units, the Company will issue the Shares to your estate or in accordance with applicable laws of descent and distribution. The Shares will be issued and delivered in book entry form, and the Company will not be liable for damages relating to any delays in making an appropriate book entry or any mistakes or errors in the making of the book entry; provided that the Company shall correct any errors caused by it. Any such book entry will be subject to such stop transfer orders and other restrictions as the Company may deem advisable under (a) the Plan and any agreement between you and the Company with respect to this Award or the Shares, (b) any applicable federal or state laws, and/or (c) the rules, regulations and other requirements of the Securities and Exchange Commission ("SEC") or any stock exchange upon which the Shares are listed. The Company may cause an appropriate book entry notation to be made with respect to the Shares to reference any of the foregoing restrictions.
8. **Non-Transferability of Award.** Except as provided in the Plan, this Agreement and the Award Memorandum, until the Shares have been issued under this Award, this Award and the Shares issuable hereunder and the rights and privileges conferred hereby may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated (by operation of law or otherwise). Upon any attempt to transfer, assign, pledge, hypothecate or otherwise dispose of this Award, or of any right or privilege conferred hereby, contrary to the provisions of the Plan or of this Agreement, or upon any attempted sale under any execution, attachment or similar process upon the rights and privileges conferred hereby, this Award and the rights and privileges conferred hereby shall immediately become null and void.
9. **Conditions to Issuance of Shares.** The Shares issued to you hereunder may be either previously authorized but unissued shares or issued shares which have been reacquired by the Company. The Company shall not be required to issue any Shares hereunder prior to fulfillment of all of the following conditions: (a) the admission of such Shares to listing on all stock exchanges on which such class of stock is then listed; (b) the completion of any registration or other qualification of such Shares under any state or federal law or under the rulings or regulations of the SEC or any other governmental regulatory body, which the compensation committee of the Board of Directors (the "Compensation Committee") shall, in its discretion, deem necessary or advisable; (c) the obtaining of any approval or

other clearance from any state or federal governmental agency, which the Compensation Committee shall, in its discretion, determine to be necessary or advisable; (d) the lapse of such reasonable period of time following the date of vesting of the Award or the payment event specified in a deferral election as the Compensation Committee may establish from time to time for reasons of administrative convenience (provided that any such period shall be in compliance with Code Section 409A); and (e) your acceptance of the terms and conditions of this Agreement, the Award Memorandum and the Plan within the time period and in the manner specified in this Agreement.

10. **Dividends; No Rights as Shareholder.** If the Company declares a cash dividend and the dividend record date occurs prior to the Vesting Date, you will be credited with an additional number of Target Units on the date the cash dividends are paid to the Company shareholders equal to (a) the amount of cash dividends payable with respect to a number of shares of stock equal to your Target Units divided by (b) the Fair Market Value of a Share on the date the dividend is paid. Until this Award vests and the Shares are issued to you, you shall have no rights as a shareholder of the Company with respect to the Shares. Specifically, you understand and agree that you do not have voting rights or, except as provided in this Section 10, the right to receive dividends or any other distributions paid with respect to shares of Company common stock by virtue of this Award or the Shares subject hereto.
11. **Addresses for Notices.** Any notice to be given to the Company under the terms of this Agreement shall be addressed to the Company as follows: Corporate Secretary, Fiserv, Inc., 255 Fiserv Drive, Brookfield, WI 53045, or at such other address as the Company may hereafter designate in writing. Any notice to be given to you shall be addressed to you at the address set forth in the Company's records from time to time.
12. **Captions; Agreement Severable.** Captions provided herein are for convenience only and are not to serve as a basis for interpretation or construction of this Agreement. In the event that any provision in this Agreement shall be held invalid or unenforceable, such provision shall be severable from, and such invalidity or unenforceability shall not be construed to have any effect on, the remaining provisions of this Agreement.
13. **Securities and Tax Representations.**
  - (a) You acknowledge receipt of the prospectus under the Registration Statement on Form S-8 with respect to the Plan filed by the Company with the SEC. You represent and agree that you will comply with all applicable laws and Company policies relating to the Plan, this Agreement and any disposition of Shares and that upon the acquisition of any Shares subject to this Award, you will make or enter into such written representations, warranties and agreements as the Company may reasonably request to comply with applicable securities laws or this Agreement.
  - (b) You represent and warrant that you understand the federal, state and local income and employment tax consequences associated with the granting of the Award, the vesting of the Award, the deferral of all or a portion of the Shares otherwise issuable upon vesting of the Award, and the subsequent sale or other disposition of any Shares. You understand and agree that when this Award vests and Shares are issued, and you thereby realize gross income (if any) taxable as compensation in respect of such vesting or issuance, the Company will be required to withhold federal, state and local taxes on the full amount of the compensation income realized by you and may also be required to withhold other amounts as a result of such vesting. You also understand and agree that the Company may be required to withhold certain payroll taxes in connection with your Retirement or your termination due to Disability prior to the issuance of Shares. You hereby agree to provide the Company with cash funds or Shares equal in value to the federal, state and local payroll and income taxes and other amounts required to be withheld by the Company or its Subsidiary in respect of any compensation income or wages in relation to the Award or make other arrangements satisfactory to the Company regarding such amounts, which may include deduction of such taxes from other wages owed to you by the Company or its Subsidiaries. All

matters with respect to the total amount to be withheld shall be determined by the Company in its sole discretion.

14. **Market Stand-Off.** The Company reserves the right to impose restrictions on dispositions in connection with any underwritten public offering by the Company of its equity securities pursuant to an effective registration statement filed under the Securities Act of 1933, as amended. Upon receipt of written notice from the Company of a trading restriction, you agree that you shall not directly or indirectly sell, make any short sale of, loan, hypothecate, pledge, offer, grant or sell any option or other contract for the purchase of, purchase any option or other contract for the sale of, or otherwise dispose of or transfer or agree to engage in any of the foregoing transactions with respect to, any Shares acquired under this Award without the prior written consent of the Company. Such restriction shall be in effect for such period of time following the date of the final prospectus for the offering as may be determined by the Company. In no event, however, shall such period exceed one hundred eighty (180) days.

15. **General Provisions.**

- (a) None of the Plan, this Agreement or the Award Memorandum confers upon you any right to continue to be employed by the Company or any Subsidiary of the Company or limits in any respect any right of the Company or any Subsidiary of the Company to terminate your employment at any time, without liability.
- (b) This Agreement, the Award Memorandum, the Plan and the Restricted Stock Unit Deferral Election Form, if any, contain the entire agreement between the Company and you relating to the Award and the Shares and supersede all prior agreements or understandings relating thereto.
- (c) This Agreement and the Award Memorandum may only be modified, amended or cancelled as provided in the Plan.
- (d) If any one or more provisions of this Agreement or the Award Memorandum is found to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions hereof shall not in any way be affected or impaired thereby.
- (e) Any remedies available to the Company under the Plan or this Agreement are cumulative and are in addition to, and are not affected by, the other rights and remedies available to the Company under the Plan, this Agreement, by law or otherwise.
- (f) This Agreement and the Award Memorandum shall be governed by and construed in accordance with the laws of the State of Wisconsin, without regard to conflict of law provisions.
- (g) The Company agrees, and you agree, to be subject to and bound by all of the terms and conditions of the Plan. The Prospectus for the Plan is accessible on the Company's administrative agent's website ([www.netbenefits.fidelity.com](http://www.netbenefits.fidelity.com)) in the "forms library" and a paper copy is available upon request.
- (h) This Agreement and the Award Memorandum shall be binding upon and inure to the benefit of any successor or assign of the Company and to any heir, distributee, executor, administrator or legal representative entitled by law to your rights hereunder.
- (i) You understand that, under the terms of the Plan, this Agreement and the Award Memorandum, the Company may cancel or rescind this Award and/or the Shares in certain circumstances.

**By selecting the “I accept” box on the website of our administrative agent, you acknowledge your acceptance of, and agreement to be bound by, this Agreement, the Award Memorandum and the Plan.**

**Your acceptance of the terms of this Agreement, the Award Memorandum and the Plan through our administrative agent's website is a condition to your receipt of Shares. You must log on to our administrative agent's website and accept the terms and conditions of this Agreement, the Award Memorandum and the Plan within 120 calendar days of your Award Grant Date. If you do not accept the terms and conditions of this Agreement, the Award Memorandum and the Plan within such time, this Award will be forfeited and immediately terminate.**



## NON-EMPLOYEE DIRECTOR COMPENSATION SCHEDULE

### Overview

A summary of our annual non-employee director compensation is provided below:

Annual Equity	\$192,000 <sup>(1)</sup>
Board Fee	\$ 78,000
Chairman Fee	\$180,000 <sup>(2)</sup>
Committee Fee	\$ 15,000
Committee Chair Fee	\$ 10,000

<sup>(1)</sup> Upon being elected or re-elected as a director, each non-employee director receives such number of restricted stock units as is determined by dividing \$192,000 by the closing price of our common stock on the grant date.

<sup>(2)</sup> The Chairman fee is comprised of (i) \$90,000 in cash and (ii) such number of restricted stock units as is determined by dividing \$90,000 by the closing price of our common stock on the grant date. The Chairman fee is in addition to the standard Board fee and annual equity grant.

Restricted stock units vest 100% on the earlier of (i) the first anniversary of the grant date or (ii) immediately prior to the first annual meeting of shareholders following the grant date.

Committee fees are payable with respect to each committee on which a director serves. All cash fees are payable quarterly in arrears.

### Deferred Compensation Plan

Under our non-employee director deferred compensation plan, each non-employee director may defer up to 100% of his or her cash fees. Based on his or her deferral election, the director is credited with a number of share units at the time he or she would have otherwise received the portion of the fees being deferred. In addition, each non-employee director may defer receipt of up to 100% of shares due upon vesting of restricted stock units, and based on his or her election, the director is credited with one share unit for the receipt of each such share that is deferred. Share units are equivalent to shares of our common stock except that share units have no voting rights.

Upon cessation of service on the board, the director receives a share of our common stock for each share unit. Directors elect whether the shares are received in a lump sum distribution or in annual installments over two to fifteen years, and any fractional share units are paid in cash. Share units credited to a director's account are considered awards granted under the Amended and Restated Fiserv, Inc. 2007 Omnibus Incentive Plan and count against that plan's share reserve.

## SUBSIDIARIES OF FISERV, INC.

Name under which Subsidiary does Business	Jurisdiction of Incorporation
Administradora de Tarjetas S.R.L.	Argentina
ayCash GmbH	Germany
BillMatrix Corporation	Delaware
BluePay Canada, ULC	Canada
BluePay Processing, LLC	Delaware
BUYPASS Inco Corporation	Delaware
CardConnect, LLC	Delaware
Carreker Corporation	Delaware
CashEdge Inc.	Delaware
CDI BluePay Private Limited	India
CESI Holdings, LLC	Delaware
CheckFree Corporation	Delaware
Checkfree Services Corporation	Delaware
CheckFree Solutions Limited	United Kingdom
CheckFreePay Corporation	Connecticut
Clover Network, Inc.	Delaware
Concord Computing Corporation	Delaware
Concord EFS, Inc.	Delaware
Concord Payment Services, Inc.	Georgia
Concord Transaction Services, LLC	Colorado
Corillian Corporation	Oregon
DW Holdings Canada ULC	Canada
Eastern States Bankcard Association Inc.	New York not-for-profit
Eastern States Monetary Services Inc.	New York not-for-profit
Electronic Banking Solutions Limited	Australia
FD do Brasil Soluções de Pagamento Ltda.	Brazil
FDGS Group, LLC	Delaware
FDR Delaware Holdings Limited	United Kingdom
FDR Limited, LLC	Delaware
FDR U.K. Limited	United Kingdom
FDS Holdings, Inc.	Delaware
Federated Union Systems Europe, Limited	Ireland
First Data (China) Co., Ltd.	China
First Data (India) Private Limited	India
First Data (Mauritius) Holding Company	Mauritius
First Data (Singapore) Pte. Ltd.	Singapore
First Data Austria GmbH	Austria
First Data Austria Holdings GmbH	Austria
First Data Canada Ltd.	Canada
First Data Colombia Ltda.	Colombia
First Data Cono Sur SRL	Argentina
First Data Corporation	Delaware
First Data Corporation Australia (Holdings) Pty Limited	Australia

First Data Development Private Ltd	India
First Data Egypt LLC	Egypt
First Data Europe Limited	United Kingdom
First Data Global Services Limited	Ireland
First Data GmbH	Germany
First Data Government Solutions, LP	Delaware
First Data Hardware Services Inc.	California
First Data Holding GmbH	Germany
First Data Holding I (Netherlands) BV	Netherlands
First Data Hong Kong Limited	Hong Kong
First Data Hydra Holdings LLC	Delaware
First Data Insurance Agency Inc.	Delaware
First Data International (Italia) Srl	Italy
First Data International LLC	Delaware
First Data International Luxembourg II S.a.r.l.	Luxembourg
First Data International Luxembourg III S.a.r.l.	Luxembourg
First Data International Luxembourg IV S.a.r.l.	Luxembourg
First Data Merchant Services LLC	Florida
First Data Merchant Solutions (Hellas) Ltd	Greece
First Data Merchant Solutions (Hong Kong) Private Limited	Hong Kong
First Data Merchant Solutions (Macau) Private Limited	Macau
First Data Merchant Solutions (Malaysia) Sdn. Bhd.	Malaysia
First Data Merchant Solutions Australia Pty Ltd	Australia
First Data Merchant Solutions Private Limited (Singapore)	Singapore
First Data Middle East FZ-LLC	UAE
First Data Mobile (Bermuda) Holdings, Ltd.	Bermuda
First Data Mobile Holdings Limited	Ireland
First Data Mobile Payments Limited	Ireland
First Data Mobile Solutions GmbH	Germany
First Data Mobile Solutions Limited	Ireland
First Data Network Australia Limited	Australia
First Data Operations (Austria) GmbH	Austria
First Data Polska S.A.	Poland
First Data Processing, Inc.	Delaware
First Data Procurements México, S. de R.L. de C.V.	Mexico
First Data Real Estate Holdings L.L.C.	Delaware
First Data Receivables, LLC	Delaware
First Data Reporting Services LLC	Delaware
First Data Resources Australia Limited	Australia
First Data Resources Investments Pty Limited	Australia
First Data Resources, LLC	Delaware
First Data Spain Holdings, S.L.	Spain
First Data Technologies, Inc.	Delaware
First Data Trust Company, LLC	Colorado
First Data UK Holdings Limited	United Kingdom
First Data Uruguay S.R.L.	Uruguay
Fiserv Computer Systems, Inc.	Canada
Fiserv CP, LLC	Delaware
Fiserv (Europe) Limited	United Kingdom

Fiserv Global Services, Inc.	Delaware
Fiserv Korea Limited	Korea
Fiserv Lanka (Private) Limited	Sri Lanka
Fiserv Investment Solutions, Inc.	Delaware
Fiserv Solutions, LLC	Wisconsin
Fiserv Slovakia, s.r.o.	Slovakia Republic
FTS (NSW) Pty. Limited	Australia
Funds & Assets Management LLC	New York
Information Technology, Inc.	Nebraska
Integrated Payment Systems Canada Inc.	Canada
Integrated Payment Systems Inc.	Delaware
Inverland Jasper SL	Spain
ITI of Nebraska, Inc.	Nebraska
Marketplace Merchant Solutions Limited	Ireland
Merchant Solutions Private Limited	Bangladesh
MerchantPro Express, LLC	Delaware
Money Network Financial, LLC	Delaware
New Payment Services, Inc.	Georgia
Omnipay Limited	Ireland
PaySys Europe, B.V.	Netherlands
PaySys International Limited	Ireland
PaySys International Pty. Ltd.	Australia
PaySys International, Inc.	Florida
Pegaso Argentina S.R.L.	Argentina
Posnet SRL	Argentina
Research Park Association, Inc.	Florida not-for-profit
Software Express Informatica Ltda	Brazil
Star Networks, Inc.	Delaware
Star Systems Assets, Inc.	Delaware
Star Systems, Inc.	Delaware
TeleCheck International, Inc.	Georgia
TeleCheck Services Canada, Inc.	Canada
TeleCheck Services of Puerto Rico, Inc.	Georgia
TeleCheck Services, Inc.	Delaware
Tissington Limited	Ireland/Luxembourg
TRS Recovery Services, Inc.	Colorado
United Community Payment Systems, LLC	Delaware
XP Systems Corporation	Minnesota
YourPay LLC	Delaware

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in Registration Statement Nos. 333-143191, 333-145599, 333-188795, 333-231868, and 333-235769 on Form S-8, No. 333-229689 on Post-Effective Amendment No. 1 on S-8 to S-4, and No. 333-227436 on Form S-3 of our reports dated February 26, 2021, relating to the consolidated financial statements of Fiserv, Inc. and subsidiaries (the “Company”) and the effectiveness of the Company’s internal control over financial reporting, appearing in this Annual Report on Form 10-K of the Company for the year ended December 31, 2020.

/s/ Deloitte & Touche LLP

Milwaukee, Wisconsin  
February 26, 2021

CERTIFICATION PURSUANT TO SECTION 302  
OF THE SARBANES-OXLEY ACT OF 2002

I, Frank J. Bisignano, certify that:

1. I have reviewed this Annual Report on Form 10-K of Fiserv, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2021

By: /s/ Frank J. Bisignano  
Frank J. Bisignano  
President and Chief Executive Officer

CERTIFICATION PURSUANT TO SECTION 302  
OF THE SARBANES-OXLEY ACT OF 2002

I, Robert W. Hau, certify that:

1. I have reviewed this Annual Report on Form 10-K of Fiserv, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2021

By: /s/ Robert W. Hau  
Robert W. Hau  
Chief Financial Officer

CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Fiserv, Inc. (the "Company") for the year ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Frank J. Bisignano, as President and Chief Executive Officer of the Company, and Robert W. Hau, as Chief Financial Officer of the Company, each hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Frank J. Bisignano  
Frank J. Bisignano  
President and Chief Executive Officer  
February 26, 2021

By: /s/ Robert W. Hau  
Robert W. Hau  
Chief Financial Officer  
February 26, 2021





# **IV&V Plan Assessment of IEDSS SB PLN D03 Project Schedule**

***Adhoc Request  
August 26, 2016***

## Document History

This document is controlled through the Document Management Process. To verify the document is the latest version, please contact the First Data Team.

Date	Version	Reason for Revision
8/24/2016	1.0	Initial draft
8/26/2016	1.1	Draft submission
8/30/2016	1.2	State Comments
9/20/2016	1.3	Tinsley updates

First Data IV&V conducted a review of the Deloitte project schedule dated August 19, 2016. Neither summary activities nor detailed tasks, dependencies nor resource levels support the achievement of critical IEDSS milestones. Please note, the MS Project fields in the posted schedule do not map to standard MS project fields required for the calculation of duration or critical path. As a result, First Data performed a review of the “text” based fields and cannot, with certainty validate the accuracy of the published schedule. Further, the schedule reflects DDI vendor activity ONLY and does not include interdependencies to other activities required to support an IEDSS enterprise implementation. The review and analysis confirms that the schedule is invalid and of little benefit in ascertaining remaining work effort to complete the project.

As a starting point, First Data IV&V reviewed the Project Statistics information page (Figure 1, below), to gain an understanding, at a high level, the status of project progress. Per this screen, the plan reflects that only 9% of the work has been executed. This could be indicative of many issues, for example:

- the plan start and end dates are incorrect
- the plan is not resourced, baselined nor intuitive for task description of work, construct of scope of activities, task durations and dependencies (resulting in questionable interim start and end dates included in the published schedule)

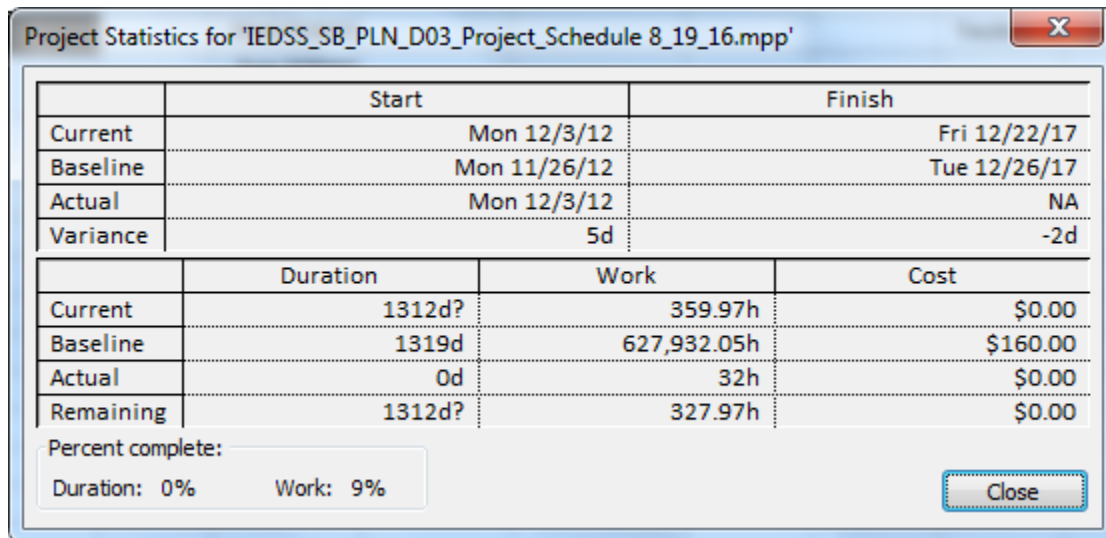


Figure 1: Project Statistics DDI Vendor

Due to a lack of confidence in activities, tasks, durations, dependencies and resources, First Data IV&V believes that the current GANTT representation of the IEDSS project state is invalid. Per the IV&V staff’s analysis of Level 2 or lower tasks, and confirmed by the State, most tasks are incorrectly assigned dates and tasks themselves are either misrepresented or misinterpreted as to levels of effort. First Data reviewed critical work activities to validate accuracy (Testing Execution) and little detail is present to support either modules tested or staff assigned to test and remediate defects. (In addition, the published schedule does not follow the

prescribed Project Management Plan source document presented by vendor at project start, nor does it conform with EVD (Deloitte), PMI (Project Management Institute) or any other Industry Standards inherent in a Plan Schedule having referential integrity within its layout or depiction of all necessary activities to complete project of this magnitude on final end date of 12/17/2017 as shown as a final task item within the plan itself. This project information page shows incorrect start and end dates.

As one can see in the screenshot below, there is no resourcing or resource leveling of staff hours to tasks. There are very few tasks which do have resources assigned.

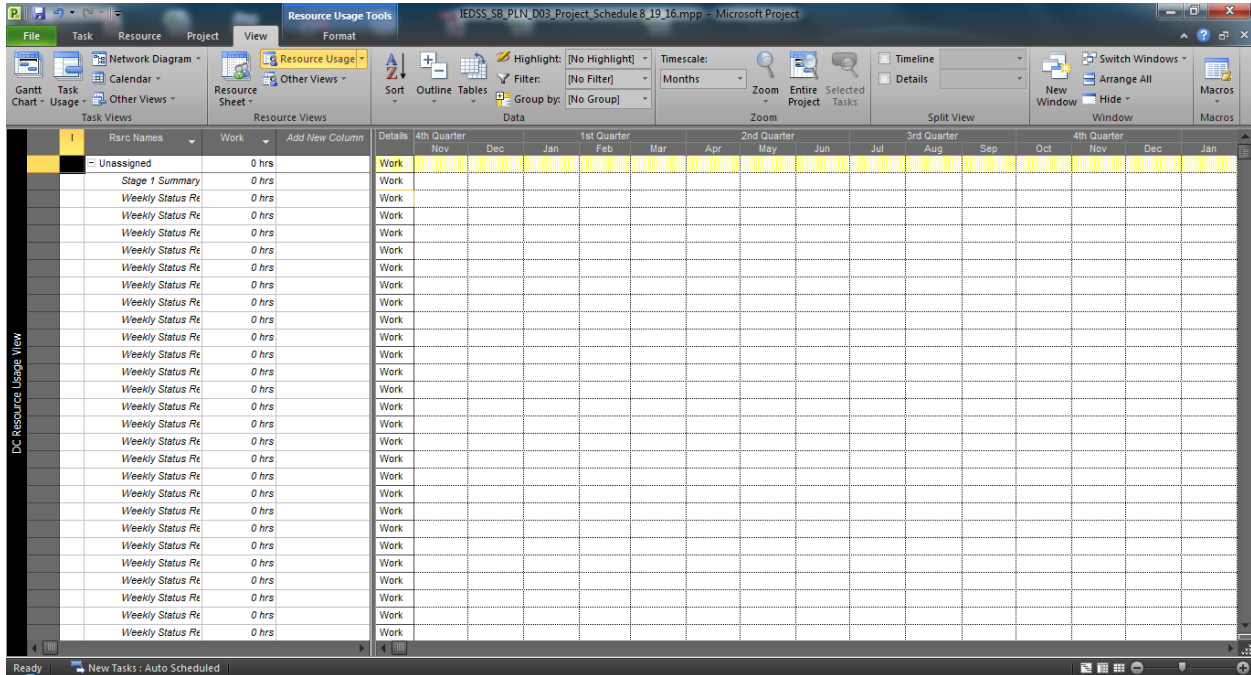


Figure 2: Resource Usage

In addition, the Plan has no critical path capability or view. The tasks have no predecessors or successors the addition of which would lend confidence to the published schedule.

### Verification

The observed version of the project schedule does not contain (or use correctly) all of the required attributes or criteria articulated in the “IEDSS (Updated) Project Plan”-the guiding instrument mandating the development and maintenance of IEDSS Project Schedule structure. See for example Chapter 4 of the IEDSS Project Plan for details on project schedule development criteria and mandated maintenance processes.

The **WBS, Duration, Work, Predecessor, Successor and Resource Name** attributes are not being used, or used incorrectly by the DDI Vendor in this current iteration of the project schedule. These are key elements that provide integrity to the scope and standards of the schedule. As a result of the incorrect use of these elements, other attributes such as ‘**Percent Complete**’ are not accurate or reflective of the ‘work’ left to be completed by the DDI Vendor. Because the **Duration** field is not used correctly by the DDI Vendor, MS Project defaulted the schedule lines that should be ‘tasks’ into project milestones; a Gantt chart is not possible and the task ‘percent complete’ do not align with the parent task or milestone.

With the observed configuration of the project schedule, there is no way to sequence the work packages (tasks) to construct or establish a ‘critical path’ –an essential component of project management. Likewise, it is difficult if not impossible to verify resource scheduling issues for making supporting decisions, or to monitor and manage the progress of the overall project.

### Validation:

The observed project schedule is limited in scope and information and does not have the needed details to be useful as project management tool or a communication device for an endeavor of this size or time duration.

The scope of the reviewed line items are high level and/or do not provide the detail needed to understand the tasks required to complete a particular phase or scope of an activity. For example, under the testing section, many of the modules to be tested are not listed or represented as a task line-this is especially true for Integration and UAT. For some waves in testing, only three lines of task/activities are provided, but represent a work span of two months. While anecdotally the DDI vendor maintains a separate UAT schedule, the activities and updates for this separate schedule is not included in the published DDI vendor schedule.

The schedule does not incorporate or integrate with other vendor partners, rendering it difficult to understand how related enterprise milestones will be met.

When looking at the project schedule, it is difficult to relate the various discussed events such as “Releases”, “Waves” to tasks listed in the schedule.

One purpose of the schedule is for an external stakeholder (CMS, DHHS) to review the latest iteration of a project schedule to understand potential schedule, resource and scope challenges.

**General Observation:** Very few of the 13,000 tasks are resourced.

**Change Requests:** A number of change requests that appear on the deferred change requests spreadsheet (8/11/2016) are not shown in the project schedule.

**Line 7476:** Stage 2 Design complete is shown as having a finish date of 9-20-16.

**Line 8001:** Stage 2 Development complete is shown as being completed by 1/11/2017

**Line 8723:** Stage 2 Security Testing is scheduled to be completed by 12/2/2016.

**Line 8779:** Information Security Risk Assessment has a completion date of 6/29/16. Deliverable review and acceptance has not occurred.

**Line 860:** Stage 2 Project Work Schedule shows 100% complete as of 10/13/2013 which corresponds to the Go Live of Stage 2 for ACA. Given the normal projects events, one would suspect an on-going set of tasks pertaining to the updating of the project schedule. As an example, project schedule updates often occur after CCB meetings.

**Line 883:** One would expect a milestone that indicates the creation and regular updating of the Project Risk Registry. The last entry relating to the Initial Risk Assessment (IRA) is dated 9/25/2013. There is no indication that the IRA was reviewed and/or approved by the client. One would expect that a series of Updating Risk Registry events (updating, review meetings, etc.) would be displayed. As an example, Risk Registry updates usually occur after weekly risk management meetings.

**Line 8863:** Deploy Non-Production Code to UAT environment task is shown as 0% complete with a due date of 8/26/2016. **Line 8866** Execute Test Plan is scheduled to begin on 8/23/2016.

**Line 1146:** Per the schedule, the Stage 2 requirement effort was completed on 1/23/2014. I suspect that new requirements have been identified since then. Per the schedule being reviewed, Releases 3.1 through 4.0 contingency contain 124 CRs (varying complexity). A CR will or should result in the deletion or change to an existing requirement and/or the addition of one or more new requirements.

Given the number of CRs listed in the project schedule, one would expect a series of events pertaining to updating the Requirements Matrix database. In order for testing to be properly executed, test cases must be developed and successfully executed prior to promotion to production.

**Line 900:** Security Requirements are shown as 100% complete as of 11/8/2013. MARS-E 2.0 which the IEDSS must adhere to was not published until 10/10/2015. The task Updated Security Documentation (**line 8810**) indicates that the state has yet to approve the documentation. It is unknown if the documentation contains the additional requirements set forth by MARS-E 2.0.

**Line 12654:** Code Drop 4 dated 3/7/2016. Given the fact that so much is still going on should we not be seeing additional code drops? Perhaps it is a question of definition (code drop) but there is little to support what this task means.

**Line 5168:** Detail System Design is shown as complete as of 12/31/2015. This is inaccurate. In all of the sessions attended to date, the vendor has provided preliminary design documents, not detail design documents.

**Release 5:** There are a number of references to Release 5 in various documents. That stated there is no mention of Release 5 in the project schedule.

**Training:** Training area looks reasonable.

**Line 7903:** QRADAR Procurement and Configuration has a completion date of 8/19/2016. Does QRADAR not have to be in place and configured in order for many aspects of testing (interfaces in particular) to be considered valid, specifically thinking of performance testing during UAT.

Five R4.0 CRs show as JADs do not show 100% complete, are past the finish date of 7/15/16.

Six R4.0 CRs marked as No-JADS do not show 100% complete, are past the finish date listed of 7/15/16.

Some of the above show Deloitte has not resubmitted the documents after State commented, some show they are awaiting State approval, and often a month or more has passed. The accuracy of these should be verified with Deloitte and the State.

Eleven R4.0 contingency CRs are listed yet none are shown as started. The start date is 8/1/16 and end date is 9/15/16 for 6 of them. The other five have a start date of 3/16/16 and an end date of 7/15/16.

Incomplete Benefit Recovery work for R4.0 is not listed.

Stage 2 requirements show complete as of 1/13/14. Requirements have continued long after this date, especially related to CRs.

**Line 13139 – Change Requests – Interfaces:** It has an end date of 3/16/16, however this is under code drop 4, so this end date and nothing under it has a finish date past 10/15/15.

NEBRASKA DEPARTMENT OF HEALTH AND HUMAN SERVICES DIVISION OF MEDICAID  
& LONG TERM SERVICES

# Independent Verification & Validation (IV&V) Services for Data Management and Analytics (DMA) Module

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## System and Business Operations Readiness Review Plan

First Data Government Solutions

9/23/2020



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## Document History

This document is controlled through the Document Management Process. To validate that the document is the latest version, please contact the First Data Team.

Date Complete	Version	Responsible	Reason for Revision
05/14/2020	1.0	Fiserv	First Approved Version
09/08/2020	2.0	Fiserv	Updated with changes since Soft Launch
09/18/2020	2.1	Fiserv	Updated from quality review
09/23/2020	2.2	Fiserv	Updated from final review

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## 1.0 Introduction

### 1.1 Overview

First Data has been engaged to perform Independent Verification and Validation (IV&V) for the State of Nebraska, Department of Health and Human Services (DHHS), and the Data Management and Analytics (DMA) module. The purpose of this engagement is to develop and implement a new data analytics platform.

Deloitte is the solution vendor selected for the DMA project. They are implementing HealthInteractive Analytics (HIA), a cloud-based Service as a Software (SaaS) data warehouse and healthcare analytics tool that provides the users with information to support decision making, program analysis, and operational processes across the Medicaid Enterprise. DHHS staff will use HIA information to accomplish a range of analytical use cases with key objectives to make information widely available, easy to understand, of high quality, and provide the data to help the user make insightful business decisions. The overall goal is to help DHHS improve health care quality, increase efficiency in the delivery of care, and improve patient experience.

### 1.2 Purpose

Operational and System Readiness defines the point at which a developed system, organization, and affected stakeholders are sufficiently prepared to implement a change.

Too often, insufficient preparation stems from an insular vision resulting in unsatisfied project goals and objectives. It is important to recognize that successful operational readiness goes far beyond the system and is the culmination of a process of preparation, review and scrutiny that span the project life cycle.

A System and Business Operations Readiness Review (SaBORR) helps key stakeholders determine if they are ready for system implementation. SaBORR serves as a mechanism to clearly understand the status of each readiness task, identify outstanding items from the Design, Development and Implementation (DDI) phase and evaluate the risk of proceeding (Go/No-Go decision). IV&V will follow this Plan to assess the status and coverage of the various activities and documentation necessary to determine if both the system and the business are ready for implementation to Production. IV&V will deliver a comprehensive report that will be used as input to the Go/No-Go decision. SaBORR also satisfies the federal partner oversight groups that the developed system is operationally ready and prepared to support the business goals defined by project requirements. The precursor to the SaBORR is the SaBORR Plan. The SaBORR Plan provides insight into what areas are assessed and how assessment areas are measured.

The core approach of the SaBORR is a checklist process used for the development of a Go-Live recommendation and support of a Go-Live decision. The checklist process defines the necessary functionality and scenarios to determine readiness in the areas of:

- Business Readiness
  - ✓ Organizational Readiness
  - ✓ User Readiness
  - ✓ Data Readiness
  
- Technology Readiness
  - ✓ Technical Readiness
  - ✓ System Readiness
  - ✓ Implementation Readiness

### 1.3 Roles and Responsibilities

Role	Responsibilities
Deloitte	<ul style="list-style-type: none"> <li>• Develop deliverables defined in the DMA Request for Proposal (RFP)</li> <li>• Develop and execute plans covering readiness activities (e.g. testing, training, operational support)</li> <li>• Provide empirical evidence where required (e.g. defect logs, performance measurements)</li> <li>• System Integration Testing (SIT)</li> <li>• Support training and communication activities</li> <li>• Provide helpdesk support</li> </ul>
DHHS	<ul style="list-style-type: none"> <li>• Review and Approval of DMA Contract Deliverables</li> <li>• Accept SIT releases</li> <li>• User Acceptance Testing (UAT)</li> <li>• Organization Change Management (OCM)</li> <li>• Prepare, schedule, and execute staff training</li> </ul>
IV&V	<ul style="list-style-type: none"> <li>• Independent Third Party Assessment of DMA Deliverables</li> <li>• Develop System and Business Operational Readiness Review Plan and Report</li> <li>• Observe and assess readiness tasks and activities</li> <li>• Prepare and deliver SaBARR Report as input for DHHS Go/No-Go decision</li> </ul>

*Table 1 – Roles and Responsibilities*

## **1.4 Assumptions**

- DHHS and vendor have completed their necessary project responsibilities
- All necessary accesses to conduct IV&V activities will be provided by DHHS
- All the artifacts necessary for Centers for Medicare & Medicaid Services (CMS) certification will be available for review for the DMA IV&V team
- The IV&V contractor will have access to all key staff daily, as needed to observe meetings, review deliverables and documentation, and conduct interviews

## **1.5 Constraints**

- DHHS, Vendor, and IV&V staff primarily working remotely due to COVID-19 pandemic may affect resource availability

## 2.0 References

This section identifies key term and acronym definitions, standards used or referenced by IV&V and references to other relevant documents used during the review.

### 2.1 Definitions

**Error! Reference source not found.** provides acronyms used within this document or may be encountered during the review process.

Acronym	Definition
ADS	Analytics Data Store
ALM	Application Lifecycle Management
AM-PM	Application Management Process Manager
CM	Configuration Management
CMMI	Capability Maturity Model Integration
CMS	Centers for Medicare & Medicaid Services
COVID-19	Coronavirus Disease 2019
DDI	Design, Develop and Implementation
DHHS	Nebraska Department of Health and Human Services
DMA	Data Management and Analytics
EDI	Electronic Data Interchange
ETL	Extract, Transform, Load
HIA	HealthInteractive Analytics
ICDs	Interface Control Documents
IDS	Integrated Data Store
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IMS	Integrated Master Schedule
IS&T	Nebraska DHHS, Information Systems & Technology Division
ISLM	Infrastructure and Solution Lifecycle Management Plan
ISO	International Organization for Standardization
ITIL	Information Technology Infrastructure Library
IV&V	Independent Verification and Validation
KPI	Key Performance Indicator
LMS	Learning Management System

Acronym	Definition
MCE	Managed Care Entity
MECT	Medicaid Enterprise Certification Toolkit
MITA	Medicaid Information Technology Architecture
MLTC	Nebraska DHHS, Division of Medicaid and Long-Term Care
MMIS	Medicaid Management Information System
N/A	Not Applicable
PMC	Project Management Center
PMI	Project Management Institute
PMO	Project Management Office
PMP	Project Management Plan
POAM	Plan of Action and Milestones
RFP	Request for Proposal
RTM	Requirements Traceability Matrix
SaaS	Software as a Service
SaBORR	System and Business Operations Readiness Review
SDLC	Systems Development Life Cycle
SIT	System Integration Testing
SLA	Service Level Agreement
SV	Schedule Variance
TBD	To Be Determined
T-MSIS	Transformed Medicaid Statistical Information System
UAT	User Acceptance Testing
UI	User Interface

*Table 2 - Acronyms*

## 2.2 Standards

The IV&V team may reference or utilize industry best practices or recognized standards during the readiness review. The standards employed by IV&V are drawn from the following recognized standards bodies:

- The Project Management Institute (PMI®)
- The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
- The International Organization for Standardization (ISO)



- The International Electrotechnical Commission (IEC)
- Information Technology Infrastructure Library (ITIL)
- The Capability Maturity Model Integration (CMMI)

## **2.3 Other References**

The IV&V team may utilize other references during the review. Those other references include:

- Medicaid Enterprise Certification Toolkit (MECT) Version 2.3
- Medicaid Information Technology Architecture (MITA) Version 3.0
- Nebraska Request for Proposal (RFP) #5252Z1: Independent Verification and Validation (IV & V)
- First Data response to RFP #5252Z1 dated May 18, 2016
- First Data Verification & Validation Practice Guide Version 1.0
- Nebraska RFP # 5330Z1: Contractor to provide Medicaid Data Management and Analytics (DMA) Services
- Deloitte response to RFP # 5330Z1

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## **3.0 Evaluation Methodology**

The IV&V System and Business Operational Readiness Review Plan covers the evaluation of the Business Readiness and Technical Readiness status of the DMA project geared to launch the new HIA solution. The overall approach to evaluating readiness utilizes both qualitative and quantitative techniques. IV&V will use different methods to collect the data for the report which involves interviewing key DHHS and Vendor staff, reviewing readiness reports, and validating content of key approved deliverables.

Individual readiness criteria have been identified through the review of industry best practices, standards and project deliverables. Each of those criteria are identified below with the source of the criteria, the type of assessment expected to be conducted, and indicators for when the criteria will be reviewed.

### **3.1 Business Readiness**

#### **3.1.1 Organization Readiness**

The IV&V organizational readiness review will focus on the following items:

- Requirements Traceability
- System Integration Testing
- User Acceptance Testing
- Third-Party Testing
- Implementation Deliverables
- Configuration Management
- Project Management
- Vendor Operational Readiness

##### **3.1.1.1 Requirements Traceability**

The Requirements Traceability Matrix (RTM) ties all the business requirements throughout the lifecycle of the project to ensure all requirements are included from project initiation to project completion.

Criteria	Source	Assessment	Soft Launch	Go-Live
Traceability of scoped requirements	Requirements Traceability Matrix	Validate scoped requirements trace throughout the lifecycle by assessing the Requirements Traceability Matrix.	Yes	Yes

**Table 3 - Requirements Traceability**

**3.1.1.2 System Integration Testing**

Integration Testing of the system allows for bugs to be mitigated prior to User Acceptance testing. Defect resolution earlier in the lifecycle is more effective and efficient.

Criteria	Source	Assessment	Soft Launch	Go-Live
Adherence to Comprehensive Test Plan	DDI NE DMA Comprehensive Test Plan, Integrated Master Schedule (IMS), Application Lifecycle Management (ALM)	Validate DDI NE DMA Comprehensive Test Plan is aligned with the IMS and the IMS is complied with.	Yes	Yes
Adherence to the Defect Management Process	DDI NE DMA Comprehensive Test Plan, User Support Plan, ALM, Infrastructure and Solution Lifecycle Management Plan (ISLM)	Validate project is in compliance with the approved defect management process.	Yes	Yes
Mapping of failed SIT scripts to defects	DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Validate failed test scripts in ALM are mapped to defects logged in defect tracking system.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Mitigate open SIT defects	DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Validate the Mitigation Plan and compliance for open SIT defects at Soft Launch and Go-Live.	Yes	Yes

**Table 4 - System Integration Testing**

**3.1.1.3 User Acceptance Testing**

User Acceptance Testing allows the client the opportunity to ensure the system functions as required and identify any issues prior to production.

Criteria	Source	Assessment	Soft Launch	Go-Live
Adherence to the DHHS UAT Plan	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	Validate the UAT Test Plan is followed as outlined in the DDI NE DMA Comprehensive Test Plan and DMA - UAT Test Plan.	Yes	Yes
Maintenance of and Adherence to the Configuration Management Process	DDI NE DMA Infrastructure and Solution Lifecycle Management	Validate the Configuration Management process is maintained adequately and adhered to.	Yes	Yes
Reliability of UAT Execution Results Summary	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	Validate UAT Execution Results Summary is recorded reliably.	Yes	Yes
Acceptance of open UAT defects (Counts, Severity, Mitigation Plan)	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	Validate the plan to mitigate the open UAT defects is acceptable.	Yes	Yes

**Table 5 - User Acceptance Testing**

**3.1.1.4 Third-Party Testing**

Third-Party Testing ensures the system interfaces function as documented and identify any issues prior to production.

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion and Acceptance of Third-Party Inbound Testing	DDI NE DMA Data Sharing Plan, Interface Control Documents (ICDs)	Validate third-party inbound testing is completed satisfactorily.	Yes	Yes
Completion and Acceptance of Third-Party Outbound Testing	DDI NE DMA Data Sharing Plan, ICDs	Validate third-party outbound testing is completed satisfactorily.	Yes	Yes

**Table 6 - Third Party Testing**

**3.1.1.5 Implementation Deliverables**

Various dashboards, checklists, meetings, and other implementation tools help to ensure the implementation is successful.

Criteria	Source	Assessment	Soft Launch	Go-Live
Tracking of Go/No-Go Checklist and adherence to schedule	DDI NE DMA Operational Readiness Plan, Go/No-Go Checklist, IMS	Validate the Go/No-Go Checklist is being tracked and on schedule.	Yes	Yes
Tracking of Deployment Checklist and adherence to schedule	DDI NE DMA Operational Readiness Plan, Deployment checklist, IMS	Validate the Deployment checklist is being tracked and on schedule.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Adherence to Quality Assurance Plan and Procedures	DDI NE DMA Comprehensive Quality Assurance Plan; Quality Assurance Procedures	Validate the Quality Assurance Plan and Quality Procedures are followed appropriately.	Yes	Yes

**Table 7 – Implementation Deliverables**

**3.1.1.6 Configuration Management Process**

Configuration Management (CM) is a systems engineering process for establishing and maintaining consistency of a product's performance, including functional and physical attributes with its requirements, design, and operational information throughout its life cycle.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of the Configuration Management Plan	ISLM	Validate the Configuration Management Plan has been approved.	Yes	Yes
Identification of Configuration Management record items	ISLM	Validate Configuration Management record items have been identified.	Yes	Yes
Maintenance of audit trail and management of access	ISLM	Validate an audit trail is maintained and access is managed.	Yes	Yes
Logging and maintenance of all records	ISLM	Validate all records are logged and maintained at all times.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Compliance of all records with original requirements	ISLM	Validate all records comply with original requirements.	Yes	Yes

*Table 8 – Configuration Management*

### 3.1.1.7 Project Management

Project management is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters. Project management has final deliverables that are constrained to a finite timescale and budget.

Criteria	Source	Assessment	Soft Launch	Go-Live
Occurrence of planning sessions and milestone meetings	IMS	Validate the project team has met for planning sessions and milestone meetings as scheduled and on an ad hoc basis. Utilize the IMS and project status meeting minutes/notes for verification.	Yes	Yes
Adherence to and compliance with the Risk Management Plan	Project Management Plan (PMP), observations, project meeting minutes	Assess adherence to and compliance with the Risk Management Plan, including the identification and logging of risks, severity, mitigation, and tracking to closure. Base the assessment on observations of the project team's compliance performance as well as	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		relevant project status meeting minutes/notes and project dashboards.		
Compliance with Service Level Agreements (SLAs)	DMA Contract and amendments	Validate system readiness testing results support compliance with the approved SLAs.	Yes	Yes
Compliance with response requirements for System Integration Testing (SIT)	Deloitte Operational Readiness Plan, emails, Interviews	Validate compliance with response requirements as per the schedules provided in the Performance Testing section of the Operational Readiness Plan. Base verification on interviews with the Deloitte SIT team lead and/or Deloitte Project Management Office (PMO) lead.	Yes	Yes
Installation and configuration of Performance Testing software prior to system readiness testing	IMS and project status meeting minutes	Validate Performance Testing software was installed and configured prior to system readiness testing. Base verification on a review of relevant IMS Tasks and project status meeting minutes.	Yes	Yes
Connection of Performance Testing	Deloitte Operational Readiness Plan	Assess whether Performance Testing tools were connected with the application	Yes	Yes



Criteria	Source	Assessment	Soft Launch	Go-Live
tools with the application servers		servers and system resource utilization details were received during performance testing. Base the assessment on confirmation with the DMA Information Systems & Technology Division (IS&T) project lead, relevant IMS tasks, and project status meeting minutes.		
Absence of unresolved User Interface (UI) errors	ALM, Interview	Validate that there are no unresolved User Interface (UI) errors identified in the HIA portal. Base verification on confirmation with the DMA IS&T project lead.	Yes	Yes
Compliance with Production environment set-up requirements	Interview	Validate the Production environment was set-up with required application components and objects were deployed prior to the system readiness testing. Base verification on confirmation with the DMA IS&T project lead.	Yes	Yes
Compliance with read-only access requirements for the	Interview	Validate read-only access to the production environment was	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
production environment		provided as required. Base verification on confirmation with the DMA IS&T project lead.		
Availability of at least 12 months of test data in the production environment for system readiness testing	Interview	Validate at least 12 months of test data was available in the production environment to perform system readiness testing. Base verification on confirmation with the DMA IS&T project lead.	Yes	Yes
Execution of HyperCare touch points and Incident Management sessions	IMS and project status meeting minutes	Validate HyperCare touch points and Incident Management sessions were executed. Base verification on relevant IMS tasks and project status meeting minutes/notes.	Yes	Yes
Execution of Decision Point sessions	IMS and project status meeting minutes	Validate Decision Point sessions were executed. Base confirmation on relevant IMS tasks and project status meeting minutes/notes.	Yes	Yes
Evaluation of issues log from Project Management Center (PMC)	PMC, Interview	Validate issues log from PMC was evaluated. Base verification on an interview with the DMA IS&T project lead.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Identification of Project-related dependencies	IMS, Interview	Validate project related dependencies were identified. Base confirmation on analysis of the IMS and an interview with the DMA Medicaid and Long Term Care (MLTC) project lead.	Yes	Yes
Establishment and utilization of Project Governance	IMS, Interview	Validate that Project Governance was established and utilized. Base verification on IMS tasks and an interview with the DMA Project Director.	Yes	Yes

**Table 9 – Project Management**

**3.1.1.8 Vendor Operational Readiness**

Review of the IMS identifies various milestones to indicate the vendor’s readiness to Go-Live as identified in the Project Management Plan. Vendor Readiness drives a successful implementation.

Criteria	Source	Assessment	Soft Launch	Go-Live
Execution of DMA Steering Committee meetings	IMS, Meeting Minutes, Interview	Validate Steering Committee meetings have been executed as expected.	Yes	Yes
Execution of Managed Care Entities (MCE) meetings	IMS, Meeting Minutes	Validate Managed Care Entities meetings have	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		been executed as expected.		
Approval of Communications and Organizational Management Plans	DDI NE DMA Operational Communications Management Plan, IMS, and Meeting Minutes	Validate Communications and Organizational Management Plans were approved.	Yes	Yes
Approval of and compliance with Organizational Change Management (OCM) Readiness	DDI NE DMA Change Management Plan	Validate Organizational Change Management Readiness was approved and complied with.	Yes	Yes
Approval of Data Quality / Data Validations Readiness Mapping	DDI NE DMA Data Governance Plan, IMS	Validate the Data Quality / Data Validations Readiness Mapping plan was approved.	Yes	Yes
Implementation of Deloitte's HyperCare Model approach	DDI NE DMA Operational Readiness Plan, IMS, Meeting Minutes	Validate the implementation of Deloitte's HyperCare Model approach to user support during Soft Launch and Go-Live.	Yes	Yes
Execution of HyperCare Sessions, Touchpoints and Meeting(s)	DDI NE DMA Operational Readiness Plan, IMS, Meeting Minutes.	Validate HyperCare sessions, touchpoints and meeting(s) were executed according to schedule.	Yes	Yes
Approval of Initial milestones	IMS, Meeting Minutes	Validate initial milestones were approved.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Execution of Milestone meetings	IMS, Meeting Minutes	Validate Milestone meetings were executed according to schedule.	Yes	Yes
Execution of Planning Session(s)	IMS, Meeting Minutes	Validate Planning Sessions were executed according to schedule.	Yes	Yes
Approval of Operational Readiness schedule	IMS, Meeting Minutes	Validate Operational Readiness schedule was approved.	Yes	Yes
Execution of Operational Readiness Review Team meetings	IMS, Meeting Minutes	Validate Operational Readiness Review Team meetings were executed according to schedule.	Yes	Yes
Approval of Operational Readiness Milestones and Dates	IMS, Meeting Minutes	Validate Operational Readiness Milestones and Dates were approved.	Yes	Yes
Execution of Operational Readiness Decision Points	IMS, Meeting Minutes	Validate Operational Readiness Decision Points were executed according to schedule.	Yes	Yes
Approval of Operational Readiness Review Team Schedule	IMS, Meeting Minutes	Validate Operational Readiness Review Team schedule was approved.	Yes	Yes
Approval of Resource/Staff Readiness mapping	Project Management Plan	Validate resource/staff readiness mapping was approved.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Tracking and Assessment of Readiness Areas	Readiness Checklist, Go / No-Go Spreadsheet and Dashboard	Validate Readiness areas were tracked and assessed.	Yes	Yes
Approval of HIA and Call Scripting	IMS	Validate HIA and Call Scripting were approved.	Yes	Yes
Loading of UAT Triage meeting tasks in IMS	Deloitte Operational Readiness Plan	Validate UAT Triage meetings tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project UAT lead.	Yes	Yes
Loading of DMA Touchpoints and Incident Management tasks in IMS	IMS, Interview	Validate DHHS Touchpoints and Incident Management tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of MCE Touchpoint tasks in IMS	IMS, Interview	Confirm that MCE Touchpoint tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Incident Management tasks in IMS	IMS, Interview	Validate Incident Management tasks were loaded in IMS. Base verification on an analysis of relevant	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		IMS tasks and an interview with the DMA Project Lead.		
Loading of Incident Management Sessions in IMS	IMS, Interview	Validate Incident Management Sessions were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Decision Sessions in IMS	IMS, Interview	Validate Decision Sessions were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Implementation Checklist tasks in IMS	IMS, Interview	Validate Implementation Checklist tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Technical Readiness Mapping tasks in IMS	IMS, Interview	Validate Technical Readiness Mapping tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Loading of Implementation Readiness Mapping tasks in IMS	IMS, Interview	Validate Implementation Readiness Mapping tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA IS&T Team Lead.	Yes	Yes
Loading of Deployment Checklist tasks in IMS	IMS, Interview	Validate Deployment Checklist tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Deployment Activities and Go/No Go tasks in IMS	IMS, Interview	Validate Deployment Activities and Go/No-Go tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA IS&T Team Lead.	Yes	Yes
Loading of Documentation Readiness Mapping tasks in IMS	IMS, Interview	Validate Documentation Readiness Mapping tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes



Criteria	Source	Assessment	Soft Launch	Go-Live
Loading of Production Ready System tasks in IMS	IMS, Interview	Validate Production Ready System tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA IS&T Team Lead.	Yes	Yes
Loading of Go/No-Go Operational Checklist tasks in IMS	IMS, Interview	Validate Go/No-Go Operational Checklist tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Go/No-Go Checklist tasks in IMS	IMS, Interview	Validate Go/No-Go Checklist tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Go/No-Go Meetings tasks in IMS	IMS, Interview	Validate Go/No-Go Meetings tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Contingency Enactment Readiness Mapping tasks in IMS	IMS, Interview	Validate Contingency Enactment Readiness Mapping tasks were loaded in IMS. Base confirmation on an	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		analysis of relevant IMS tasks and an interview with the DMA Project Lead.		
Loading of Rollback Enactment Readiness Mapping tasks in IMS	IMS, Interview	Validate Rollback Enactment Readiness Mapping tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead.	Yes	Yes
Loading of Project Management stabilization tasks in IMS	IMS, Interview	Validate Project Management stabilization tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead.	Yes	Yes
Completeness of Checklists	IMS, Interview	Validate Checklists included full coverage and all required steps. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead.	Yes	Yes
Appropriate communication	Interview	Validate Checklist communications with stakeholders was appropriate. Base	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
regarding Checklists with stakeholders		confirmation on interviews with stakeholders		
Completeness of Checklist measurements	IMS, Interview	Validate Checklist measurements were complete and appropriate. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead.	Yes	Yes
Functioning of HyperCare Command Center operations	IMS, Interview	Validate HyperCare Command Center was operational and functioning as required. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead and DHHS Business Owners.	Yes	Yes
Functioning of Dashboard Tool operations	IMS, Interview	Validate the Dashboard Tool was operational and functioning as required. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead and DHHS Business Owners.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Functioning of Testing Dashboard Tool operations	IMS, Interview	Validate the Testing Dashboard Tool was operational and functioning as required. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead and DMA Test Lead.	Yes	Yes
Completion of Go/No-Go Item (Mapping to Readiness Topics)	IMS, Interview	Validate Go/No-Go Item (Mapping to Readiness Topics) was completed. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Functioning of Operational Readiness Incident Management process	IMS, Interview	Validate Operational Readiness Incident Management was functional. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Functioning of ALM operations	ALM, Interviews	Validate ALM was operational. Base verification on an analysis of relevant IMS tasks and interviews with the DMA Project and Test Leads.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Functioning of PMC operations	PMC, Interviews	Validate PMC was operational. Base confirmation on an analysis of relevant IMS tasks and interviews with the DMA Project and Test Leads.	Yes	Yes
Documentation and roll out of Incident Management Workflow	IMS, Meeting Minutes, email, Interviews	Validate Incident Management Workflow was documented and rolled out to stakeholders. Base verification on a review of the Incident Management Workflow and an interview with the DMA Project Lead.	Yes	Yes
Functioning of the Manager Dashboard	Inspection, Interviews	Validate the Manager Dashboard was operational. Base confirmation on an inspection of the dashboard and interviews with the DMA Project Lead and DHHS Business Owners.	Yes	Yes
Readiness of User Support	Interview	Validate User Support was ready to assume its role at Go-Live. Base confirmation on an interview with the DMA User Support Team Lead.	Yes	Yes
Functioning of Application	Interview	Validate AM-PM for tracking and	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Management Process Manager (AM-PM)		monitoring was operational. Base confirmation on an interview with the DMA Project IS&T Lead and a demonstration.		

**Table 10 – Vendor Operational Readiness**

### 3.1.2 User Readiness

The IV&V user readiness review will focus on the following items:

- Communication
- Training
- User Support
- User Support Team

#### 3.1.2.1 Communication

Communication Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Operational Communications Management Plan	DDI NE DMA Operational Communications Management Plan	Validate Operational Communications Management Plan was approved.	Yes	Yes
Approval of and adherence to communication	DDI NE DMA Operational Communications	Validate communication review, approval and distribution process	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
review, approval and distribution process	Management Plan, IMS, Meeting Minutes	was executed as planned.		
Approval of roles and responsibilities	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	Validate roles and responsibilities were approved.	Yes	Yes
Approval of Operational Communications List	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	Validate Operational Communications List was approved.	Yes	Yes
Approval of Communications Distribution Lists	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	Validate Communications Distribution Lists were approved.	Yes	Yes
Awareness of HIA by end users	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys, Newsletters, and emails	Validate level of end user awareness of HIA based on review of communication efforts, training activities and user survey results.	Yes	Yes
Effectiveness of promoting end user buy-in	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys	Validate the effectiveness of promoting end user buy-in.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Degree of user acceptance	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys	Validate user acceptance by calculating survey scores and evaluating survey responses.	Yes	Yes

**Table 11 - Communications**

### 3.1.2.2 Training

The purpose of training is to ensure all end users have the knowledge and skills needed to perform their jobs efficiently and smoothly. A Training Plan should identify training goals, learning objectives, learning methods, activities, documentation/evidence of learning and evaluation.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Training Plan	DDI NE DMA Operational Communications Management Plan, Training Plan	Validate Training Plan was approved.	Yes	Yes
Adherence to training schedule	Training Plan, IMS, Meeting Minutes	Validate training schedule was executed as planned.	Yes	Yes
Approval of Learning Management System (LMS) changes	LMS	Validate LMS changes were approved and implemented.	Yes	Yes
Approval of Job Aids and distribution plan	User Document, Training Plan, Job Aids	Validate Job Aids and distribution plan were approved.	Yes	Yes

**Table 12 - Training**



### 3.1.2.3 User Support

User support ensures the end users are provided help when they encounter problems with the system/application. A User Support Plan identifies the teams responsible for providing support and the process used.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to User Support Plan	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate User Support Plan was approved and executed as planned.	Yes	Yes
Approval of and adherence to Service Desk planning and resources	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate Service Desk planning and resources were approved and executed as planned.	Yes	Yes
Approval of and adherence to On-site/Virtual Support upon Soft Launch and Go-Live	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate On-Site/Virtual Support plan for Soft Launch and Go-Live was approved and executed as planned.	Yes	Yes
Approval of and adherence to Security Role Provisions and User Support Team Definitions	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate security role provisions and user support team security role definitions were approved and executed as planned.	Yes	Yes
Approval of and adherence to Resource/Staff Readiness Plan	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate Resource/Staff Readiness Plan, including Incident Management Process, was approved and executed as planned.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Determining Incident Attributes	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate determination of Incident Attributes was approved prior to implementation.	Yes	Yes
Approval of Service Level Standard and Escalation Management process	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate Service Level Standard and Escalation Management process was approved.	Yes	Yes
Approval of Incident Management Key Performance Indicators (KPIs)	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate Incident Management Key Performance Indicators (KPIs) were approved.	Yes	Yes

**Table 13 - User Support**

### 3.1.2.4 User Support Team

User Support Teams provide different levels of support to the end users. Typically, the first level support team provides general help and assistance. If the first level support team is not able to resolve the issue, then the issue is escalated to the next level within the user support structure to research and resolve.

Criteria	Source	Assessment	Soft Launch	Go-Live
Effectiveness of User Support Team training	Interviews	Validate the User Support Team, including the Product Owner(s) and Super User(s) were fully trained and ready to handle assigned duties. Base confirmation on an interview with the	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		User Support Team - Product Owner.		

*Table 14 - User Support Team*

### 3.1.3 Data Readiness

The IV&V data readiness review will focus on the following items:

- Data Governance
- Data Management
- Data Modeling
- Data Conversion
- Data Sharing
- Data Integration
- Data Quality

#### 3.1.3.1 Data Governance

Data Governance comprises collecting, revising and standardizing data, and making it good for use. Governance makes the data consistent. Data Governance ensures that critical data is available at the right time to the right person, in a standardized and reliable form. This infers into better organization of business operations. Adopting and implementing Data Governance can result in improved productivity and efficiency of an organization. IV&V will assess the extent to which DHHS adopts and implements its data governance framework as outlined in the Data Governance Plan.

Criteria	Source	Assessment	Soft Launch	Go-Live
Adoption and implementation of a data governance framework	Interviews	Validate the data governance framework was finalized and ready for Go-Live. Base verification on interviews with the	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		DMA Governance Lead and DMA Project Lead.		

*Table 15 – Data Governance*

### 3.1.3.2 Data Management

Managing data effectively requires having a data strategy, processes, procedures, and reliable methods to access, integrate, cleanse, govern, store and prepare data for analytics. IV&V will assess the extent to which DHHS implements its data strategy, follows its processes and procedures and utilizes reliable methods/tools to manage data for the HIA solution throughout the full data lifecycle.

Criteria	Source	Assessment	Soft Launch	Go-Live
Implementation of data strategy, processes, procedures and methods/tools for data management	Data Management Plan, Data Retention and Archive Plan, Interviews	Validate and assess the implementation of data strategy, processes, procedures and methods/tools for data management.	Yes	Yes
Approval of and adherence to Data Retention and Archive Plan	Data Retention and Archive Plan	Validate Data Retention and Archive Plan was approved and executed as planned.	Yes	Yes

*Table 16 – Data Management*

### 3.1.3.3 Data Modeling

Data modeling helps in the visual representation of data and enforces business rules, regulatory compliances, and government policies on the data. Data Models ensure consistency in naming conventions, default values, semantics, and security while ensuring quality of the data. The emphasis is on what data is needed and how it should be organized instead of what operations need to be performed on the data. IV&V will validate the data modeling process was followed and steps were taken to configure the HealthInteractive solution’s data models to meet DHHS’ needs, as outlined in the Data Modeling Plan.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to data modeling and configuration process	Data Modeling Plan, Conceptual, Logical & Physical Data Models, Interviews	Validate data modeling and configuration process was approved and executed as planned.	Yes	Yes

**Table 17 – Data Modeling**

**3.1.3.4 Data Conversion**

Data conversion is a critical process in the migration of information from existing information databases to new ones that often requires changes in data formats. Data conversion refers to the transformation and transfer of data between different systems to ensure that it is compatible with the new database. IV&V will validate execution of the data conversion and load process as outlined in the Data Conversion and Load Plan, Data Conversion Mappings, Data Transformation Plan, and Data Conversion and Execution Packages.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to data conversion and load process	Data Conversion and Load Plan, Interview	Validate approval of and adherence to Data Conversion and Load Plan and confirm DHHS has accepted the results.	Yes	Yes
Approval of and adherence to processes and routines for data conversion mapping	Data Conversion Mappings, Interview	Validate approval of and adherence to Data Conversion Mappings and confirm DHHS has accepted the results.	Yes	Yes
Approval of and adherence to data transformation process	Data Transformation Plan, Interview	Validate approval of and adherence to Data Transformation Plan and confirm DHHS has accepted the results.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Data Conversion Execution Packages	Data Conversion Execution Packages, Interview	Validate approval of Data Conversion Execution Packages and confirms DHHS has accepted the results and utilized them in determining the Go/No-Go decision.	Yes	Yes

*Table 18 – Data Conversion*

### 3.1.3.5 Data Sharing

Effective and efficient data sharing requires identification of the specific processes involved, roles and responsibilities, stakeholders, interfaces, transfer/extraction procedures, privacy and security protocols, and file retention standards. IV&V will validate execution of the data sharing process as outlined in the Data Sharing Plan.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to data sharing process	Data Sharing Plan, Interview	Validate approval of and adherence to the Data Sharing Plan and confirm DHHS has accepted the results.	Yes	Yes

*Table 19 – Data Sharing*

### 3.1.3.6 Data Integration

Data integration is the process of combining data from different sources into a single, unified view. Integration begins with the ingestion process, and includes steps such as cleansing, Extract, Transform, Load (ETL) mapping, and transformation. Data integration ultimately enables analytics tools to produce effective, actionable business intelligence. IV&V will validate data integration processes as outlined in the Data Integration Plan and assess satisfaction with data integration results.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to data integration process	Data Integration Plan, Interviews	Validate approval of and adherence to the Data Integration Plan and confirm DHHS has accepted the results.	Yes	Yes

**Table 20 – Data Integration**

### 3.1.3.7 Data Quality

Data quality is a measure of the condition of data based on factors such as accuracy, completeness, consistency, reliability and currency (whether it's up to date). Measuring data quality levels can help organizations identify data errors that need to be resolved and assess whether the data is fit to serve its intended purpose. Data quality management is a core component of the overall data management process, and data quality improvement efforts are often closely tied to data governance programs that aim to ensure data is formatted and used consistently throughout an organization. IV&V will validate execution of data quality management framework, processes, procedures and methods/tools as outlined in the Data Governance Plan, Data Management Plan, Comprehensive Quality Assurance Plan and Quality Assurance Procedures project artifacts.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to quality assurance processes and procedures	Comprehensive Quality Assurance Plan, Quality Assurance Procedures, Interview	Validate approval of and adherence to the Comprehensive Quality Assurance Plan and Quality Assurance Procedures.	Yes	Yes

**Table 21 – Data Quality**

## 3.2 Technology Readiness

### 3.2.1 Technical Readiness

The technical readiness review will primarily focus on the infrastructure and technical components of the DMA project. The majority of the infrastructure and technical components will be deployed as part of the Soft Launch deployment.

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of the (12) Pre-Cutover technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (12) Pre-Cutover Soft Launch technical tasks.	Yes	Yes
Completion of the (11) Cutover Prep Activities: HIA Code Migration Activities technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (11) Cutover Prep Activities: HIA Code Migration Activities Soft Launch technical tasks.	Yes	Yes
Completion of the (16) Cutover Prep Activities: Batch Configuration technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (16) Cutover Prep Activities: Batch Configuration Soft Launch technical tasks.	Yes	Yes
Completion of the (6) Cutover Prep Activities: DB Activities technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (6) Cutover Prep Activities: DB Activities Soft Launch technical tasks.	Yes	Yes
Completion of the (4) Cutover Prep Activities: Server	DMA Cutover Plan	Validate the completion status of each of the (4) Cutover	Yes	Yes



Criteria	Source	Assessment	Soft Launch	Go-Live
Operating System technical tasks planned for Soft Launch		Prep Activities: Server Operating System Soft Launch technical tasks.		
Completion of the (2) Cutover Prep Activities: Cloud Access technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (2) Cutover Prep Activities: Cloud Access Soft Launch technical tasks.	Yes	Yes
Completion of the (4) Cutover Prep Activities: Network technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (4) Cutover Prep Activities: Network Soft Launch technical tasks.	Yes	Yes
Completion of the (6) Cutover Prep Activities: Active Directory Management technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (6) Cutover Prep Activities: Active Directory Management Soft Launch technical tasks.	Yes	Yes
Completion of the (8) Cutover Prep Activities: Log Aggregation technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (8) Cutover Prep Activities: Log Aggregation Soft Launch technical tasks.	Yes	Yes
Completion of the (4) Cutover Prep Activities: Alerts technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (4) Cutover Prep Activities: Alerts Soft Launch technical tasks.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of the (33) Cutover Prep Activities: Server Configurations technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (33) Cutover Prep Activities: Server Configurations Soft Launch technical tasks.	Yes	Yes
Completion of the (8) Cutover Prep Activities: Conversion technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (8) Cutover Prep Activities: Conversion Soft Launch technical tasks.	Yes	Yes
Completion of the (8) Cutover Prep Activities: Production Validation technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (8) Cutover Prep Activities: Production Validation Soft Launch technical tasks.	Yes	Yes
Completion of the (2) Cutover Prep Activities: Decisions technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (2) Cutover Prep Activities: Decisions Soft Launch technical tasks.	Yes	Yes
Completion of the (1) Cutover Prep Activities: Medicaid Management Information System (MMIS) task completion for cutover technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (1) Cutover Prep Activities: MMIS task completion for cutover Soft Launch technical tasks.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of the (4) Cutover Prep Activities: Transformed Medicaid Statistical Information System (T-MSIS) Pre-Cutover activities technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (4) Cutover Prep Activities: T-MSIS Pre-Cutover activities Soft Launch technical tasks.	Yes	Yes
Completion of the (3) Cutover technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (3) Cutover Soft Launch technical tasks.	Yes	Yes
Completion of the (6) Rollback technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (6) Rollback Soft Launch technical tasks.	Yes	Yes
Completion of the (4) Post-Cutover technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (4) Post-Cutover Soft Launch technical tasks.	Yes	Yes

**Table 22 – Technical**

### 3.2.2 System Readiness

The system readiness review is focused on comparing the System Readiness Test Plan deliverable to the System Readiness Test Results deliverable. During the review process IV&V will record any items that do not align with the Plan and evaluate the performance measure results.

Criteria	Source	Assessment	Soft Launch	Go-Live
Compliance with System Readiness Test Plan	System Readiness Test Plan, System Readiness Test Results, Interviews	Validate the System Readiness Test Results align with the System Readiness Test Plan. Base confirmation on review of plan/results and interviews with the IS&T Product Owner and DMA Project Lead.	Yes	Yes

*Table 23 – System*

### 3.2.3 Implementation Readiness

The implementation readiness review will focus on the items managed within the Operational Readiness Checklist.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Contingency and Implementation and Contingency plan	Operational Readiness Checklist; Contingency Enactment	Validate Contingency and Implementation and Contingency plan was approved.	Yes	Yes
Approval of server backup procedures	Operational Readiness Checklist; Contingency Enactment	Validate Server backup procedures are in place.	Yes	Yes
Availability of Production code version in code repository	Operational Readiness Checklist; Contingency Enactment	Validate Production code version is available in code repository.	Yes	Yes
Approval of System Security Procedures	Operational Readiness Checklist; Contingency Enactment	Validate System Security Procedures are in place.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of access review and certification for all account types (user, system, service)	Operational Readiness Checklist; Contingency Enactment	Validate access review and certification for all account types (user, system, service) occurred.	Yes	Yes
Completion of vulnerability scan of production environment	Operational Readiness Checklist; Contingency Enactment	Validate vulnerability scan of production environment occurred.	Yes	Yes
Completion of patching of production environment	Operational Readiness Checklist; Contingency Enactment	Validate patching of production environment occurred.	Yes	Yes
Confirmation of geo-fencing	Operational Readiness Checklist; Contingency Enactment	Validate confirmation of geo-fencing occurred.	Yes	Yes
Completion of Plan of Action and Milestones (POAM)	Operational Readiness Checklist; Contingency Enactment	Validate POAM completed.	Yes	Yes
Identification of POAM items	Operational Readiness Checklist; Contingency Enactment	Validate identification of POAM items.	Yes	Yes
Resolution of high POAM items	Operational Readiness Checklist; Contingency Enactment	Validate resolution of high POAM items.	Yes	Yes
Action Plan for POAM Items (< High)	Operational Readiness Checklist; Contingency Enactment	Validate action plans exist for POAM Items (< High).	Yes	Yes
Completion of Help Desk setup	Operational Readiness Checklist; Implementation	Validate Help Desk setup is complete.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of production user role setup	Operational Readiness Checklist; Implementation	Validate user roles were setup in production.	Yes	Yes
Assignment of users to roles	Operational Readiness Checklist; Implementation	Validate assignment of users to roles is complete.	Yes	Yes
MCE encounter submission process	Operational Readiness Checklist; Rollback Enactment	Validate MCE encounter submission process in place.	Yes	Yes
MMIS procedures to receive encounters	Operational Readiness Checklist; Rollback Enactment	Validate MMIS procedures to receive encounters are in place.	Yes	Yes
MMIS procedures to send files to Legacy system	Operational Readiness Checklist; Rollback Enactment	Validate MMIS procedures to send files to Legacy system are in place.	Yes	Yes
Legacy system procedures in case of rollback	Operational Readiness Checklist; Rollback Enactment	Validate Legacy system procedures are in place in case of rollback.	Yes	Yes
Rollback new batches of MMIS created for HIA	Operational Readiness Checklist; Rollback Enactment	Validate Rollback new batches of MMIS created for HIA.	Yes	Yes
Approval of Initial Conversion	Operational Readiness Checklist; Technical	Validate Initial Conversion was approved.	Yes	Yes
Approval of Code Deployment	Operational Readiness Checklist; Technical	Validate Code Deployment was approved.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Mock Production Run	Operational Readiness Checklist; Technical	Validate Mock Production Run was approved.	Yes	Yes
Delivery of DHHS Technical Attestation	Operational Readiness Checklist; Technical	Validate DHHS Technical Attestation was delivered.	Yes	Yes

**Table 24 - Implementation**

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## 4.0 Documentation Methodology

IV&V will create a formal report to summarize the results of the analysis performed and to offer recommendations, as appropriate. The report will also identify outstanding items or concerns and the implications of not resolving those items or concerns prior to Soft Launch and Go-Live. A readiness checklist will be utilized to facilitate the assessment process and to document the level of readiness for specific categories of readiness critical to successful deployment of the HIA solution. The completed readiness checklist will be included in the final readiness review report. There are several inputs that will contribute to the assessment process, including, but not limited to:

- Deloitte Contract
- Project deliverables and artifacts (Deloitte and DHHS)
- Deloitte and IV&V status reports
- Open risks and issues
- Deloitte project plan and work plan
- Stakeholder interviews
- In-person observations
- Implementation Readiness Checklist

### 4.1 Checklists

A readiness checklist will be utilized to facilitate the assessment process and to document the level of readiness for specific categories critical to successful deployment of the HIA solution. The fundamental purpose of the readiness checklist is to assist the assessment team in identifying any implementation readiness gaps, providing recommendations to address any gaps, and providing a recommendation whether the project is ready for implementation. The checklist serves as a mechanism to clearly understand the status of each readiness criteria, identify outstanding items and evaluate the risk of proceeding.

The readiness checklist is an Excel spreadsheet that covers specific categories of business and technology readiness with defined criteria. The checklist includes the following:

- Category and sub-category
- Criteria – specific business or operations criteria being assessed
- Criteria Source - where the criteria originated



- Assessment Guidance – how the criteria will be assessed
- Indicators for when the criteria should be reviewed (e.g. pilot, Soft Launch, Go-Live)

An excerpt from the readiness checklist illustrating this content can be found below:

	A	B	C	D	E	F	G
1	Readiness Criteria Metadata						
2	Category	Sub Category	Criteria	Criteria Source	Assessment Guidance	Sft LUNCH	Go-Live
3	Organization	Requirements Traceability	Requirements Traceability Matrix - Scoped Requirements		Validate requirements trace throughout the lifecycle by assessing the Requirements Traceability Matrix.		
4	Organization	System Integration Testing	Adherence to Comprehensive Test Plan		Validate DDI NE DMA Comprehensive Test Plan is aligned with IMS and IMS is complied with.		
5	Organization	System Integration Testing	Adherence to the Defect Management Process		Validate project is in compliance with DDI NE DMA Quality Assurance Procedures.		
6	Organization	System Integration Testing	Failed SIT scripts mapped to defects		Verify failed test scripts in ALM are mapped to defects logged in defect tracking system.		
7	Organization	System Integration Testing	Mitigation Plan for Open SIT defects		Validate the Mitigation Plan and compliance of it for open SIT defects at soft launch and go-live.		

**Figure 1 - Readiness Checklist Metadata**

The checklist contains additional content for each criteria, including:

- Review Date – prior to review this field may indicate the date the criteria is scheduled for review, once the review is complete this field should indicate the date the review was completed
- Reviewer Name – prior to review this field may indicate the name of person assigned to perform the review, once the review is complete this field should indicate name of person who completed the review
- Review Source – indicate the intended source of the review
- Review Status – indicates the current status of the review, selected from dropdown list (Not Started, Work In Progress, Complete, Other, N/A)

- Review Outcome – outcome of review
- Reviewer Comments – notes from reviewer pertaining to the criteria

An excerpt from the readiness checklist illustrating this content for the Soft-Launch Review can be found below:

Soft Launch Review					
Review Date	Reviewer Name	Review Source	Review Status	Review Outcome	Reviewer Comments
		Requirements Traceability Matrix	Not Started		
		DDI NE DMA Comprehensive Test Plan, Integrated Master Schedule (IMS), Application Lifecycle Management (ALM)	Not Started		
		DDI NE DMA Comprehensive Test Plan, ALM	Not Started		
		DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Not Started		

**Figure 2 - Readiness Checklist Soft Launch**

An excerpt from the readiness checklist illustrating this content for the Go-Live Review can be found below:

Go-Live Review					
Review Date	Reviewer Name	Review Source	Review Status	Review Outcome	Reviewer Comments
		Requirements Traceability Matrix	Not Started		
		DDI NE DMA Comprehensive Test Plan, Integrated Master Schedule (IMS), Application Lifecycle Management (ALM)	Not Started		
		DDI NE DMA Comprehensive Test Plan, ALM	Not Started		
		DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Not Started		

**Figure 3 - Readiness Checklist Go-Live**

## 4.2 Reporting

The fundamental purpose of the readiness report is to provide key stakeholders findings from the readiness review. The report serves as a mechanism to clearly understand the status of each readiness task, outstanding items and evaluate the risk of proceeding with implementation.

The readiness report covers specific areas of readiness with defined criteria; source of the criteria; date, source and outcome of the review; and any additional notes or recommendations for consideration. These specific areas of readiness may be assessed prior to multiple phases of implementation (e.g. pilot, Soft Launch and Go-Live). An excerpt from the readiness report can be found below:

<b>Review Criteria:</b>	<b>Criteria Text Here</b>	
<b>Criteria Source:</b>	Source Text Here	
	Soft-Launch	Go-Live
<b>Review Date:</b>	{N/A or TBD}	{N/A or TBD}
<b>Review Source:</b>	{N/A or TBD}	{N/A or TBD}
<b>Review Outcome:</b>	{N/A or TBD}	{N/A or TBD}
<b>Note:</b>	N/A	

*Table 25 - Readiness Report Example*

### 4.2.1 Soft Launch

The table below depicts the projected timeline of IV&V tasks required to complete the readiness review effort and how they relate to the project’s Go/No-Go decision point for Soft Launch.

<b>Task</b>	<b>Start Date</b>	<b>Finish Date</b>
Conduct readiness review	4/1/2020	5/20/2020
DHHS and vendor interviews	5/21/2020	5/22/2020

Task	Start Date	Finish Date
Compile readiness report	5/22/2020	5/22/2020
Internal quality assurance review	5/26/2020	5/26/2020
Deliver report to DHHS and CMS	5/27/2020	5/27/2020
Go/No-Go decision	5/29/2020	5/29/2020

*Table 26 - Soft Launch Timeline*

### 4.2.2 Go-Live

The table below depicts the projected timeline of IV&V tasks required to complete the readiness review effort and how they relate to the project’s Go/No-Go decision point for Go-Live.

Task	Start Date	Finish Date
Conduct readiness review	9/24/2020	10/16/2020
DHHS and vendor interviews	10/19/2020	10/20/2020
Compile readiness report	10/21/2020	10/21/2020
Internal quality assurance review	10/22/2020	10/22/2020
Deliver report to DHHS and CMS	10/23/2020	10/23/2020
Go/No-Go decision	10/26/2020	10/26/2020

*Table 27 - Go-Live Timeline*

Independent Verification & Validation (IV&V) Post Go-Live  
Stakeholder Interviews – Findings & Recommendations

May 2021

First Data Government Solutions/Fiserv Inc.

7/1/2021

The logo for Fiserv, featuring the word "fiserv." in a bold, lowercase, orange sans-serif font.

## 1.0 Stakeholder Interviews

### 1.1 Summary

In May 2021, the IV&V team conducted nine interviews with stakeholders of the DMA project. The interviewees were asked a series of questions designed to solicit feedback about several areas including:

- Go-live implementation
- First production release
- HIA governance committees
- General concerns
- Potential improvements

The IV&V team then analyzed the results of those interviews to determine any trends across interviews or concerning outlier responses. Once those findings were finalized, the team developed a recommendation on how to address the finding. Those findings and recommendations are included in the next section.

### 1.2 Findings & Recommendations

Findings	Recommendation
Stakeholders expressed the need to continue improving the partnership between the vendor and the State.	IV&V agrees with the State's current approach in addressing partnership improvement.
Stakeholders expressed the need to improve various steps in the project lifecycle process, such as roadmap management, design, gap analysis, testing, and OCM.	IV&V encourages the State and Vendor to utilize the Retrospective Agile process.
Stakeholders expressed the need to improve analytic and user support processes and features.	IV&V encourages the State to enhance analytic and user Support processes and features for the highlighted area's identified by the Stakeholders: <ul style="list-style-type: none"><li>• Improve Audit Balance &amp; Control (ABC) processes</li><li>• Increase clarity on roles and responsibilities (ex: Operating Committee and its members)</li><li>• Improve interaction between OC and SC</li><li>• Promote all claims data into ADS</li><li>• Complete work addressing requirements 427 and 431</li></ul>
Stakeholders expressed the need to improve project and enterprise communication.	IV&V encourages the State to ensure all communications are distributed through all project and enterprise channels effectively.

The IV&V team is available to discuss these findings and recommendations in more detail at the state's request.

## Nebraska IV&V Services

### Weekly Status Report, Week Ending 07/09/2021

1.	Data Management & Analytics .....	1
2.	Federal Data Services Hub (FDSH) - H79 & H138 Attestation .....	2

#### 1. Data Management & Analytics

**Status: Underway**

<b>Findings</b>	<ul style="list-style-type: none"> <li>• IV&amp;V has observed two incidents this week. On July 7, the June 2021 member enrollment file did not complete its load to ADS. On July 8, it was reported that the standard reports links were not pointing to the production environment. These incidents also appear to be causing some issues with user confidence in the solution and underlying data.               <ul style="list-style-type: none"> <li>○ IV&amp;V recommends the vendor complete a Root Cause Analysis (RCA), resolve the two incidents as soon as possible, and establish a comprehensive plan to re-instill user confidence in HIA.</li> </ul> </li> </ul>
<b>Critical Incidents</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Schedule Updates</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Completed Activities</b>	<ul style="list-style-type: none"> <li>• Participated in the following meetings and work sessions:               <ul style="list-style-type: none"> <li>○ Weekly Stand Up – Operations (07/06)</li> <li>○ Nebraska IV&amp;V - Security Touch Point (07/07)</li> <li>○ Weekly NE DMA Certification Meeting (07/07)</li> <li>○ HIA OC Meeting (07/07))</li> <li>○ Weekly NE DMA Certification Meeting (07/08)</li> <li>○ DMA PM Touch Point (07/09)</li> <li>○ ABC Report and Release controls (07/09)</li> </ul> </li> <li>• Reviewed the following project DEDs, Deliverables and other artifacts:               <ul style="list-style-type: none"> <li>○ IMS</li> <li>○ Weekly Project Status Report</li> </ul> </li> <li>• Participated in the following activities as needed:               <ul style="list-style-type: none"> <li>○ Prepared IV&amp;V Monthly Status Report</li> </ul> </li> </ul>
<b>Upcoming Activities</b>	<ul style="list-style-type: none"> <li>• Participate in the following meetings and work sessions:               <ul style="list-style-type: none"> <li>○ Weekly NE Certification Meetings</li> <li>○ Weekly Stand Up Operations</li> <li>○ NE DMA   Project Management Meeting</li> <li>○ NE Bi-weekly MMIS Call with CMS</li> </ul> </li> <li>• Review the following project DEDs, Deliverables and other artifacts:               <ul style="list-style-type: none"> <li>○ IMS</li> <li>○ Implementation Advanced Planning Document Update (IAPDU)</li> <li>○ Weekly Project Status Report</li> <li>○ Monthly Project Status Report</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Participate in the following activities as needed:             <ul style="list-style-type: none"> <li>○ Submit the IV&amp;V Monthly Status Report</li> <li>○ Evaluate project activities for possible risks and issues</li> <li>○ Research Streamlined Modular Certification (SMC) for the DMA project</li> </ul> </li> </ul>
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## 2. Federal Data Services Hub (FDSH) - H79 & H138 Attestation

**Status: Underway**

<b>Findings</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Critical Incidents</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Schedule Updates</b>	<ul style="list-style-type: none"> <li>• Review H79 responses from batch job sent to CMS Hub.</li> </ul>
<b>Completed Activities</b>	<ul style="list-style-type: none"> <li>• On Wednesday, July 8<sup>th</sup>, IV&amp;V began preparing draft Attestation Letter and submitted to FDGS team for review.</li> <li>• On Thursday, July 9<sup>th</sup>, the NE Team currently validating RRV H79.</li> <li>• On Friday, July 10<sup>th</sup>, the NE Team began preparing screen print evidence.</li> </ul>
<b>Upcoming Activities</b>	<ul style="list-style-type: none"> <li>• NE Team to submit Test evidence to IV&amp;V from FDSH testing on Friday, July 2nd.</li> <li>• Observe Testing</li> <li>• Draft Attestation</li> </ul>



## New York IV&V Services

### IES Weekly Status Report, Week Ending 09/20/2019

Program Sponsor: Paul Francis			
Program Director: Ann Roest			
FD Delivery Director	<b>Eric Leach</b>		
FD Project Manager	<b>Mary Fitzgerald</b>	<a href="mailto:Mary.Fitzgerald@its.ny.gov">Mary.Fitzgerald@its.ny.gov</a>	(518) 473-2004
Report Date	09/16/2019-09/20/2019		
Period Ending	09/20/2019		
<b>Overall Project Status</b>	<b>Yellow</b>	<b>Project status is yellow due to the delays associated with the staff augmentation re-bid.</b>	

**Status:**

<b>Findings (Risks/Issues)</b>	1) Risk Register with Mitigation Plan and Issue Log attached
<b>Critical Incidents</b>	1) None
<b>Opportunities</b>	1) Lessons Learned and Best Practices from other states that have ongoing or completed similar projects
<b>IV&amp;V Schedule Updates</b>	<ul style="list-style-type: none"> <li>• No IV&amp;V schedule changes identified this week</li> </ul>
<b>IV&amp;V Completed Activities</b>	<p>Participated in the following activities:</p> <ul style="list-style-type: none"> <li>• Continued preparation of the Q4 Quarterly IV&amp;V Progress Report</li> <li>• Submitted information requests to IES for Q4 Quarterly IV&amp;V Progress Report</li> </ul> <p>Participated in the following meetings and work sessions:</p> <ul style="list-style-type: none"> <li>• Attended the MDU SME Touchpoint Meeting</li> <li>• Participated in the IV&amp;V Questions for NYDocSubmit, OSI, and HRS Technical Teams Meeting</li> <li>• Attended the HRS Status Check Meeting</li> <li>• Attended the IES Program Steering Committee Meeting</li> <li>• Observed the CMS/FNS call; IES reviewed the IV&amp;V Monthly Status Report for August 2019 and provided updates to the NYS Procurments List</li> </ul> <p>Conducted the following interviews:</p> <ul style="list-style-type: none"> <li>• None conducted this week</li> </ul>
<b>IV&amp;V Upcoming Activities</b>	<ul style="list-style-type: none"> <li>• Hearing Replacement System Status Meeting</li> <li>• IES Project Steering Committee Meeting</li> <li>• Weekly CMS/FNS Status Call</li> <li>• IES Claming Call</li> </ul>
<b>Corrective Actions/ Mitigations</b>	<ul style="list-style-type: none"> <li>• None identified this week</li> </ul>



# IV&V Monthly Status Report – July 2021

First Data Government Solutions

Data Management and Analytics (DMA)

August 7, 2021

# Executive Summary

## Report Summary

The overall project health is reflected as green. During the month of July, the State Medicaid Agency (SMA) prepared for the next release of HealthInteractive Analytics (HIA).

The SMA has continued with HIA Steering Committee, HIA Operating Committee and Data Governance Council meetings and plans to formalize a Change Control Board in the near future. The Final Certification Review is scheduled for September 1, 2021.

The SMA and DMA vendor continued to negotiate potential changes addressing a contract letter which was delivered to the DMA vendor on March 22, 2021. Progress towards resolution is expected to conclude with a contract amendment and related changes. IV&V conducted a series of stakeholder interviews resulting in four findings and recommendations for the state's consideration. These are included in the report appendix.

## Engagement Info

State Medicaid Agency (SMA): Nebraska Department of Health and Human Services (DHHS)

Module(s): Data Warehouse, Decision Support System, Encounter Processing, Program Integrity

Certification Approach: Streamlined Modular Certification (SMC)



One or more critical incidents are noted and necessitate escalation to Executive Management or Executive Steering Committee.



All scope, budget, schedule or known project risks/issues are manageable; however one or more risks/issues may necessitate escalation to Executive Management or Executive Steering Committee for intervention and resolution.



All scope, budget, schedule or known project risks/issues are manageable by the project team. Risks are mitigated & issues are resolved within an appropriate period of time.

# Key Focus Areas

**Project Integrity:** Integrated Master Schedule (IMS) reports for In-Flight, Upcoming, Late, and Slipping tasks are distributed on a regular basis. The project management team also continues to meet weekly to discuss several topics (e.g. issues, action items, change requests.) The Steering Committee, Operations Committee, and Data Governance Council continue to meet in accordance with their respective Charters. On July 19, 2021, DHHS MLTC issued a letter to the DMA vendor to formally provide notice of acceptance of the delivery of the Deloitte HIA System

**Solution Integrity:** Incident management meetings are facilitated on a bi-weekly basis. Three incidents occurred involving a June 2021 data load error, Standard Reports link being unavailable, and a dental claims provider ID mapping issue. The DMA vendor plans to conduct a root cause analysis on these incidents and is reviewing with the SMA to determine any next steps. User story design, development, and testing continues for future operational releases. A Provider Ownership Detail Report demonstration was presented in the DEV environment on July 14, 2021. A Quality of Care Reports Design session was held on July 30, 2021.

**Certification:** Although CMS has not provided an official response regarding the Operational Milestone Review (R2), CMS and the SMA have agreed to a Final Certification Review (CR) date of September 1, 2021. Utilizing Streamlined Modular Certification (SMC) for the final phase of certification, CMS and the SMA have agreed to the updated certification criteria and metrics identified in the DMA Intake Form. Development of metrics reporting and compliance statements for the intake form continues. A CR Kickoff Meeting was held on July 29, 2021 to provide an overview of the DMA project, the CR Agenda, Expected Outcomes, the Intake Form, and the Metrics Report.

# New IV&V Observations

## Observation

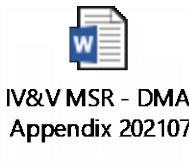
IV&V has observed two incidents this week. On July 7, the June 2021 member enrollment file did not complete its load to ADS. On July 8, it was reported that the standard reports links were not pointing to the production environment. These incidents also appear to be causing some issues with user confidence in the solution and underlying data.

## Recommendation

IV&V recommends the vendor complete a Root Cause Analysis (RCA), resolve the two incidents as soon as possible, and establish a comprehensive plan to re-instill user confidence in HIA.

# Appendix Contents

- IV&V Observations
  - Classification and Actions
  - Open Observations
  - Closed Observations
- IV&V Activities
  - Deliverable and Artifact Reviews
  - Meetings Observed
  - Other Activities
- Stakeholder Interviews
  - Summary
  - Findings & Recommendations



**First Data**  
is now **fiserv.**



**State of New York  
Office of General Services**

**IV&V Monthly Status &  
Recommendations Report  
IES Program  
IES-IVV-1.02**

**March 2019**

**Prepared for: NY IES Program Management**

**Prepared by: First Data NY IES IV&V Team**

**March 31, 2019**



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# 1.0 Executive Overview

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## 1.1 Introduction and Purpose

The purpose of the New York Integrated Eligibility System (IES) Independent Verification and Validation (IV&V) Monthly Status and Recommendations Report is to provide the IES Program leadership, and designated stakeholders, with an independent and objective assessment of critical results, observations, or issues related to the management of the program, its component programs, and the technical aspects of the program.

The observations and recommendations in this report represent a cumulative summary of general assessments, issues and risks logged on a weekly basis, based on information gathered during our work that provide the greatest opportunity for positive impact to the program. Throughout the IES Program's life cycle, the IV&V Team will adhere to the Centers for Medicare and Medicaid Services (CMS) certification guidelines as defined in both the Medicaid Eligibility and Enrollment Toolkit (MEET) and the Medicaid Eligibility and Enrollment Life Cycle (MEELC) collaboratively with program leadership to ensure federal guidelines are met, and develop recommendations that are realistic and achievable within the program constraints.

Note: While maintaining our independence, we strive to work as partners with the IES Program and vendor teams to ensure the achievement of program objectives. However, readers should understand that in our independent verification and validation role, many of our observations and comments are critical in nature, since our objective is to identify areas of the program in need of improvement. Our findings do not generally reflect all of the strengths noted during the execution of our work.

## 1.2 Program Health Dashboard

The Program Health Dashboard provides an At-a-Glance graphical depiction of the overall health of the IES Program. The IV&V Project Manager will work with the IES Program Leadership Team to identify key indicators for the dashboard views.

The following table identifies the status of the IES Program for the current reporting month:

**Table 1 – Overall Program Health**

<b>Healthy [Green]</b>	<ul style="list-style-type: none"> <li>For the current reporting month, the health of the IES Program progressed to a “Healthy Status.” Increased program health is evidenced by the progressive hiring of key IES staff and enhancements to project management documentation, which has been influenced by programmatic changes resulting from Lessons Learned in the termination of the e3209 Automation project. IES is endeavoring to focus their efforts on greater stakeholder engagement in the near term.</li> </ul>
----------------------------	--

The following legend defines the project status categories that will be used to identify the project health in a given reporting month:

**Table 2 – Program Health Dashboard Definitions**

<b>Troubled [Healthy]</b>	<ul style="list-style-type: none"> <li><b>Red</b> - One or more critical incidents are noted and necessitate escalation to the Program Steering Committee.</li> </ul>
<b>At Risk [Yellow]</b>	<ul style="list-style-type: none"> <li><b>Yellow</b> - All scope, budget, schedule or known project risks/issues are manageable; however, one or more risks/issues may necessitate escalation to the Program Steering Committee for intervention and resolution.</li> </ul>
<b>Healthy [Green]</b>	<ul style="list-style-type: none"> <li><b>Green</b> - All scope, budget, schedule or known project risks/issues are manageable by the project team. Risks are mitigated &amp; issues are resolved within an appropriate period of time.</li> </ul>

## 1.3 Monthly Status Summary

### 1.3.1 High Level Observation Status

The general health of the IES Program is currently in a “Healthy Status”; however, during the month of March 2019, there were several observations related to MDU funding and strategic planning that if not resolved in the coming months, could have a negative impact on the program status and IES program overall.

IV&V reported last month that the MDU (Mobile Document Upload) quick win project has achieved increased success, realized through roll outs to additional counties that joined the pilot, with more counties scheduled for subsequent phases. Although progress has been made with MDU, IES and its parent agency recently averted a situation where funding was not appropriated for resources to continue work and support the transition plan. IES continues to work with ITS (parent agency) and the NYS Division of the Budget on funding strategies and resources for the MDU quick win.

IV&V is encouraging IES Program leadership to partner further with key stakeholders to leverage parent agency support and put measures in place that share the accountability for business ownership. This will not be critical to the continued success of the MDU project, but will be paramount for the IES Program as they continue to build Platform and Shared Services.

The Lessons Learned from the termination of the e3209 Automation project has crystalized into a positive learning experience for the IES Program that has also provided timely insight for new leadership staff. IV&V’s expectation is that the new leadership perspectives will help strengthen IES Leadership’s movement toward more effective communication and greater stakeholder engagement and continue to prioritize as part of their leadership approach.

The IV&V observations from the aforementioned activities and review of IES Program deliverables and artifacts reveal that meetings are maintaining a steady cadence with good information sharing and key stakeholder engagement.

The IV&V Team remained consistent with previous months, by participating in various meetings and providing verbal remarks and written commentary in the form of weekly status reports or memorandums outlining observations and recommendations for the following activities or documents: weekly conference calls with CMS/FNS; e3209 Automation closure sessions; lessons learned session; Data Management meetings and Mobile Document Upload (MDU) meetings.

### 1.3.2 Key Observations and Recommendations

The table below illustrates key observations and recommendations that, based on qualitative information gathered during this reporting period, provide the greatest opportunity for positive impact to the program and actionable recommendations for IES Program Leadership. The key Observation and Recommendations cited in the following table is derived from the Observations and Recommendations detailed in Section 4.1. as well as the severity of the risks, issues and or critical incidents cited Sections 3.1, 3.2 and 3.3 that occur in the current month

In the table that follows, the number in the “ID” column indicates the number of the IV&V Monthly Status and Recommendations Report, represented by the first digit, and a unique identifier of the finding within the report following the decimal point. The column labeled “Type” is used to indicate the functional area across the Software Delivery Life Cycle (SDLC) to which the finding and recommendation apply that is also cited in the IV&V Risk Register.

The types associated with each finding and recommendation is defined as follows:

- Tech–Technical
- Bus-Business (Programmatic)
- PM-Project Management
- Scp-Scope
- Sch-Schedule
- Res-Resources
- Fin-Financial
- Org-Organization
- Reg-Regulatory/Legislative/Legal
- Sec-Security
- Pol-Political

**Table 3 – Key Observations and Recommendations – Current Month**

ID	Type	Observations	Recommendation
5	Tech, Bus	<p><b>Funding for MDU Application Transition Plan and Resources:</b></p> <p>When an application’s status changes from active development and initial deployment to operations and maintenance, a transition plan is required to ensure that roles and responsibilities are assigned to, and staffed by, the appropriate units.</p> <p>The MDU project is following a shared development model. One team, consisting of members in the ITS CTO organization, is developing the</p>	<p><b>IV&amp;V Recommendation:</b></p> <p>Identify and appropriate funding to support the execution of the MDU transition plan as well as resources.</p> <p>Re-evaluate projects/work streams to ensure funding has been identified and appropriated/allocated to support transition plans.</p> <p><b>As of March 29, 2019, funding has been appropriated to continue MDU work for an unknown period of time.</b></p>

ID	Type	Observations	Recommendation
		<p>NYDOCS submit mobile app. The second team, consisting of members in the ITS Human Services Business Systems organization is developing the Worker Portal.</p> <p>Although, there is a support plan/transition plan in place, IV&amp;V confirmed that there is currently no planned funding to support the transition plan.</p>	

## 2.0 Federal Review Progress

Currently, IV&V participates in a joint weekly call with CMS and FNS. Key updates from meetings and activity accomplishments are summarized individually for each Federal partner as noted below during the current reporting month:

### **CMS:**

#### Weekly Status Meetings

- The IV&V Team participated in the CMS and FNS weekly calls during the month of March. During attended meetings, the following were reviewed and questions answered:
  - IES presented an organization chart and briefed the team on the roles and responsibilities for each deputy director. Additionally, the weekly call time change was discussed. IES will provide dates and times for possible weekly calls going forward. Finally, legacy rules extraction procurement was presented by IES. IES asked for questions pertaining to the e3209 close out; there no objections from the federal partners.
  - Status on IAPD, PBITS and SI RFP were provided by CMS/FNS.
- There continues to be a respectful and collaborative relationship across all participants.

### **FNS:**

#### Weekly Status Meetings

- IV&V notified the IES Contract Manager of an updated 901 Handbook that was released by FNS.
- The IV&V Team participated in the CMS and FNS weekly calls scheduled this month

## 3.0 Critical Incidents, Issues, and Risks

IV&V provides an independent and unbiased perspective on the progress of NY IES Program development and the integrity and functionality of the system. This perspective includes identification of critical incidents, risks, and issues as the module is planned, developed, and deployed and recommendations to effectively manage these items as described below.

### 3.1 Critical Incidents

A “Critical Incident” is a distinct event or situation that creates a significant risk of substantial impact or serious harm, affecting either the solution, functionality or the project timeline. When a critical incident occurs in a given month, a key observation and recommendation is written to capture IV&V’s analysis of the circumstance. The key finding and recommendation will correspond to the critical incident reported by IV&V. To that end, IV&V determined that the aforementioned reporting measures provide enough substantiation and negates the need for an observation and recommendation in Section 4.0. The following table identifies IES Program critical incidents captured in the current reporting month:

**Table 4 – Tracking Critical Incidents**

#	Title	Description	IV&V Recommendation	Status
2	Funding for MDU work and transition plan.	At several MDU meetings, it was reported that funding for the MDU development activities would cease at the end of March 2019. IV&V confirmed that there is currently no planned funding or resources to support the transition plan.	IV&V recommends that Program Leadership work with its parent agency, state budget division and other key stakeholders to develop a sustainable funding strategy for MDU work and transition plan.	As of March 29, 2019, funding has been appropriated to continue MDU work for an unknown period of time.



## 3.2 Issues Reported this Month

An “Issue” is a problem that is about to occur or is currently occurring and presumed to have detrimental effects on the project. The following table identifies the IES Program issues captured in the current reporting month.

NOTE: Previously reported Issues that remain in an “Open” status can be reviewed in the Issue Log that is embedded as an attachment in Appendix B3.

**Table 5 – Tracking Program Issues**

#	Issue	Status	Priority	Recommended Action
4	<p><b>MDU Funding and Resources for Transition Plan</b> - It was stated at the March 7, 2019 MDU Weekly Status meeting that funding for the Office of Information Technology Services, Chief Technology Office (ITS CTO) development activities will end on March 31, 2019. This has been stated at several prior MDU Weekly Status meetings as well. IV&amp;V confirmed that there is currently no planned funding or resources to support the transition plan. <i>NOTE – This was initially reported as a Risk (#11) on 3/15/19, but was escalated to an issue and subsequently closed.</i></p>	Open	Urgent	<p><b>IV&amp;V Recommendation:</b> IV&amp;V recommends that Program Leadership work with ITS and other stakeholders for funding and resource resolution.</p> <p><b>As of March 29, 2019, funding has been appropriated to continue MDU work for an unknown period of time.</b></p>

### 3.3 Risks

A “Risk” is any unexpected event that might adversely affect people, processes, technology, and resources involved in a project. The following graphic depicts a measurement matrix for how risks are weighted and scored:

Figure 1 – Risk Priority Scoring

		PRIORITY						
		Level of Control						
		5	4	3	2	1		
Weighting (Probability * Impact)	1	0.2	0.25	0.33	0.5	1		Low
	2	0.4	0.5	0.67	1	2		
	3	0.6	0.75	1	1.5	3		
	4	0.8	1	1.33	2	4		Medium
	5	1	1.25	1.67	2.5	5		
	6	1.2	1.5	2	3	6		
	8	1.6	2	2.67	4	8		High
	9	1.8	2.25	3	4.5	9		
	10	2	2.5	3.33	5	10		
	12	2.4	3	4	6	12		
	15	3	3.75	5	7.5	15		
	16	3.2	4	5.33	8	16		
	20	4	5	6.67	10	20		
	21	4.2	5.25	7	10.5	21		
	22	4.4	5.5	7.33	11	22		
	23	4.6	5.75	7.67	11.5	23		
24	4.8	6	8	12	24			
25	5	6.25	8.33	12.5	25			

The following table identifies the “Open” IES Program risks captured in the current reporting month. The risks and recommended mitigation plans in this table directly corresponds to the most recent Risk Register in the reporting month. NOTE: The cumulative list of risks that remain in an “Open” status are noted in Appendix B1 in an embedded spreadsheet.

**Table 6 – Tracking Program Risks**

#	Risk	Probability	Impact	IES Program Mitigation Plan (IV&V Recommendation)
11	<p><b>MDU Funding and Resources for Transition Plan</b> – It was stated at the March 7, 2019 MDU Weekly Status meeting that funding for the Office of Information Technology Services, Chief Technology Office (ITS CTO) development activities will end on March 31, 2019. When an application’s status changes from active development and initial deployment to operations and maintenance, a transition plan is needed to ensure that roles and responsibilities are assigned to, and staffed by, the appropriate units. The MDU project is following a shared development model. One team, consisting of members in the ITS CTO organization, is developing the NYDocSubmit mobile app. The second team, consisting of members in the ITS Human Services Business Systems organization, is developing the Worker Portal. IV&amp;V confirmed that there is currently no funding to execute the MDU transition plan.</p>	4	3	<p><b>IV&amp;V Recommendation:</b> Identify and appropriate funding and resources to support the execution of the MDU transition plan.</p> <p>Re-evaluate projects/work streams to ensure funding and resources have been identified and appropriated/allocated to support transition plans.</p> <p><i>This risk was presented to the state on 3/15/19 and was elevated to an issue on 3/19/19 and noted in Table 5.</i></p>
12	<p><b>MDU Transition Planning (Business owner and Transition Planning)</b> - IV&amp;V reviewed supporting documents for an MDU transition plan and business owner(s). IES has a MDU support plan for current/future operations however there is no transition planning language or a stand-alone transition document that directs how the handoff will be to the business owner(s) and clearly delineates their</p>	3	3	<p><b>IV&amp;V Recommendation:</b> Develop and execute a transition plan for MDU before the first development team (NYDocSubmit) disengages from the project. Re-engage the business owner agencies to provide a representative(s) that has the time, access to resources and authority to act on behalf of the agency. Developing a transition strategy and or plan now will be helpful in the future when the IES</p>

#	Risk	Probability	Impact	IES Program Mitigation Plan (IV&V Recommendation)
	roles and responsibilities. Additionally, no business owner(s) has been identified.			Program moves to and through the various work streams.

## 4.0 Observations & Recommendations

IV&V provides independent and unbiased observations resulting from all IV&V activities. This section includes identified observations and recommendations to effectively manage or avoid potential impediments to IES Program success. Observations and Recommendations are the supporting detail for any Findings and Recommendations documented in Section 1.3.2. The definitions for the types identified in the “Type” column for each observation and recommendation can also be found in Section 1.3.2 above table 3.

### 4.1 Observations Detail: Current Reporting Month

The IV&V Team identified the following observations during the current reporting period and documented the corresponding recommendations:

**Table 7 – Current Month Observations and Recommendations**

ID	TYPE	Observation	Recommendation
<b>Mobile Document Upload (MDU):</b> The IV&V Team attended several MDU meetings during the month of March 2019. The following observations are based on a review of project meeting agendas, minutes, meeting attendance and project documentation.			
<b>TBI</b>	Tech, Bus	<b>Open Source Software:</b> The MDU Project uses two Open Software products: Xamarin Forms and MongoDB. IV&V has not been able to validate that the New York State Information Technology Standard: Patch Management, NYS-S15-001, updated 9/11/2018 has been followed in support of the MDU Project.  If security updates are not installed in a timely manner, MDU and subsequently ITS systems can be at risk to security vulnerabilities.	<b>IV&amp;V Recommendation:</b> IV&V recommends that the State validates that the MDU Project is following the patch update schedule and monitor for updates to MongoDB and Xamarin Forms and apply patches in a timely manner. This recommendation is documented in the New York State Information Technology Standard: Patch Management, NYS-S15-001, updated 9/11/2018.

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## 5.0 IV&V Activities

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The IES Program began development of a Project Partnership Understanding (PPU) agreement in October 2018 and upon its review by FNS and subsequent federal approval, the IV&V Team expects to perform activities in the Medicaid Eligibility and Enrollment Life Cycle (MEELC) as outlined in the Medicaid Eligibility and Enrollment Toolkit (MEET), version 1.1.

The IV&V team discussed R1 Milestone preparation steps and demonstrated First Data's Evidence Tracker Tool to the IES Program management team on March 13, 2019. Future work includes milestone review and evidence tracker tool training for state staff and regular milestone review meetings with the IES Program management team.

On March 22, 2019, the IV&V team met with the IES Contract Manager and the PMO Project Manager to discuss ways of incorporating the MEELC and MEET in the IES System Development Life Cycle. (SDLC).

Additional activities may be required in order to progress throughout the life of the project. IV&V activities performed during this reporting period are outlined in Sections 5.1-5.6

### 5.1 MEELC Artifacts Reviewed

There were no MEELC artifacts presented to IV&V for review in the current reporting period. IV&V will review revisions to existing and new documentation as they are made available.

### 5.2 MEELC Checklist Evidence Reviewed

The PPU is under development by the IES Program. Once approved by CMS and the State, it will outline the checklist set that will be used for the IES Program and reviewed by the IV&V Team.

### 5.3 MEELC IV&V Progress Report

IV&V held several internal meetings in March 2019 to begin development of the Q2 2019 IV&V Progress Report.

### 5.4 Interviews Conducted

The IV&V Team did not conduct interviews during this reporting period.

### 5.5 Meetings Observed

IV&V attended the following meetings during this reporting period:

**Table 8 – List of Meetings Observed for the reporting period**

Meeting	Date(s) and Purpose
<b>Mobile Document Upload</b>	<ul style="list-style-type: none"> <li>▪ March 6, 2019 (MDU/Worker Portal (OSI) Use Case Discussion)</li> <li>▪ March 6, 2019 (MDU Weekly Status Meeting)</li> <li>▪ March 7, 2019 (MDU Status Update with Agencies)</li> <li>▪ March 13, 2019 (MDU Weekly Status Meeting)</li> <li>▪ March 20, 2019 (MDU Weekly Status Meeting)</li> <li>▪ March 27, 2019 (MDU Weekly Status Meeting)</li> </ul>
<b>Data Preparation Meeting</b>	<ul style="list-style-type: none"> <li>▪ March 5, 2019 (Bi-Weekly Data Preparation Agency Status Meeting)</li> </ul>
<b>IES Program Steering Committee Meeting</b>	<ul style="list-style-type: none"> <li>▪ March 7, 2019</li> <li>▪ March 28, 2019</li> </ul>
<b>IES Program Weekly CMS &amp; FNS Calls</b>	<ul style="list-style-type: none"> <li>▪ March 7, 2019</li> <li>▪ March 14, 2019</li> <li>▪ March 21, 2019</li> <li>▪ March 28, 2019</li> </ul>
<b>IES Claiming Meeting</b>	<ul style="list-style-type: none"> <li>▪ The monthly claiming meeting for March was cancelled</li> </ul>
<b>SSD Meeting</b>	<ul style="list-style-type: none"> <li>▪ March 20, 2019</li> </ul>

## 5.6 Other Activities

Additional activities that were performed by the IV&V Team are listed below:

- IES conducted an overview of e3209 Automation project lessons learned with project stakeholders, who were very receptive and engaging concerning lessons learned and how the state can better prepare for future IES endeavors from this quick win experience.
- IV&V provided summary notes from the Healthcare IT Connect conference, held on from the March 18, 2019 to the IES leadership team. First Data participated in the MITA Governance Board and Public Sector Technology Group (PSTG) Agile Best Practices Committee sessions.
- Began development of a FNS Go/No-Go Checkist training for the IES Program staff.

## 5.7 Upcoming Activities

During the month of April 2019, the IV&V Team will perform the following IV&V activities:

- Continue working on the Q2 2019 IV&V Progress Report
- Continue citing point in time observations and recommendations when necessary
- Begin a review of existing program documentation when available
- Continue to attend weekly calls with the State, CMS and FNS
- Continue to attend Program Steering Committee Meetings
- Continue to attend MDU Meetings
- Continue to provide weekly reports to the IES Leadership Team
- Continue to attend the monthly claiming (cost allocation) meeting
- Participate in procurement reviews
- Complete development of the FNS Go/No-Go Checkist training for the IES Program staff



## **6.0 Project Performance Metrics**

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Performance metrics allow tracking of project completion against milestones set by the IES Program Leadership. The IV&V Team intends to initiate diagnostic, predictive, and retrospective analysis of these metrics once the implementation team (e.g. system integrator) is contracted for this project. Until such time, no performance metrics can be reported.

## Appendix A: Cumulative Previously Reported Observations and Recommendations

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This section contains the cumulative IV&V reported Observations and Recommendations with the associated IES Program leadership responses.

### A.1: Previously Reported IV&V Observations and Recommendations

The embedded document contains all observations and recommendations reported by IV&V to date (cumulative).



IVV - IES  
Observation List (4.1)

## Appendix B: Issues and Risks – Open\Closed

As IES Program leadership works collaboratively with IV&V in the identification and resolution of issues and risks, IV&V will track the status of issues and risks cited in monthly reports for continuity and performance monitoring. Section B:1 contains an embedded document that includes the “Open” risks to date that have yet to be resolved by IES Program leadership. Section B:2 contains the “Closed” risks that have been remediated to date. Section B:3 and B:4 included previously reported issues with an “Open” and “Closed” status respectively.

IES Program stakeholders with access to SharePoint can find all IV&V risks and issues with an open and closed status here: [IES SharePoint link to be included when available](#)

### B1: Previously reported Risks – Open Status



NY\_IES\_Program\_Risk\_Register - OPEN (N)

### B2: Previously reported Risks – Closed Status



NY\_IES\_Program\_Risk\_Register - CLOSED

### B3: Previously reported Issues – Open Status



NY IES Program Issue Log - OPEN (M)

### B4: Previously reported Issues – Closed Status



NY IES Program Issue Log - CLOSED

### B5: Previously reported Critical Incidents – Open Status

[N/A]

### B6: Previously reported Critical Incidents – Closed Status

[N/A]

NEBRASKA DEPARTMENT OF HEALTH AND HUMAN SERVICES DIVISION OF MEDICAID  
& LONG TERM SERVICES

# Independent Verification & Validation (IV&V) Services for Data Management and Analytics (DMA) Module

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## System and Business Operations Readiness Review Plan

First Data Government Solutions

9/23/2020



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09/08/2020	2.0	Fiserv	Updated with changes since Soft Launch
09/18/2020	2.1	Fiserv	Updated from quality review
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## 1.0 Introduction

### 1.1 Overview

First Data has been engaged to perform Independent Verification and Validation (IV&V) for the State of Nebraska, Department of Health and Human Services (DHHS), and the Data Management and Analytics (DMA) module. The purpose of this engagement is to develop and implement a new data analytics platform.

Deloitte is the solution vendor selected for the DMA project. They are implementing HealthInteractive Analytics (HIA), a cloud-based Service as a Software (SaaS) data warehouse and healthcare analytics tool that provides the users with information to support decision making, program analysis, and operational processes across the Medicaid Enterprise. DHHS staff will use HIA information to accomplish a range of analytical use cases with key objectives to make information widely available, easy to understand, of high quality, and provide the data to help the user make insightful business decisions. The overall goal is to help DHHS improve health care quality, increase efficiency in the delivery of care, and improve patient experience.

### 1.2 Purpose

Operational and System Readiness defines the point at which a developed system, organization, and affected stakeholders are sufficiently prepared to implement a change.

Too often, insufficient preparation stems from an insular vision resulting in unsatisfied project goals and objectives. It is important to recognize that successful operational readiness goes far beyond the system and is the culmination of a process of preparation, review and scrutiny that span the project life cycle.

A System and Business Operations Readiness Review (SaBORR) helps key stakeholders determine if they are ready for system implementation. SaBORR serves as a mechanism to clearly understand the status of each readiness task, identify outstanding items from the Design, Development and Implementation (DDI) phase and evaluate the risk of proceeding (Go/No-Go decision). IV&V will follow this Plan to assess the status and coverage of the various activities and documentation necessary to determine if both the system and the business are ready for implementation to Production. IV&V will deliver a comprehensive report that will be used as input to the Go/No-Go decision. SaBORR also satisfies the federal partner oversight groups that the developed system is operationally ready and prepared to support the business goals defined by project requirements. The precursor to the SaBORR is the SaBORR Plan. The SaBORR Plan provides insight into what areas are assessed and how assessment areas are measured.

The core approach of the SaBORR is a checklist process used for the development of a Go-Live recommendation and support of a Go-Live decision. The checklist process defines the necessary functionality and scenarios to determine readiness in the areas of:



- Business Readiness
  - ✓ Organizational Readiness
  - ✓ User Readiness
  - ✓ Data Readiness
  
- Technology Readiness
  - ✓ Technical Readiness
  - ✓ System Readiness
  - ✓ Implementation Readiness

### 1.3 Roles and Responsibilities

Role	Responsibilities
Deloitte	<ul style="list-style-type: none"> <li>• Develop deliverables defined in the DMA Request for Proposal (RFP)</li> <li>• Develop and execute plans covering readiness activities (e.g. testing, training, operational support)</li> <li>• Provide empirical evidence where required (e.g. defect logs, performance measurements)</li> <li>• System Integration Testing (SIT)</li> <li>• Support training and communication activities</li> <li>• Provide helpdesk support</li> </ul>
DHHS	<ul style="list-style-type: none"> <li>• Review and Approval of DMA Contract Deliverables</li> <li>• Accept SIT releases</li> <li>• User Acceptance Testing (UAT)</li> <li>• Organization Change Management (OCM)</li> <li>• Prepare, schedule, and execute staff training</li> </ul>
IV&V	<ul style="list-style-type: none"> <li>• Independent Third Party Assessment of DMA Deliverables</li> <li>• Develop System and Business Operational Readiness Review Plan and Report</li> <li>• Observe and assess readiness tasks and activities</li> <li>• Prepare and deliver SaBARR Report as input for DHHS Go/No-Go decision</li> </ul>

*Table 1 – Roles and Responsibilities*

## **1.4 Assumptions**

- DHHS and vendor have completed their necessary project responsibilities
- All necessary accesses to conduct IV&V activities will be provided by DHHS
- All the artifacts necessary for Centers for Medicare & Medicaid Services (CMS) certification will be available for review for the DMA IV&V team
- The IV&V contractor will have access to all key staff daily, as needed to observe meetings, review deliverables and documentation, and conduct interviews

## **1.5 Constraints**

- DHHS, Vendor, and IV&V staff primarily working remotely due to COVID-19 pandemic may affect resource availability

## 2.0 References

This section identifies key term and acronym definitions, standards used or referenced by IV&V and references to other relevant documents used during the review.

### 2.1 Definitions

**Error! Reference source not found.** provides acronyms used within this document or may be encountered during the review process.

Acronym	Definition
ADS	Analytics Data Store
ALM	Application Lifecycle Management
AM-PM	Application Management Process Manager
CM	Configuration Management
CMMI	Capability Maturity Model Integration
CMS	Centers for Medicare & Medicaid Services
COVID-19	Coronavirus Disease 2019
DDI	Design, Develop and Implementation
DHHS	Nebraska Department of Health and Human Services
DMA	Data Management and Analytics
EDI	Electronic Data Interchange
ETL	Extract, Transform, Load
HIA	HealthInteractive Analytics
ICDs	Interface Control Documents
IDS	Integrated Data Store
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IMS	Integrated Master Schedule
IS&T	Nebraska DHHS, Information Systems & Technology Division
ISLM	Infrastructure and Solution Lifecycle Management Plan
ISO	International Organization for Standardization
ITIL	Information Technology Infrastructure Library
IV&V	Independent Verification and Validation
KPI	Key Performance Indicator
LMS	Learning Management System

Acronym	Definition
MCE	Managed Care Entity
MECT	Medicaid Enterprise Certification Toolkit
MITA	Medicaid Information Technology Architecture
MLTC	Nebraska DHHS, Division of Medicaid and Long-Term Care
MMIS	Medicaid Management Information System
N/A	Not Applicable
PMC	Project Management Center
PMI	Project Management Institute
PMO	Project Management Office
PMP	Project Management Plan
POAM	Plan of Action and Milestones
RFP	Request for Proposal
RTM	Requirements Traceability Matrix
SaaS	Software as a Service
SaBORR	System and Business Operations Readiness Review
SDLC	Systems Development Life Cycle
SIT	System Integration Testing
SLA	Service Level Agreement
SV	Schedule Variance
TBD	To Be Determined
T-MSIS	Transformed Medicaid Statistical Information System
UAT	User Acceptance Testing
UI	User Interface

*Table 2 - Acronyms*

## 2.2 Standards

The IV&V team may reference or utilize industry best practices or recognized standards during the readiness review. The standards employed by IV&V are drawn from the following recognized standards bodies:

- The Project Management Institute (PMI®)
- The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
- The International Organization for Standardization (ISO)

- The International Electrotechnical Commission (IEC)
- Information Technology Infrastructure Library (ITIL)
- The Capability Maturity Model Integration (CMMI)

## **2.3 Other References**

The IV&V team may utilize other references during the review. Those other references include:

- Medicaid Enterprise Certification Toolkit (MECT) Version 2.3
- Medicaid Information Technology Architecture (MITA) Version 3.0
- Nebraska Request for Proposal (RFP) #5252Z1: Independent Verification and Validation (IV & V)
- First Data response to RFP #5252Z1 dated May 18, 2016
- First Data Verification & Validation Practice Guide Version 1.0
- Nebraska RFP # 5330Z1: Contractor to provide Medicaid Data Management and Analytics (DMA) Services
- Deloitte response to RFP # 5330Z1

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## **3.0 Evaluation Methodology**

The IV&V System and Business Operational Readiness Review Plan covers the evaluation of the Business Readiness and Technical Readiness status of the DMA project geared to launch the new HIA solution. The overall approach to evaluating readiness utilizes both qualitative and quantitative techniques. IV&V will use different methods to collect the data for the report which involves interviewing key DHHS and Vendor staff, reviewing readiness reports, and validating content of key approved deliverables.

Individual readiness criteria have been identified through the review of industry best practices, standards and project deliverables. Each of those criteria are identified below with the source of the criteria, the type of assessment expected to be conducted, and indicators for when the criteria will be reviewed.

### **3.1 Business Readiness**

#### **3.1.1 Organization Readiness**

The IV&V organizational readiness review will focus on the following items:

- Requirements Traceability
- System Integration Testing
- User Acceptance Testing
- Third-Party Testing
- Implementation Deliverables
- Configuration Management
- Project Management
- Vendor Operational Readiness

##### **3.1.1.1 Requirements Traceability**

The Requirements Traceability Matrix (RTM) ties all the business requirements throughout the lifecycle of the project to ensure all requirements are included from project initiation to project completion.

Criteria	Source	Assessment	Soft Launch	Go-Live
Traceability of scoped requirements	Requirements Traceability Matrix	Validate scoped requirements trace throughout the lifecycle by assessing the Requirements Traceability Matrix.	Yes	Yes

**Table 3 - Requirements Traceability**

### 3.1.1.2 System Integration Testing

Integration Testing of the system allows for bugs to be mitigated prior to User Acceptance testing. Defect resolution earlier in the lifecycle is more effective and efficient.

Criteria	Source	Assessment	Soft Launch	Go-Live
Adherence to Comprehensive Test Plan	DDI NE DMA Comprehensive Test Plan, Integrated Master Schedule (IMS), Application Lifecycle Management (ALM)	Validate DDI NE DMA Comprehensive Test Plan is aligned with the IMS and the IMS is complied with.	Yes	Yes
Adherence to the Defect Management Process	DDI NE DMA Comprehensive Test Plan, User Support Plan, ALM, Infrastructure and Solution Lifecycle Management Plan (ISLM)	Validate project is in compliance with the approved defect management process.	Yes	Yes
Mapping of failed SIT scripts to defects	DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Validate failed test scripts in ALM are mapped to defects logged in defect tracking system.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Mitigate open SIT defects	DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Validate the Mitigation Plan and compliance for open SIT defects at Soft Launch and Go-Live.	Yes	Yes

*Table 4 - System Integration Testing*

### 3.1.1.3 User Acceptance Testing

User Acceptance Testing allows the client the opportunity to ensure the system functions as required and identify any issues prior to production.

Criteria	Source	Assessment	Soft Launch	Go-Live
Adherence to the DHHS UAT Plan	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	Validate the UAT Test Plan is followed as outlined in the DDI NE DMA Comprehensive Test Plan and DMA - UAT Test Plan.	Yes	Yes
Maintenance of and Adherence to the Configuration Management Process	DDI NE DMA Infrastructure and Solution Lifecycle Management	Validate the Configuration Management process is maintained adequately and adhered to.	Yes	Yes
Reliability of UAT Execution Results Summary	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	Validate UAT Execution Results Summary is recorded reliably.	Yes	Yes
Acceptance of open UAT defects (Counts, Severity, Mitigation Plan)	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	Validate the plan to mitigate the open UAT defects is acceptable.	Yes	Yes



**Table 5 - User Acceptance Testing**

**3.1.1.4 Third-Party Testing**

Third-Party Testing ensures the system interfaces function as documented and identify any issues prior to production.

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion and Acceptance of Third-Party Inbound Testing	DDI NE DMA Data Sharing Plan, Interface Control Documents (ICDs)	Validate third-party inbound testing is completed satisfactorily.	Yes	Yes
Completion and Acceptance of Third-Party Outbound Testing	DDI NE DMA Data Sharing Plan, ICDs	Validate third-party outbound testing is completed satisfactorily.	Yes	Yes

**Table 6 - Third Party Testing**

**3.1.1.5 Implementation Deliverables**

Various dashboards, checklists, meetings, and other implementation tools help to ensure the implementation is successful.

Criteria	Source	Assessment	Soft Launch	Go-Live
Tracking of Go/No-Go Checklist and adherence to schedule	DDI NE DMA Operational Readiness Plan, Go/No-Go Checklist, IMS	Validate the Go/No-Go Checklist is being tracked and on schedule.	Yes	Yes
Tracking of Deployment Checklist and adherence to schedule	DDI NE DMA Operational Readiness Plan, Deployment checklist, IMS	Validate the Deployment checklist is being tracked and on schedule.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Adherence to Quality Assurance Plan and Procedures	DDI NE DMA Comprehensive Quality Assurance Plan; Quality Assurance Procedures	Validate the Quality Assurance Plan and Quality Procedures are followed appropriately.	Yes	Yes

**Table 7 – Implementation Deliverables**

**3.1.1.6 Configuration Management Process**

Configuration Management (CM) is a systems engineering process for establishing and maintaining consistency of a product's performance, including functional and physical attributes with its requirements, design, and operational information throughout its life cycle.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of the Configuration Management Plan	ISLM	Validate the Configuration Management Plan has been approved.	Yes	Yes
Identification of Configuration Management record items	ISLM	Validate Configuration Management record items have been identified.	Yes	Yes
Maintenance of audit trail and management of access	ISLM	Validate an audit trail is maintained and access is managed.	Yes	Yes
Logging and maintenance of all records	ISLM	Validate all records are logged and maintained at all times.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Compliance of all records with original requirements	ISLM	Validate all records comply with original requirements.	Yes	Yes

*Table 8 – Configuration Management*

### 3.1.1.7 Project Management

Project management is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters. Project management has final deliverables that are constrained to a finite timescale and budget.

Criteria	Source	Assessment	Soft Launch	Go-Live
Occurrence of planning sessions and milestone meetings	IMS	Validate the project team has met for planning sessions and milestone meetings as scheduled and on an ad hoc basis. Utilize the IMS and project status meeting minutes/notes for verification.	Yes	Yes
Adherence to and compliance with the Risk Management Plan	Project Management Plan (PMP), observations, project meeting minutes	Assess adherence to and compliance with the Risk Management Plan, including the identification and logging of risks, severity, mitigation, and tracking to closure. Base the assessment on observations of the project team's compliance performance as well as	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		relevant project status meeting minutes/notes and project dashboards.		
Compliance with Service Level Agreements (SLAs)	DMA Contract and amendments	Validate system readiness testing results support compliance with the approved SLAs.	Yes	Yes
Compliance with response requirements for System Integration Testing (SIT)	Deloitte Operational Readiness Plan, emails, Interviews	Validate compliance with response requirements as per the schedules provided in the Performance Testing section of the Operational Readiness Plan. Base verification on interviews with the Deloitte SIT team lead and/or Deloitte Project Management Office (PMO) lead.	Yes	Yes
Installation and configuration of Performance Testing software prior to system readiness testing	IMS and project status meeting minutes	Validate Performance Testing software was installed and configured prior to system readiness testing. Base verification on a review of relevant IMS Tasks and project status meeting minutes.	Yes	Yes
Connection of Performance Testing	Deloitte Operational Readiness Plan	Assess whether Performance Testing tools were connected with the application	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
tools with the application servers		servers and system resource utilization details were received during performance testing. Base the assessment on confirmation with the DMA Information Systems & Technology Division (IS&T) project lead, relevant IMS tasks, and project status meeting minutes.		
Absence of unresolved User Interface (UI) errors	ALM, Interview	Validate that there are no unresolved User Interface (UI) errors identified in the HIA portal. Base verification on confirmation with the DMA IS&T project lead.	Yes	Yes
Compliance with Production environment set-up requirements	Interview	Validate the Production environment was set-up with required application components and objects were deployed prior to the system readiness testing. Base verification on confirmation with the DMA IS&T project lead.	Yes	Yes
Compliance with read-only access requirements for the	Interview	Validate read-only access to the production environment was	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
production environment		provided as required. Base verification on confirmation with the DMA IS&T project lead.		
Availability of at least 12 months of test data in the production environment for system readiness testing	Interview	Validate at least 12 months of test data was available in the production environment to perform system readiness testing. Base verification on confirmation with the DMA IS&T project lead.	Yes	Yes
Execution of HyperCare touch points and Incident Management sessions	IMS and project status meeting minutes	Validate HyperCare touch points and Incident Management sessions were executed. Base verification on relevant IMS tasks and project status meeting minutes/notes.	Yes	Yes
Execution of Decision Point sessions	IMS and project status meeting minutes	Validate Decision Point sessions were executed. Base confirmation on relevant IMS tasks and project status meeting minutes/notes.	Yes	Yes
Evaluation of issues log from Project Management Center (PMC)	PMC, Interview	Validate issues log from PMC was evaluated. Base verification on an interview with the DMA IS&T project lead.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Identification of Project-related dependencies	IMS, Interview	Validate project related dependencies were identified. Base confirmation on analysis of the IMS and an interview with the DMA Medicaid and Long Term Care (MLTC) project lead.	Yes	Yes
Establishment and utilization of Project Governance	IMS, Interview	Validate that Project Governance was established and utilized. Base verification on IMS tasks and an interview with the DMA Project Director.	Yes	Yes

**Table 9 – Project Management**

**3.1.1.8 Vendor Operational Readiness**

Review of the IMS identifies various milestones to indicate the vendor’s readiness to Go-Live as identified in the Project Management Plan. Vendor Readiness drives a successful implementation.

Criteria	Source	Assessment	Soft Launch	Go-Live
Execution of DMA Steering Committee meetings	IMS, Meeting Minutes, Interview	Validate Steering Committee meetings have been executed as expected.	Yes	Yes
Execution of Managed Care Entities (MCE) meetings	IMS, Meeting Minutes	Validate Managed Care Entities meetings have	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		been executed as expected.		
Approval of Communications and Organizational Management Plans	DDI NE DMA Operational Communications Management Plan, IMS, and Meeting Minutes	Validate Communications and Organizational Management Plans were approved.	Yes	Yes
Approval of and compliance with Organizational Change Management (OCM) Readiness	DDI NE DMA Change Management Plan	Validate Organizational Change Management Readiness was approved and complied with.	Yes	Yes
Approval of Data Quality / Data Validations Readiness Mapping	DDI NE DMA Data Governance Plan, IMS	Validate the Data Quality / Data Validations Readiness Mapping plan was approved.	Yes	Yes
Implementation of Deloitte's HyperCare Model approach	DDI NE DMA Operational Readiness Plan, IMS, Meeting Minutes	Validate the implementation of Deloitte's HyperCare Model approach to user support during Soft Launch and Go-Live.	Yes	Yes
Execution of HyperCare Sessions, Touchpoints and Meeting(s)	DDI NE DMA Operational Readiness Plan, IMS, Meeting Minutes.	Validate HyperCare sessions, touchpoints and meeting(s) were executed according to schedule.	Yes	Yes
Approval of Initial milestones	IMS, Meeting Minutes	Validate initial milestones were approved.	Yes	Yes



Criteria	Source	Assessment	Soft Launch	Go-Live
Execution of Milestone meetings	IMS, Meeting Minutes	Validate Milestone meetings were executed according to schedule.	Yes	Yes
Execution of Planning Session(s)	IMS, Meeting Minutes	Validate Planning Sessions were executed according to schedule.	Yes	Yes
Approval of Operational Readiness schedule	IMS, Meeting Minutes	Validate Operational Readiness schedule was approved.	Yes	Yes
Execution of Operational Readiness Review Team meetings	IMS, Meeting Minutes	Validate Operational Readiness Review Team meetings were executed according to schedule.	Yes	Yes
Approval of Operational Readiness Milestones and Dates	IMS, Meeting Minutes	Validate Operational Readiness Milestones and Dates were approved.	Yes	Yes
Execution of Operational Readiness Decision Points	IMS, Meeting Minutes	Validate Operational Readiness Decision Points were executed according to schedule.	Yes	Yes
Approval of Operational Readiness Review Team Schedule	IMS, Meeting Minutes	Validate Operational Readiness Review Team schedule was approved.	Yes	Yes
Approval of Resource/Staff Readiness mapping	Project Management Plan	Validate resource/staff readiness mapping was approved.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Tracking and Assessment of Readiness Areas	Readiness Checklist, Go / No-Go Spreadsheet and Dashboard	Validate Readiness areas were tracked and assessed.	Yes	Yes
Approval of HIA and Call Scripting	IMS	Validate HIA and Call Scripting were approved.	Yes	Yes
Loading of UAT Triage meeting tasks in IMS	Deloitte Operational Readiness Plan	Validate UAT Triage meetings tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project UAT lead.	Yes	Yes
Loading of DMA Touchpoints and Incident Management tasks in IMS	IMS, Interview	Validate DHHS Touchpoints and Incident Management tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of MCE Touchpoint tasks in IMS	IMS, Interview	Confirm that MCE Touchpoint tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Incident Management tasks in IMS	IMS, Interview	Validate Incident Management tasks were loaded in IMS. Base verification on an analysis of relevant	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		IMS tasks and an interview with the DMA Project Lead.		
Loading of Incident Management Sessions in IMS	IMS, Interview	Validate Incident Management Sessions were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Decision Sessions in IMS	IMS, Interview	Validate Decision Sessions were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Implementation Checklist tasks in IMS	IMS, Interview	Validate Implementation Checklist tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Technical Readiness Mapping tasks in IMS	IMS, Interview	Validate Technical Readiness Mapping tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Loading of Implementation Readiness Mapping tasks in IMS	IMS, Interview	Validate Implementation Readiness Mapping tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA IS&T Team Lead.	Yes	Yes
Loading of Deployment Checklist tasks in IMS	IMS, Interview	Validate Deployment Checklist tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Deployment Activities and Go/No Go tasks in IMS	IMS, Interview	Validate Deployment Activities and Go/No-Go tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA IS&T Team Lead.	Yes	Yes
Loading of Documentation Readiness Mapping tasks in IMS	IMS, Interview	Validate Documentation Readiness Mapping tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Loading of Production Ready System tasks in IMS	IMS, Interview	Validate Production Ready System tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA IS&T Team Lead.	Yes	Yes
Loading of Go/No-Go Operational Checklist tasks in IMS	IMS, Interview	Validate Go/No-Go Operational Checklist tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Go/No-Go Checklist tasks in IMS	IMS, Interview	Validate Go/No-Go Checklist tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Go/No-Go Meetings tasks in IMS	IMS, Interview	Validate Go/No-Go Meetings tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Loading of Contingency Enactment Readiness Mapping tasks in IMS	IMS, Interview	Validate Contingency Enactment Readiness Mapping tasks were loaded in IMS. Base confirmation on an	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		analysis of relevant IMS tasks and an interview with the DMA Project Lead.		
Loading of Rollback Enactment Readiness Mapping tasks in IMS	IMS, Interview	Validate Rollback Enactment Readiness Mapping tasks were loaded in IMS. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead.	Yes	Yes
Loading of Project Management stabilization tasks in IMS	IMS, Interview	Validate Project Management stabilization tasks were loaded in IMS. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead.	Yes	Yes
Completeness of Checklists	IMS, Interview	Validate Checklists included full coverage and all required steps. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead.	Yes	Yes
Appropriate communication	Interview	Validate Checklist communications with stakeholders was appropriate. Base	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
regarding Checklists with stakeholders		confirmation on interviews with stakeholders		
Completeness of Checklist measurements	IMS, Interview	Validate Checklist measurements were complete and appropriate. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead.	Yes	Yes
Functioning of HyperCare Command Center operations	IMS, Interview	Validate HyperCare Command Center was operational and functioning as required. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead and DHHS Business Owners.	Yes	Yes
Functioning of Dashboard Tool operations	IMS, Interview	Validate the Dashboard Tool was operational and functioning as required. Base verification on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead and DHHS Business Owners.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Functioning of Testing Dashboard Tool operations	IMS, Interview	Validate the Testing Dashboard Tool was operational and functioning as required. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project IS&T Lead and DMA Test Lead.	Yes	Yes
Completion of Go/No-Go Item (Mapping to Readiness Topics)	IMS, Interview	Validate Go/No-Go Item (Mapping to Readiness Topics) was completed. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Functioning of Operational Readiness Incident Management process	IMS, Interview	Validate Operational Readiness Incident Management was functional. Base confirmation on an analysis of relevant IMS tasks and an interview with the DMA Project Lead.	Yes	Yes
Functioning of ALM operations	ALM, Interviews	Validate ALM was operational. Base verification on an analysis of relevant IMS tasks and interviews with the DMA Project and Test Leads.	Yes	Yes



Criteria	Source	Assessment	Soft Launch	Go-Live
Functioning of PMC operations	PMC, Interviews	Validate PMC was operational. Base confirmation on an analysis of relevant IMS tasks and interviews with the DMA Project and Test Leads.	Yes	Yes
Documentation and roll out of Incident Management Workflow	IMS, Meeting Minutes, email, Interviews	Validate Incident Management Workflow was documented and rolled out to stakeholders. Base verification on a review of the Incident Management Workflow and an interview with the DMA Project Lead.	Yes	Yes
Functioning of the Manager Dashboard	Inspection, Interviews	Validate the Manager Dashboard was operational. Base confirmation on an inspection of the dashboard and interviews with the DMA Project Lead and DHHS Business Owners.	Yes	Yes
Readiness of User Support	Interview	Validate User Support was ready to assume its role at Go-Live. Base confirmation on an interview with the DMA User Support Team Lead.	Yes	Yes
Functioning of Application	Interview	Validate AM-PM for tracking and	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Management Process Manager (AM-PM)		monitoring was operational. Base confirmation on an interview with the DMA Project IS&T Lead and a demonstration.		

**Table 10 – Vendor Operational Readiness**

### 3.1.2 User Readiness

The IV&V user readiness review will focus on the following items:

- Communication
- Training
- User Support
- User Support Team

#### 3.1.2.1 Communication

Communication Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Operational Communications Management Plan	DDI NE DMA Operational Communications Management Plan	Validate Operational Communications Management Plan was approved.	Yes	Yes
Approval of and adherence to communication	DDI NE DMA Operational Communications	Validate communication review, approval and distribution process	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
review, approval and distribution process	Management Plan, IMS, Meeting Minutes	was executed as planned.		
Approval of roles and responsibilities	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	Validate roles and responsibilities were approved.	Yes	Yes
Approval of Operational Communications List	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	Validate Operational Communications List was approved.	Yes	Yes
Approval of Communications Distribution Lists	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	Validate Communications Distribution Lists were approved.	Yes	Yes
Awareness of HIA by end users	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys, Newsletters, and emails	Validate level of end user awareness of HIA based on review of communication efforts, training activities and user survey results.	Yes	Yes
Effectiveness of promoting end user buy-in	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys	Validate the effectiveness of promoting end user buy-in.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Degree of user acceptance	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys	Validate user acceptance by calculating survey scores and evaluating survey responses.	Yes	Yes

**Table 11 - Communications**

**3.1.2.2 Training**

The purpose of training is to ensure all end users have the knowledge and skills needed to perform their jobs efficiently and smoothly. A Training Plan should identify training goals, learning objectives, learning methods, activities, documentation/evidence of learning and evaluation.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Training Plan	DDI NE DMA Operational Communications Management Plan, Training Plan	Validate Training Plan was approved.	Yes	Yes
Adherence to training schedule	Training Plan, IMS, Meeting Minutes	Validate training schedule was executed as planned.	Yes	Yes
Approval of Learning Management System (LMS) changes	LMS	Validate LMS changes were approved and implemented.	Yes	Yes
Approval of Job Aids and distribution plan	User Document, Training Plan, Job Aids	Validate Job Aids and distribution plan were approved.	Yes	Yes

**Table 12 - Training**

### 3.1.2.3 User Support

User support ensures the end users are provided help when they encounter problems with the system/application. A User Support Plan identifies the teams responsible for providing support and the process used.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to User Support Plan	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate User Support Plan was approved and executed as planned.	Yes	Yes
Approval of and adherence to Service Desk planning and resources	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate Service Desk planning and resources were approved and executed as planned.	Yes	Yes
Approval of and adherence to On-site/Virtual Support upon Soft Launch and Go-Live	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate On-Site/Virtual Support plan for Soft Launch and Go-Live was approved and executed as planned.	Yes	Yes
Approval of and adherence to Security Role Provisions and User Support Team Definitions	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate security role provisions and user support team security role definitions were approved and executed as planned.	Yes	Yes
Approval of and adherence to Resource/Staff Readiness Plan	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate Resource/Staff Readiness Plan, including Incident Management Process, was approved and executed as planned.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Determining Incident Attributes	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate determination of Incident Attributes was approved prior to implementation.	Yes	Yes
Approval of Service Level Standard and Escalation Management process	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate Service Level Standard and Escalation Management process was approved.	Yes	Yes
Approval of Incident Management Key Performance Indicators (KPIs)	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Validate Incident Management Key Performance Indicators (KPIs) were approved.	Yes	Yes

**Table 13 - User Support**

**3.1.2.4 User Support Team**

User Support Teams provide different levels of support to the end users. Typically, the first level support team provides general help and assistance. If the first level support team is not able to resolve the issue, then the issue is escalated to the next level within the user support structure to research and resolve.

Criteria	Source	Assessment	Soft Launch	Go-Live
Effectiveness of User Support Team training	Interviews	Validate the User Support Team, including the Product Owner(s) and Super User(s) were fully trained and ready to handle assigned duties. Base confirmation on an interview with the	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		User Support Team - Product Owner.		

*Table 14 - User Support Team*

### 3.1.3 Data Readiness

The IV&V data readiness review will focus on the following items:

- Data Governance
- Data Management
- Data Modeling
- Data Conversion
- Data Sharing
- Data Integration
- Data Quality

#### 3.1.3.1 Data Governance

Data Governance comprises collecting, revising and standardizing data, and making it good for use. Governance makes the data consistent. Data Governance ensures that critical data is available at the right time to the right person, in a standardized and reliable form. This infers into better organization of business operations. Adopting and implementing Data Governance can result in improved productivity and efficiency of an organization. IV&V will assess the extent to which DHHS adopts and implements its data governance framework as outlined in the Data Governance Plan.

Criteria	Source	Assessment	Soft Launch	Go-Live
Adoption and implementation of a data governance framework	Interviews	Validate the data governance framework was finalized and ready for Go-Live. Base verification on interviews with the	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
		DMA Governance Lead and DMA Project Lead.		

*Table 15 – Data Governance*

### 3.1.3.2 Data Management

Managing data effectively requires having a data strategy, processes, procedures, and reliable methods to access, integrate, cleanse, govern, store and prepare data for analytics. IV&V will assess the extent to which DHHS implements its data strategy, follows its processes and procedures and utilizes reliable methods/tools to manage data for the HIA solution throughout the full data lifecycle.

Criteria	Source	Assessment	Soft Launch	Go-Live
Implementation of data strategy, processes, procedures and methods/tools for data management	Data Management Plan, Data Retention and Archive Plan, Interviews	Validate and assess the implementation of data strategy, processes, procedures and methods/tools for data management.	Yes	Yes
Approval of and adherence to Data Retention and Archive Plan	Data Retention and Archive Plan	Validate Data Retention and Archive Plan was approved and executed as planned.	Yes	Yes

*Table 16 – Data Management*

### 3.1.3.3 Data Modeling

Data modeling helps in the visual representation of data and enforces business rules, regulatory compliances, and government policies on the data. Data Models ensure consistency in naming conventions, default values, semantics, and security while ensuring quality of the data. The emphasis is on what data is needed and how it should be organized instead of what operations need to be performed on the data. IV&V will validate the data modeling process was followed and steps were taken to configure the HealthInteractive solution’s data models to meet DHHS’ needs, as outlined in the Data Modeling Plan.



Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to data modeling and configuration process	Data Modeling Plan, Conceptual, Logical & Physical Data Models, Interviews	Validate data modeling and configuration process was approved and executed as planned.	Yes	Yes

**Table 17 – Data Modeling**

**3.1.3.4 Data Conversion**

Data conversion is a critical process in the migration of information from existing information databases to new ones that often requires changes in data formats. Data conversion refers to the transformation and transfer of data between different systems to ensure that it is compatible with the new database. IV&V will validate execution of the data conversion and load process as outlined in the Data Conversion and Load Plan, Data Conversion Mappings, Data Transformation Plan, and Data Conversion and Execution Packages.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to data conversion and load process	Data Conversion and Load Plan, Interview	Validate approval of and adherence to Data Conversion and Load Plan and confirm DHHS has accepted the results.	Yes	Yes
Approval of and adherence to processes and routines for data conversion mapping	Data Conversion Mappings, Interview	Validate approval of and adherence to Data Conversion Mappings and confirm DHHS has accepted the results.	Yes	Yes
Approval of and adherence to data transformation process	Data Transformation Plan, Interview	Validate approval of and adherence to Data Transformation Plan and confirm DHHS has accepted the results.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Data Conversion Execution Packages	Data Conversion Execution Packages, Interview	Validate approval of Data Conversion Execution Packages and confirms DHHS has accepted the results and utilized them in determining the Go/No-Go decision.	Yes	Yes

*Table 18 – Data Conversion*

### 3.1.3.5 Data Sharing

Effective and efficient data sharing requires identification of the specific processes involved, roles and responsibilities, stakeholders, interfaces, transfer/extraction procedures, privacy and security protocols, and file retention standards. IV&V will validate execution of the data sharing process as outlined in the Data Sharing Plan.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to data sharing process	Data Sharing Plan, Interview	Validate approval of and adherence to the Data Sharing Plan and confirm DHHS has accepted the results.	Yes	Yes

*Table 19 – Data Sharing*

### 3.1.3.6 Data Integration

Data integration is the process of combining data from different sources into a single, unified view. Integration begins with the ingestion process, and includes steps such as cleansing, Extract, Transform, Load (ETL) mapping, and transformation. Data integration ultimately enables analytics tools to produce effective, actionable business intelligence. IV&V will validate data integration processes as outlined in the Data Integration Plan and assess satisfaction with data integration results.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to data integration process	Data Integration Plan, Interviews	Validate approval of and adherence to the Data Integration Plan and confirm DHHS has accepted the results.	Yes	Yes

**Table 20 – Data Integration**

### 3.1.3.7 Data Quality

Data quality is a measure of the condition of data based on factors such as accuracy, completeness, consistency, reliability and currency (whether it's up to date). Measuring data quality levels can help organizations identify data errors that need to be resolved and assess whether the data is fit to serve its intended purpose. Data quality management is a core component of the overall data management process, and data quality improvement efforts are often closely tied to data governance programs that aim to ensure data is formatted and used consistently throughout an organization. IV&V will validate execution of data quality management framework, processes, procedures and methods/tools as outlined in the Data Governance Plan, Data Management Plan, Comprehensive Quality Assurance Plan and Quality Assurance Procedures project artifacts.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of and adherence to quality assurance processes and procedures	Comprehensive Quality Assurance Plan, Quality Assurance Procedures, Interview	Validate approval of and adherence to the Comprehensive Quality Assurance Plan and Quality Assurance Procedures.	Yes	Yes

**Table 21 – Data Quality**

## 3.2 Technology Readiness

### 3.2.1 Technical Readiness

The technical readiness review will primarily focus on the infrastructure and technical components of the DMA project. The majority of the infrastructure and technical components will be deployed as part of the Soft Launch deployment.

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of the (12) Pre-Cutover technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (12) Pre-Cutover Soft Launch technical tasks.	Yes	Yes
Completion of the (11) Cutover Prep Activities: HIA Code Migration Activities technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (11) Cutover Prep Activities: HIA Code Migration Activities Soft Launch technical tasks.	Yes	Yes
Completion of the (16) Cutover Prep Activities: Batch Configuration technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (16) Cutover Prep Activities: Batch Configuration Soft Launch technical tasks.	Yes	Yes
Completion of the (6) Cutover Prep Activities: DB Activities technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (6) Cutover Prep Activities: DB Activities Soft Launch technical tasks.	Yes	Yes
Completion of the (4) Cutover Prep Activities: Server	DMA Cutover Plan	Validate the completion status of each of the (4) Cutover	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Operating System technical tasks planned for Soft Launch		Prep Activities: Server Operating System Soft Launch technical tasks.		
Completion of the (2) Cutover Prep Activities: Cloud Access technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (2) Cutover Prep Activities: Cloud Access Soft Launch technical tasks.	Yes	Yes
Completion of the (4) Cutover Prep Activities: Network technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (4) Cutover Prep Activities: Network Soft Launch technical tasks.	Yes	Yes
Completion of the (6) Cutover Prep Activities: Active Directory Management technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (6) Cutover Prep Activities: Active Directory Management Soft Launch technical tasks.	Yes	Yes
Completion of the (8) Cutover Prep Activities: Log Aggregation technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (8) Cutover Prep Activities: Log Aggregation Soft Launch technical tasks.	Yes	Yes
Completion of the (4) Cutover Prep Activities: Alerts technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (4) Cutover Prep Activities: Alerts Soft Launch technical tasks.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of the (33) Cutover Prep Activities: Server Configurations technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (33) Cutover Prep Activities: Server Configurations Soft Launch technical tasks.	Yes	Yes
Completion of the (8) Cutover Prep Activities: Conversion technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (8) Cutover Prep Activities: Conversion Soft Launch technical tasks.	Yes	Yes
Completion of the (8) Cutover Prep Activities: Production Validation technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (8) Cutover Prep Activities: Production Validation Soft Launch technical tasks.	Yes	Yes
Completion of the (2) Cutover Prep Activities: Decisions technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (2) Cutover Prep Activities: Decisions Soft Launch technical tasks.	Yes	Yes
Completion of the (1) Cutover Prep Activities: Medicaid Management Information System (MMIS) task completion for cutover technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (1) Cutover Prep Activities: MMIS task completion for cutover Soft Launch technical tasks.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of the (4) Cutover Prep Activities: Transformed Medicaid Statistical Information System (T-MSIS) Pre-Cutover activities technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (4) Cutover Prep Activities: T-MSIS Pre-Cutover activities Soft Launch technical tasks.	Yes	Yes
Completion of the (3) Cutover technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (3) Cutover Soft Launch technical tasks.	Yes	Yes
Completion of the (6) Rollback technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (6) Rollback Soft Launch technical tasks.	Yes	Yes
Completion of the (4) Post-Cutover technical tasks planned for Soft Launch	DMA Cutover Plan	Validate the completion status of each of the (4) Post-Cutover Soft Launch technical tasks.	Yes	Yes

**Table 22 – Technical**

### 3.2.2 System Readiness

The system readiness review is focused on comparing the System Readiness Test Plan deliverable to the System Readiness Test Results deliverable. During the review process IV&V will record any items that do not align with the Plan and evaluate the performance measure results.

Criteria	Source	Assessment	Soft Launch	Go-Live
Compliance with System Readiness Test Plan	System Readiness Test Plan, System Readiness Test Results, Interviews	Validate the System Readiness Test Results align with the System Readiness Test Plan. Base confirmation on review of plan/results and interviews with the IS&T Product Owner and DMA Project Lead.	Yes	Yes

*Table 23 – System*

### 3.2.3 Implementation Readiness

The implementation readiness review will focus on the items managed within the Operational Readiness Checklist.

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Contingency and Implementation and Contingency plan	Operational Readiness Checklist; Contingency Enactment	Validate Contingency and Implementation and Contingency plan was approved.	Yes	Yes
Approval of server backup procedures	Operational Readiness Checklist; Contingency Enactment	Validate Server backup procedures are in place.	Yes	Yes
Availability of Production code version in code repository	Operational Readiness Checklist; Contingency Enactment	Validate Production code version is available in code repository.	Yes	Yes
Approval of System Security Procedures	Operational Readiness Checklist; Contingency Enactment	Validate System Security Procedures are in place.	Yes	Yes



Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of access review and certification for all account types (user, system, service)	Operational Readiness Checklist; Contingency Enactment	Validate access review and certification for all account types (user, system, service) occurred.	Yes	Yes
Completion of vulnerability scan of production environment	Operational Readiness Checklist; Contingency Enactment	Validate vulnerability scan of production environment occurred.	Yes	Yes
Completion of patching of production environment	Operational Readiness Checklist; Contingency Enactment	Validate patching of production environment occurred.	Yes	Yes
Confirmation of geo-fencing	Operational Readiness Checklist; Contingency Enactment	Validate confirmation of geo-fencing occurred.	Yes	Yes
Completion of Plan of Action and Milestones (POAM)	Operational Readiness Checklist; Contingency Enactment	Validate POAM completed.	Yes	Yes
Identification of POAM items	Operational Readiness Checklist; Contingency Enactment	Validate identification of POAM items.	Yes	Yes
Resolution of high POAM items	Operational Readiness Checklist; Contingency Enactment	Validate resolution of high POAM items.	Yes	Yes
Action Plan for POAM Items (< High)	Operational Readiness Checklist; Contingency Enactment	Validate action plans exist for POAM Items (< High).	Yes	Yes
Completion of Help Desk setup	Operational Readiness Checklist; Implementation	Validate Help Desk setup is complete.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Completion of production user role setup	Operational Readiness Checklist; Implementation	Validate user roles were setup in production.	Yes	Yes
Assignment of users to roles	Operational Readiness Checklist; Implementation	Validate assignment of users to roles is complete.	Yes	Yes
MCE encounter submission process	Operational Readiness Checklist; Rollback Enactment	Validate MCE encounter submission process in place.	Yes	Yes
MMIS procedures to receive encounters	Operational Readiness Checklist; Rollback Enactment	Validate MMIS procedures to receive encounters are in place.	Yes	Yes
MMIS procedures to send files to Legacy system	Operational Readiness Checklist; Rollback Enactment	Validate MMIS procedures to send files to Legacy system are in place.	Yes	Yes
Legacy system procedures in case of rollback	Operational Readiness Checklist; Rollback Enactment	Validate Legacy system procedures are in place in case of rollback.	Yes	Yes
Rollback new batches of MMIS created for HIA	Operational Readiness Checklist; Rollback Enactment	Validate Rollback new batches of MMIS created for HIA.	Yes	Yes
Approval of Initial Conversion	Operational Readiness Checklist; Technical	Validate Initial Conversion was approved.	Yes	Yes
Approval of Code Deployment	Operational Readiness Checklist; Technical	Validate Code Deployment was approved.	Yes	Yes

Criteria	Source	Assessment	Soft Launch	Go-Live
Approval of Mock Production Run	Operational Readiness Checklist; Technical	Validate Mock Production Run was approved.	Yes	Yes
Delivery of DHHS Technical Attestation	Operational Readiness Checklist; Technical	Validate DHHS Technical Attestation was delivered.	Yes	Yes

**Table 24 - Implementation**

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## 4.0 Documentation Methodology

IV&V will create a formal report to summarize the results of the analysis performed and to offer recommendations, as appropriate. The report will also identify outstanding items or concerns and the implications of not resolving those items or concerns prior to Soft Launch and Go-Live. A readiness checklist will be utilized to facilitate the assessment process and to document the level of readiness for specific categories of readiness critical to successful deployment of the HIA solution. The completed readiness checklist will be included in the final readiness review report. There are several inputs that will contribute to the assessment process, including, but not limited to:

- Deloitte Contract
- Project deliverables and artifacts (Deloitte and DHHS)
- Deloitte and IV&V status reports
- Open risks and issues
- Deloitte project plan and work plan
- Stakeholder interviews
- In-person observations
- Implementation Readiness Checklist

### 4.1 Checklists

A readiness checklist will be utilized to facilitate the assessment process and to document the level of readiness for specific categories critical to successful deployment of the HIA solution. The fundamental purpose of the readiness checklist is to assist the assessment team in identifying any implementation readiness gaps, providing recommendations to address any gaps, and providing a recommendation whether the project is ready for implementation. The checklist serves as a mechanism to clearly understand the status of each readiness criteria, identify outstanding items and evaluate the risk of proceeding.

The readiness checklist is an Excel spreadsheet that covers specific categories of business and technology readiness with defined criteria. The checklist includes the following:

- Category and sub-category
- Criteria – specific business or operations criteria being assessed
- Criteria Source - where the criteria originated

- Assessment Guidance – how the criteria will be assessed
- Indicators for when the criteria should be reviewed (e.g. pilot, Soft Launch, Go-Live)

An excerpt from the readiness checklist illustrating this content can be found below:

	A	B	C	D	E	F	G
1	Readiness Criteria Metadata						
2	Category	Sub Category	Criteria	Criteria Source	Assessment Guidance	Sft LUNCH	Go-Live
3	Organization	Requirements Traceability	Requirements Traceability Matrix - Scoped Requirements		Validate requirements trace throughout the lifecycle by assessing the Requirements Traceability Matrix.		
4	Organization	System Integration Testing	Adherence to Comprehensive Test Plan		Validate DDI NE DMA Comprehensive Test Plan is aligned with IMS and IMS is complied with.		
5	Organization	System Integration Testing	Adherence to the Defect Management Process		Validate project is in compliance with DDI NE DMA Quality Assurance Procedures.		
6	Organization	System Integration Testing	Failed SIT scripts mapped to defects		Verify failed test scripts in ALM are mapped to defects logged in defect tracking system.		
7	Organization	System Integration Testing	Mitigation Plan for Open SIT defects		Validate the Mitigation Plan and compliance of it for open SIT defects at soft launch and go-live.		

**Figure 1 - Readiness Checklist Metadata**

The checklist contains additional content for each criteria, including:

- Review Date – prior to review this field may indicate the date the criteria is scheduled for review, once the review is complete this field should indicate the date the review was completed
- Reviewer Name – prior to review this field may indicate the name of person assigned to perform the review, once the review is complete this field should indicate name of person who completed the review
- Review Source – indicate the intended source of the review
- Review Status – indicates the current status of the review, selected from dropdown list (Not Started, Work In Progress, Complete, Other, N/A)

- Review Outcome – outcome of review
- Reviewer Comments – notes from reviewer pertaining to the criteria

An excerpt from the readiness checklist illustrating this content for the Soft-Launch Review can be found below:

Soft Launch Review					
Review Date	Reviewer Name	Review Source	Review Status	Review Outcome	Reviewer Comments
		Requirements Traceability Matrix	Not Started		
		DDI NE DMA Comprehensive Test Plan, Integrated Master Schedule (IMS), Application Lifecycle Management (ALM)	Not Started		
		DDI NE DMA Comprehensive Test Plan, ALM	Not Started		
		DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Not Started		

**Figure 2 - Readiness Checklist Soft Launch**

An excerpt from the readiness checklist illustrating this content for the Go-Live Review can be found below:

Go-Live Review					
Review Date	Reviewer Name	Review Source	Review Status	Review Outcome	Reviewer Comments
		Requirements Traceability Matrix	Not Started		
		DDI NE DMA Comprehensive Test Plan, Integrated Master Schedule (IMS), Application Lifecycle Management (ALM)	Not Started		
		DDI NE DMA Comprehensive Test Plan, ALM	Not Started		
		DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Not Started		

**Figure 3 - Readiness Checklist Go-Live**

## 4.2 Reporting

The fundamental purpose of the readiness report is to provide key stakeholders findings from the readiness review. The report serves as a mechanism to clearly understand the status of each readiness task, outstanding items and evaluate the risk of proceeding with implementation.

The readiness report covers specific areas of readiness with defined criteria; source of the criteria; date, source and outcome of the review; and any additional notes or recommendations for consideration. These specific areas of readiness may be assessed prior to multiple phases of implementation (e.g. pilot, Soft Launch and Go-Live). An excerpt from the readiness report can be found below:

<b>Review Criteria:</b>	<b>Criteria Text Here</b>	
<b>Criteria Source:</b>	Source Text Here	
	Soft-Launch	Go-Live
<b>Review Date:</b>	{N/A or TBD}	{N/A or TBD}
<b>Review Source:</b>	{N/A or TBD}	{N/A or TBD}
<b>Review Outcome:</b>	{N/A or TBD}	{N/A or TBD}
<b>Note:</b>	N/A	

*Table 25 - Readiness Report Example*

### 4.2.1 Soft Launch

The table below depicts the projected timeline of IV&V tasks required to complete the readiness review effort and how they relate to the project’s Go/No-Go decision point for Soft Launch.

<b>Task</b>	<b>Start Date</b>	<b>Finish Date</b>
Conduct readiness review	4/1/2020	5/20/2020
DHHS and vendor interviews	5/21/2020	5/22/2020

Task	Start Date	Finish Date
Compile readiness report	5/22/2020	5/22/2020
Internal quality assurance review	5/26/2020	5/26/2020
Deliver report to DHHS and CMS	5/27/2020	5/27/2020
Go/No-Go decision	5/29/2020	5/29/2020

*Table 26 - Soft Launch Timeline*

### 4.2.2 Go-Live

The table below depicts the projected timeline of IV&V tasks required to complete the readiness review effort and how they relate to the project’s Go/No-Go decision point for Go-Live.

Task	Start Date	Finish Date
Conduct readiness review	9/24/2020	10/16/2020
DHHS and vendor interviews	10/19/2020	10/20/2020
Compile readiness report	10/21/2020	10/21/2020
Internal quality assurance review	10/22/2020	10/22/2020
Deliver report to DHHS and CMS	10/23/2020	10/23/2020
Go/No-Go decision	10/26/2020	10/26/2020

*Table 27 - Go-Live Timeline*



# Independent Verification & Validation (IV&V) Services for Data Management and Analytics (DMA) Module

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## System and Business Operations Readiness Review Report for Go-Live

First Data Government Solutions

10/29/2020



## Document History

This document is controlled through the Document Management Process. To verify that the document is the latest version, please contact the First Data Team.

Date	Version	Responsible	Reason for Revision
10/29/2020	1.0	IV&V team	Initial Release of Report for Go-Live

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## 1.0 Introduction

### 1.1 Project Overview

First Data has been engaged to perform Independent Verification and Validation (IV&V) for the State of Nebraska, Department of Health and Human Services (DHHS), and the Data Management and Analytics (DMA) module. The purpose of this engagement is to develop and implement a new data analytics platform.

Deloitte is the solution vendor selected for the DMA project. They are implementing HealthInteractive Analytics (HIA), a cloud-based Software as a Service (SaaS) data warehouse and healthcare analytics tool that provides the users with information to support decision making, program analysis, and operational processes across the Medicaid Enterprise. DHHS staff will use HIA information to accomplish a range of analytical use cases with key objectives to make information widely available, easy to understand, of high quality, and access the data needed to help the user make insightful business decisions. The overall goal is to help DHHS improve health care quality, increase efficiency in the delivery of care, and improve patient experience.

DHHS is implementing HIA with a phased approach. A Soft Launch implemented the majority of functionality on June 1, 2020 but was only used as the system of record for specific functions such as Transformed Medicaid Statistical Information System (T-MSIS) and Investigative Case Management (ICM). Go-Live is scheduled to occur November 2, 2020 which signifies full adoption of HIA and transition from previous systems. In between Soft Launch and Go-Live, several enhancements have been implemented.

### 1.2 Report Purpose

Operational and System Readiness defines the point at which a developed system, organization, and affected stakeholders are sufficiently prepared to implement a change. Too often, insufficient preparation stems from an insular vision resulting in unsatisfied project goals and objectives. It is important to recognize that successful operational readiness goes far beyond the system and is the culmination of a process of preparation, review and scrutiny that spans the project life cycle.

The System and Business Operations Readiness Review (SaBORR) is a mechanism to assess the status of selected readiness tasks, identify outstanding items from the Design, Development and Implementation (DDI) phase and evaluate the risk of proceeding (Go/No-Go decision). IV&V developed a SaBORR Plan which provides insight into what areas are assessed and how assessment areas are measured. The results of the SaBORR are delivered in this comprehensive report that can be used as input to the Go/No-Go decision. In short, the results of SaBORR help key stakeholders determine if they are ready for system implementation.

## 1.3 Approach and Methodology

The overall approach to evaluating readiness utilizes both qualitative and quantitative techniques. IV&V used multiple methods to collect the data for the report and several additional inputs that contributed to the assessment process, including, but not limited to:

- DHHS Contract and amendments with vendor
- Project deliverables and artifacts (DHHS and vendor)
- Vendor and IV&V status reports
- Risk, Action Item, Issue and Decision (RAID) logs
- Stakeholder interviews
- In-person observations

Individual readiness criteria have been identified through the review of industry best practices, standards and project deliverables. SaBORR also satisfies the requirements of the federal partner oversight groups that the developed system is operationally ready and prepared to support the business goals defined by project requirements.

The core approach of the SaBORR is a checklist process used for the development of an implementation recommendation and support of an implementation decision. The checklist process defines the necessary functionality and scenarios to determine readiness in the areas of:

- Business Readiness
  - ✓ Organizational Readiness
  - ✓ User Readiness
  - ✓ Data Readiness
- Technology Readiness
  - ✓ Technical Readiness
  - ✓ System Readiness
  - ✓ Implementation Readiness

The approach and methodology utilized by IV&V is further detailed in the IV&V SaBORR Plan. The standards and other references used in this assessment are identified in Section 3.0 – References of this report.

## 1.4 Executive Summary

The IV&V team has completed the SaBORR for the Go-Live of the HIA solution scheduled for November 2, 2020 and the results of this review can be found in the subsequent sections of this report. The nature of the soft launch approach allowed flexibility and time for some types of items to be addressed prior to Go-Live. The intent of the results provided in this report is to assist DHHS with the Go/No-Go decision prior to Go-Live.

A total of 234 technology and business readiness criteria were reviewed by the IV&V team as broken down in the tables below:

Technology Readiness		Business Readiness	
Implementation	110	Data	11
System	3	Organization	85
Technical	4	User	21
<b>Total</b>	<b>117</b>	<b>Total</b>	<b>117</b>

IV&V found no major impediments to the go-live implementation of HIA scheduled for November 2, 2020. However, based on the outcome of this review, IV&V has the following recommendations for consideration:

- The DMA project team appears to be unsatisfied with the current Incident Management process. Current documentation appears to be conflicting and contributing to the dissatisfaction. Identify an agreed upon process for Incident Management and update documentation of the process.
- The assignment of the Security Roles to State staff members may not fully align to job duties. Conduct a complete review of State staff role assignments and make changes as needed.
- As of 10/28/20, there are still outstanding defects for Encounter processing. Evaluate the Go-Live impact and take appropriate action.
- DMA Project Lead indicates there have been anecdotal reports of issues with build integrity and code build deployment based on regression testing and error identification. IV&V recommends the project team continue to monitor regression errors and timely resolution.
- The DMA project appears to be following Change Management and RAID Management processes identified in the Operations Project Management Plan (PMP). However, the DMA Project Steering Committee (SC) continues to not be convened monthly as indicated. IV&V recommends the project reconvene SC meetings as soon as possible.

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## **2.0 Assessment Results**

### **2.1 Business Readiness**

#### **2.1.1 Organization Readiness**

The IV&V organizational readiness review focused on the following items:

- Requirements Traceability (1)
- System Integration Testing (4)
- User Acceptance Testing (4)
- Third-Party Testing (2)
- Implementation Deliverables (3)
- Configuration Management (5)
- Project Management (15)
- Vendor Operational Readiness (51)

Criteria	Date	Source	Outcome
Traceability of scoped requirements	10/22/20	Requirements Traceability Matrix	<p>In review of the requirements, outstanding items are bucketed into 3 categories:</p> <ol style="list-style-type: none"> <li>1. PMC Issue: 668056: Completion of requirement 427/431: State and Deloitte Executive decision to postpones discussion until December 2020</li> <li>2. Completion of Deliverables / Artifacts: <ul style="list-style-type: none"> <li>• Quarterly Deliverable Update October (complete, no quarterly deliverables)</li> <li>• R3 Event materials – not scheduled until R3 event</li> <li>• Completion and approval forms for outstanding DDI deliverables: <ul style="list-style-type: none"> <li>• System Readiness Test Results – approved, pending signature form</li> <li>• Post Implementation Report – deliverable is intended to be due/submitted post go-live</li> <li>• Operational Readiness Report artifact - submitted</li> </ul> </li> </ul> </li> <li>3. Performance Measures: <ul style="list-style-type: none"> <li>• Closure of Amendment 5 - Performance Measures and subsequent reporting on the approved measures (Operations reporting of performance measures)- Performance Measures amendment had additional comments and is being reviewed by the State Contract Team and will be sent over to CMS once complete.</li> </ul> </li> </ol>



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Criteria	Date	Source	Outcome
Adherence to Comprehensive Test Plan	10/20/20	DDI NE DMA Comprehensive Test Plan, Integrated Master Schedule (IMS), Application Lifecycle Management (ALM)	The IMS (as of 10/20/2020) activities for Go-Live reflects similar activities as identified in the Comprehensive Test Plan.
Adherence to the Defect Management Process	10/20/20	DDI NE DMA Comprehensive Test Plan, ALM	Defects are documented in ALM identifying the defect, status and if associated with a planned release.
Mapping of failed SIT scripts to defects	10/20/20	DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	Defects are logged in ALM with the User Story identifying the issue found in testing. The Status of the defect is tracked within ALM. Was not able to find any Triage Meeting Minutes.
Mitigate open SIT defects	10/20/20	DDI NE DMA Comprehensive Test Plan, ALM, IMS, Triage Meeting Minutes	The Comprehensive Test Plan identified a general Mitigation Process in regard to defect fixes; IMS (as of 10/20/2020) has identified the HHA Release, Finance Release, Enhancement Release, Defect Release are at 100%; Anthem Release is at 67% and Go-Live is at 69%.
Adherence to the DHHS UAT Plan	10/16/20	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	IV&V has verified that the UAT Test Plan is being followed.
Maintenance of and Adherence to the Configuration Management Process	10/21/20	DDI NE DMA Infrastructure and Solution Lifecycle Management	IV&V was not able to verify maintenance of and adherence to the Configuration Management Process. The DMA Project Lead indicates the team does not have clear visibility into the process or access to the logs of records. No concerns were expressed at this time with the Configuration Management Process.

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Criteria	Date	Source	Outcome
Reliability of UAT Execution Results Summary	10/16/20	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	IV&V has verified that the UAT Execution Results Summary has been recorded reliably.
Acceptance of open UAT defects (Counts, Severity, Mitigation Plan)	10/16/20	DDI NE DMA Comprehensive Test Plan, DMA – UAT Test Plan, ALM, IMS, Triage Meeting Minutes	IV&V has verified that the plan to mitigate open UAT defects is acceptable.
Completion and Acceptance of Third-Party Inbound Testing	10/16/20	DDI NE DMA Data Sharing Plan, Interface Control Documents (ICDs)	IV&V has verified that third-party inbound testing has been and continues to be completed satisfactorily.
Completion and Acceptance of Third-Party Outbound Testing	10/16/20	DDI NE DMA Data Sharing Plan, ICDs	IV&V has verified that third-party outbound testing has been and continues to be completed satisfactorily.
Tracking of Go/No-Go Checklist and adherence to schedule	10/27/20	DDI NE DMA Operational Readiness Plan, Go/No-Go Checklist, IMS	<p>After further review of Operational Readiness checklist, IMS, DMA cutover plan v 4, it is my assessment that activities in these documents are being tracked and on schedule. According to IMS 10/23/2020 91% of overall work has been completed.</p> <p>Note: According to Go-Live Cutover_Plan_v4.0 12 task items should have been completed by yesterday but none of the tasks items have the actual start date or actual end date. The columns have not been updated as of 10/27/2020 @11:21am</p>

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Criteria	Date	Source	Outcome
Tracking of Deployment Checklist and adherence to schedule	10/27/20	DDI NE DMA Operational Readiness Plan, Deployment checklist, IMS	After further review of Operational Readiness checklist, IMS, DMA cutover plan v 4, it is my assessment that activities in these documents are being tracked and on schedule. According to IMS 10/23/2020 91% of overall work has been completed. Note: According to Go-Live Cutover_Plan_v4.0 12 task items should have been completed by yesterday but none of the tasks items have the actual start date or actual end date. The columns have not been updated as of 10/27/2020 @11:21am
Adherence to Quality Assurance Plan and Procedures	10/16/20	DDI NE DMA Comprehensive Quality Assurance Plan; Quality Assurance Procedures	IV&V verified that the Quality Assurance Procedures Plan is being followed appropriately.
Approval of the Configuration Management Plan	09/30/20	Infrastructure and Solution Lifecycle Management Plan (ISLM)	IV&V has verified the document and its approved by Kris Azimi, Administrator II, Health Care Informatics & Business Integration on 9/14/2018.(DDI_NE_DMA_Infrastructure and Solution Lifecycle Management Plan_v.1.4.Final.docx)
Identification of Configuration Management record items	09/28/20	ISLM	IV&V has verified Configuration Management records in ISLM. (DDI_NE_DMA_Infrastructure and Solution Lifecycle Management Plan_v.1.4.Final)
Maintenance of audit trail and management of access	10/19/20	ISLM	IV&V has verified an audit trail is maintained and access is being managed.
Logging and maintenance of all records	10/19/20	ISLM	IV&V has verified that the status of all records are being logged and maintained at all times.

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Criteria	Date	Source	Outcome
Compliance of all records with original requirements	10/21/20	ISLM	IV&V has verified all records comply with original requirements with the exception of requirements 427 and 431 that had to be reconciled with CMS and not sure if at all they will part of operations at this stage and confirmed none of this impacts Go-Live.
Occurrence of planning sessions and milestone meetings	09/29/20	IMS	IV&V has verified that the project team has met for planning sessions and milestone meetings both as scheduled and on an ad hoc basis. Meeting have been canceled and/or rescheduled as needed due to conflicts.
Adherence to and compliance with the Risk Management Plan	09/29/20	Project Management Plan (PMP), observations, project meeting minutes	IV&V has verified that the project team is following and complying with the Risk Management Plan as outlined in the Operations PMP. An additional SMA resource and DMA vendor resource were assigned to assist the DMA project team with IV&V observation reconciliation and RAID clean up and management. Weekly meetings have occurred since 3/31/2020 to review risks and issues logged into PMC. Significant progress has been made to reconcile the IV&V observations, clean-up the RAID logs in PMC and manage the process.

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Criteria	Date	Source	Outcome
Compliance with Service Level Agreements (SLAs)	10/21/20	DMA Contract and amendments	IV&V was not able to verify system readiness testing results support compliance with the approved SLAs as they have not been finalized, agreed upon by the SMA and DMA vendor and approved by CMS as of the time of this review. Changes were recently made to the SLAs are currently being reviewed by the DMA vendor. Once the changes have been approved by the DMA vendor, the SLAs will be resubmitted to CMS for approval. The SLAs will most likely not be approved and in place by Go-Live. The DMA vendor is requesting the SMA sign a statement indicating the SLAs will not be enforced until final approval is received by CMS. Once the SLAs are finalized and approved, the DMA vendor has agreed to repeat system readiness testing for Go-Live.
Compliance with response requirements for System Integration Testing (SIT)	10/16/20	Deloitte Operational Readiness Plan, emails, Interviews	IV&V has verified that the Deloitte System Integration Test (SIT) team received responses from the DHHS team as per the schedules provided in the Performance Testing section of the Deloitte Operational Readiness Plan.
Installation and configuration of Performance Testing software prior to system readiness testing	09/29/20	IMS and project status meeting minutes	IV&V has verified that Performance Testing software was installed and configured prior to system readiness testing.
Connection of Performance Testing tools with the application servers	09/29/20	Deloitte Operational Readiness Plan	IV&V has confirmed that Performance Testing tools were connected with the application servers and system resource utilization details were received during performance testing.

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Criteria	Date	Source	Outcome
Absence of unresolved User Interface (UI) errors	10/16/20	ALM, Interview	IV&V has verified that there are no unresolved User Interface (UI) errors identified in the HIA portal.
Compliance with Production environment set-up requirements	10/16/20	Interview	IV&V has verified with the DMA Project Lead that there have been anecdotal reports of issues with build integrity and code build deployment based on regression testing and error identification. IV&V recommends the project team continue to monitor regression errors and timely resolution.
Compliance with read-only access requirements for the production environment	10/01/20	Interview	IV&V has verified that the Deloitte SIT team was provided with read-only access to the production environment.
Availability of at least 12 months of test data in the production environment for system readiness testing	10/01/20	Interview	IV&V has verified that at least a year's worth of test data was available in the production environment to perform system readiness testing.
Execution of HyperCare touch points and Incident Management sessions	10/06/20	IMS and project status meeting minutes	IV&V has verified that Incident Management sessions were executed. HyperCare touchpoints have been scheduled but not executed at the time of this review.
Execution of Decision Point sessions	10/06/20	IMS and project status meeting minutes	IV&V has verified that Decision Point sessions were executed.
Evaluation of issues log from Project Management Center (PMC)	10/01/20	PMC, Interview	IV&V has verified the issues log from PMC were evaluated as part of the Risk Management process.

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Criteria	Date	Source	Outcome
Identification of Project-related dependencies	10/01/20	IMS, Interview	IV&V has confirmed that project related dependencies outside of the DMA project have been considered and identified by the project team in the development of the work plan.
Establishment and utilization of Project Governance	10/06/20	IMS, Interview	IV&V has verified that Project Governance was established and is being utilized, although not to the fullest extent as documented. DMA Change Control Board meetings continue to occur as needed. Additional weekly RAID meetings have been established and RAID items have gone through a clean-up process. Schedule monitoring and maintenance processes have also been established. A Steering Committee Meeting was scheduled for 1/29/2020 but was cancelled. The Project Director has indicated escalations are occurring regularly as needed but in a slightly different venue/frequency than the SC. The DMA project appears to be following Change Management and RAID Management processes identified in the Operations PMP. The DMA Project Steering Committee continues to not be convened monthly as indicated.
Execution of DMA Steering Committee meetings	10/06/20	IMS, Meeting Minutes, Interview	IV&V has verified that Steering Committee meetings have not been executed as expected. A Steering Committee Meeting was scheduled for 1/29/2020 but was cancelled. The Project Director has indicated escalations are occurring regularly as needed but in a slightly different venue/frequency than the SC. The DMA project appears to be following Change Management and RAID Management processes identified in the Operations PMP. The DMA Project Steering Committee continues to not be convened monthly as indicated.

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Criteria	Date	Source	Outcome
Execution of Managed Care Entities (MCE) meetings	10/20/20	IMS, Meeting Minutes	Confirmed through the meeting notes the MCEs meetings were conducted and documented appropriately.
Approval of Communications and Organizational Management Plans	10/20/20	DDI NE DMA Operational Communications Management Plan, IMS, and Meeting Minutes	Operational Communications Management plan was approved by Larra Petersen-Lukenda, Director of Operations and Analytics on 05/08/2019.
Approval of and compliance with Organizational Change Management (OCM) Readiness	10/20/20	DDI NE DMA Change Management Plan	Change Management Plan was approved by Ruth Vineyard on 03/22/2018. Activities identified within the Plan has been adhered to. Operational Readiness Plan was approved by Larra Petersen-Lukenda, Director of Operations and Analytics on 09/10/2019. Activities identified with the Plan has been adhered to. Organizational Change Management Plan outlines the various activities for Go-Live and has been adhered to; there is no formal approval of this Deloitte document from the State.
Approval of Data Quality / Data Validations Readiness Mapping	10/19/20	DDI_NE_DMA_Data Conversion Specifications_v.4.0 Final, DDI_NE_DMA_Data Conversion Mappings_v.3.0 Final, 10/16/2020 IMS	IV&V finds that the data quality / data validation readiness mapping meets the criteria per review of the DDI_NE_DMA_Data Conversion Specifications_v.4.0 Final and DDI_NE_DMA_Data Conversion Mappings_v.3.0 Final documents and the IMS.
Implementation of Deloitte's HyperCare Model approach	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds that the implementation of Deloitte's HyperCare Model approach partially meets the criteria outlined in the DMA Operational Readiness Plan. HyperCare Self Help and Triage Information have been developed but not yet distributed. The HyperCare Schedule and Virtual Room Report Template have been Developed. The HyperCare Virtual Room has not been



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Criteria	Date	Source	Outcome
			set up or communicated to end users as of 10/15/2020.
Execution of HyperCare Sessions, Touchpoints and Meeting(s)	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds that the execution of HyperCare Sessions and Touchpoints partially meet the criteria outlined in the DMA Operational Readiness Plan. HyperCare sessions, touchpoints and meetings were held pre Soft-Launch and are not being held prior to Go-Live.
Approval of Initial milestones	10/21/20	10/16/2020 IMS, 10/16/2020 Milestone Report	IV&V finds that the milestones includes in the initial IMS and all modification of the IMS have been approved by the Client.
Execution of Milestone meetings	10/21/20	DDI NE DMA Operational Readiness Plan v.5.1, 10/15/2020 IMS	IV&V finds that the Milestone sessions were joined with the Planning sessions and partially meets the criteria. The Operational Readiness Plan outlined 2 sessions held two months prior to Go-Live and 2 more sessions held one month prior to Go-Live, Calendars found only one meeting was held approximately two months prior to Go-Live and one meeting was held approximately one month prior to Go-Live. Furthermore the Operational Readiness Plan outlines three sessions to be held after Go-Live, as of this time none have been scheduled or are reflected on the IMS.
Execution of Planning Session(s)	10/23/20	DDI NE DMA Operational Readiness Plan v.5.1, 10/15/2020 IMS	IV&V finds the execution of the Planning Sessions partially meets the criteria as outlined in the Operational Readiness Plan. No Planning Sessions are scheduled after Go-Live,
Approval of Operational Readiness schedule	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live	

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Criteria	Date	Source	Outcome
		Operational Readiness Decision Criteria Checklist 10/15/2020.	
Execution of Operational Readiness Review Team meetings	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	Go-Live Planning and Milestone meetings began on 9/10/2020 and are scheduled to continue weekly until 10/29/2020 when the Go/No-Go decision is made.
Approval of Operational Readiness Milestones and Dates	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	Go-Live Planning and Milestone meetings began on 9/10/2020 and are scheduled to continue weekly until 10/29/2020 when the Go/No-Go decision is made. Operational Readiness Milestones and finish dates are reviewed each week during this meeting by the State, Deloitte, and IV&V.
Execution of Operational Readiness Decision Points	10/22/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	Operational Readiness Decision Points were executed as a part of the Go-Live Planning and Milestone meetings held weekly beginning 9/10/2020 through 10/29/2020 when the Go/No-Go decision is made. Operational Readiness Decision Points are reviewed by the State, Deloitte, and IV&V.
Approval of Operational Readiness Review Team Schedule	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	Operational Readiness Review Team schedule was discussed and approved during the Go-Live Planning and Milestone Kickoff meeting held 9/10/2020. The State, Deloitte, and IV&V attend the Go-Live Planning and Milestone weekly meetings.

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Criteria	Date	Source	Outcome
Approval of Resource/Staff Readiness mapping	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0	Resource/Staff Readiness mapping could not be located in a direct document, however the Go-Live Operational Readiness Decision Criteria Checklist and the Go-Live Cutover Plan both have task owners assigned. This is the same practice used during Soft-Launch the State was comfortable with.
Tracking and Assessment of Readiness Areas	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0	The Go-Live Operational Readiness Decision Criteria Checklist tracks readiness areas. The Go-Live Planning and Milestone weekly meeting allows State and Deloitte staff the opportunity to assess the readiness tasks.
Approval of HIA and Call Scripting	10/22/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0, DDI NE DMA System	HIA and Call Scripting have been tested and results approved by the State.

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Criteria	Date	Source	Outcome
		Readiness Test Results	
Loading of UAT Triage meeting tasks in IMS	10/22/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, DDI NE DMA System Readiness Plan, DDI NE DMA System Readiness Test Results.	UAT Testing is one task for each release on the IMS. No meeting minutes were found for the UAT Triage meetings. Triage of defects found in UAT were tracked in ALM.
Loading of DMA Touchpoints and Incident Management tasks in IMS	10/21/20	10/15/2020 IMS, Incident Management Meeting Minutes, DDI_NE_DMA_User Support Plan_v.1.4.Final	IV&V finds that DMA Touchpoint and Incident Management tasks have been loaded in IMS meeting the required criteria.
Loading of MCE Touchpoint tasks in IMS	10/23/20	10/15/2020 IMS, Incident Management Meeting Minutes, DDI_NE_DMA_User Support Plan_v.1.4.Final	IV&V finds that MCEs Touchpoint tasks have been loaded in IMS meeting the required criteria.
Loading of Incident Management tasks in IMS	10/22/20	10/15/2020 IMS, Incident Management Meeting Minutes, DDI_NE_DMA_User Support Plan_v.1.4.Final	IV&V finds that DMA Incident Management tasks have been loaded in IMS meeting the required criteria.
Loading of Incident Management Sessions in IMS	10/22/20	10/15/2020 IMS, Incident Management Meeting Minutes, DDI_NE_DMA_User Support Plan_v.1.4.Final	IMS, Calendars, Meeting Minute, DDI_NE_DMA_User Support Plan_v.1.4.Final

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Criteria	Date	Source	Outcome
Loading of Decision Sessions in IMS	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds that Decision Sessions have been loaded in IMS.
Loading of Implementation Checklist tasks in IMS	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds the Implementation Checklist tasks have been loaded in the IMS.
Loading of Technical Readiness Mapping tasks in IMS	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds the Technical Checklist tasks have been loaded in the IMS.
Loading of Implementation Readiness Mapping tasks in IMS	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds the Implementation Checklist tasks have been loaded in the IMS.
Loading of Deployment Checklist tasks in IMS	10/21/20	10/16/2020 IMS, Go-Live Cutover Plan v4.0	The Deployment activities can be found on the Cutover Plan, there are five items with Task ID's 2.1.1 through 2.1.6, however the individual tasks cannot be found on the IMS. The IMS has one Task, Go-Live Deployment 1.19.10.2 with a finish date of 10/30/2020.

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Criteria	Date	Source	Outcome
Loading of Deployment Activities and Go/No Go tasks in IMS	10/22/20	10/16/2020 IMS, Go-Live Cutover Plan v4.0, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	The Go-Live Operational Readiness Decision Criteria Checklist has been mapped to the IMS, the Go-Live Cutover Plan has not yet been mapped to the IMS.
Loading of Documentation Readiness Mapping tasks in IMS	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds the Documentation Checklist tasks have been loaded in the IMS.
Loading of Production Ready System tasks in IMS	10/21/20		The Go-Live Operational Readiness Decision Criteria Checklist has been mapped to the IMS, the Go-Live Cutover Plan has not yet been mapped to the IMS.
Loading of Go/No-Go Operational Checklist tasks in IMS	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0	The Go-Live Operational Readiness Decision Criteria Checklist has been mapped to the IMS, the Go-Live Cutover Plan has not yet been mapped to the IMS.

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Criteria	Date	Source	Outcome
Loading of Go/No-Go Checklist tasks in IMS	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0	IV&V finds the Go/No-Go Checklist tasks have been loaded in IMS.
Loading of Go/No-Go Meetings tasks in IMS	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0	IV&V finds the Go/No-Go Meeting tasks have been loaded in IMS.
Loading of Contingency Enactment Readiness Mapping tasks in IMS	10/22/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds that the Contingency Enactment Readiness Mapping tasks have been loaded in the IMS meeting the criteria.
Loading of Rollback Enactment Readiness Mapping tasks in IMS	10/22/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational	IV&V finds that the Rollback Enactment Readiness Mapping tasks have been loaded in the IMS meeting the criteria.

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Criteria	Date	Source	Outcome
		Readiness Decision Criteria Checklist 10/15/2020.	
Loading of Project Management stabilization tasks in IMS	10/22/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020.	IV&V finds that Project Management stabilization tasks have been loaded in IMS.
Completeness of Checklists	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020, Meeting Minutes.	The Go-Live Operational Readiness Decision Criteria Checklist is reviewed weekly for completeness during the Go-Live Planning and Milestone meeting which began on 9/10/2020 and is attended by the State, Deloitte and IV&V.
Appropriate communication regarding Checklists with stakeholders	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020, Meeting Minutes.	The Go-Live Operational Readiness Decision Criteria Checklist is reviewed weekly for completeness during the Go-Live Planning and Milestone meeting which began on 9/10/2020 and is attended by the State, Deloitte and IV&V.
Completeness of Checklist measurements	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020, Meeting Minutes.	The Go-Live Operational Readiness Decision Criteria Checklist is reviewed weekly for completeness during the Go-Live Planning and Milestone meeting which began on 9/10/2020 and is attended by the State, Deloitte and IV&V.



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Criteria	Date	Source	Outcome
Functioning of HyperCare Command Center operations	10/21/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0	HyperCare Command Center Operations was implemented during the two weeks post Soft-Launch. OCM tasks exist to redistribute the information as well as setup and staff. Furthermore HyperCare Command and Control Meetings and HyperCare User Experience Daily Meetings have been scheduled for the first month.
Functioning of Dashboard Tool operations	10/22/20	Project Management Center (PMC), DDI NE DMA Operational Readiness Plan, DDI_NE_DMA_User Support Plan_v.1.4.Final.	The Project Management Center is functioning and available.
Functioning of Testing Dashboard Tool operations	10/21/20	DDI NE DMA Operational Readiness Plan, Octane	IV&V finds the Testing Dashboard Tool meets criteria.
Completion of Go/No-Go Item (Mapping to Readiness Topics)	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0	The Go-Live Operational Readiness Decision Criteria Checklist has finish dates that are reviewed weekly during the Go-Live Planning and Milestone meetings weekly by the State and Deloitte. All tasks are on track according to the Plan.

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Criteria	Date	Source	Outcome
Functioning of Operational Readiness Incident Management process	10/23/20	Initial Operations Support and Management Plan, Operational Readiness Plan, User Support Plan	IV&V finds the Incident Management process was implemented during Soft-Launch. The State and Deloitte teams meet weekly to review all incidents and assess priority and resolution.
Functioning of ALM operations	10/16/20	ALM, Interviews	IV&V has verified that ALM was operational.
Functioning of PMC operations	10/01/20	PMC, Interviews	IV&V has confirmed that PMC was operational and has not posed many challenges for the project team.
Documentation and roll out of Incident Management Workflow	10/23/20	Initial Operations Support and Management Plan, Operational Readiness Plan, User Support Plan	IV&V finds the Incident Management process was documented in the Initial Operations Support and Management Plan, Operational Readiness Plan and the User Support Plan. Furthermore it was rolled out during Soft-Launch.
Functioning of the Manager Dashboard	10/21/20	Project Management Center (PMC), DDI NE DMA Operational Readiness Plan, DDI_NE_DMA_User Support Plan_v.1.4.Final.	The Project Management Center is functioning and available.
Readiness of User Support	10/23/20	DDI NE DMA Operational Readiness Plan, 10/16/2020 IMS, Go-Live Operational Readiness Decision Criteria Checklist 10/15/2020. DDI_NE_DMA_User Support Plan_v.1.4.Final, Go-Live Cutover Plan v4.0	OCM tasks are outlined on the Go-Live Operational Readiness Decision Criteria Checklist to include Training, Self Help, virtual help, HyperCare, and notifications. All tasks have finish dates and are reviewed weekly in the Go-Live Planning and Milestone meeting.

Criteria	Date	Source	Outcome
Functioning of Application Management Process Manager (AM-PM)	10/23/20	Interview	IV&V finds the Application Management Process Manager (AM-PM) was implemented with Soft-Launch and will continue to be utilized with Go-Live.

### 2.1.2 User Readiness

The IV&V user readiness review focused on the following items:

- Communication (8)
- Training (4)
- User Support (8)
- User Support Team (1)

Criteria	Date	Source	Outcome
Approval of Operational Communications Management Plan	10/20/20	DDI NE DMA Operational Communications Management Plan	NE DMA Operational Communications Management Plan was approved and signed by Larra Petersen-Lukenda, Director of Operational Analytics on 5/8/19.
Approval of and adherence to communication review, approval and distribution process	10/20/20	DDI NE DMA Operational Communications Management Plan, IMS, Meeting Minutes	The Communications that were found followed the process identified in the Operational Communications Management Plan.
Approval of Roles and Responsibilities	10/20/20	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	NE DMA Operational Communications Management Plan contains Section 3: Roles and Responsibilities.

Criteria	Date	Source	Outcome
Approval of Operational Communications List	10/20/20	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	NE DMA Operational Communications Management Plan contains Section 4: Operational Communications List.
Approval of Communications Distribution Lists	10/20/20	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes	NE DMA Operational Communications Management Plan contains Section 4: Operational Communications List, within the NE DMA Operational Communications Management Plan, which was approved and signed by Larra Petersen-Lukenda, Director of Operational Analytics on 5/8/19.
Awareness of HIA by end users	10/20/20	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys, Newsletters, and emails	NE DMA OCM has been conducting Business Users Group Meetings (BUG) on a bi-weekly basis after the Soft-Launch from Jun-Sep 2020 and has conduct them weekly during the month of Oct 2020 prior to Go-Live. Decision of continuing the BUG meetings after Go-Live still has not been determined as of 10/12/2020.
Effectiveness of promoting end user buy-in	10/20/20	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys	During the BUG meetings, ad hoc surveys have been conducted. The meetings are to provide a method for the end users to communicate their questions, concerns and provide training on specific reports that are asked about by end users.
Degree of user acceptance	10/20/20	DDI NE DMA Operational Communications Management Plan, Training Plan, Meeting Minutes, Surveys	During the current BUG meetings, ad hoc live surveys have been conducted. The majority of the end users participating in the surveys have been positive in regard to the HIA Solution; a small percentage of end users still are uncertain.

Criteria	Date	Source	Outcome
Approval of Training Plan	10/20/20	DDI NE DMA Operational Communications Management Plan, Training Plan	Training Plan was in the form of a Power Point Presentation and does not have a 'signed' approval indicator; this was provided by Shara Sheehan, MLTC Project Manager. Unable to locate a Vendor Training Plan.
Adherence to Training schedule	10/20/20	Training Plan, IMS, Meeting Minutes	The HIA training for go-live was referred to as the "HIA Refresher training". There were 29 end users that participated in the refresher training.
Approval of Learning Management System (LMS) changes	10/20/20	LMS	The HIA training for go-live was referred to as the "HIA Refresher training". There were 29 end users that took the refresher training.
Approval of Job Aids and distribution plan	10/20/20	User Document, Training Plan, Job Aids	Job Aids are available within the HIA Solution and will also be accessible via the State SharePoint; the User Document will be updated quarterly, as needed, and therefore the Job Aids and WBTs will be updated from those updates, as needed. The User Document is considered 'the source of truth' and will be updated as needed on a quarterly basis.
Approval of and adherence to User Support Plan	10/20/20	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Final version 1.4 of the NE DMA User Support Plan dated 5/28/2019. This identifies the User Support process for Tier 1; Tier 2; Tier 3 processes.

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Criteria	Date	Source	Outcome
Approval of and Adherence to Service Desk planning and resources	10/21/20	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Deloitte will be providing HyperCare assistance after Go-Live for the HIA Solution. The State Helpdesk would handle State issues while anything in regard to HIA Solution, the Deloitte/HyperCare helpdesk would handle those issues. Update: as per the October 2020 Newsletter sent on 10/21/2020, HyperCare will be available 11/2/2020 - 11/27/2020-9 -11 am and 2-4 pm CDT.
Approval of and Adherence to On-site/Virtual Support upon Soft Launch and Go-Live	10/21/20	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	HyperCare is to be available for Go-Live as per the Organizational Change Management Plan dated July 2020. Update: as per the October 2020 Newsletter sent on 10/21/2020, HyperCare will be available 11/2/2020 - 11/27/2020-9 -11 am and 2-4 pm CDT.
Approval of and Adherence to Security Role Provisions and User Support Team Definitions upon Soft Launch and Go-Live	10/20/20	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Security Roles have been established and ready for Go-Live for the appropriate users.
Approval of and adherence to Resource/Staff Readiness Plan	10/21/20	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Super Users/User Support Team Members understand the Incident Management Process. If they are unable to resolve the question/issue with an end user, they will escalate to the Deloitte HyperCare Helpdesk. Update: as per the October 2020 Newsletter sent on 10/21/2020, HyperCare will be available 11/2/2020 - 11/27/2020-9 -11 am and 2-4 pm CDT.

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Criteria	Date	Source	Outcome
Approval of Determining Incident Attributes	10/21/20	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Super Users/User Support Team Members understand the process to use in reporting an Incident in regard to the HIA Solution if and when the occurrence happens. Another DMA/HIA Training Resources email was sent to HIA End Users on 10/20/2020 indicating where/how to find the training materials and how to contact Super Users for questions and assistance. Update: as per the October 2020 Newsletter sent on 10/21/2020, HyperCare will be available 11/2/2020 - 11/27/2020-9 -11 am and 2-4 pm CDT.
Approval of Service Level Standard and Escalation Management process	10/21/20	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Acceptance and approval of the Incident Management process has been done by the approval of the Business and Technical Operating Procedures by Larra Petersen-Lukenda, Director of Operations and Analytics on 2/18/2020.
Approval of Incident Management Key Performance Indicators (KPIs)	10/21/20	DDI NE DMA Business and Technical Operating Procedures, IMS, Observance, Meeting Minutes	Acceptance and approval of the Key Performance Indicators (KPIs) process has been identified by the approval of the Business and Technical Operating Procedures by Larra Petersen-Lukenda, Director of Operations and Analytics on 2/18/2020.
Effectiveness of User Support Team training	10/20/20	Interviews	The Business Users Group meetings that have been conducted weekly at the beginning of October 2020 (bi-weekly in September 2020) has been attended by Super Users and End Users of the HIA Solution. Information, questions, additional assistance in creating ad hoc reports are the topics for

Criteria	Date	Source	Outcome
			the meetings. Over a 100+ attendance has occurred for these meetings and continue to provide ongoing support to the end users of the HIA Solution. There have been no negative responses reported by the attendees. A survey has been sent by the OCM team to the respective stakeholders; the results of the survey will not be available until the end of October 2020.

### 2.1.3 Data Readiness

The IV&V data readiness review focused on the following items:

- Data Governance (1)
- Data Management (2)
- Data Modeling (1)
- Data Conversion (4)
- Data Sharing (1)
- Data Integration (1)
- Data Quality (1)

Criteria	Date	Source	Outcome
Adoption and implementation of a data governance framework	10/21/20	Interviews	IV&V has confirmed that the new DMA Project Lead is planning to reboot data governance efforts both for the DMA project and as part of the enterprise data governance framework.



Criteria	Date	Source	Outcome
Implementation of data strategy, processes, procedures and methods/tools for data management	10/20/20	Data Management Plan, Data Retention and Archive Plan, Interviews	IV&V has verified that there are some concerns about access to sensitive information with the system and state is working to Implement the solution with Deloitte and it has been raised as a risk.
Approval of and adherence to Data Retention and Archive Plan	10/20/20	Data Retention and Archive Plan	IV&V has verified the approval of the document by, Larra Petersen-Lukenda, Director of Operations and Analytics on 9/10/17. (DDI_NE_DMA_Data Retention and Archive Plan_Deliverable Acceptance Form) However, documentation is not accurately reflecting project decisions made in the DDI phase of the project.
Approval of and adherence to data modeling and configuration process	10/08/20	Data Modeling Plan, Conceptual, Logical & Physical Data Models, Interviews	Verified data modeling and configuration process was approved and executed were executed as planned.
Approval of and adherence to data conversion and load process	10/08/20	Data Conversion and Load Plan, Interview	IV&V has verified that Deloitte acted in accordance with the Data Conversion and Load Plan and DHHS has accepted the results.
Approval of and adherence to processes and routines for data conversion mapping	10/16/20	Data Conversion Mappings, Interview	IV&V has verified that Deloitte has acted in accordance with the Data Conversion Mappings and DHHS has accepted the results.
Approval of and adherence to data transformation process	10/08/20	Data Transformation Plan, Interview	IV&V has verified that Deloitte has acted in accordance with the Data Transformation Plan and DHHS has accepted the results.

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Criteria	Date	Source	Outcome
Approval of Data Conversion Execution Packages	10/08/20	Data Conversion Execution Packages, Interview	IV&V has verified that Deloitte has acted in accordance with the Data Conversion Execution Packages and DHHS has accepted the results.
Approval of and adherence to data sharing process	10/20/20	Data Sharing Plan, Interview	IV&V has verified the approval of the document by, Kris Azimi, Administrator II, Healthcare Informatics & Business Integration 9/27/18. (DDI_NE_DMA_Data Sharing Plan_v.1.2.Final) . However, Federal Reports listed under CMS ### reports, were never properly configured for actual submission and Data Governance Board was not consulted consistently.
Approval of and adherence to data integration process	10/06/20	Data Integration Plan, Interviews	IV&V has verified that Deloitte acted in accordance with the Data Integration Plan and DHHS has accepted the results.
Approval of and adherence to quality assurance processes and procedures	10/20/20	Comprehensive Quality Assurance Plan, Quality Assurance Procedures, Interview	IV&V has verified the approval of the document by, Larra Petersen-Lukenda, Director of Operations and Analytics on 2/22/19. (DDI_NE_DMA_Comprehensive Quality Assurance Plan and Quality Assurance Procedures v.1.5.Final).However, Following observations were made: <ul style="list-style-type: none"> <li>• Structured quality metrics were not published/organized consistently for state to be able to measure the performance.</li> <li>• Performance metrics are still out for approval with CMS less than 2 weeks from full go live.</li> </ul> It is also observed that

Criteria	Date	Source	Outcome
			<ul style="list-style-type: none"> <li>• key status reporting meetings were missing like retrospectives and quarterly reviews.</li>   <li>• State does not have access/use of the list of dashboards designed around validation of data within the HIA platform listed under (Functional Area Validations – page 38 of 71)</li>   <li>• There are questions around availability of Data Profiling – reports (page 42 of 71) and scores associated with it.</li>   <li>• Steering Committee has not met since January 2020.</li>   <li>• Concern / frustration specifically towards the quality of the delivered documents by Deloitte.</li>   <li>• Deloitte not being consistent with Peer reviews</li>   <li>• State also observed the The Requirements Traceability on page 11 has issues in that the entire premise is the Deloitte staff determining if there are gaps in the available functionality and the required functionality. Deloitte has proven in the past that they do not interpret the requirements in the same way that the State does, and without the input of State staff, it is impossible for these gaps to be appropriately measured. It doesn't seem to me that it is appropriate quality assurance for the vendor to determine if there are gaps in the functionality.</li> </ul>

## 2.2 Technology Readiness

### 2.2.1 Technical Readiness

The Technical Readiness section primarily focused on the Infrastructure and Technical components of the DMA project.

Criteria	Date	Source	Outcome
Completion of the (6) Pre-Cutover technical tasks planned for Go-Live.	10/25/20	DMA "Go-Live Cutover_Plan_v4.0.xlsx"	IV&V used the Oct 20, 2020, 3:21 PM copy of the DMA Go-Live Cutover_Plan_v4.0.xlsx file to perform the 'Pre-Cutover' assessment. The review compares the Planned Start Date to the Actual Start Date and the Planned End Date to the Actual End Date.  Review results: Tasks Started On-Time: 1 Tasks Finished On-Time: 0 Tasks Not Started or Started Late: Zero (5) Tasks Finished Late: 0 Active Late Tasks: Zero (0) Active Not Late Tasks: 0 Future Start Date Tasks: Zero (0)

Criteria	Date	Source	Outcome
Completion of the (19) Cutover Prep Activities planned for Go-Live.	10/25/20	DMA "Go-Live Cutover_Plan_v4.0.xlsx"	IV&V used the Oct 20, 2020, 3:21 PM copy of the DMA Go-Live Cutover_Plan_v4.0.xlsx file to perform the 'Cutover Prep Activities' assessment. The review compares the Planned Start Date to the Actual Start Date and the Planned End Date to the Actual End Date.  Review results: Tasks Started On-Time: Tasks Finished On-Time: 1 Tasks Not Started or Started Late: Zero (18) Tasks Finished Late: Active Late Tasks: Zero (0) Active Not Late Tasks: 0 Future Start Date Tasks: Zero (0)
Completion of the (2) Cutover technical tasks planned for Go-Live.	10/25/20	DMA "Go-Live Cutover_Plan_v4.0.xlsx"	IV&V used the Oct 20, 2020, 3:21 PM copy of the DMA Go-Live Cutover_Plan_v4.0.xlsx file to perform the 'Cutover' assessment. The review compares the Planned Start Date to the Actual Start Date and the Planned End Date to the Actual End Date.  Review results: Tasks Started On-Time: Tasks Finished On-Time: 0 Tasks Not Started or Started Late: Zero (2) Tasks Finished Late: Active Late Tasks: Zero (0) Active Not Late Tasks: 0 Future Start Date Tasks: Zero (0)

Criteria	Date	Source	Outcome
Completion of the (5) Rollback Cutover technical tasks planned for Go-Live.	10/25/20	DMA "Go-Live Cutover_Plan_v4.0.xlsx"	IV&V used the Oct 20, 2020, 3:21 PM copy of the DMA Go-Live Cutover_Plan_v4.0.xlsx file to perform the 'Rollback' assessment. The review compares the Planned Start Date to the Actual Start Date and the Planned End Date to the Actual End Date.  Review results: Tasks Started On-Time: Tasks Finished On-Time: 0 Tasks Not Started or Started Late: Zero (5) Tasks Finished Late: Active Late Tasks: Zero (0) Active Not Late Tasks: 0 Future Start Date Tasks: Zero (0)

### 2.2.2 System Readiness

The system readiness review focused on comparing the System Readiness Test Plan deliverable to the System Readiness Test Results deliverable. During the review process IV&V recorded any items that did not align with the Plan or generated concerns related to the Go-Live deployment.

Criteria	Date	Source	Outcome
<p>Verify system configuration testing planned activities to system configuration results.</p> <p>In scope configurations:</p> <ul style="list-style-type: none"> <li>* Hardware configurations</li> <li>* Software configurations</li> <li>* Application configurations</li> <li>* User configurations</li> <li>* Environment connectivity</li> <li>* Deployment objects checklist</li> <li>* Batch jobs and scheduler checklist</li> </ul>	10/06/20	System Readiness Test Plan, System Readiness Test Results.	<p>The System Readiness Test Plan described 7 system configuration testing items. The review of the System Readiness Test Results found 4 of the 7 items. Named items: Hardware configuration, User configuration, Batch Scheduler, were not mentioned in the System Readiness Test Results document in Figure 4 on page 8. The 4 found items were confirmed during the normal project deliverable review process of the accepted System Readiness Test Results deliverable.</p> <p>The System Readiness Test Plan has embedded links for the System Configuration Checklist and Batch Job Checklist that IV&amp;V was not able to locate. The System Readiness Test Results contained the testing outcomes for those items but no checklists were found in the deliverable.</p>
<p>Verify performance testing planned activities to performance testing results. In scope configurations:</p> <p>Performance Testing Types:</p> <ul style="list-style-type: none"> <li>* Load testing</li> <li>* Stress testing</li> <li>* Endurance testing</li> </ul> <p>Performance testing components:</p> <ul style="list-style-type: none"> <li>* NE DMA portals</li> <li>* Standard and ad hoc reports</li> </ul>	10/06/20	System Readiness Test Plan, System Readiness Test Results.	<p>The System Readiness Test Plan described 3 performance testing types; load, stress, and endurance; to be performed on 2 components; NE DMA portals and Standard and ad hoc reports. The review of the System Readiness Test Results found execution of all testing types. Only one component had test results, the Standard report. Testing results for components NE DMA portal and ad hoc reports were not found in the System Readiness Test Results deliverable. Additional results were found for other components; Summary reports, Detailed reports, Integrated Case Management,</p>

Criteria	Date	Source	Outcome
			<p>and Other reports.</p> <p>The System Readiness Test Plan assumption was to use 1 year of test data but actually the System Readiness Results were based on 10 years of test data for Load testing, Stress testing, and Endurance testing. The System Readiness Test Plan declared concurrent users for Load testing to be 650, where the System Readiness Test Results only tested 100 concurrent users. The System Readiness Test Plan declared concurrent users for Stress testing to be 650, the System Readiness Test Results matched 650 concurrent users. The System Readiness Test Plan declared concurrent users for Endurance testing to be 250, where the System Readiness Test Results only tested 50 concurrent users.</p> <p>The System Readiness Test Plan contains three very important sections related to Performance Testing; Analyze Performance Improvement Areas, Implement Performance Improvement Areas, and Execute Performance Testing (Cycle II). These sections serve as a backdrop to Performance Testing core professional principles. The System Readiness Test Results has no reference to any of the three sections or any mention of concerns related to application performance following a single performance test cycle.</p> <p>The System Readiness Test Plan</p>



Criteria	Date	Source	Outcome
			<p>outlined the Performance Testing approach which included three testing types; Load Testing, Stress Testing, and Endurance Testing. Additionally, the System Readiness Plan identified a common set of 76 test scenarios that each test type (Load, Stress, and Endurance) would execute. The System Readiness Test Results description of the Performance Testing approach closely matched that of the System Readiness Test Plan except in terms of test scenario volume per testing type. The System Readiness Test Results listed a 104 test results for Load Testing, one test result for Stress Testing, and one test result for Endurance Testing. The System Readiness Test Results deliverable did not provide any reasoning or clarification on why the Stress or Endurance test scenarios were significantly reduced between the System Readiness Test Plan and Results documentation.</p> <p>Only one test scenarios 'failed' during Performance Testing it was part of the Stress Testing execution according to Deloitte. All other test scenarios 'passed' during Performance Testing for the following types: Load, Stress, and Endurance. Deloitte confirmed that the 'failed' test scenario has been corrected and closed.</p>

Criteria	Date	Source	Outcome
<p>Verify disaster recovery testing planned activities to disaster recovery testing results.</p>	<p>10/06/20</p>	<p>System Readiness Test Plan, System Readiness Test Results, Disaster Recovery Plan.</p>	<p>The System Readiness Test Plan outlines a Disaster Recovery Test section. Within the section the basic details of disaster recovery testing is provided along with directions to inspect the deliverable named Disaster Recovery Test Plan. Clearly stated in the Disaster Recovery Test Plan are the details that the results of disaster recovery testing will be published in the Disaster Recovery Test Report. Part of our assessment included searching for the Disaster Recovery Test Report on the Deloitte SharePoint site. IV&amp;V was unable to find the Disaster Recovery Test Report artifact.</p> <p>The System Readiness Test Results does contain Disaster Recovery Testing results. The System Readiness Test Results list 14 test scenarios and it is a common practice to establish a base set of test scenarios in a Plan. Examining both the System Readiness Test Plan and the DR Plan, IV&amp;V was unable to find any predefined or base set of test scenarios.</p> <p>The System Readiness Test Plan’s Roles and Responsibilities table includes the role named “NE DHHS team”. The third bullet in the responsibility column for “NE DHHS team” states “Actively involved in the disaster recovery testing process as per the roles defined in the DR Plan”. A review of the DR Plan Roles and Responsibilities table includes the</p>

Criteria	Date	Source	Outcome
			<p>role named “Security/Privacy/Compliance Team (DHHS)” with the responsibility of “Validation of operation at the DR site based on the results provided via DR testing activity and identification of gaps and working with other teams to come up with the mitigation plan”. IV&amp;V considers these two roles to be equivalent from a responsibility perspective. When reviewing the System Readiness Test Results deliverable the role “NE DHHS team” had the responsibility of “Actively involved in the disaster recovery testing process as per the roles defined in the DR Plan” removed from its responsibilities. IV&amp;V is concerned that the State did not participate in the disaster recovery exercise.</p> <p>The DR Plan makes numerous references to the wording “DR site” compared to the deliverable which states “Production environment”. IV&amp;V confirmed with one of the State’s Security Team staff members that the Disaster Recovery testing did take place at a “DR site”. They responded with “The activity included restoration of, and usage of, the system from servers in a second Availability Zone.”</p>

### 2.2.3 Implementation Readiness

The implementation readiness review focused on the items managed within the Operational Readiness Checklist. At the time of review, the Status of these items were:

- Complete: 51
- In Progress: 25
- Not Started: 34

Criteria	Date	Source	Outcome
Have the Go-Live Release Notes been submitted?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.1 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/28/2020.
Are Deloitte Project Deliverables needed for Go-Live completed and approved?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.2 Status: Complete Review Results: A comparison of Scheduled Date (10/28/2020) and Actual Finish (10/05/2020) indicates the criterion was (23) days early.
Is the Operations Integrated Master Schedule / Release Schedule complete and approved?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.3 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 10/05/2020.
Is the System Readiness Test Results complete and approved?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.4 Status: Complete Review Results: A comparison of Scheduled Date (10/15/2020) and Actual Finish (10/05/2020) indicates the criterion was (10) days early.

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Criteria	Date	Source	Outcome
Are Deloitte Project artifacts needed for Go-Live updated and approved?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.5 Status: Complete Review Results: A comparison of Scheduled Date (10/28/2020) and Actual Finish (10/05/2020) indicates the criterion was (23) days early.
Is the Third Party Cybersecurity Assessment complete and approved?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.7 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 09/01/2020.
Has the ICD catalog update for the Medicaid expansion/Finance / enhancement release been completed and approved?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.8 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 09/14/2020.
Has the Business and Technical Operating Procedures update for the Medicaid expansion/Finance / enhancement release been completed and approved?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.9 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 09/01/2020.
Has the User Documentation update for the Medicaid expansion/Finance / enhancement release been	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.10 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 09/24/2020.

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Criteria	Date	Source	Outcome
completed and approved?			
Are State project artifacts needed for Go-Live completed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.11 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/28/2020.
State UAT testing plan for operations (with roles identified) Complete?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Documentation section	State Owner: Shara Sheehan Deloitte Owner: Meg IMS Ref: 1.19.8.1.4.5.12 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/28/2020.
Have business units updated internal documents?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has Data Analytics business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.1 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.

Criteria	Date	Source	Outcome
Has Developmentally Disabled business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.2 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has FAPA business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.3 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has Medicaid IT Initiatives business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.4 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has MLTC Plan Management business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.5 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.

Criteria	Date	Source	Outcome
Has MLTC Medicaid Claims business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.6 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has MLTC Financial and Business Operations business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.7 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has MMIS business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.8 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has Program Integrity business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.9 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.



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Criteria	Date	Source	Outcome
Has Provider Relations business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.10 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has Recovery and Cost Avoidance (RCA) business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.11 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Has Pharmacy business unit ancillary documentation (State Owned) been updated for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.6.12 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Are governance bodies in place for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.8 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.

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Criteria	Date	Source	Outcome
Has Change Management governance been identified for initial operations?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.8.1 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Have Product Owner roles and resource allocations (hour commitments) been identified for initial operations?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.8.2 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Have Project Manager roles and resource allocations (hour commitments) been identified for initial operations?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.8.3 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Have report packages created by Business Units been promoted to Production Redundant IDS?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.10 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.

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Criteria	Date	Source	Outcome
Are Managed Care Entities prepared for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.15 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Cutover dates and file transfer protocols have been communicated to MCE's for go Live	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Process section	State Owner: Aaron Deloitte Owner: Rob IMS Ref: 1.17.6.1.3.7.1.15.1 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Was the Go Live OCM Plan Developed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.1 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 08/21/2020.
Was the Go Live OCM Plan Executed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.2 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the Business User Group Re-Established for Go-Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.3 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020)

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Criteria	Date	Source	Outcome
			indicates the criterion was (28) days early.
Were the Business User Group sessions held bi-weekly?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.4 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Were the monthly Functional Corner topics developed and distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.5 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/14/2020) indicates the criterion was (16) days early.
Were the monthly Communication Video topics developed and distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.6 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/14/2020) indicates the criterion was (16) days early.
Were the monthly Newsletters developed and distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.7 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.

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Criteria	Date	Source	Outcome
Were the weekly user manager reports provided to POs and POCs	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.8 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the "Message from Jeremy on HIA Usage" developed and distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.9 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 08/30/2020.
Were the Bi-Weekly Communications to End Users Developed and Distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.10 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the Pre-Go Live Announcement Developed and Distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.11 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the Go Live Announcement Developed and Distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.12 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the Post-Go Live Announcement (Day After) Developed and Distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.13 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.

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Criteria	Date	Source	Outcome
Were the Weekly Post Go-Live Announcements Developed and Distributed (Week 1 to 4)	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.14 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the FAQ document on SharePoint updated?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.15 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the DMA site updated to include all new materials?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Communications) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.16 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/11/2020) indicates the criterion was (19) days early.
Were the weekly Common Issues Spreadsheet distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.17 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the Super User Go Live Kick-Off Session Held?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.18 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.

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Were the Super User Check-In meetings completed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.19 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Were the two Training Resources Reminder Emails Sent Out?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.20 Status: In Progress Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/05/2020) indicates the criterion was (25) days early.
Were the October Product Owner Pulse Checks at OTRC Completed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.21 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the HyperCare Self Help and Triage Information developed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.22 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/09/2020) indicates the criterion was (21) days early.



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Criteria	Date	Source	Outcome
Was the HyperCare Self Help and Triage Information Distributed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.23 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the HyperCare Virtual Room Set Up and Communicated to End Users?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.24 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was the HyperCare Schedule Developed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: N/A Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.25 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/12/2020) indicates the criterion was (18) days early.
Was the HyperCare Virtual Room Report Template Created?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.26 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/01/2020) indicates the criterion was (29) days early.
Were all End Users Prod Access Confirmed for Go Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.27 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/30/2020.



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Were the Organizational Readiness Base Surveys Completed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.28 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (09/30/2020) indicates the criterion was (30) days early.
Were tactics developed and executed to address comments from the Org Readiness Surveys?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.29 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/01/2020) indicates the criterion was (29) days early.
Were the Organizational Readiness Final Surveys Completed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.30 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/30/2020.
Was Deloitte Operational Staff Readiness Assessed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.31 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.

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Was the Deloitte Operational Staff trained in Operational Processes?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.32 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Was the State DMA Operational Staff Identified for Go Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.33 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (09/30/2020) indicates the criterion was (30) days early.
Was the State DMA Operational Staff Readiness Assessed for Go Live?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Overarching) section	State Owner: BB Babalola Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.34 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/15/2020) indicates the criterion was (15) days early.
Were the Super Users Re-Engaged?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.35 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.

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Criteria	Date	Source	Outcome
Were the Super Users Identified for Business Units?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.36 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Were the Super Users communicated to End Users?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.37 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/02/2020) indicates the criterion was (28) days early.
Were the End User Training Sessions Completed for MMIS?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.38 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 09/15/2020.
Were the Refresher Training Sessions Completed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.39 Status: Complete Review Results: A comparison of Scheduled Date (10/30/2020) and Actual Finish (10/15/2020) indicates the criterion was (15) days early.

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Criteria	Date	Source	Outcome
Were the End User Training Surveys for MMIS Completed?	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; OCM (Training) section	State Owner: Shara Sheehan Deloitte Owner: Meg Smith IMS Ref: 1.19.8.1.4.3.40 Status: Complete Review Results: The criterion was completed on the defined Scheduled Date of 09/30/2020.
Parallel 837 MTD for October shared with MCEs	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Encounter Processing section	State Owner: Andy Scherer Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.4.1 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/18/2020.
MLTC reviews the Open ALM issues for 837/NCPDP Encounters	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Encounter Processing section	State Owner: Andy Scherer/Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.4.2 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/26/2020.
MLTC approves 837 encounter move to HIA	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Encounter Processing section	State Owner: Andy Scherer/Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.4.3 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/24/2020.
MLTC approves NCPDP encounter move to HIA	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Encounter Processing section	State Owner: Andy Scherer/Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.4.4 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/24/2020.

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Criteria	Date	Source	Outcome
MCEs notified of 837 encounter move to HIA	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Encounter Processing section	State Owner: Andy Scherer Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.4.5 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/26/2020.
MCEs notified of NCPDP encounter move to HIA	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Encounter Processing section	State Owner: Andy Scherer Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.4.6 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/26/2020.
MCEs notified of encounter incident reporting procedures.	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Encounter Processing section	State Owner: Andy Scherer Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.4.7 Status: Not Started Review Results: The Scheduled Date for this criterion is 10/26/2020.
EDI Gateway implementation for NCPDP and responses	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Implementation section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.2.1 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/02/2020.
MMIS Implementation for NCPDP and responses	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Implementation section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.2.2 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/02/2020.

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Criteria	Date	Source	Outcome
EDI Gateway implementation for 837, 277CA and MTD	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Implementation section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.2.3 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/02/2020.
MMIS Implementation for 837, 277CA and MTD	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Implementation section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.2.4 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/02/2020.
MMIS implementation for UPIC	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Implementation section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.2.5 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/02/2020.
MMIS remove Encounter process (837 and pharmacy) from MMIS schedule	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Implementation section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.2.6 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/02/2020.
MMIS implementation for Claims History File	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Implementation section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.2.7 Status: Not Started Review Results: The

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Criteria	Date	Source	Outcome
			Scheduled Date for this criterion is 11/02/2020.
MMIS implementation for MDR	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Implementation section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.2.8 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/23/2020.
Review first 277CA file	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.1 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/03/2020.
Review first MTD Summary	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.2 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/03/2020.
Review first NCPDP Acknowledgement File	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.3 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/03/2020.

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Criteria	Date	Source	Outcome
Review first NCPDP Compliance File	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.4 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/03/2020.
Review first NCPDP MTD Summary	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.5 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/03/2020.
Review first UHC Claims History file	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.6 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/10/2020.
Review first WellCare Claims History file	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.7 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/10/2020.
Review first Totalcare Claims History file	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.8 Status: Not Started Review Results: The



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Criteria	Date	Source	Outcome
			Scheduled Date for this criterion is 11/10/2020.
Review first AHS Claims History file	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.9 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/10/2020.
Review First UPIC File	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.10 Status: Not Started Review Results: The Scheduled Date for this criterion is 12/01/2020.
Review first Encounter MDR file	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.11 Status: Not Started Review Results: The Scheduled Date for this criterion is 02/16/2021.
Batch schedule for NCPDP processing	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.12 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/01/2020.

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Criteria	Date	Source	Outcome
Batch schedule for MDR outbound file	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.13 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/01/2020.
Batch schedule for UPIC outbound file	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.14 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/01/2020.
Batch schedule for outbound claims history files for WellCare, UHC and Totalcare	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.15 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/01/2020.
Disable batch to delete encounter processed by HIA	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.16 Status: Not Started Review Results: The Scheduled Date for this criterion is 11/01/2020.
Process Encounter files for October from MMIS	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Technical section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.1.17 Status: Not Started Review Results: The

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Criteria	Date	Source	Outcome
			Scheduled Date for this criterion is 11/02/2020.
Server backup procedures are in place	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Contingency section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.7.1 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/31/2020.
Production code version is available in code repository	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Contingency section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.7.2 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/31/2020.
System Security Procedures are in place	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Contingency section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.7.3 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/31/2020.
Legacy system procedures are in place in case of rollback	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Rollback section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.8.1 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/31/2020.

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Criteria	Date	Source	Outcome
MCEs encounter submission process in place	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Rollback section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.8.2 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/31/2020.
MMIS procedures to send files to Legacy system are in place	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Rollback section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.8.3 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/31/2020.
MMIS procedures to receive encounters are in place	10/21/20	Go-Live Operational Readiness_Decision Criteria Checklist_10212020.xlsx; Rollback section	State Owner: Sherry Linnerson Deloitte Owner: Arvind Dubey IMS Ref: 1.19.8.1.4.8.4 Status: In Progress Review Results: The Scheduled Date for this criterion is 10/31/2020.

## 3.0 References

This section identifies key term and acronym definitions, standards used or referenced by IV&V and references to other relevant documents used during the review.

### 3.1 Definitions

Table 1 - Acronyms: provides the acronyms and their definitions that are used throughout the project and within this document.

Acronym	Definition
ALM	Application Lifecycle Management
AM-PM	Application Management Process Manager
CMMI	Capability Maturity Model Integration
CMS	Centers for Medicare & Medicaid Services
DDI	Design, Develop and Implementation
DHHS	Nebraska Department of Health and Human Services
DMA	Data Management and Analytics
EDI	Electronic Data Interchange
HIA	HealthInteractive Analytics
ICDs	Interface Control Documents
ICM	Investigative Case Management
IDS	Integrated Data Store
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IMS	Integrated Master Schedule
ISLM	Infrastructure and Solution Lifecycle Management Plan
ISO	International Organization for Standardization
ITIL	Information Technology Infrastructure Library
IV&V	Independent Verification and Validation
KPI	Key Performance Indicator
MCE	Managed Care Entity
MECT	Medicaid Enterprise Certification Toolkit
MITA	Medicaid Information Technology Architecture
MLTC	Nebraska DHHS, Division of Medicaid and Long-Term Care
MMIS	Medicaid Management Information System

Acronym	Definition
N/A	Not Applicable
NE	Nebraska
PMC	Project Management Center
PMI	Project Management Institute
PMP	Project Management Plan
RAID	Risk, Action Item, Issue and Decision
RFP	Request for Proposal
SaaS	Software as a Service
SaBORR	System and Business Operations Readiness Review
SC	Steering Committee
SIT	System Integration Testing
SLA	Service Level Agreement
T-MSIS	Transformed Medicaid Statistical Information System
UAT	User Acceptance Testing
UI	User Interface

*Table 1 - Acronyms*

## 3.2 Standards

The IV&V team referenced or utilized industry best practices or recognized standards during the readiness review. The standards employed by IV&V are drawn from the following recognized standards bodies:

- The Project Management Institute’s (PMI®)
- The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
- The International Organization for Standardization (ISO)
- The International Electrotechnical Commission (IEC)
- Information Technology Infrastructure Library (ITIL)
- The Capability Maturity Model Integration (CMMI)

## 3.3 Other References

The IV&V team utilized other references during the review. Those other references are:

- Medicaid Enterprise Certification Toolkit (MECT) Version 2.3
- Medicaid Information Technology Architecture (MITA) Version 3.0
- Nebraska Request for Proposal (RFP) #5252Z1: Independent Verification and Validation (IV & V)
- First Data response to RFP #5252Z1 dated May 18, 2016
- First Data Verification & Validation Practice Guide Version 1.0
- Nebraska RFP # 5330Z1: Contractor to provide Medicaid Data Management and Analytics (DMA) Services
- Deloitte response to RFP # 5330Z1

December 15, 2018



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IEDSS OPERATIONAL READINESS  
OV&V STATUS REPORT  
NOVEMBER 2018

Operational Verification and Validation (OV&V) Services | Version 1.0

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## 1.0 Introduction

First Data Corporation conducts Operational Verification and Validation (OV&V) services for the Indiana Eligibility Modernization Project (IEMP). To enhance the services currently being provided, First Data provides operational readiness support to the Division of Family Resources (DFR) as they roll out the new integrated eligibility system, Indiana Eligibility Determination and Services System (IEDSS). This report provides updates on the planning and delivery of the project's implementation processes so the DFR can ensure the needs of the agency, and ultimately, the clients, will be met.

## 2.0 Status Updates

### 2.1 Implementation Team and Operational Readiness Status

Before IEDSS rolls out, all aspects of implementation must be taken into consideration. This is accomplished through higher-level operational readiness reviews to identify all tasks required to implement the system, and then a more detailed deployment schedule that addresses the step-by-step needs for the day(s) of actual deployment. In order to facilitate these activities during November 2018, OV&V continued to meet with the State Implementation Manager on a regular basis to focus on the development and execution of readiness endeavors. Additional support was provided through KSM Consulting and will continue throughout the project. For the purposes of this report, the small group consisting of the State Implementation Manager, KSM Consulting, Deloitte Implementation Manager and OV&V will be called the Core Implementation Team or Core.

High level activities conducted throughout the month of November are outlined in this section of the report, while details are included throughout:

- On-going sessions with the Core Implementation Team to address the execution and subsequent review the State's readiness strategies and planned goals.
- Collection of task items and process steps for the creation of the initial draft of the Operational Readiness Review Task List and the Deployment Schedule.
- Continued planning for the first of two Dry Runs. The first Dry Run is scheduled to start on December 7 and run through the weekend. The scope for this is included in the Deployment Planning section below. A walkthrough of the Deployment Scheduled was held to prepare for the Dry Run. .
- Initial discussions regarding Site Support Planning began. With Deloitte providing site support services, DFR will need to provide significant oversight into the activities being prepared and delivered.
- Review of Federal Readiness Requirements. The Implementation Team continued to work on planning for CMS/FNS required documentation.



### 2.1.1 Operational Readiness Review (ORR)

Planning and preparation for ORR continued during November. Small group meetings were conducted with DFR primary partners to promote positive working relationships, review high level goals for the first Dry Run, and solicit any needs or concerns the partners held. Ongoing meetings with these Partners, as well as others involved in IEDSS, are planned to continue throughout the implementation process. Partners involved in meetings held during the month included:

- Site Support
- Command Center
- IOT
- BizTalk
- Data Warehouse
- Day 0 Script and Smoke Testing
- Training
- Infrastructure and Tech
- Conversion
- Rollback Strategy

The Implementation Team continued to compile operational readiness review tasks into one consolidated file, adding additional tasks and updating existing tasks as they were discovered. There were some challenges in gathering these details for various reasons: partner availability, conflicting obligations, and understanding of the ORR process. The Implementation Team remained flexible to scheduling needs of work streams in order to obtain details and provided additional guidance when needed. The Implementation Team will resume ORR meetings with the entire group after the team conducts the first of two Dry Runs for Deployment. These meetings will be used to ensure Partners accountability for their tasks through status report updates.

For the duration of the Project, especially through Pilot, the ORR task items will be monitored for potential challenges that might impact success. The table below lists a few of the items that might require additional discussion.

**Table 1 ORR Task Items to Monitor**

	Readiness Group	ORR Task Item	Potential Impacts
1.	BizTalk	No identified ORR Tasks at this time.	Initial ORR Tasks have been collected from the BizTalk team; however, there are several Action Items pending from the meeting. One of these is a detailed walk through of each interface which is time consuming and should be started soon.
2.	RCR/PostMasters/IVR/Phoenix	Software/Server Updates	As discussed last month in a review meeting with DFR, these



	Readiness Group	ORR Task Item	Potential Impacts
			are not of high importance. However, the Implementation Team will monitor progress just in case there might be impact to schedule.
3.	IOT	Short term/long term server issues	Concerns exist about how quickly this can be delivered to the State and installed.
4.	Interfaces	Interface Tracker Updates	Prior discussions have indicated that the interface tracker was being updated to reflect additional details required for go live. Unsure if this has been obtained.
5.	Command Center	Planning	Planning for Command Center involves many partners/systems. As a result, the Implementation Team will need to ensure all necessary Participants are in the communication loop.

### 2.1.2 Deployment Planning Activities

With the first Dry Run scheduled for December 7, 2018, the Implementation Team focused efforts during the month of November on finalizing the Deployment Schedule. This included addressing each step in the process, as well as mitigating any issues that arose. The team was able to include a connectivity test with Data Warehouse, which had been initially removed from scope. Deloitte shared a potential option to change the scope of the Dry Run which would allow for a test of newly installed server upgrades, as well as including several connectivity points. However, after additional analysis, Deloitte determined they not be able to prepare the environment in time for planned activities to begin according the Integrated Project Schedule. An additional issue was raised near the end of November regarding the use of PROD Stage 2 environment in correlation to testing efforts and user IDs for the second segment of the Dry Run planning. As a result, PROD Stage 1 was used to accommodate any issues that might impact the Testing Teams. Discussions took place to address smoke testing as it related to the Dry Run. In light of the identified scope, smoke testing scenarios were kept at a minimum, focusing on entry into the system and user accessibility/security.



## 2.2 Federal Readiness

### 2.2.1 FNS

A Draft Go Live Packet was submitted on October 31, 2018 with the purpose of providing already existing evidence to the FNS Review Team, in an effort to resolve items listed as discrepant early in the FNS review process. At this time, FNS has not supplied DFR with any feedback for this submission. As mentioned previously, the Go Live Packet was not complete upon submission since the system development lifecycle is not complete. In the next few months, the Implementation Team will be finalizing the documentation required for Pilot submission so that when the final packet is due, all items will be readily available.

### 2.2.2 CMS

The Implementation Team met with IEDSS IV&V to discuss planning for the completion of the MEET (Medicaid Eligibility and Enrollment Toolkit) checklists and evidence. Based on conversations with DFR's CMS Regional Partner, DFR will be working towards completion of R2 requirements and corresponding evidence. IV&V will be validating the evidence provided by DFR against those federal requirements. To avoid last minute reviews and discussions regarding appropriateness of submitted materials, OV&V would recommend that DFR request feedback from this evidence review during each scheduled MEET touchpoint with the IV&V team.

### 2.2.3 MITA Self-Assessment

At this time, there are no updates to report.

## 2.3 Training

The delivery of IEDSS Training to the field staff requires careful review of the materials, as well as detailed planning and effective communication of logistics to facilitate a smooth execution of the plan. This section addresses IEDSS Training progress.

The Training Team held two meetings during the month in order to ramp up planning for IEDSS training. Onboarding coordination is underway for hiring training personnel from Deloitte, as well as DFR and Conduent. Deloitte has 27 trainers starting on December 3, 2018. The DFR Training Director is in the process of determining the State portion of trainers so that onboarding can begin for them as well. Deloitte has indicated that they may have additional team members they could use to augment the State pool if needed.

### 2.3.1 Materials – Design and Approval

All training materials received review and approval prior to DFR's first attempt at rolling out IEDSS training in February 2017. Since that time, Deloitte has continued to make updates, corrections, and enhancements to them, based on testing efforts and additional changes to the system. Currently, the IEDSS Project Schedule has this item scheduled for completion by the end of



December 2018. In an effort to achieve a final approval of materials, the DFR Training Director and team will participate in an abbreviated version of the Eligibility Coursework, as well as conduct a review of more critical Job Aids and Quick Reference Guides. The DFR Training Director will be managing this review process.

### 2.3.2 Logistics

This section will outline the status of the overall training logistics:

- **Location Readiness:** Training locations have been identified and tentatively scheduled. The plan currently shows details for Pilot and both Waves, but these details are subject to change as appropriate. Prior to the first training course in each location, site readiness activities will need to take place: status of hardware, trainee special accommodations, adequate seating, printing of materials, etc. The issue of Tippecanoe losing a training room was addressed. The team was going to assess this and determine if there would be any impacts to the training schedule. The general consensus was that this could be managed effectively
- **Registration:** Discussions have taken place surrounding the best method of tracking registration. Initially, there was interest in using functionality within Learning Management System (LMS); however, constraints were identified regarding granting access to the supervisors. As a result, Deloitte was going to revisit their survey tool for this purpose. Deloitte has indicated that they hope to see registration starting towards the end of 2018. Also, because of staffing turnover and changes, the audience analysis completed previously will need to be revisited for accuracy, as assignments of training courses may need to be changed.
- **Office Coverage:** At this time, there are no updates to report.
- **LMS Updates:** All web-based trainings, including any recent updates, have been uploaded into LMS. Discussions were held regarding the possibility of using LMS to track registration for instructor led training; however, as noted earlier, this is under review.
- **Technical Requirements:** At this time, there are no updates to report.

### 2.3.3 Delivery

Deloitte has indicated that they have prepared some communications related to the kick off of training and registration. These will require DFR sign-off prior to being sent to the field. The issue of New Hire training during IEDSS deployment has been raised. A brainstorming session with DFR and Conduent might provide suggestions for developing a plan to tackle this concern.

### 2.3.4 Training Partnership Relationships

Training meetings have included representation from Conduent, in addition to DFR and Deloitte personnel. As training planning gains momentum, it will be important to maintain open dialogue with the Conduent staff that will be augmenting the DFR training pool. Clear and consistent communication among all three Partners (DFR, Deloitte, and Conduent) will help to build a strong foundation for a successful delivery of the curriculum that has been prepared.



## 3.0 Site Support and Change Management Readiness

While the new eligibility system must function as designed from a technical standpoint, robust site support, effective change management communication, and appropriate technical site preparations, in addition to applicable training, form the foundation for a successful roll-out to the business as a whole. In November, Deloitte initiated discussion with the Project Leadership Team regarding their approach to site support. Future reports will provide greater detail regarding this approach.

### 3.1.1 Site Support and Planning

As mentioned above, a kick-off meeting with Project Leadership (including the State Implementation Manager), DFR Leadership, and Deloitte was held in November to clarify DFR's expectations regarding the direction of this work. Initial discussions focused on the Command Center and escalation processes. The current plan is to build off of the already established processes as an effort to minimize the extent of change required by the field. Deloitte has committed to using these processes as a framework for the Command Center as a whole. While finalizing the structure of the Command Center and escalation processes will be critical to the success of Go-Live, OV&V recommends that site support planning is conducted in the near future to:

- establish clear timelines for the completion of site readiness assessment
- identify and resolve any gaps notated in the field
- select and train of site support personnel (for Deloitte and DFR)
- prepare for any change management communication.

In light of OV&V's involvement with operational readiness as a whole, particularly in regards to site support, we recommend clear delineation, documentation, and communication of roles and responsibilities be established up front.

### 3.1.2 Change Management Communication

This section will focus on change management communication. DFR and the FSSA Communications Department are developing a high level communications campaign. Other change management and internal communication strategies will be revisited at a later date, with some of these discussions occurring during site support planning.

### 3.1.3 Technical/User Setup

This will focus on technical readiness for local offices, RCCs and the CC. This will include information regarding location details, user set up and profile creation. At this time, there are no updates to report.





## 4.0 Observations and Recommendations

When areas of concern arise during the course of business that may impact the project, these will be addressed with DFR leadership as well as within this section. See the following table addresses specific OV&V Observations and Recommendations.

**Table 2 Observations and Recommendations**

	<b>Subject</b>	<b>Description</b>	<b>Possible Mitigation</b>
1.	BizTalk Challenges	Due to the number of “customers” for the BizTalk team and conflicting priorities, there are concerns that BizTalk may have limitations to availability when it comes to Operational Readiness and the December Dry Run. This could push Dry Run involvement of the BizTalk team to the February Dry Run, leaving less time for adjustments prior to Pilot.	The Implementation Team met with the BizTalk team to obtain ORR items and outline the Deployment Schedule for their group. Items will need to be monitored closed, and in correlation with the IEDSS PMO Lead.
2.	System Environments	As mentioned in the Deployment section of the report, there are concerns about the ability of the Implementation Team to conduct a full Production environment Dry Run. Due to connections with “live” services, various Partners have restrictions as to the depth of testing that can occur.	Dry Run 1 will not complete a full test of the system functionality in the Production environment. This will need to be addressed in subsequent dry runs as connection points with interfacing partners will be critical for success at Pilot.
3.	Technical upgrades and Timelines	As Operational Readiness Review tasks are generated, several teams reported that they have server upgrades, software upgrades, and other internal technology changes they must monitor. Some examples include: Content Manager server/software upgrades, IVR server/software upgrades, and Phoenix upgrades.	As items related to IEDSS deployment are included in this list, the State and Implementation Team must track these technology changes so that other readiness activities with dependencies on these functionalities are not impacted.





## 5.0 Upcoming Activities

Listed below are items to be addressed in the upcoming months.

**Table 3 Upcoming Activities**

Subject	Activities
Operational Readiness Review	<ul style="list-style-type: none"> <li>• Continue to build out the Operational Readiness Review Checklist</li> <li>• Monitor status of task items for each work stream</li> <li>• Participate in any work stream specific planning meetings</li> </ul>
Deployment Schedule	<ul style="list-style-type: none"> <li>• Begin to develop scope for Dry Run 2, as well as steps required for each Partner, identifying any dependencies</li> </ul>
Site Support	<ul style="list-style-type: none"> <li>• Assist in determining roles and responsibilities for DFR versus Deloitte</li> <li>• Review high level planning materials, including proposed schedule, for Deloitte's site support documentation as available</li> <li>• Review planned site assessment surveys for appropriate questions</li> <li>• Begin discussions regarding location site leads and wizards (DFR employees)</li> <li>• Participate in Command Center/Help Desk discussions</li> <li>• Obtain status for ORR items</li> </ul>
Training	<ul style="list-style-type: none"> <li>• Participate in Training Team meetings</li> <li>• Assist in location planning/registration as needed</li> <li>• Obtain status for ORR items</li> </ul>

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# **Project Security**

## **Plan**

*NE IV&V*

Version 1  
Last Update: 4/5/2017

## Version History

Document and track the Version History. This document is managed in SharePoint and controlled by the First Data Government Center of Excellence and the NE IV&V Community Leaders.

Community and Practice Leaders should determine if a “dot” version is needed for a minor update or whether the update is significant enough to warrant a full version number (x.0).

Version	Date	Author	Revision
01/13/2017	0.1	A	Original Draft
03/03/2017	0.2	Albert Decker	Add security controls, edit content
3/15/2017	0.3	A	Addressed potential need for Business Associate Agreement
04/05/17	0.4	Albert Decker	Add content and conformed to Proposal
05/24/17	0.5	Albert Decker	Add content per client feedback

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# 1.0 Introduction and Overview of Security Plan

## 1.1 Executive Summary

The Privacy and Security Plan work product applies to all current and potential future scope of First Data's delivery of IV&V services to the State of Nebraska under contract number 73672 04. The scope of this plan includes standard privacy and security policies, mandatory First Data employee, and subcontractor training on those policies, standard security controls, and specific extensions of the policy to safeguard Nebraska DHHS information that may be transmitted within the contractors systems.

## 1.2 First Data Privacy and Security Policies

Preserving the confidentiality and protecting First Data's company and customer assets is critical to achieving our business goals and objectives. Owner-associates must appropriately guard and protect confidential information that is entrusted to First Data by our clients, vendors, suppliers and other third parties. First Data is subject to U.S. and international laws regarding protection of personal data, whether it is in a physical or logical format. These laws carry significant penalties and reputational risk for First Data, as well as fines and imprisonment for the individuals involved. Personal data (PD) is ANY information that can identify an individual. Examples include: name, address, date of birth, email address and social security number and/or national identification number. Business confidential information (BCI) is not personal data but rather things like financial data, product plans, and pricing. It should be protected as if it were personal data. All owner-associates of First Data must comply with data protection laws and these procedures. Failure to comply may result in disciplinary action up to and including termination of employment. PD and BCI are referred to as "data" in this document; definitions can be found below.

### 1.2.1 Prevent Unintended Disclosures

Owner-associates must take steps to ensure data is not accidentally disclosed. Steps include:

- Lock your desk or office door when you leave your area for the day
- Follow the clean desk guidelines
- Never share passwords or other means of access
- Do not discuss data or First Data information in public areas outside the workplace
- Ensure that electronic data resides only on First Data approved devices
- Remove any items from printers and faxes at the end of the day

### 1.2.2 Treat Data Securely and Dispose of It Properly

Owner-associates must handle data securely through all phases of the lifecycle. For example:

- Use only secure methods for transferring data
- Confirm the accuracy of all email addresses when sending data
- Encrypt, mask, or otherwise secure personal data where possible, including in storage

- All proposed transfers of personal data across borders or activities that would allow personal data to be viewed, processed, or otherwise handled outside the country of its origin must be submitted to the Data Privacy Office at [DABReview@firstdata.com](mailto:DABReview@firstdata.com)
- Retention of data must comply with applicable contracts and our Records & Retention Policy

## 2.0 Roles and Responsibilities

This project defines the following security related roles and responsibilities:

Role	Person	Responsibility
Executive	K	Ultimate approver for security
Business Owner	A	Define security goals and objectives
Project Security Officer	Albert Decker	Write and implement security plan

Note that these are in addition to any other project roles which the same person may hold.

## 2.1 Security Controls Roles and Responsibilities

Primarily, First Data team members use state owned systems



## 3.0 Security and Privacy Processes and Procedures

### 3.1.1 Identity Proofing and Background Checks

All NE IV&V Project Team members are subject to criminal and credit checks as a part of pre-employment screening. In addition, clients may require their own background checks. In those cases, team members follow the state processes as well as First Data (or subcontractor) processes.

### 3.1.2 Internal Systems Access

Generally, First Data implements access control via group membership. The NE IV&V Project manager (or delegate) submits a request to First Data LAN Security to have an account created or specific access (group membership) granted to an existing account. This requested is processed in priority order.

## 4.0 Information/Data Classification and Control

The project team has identified the following important types of information as requiring specific protections:

Information Type	Data Owner	Risk Level
FTI – Federal Tax Information	IRS	{M,M,M}
PHI – Protected Health Information	Individual	{M,M,M} to {H,M,M}
Financial	Individual	{M,M,M} to {H,M,M}
PII	Individual	{M,M,M} to {H,M,M}
Other Vendor Proprietary	Other Vendors	{M,M,M} to {H,M,M}
First Data Proprietary	First Data	{M,M,M}

The First Data project team will avoid, to the extent that is practical, storing any data which it does not own in any system which it controls. Any such data which is incidentally captured will be deleted or redacted as soon as is practical.

The systems used for this project are judged to be of Moderate impact.

## 5.0 Personnel Security

As no members of this team perform work at First Data sites, personnel security is beyond the scope of control of First Data. The presumption is that team members perform their work:

- At state facilities (in which case, the state's personnel security controls apply);
- In locations of their choosing e.g. hotel or conference rooms, home offices, etc. (in which case personnel security is the individual's responsibility); or
- In transit to and from state facilities e.g. at airports (in which case security is the responsibility of the facility owner or federal agency).

## 6.0 Physical Asset Security

Physical asset security is not applicable to this project.

## 7.0 Communication Security

Communication security revolves primarily around email security. The First Data team primarily uses state supplied email for communication of any sensitive data. In addition, First Data email provides the following security controls:

- All data is encrypted both in transit and at rest.
- All mobile devices are fully encrypted (full disk or full device encryption as appropriate).
- USB port functionality is restricted on First Data laptops, disallowing external drives except for especially hardened drives that are encrypted with First Data supplied encryption keys.
- Access to First Data systems is provided only over an intranet or via IPsec encrypted VPN using multifactor authentication from a First Data owned device.
  - Exception: email may be accessed with a secure client on authorized Apple and Android mobile devices that have been approved and secured. Specifically:
    - Devices are encrypted.
    - Access is only granted to specific devices after management approval and then only for device models on an approved list.
    - Devices are checked by the secure client for tampering (e.g. rooting, installation of non-standard ROMs, unauthorized OS updates).
    - This access requires multifactor authentication.
- Email client programs automatically request verification of all external email addresses when sending.
- Secure Mail is available for any PII that needs to be transmitted. This does not directly send the email over the internet to potentially unsecured email servers, but sends a notification only and requires the recipient to access the email over a secured connection.

## 8.0 Access Control

First Data systems access control is provided by means of user accounts. Each user has their own specific account. Multiple login sessions to most resources is prohibited, with sign in either terminating the prior or session or connecting the request to that session. For more sensitive systems, multifactor authentication is a requirement. For this project, the only systems used will require access via an IPSec VPN with multifactor authentication.

## 9.0 Monitoring System Access and Use

First Data monitors the use of its systems via several mechanisms. User activity is logged at various levels:

- Application logs
- Platform (e.g. SharePoint, Exchange) logs
- Operating System logs
- Firewall logs

These logs are collected in a central logging facility and checked for anomalies such as:

- Access unusual resources
- Failed attempts to access internal resources
- Attempts to access forbidden / restricted external resources (e.g. black listed web sites, prohibited or monitored protocols, etc.)

Users who are found to violate First Data security policy are subject to sanctions up to and including termination of employment and criminal prosecution.

## **10.0 Incident Management**

First Data has a security operations center which serves as the first line of defense for any security incident. This operations center is charged with detection and triage of incidents. When an incident may include a data breach, an incident response team is formed bringing together technical, management, and business resources to understand, stop and recover from the breach. The details of this are contained in First Data's incident response plans.



## 11.0 Disaster Recovery and Business Continuity

This is beyond the scope of this project.

## 12.0 External Dependencies

The First Data team is dependent on various external entities:

- Utilities to provide communication and power
- Airlines for transportation to and from the state's facilities
- The State for its facilities and systems

Each of these entities will have its own security concerns and plans, which are beyond the scope of this plan.

## 13.0 Third Party Security

The project may include third parties (e.g. other state agencies or contractors) who have their own security plans. The First Data team is not responsible for the security measures of those third parties.

## 14.0 Operations Management

This is beyond the scope of this projet.

## 15.0 Compliance

First Data has requirements for compliance with state and federal laws and regulations. These include:

- The Privacy Act of 1974 (5 U.S.C. § 552a)
- Health Insurance Portability and Accountability Act of 1996 (HIPAA)
- Health Information Technology for Economic and Clinical Health (HITECH) Act
- IRS Publication 1075

First Data has a compliance officer responsible at a corporate level for our compliance with these laws and regulations. Their input has been incorporated into First Data's privacy and security policy, plans and training.

## 16.0 Appendix A – Security Control Listing

### 16.1 GENERAL COMMENTS

System security is a broad topic and requires a high level of detail. There are three broad goals **Confidentiality, Integrity and Availability**. Confidentiality means simply that data is not exposed unless there is both a right to know and a need to know. Integrity means simply that the data in a system is protected from unauthorized alteration. Availability means that a system can be used when needed.

It is common practice to discuss **controls** (security measures) in groupings of various types. A commonly used framework splits the controls into types and families. The three types of controls are **Administrative** (dealing with policies, guidelines, rules etc), **Operational** (dealing with procedures, forms, tasks, etc.) and **Technical** (dealing with system settings, design, components, etc.). Administrative controls establish the “rules and regulations” that govern security and the controls verbs such as establish, adopt, etc. (in other words, it is something that the organization does). Operational controls focus on the “how to” and dictate those aspects with words such as track, log, label, etc. (in other words something that individuals at an organization do). Technical controls deal with designing, developing, and operating technology (e.g. the system and its operating environment). Generally, the focus here is on how a system maintains confidentiality, integrity and availability.

The above three categories are useful, but still too broad for a detailed discussion. To get to the necessary level of detail, specific security controls are grouped into **families**, with each family addressing a particular portion of security. The currently defined families are:

Code	Name	Description
AC	Access Control	Specifies circumstances defining access is granted or denied
AT	Awareness and Training	Specifics of training those who work with system on necessary security knowledge
AU	Audit and Accountability	Verifying what users do, what data is accessed, etc.
CA	Certification, Accreditation and Assessment	Verifying that the system is secure enough, authorizing it to operate
CM	Configuration Management	Managing how the system and its various parts are configured, when and why changes are made
CP	Contingency Planning	Plan for future events and a response to them
IA	Identification and Authentication	Determine the identity of a person or system and ensure that the identification is correct
IR	Incident Response	Responding to incidents (the execution of the plan from CP)
MA	Maintenance	Controls that ensure that systems are not compromised during maintenance
MP	Media Protection	Protecting data the media that hold stored data
PE	Physical and Environmental	Locks, fire alarms, fire extinguishers, etc.
PL	Planning	Plans other than contingency plans
PS	Personnel Security	Ensuring that personnel are safe in their work environments
RA	Risk Assessments	Identifying potential harmful events, attacks, etc. and planning a response
SA	System and Services Acquisition	Ensuring that security is planned and budgeted for in system acquisition
SC	System Communications Protection	Ensuring that communications are secure
SI	System Information Integrity	Ensuring that data is not improperly altered
PM	Information Security Program Plan	Planning for the necessary system security program logistics and infrastructure

The tables below establish responsibility and accountability for each control. Certain controls are out of scope for this plan (particularly system specific controls) and are therefore not indicated as a responsibility for the state or for First Data. Such controls should be detailed in the security plans of each system where they are implemented.



## 16.2 ACCESS CONTROL (AC) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
AC 1 Access Control Policy and Procedures	Maintain an accurate data map of all data contained in their systems and services	RA	RA	
	Prevent unauthorized access to that data	RA	RA	
	Define job roles and access needed	RA	RA	
	Assign permissions to roles		RA	
	Assign users to / remove users from roles		RA	
	Create process for requesting grant or removal of access	RA	C	
	Request Access	RA		
	Approve or deny access to data	I	RA	
	Track Access Requests	R	RA	
	AC 2 Account Management	Identifying account types		RA
Establish conditions for membership in groups (roles)			RA	
Identify Authorized users and Access required		RA		
Require approvals for establishing accounts			RA	
Authorize and monitor use of guest/anonymous/ temporary accounts		RA	RA	
Notify when temporary accounts are no longer required or information system users are terminated, transferred, or need for access changes		RA		
	Deactivate temporary accounts		RA	

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Deactivate terminated or transferred user accounts		RA	
	Review Accounts for inactivity, existing needs	RA	RA	
	Review accounts in Administrative or other system related roles every 14 days	RA		
	Review for new unauthorized accounts every 14 days		RA	
AC 4 Information Flow Enforcement	Implement Information Flow Enforcement	RA	RA	
AC 5 Separation of Duties	Separates duties of individuals as necessary, to prevent malevolent activity without collusion	RA	RA	
	Documents separation of duties	RA	RA	
	Implements separation of duties through assigned information system access authorizations.		RA	
AC 6 Least Privilege	Disable all file system access not explicitly required for system, application, and administrator functionality.		RA	
	Provide minimal physical system access required to perform job duties		RA	
	Restrict the use of database management utilities to only authorized database administrators.	RA	RA	First Data prohibits installation of software unless approved for the person's role.
	Restrict access to those files and system resources required for job duties	RA	RA	
	Disable all system and removable media boot access unless it is explicitly authorized by the CSO / CPO	RA	RA	First Data supplied equipment is specifically configured to prohibit attachment of devices that are not approved, including removable media.

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Gain explicit approval for access to privileged functions			
AC 7 Unsuccessful Login Attempts	Configure the information system to lock out the user account automatically after three (3) failed log-on attempts by a user.			Out of scope
AC 8 System Use Notification	Configure the information system to limit the number of concurrent logins if required.			Out of scope
AC 11 Session Lock	Initiate a system lock after 15 minutes of inactivity	RA	RA	First Data laptops will lock after this period.
	Retain the lock until user unlocks with approved authentication procedure	RA	RA	First Data laptops require unlocking with either the logged in user or administrative credentials.
AC 14 Permitted Actions without Identification or Authentication	Documents and provides supporting rationale in the security plan	RA		The only permitted actions are system shutdown and logging in.
	Configures Information systems to permit public access only to the extent necessary to accomplish mission objectives, without first requiring individual identification and authentication	RA	RA	No public access on First Data systems.
	Permits actions to be performed without identification and authentication only to the extent necessary to accomplish mission/business objectives.	RA	RA	The only permitted actions are system shutdown and logging in.
AC 17 Remote Access	Require callback capability with re-authentication to verify connections from authorized locations when the secure data communications network or Multi-Protocol Label Switching (MPLS) service network cannot be used.			Out of scope.

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	If e-authentication is implemented as a remote access solution or associated with remote access, refer to NIST SP 800-63, Electronic Authentication Guideline.	RA		First Data employs security measures per the guideline.
	Employ automated mechanisms to facilitate the monitoring and control of remote access methods.	RA		All access is logged. All attempt are logged.
	The information system routes all remote accesses through a limited number of managed access control points.	RA		There are 2 VPN access points.
	Monitor for unauthorized remote connections to the information system at least quarterly, and takes appropriate action if an unauthorized connection is discovered.	RA		Monitored continuously.
	Ensures that remote sessions used for remote administration employ additional security measures (e.g., Secure Shell [SSH], Virtual Private Networking [VPN] with blocking mode enabled) and the approved encryption standard (see SC-13), and the sessions are audited	RA		VPN is used.
	Disable Bluetooth and peer-to-peer networking protocols within the information system except for explicitly identified components in support of specific operational requirements			First Data does not employ Bluetooth enabled laptops.
AC 18 Wireless Access	Request and receive approval for any wireless connection prior to implementation	RA		Management and LAN Security approval s required.

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
AC 19 Access Control for Mobile Devices	Request and receive waiver prior to connection of mobile devices	RA		Only previously approved devices are able to connect.
	Employ approved methods of cryptography	RA		Generally, PKI and AES standards are observed.
	Monitor for un authorized connections from mobile devices	RA		All connection attempts are monitored.
	Enforce requirements for Mobile Device Connection	RA		An approved mobile application must be used, this requires specific approval and activation for each device.
	Disables information system functionality that provides the capability for automatic execution of code on mobile devices without user direction;	RA		Such functionality is disabled.
	Issues specially configured mobile devices to individuals traveling to locations that the organization deems to be of significant risk in accordance with organizational policies and procedures	RA		Also, travel to such locations requires specific authorization.
	Protects the storage and transmission of information on portable and mobile information devices with activities such as scanning the devices for malicious code, virus protection software.	RA		Required for all company and BYOD devices.
AC 20 Use of External Information Systems	Describe use of External Systems in System Security Plan			Out of scope.
	Limit PII and FTI access via External systems			Out of scope.
	Prevent downloading of FTI and PII to external systems			Out of scope.

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Monitor use of privileged accounts and functions			Out of scope.
	Prohibit use of removable media on external systems			Out of scope.
	Follow client Media policy.	RA		
AC 22 Publicly Accessible Content	Define process for posting information to publicly accessible system	RA		Generally, only specifically designated individuals with appropriate authorization are able to do this.
	Designates individuals authorized to post information onto a publicly accessible information system			Out of scope.
	Trains authorized individuals to ensure that publicly accessible information does not contain nonpublic information;			Out of scope.
	Reviews the proposed content of information prior to posting onto the publicly accessible information system to ensure that nonpublic information is not included			Out of scope.
	Reviews the content on the publicly accessible information system for nonpublic information monthly and removes such information, if discovered			Out of scope.

### 16.3 AWARENESS AND TRAINING (AT) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
AT 1 Security Awareness and Training Policy and Procedures	Document, disseminate and update training policy	RA	RA	
	Create Security Training Plan	RA	RA	
AT 2 Security Awareness	Provide basic security training	RA	RA	All employees are required to have initial training and refresher every 6 months.
	Send periodic reminders	RA	RA	
AT 3 Security Training	Provide Role Based Security Training	RA	RA	For some projects, additional training may be required due to presence of specific client requirements or when encountering FTI, PHI, etc.
AT 4 Security Training Records	Document and Monitor training activities	RA	RA	
	Retain records for 3 years	RA	RA	

## 16.4 AUDIT AND ACCOUNTABILITY (AU) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
AU 1 Audit and Accountability Policy and Procedures	Perform Audits as outlined in AU-1	RA	RA	
AU 2 Auditable Events	Determine List of Auditable Events	RA	RA	First Data audits specific events (system access attempts, internet access, etc.) On specific request, client may specify auditable events and First Data will make an attempt to accommodate.
	Coordinated audit	RA	RA	When contractually specified.
	Review / Update Auditable Event List	RA		
	Determine auditable events schedules (e.g. continuous, daily, weekly, etc.) and which events are in each category	RA		
	Configure system to capture events	RA		Laptops and firewalls are configured to do this.
	Configure perimeter devices to capture events	RA		
AU 3 Content of Audit Records	Configure system to capture the data specified in the control	RA		
	Configure system to enable capturing enhanced data.	RA		
AU 4 Audit Storage Capacity	Design / Configure system to include enough capacity to store expected volume of audit data	RA		
AU 5 Response to Audit Processing Failures	Design / Configure system to produce alerts as noted	RA		
	Design / Configure system to take action as noted and agreed to	RA		



Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
AU 6 Audit Review, Analysis, and Reporting	Periodically (as agreed between vendor and client) perform review of audit records	RA		
	Review network traffic, bandwidth, alert notifications and border defenses every 24 hours, or in response to an event	RA		First Data employs continuous monitoring at our SOC.
	Investigate suspicious activity or suspected violations using automated facilities	RA		
	Perform manual reviews of system audit records randomly on demand, but at least once every thirty days Inspect administrator groups on demand, but no less than every fourteen days for unauthorized administrative accounts	RA		
	Report any findings to appropriate internal officials and the client in a timely manner	RA		
AU 7 Audit Reduction and Report Generation	Implement an audit reduction facility (such as a central logging and reporting facility, Security Information and Event Management (SIEM) system, etc.);	RA		First Data employs Splunk as a tool for this.
	Implement the capability to automatically process audit records for events of interest based on selectable event criteria	RA		
AU 8 Time	Implement timestamps as noted in the	RA		

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
Stamps	control description.			
	Automatically synchronize clocks at boot time and daily using NNTP or a similar means, ideally to an external time source (such as the NIST atomic clock).	RA		
AU 9 Protection of Audit Information	Ensure that the information system protects audit information and audit tools from unauthorized access, modification, and deletion	RA		
	Fully describe the implementation in the System Security Plan Workbook	RA		
AU 10 Non Repudiation	implement nonrepudiation for all accounts requiring a login	RA		
	Fully describe the implementation in the System Security Plan Workbook	RA		
AU 11 Audit Record Retention	Retain Audit Records according to data retention policies.	RA		General records for 90 days, Project records for 3 years or as contractually defined.
	Provide copies as requested	RA		
AU 12 Audit Generation	Generate audit records as described in the control, including events noted in other controls .	RA		
	Enable designated personnel to select which auditable events are audited by specific components	RA		
	Generate audit records as specified in AU-2 with content described in AU-3.	RA		

## 16.5 CERTIFICATION, ACCREDITATION AND SECURITY ASSESSMENTS (CA) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
CA-1	System Integrators / Developers are required to document their policies, procedures, and security controls in a format acceptable to the client	RA		Generally, SP800-53 is acceptable for existing or common controls.
	System Hosts/Operators are required to follow the system security plans, provide timely evidence that the plan is being followed, provide the client usable copies of data and destroy all other copies (except where retention is mandated by law or regulation) upon expiration or other termination of their contracts;			Out of scope
	Evaluators, Assessors and Auditors are required to follow the appropriate standards for evaluation of systems, including preparation of reports and to evaluate systems according to this policy;	RA		Evaluators may include external or internal
	Privacy and Security Management are required to review this policy (see Revision Cycle), document all reviews and changes to this policy;	RA		
	issue authorities to operate and report any issues to Executive management, to issue Authorities to Operate based on Business owner and System Evaluator/Assessor/Auditor input;	RA		Generally out of scope, as all systems used are internal to First Data (e.g. SharePoint and Exchange) or supplied by the client (email, ReadyCert)
	Business owners are required to document the security needs for their systems with assistance from client technical staff;	RA	RA	
	Executive Management is required to provide the resources (and commitment) to ensure that this policy is carried out.	RA		

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
CA-2	Develops a security assessment plan that describes the scope of the assessment including: – Security controls and control enhancements under assessment; – Assessment procedures to be used to determine security control effectiveness; and – Assessment environment, assessment team, and assessment roles and responsibilities	RA		First Data uses a third party SOC Audit procedure.
	Assesses the security controls in information systems within every three-hundred-sixty-five (365) days in accordance with NIST and ISO Standards to determine the extent to which the controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting the security requirements for the system;	RA		
	Produces a security assessment report that documents the results of the assessment	RA		First Data’s SOC report.
	Provides the results of the security control assessment within every three-hundred-sixty-five (365) days, in writing, to the Business Owner who is responsible for reviewing the assessment documentation and updating system security documentation where necessary to reflect any changes to the system	RA		
CA-3	Authorizes connections from the information system to other information systems through the use of Interconnection Security Agreements;			Out of scope for project security plan.
	Documents, for each interconnection, the interface characteristics, security requirements, and the nature of the information communicated;			Out of scope for project security plan.

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Reviews and updates Interconnection Security Agreements annually or at major changes in system inventory or lifecycle			Out of scope for project security plan.
	Prohibits the direct connection of a system to an external network without the use of a firewall and other appropriate boundary protection devices			Out of scope for project security plan.
CA-5	Develops and submits a Plan of Action and Milestones (POA&M) for the information system within thirty (30) days of the final results for every internal/external audit/review or test (e.g., ST&E, penetration test) to document the organization's planned remedial actions to correct weaknesses or deficiencies noted during the assessment of the security controls and to reduce or eliminate known vulnerabilities in the system;			Out of scope for project security plan.
	Updates and submits existing POA&M monthly until all the findings are resolved based on the findings from security controls assessments, security impact analyses, and continuous monitoring activities.	RA		Out of scope for project security plan.
CA-6	The organization updates the security authorization: <ul style="list-style-type: none"> <li>a. At least every three (3) years;</li> <li>b. When substantial changes are made to the system;</li> <li>c. When changes in requirements result in the need to process data of a higher sensitivity;</li> <li>d. When changes occur to authorizing legislation or federal requirements;</li> <li>e. After the occurrence of a serious security violation which raises questions about the validity of an earlier security authorization; and</li> <li>f. Prior to expiration of a previous security authorization.</li> </ul>			Out of scope for project security plan.

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
CA-7	<p>First Data’s continuous monitoring strategy requires vendors to implement a continuous monitoring program that includes:</p> <ul style="list-style-type: none"> <li>a. A configuration management process for the information system and its constituent components;</li> <li>b. A determination of the security impact of changes to the information system and environment of operation;</li> <li>c. Ongoing security control assessments in accordance with the organizational continuous monitoring strategy; and</li> <li>d. Reporting the security state of the information system to appropriate officials within every three-hundred-sixty-five (365) days.</li> </ul>			Out of scope for project security plan.
	<p>Plans, schedules, and conducts automated or manual assessments on a continuous and unannounced basis, of all information systems that are processing data on behalf of or directly for including, but not limited to, in-depth monitoring of systems and networks, vulnerability and configuration scanning, and announced penetration testing to ensure compliance with all vulnerability mitigation procedures.</p>			Out of scope for project security plan.
CA-8	<p>Conduct penetration testing.</p>			Out of scope for project security plan.

## 16.6 CONFIGURATION MANAGEMENT (CM) FAMILY

Control	Specific Responsibility			Notes / Associated Procedure
CM-1	Define a change control policy. Implement internal change control processes to conform to this policy, documenting and publishing those processes, notifying the client of events that force emergency changes and the changes made. Business owners are responsible for defining requirements for systems, for following the processes described in this policy Security Officer is responsible for receiving notice of emergency changes, for approving vendor processes, for supporting the Configuration Management processes and for reviewing this policy and processes annually Executive Leadership is responsible for compelling vendors and staff to adhere to the policy and processes	RA		

Control	Specific Responsibility			Notes / Associated Procedure
CM-2	Implementation consists of: <ul style="list-style-type: none"> <li>• develops and documents a baseline configuration of the information system;</li> <li>• maintains, under configuration control, a current baseline configuration of the information system;</li> <li>• documents deviations from the baseline configuration, in support of mission needs/objectives;</li> <li>• updates the baseline every three-hundred sixty-five days, during system component changes or upgrades, and as an integral part of system component installations;</li> <li>• maintains older versions of the baseline configuration to support rollback (details as agreed to by Field: OSNand System Integrator);</li> <li>• develops and maintains a list of program software that may execute on the information system.</li> </ul>	RA		



Control	Specific Responsibility			Notes / Associated Procedure
	<p>The baseline configuration must contain the following minimum items:</p> <ul style="list-style-type: none"> <li>• complete list of system components (hardware, software, service, etc.) [see CM-8 Information System Component Inventory]</li> <li>• configuration of each component</li> </ul> <p>O hardware: brand, model number, configuration (e.g. hardware options, switch settings, IP addresses, ROM versions, set up commands, etc.), where installed (e.g. slot, server, rack, switch port, etc.)</p> <p>O software: brand, name, version, patch level, installation options, scripts, plug-ins, source code, configuration settings, licensing information</p> <p>O services and interfaces: identifying information (name of service or interface), licensing and access (e.g. passwords), location (e.g. service end points, network address and port, etc.)</p> <ul style="list-style-type: none"> <li>• step by step component installation and set-up instructions</li> <li>• associated manuals for the component</li> </ul>			<p>Out of scope for project security plan</p>
CM-3	<p>First Data participates in its vendors change control processes as appropriate.</p>	RA		
	<p>Vendors are required to have a change control process, and to test, validate, and document changes to the information system before implementing the changes on the operational system.</p>	RA		
	<p>First Data participates in this testing. In the event of an emergency or urgent change (e.g. as part of a security incident or other system failure), changes may be implemented in the operational system before the change control process is executed.</p>	RA		<p>The process is still required for these events, to ensure that changes are fully understood, tested, documented and placed into the system baseline.</p>

Control	Specific Responsibility			Notes / Associated Procedure
CM-4	First Data performs a security impact analysis as part of planning for any major system acquisition.	RA		Business Owner responsible for security requirements.
	Vendors are required to perform a similar analysis as part of their configuration management process.	RA		As a part of this process, any changes are to be tried in a separate environment to discover any security issues.
	After implementing the change into the operational system, security functions are checked as a part of system testing.	RA		May or may not require/conduct a separate test.
CM-5	Documenting the job roles allowed to perform configuration changes	RA		
	Implementing service windows	RA		
	Maintaining access records for physical access			
	Maintaining logs for execution of privileged functions, including those needed for configuration control changes			
	Periodically auditing those logs	RA		
	Restricting access to administrative system components	RA		
CM-6	Establishes and documents mandatory configuration settings for information technology products employed within the information system using the latest security configuration guidelines listed in Implementation Standard 1 that reflect the most restrictive mode consistent with operational requirements;			Out of scope for project security plan
	Implements the configuration settings			
	Identifies, documents, and approves exceptions from the mandatory configuration settings for individual components within the information system based on explicit operational requirements			
	Monitors and controls changes to the configuration settings in accordance with organizational policies and procedures.			

Control	Specific Responsibility			Notes / Associated Procedure
CM-7	Configure the information system to provide only essential capabilities and specifically disable, prohibit, or restrict the use of system services, ports, network protocols, and capabilities that are not explicitly required for system or application functionality.			Out of scope for project security plan.
	A list of specifically needed system services, ports, and network protocols will be maintained and documented in the SSP; all others will be disabled.			Bus. Owner specifies needed functionality
	Review the information system within every three-hundred-sixty-five days to identify and eliminate unnecessary functions, ports, protocols, and/or services.			
CM-8	Maintain an inventory of First Data systems used.	RA		For the current project systems are limited to email, SharePoint and timecard systems.
CM-9	Create and maintain a configuration management plan for each system consistent with CM-1 and other client and vendor security controls.			Out of scope for project security plan

## 16.7 CONTINGENCY PLANNING (CP) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
CP-1	Develop System Specific Contingency Plans			First Data maintains plans based on compliance and business needs and requirements.
CP-2	Develops a contingency plan for each information system.			Out of scope for project security plan (it is in each system's scope)
	Coordinates contingency plan development with organizational elements responsible for related plans.			Plans related to contingency plans for organizational information systems include, for example, Business Continuity Plans, Disaster Recovery Plans, Continuity of Operations Plans, Crisis Communications Plans, Critical Infrastructure Plans, Cyber Incident Response Plans, Insider Threat Implementation Plan, and Occupant Emergency Plans
	Conducts capacity planning so that necessary capacity for information processing, telecommunications, and environmental support exists during contingency operations			Capacity planning is needed because different types of threats (e.g., natural disasters, targeted cyber-attacks) can result in a reduction of the available processing, telecommunications, and support services originally intended to support the organizational missions/business functions. Organizations may need to anticipate degraded operations during contingency operations and factor such degradation into capacity planning.
	Plans for the transfer of essential missions and business functions to alternate processing and/or storage sites with little or no loss of operational continuity and sustains that continuity through information system restoration to primary processing and/or storage sites.			
	Coordinates its contingency plan with the contingency plans of external service providers to ensure that contingency requirements can be satisfied.			

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Identifies critical information system assets supporting essential missions and business functions.			
CP-3	Perform contingency training			Out of scope
CP-4	Test and exercise contingency plans as noted above. This testing must occur so as to allow sufficient time to modify the plan if needed.			Out of scope
CP-6	Establish an alternate storage site including necessary agreements to permit the storage and retrieval of information system backup information;			Out of scope
	Ensures that the alternate storage site provides information security safeguards equivalent to that of the primary site.			Out of scope
CP-7	Establish an alternate processing site and necessary agreements to permit the resumption of information system operations for essential functions within the time period specified when the primary processing capabilities are unavailable			Out of scope
	Ensures that equipment and supplies required to resume operations are available at the alternate site or contracts are in place to support delivery to the site in time to support the time period for resumption specified in Implementation Standard 1.			Out of scope for project security plan.
CP-8	Address telecommunications services at alternate sites as part of their contingency plans			Out of scope for project security plan.

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
CP-9	Perform full backups weekly to separate media. Perform incremental or differential backups daily to separate media. Backups to include user-level and system-level information (including system state information). Three (3) generations of backups (full plus all related incremental or differential backups) are stored off-site. Off-site and on-site backups must be logged with name, date, time and action.			Out of scope for project security plan.
	(For PII only) Ensure that a current, retrievable, copy of PII is available before movement of servers.			Out of scope for project security plan.
	For FTI: Back-up tapes must be labeled as containing FTI, must be logged, must be transported securely using two barriers and a transmittal, and must be inventoried on a semi-annual basis.			Out of scope for project security plan.
	Test backup information following each backup to verify media reliability and information integrity.			Out of scope for project security plan. The test must include a full restore from back up media.
CP-10	Provide for the recovery and reconstitution of the information system to a known state after a disruption, compromise, or failure.			Out of scope for project security plan. Recovery of the information system after a failure or other contingency shall be done in a trusted, secure, and verifiable manner.
	Implement transaction recovery for systems that are transaction-based.			Out of scope for project security plan.
	Provide compensating security controls if circumstances that inhibit recovery and reconstitution to a known state.			Out of scope for project security plan.



## 16.8 IDENTIFICATION AND AUTHENTICATION (IA) FAMILY

Control	Specific Responsibility			Notes / Associated Procedure
IA-1	Define the roles, responsibilities and information required to perform the tasks associated with each role.	RA	RA	Defining (business) roles is the subject of other controls.
	Define the access to be granted.		RA	
	Define the identification and authentication necessary.		RA	
IA-2	Implement IA-1 policy.		RA	The implementation must: <ol style="list-style-type: none"> <li>1. Require the use of system and/or network authenticators and unique user identifiers.</li> <li>2. Help desk support requires user identification for any transaction that has information security implications.</li> <li>3. For FTI: include a complete section 2.10 (e-Authentication level) in the SSP Template.</li> <li>4. The information system uses multifactor authentication for network access to privileged accounts.</li> <li>5. For FTI: Require two-factor authentication whenever FTI is being accessed from an alternative work location or via agency's web portal by an employee or contractor.</li> <li>6. The information system uses multifactor authentication for remote network access to non-privileged accounts.</li> <li>7. The information system uses multifactor authentication for local</li> </ol>



Control	Specific Responsibility			Notes / Associated Procedure
				access to privileged accounts. 8. The information system uses replay resistant authentication mechanisms for network access to privileged accounts.
IA-3	Uniquely identifies and authenticates specific and/or types of devices before establishing a connection.			Out of scope for project security plan. Implement this control as appropriate to system design.
IA-4	Manage information system identifiers for users and devices.			Out of scope for project security plan. Receiving authorization from a designated organizational official to assign a user or device identifier; Selecting an identifier that uniquely identifies an individual or device; Assigning the user identifier to the intended party or the device identifier to the intended device; Preventing reuse of user or device identifiers until all previous access authorizations are removed from the system, including all file accesses for that identifier but not before a period of at least three hundred sixty-five (365) days has expired; and Disabling the user identifier after the time period of inactivity specified in Implementation Standard 1 and deleting disabled accounts during the annual re-certification process.
IA-5	Manage information system authenticators for users and devices			Out of scope for project security plan.
IA-6	Obscure feedback from all authentication mechanisms during the authentication process			Out of scope for project security plan.

Control	Specific Responsibility			Notes / Associated Procedure
IA-7	Any cryptographic module used must be certified by an independent authority (e.g. NIST, an accredited laboratory) as meeting appropriate FIPS standards.			Out of scope for project security plan.
IA-8	Information system uniquely identifies and authenticates non-organizational users (or processes acting on behalf of non-organizational users).			Out of scope for project security plan.

## 16.9 INCIDENT RESPONSE (IR) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
IR-1	Comply with all guidance issued by the client and its federal partners regarding Incident Reporting and Management	RA		Projects generally use both First Data internal and client response plans to ensure that incidents are tracked and resolved appropriately.
	Follow accepted practices in developing systems which implement the security controls established in their security plans; follow security plans; to provide audit evidence; provide timely notice of any security incident (even those which occur for other customers where Field: OSNsystems may be impacted); and to assist in execution of incident response plans.	RA		
	Review this policy annually, document all reviews and changes to this policy and report any issues to Executive management;	RA		
	Provide the resources (and commitment) to ensure that this policy is carried out.	RA		
	Execute the Incident Response Plan	RA		
IR-2	Trains personnel in their incident response roles and responsibilities with respect to the information system;	RA	RA	
	Provides refresher training within every three-hundred-sixty-five (365) days.	RA	RA	
	Identify employees with significant information security responsibilities and provide role-specific training	RA	RA	
	Provide the information systems security awareness material/exposure outlined in NIST guidance on IT security awareness and training to	RA	RA	

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	all new employees before allowing them access to the systems.			
	Provide training whenever there is a significant change in the information system environment or procedures or when an employee enters a new position that requires additional role-specific training	RA	RA	
IR-3				<b>Out of scope for project security plan.</b>
IR-4	Reports security incidents to the appropriate point of contact (POC) i.e., client Privacy Officer, Security Officer, Business Owner or System Technical Support as directed by the business organization.	RA		
	Works with client, Security Officer, Business Owner or System Technical Support in information gathering and incident determination activities.	RA		
	Acts as the first POC for security incidents or anomalies, and records information provided by the System User, Business Owner or System Technical Support, depending on alert source.	RA	RA	Project security officer, state ISO
	Generates incident records.	RA	RA	
	Determines if incident is related to PII.	RA	RA	
	Escalate incident to CMS (or other agency) as appropriate.	RA	RA	
	Refers security incident to the CMS Help Desk.	RA	RA	In particular, staff of the CSO/CPO
	Issues Incident Report Form, as appropriate to the System User, Business Owner or System Technical Support to complete.	RA	RA	In particular, staff of the CSO/CPO
	Provides ad hoc and periodic reports on security incidents and handling of advisories to the appropriate staff	RA		In particular, staff of the CSO/CPO

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Executes responsibilities of System Technical Support and/or Business Owner for selected incidents as requested	RA		In particular, staff of the CSO/CPO
	Analyzes the risk of identity theft or health insurance fraud in accordance with Federal guidelines		RA	In particular, staff of the CSO/CPO  OMB requirements and HHS Departmental guidelines. OMB Memorandum M-07-16 provides detailed guidance including specific factors which an agency should consider in assessing the likely risk of harm caused by the breach.
IR-4	Ensures the breach is reported to any other affected business or system owner, e.g., claims processing or program integrity for payment fraud.	RA	RA	
	Conducts assessments of breaches in order to determine next steps, e.g., whether or not to notify, by what means (press releases, letters), and to whom (individuals, providers, other federal agencies), whether to offer credit protection services.	RA	RA	
	Develops government cost estimates of notification and/or credit protection services.		RA	
	Drafts model breach notification letters and/or other materials in plain language, standardized to the extent possible, with specific tailoring on a case-by-case basis.		RA	
	Determines and recommends how the letter and/or public notice gets “rolled-out,” for example, by the agency, a contractor, another agency.		RA	
	Assists business owners prepare scripts for Medicare call center operations and/or frequently asked questions to post, if necessary.	RA	RA	

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Coordinates recommendations submitted to the Senior Core Leadership for Breach Notification with the HHS PII Breach Notification Team.	RA	RA	
	Investigates credit protection services/costs for business components.		RA	
	Report the incident, if not already reported.	RA	RA	
	Serves as the system's or function's focal point for security incidents for triage, response and recovery phases.	RA	RA	
	Prepares component-level plans and procedures to address security incidents, in accordance with this document, and information security standard operating procedures.	RA	RA	
	Provides technical support and advice for incident handling, impact assessment, and technical system management, including actions to be taken if circumstances are not covered by standard operating procedures.	RA		
IR-4	Oversees the development and implementation of the corrective action plan, if applicable.	RA	RA	
	Coordinates evaluation and categorization of security advisories/information.	RA		
	Refers security advisories/information involving the business function, if appropriate.	RA		
	Implements changes to information systems to minimize newly discovered vulnerabilities resulting from a security incident.	RA		
	Reports incident status/resolution information to the client staff.	RA		
	Recommends updates and closings of incident and	RA		

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	event tickets for all categories.			
	Assists the CSIRT in information gathering, forensics and reporting activities.	RA	RA	
	Initiates escalation procedures as directed.			
	Appoint a management and staff POC for incident handling.	RA		Project Security Officer
	Oversees the PHI and PII corrective action plan (if applicable).	RA	RA	
	Provides a management representative to the CSIRT.		RA	
	Upon the decision by the Senior Core Leadership or Administrator, implements approved Breach notification processes, e.g., mailings to individuals, press releases.	RA	RA	
	Provides guidance to business partners, if needed, for reporting to the CMS IT Service Desk, e.g., a Business Owner may direct partners to submit via a Central Office or Regional Office contact before the incident is sent to the CMS IT Service Desk.	RA		
	Informs the Office of Acquisitions and Grants Management if the incident constitutes a contract violation.	RA	RA	Client function for contract oversight, name may vary
	Provides overall direction to the BAT for incidents involving compromise of individually identifiable information.	RA	RA	
IR-4	Participates as a member of the Senior Core Leadership for Breach Notification and the CSIRT.	RA		
	Provides staff to support on-going CSIRT roles and responsibilities.	RA		
	Provides guidance on the impact of both PII and	RA		

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	PHI incident/breach.			
	Comments on proposed notification letters.	RA		
IR-5	Initiate Security Event / Incident Tracking	RA		
	Track Event / Incident	RA		
	Close Incident Tracking	RA		
IR-6	Follow CMS Reporting Guidelines	RA	RA	Documented in IR-4 Incident Handling. To summarize, follows, and requires grantees and vendors to follow, CMS reporting guidelines. See IR-4 for more details.
IR-7	Assist in Incident Response	RA		Generally, if a vendor, IPC Grantee Organization, etc. cannot fully handle the event, it should be escalated to the Field: OSNChief Privacy and Security Officers, who may in turn escalate to CMS.



## 16.10 MAINTENANCE (MA) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
MA-1	The vendor develops, disseminates, and reviews/updates within every three hundred sixty-five (365) days: A formal, documented information system maintenance policy that addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; and Formal, documented procedures to facilitate the implementation of the information system maintenance policy and associated system maintenance controls.			<b>Out of scope for project security plan.</b>
MA-2	Schedules, performs, documents, and reviews records of maintenance and repairs on information system components in accordance with manufacturer or vendor specifications and/or organizational requirements;			<b>Out of scope for project security plan.</b>
	Controls all maintenance activities, whether performed on site or remotely and whether the equipment is serviced on site or removed to another location;			<b>Out of scope for project security plan.</b>
MA-2	Requires that a designated official explicitly approve the removal of the information system or system components from organizational facilities for off-site maintenance or repairs;			<b>Out of scope for project security plan.</b>
	Sanitizes equipment to remove all information from associated media prior to removal from organizational facilities for off-site maintenance or repairs			<b>Out of scope for project security plan.</b>
	Checks all potentially impacted security controls to verify that the controls are still functioning properly following maintenance or repair actions.			<b>Out of scope for project security plan.</b>
	Maintains maintenance records for the information system			<b>Out of scope for project security plan.</b>
MA-3	Approves controls, monitors the use of, and maintains on an			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	ongoing basis, information system maintenance tools.			Auditable
	Inspects all maintenance tools carried into a facility by maintenance personnel for obvious improper modifications.			<b>Out of scope for project security plan.</b> Auditable
	Checks all media containing diagnostic and test programs for malicious code before the media are used in the information system.			<b>Out of scope for project security plan.</b> Auditable
MA-4	Monitors and controls non-local maintenance and diagnostic activities			<b>Out of scope for project security plan.</b> Auditable
	Allows the use of non-local maintenance and diagnostic tools only as consistent with organizational policy and documented in the security plan for the information system;			<b>Out of scope for project security plan.</b> Auditable
	Employs strong identification and authentication techniques in the establishment of non-local maintenance and diagnostic sessions			<b>Out of scope for project security plan.</b> Auditable
	Maintains records for non-local maintenance and diagnostic activities.			<b>Out of scope for project security plan.</b> Auditable
	Terminates all sessions and network connections when non-local maintenance is completed.			<b>Out of scope for project security plan.</b> Auditable
	Requires that non-local maintenance and diagnostic services be performed from an information system that implements a level of security at least as high as that implemented on the system being serviced;  or -  Removes the component to be serviced from the information system and prior to non-local maintenance or diagnostic services, sanitizes the component (with regard to sensitive information such as FTI or Privacy Act protected information) before removal from organizational facilities,			<b>Out of scope for project security plan.</b> Auditable

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	and after the service is performed, inspects and sanitizes the component (with regard to potentially malicious software and surreptitious implants) before reconnecting the component to the information system.			
	Audits non-local maintenance and diagnostic sessions and designated organizational personnel review the maintenance records of the sessions			<b>Out of scope for project security plan.</b> Specifically, staffs perform this function.
	Documents, in the security plan for the information system, the installation and use of non-local maintenance and diagnostic connections			<b>Out of scope for project security plan.</b> Auditable Existence of the interface is also required to be documented and approved.
MA-5	Establishes a process for maintenance personnel authorization and maintains a current list of authorized maintenance organizations or personnel			<b>Out of scope for project security plan.</b> List is Auditable
	Ensures that personnel performing maintenance on the information system have required access authorizations or designates vendor personnel with required access authorizations and technical competence deemed necessary to supervise information system maintenance when maintenance personnel do not possess the required access authorizations.			<b>Out of scope for project security plan.</b> Auditable
MA-6	Obtains maintenance support and/or spare parts for critical systems and applications (including Major Applications [MA] and General Support Systems [GSS] and their components) within twenty-four (24) hours of failure.			<b>Out of scope for project security plan.</b> Auditable

## 16.11 MEDIA PROTECTION FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
MP-1	Ensure that media are treated with due care.	RA		<p>Due care includes the following minimal precautions:</p> <ul style="list-style-type: none"> <li>• Paper media (forms, reports, etc.) are kept in locked file cabinets or desks when not in use. When no longer needed, paper media are shredded with cross-cut shredders or returned to their owners.</li> <li>• Magnetic media (disks, tapes) are kept in locked cabinets or locked rooms in access controlled areas. When no longer usable or when no longer dedicated to the Field: Organization Short Name, these media are required be wiped to DoD specifications (either using a degaussing tool or by repeatedly being overwritten with changing patterns of 1's and 0's) or destroyed by shredding. Deleting files or reformatting the media IS NOT sufficient to accomplish this requirement.</li> <li>• DVD or CD-ROMS must be shredded using a cross-cut shredder.</li> <li>• Removable electronic media must be shredded or wiped to DoD specifications.</li> </ul> <p>Perform an inventory of media at least every six months. Additional inventories should be conducted if a breach has occurred and no attack vector has been discovered, whenever an employee with access to these media leaves the organization or as requested by the Field: Organization Short Name.</p> <p>Ensure that media usage, movement and decommissioning are tracked.</p> <p>Ensure that media are not returned to repair facilities without proper removal of sensitive data or preferably are destroyed instead.</p>
	Communicating the requirements of this policy to	RA		

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	data collectors and handlers.			
	Review and updates of this policy.	RA		Annual
MP-2	Restricts access to sensitive data residing on digital and non-digital media to authorized individuals using automated mechanisms to control access to media storage areas.		RA	such as FTI, PHI or Privacy Act protected information
	Employs automated mechanisms to restrict access to media storage areas and to audit access attempts and access granted.		RA	e.g. full disk encryption
MP-3	Mark, in accordance with organizational policies and procedures, removable information system media and information system output indicating the distribution limitations, handling caveats, and applicable security markings (if any) of the information	RA	RA	
	Exempts specific types of media or hardware components, as specified, in writing, by the CIO or his/her designated representative, from marking as long as the exempted items remain within a secure environment. For FTI: The agency must label removable media and information system output containing FTI. IRS Notice 129-A or Notice 129-B are available for this purpose.		RA	
MP-4	Physically controls and securely stores digital and non-digital media within controlled areas using safeguards prescribed for the highest system security level of the information ever recorded on it;	RA	RA	
	Protects information system media until the media are destroyed or sanitized using approved equipment, techniques, and procedures.	RA		

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Evaluate employing an approved method of cryptography (see SC-13) to protect PII at rest, consistent with NIST SP 800-66 guidance.		RA	In nearly every case, the data should be encrypted.
	If PII is recorded on magnetic media with other data, it should be protected as if it were entirely personally identifiable information.	RA	RA	
MP-5	Protects and controls digital and non-digital media containing sensitive information (such as FTI or Privacy Act information) during transport outside of controlled areas using cryptography and tamper evident packaging and (i) if hand carried, using securable container (e.g., locked briefcase) via authorized personnel, or (ii) if shipped, trackable with receipt by commercial carrier;		RA	First Data will not transport such data as part of this project.
	Maintains accountability for information system media during transport outside of controlled areas		RA	
	Restricts the activities associated with transport of such media to authorized personnel		RA	
MP-6	Sanitizes information system media, both digital and non-digital, prior to disposal, release out of organizational control, or release for reuse;	RA		
	Employs sanitization mechanisms with strength and integrity commensurate with the classification or sensitivity of the information	RA		
	FTI furnished to the user and any paper material generated therefrom, such as extra copies, photo impressions, computer printouts, carbon paper, notes, stenographic notes, and work papers must be destroyed by burning, mulching, pulping, shredding, or disintegrating	RA		

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	FTI must never be disclosed to an agency's agents or contractors during disposal unless authorized by the Internal Revenue Code. Generally, destruction should be witnessed by an agency employee	RA	RA	
	Maintain an inventory of media containing PII	RA	RA	The scope of this project does not allow First Data to gain access to such data
	Tracks, documents, and verifies media sanitization and disposal actions			<b>Out of scope for project security plan.</b>
	Tests sanitization equipment and procedures to verify correct performance periodically.			<b>Out of scope for project security plan.</b>
	Sanitizes information system media containing sensitive information (such as FTI or Privacy Act protected information) using National Security Agency (NSA) guidance ( <a href="http://www.nsa.gov/ia/government/mdg.cfm">www.nsa.gov/ia/government/mdg.cfm</a> ) and NIST SP 800-88, Guidelines for Media Sanitization.			<b>Out of scope for project security plan.</b>
	Destroys media containing sensitive information (such as FTI or Privacy Act protected information) that cannot be sanitized.			<b>Out of scope for project security plan.</b>

## 16.12 PHYSICAL AND ENVIRONMENTAL PROTECTION FAMILY (PE) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	<p><b>Due to the onsite nature of this projects, First Data does not itself implement these controls. See PE PHYSICAL AND ENVIRONMENTAL CONTROL FAMILY.</b></p>			<p><b>Out of scope for project security plan.</b></p>



### 16.13 PLANNING (PL) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
PL-1	Comply with data collection guidance issued by the client and its federal partners;	RA		
	Document policies, procedures, and security controls in a format acceptable to the client	RA		
	Follow the system security plans, provide timely evidence that the plan is being followed, provide the client with usable copies of data and destroy all other copies (except where retention is mandated by law or regulation) upon expiration or other termination of their contracts;	RA		
	Follow the appropriate standards for evaluation of systems, including preparation of reports;			Out of scope for project security plan.
	Review this policy (see Revision Cycle, below), document all reviews and changes to this policy and report any issues to Executive management;	RA		
PL-2	Develops a security plan for the project	RA		
	Reviews the security plan for the project within every three-hundred-sixty-five (365) days	RA	RA	
	Updates the plan, minimally every three (3) years, to address current conditions	RA		or whenever: <ul style="list-style-type: none"> <li>- There are significant changes to the information system/environment of operation that affect security;</li> <li>- Problems are identified during plan implementation or security control assessments;</li> <li>- When the data sensitivity level increases; - After a serious security violation due to changes in the threat environment;</li> </ul> or

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
				- Before the previous security authorization expires.
PL-4	Read and sign Rules of Behavior document	RA		
	Abide by Rules of Behavior	RA		
PL-5	Perform a Privacy Impact Assessment			<b>Out of scope for project security plan.</b>
PL-6	Conduct security planning	RA		

## 16.14 PERSONNEL SECURITY (PS) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
PS-1	Implement State personnel policy requirements.			
	Require vendors to implement personnel security policies and procedures that are consistent with the laws and regulations of the state, in alignment with client security goals and the regulations governing the client	RA	RA	
PS-2	Assigns a criticality/sensitivity risk designation to all information types;		RA	
	Establishes the screening criteria for access to each information type;		RA	
	Establishes the information types required to perform each job role;		RA	
	Assigns a criticality/sensitivity risk designation to all positions based on information access requirements;		RA	
	Establishes screening criteria for individuals filling those positions; and	RA	RA	
	Reviews and revises position criticality/sensitivity risk designations within every three hundred sixty-five (365) days.		RA	
PS-3	Perform criminal history check for all persons prior to employment.	RA		
	Screen individuals prior to authorizing access to the information system	RA		
	Rescreen individuals periodically, consistent with the criticality/sensitivity rating of the position	RA		
PS-4	Revokes system and physical access immediately following employee termination;	RA	RA	
	Conducts exit interviews;	RA		

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
	Retrieves all security-related information system-related property;	RA		
	Retains access to information and information systems formerly controlled by terminated individual; and	RA		
	Immediately escorts employees terminated for cause out of the organization.	RA	RA	
PS-5	Implement a Personnel Transfer procedure	RA	RA	Re-issuing appropriate information system-related property (e.g., keys, identification cards, building passes); Notification to security management; Closing obsolete accounts and establishing new accounts; and Revocation of all system access privileges (if applicable).
PS-7	Define vendor and grantee security requirements		RA	
	Perform due diligence risk assessment	RA	RA	
PS-8	Implement a formal sanctions process for personnel failing to comply with established information security policies and procedures.	RA		

## 16.15 RISK ASSESSMENTS (RA) FAMILY

Control	Specific Responsibility	FD	NE	Notes / Associated Procedure
RA-1	Communicating the tasks performed and resources (people, technology, data, etc.) to Security Staff;	RA		
	Leading risk assessments	RA		
	Periodic reviews and revision of this policy	RA		
	Perform risk assessment activities	RA		
RA-2	Document the system including Data and Processes			<b>Out of scope for project security plan.</b>
	Perform risk assessment			<b>Out of scope for project security plan.</b>
	Categorize system			<b>Out of scope for project security plan.</b>
RA-3	Perform Initial Risk Assessment	RA	RA	
	Host workgroup discussions of Risk Assessments	RA	RA	
	Prepare Risk Change Report		RA	
	Update security plan as needed (nominally quarterly)	RA		
RA-5	Engage external security vendor for vulnerability scanning			<b>Out of scope for project security plan.</b>
	Accumulate scans and provide reports			<b>Out of scope for project security plan.</b>
	Determine remediation required			<b>Out of scope for project security plan.</b>

## 16.16 SYSTEM AND SERVICES ACQUISITION (SA) FAMILY

Control	Specific Responsibility			Notes / Associated Procedure
SA-1	Document and implement a security plan that is compliant with 45 CFR 155.260 Privacy and security of personally identifiable information and acceptable to the client			<b>Out of scope for project security plan.</b>
	Pass on the obligation to comply with 45 CFR 155.260 Privacy and security of personally identifiable information to any sub-contractor			<b>Out of scope for project security plan.</b>
	ensure that procurement instruments (RFP's etc.) contain language that enforces this policy and describe the amount to be allocated toward compliance with this policy			<b>Out of scope for project security plan.</b> Purchasing / Procurement is the Bus. Lead in question
	Specify systems and services security needs when initially documenting their functions.			<b>Out of scope for project security plan.</b>
SA-2	Security requirements are determined during the planning of business processes;			<b>Out of scope for project security plan.</b>
	Resources required to protect systems and information are determined, documented and allocated as a part of the funding process; and			<b>Out of scope for project security plan.</b>
	Budgeting and procurement track information security as a separate line item.			<b>Out of scope for project security plan.</b>
SA-3	Manages the information system using CMS's Enterprise Life Cycle, which incorporates information security considerations;			<b>Out of scope for project security plan.</b>
	Defines and documents information security roles and responsibilities throughout the system development life cycle;			<b>Out of scope for project security plan.</b>
	Identifies individuals having information security roles and responsibilities; and			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
	Integrates the organizational information security risk management process into system development life cycle activities.			<b>Out of scope for project security plan.</b>
SA-4	Include requirements in procurement solicitations			<b>Out of scope for project security plan.</b>
	Define requirements for use in procurement solicitations			<b>Out of scope for project security plan.</b>
SA-5	Obtains, protects as required, and makes available to authorized personnel, administrator documentation for the information system			<b>Out of scope for project security plan.</b>
	Obtains, protects as required, and makes available to authorized personnel, user documentation for the information system			<b>Out of scope for project security plan.</b>
	Documents attempts to obtain information system documentation when such documentation is either unavailable or nonexistent			<b>Out of scope for project security plan.</b>
SA-5	Provide license numbers and counts (where applicable) when providing copies of the system to the Field: Organization Short Name.			<b>Out of scope for project security plan.</b>
SA-7	Provide written permission to install non-standard software			<b>Out of scope for project security plan.</b>
	document the business need for any such software			<b>Out of scope for project security plan.</b>
	work with procurement to obtain the proper licenses for any software installed			<b>Out of scope for project security plan.</b>
	Perform Security Impact analysis			<b>Out of scope for project security plan.</b>
SA-8	Apply security engineering principles as noted			<b>Out of scope for project security plan.</b>
SA-9	Perform Security Due Diligence			<b>Out of scope for project security plan.</b>
SA-9	Grants (and may revoke if necessary) authority for the vendor to operate its system.			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
	audits/assesses vendors for compliance to their documented security implementation			<b>Out of scope for project security plan.</b>
	Monitor Plans of Action and Milestones			<b>Out of scope for project security plan.</b>
	Provide documentation as requested			<b>Out of scope for project security plan.</b>
	Approve changes to contract team			<b>Out of scope for project security plan.</b>
	Monitor SLAs			<b>Out of scope for project security plan.</b>
	audit each vendor or system at least once within any three year period			<b>Out of scope for project security plan.</b>
	Meet personnel requirements			<b>Out of scope for project security plan.</b>
	Agree on metrics and SLAs			<b>Out of scope for project security plan.</b>
	Gather and supply data for metrics			<b>Out of scope for project security plan.</b>
	Agree on metrics analysis / calculation			<b>Out of scope for project security plan.</b>
SA-9	During any major change (including initial implementation), document and perform security testing			<b>Out of scope for project security plan.</b>
	Perform periodic training of its personnel based upon their role(s) and the access granted.			<b>Out of scope for project security plan.</b>
	Track (keep records of) the execution of the above processes			<b>Out of scope for project security plan.</b>
SA-10	Perform configuration management during system, component, or service design, development, implementation, and operation			<b>Out of scope for project security plan.</b>
	Document, manage, and control the integrity of changes to all system development related work			<b>Out of scope for project security plan.</b>



Control	Specific Responsibility			Notes / Associated Procedure
	products			
	Implement only Field: Organization Short Name-approved changes to the system, component, or service;			<b>Out of scope for project security plan.</b>
	Document approved changes to the system, component, or service and the potential security impacts of such changes;			<b>Out of scope for project security plan.</b>
	Track security flaws and flaw resolution within the system, component, or service and report findings to the Security and Privacy Officer			<b>Out of scope for project security plan.</b>
SA-11	Create and implement a security test and evaluation plan in accordance with, but not limited to the, current procedures			<b>Out of scope for project security plan.</b>
	Implement a verifiable flaw remediation process to correct weaknesses and deficiencies identified during the security control assessment process			<b>Out of scope for project security plan.</b>
	Document the results of the security control assessment and flaw remediation processes			<b>Out of scope for project security plan.</b>

## 16.17 SYSTEM AND COMMUNICATIONS PROTECTION (SC) FAMILY

Control	Specific Responsibility		Notes / Associated Procedure
SC-1	implement and document security controls to ensure that system communication is secured to the level required by the data being communicated; define and document all system communication channels and interfaces		<b>Out of scope for project security plan.</b>
	review Vendor security documentation; review and approve Field: OSNpolicy and procedures		<b>Out of scope for project security plan.</b>
	For Interactive (person-facing) communications, any system must be accessible only via a secured interface: HTTPS and TLS are acceptable for browser based interfaces SFTP is acceptable for file transfer SSH or RDP with SSL are acceptable for remote desktop or telnet sessions For system to system communications For custom interfaces, NIEM compliance is mandatory For all interfaces Compliance with FIPS 140 (most current version) is required Communication channels must be secured via SSL, TLS or another standard approved by the Chief Security Officer		<b>Out of scope for project security plan.</b>
SC-2	Implement separation of system management-related functionality from user functionality by using different servers, different central processing units, different instances of operating systems, different network addresses, virtualization techniques, or combinations of these or other methods, as appropriate.		<b>Out of scope for project security plan.</b>

Control	Specific Responsibility		Notes / Associated Procedure
	The information system prevents the presentation of information system management-related functionality at an interface for non-privileged users.		<b>Out of scope for project security plan.</b>
SC-3	The information system utilizes underlying hardware separation mechanisms to implement security function isolation.		<b>Out of scope for project security plan.</b>
	The information system isolates security functions enforcing access and information flow control from nonsecurity functions and from other security functions.		<b>Out of scope for project security plan.</b>
	Minimizes the number of nonsecurity functions included within the isolation boundary containing security functions.		<b>Out of scope for project security plan.</b>
	Implements security functions as largely independent modules that maximize internal cohesiveness within modules and minimize coupling between modules.		<b>Out of scope for project security plan.</b>
	Implements security functions as a layered structure minimizing interactions between layers of the design and avoiding any dependence by lower layers on the functionality or correctness of higher layers.		<b>Out of scope for project security plan.</b>
SC-4	construct information systems such that prior to release of any system resource containing sensitive information (e.g. PII, PHI), these resources are cleaned of such information		<b>Out of scope for project security plan.</b>
SC-5	The information system restricts the ability of individuals to launch denial of service attacks against other information systems.		<b>Out of scope for project security plan.</b>
	The information system manages excess capacity, bandwidth, or other redundancy to limit the effects of information flooding denial of service attacks.		<b>Out of scope for project security plan.</b>

Control	Specific Responsibility		Notes / Associated Procedure
	Employ real time monitoring tools to detect indicators of denial of service attacks against the information system;		<b>Out of scope for project security plan.</b>
	Monitor information system resources in real time to determine if sufficient• Monitor information system resources in real time to determine if sufficient resources exist to prevent effective denial of service attacks resources exist to prevent effective denial of service attacks		<b>Out of scope for project security plan.</b>
SC-7	Monitor and control communications at the external boundary of the system and at key internal boundaries within the system;		<b>Out of scope for project security plan.</b>
	Connect to external networks or information systems only through managed interfaces consisting of automated boundary protection devices arranged in accordance with organizational security architecture;		<b>Out of scope for project security plan.</b>
	At managed interfaces, deny network traffic by default and allows network traffic by exception (i.e., deny all, permit by exception);		<b>Out of scope for project security plan.</b>
	Ensure that access to all proxies is denied, except for those hosts, ports, and services that are explicitly required;		<b>Out of scope for project security plan.</b>
	Use stateful inspection/application firewall hardware and software;		<b>Out of scope for project security plan.</b>
	Use firewalls from at least two (2) different vendors at the various levels within the network to reduce the possibility of compromising the entire network;		<b>Out of scope for project security plan.</b>
	Physically allocate publicly accessible Exchange information system components to separate sub-networks with separate physical network interfaces		<b>Out of scope for project security plan.</b>

Control	Specific Responsibility		Notes / Associated Procedure
	Prevent access into the organization’s internal networks except as appropriately mediated by managed interfaces employing boundary protection devices;		<b>Out of scope for project security plan.</b>
	Limit the number of access points to the information system (e.g., prohibiting desktop modems) to allow for more comprehensive monitoring of inbound and outbound communications and network traffic;		<b>Out of scope for project security plan.</b>
	Prevent the unauthorized release of information outside of the information system boundary or any unauthorized communication through the information system boundary when there is an operational failure of the boundary protection mechanisms;		<b>Out of scope for project security plan.</b>
	Prevent remote devices that have established a non-remote connection with the system from communicating outside of that communications path with resources in external networks;		<b>Out of scope for project security plan.</b>
	Implement a managed interface for each external telecommunication service;		<b>Out of scope for project security plan.</b>
	Establish a traffic flow policy for each managed interface;		<b>Out of scope for project security plan.</b>
	Employ security controls as needed to protect the confidentiality and integrity of the information being transmitted;		<b>Out of scope for project security plan.</b>
	Documents each exception to the traffic flow policy with a supporting mission/business need and duration of that need;		<b>Out of scope for project security plan.</b>
	Review exceptions to the traffic flow policy within every three-hundred-sixty-five (365) days;		<b>Out of scope for project security plan.</b>
	Remove traffic flow policy exceptions that are no longer supported by an explicit mission / business need.		<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
SC-8	The information system implements cryptographic mechanisms to: prevent unauthorized disclosure of information and to detect changes to information during transmission unless otherwise protected.			<b>Out of scope for project security plan.</b>
	The information system maintains the confidentiality of information during preparation for transmission and during reception.			<b>Out of scope for project security plan.</b>
	The information system implements cryptographic mechanisms to protect message externals unless otherwise protected.			<b>Out of scope for project security plan.</b>
SC-9	Implement secure transmission of all sensitive information whether retrieved or sent, employing cryptographic mechanisms to prevent unauthorized disclosure of information during transmission unless otherwise protected by alternative physical measures.			<b>Out of scope for project security plan.</b>
SC-10	The information system automatically terminates the network connection associated with a communications session at the end of the session, or: Forcibly de-allocates communications session Dynamic Host Configuration Protocol (DHCP) leases after seven (7) days; and Forcibly disconnects inactive Virtual Private Network (VPN) connections after thirty (30) minutes of inactivity.			<b>Out of scope for project security plan.</b>
SC-13	use compliant and validated cryptographic modules			<b>Out of scope for project security plan.</b>
	enforced during the design review, auditing or due diligence			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
SC-14	Ensure that network access controls, operating system file permissions, and application configurations protect the integrity of information stored, processed, and transmitted by publicly accessible systems, as well as the integrity of publicly accessible applications			<b>Out of scope for project security plan.</b>
SC-15	Prohibit remote activation of collaborative computing devices			<b>Out of scope for project security plan.</b>
	Provide an explicit indication of use to users physically present at the devices of the active state of the device;			<b>Out of scope for project security plan.</b>
	Provide for physical disconnection of the collaborative computing device in a manner supporting ease of use.			<b>Out of scope for project security plan.</b>
SC-17	use trusted authorities for the issuance of Public Key Infrastructure (PKI) certificates			<b>Out of scope for project security plan.</b>
SC-18	Document the use of mobile code in the system design			<b>Out of scope for project security plan.</b>
	Mobile code must come from the system rather than a third party			<b>Out of scope for project security plan.</b>
SC-19	Do not incorporate Voice over IP technology			<b>Out of scope for project security plan.</b>
SC-20 and SC-22	Enable remote clients to obtain origin authentication and integrity verification assurances for the host/service name to network address resolution information			<b>Out of scope for project security plan.</b>
SC-28	The Field: OSNrequires that data at rest be encrypted when PII or PHI is present.			<b>Out of scope for project security plan.</b>
SC-32	The Field: OSNrequires vendors to partition Information Systems into at least two zones – one for components that interact with the internet and one in which components do not. This will be documented in the system design.			<b>Out of scope for project security plan.</b>
SC-ACA-1	Protect ACA sensitive information (such as FTI or Privacy Act Protected Information) that is sent via email.			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
				<b>Out of scope for project security plan.</b>



## 16.18 SYSTEM AND INFORMATION INTEGRITY (SI) FAMILY

Control	Specific Responsibility			Notes / Associated Procedure
SI-1	implement and document security controls to ensure that integrity is maintained,			<b>Out of scope for project security plan.</b>
	perform bulk updates as requested by the Business Owner			<b>Out of scope for project security plan.</b>
	define the job roles permitted to update information			<b>Out of scope for project security plan.</b>
	generate/approve bulk updates through vendor personnel			<b>Out of scope for project security plan.</b>
	review Vendor security documentation			<b>Out of scope for project security plan.</b>
	review and approve Field: OSNpolicy and procedures			<b>Out of scope for project security plan.</b>
SI-2	Identifies, reports, and corrects information system flaws			<b>Out of scope for project security plan.</b>
	Tests software updates related to flaw remediation for effectiveness and potential side effects on information systems before installation			<b>Out of scope for project security plan.</b>
	Incorporates flaw remediation into the organizational configuration management process			<b>Out of scope for project security plan.</b>
SI-3	Employs malicious code protection mechanisms at information system entry and exit points			<b>Out of scope for project security plan.</b>
	Updates malicious code protection mechanisms (including signature definitions) whenever new releases are available in accordance with configuration management policy and procedures			<b>Out of scope for project security plan.</b>
	Configures malicious code protection mechanisms			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
	Addresses the receipt of false positives during malicious code detection and eradication and the resulting potential impact on the availability of the information system			<b>Out of scope for project security plan.</b>
	Centrally manages malicious code protection mechanisms			<b>Out of scope for project security plan.</b>
	Automatically updates malicious code protection mechanisms (including signature definitions)			<b>Out of scope for project security plan.</b>
	Prevents non-privileged users from circumventing malicious code protection capabilities			<b>Out of scope for project security plan.</b>
SI-4	Interconnects and configures individual intrusion detection tools into a system wide intrusion detection system using common protocols			<b>Out of scope for project security plan.</b>
	Monitors events on the information system in accordance with Information Security Incident Handling and Breach Analysis/Notification Procedure and detects information system attacks			<b>Out of scope for project security plan.</b>
	Employs automated tools to support near real-time analysis of events			<b>Out of scope for project security plan.</b>
	Provides near real-time alerts when the following indications of compromise or potential compromise occur			<b>Out of scope for project security plan.</b>
	Monitors inbound and outbound communications for unusual or unauthorized activities or conditions			<b>Out of scope for project security plan.</b>
	Identifies unauthorized use of the Field: OSN information system			<b>Out of scope for project security plan.</b>
	Deploys monitoring devices			<b>Out of scope for project security plan.</b>
	Heightens the level of information system monitoring activity whenever there is an indication of increased			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
	risk			
	Obtains legal opinion with regard to information system monitoring activities in accordance with applicable federal laws, Executive Orders, directives, policies, or regulations			<b>Out of scope for project security plan.</b>
	Prevents non-privileged users from circumventing intrusion detection and prevention capabilities			<b>Out of scope for project security plan.</b>
SI-5	Receives information system security alerts, advisories, and directives from designated external organizations on an ongoing basis			<b>Out of scope for project security plan.</b>
	Generates internal security alerts, advisories, and directives as deemed necessary			<b>Out of scope for project security plan.</b>
	Disseminates security alerts, advisories, and directives to appropriate personnel			<b>Out of scope for project security plan.</b>
	Implements security directives in accordance with established time frames, or notifies the Field: OSNof the vendor's degree of noncompliance			<b>Out of scope for project security plan.</b>
SI-7	Perform daily integrity scans of the information system			<b>Out of scope for project security plan.</b>
	Employ automated tools to detect unauthorized changes to the system			<b>Out of scope for project security plan.</b>
	Immediately notify the Chief Privacy and Security Officer of any detected unauthorized changes			<b>Out of scope for project security plan.</b>
SI-8	Implement spam protection mechanisms			<b>Out of scope for project security plan.</b>
	Centrally manage those mechanisms.			<b>Out of scope for project security plan.</b>
SI-9	restricts the capability to input information to the information system to authorized personnel			<b>Out of scope for project security plan.</b>
SI-10	employ automated means (e.g. form validation on both the client and server sides) to ensure that all inputs			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
	conform to valid syntax and semantics defined			
SI-11	Identifies potentially security-relevant error conditions			<b>Out of scope for project security plan.</b>
	Generates error messages that provide information necessary for corrective actions without revealing information that could be exploited by adversaries in error logs and administrative messages that could be exploited by adversaries; and			<b>Out of scope for project security plan.</b>
	Reveals error messages only to authorized personnel.			<b>Out of scope for project security plan.</b>
	Refrain from passing along verbatim error messages from servers in different network/trust zones.			<b>Out of scope for project security plan.</b>
SI-12	Retain output, including, but not limited to audit records, system reports, business and financial reports, and business records, from the information system in accordance with Policy and all applicable National Archives and Records Administration (NARA) requirements.			<b>Out of scope for project security plan.</b>
	Where not otherwise specified, records are to be kept long enough to detect and analyze any security event (90 days online and 1 year archival).			<b>Out of scope for project security plan.</b>

## 16.19 INFORMATION SECURITY PROGRAM PLAN (PM) FAMILY

Control	Specific Responsibility			Notes / Associated Procedure
PM-1	develops an information security program plan that <ul style="list-style-type: none"> <li>• provides an overview of the requirements for the security program;</li> <li>• provides a description of the security program management controls and common controls in place or planned for meeting security program requirements;</li> <li>• provides sufficient information about the program management controls and common controls (including specification of parameters for any assignment and selection operations either explicitly or by reference) to enable an implementation that is unambiguously compliant with the intent of the plan and a determination of the risk to be incurred if the plan is implemented as intended;</li> <li>• includes roles, responsibilities, management commitment, coordination among organizational entities, and compliance;</li> <li>• is approved by a senior official with responsibility and accountability for the risk being incurred to organizational operations (including mission, functions, image, and reputation), organizational assets, individuals, other organizations and the Nation</li> </ul>			<p><b>Out of scope for project security plan.</b></p>
	only use or disclose such personally identifiable information to the extent such information is necessary to carry out the functions described in § 155.200			<p><b>Out of scope for project security plan.</b>                      CPO/CSO write policy defining acceptable uses with input from Bus. Leads                       Vendors implement restrictions</p>
	Implement security in accord with principles from			<p><b>Out of scope for project security plan.</b></p>

Control	Specific Responsibility			Notes / Associated Procedure
	45CFR 155.260			
	establish and implement operational, technical, administrative and physical safeguards that are consistent with any applicable laws			<b>Out of scope for project security plan.</b>
	This policy and the Security Program Plan will be reviewed annually and updated as necessary.			<b>Out of scope for project security plan.</b>
PM-2	Appoint a senior information security officer to coordinate, develop, implement, and maintain an organization-wide information security program			<b>Out of scope for project security plan.</b>
	Appoint a senior privacy officer to coordinate, develop, implement and maintain and maintain privacy and compliance			<b>Out of scope for project security plan.</b>
	Empower the senior information security leadership with the mission and resources required to coordinate, develop, implement, and maintain an organization-wide information security, privacy and compliance program.			<b>Out of scope for project security plan.</b>
	Implement security Program			<b>Out of scope for project security plan.</b>
	ensuring that the security program is in compliance			<b>Out of scope for project security plan.</b>
PM-3	Require contractors and grantees to meet the same security obligations as the Field: Organization Short Name			<b>Out of scope for project security plan.</b>
	Include Information Security in all grant requests			<b>Out of scope for project security plan.</b>
	Break out security costs separately on RFP, business case, etc.			<b>Out of scope for project security plan.</b> CSO/CPO provide language for insertion
	assess/audit vendors for security			<b>Out of scope for project security plan.</b> Particularly, staff perform assessment/audit with sign off from CSO

Control	Specific Responsibility			Notes / Associated Procedure
PM-4	determine what security controls are missing or in need of remediation			<b>Out of scope for project security plan.</b> Particularly, staff perform assessment/audit with sign off from CSO
	determine the steps needed ensure that all controls are in place and adequate			<b>Out of scope for project security plan.</b> Particularly, staff perform assessment/audit with sign off from CSO
	ensure that resources are available to complete the actions in the defined schedule			<b>Out of scope for project security plan.</b>
	Use normal project management practices to keep the POA&M on schedule. Any issues should be raised to the security workgroup.			<b>Out of scope for project security plan.</b> Particularly, staff perform with sign off from CSO
PM-5	Maintain System Inventory			<b>Out of scope for project security plan.</b>
PM-6	Develop Performance Measures			<b>Out of scope for project security plan.</b>
	Monitor Performance Measures			<b>Out of scope for project security plan.</b>
PM-7	develops an Enterprise Architecture			<b>Out of scope for project security plan.</b>
PM-8	Develop critical infrastructure plan			<b>Out of scope for project security plan.</b>
	Review critical infrastructure plan annually			<b>Out of scope for project security plan.</b>
PM-9	Develop risk management framework			<b>Out of scope for project security plan.</b>
	Manage Risk			<b>Out of scope for project security plan.</b>
	Review / update RMF annually			<b>Out of scope for project security plan.</b>
	Manage Incidents			<b>Out of scope for project security plan.</b>
	Perform Contingency Planning			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes / Associated Procedure
PM-10	Request Authority to Operate			<b>Out of scope for project security plan.</b>
	Grant/Deny ATO			<b>Out of scope for project security plan.</b>
	Assess system risk			<b>Out of scope for project security plan.</b>
PM-11	Document Processes			<b>Out of scope for project security plan.</b>



## 16.20 PRIVACY CONTROLS AND COMMENTS

Privacy controls are based on the Fair Information Practice Principles:. These are defined as:

- **Transparency:** Organizations should be transparent and notify individuals regarding collection, use, dissemination, and maintenance of personally identifiable information (PII).
- **Individual Participation:** Organizations should involve the individual in the process of using PII and, to the extent practicable, seek individual consent for the collection, use, dissemination, and maintenance of PII. Organizations should also provide mechanisms for appropriate access, correction, and redress regarding use of PII.
- **Purpose Specification:** Organizations should specifically articulate the authority that permits the collection of PII and specifically articulate the purpose or purposes for which the PII is intended to be used.
- **Data Minimization:** Organizations should only collect PII that is directly relevant and necessary to accomplish the specified purpose(s) and only retain PII for as long as is necessary to fulfill the specified purpose(s).
- **Use Limitation:** Organizations should use PII solely for the purpose(s) specified in the notice. Sharing PII should be for a purpose compatible with the purpose for which the PII was collected.
- **Data Quality and Integrity:** Organizations should, to the extent practicable, ensure that PII is accurate, relevant, timely, and complete.
- **Security:** Organizations should protect PII (in all media) through appropriate security safeguards against risks such as loss, unauthorized access or use, destruction, modification, or unintended or inappropriate disclosure.
- **Accountability and Auditing:** Organizations should be accountable for complying with these principles, providing training to all employees and contractors who use PII, and auditing the actual use of PII to demonstrate compliance with these principles and all applicable privacy protection requirements.

Privacy controls are grouped into **families**, with each family addressing a particular principle from the list above.

Code	Name	Description
TR	Transparency	
IP	Individual Participation and Redress	

Code	Name	Description
AP	Authority and Purpose	
DM	Data Minimization and Retention	
UL	Use Limitation	
DI	Data Quality and Integrity	
SE	Security	
AR	Accountability, Audit and Risk	

## 16.21 TRANSPARENCY (TR) FAMILY

The description of TR security control detail and comments are provided in this section.

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
TR-1	Provide effective notice to the public regarding the organizations activities that impact privacy			<b>Out of scope for project security plan.</b>
	Provide effective notice to the public regarding the organizations authority to collect PII			<b>Out of scope for project security plan.</b>
	Provide effective notice to the public regarding choices individuals have in collection of their PII			<b>Out of scope for project security plan.</b>
	Provide effective notice to the public regarding choices individuals have in access to and correction of their PII			<b>Out of scope for project security plan.</b>
	Describe PII collected and uses to which it will be put			<b>Out of scope for project security plan.</b>
	Describe internal uses of PII			<b>Out of scope for project security plan.</b>
	Describe sharing of PII including the organizations shared with, and purpose for sharing			<b>Out of scope for project security plan.</b>
	Describe whether individuals have the ability to consent to specific uses or sharing of their PII and how to exercise their consent			<b>Out of scope for project security plan.</b>
	Describe how individuals may access their PII			<b>Out of scope for project security plan.</b>
	Describe how PII will be protected			<b>Out of scope for project security plan.</b>
	Revise public notices to reflect changes in			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
TR-1(1)	Provide layered notices at point of collection			<b>Out of scope for project security plan.</b>
TR-2	Publish SORNs in the Federal Register			<b>Out of scope for project security plan.</b>
	Keep SORN's Current			<b>Out of scope for project security plan.</b>
	Include Privacy Act Statements on forms collecting data			<b>Out of scope for project security plan.</b>
TR-2(1)	Publish SORN's on website			<b>Out of scope for project security plan.</b>
TR-3	Ensure the public has access to information about privacy activities			<b>Out of scope for project security plan.</b>
	Ensure public can communicate with CPO			<b>Out of scope for project security plan.</b>
	Ensure privacy practices are publically available through web site or otherwise			<b>Out of scope for project security plan.</b>

## 16.22 INDIVIDUAL PARTICIPATION AND REDRESS (IP) FAMILY

Control	Specific Responsibility		Notes/Associated Procedure
IP-1	Provide the means, where feasible and appropriate, for individuals to authorize collection, use, maintenance, and sharing of PII		<b>Out of scope for project security plan.</b>
	Provide appropriate means to understand consequences of approving or declining authorization for collection, use maintenance of PII		<b>Out of scope for project security plan.</b>
	Obtain consent before new use or disclosure		<b>Out of scope for project security plan.</b>
	Ensure Individuals are aware of new uses or changes to use after collection		<b>Out of scope for project security plan.</b>
IP-2	Provide individuals the ability to access their PII		<b>Out of scope for project security plan.</b>
	Publishes policies or regulations governing how individuals may access their PII		<b>Out of scope for project security plan.</b>
	Publishes access procedures		<b>Out of scope for project security plan.</b>
	Adhere to Privacy Act Requirements and OMB guidance and policies		<b>Out of scope for project security plan.</b>
IP-3	Provide contact information for corrections to PII		<b>Out of scope for project security plan.</b>

Control	Specific Responsibility			Notes/Associated Procedure
	Establish process for disseminating changes to PII			<b>Out of scope for project security plan.</b>
IP-4	Implement a process for receiving and responding to complaints			<b>Out of scope for project security plan.</b>
IP-4 (1)	Respond to complaints within a specified time period			<b>Out of scope for project security plan.</b>

## 16.23 SECURITY (SE) FAMILY

The description of SE security control detail and comments are provided in this section.

Control	Specific Responsibility	FD	NE	Notes
SE-1	Establish, maintain and Update within every 365 days an inventory of all programs and systems used in collecting, creating, using, disclosing, maintaining, or maintaining PII	RA		
	Provide each update to the inventory to the CPO and CSO	RA		
SE-2	Develop and implement a Privacy Incident Response Plan	RA		Reuse the security incident plan
	Provide an organized and effective response	RA	RA	
	Follow current CMS incident reporting standards	RA	RA	

## 16.24 USE LIMITATION (UL) FAMILY

The description of UL security control detail and comments are provided in this section.

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
UL-1	The organization uses PII internally only for authorized uses.	RA	RA	Vendors: Implement audit controls for access to PII Bus. Leads and Executives to Authorize all uses of PII. CPO may veto uses for compliance reasons.
UL-2	Limit sharing of PII to authorized uses	RA	RA	Vendors: Implement audit controls for access to PII Bus. Leads and Executives to Authorize all uses of PII. CPO may veto uses for compliance reasons.
	Enter into formal agreements for sharing of data	RA	RA	All data sharing requires written agreements Vendors: Implement audit controls for access to PII Bus. Leads and Executives to Authorize all uses of PII. CPO may veto uses for compliance reasons.
	Monitor, audit and train staff on sharing of PII	RA	RA	Should be incorporated into annual security training
	Evaluate new sharing of data to determine if it is authorized and whether notices must be	RA	RA	



Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
	updated.			

## 16.25 ACCOUNTABILITY, AUDIT, and RISK MANAGEMENT (AR) FAMILY

The description of AR security control detail and comments are provided in this section.

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
AR-1	Appoint designated Privacy Official	RA		Project Security Officer fills this role as well. Due to the high level of responsibility, the appointment must come from executive leadership. The named individual must consent to the nomination. Consent from CSO and Business Leads is required. Vendors must be informed of any changes.
	Monitor privacy laws and policy for changes	RA		CPO performs and disseminates
	Develop strategic organizational privacy plan	RA		Included in security plan
	Develop, disseminate and implement privacy policies and procedures	RA		CPO performs and disseminates All others comply
	Update privacy policies and procedures at least annually or as required to meet changing requirements	RA		CPO performs and disseminates
AR-2	Document and implement a privacy risk management process	RA		CPO performs and disseminates
	Conduct privacy impact assessments	RA		CPO performs and disseminates

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
AR-3	Establish privacy roles, responsibilities and access requirements for contractors and service providers	RA		CPO performs and disseminates
	Include privacy requirements in acquisition documents	RA		CPO performs and disseminates
AR-4	Monitor and audit privacy controls and policies	RA		CPO develop and execute reporting process All others responsible for implementing procedures.
	Comply with HHS privacy oversight	RA		
AR-5	Develop and implement a comprehensive privacy training and awareness strategy	RA		CPO performs and disseminates
	Administer basic and role based privacy training at least annually	RA		CPO performs and disseminates
	Ensure personnel certify acceptance of privacy responsibility at least annually	RA		CPO maintains records. Informs as needed if anyone out of compliance.
AR-6				This control does not apply to non-Federal entities. This control is meant for Department-level reporting to OMB and Congress about the Department’s privacy program.
AR-7	Design information systems to support privacy with automatic privacy controls			<b>Out of scope for project security plan.</b>
AR-8	Keep accurate accounting of disclosures of information in each system of records			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
	Retain accounting for life of record or 5 years, whichever is greater			<b>Out of scope for project security plan.</b>
	Make the disclosure accounting available to the person named in the record upon request			<b>Out of scope for project security plan.</b>

## 16.26 DATA QUALITY and INTEGRITY (DI) FAMILY

The description of DI security control detail and comments are provided in this section.

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
DI-1	Confirm upon collection the completeness, accuracy, relevance and timeliness of data			<b>Out of scope for project security plan.</b>
	Collect PII from the individual to the extent practicable			<b>Out of scope for project security plan.</b>
	Check for and correct inaccurate or outdated data as directed by HHS Data Integrity Board			<b>Out of scope for project security plan.</b>
	Issues guidelines ensuring quality, utility, objectivity and integrity of disseminated information			<b>Out of scope for project security plan.</b>
DI-1(1)	Request the individual or representative to validate data during collection process			<b>Out of scope for project security plan.</b>
DI-1(2)	Request the individual or representative to re-validate data previously collected			<b>Out of scope for project security plan.</b>
DI-2	Document process to ensure data integrity of PII			<b>Out of scope for project security plan.</b>
	Establish a data integrity board			<b>Out of scope for project security plan.</b>

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Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
	when appropriate			
DI-2(1)	Publish CMA's on web site			<b>Out of scope for project security plan.</b>

## 16.27 AUTHORITY AND PURPOSE (AP) FAMILY

The description of AP security control detail and comments are provided in this section.

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
AP-1	The organization determines and documents the legal authority that permits the collection, use, maintenance, and sharing of Personally Identifiable Information (PII)			<b>Out of scope for project security plan.</b>
AP-2	The organization describes the purpose(s) for which PII is collected, used, maintained, and shared in privacy notices and data sharing agreements.			<b>Out of scope for project security plan.</b>

## 16.28 DATA MINIMIZATION AND RETENTION (DM) FAMILY

The description of DM security control detail and comments are provided in this section.

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
DM-1	Identifies the minimum PII elements that are relevant and necessary to accomplish the legally authorized purpose of collection;			<b>Out of scope for project security plan.</b>
	Limits the collection and retention of PII to the minimum elements identified, for the purposes described in the notice, and for which the individual has provided consent;			<b>Out of scope for project security plan.</b>
	Conducts an initial evaluation of PII holdings, and periodically review the holdings, within every 365 days, to ensure that only PII identified in the notice is collected and retained, and that the PII continues to be necessary to accomplish the legally authorized purpose.			<b>Out of scope for project security plan.</b>
DM-1(1)	Where feasible and within the limits of technology, locates, and			<b>Out of scope for project security plan.</b>



Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
	removes/redacts specified PII and/or uses anonymization and de-identification techniques to permit use of the retained information while reducing its sensitivity and reducing the risk resulting from disclosure.			
DM-2	Retains each collection of PII for the minimum allowable time period necessary to fulfill the purpose(s) identified in the notice or as required by law			<b>Out of scope for project security plan.</b>
	Disposes of, destroys, erases, and/or anonymizes the PII, regardless of the method of storage, in accordance with a NARA-approved record retention schedule and in a manner that prevents loss, theft, misuse, or unauthorized access			<b>Out of scope for project security plan.</b>
	Uses legally compliant techniques or methods to ensure secure deletion or destruction of PII (including originals, copies, and archived records).			<b>Out of scope for project security plan.</b>
DM-2(1)	The organization configures information systems to record the			<b>Out of scope for project security plan.</b>

Control	Specific Responsibility	FD	NE	Notes/Associated Procedure
	date PII is collected, created, or updated and when PII is to be deleted or archived under a record retention schedule.			
DM-3	Develops policies and procedures that minimize the use of PII for testing, training, and research			<b>Out of scope for project security plan.</b>
	Implements controls to protect PII used for testing, training, and research.			<b>Out of scope for project security plan.</b>
DM-3 (1)	The organization, where feasible, uses techniques to minimize the risk to privacy of using PII for research, testing, or training.			<b>Out of scope for project security plan.</b>



# Project Privacy and Security Plan Template

## 1.0 Introduction

The project security plan outlines security measures to be taken by the project team to secure client information while in custody of the project team. These security measures will apply to FDGS employees and contractors.

## 1.1 Process

### Gather Project Security Requirements

- **Identify Information Protection Needs** – The project team works with the client to document the types of information that the team will use. This should be captured in the security planning matrix of this document.
- **Categorize Information by Risk Levels** – Using the standard FIPS 199 security categorization, categorize the information:

Potential Impact			
Security Objective	LOW	MODERATE	HIGH
Confidentiality Preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information. [44 U.S.C., SEC. 3542]	The unauthorized disclosure of information could be expected to have a limited adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized disclosure of information could be expected to have a serious adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized disclosure of information could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.
Integrity Guarding against improper information modification or destruction, and includes ensuring information non-repudiation and authenticity. [44 U.S.C., SEC. 3542]	The unauthorized modification or destruction of information could be expected to have a limited adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized modification or destruction of information could be expected to have a serious adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized modification or destruction of information could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.

Potential Impact			
Security Objective	LOW	MODERATE	HIGH
Availability Ensuring timely and reliable access to and use of information. [44 U.S.C., SEC. 3542]	The disruption of access to or use of information or an information system could be expected to have a limited adverse effect on organizational operations, organizational assets, or individuals.	The disruption of access to or use of information or an information system could be expected to have a serious adverse effect on organizational operations, organizational assets, or individuals.	The disruption of access to or use of information or an information system could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals

- **Plan Secure Communications** – FDGS provides the following common security controls for secure communications:

- ✓ Email is secured via the following means:

- Email can only be accessed on approved devices. Mobile devices require a secure client app, with prior approval of the device by FDGS internal security. Laptop and desktop devices must be connected to the FDGS secure network, either directly or via a VPN. Such devices must be a part of an FDGS domain.
- Email has a classification. These are NONE, PUBLIC, PUBLIC RELEASE, RESTRICTED, UNCLASSIFIED, UNOFFICIAL, PROTECTED, SECRET, and TOP SECRET.
- Email sent to addresses outside of FDGS requires confirmation of the email addresses.

- ✓ Email is sent and received (by FDGS email client software) over secured (SSL/TLS) connections only.

In the planning matrix, identify any additional secure communications requirements.

- **Plan Secure Storage** - FDGS provides the following common security controls for secure storage:

- ✓ Laptop devices employ full disk encryption.

- ✓ Mobile devices employ full device encryption and passwords.

In the planning matrix, identify any additional secure storage requirements.

- Identify Team Training Needs - For each information type identified in planning matrix, determine whether additional training is required. An important aspect of this training will be any periodic refresher training.

- Document Rules of Behavior Expectations - In the planning matrix, identify specific expectations for the information types identified.

### Implementation

- **Prepare Team** - During the project kick off, discuss project information security requirements as identified in the training matrix.
- **Deliver Necessary Training** - Deliver training as required for the project. Track team member training.
- **Secure Rules of Behavior Agreement** - Develop documented rules of behavior for project team members. Have each team member sign the Rules of Behavior document.

## 1.2 Security Planning Matrix

This matrix is used for planning the project security. HIPAA PHI is provided as an example.

Information Type	Information Categorization	Requirements			
		Communications	Storage	Training	Rules of Behavior
PHI	{H, M, L}	Communications must be encrypted, either end to end or by encrypted document.	Must be stored encrypted.	Specific HIPAA training is required.	May only be used and communicated for specified purposes. Must be deleted after project completion and end of record retention period.