SECTION 7   PROJECT APPROACH AND SOLUTION

RFP §4.1.7

In Section 7, we provide our understanding of the project, a description of our approach to the implementation, operations, training, and ongoing support of users. Refer to Sections 10 and 11 for descriptions of the DW/DSS solution we propose and how it will meet the needs of the Bureau.

7.1 Statement of Understanding

Thomson Reuters understands the objectives of BMS in launching this important DW/DSS project. The Bureau is seeking early value by implementing a new DW/DSS now, before the MMIS project is completed. This is a sound approach: the State will obtain a solution much earlier, and the overall project risks are lower, than if the new MMIS were in the critical path.

We propose an 11-month schedule to implement the DW/DSS solution for West Virginia, including one month of production operations to demonstrate readiness. This 11-month period constitutes “Phase One” of the contract. The State will actually have a production system available to users within 10 months of the start date. Thomson Reuters has a large Government workforce, we have anticipated this opportunity for a long time, and we are ready to begin your project as soon as West Virginia is ready to start.

We understand that BMS wants Phase One to result in a system with comprehensive functionality, i.e., ready, with all Phase One data, for all business units to use. Our approach satisfies this requirement – the full complement of Advantage Suite DW/DSS capabilities will be installed in 10 months with Operations sign-off coming at the end of the 11th month.

The project parameters BMS has set forth in the RFP are reasonable, and our implementation methodologies are consistent with your concept. While no healthcare data warehouse/decision support project is without risk, we are proposing an approach that has been proven successful in implementing Advantage Suite for more than 250 customers, including more than 14 times for state Medicaid agencies.

During Operations, we will provide a full-service approach to meeting your needs. Our Account Team assigned to West Virginia will provide the front-line support for the DW/DSS, including a dedicated on-site Senior Analytic Consultant / Trainer to help your users and oversee production reporting. You will have the ongoing directly-applied services of at least 14 other Thomson Reuters specialists, with 1.4 FTE of data management support. This Medicaid-seasoned team will ensure that the DW/DSS is updated timely each month and that system quality, availability, and performance meet your expectations. In addition, this team, supplemented by other staff as needed, will be responsible for managing and executing enhancements you may decide to make.

Delivering Early Value

While the Advantage Suite DW/DSS is being implemented, we will deliver rapid value to BMS through:

- An early implementation of the i-Sight case management solution for program integrity. i-Sight is not dependent on data from Advantage Suite or other source systems. i-Sight will be implemented by the 8th month of the project.
Migrating the J-SURS software from the Molina data center to the Thomson Reuters data center within the first several months of the contract. The migration would include transitioning the monthly data update duties from Molina to us, upgrading the hardware, doing a comprehensive data quality assessment and remediation if necessary, and providing intensive training and coaching to improve your users’ experience with the system.

The J-SURS Migration

Thomson Reuters is proposing this migration because our team of J-SURS experts is able to support the system so that you realize maximum possible business benefit. If BMS is interested in this migration, a partnership approach will be needed among the three parties: BMS, Molina, and Thomson Reuters. We have a long-standing relationship with Molina, to whom we are a subcontractor in several states. Our relationship would serve to expedite the migration. Should a migration be decided, we will work out a detailed project plan that will include hardware/software procurement; setup and burn-in; data communications; data migration; end user testing/validation; performance testing; infrastructure setup (monitoring, backups, alerts, etc); validation pre and post cutover; and formal acceptance by the State. Our Cost Proposal covers our work to accomplish this migration.

Thomson Reuters has deep knowledge and experience with major data center moves, including J-SURS migrations. We feel operating J-SURS in a Thomson Reuters environment will provide the State with more reliable data, better performance and system availability, and operational efficiencies that will translate into improved productivity for J-SURS end users.

RFP 3.1.11 Perform the following activities on the DW/DSS: project startup, requirements definition and analysis, detailed system design, system construction and testing, implementation readiness, operations, enhancement and user support. Thomson Reuters will perform all of these services for the DW/DSS project.

7.2 Approach to Phase One: DDI

RFP §3.2

7.2.1 Introduction

The Thomson Reuters Project Management Team has extensive experience in leading healthcare decision support projects of similar size and scope to the solution proposed for the DW/DSS and will apply that experience to successfully leading this project. This is a core business of ours; we have proven, repeatable, standard processes around our implementation approach. The implementation is managed in close coordination with BMS stakeholders to ensure effective and efficient synchronization of efforts. We follow a Five Phase Methodology for Project Implementation that adheres to the process phases recognized by the Project Management Institute’s A Guide to the Project Management Body of Knowledge (PMBOK). That methodology provides a logical framework within which to plan the tasks necessary to implement our solution for BMS.

Because we have 30 years of healthcare decision support experience, including implementations for Medicaid customers, we are familiar with the risks and implementation tasks associated with Medicaid DW/DSS projects. We have extensive experience integrating data from many disparate sources. Our
DW/DSS solution, which is based around our Advantage Suite COTS, will be hosted in the Thomson Reuters Data Center that is described in detail in Section 11.3.1.

We have learned that, as with any large project, scope, scale, and aggressive timeframes create a certain amount of risk that deadlines are not met. We take these risks into account in estimating resources, designing the work plan, and developing the price for this project so that those risks can be effectively controlled. The typical risks associated with this type of project are:

- **Risk that the source data will arrive late or fail the quality thresholds.** The project timeline we propose (see Appendix E) calls for us to receive complete and useable source data by specific dates. Our ability to deliver on time is dependent on these deadlines being achieved. In this project, we are familiar with Molina and the quality of the data from the current MMIS, thus mitigating this risk to some extent. The risk exists, but our knowledge of the source data will help us work proactively to control the risk.

- **Risk of failure to reach design consensus.** Our approach addresses this problem in two key ways. First, we propose a pre-developed data model that has been proven successful in numerous Medicaid implementations, with a generous allowance for custom fields. The extensive data model has a large number of standard data elements and will provide a strong base of support for your data needs. This fact helps streamline the decision-making process. The second approach is to employ a very structured needs assessment process. It will be important that State staff members representing the user community have the respect of each user group. While these techniques help, discipline at all levels is critical for success: 1) user discipline to prevent unrealistic requirements or undue delays; 2) State management discipline to make timely decisions; and 3) Thomson Reuters project management discipline to prevent ineffective excursions or “experimenting” in the design process. It will take a concerted effort from all parties to ensure a focused and effective approach to system and database design.

Included as appendices to this proposal are several samples, templates, and outlines related to our project management methods, tools, and standard deliverables.

### 7.2.2 Initial Project Plan

**RFP §3.2.4 and §3.2.4.1**

**RFP 3.1.10:** *Deliver initial Project Plan within 10 days of startup.* During the first few days after contract signing, we actively work with your project management contact to define and agree on a final project plan so that it may delivered to you within 10 days of startup. This plan highlights key milestones, due dates, critical dependencies (such as receipt of usable data), and planned completion dates. Our methodology includes processes for tracking issues, identifying and managing changes in scope, and a method for communicating across the joint team. We review the Plan with you on a regular basis during the project, and update as appropriate. A project management plan template is included as Appendix F.

Our Project (Management) Plan details the entire DDI project and is intended to be used as a guide for implementation of the WV DW/DSS Project. The Project Plan becomes operational and remains in effect until the implementation of the new DW/DSS DDI is complete and BMS provides approval to begin Operations. Once the project begins and the Project Plan has been reviewed, finalized, and approved, changes must be mutually agreed to by BMS and Thomson Reuters.
We call the method that we have tailored to our implementations the “Adapt Methodology.” Adapt reflects our 30 years of decision support implementation experience and will be tailored to accommodate the needs of the West Virginia DW/DSS project. The method’s effectiveness relies on early, productive user, stakeholder, and data supplier involvement in the requirements analysis and design. This ensures that the end results meet BMS’s requirements and facilitates user acceptance. Our project management approach is consistent with IEEE standards and the Project Management Institute’s methodologies and processes. Our project management principles include the following:

- Structured formal communications.
- Risk assessment and mitigation practices.
- Effective change control management.
- Focus on quality.
- Timely issues tracking and resolution.
- Milestone review with emphasis on practical deliverables.

Implementation Timeline

We are prepared to begin implementation immediately after contract execution (approximately October 1, 2011) and will complete Phase One (DDI) within 11 months of the project start date, assuming receipt of complete and useable data from the sources by the dates shown. A high-level timeline is included below. We will adjust this timeline depending upon the actual project start date.

**West Virginia DW/DSS Phase One Project Timeline**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiation</td>
<td>Oct Nov Dec Jan Feb March April May Jun Jul Aug</td>
<td></td>
</tr>
<tr>
<td>Plan/Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Acquisition, Verification and Transformation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Test, Build and Delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Project Plan Components

The DW/DSS Project (Management) Plan includes all the RFP-requested documents/deliverables. The chart below lists the Project Plan components. A template of our standard Project Management Plan is provided as Appendix F. In its final form, it will include all the plans that BMS has specified.
### Project Plan Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROJECT ORGANIZATION</strong></td>
<td></td>
</tr>
<tr>
<td>External Interfaces</td>
<td>Documents the interfaces to Data suppliers who will provide data to the DW/DSS Project and any other external interfaces or resources.</td>
</tr>
<tr>
<td>Internal Structure</td>
<td>Includes the DW/DSS Project Team organization chart, roles and responsibilities, and the Team contact list.</td>
</tr>
<tr>
<td><strong>MANAGERIAL PROCESS PLANS</strong></td>
<td></td>
</tr>
<tr>
<td>Project Start-Up Plan</td>
<td>Contains Kickoff Meeting, Staffing Plan including Staff Training and Resource Acquisition.</td>
</tr>
<tr>
<td>Project Plan, Project Schedule, and Project Charter</td>
<td>Includes the jointly developed Project Charter, the Work Breakdown Structure (WBS) with project activities, schedule, resource allocation, and Gantt chart, and the Project Plan document.</td>
</tr>
<tr>
<td>Control Plans</td>
<td>Includes the Change Control Management Plan, and Project Communications Management Process, and other project management processes.</td>
</tr>
<tr>
<td>Training Plan</td>
<td>Discusses the Training Plan for BMS users and approved external users, user levels/expertise, training materials, and the training schedule by application.</td>
</tr>
<tr>
<td>Risk Management Plan</td>
<td>Explains how Thomson Reuters will manage risk identification and mitigation.</td>
</tr>
<tr>
<td><strong>TECHNICAL PROCESS PLAN</strong></td>
<td></td>
</tr>
<tr>
<td>Hosting Plan</td>
<td>Describes the Thomson Reuters hosting environment.</td>
</tr>
<tr>
<td>System Development Plan</td>
<td>Describes the process for integrating multiple data sources, the methods and tools employed, and the associated acceptance plan. Includes the Configuration Management Plan</td>
</tr>
<tr>
<td>Operations Management Manual (Plan)</td>
<td>Includes all activities related to the update process as well as general maintenance, operation, and administration of the DW/DSS. Includes the Document Management Plan, Data Retention and Archive Plan.</td>
</tr>
<tr>
<td><strong>SUPPORTING PROCESSES PLANS</strong></td>
<td></td>
</tr>
<tr>
<td>Quality Management Plan</td>
<td>Discusses our methods for focusing on quality and the product development methodology. It includes the Data Validation and Reconciliation Plan.</td>
</tr>
<tr>
<td>Testing Plan</td>
<td>Discusses data investigation testing, unit testing, system integration testing, UAT, and operational readiness testing.</td>
</tr>
<tr>
<td>Problem Management Plan</td>
<td>Covers the issue resolution process including help and support.</td>
</tr>
<tr>
<td>Business Continuity and Disaster Recovery Plan</td>
<td>Documents Thomson Reuters methods for maintaining business continuity and components of the disaster recovery plan.</td>
</tr>
<tr>
<td>Security, Privacy, and Confidentiality Plan</td>
<td>Describes data and user security, privacy, and confidentiality including meeting Federal and State regulations (e.g., HIPAA).</td>
</tr>
</tbody>
</table>

**RFP 3.1.4:** Provide a detailed Reconciliation Plan within 45 calendar days of contract execution, which is reconciled to financial control totals, that includes processes to automatically maintain data integrity and verify/reconcile data against the source systems, including payment data, and accounts for discrepancies. Thomson Reuters maintains very high standards for data quality. We agree to provide this plan within 45 calendar days of contract execution. Please refer Appendix G for a sample System Test and Reconciliation Plan. Refer also to Section 11.4.2.2 for an in-depth description of our data quality assurance processes.

We will maintain each of these documents/deliverables, updating them as approved changes occur. We will also save each approved document to the BMS-designated Project Repository, thereby enabling
team members, stakeholders, and users to access current documentation. As requested in the RFP, our Project Manager will partner with the BMS Project Manager to co-author the Project Charter. Our Project Manager will create any needed change requests and will update the Project Plan and Project Schedule as needed. Each of the five BMS milestones and all the BMS deliverables are highlighted in bold blue italics in the Project Schedule included as Appendix E.

7.2.3 Project Startup

Upon Notice of Award, we will initiate the following internal activities:

- Notify key project team members and assign remaining project team experts.
- Finalize hire of on-site Senior Analytic Consultant with input and approval from BMS.
- Perform administrative and financial accounting setup.
- Initiate hardware and software procurement (hardware to be ordered after contract is signed).
- Conduct an orientation meeting with Thomson Reuters Project Team.

When the project start date occurs, project start-up activities will include:

- **Startup Project Management Meeting** – We meet with the BMS Project Manager (and others) to initiate project activities, confirm the schedule for the first few weeks of the project, understand and set expectations, determine BMS and WV PMO protocols, and to specify documentation/deliverable format requirements and schedule.
- **Identify and Assemble BMS Team** – The BMS Project Manager and Sponsor identify key stakeholders and other West Virginia DW/DSS team members. They also identify key participants from the current MMIS Fiscal Agent and from other data suppliers. BMS communicates roles and responsibilities and sets expectations with their team members.
- **Layouts and Data Dictionary** – BMS requests the MMIS Fiscal Agent and any other data suppliers to provide data layouts and data dictionary before the Data Summit meetings.
- **Schedule Meetings** – With assistance from our Project Manager, the BMS Project Manager schedules facilities for the upcoming Kickoff Meeting, requirements meetings, and data sessions and sends invitations to all participants.
- **Conduct Project Kickoff Meetings** – We conduct the onsite Kickoff Meeting with BMS’ project stakeholders and data suppliers. This meeting is closely coordinated with BMS and serves to introduce stakeholders to the scope and nature of the project. It helps set expectations and to establish open lines of communication. We supply BMS with information necessary to orient them to the project and to begin coordinating project activities.

We provide samples, templates, or outlines of project documents and deliverables as appendices to this proposal.
7.2.4   Requirements Definition and Analysis

RFP §3.2.6

Requirements gathering and Data Summits produce the information that forms the foundation for the DW/DSS design. It is critical that we share a complete understanding of the business requirements and the data as they will form the structure and content of the DW/DSS. Our Adapt Methodology’s effectiveness relies on early, productive user involvement in the BMS requirements definition analysis and in the data summit sessions. This ensures that the end results meet BMS’ requirements and facilitate user acceptance.

In preparation for the requirements sessions, Thomson Reuters studies the RFP, the Procurement Library, the proposal, the contract, etc., to document known requirements in the draft Requirements Traceability Matrix (RTM). Our validation of user needs begins with an assessment of the business and information requirements. A brief needs survey is sent to key stakeholders to help gain a clear understanding of end users’ key challenges, information needs, and analytic requirements. The survey information details the major DW/DSS objectives as well as specific information and reports needed to meet these objectives.

The survey is followed up with onsite requirements gathering sessions with designated representatives from the BMS user community to gain clarification, additional information, business processes, and custom data elements. Each session focuses on a set of distinct business requirements unique to individual business units and/or shared across multiple business units. We ask that users bring to the meeting reports currently in use today. These are used for reference as we work to determine the specific reporting needs of the new DW/DSS implementation.

Through this process, we will surface the critical requirements for the implementation and document them in a Requirements Definition Document (RDD) ensuring that it includes component level business and technical requirements and meets CMS certification requirements. This document will serve as the driver for database design, will help set user expectations, and will be used during the User Acceptance Testing process. This document will be reviewed and approved by BMS to ensure that we understand the scope, purpose, and implications of each requirement.

The Data Summit meetings follow the Requirements sessions. They focus on the data and data mapping by category/type, such as claims, eligibility, provider, admissions, reference, encounter, case management, etc. Key BMS staff, MMIS and MCO data experts, and others join us to define the data that will be loaded into the DW/DSS. We will review data requirements, identify core data elements and any data issues and capture custom field requirements. The MMIS staff and other data suppliers provide their layouts and data dictionaries prior to the meeting enabling this group to efficiently define and map the data content and characteristics. The information gained in the Data Summits is reflected in the DW/DSS layouts and the conceptual data models. The conceptual data models are distributed to BMS.

Our analytic staff will use the requirements information and will meet with you to develop a prioritized listing of the custom reports we propose to build for BMS. (See Section 10.1.6) The reports and dashboards will be designed to meet BMS needs for trend analyses, budget reporting, forecasting analyses, business and case management reporting and other reporting and analysis.

Our solution assumes the integration of up to 15 feeds of data in the data warehouse. Refer to Section 10.2.1.4 for a description of the assumed data sources.
We will document and distribute the following deliverables:

- Requirements Definition Document (sample/template included in Appendix H).
- Conceptual Data Model (sample/template included in Appendix I).
- Requirements Traceability Matrix (sample/template included in Appendix J).
- Prioritized listing of ad hoc reports.

### 7.2.5 Detailed System Design

RFP §3.2.7 and §3.2.7.1

The Detailed System Design document will focus primarily on how we will customize the Advantage Suite data model to meet the Bureau’s needs. Our architects will spend significant time gaining familiarity with the MMIS and MCO data structures. We will work with the claim and encounter system layouts to create a field crosswalk and highlight key points for clarification with source data experts. Strict attention to detail is required to perform the complex mapping of claims and encounter data to the Advantage Suite data model.

A critical path item in the data model design effort – and elsewhere in the project schedule – involves the timely acquisition of usable data. The first such data extract milestone will be the receipt of test data in the very early stages of the project. We will use the first test extract to finalize the scope of our data conversion effort, to verify the field crosswalk developed in the database design sessions and to identify potential data quality issues. To that end, the project team will request meetings with source system representatives to share information about data acquisition and encryption processes, and to finalize the extract delivery schedule, both for test and production extracts during construction, final deployment and subsequent monthly updates.

We will document and distribute the Detailed Technical Design Document upon completion of the detailed design activities. A sample is located in Appendix K. Components of the detailed design will include:

1. Data model, metadata, data acquisition, data access and data delivery modules,
2. Database tables,
3. Programs,
4. ETL processes,
5. Data validation and reconciliation,
6. Report specifications (including release notes and sample formats for each report), and,
7. All other artifacts necessary to implement and operate Advantage Suite in our Data Center.

The Advantage Suite data model is flexible, lending itself well to the addition of new data sources, tables, and data elements. See Section 11.4.1 for information on the data model.
7.2.6 System Construction and Testing

RFP §3.2.8, §3.2.8.1, §3.2.8.2, §3.2.8.3, §3.2.8.4, and §3.2.8.5

Our Data Architects employ proven database build processes, including the Thomson Reuters Data Model Manager, for system construction. Our controls require a formal review and signoff at key stages in the construction process by an authorized internal auditor before the Data Architects can move forward to the next construction activity.

Database Construction

During the construction period, we will develop the actual transformation programs, processes, and procedures that transform data extracted from the MMIS. We will obtain test data extracts and use these data to validate our transformation routines.

- **Develop Transformation Routines** — After the Thomson Reuters team receives the data layout and documentation for each dataset and understands the content and interrelationships of the source data fields, we will use a combination of third party and Thomson Reuters tools and standards to develop a set of Extract, Transformation and Load (ETL) routines. These routines both describe and transform source data so that it can flow into the Advantage database. A major focus of the transformation relates to making key data elements consistent across all data sources to facilitate enhancements to the data, integration of data from multiple sources, report preparation, and comparisons to internal and external benchmark data. The types of standardization we perform include calculations on financial fields to obtain consistently defined charge and payment fields, mapping all equivalent values to a single value, and mapping data such as place of service, type of service, and provider type to standard values.

- **Unit Testing** — Unit testing refers to the thorough testing of separate units of code, independent of other programs or of the system as a whole. It is the basic level of testing, focusing on discreet modules of the application in which each unit of the software is tested to verify that the detailed design for the unit has been correctly implemented. We use detailed unit test plans and follow a strict methodology for unit testing of the transformation code.

- **Technical Environment Set-Up** — During the early part of this phase, the Thomson Reuters team works with the State to establish the technical environment for the Advantage database. To complete the technical environment setup, the Thomson Reuters team will:
  - Procure and set up the hardware system platforms and system software.
  - Configure the physical tables.
  - Prepare the multiple environments. (See Section 11.3.1.3 regarding system environments.)
  - Create and implement the network communications strategy.
  - Set up security protocols and user IDs.

Testing

The objectives of Phase One Testing are to validate the DW/DSS data and to ensure the quality and functionality of the systems. Activities included during this phase are the development of a test plan and test cases/scenarios (scripts) to ensure the quality of applications, verification of the usability of the tools, and proper execution of all functions.
• **Finalize Test Plans** – We have created a robust set of tests that are performed during System Testing and the Production Build. This plan will be customized to meet the needs of the BMS implementation. Our Test Plan includes a series of queries that are run to verify that the database is consistent with the specifications and reconciles to control reports provided by the BMS MMIS system. The test plan is updated to include custom fields and critical areas that the State is most interested in defining within their database. We test to ensure that field values meet expected valid values (e.g., age is between 0-150), relationships of fields make sense (Service Date <= Paid Date), guidelines for expected results match appropriate standards (e.g., top 10 DRGs), and transformations were done correctly (e.g., fields mapped correctly). In parallel with Thomson Reuters’s test plan development, we recommend that BMS staff begin to define User Acceptance Test case scenarios based on the approved Requirements Definition document.

• **System Integration Testing** — During this iterative process over a three month period, the Thomson Reuters team identifies problems or errors in the transformation routines or build process that need to be fixed in order to produce a high quality production database. The build software takes the data and builds a relational, integrated health information star-schema database. This sophisticated software makes clinical assignments, performs edit checks, reports on data quality, builds inpatient admissions and episodes of care, reconciles the data, and integrates multiple types and formats of data into a single data platform. System testing involves the iterative building of 3 to 12 month databases (using a subset of raw data) focused on testing the latest data transformation enhancements. Each test base is designed to test the accuracy of the transformation, enhancement, and build processes; identify errors; and confirm the database logic. By testing the build process in this way, we can identify and correct problems before expending effort and resources on the full database processing. Each system test run produces a series of pass/fail results from the Test Plan. During the final stages of this testing, the Thomson Reuters team shares these results with the State and we jointly agree on the process for next steps including prioritization of issues, error resolution, and timing for production.

• **Analytic Testing** – Analytically usable data can be measured in terms of conformance to external standards (benchmarking) or internal consistency, or aptness for supporting certain analyses. In addition to hundreds of field-level database tests, we conduct thorough analytic testing to verify that the content of the database is accurate. The major types of analytic tests include the following: comparison to external benchmarks; reasonableness edits for cost and utilization data; internal consistency; product functionality as determined by the requirements; and availability of BMS custom fields, reports, and measures.

• **Production Verification (Volume) Testing** – Production verification testing refers to the testing that occurs during a full system build. Steps are followed to confirm that all production files from the MMIS and MCO Administrator are accounted for. Claims and eligibility distribution reports ensure that there are no gaps and no duplicates in the system. The System Test Plan is executed again, this time against the full production database. Frequency distributions and minimum/maximum values are reported for each field. Analytic tests are run to verify that measure calculations are reasonable and that reports generated from the database show expected results. Summary financials and record counts are reconciled to the MMIS where appropriate.
• **User Acceptance Testing (UAT)** - The user acceptance test is designed to test the system in a production environment. UAT will be performed by the State upon delivery of the UAT database. Our plan calls for a Phase I production build with 48 months of data. The proposed project work plan calls for ten days of User Acceptance Testing. Based on our experience, UAT will be most effective if it is focused in terms of scope and resources. We recommend having a test plan fully developed before testing begins. We have found that keeping the number of testers limited to a small number of key users with relevant experience will help keep the testing on track with the timeline. Just prior to acceptance testing, the Thomson Reuters team will train BMS testers so they will be familiar with Advantage Suite.

The State will drive this acceptance testing process with onsite support from the Thomson Reuters team. The Thomson Reuters team will have analytic staff available throughout the acceptance test period to help users implement their new skills on the Advantage Suite software and to resolve, investigate, and document any issues encountered in the test period. Outstanding issues will be reviewed in joint daily discussions between State staff and the Thomson Reuters team. Acceptance testing provides the State with the opportunity to independently validate implementation of the database design and confirm that requirements have been met. The acceptance test will end with an assessment of the overall results. Required corrections identified during the review will be documented and coordinated with the Thomson Reuters team for corrective action.

• **Operations Readiness Testing (ORT)** - The ORT occurs concurrently with User Acceptance Testing. We work with BMS on test scenarios to be executed by BMS along with expected results. These scenarios demonstrate satisfactory system functionality as well as compliance with requirements. As with the UAT, the ORT test cases are defined before the testing occurs. Thomson Reuters staff will assist the BMS ORT testers throughout the ORT. When the ORT tests are concluded, we will assist the BMS testers with the documentation of the test results as needed.

• **Test Reports** – Thomson Reuters will document and deliver a summary of the System Integration Testing, Analytic Testing, and Production Verification Testing prior to the commencement of User Acceptance Testing. We will assist the State with producing their User Acceptance Testing Summary. We will document required corrections in the Corrective Action Report. The test reports describe the environment in which the test was performed and identify the testers, and in the case of the UAT and the ORT, the report will specify the Thomson Reuters support staff. The report lists the tests that were run, the tester, and the test results. In some cases the test results will specify a value or condition; however, many test results are simply pass or fail.

Defects are listed in order of criticality in the test report and are individually confirmed in the Corrective Action Report where a resolution is documented. As defects are addressed and resolved, the appropriate test report and the Corrective Action Report are updated. In certain instances we use statistical process controls (i.e., regression testing) to monitor changes in data quality over time. Refer to Section 11.4.2.2 for additional information.

We will provide the following deliverables; samples, templates, and/or outlines are in the Appendix:

• BMS DW/DSS test system and environment.
7.2.7 Training Program

RFP §3.2.9

RFP 3.1.12 Develop and deliver a Training Plan within ten (10) calendar days of contract execution. The initial draft of the Training Plan will be delivered to BMS within 10 days of the start of the project. As more specific criteria are determined, i.e., the training dates, the Training Plan will be updated. A Training Plan template is contained in Appendix M.

RFP 3.1.13 Execute the training program in accordance with the Training Plan. We will work closely with BMS to ensure the training program is executed according to your expectations and in accordance with the Training Plan. We understand that up to 60 DW/DSS users, who have varying skill levels and business requirements, need to understand the DW/DSS and be proficient in its use. We also understand that training is to be carried out prior to system implementation. Post implementation training for new employees and refresher training for existing users will be offered. We will place a full-time Senior Analytic Consultant/Trainer on site in Charleston, starting by approximately Day 30 of the contract and continuing throughout Operations, to provide ongoing training, coaching, and mentoring of the Bureau’s users. This exceeds RFP requirements.

Our approach to training is not only to teach the systems but also to help BMS staff become better analysts and learn how to apply information to their daily work. We encourage continuous learning as a key to ensuring system value over time. We provide e-Learning tools as well as an Internet-accessible healthcare knowledge base with analytical guides. To further encourage usage, we will offer coaching and networking options to help your staff learn from experts and other customers, solve problems, and improve their skills. We will monitor system usage closely, by business unit. If we see usage fall unexpectedly, we will alert you and intervene to determine the problem and how to fix it.

The Training Plan addresses the technical requirements and business requirements based on:

- The Request for Proposal (RFP) released by BMS.
- Response to the RFP by Thomson Reuters.
- The contract entered into between BMS and Thomson Reuters.
- The analysis of desired training parameters identified to Thomson Reuters by BMS.

The Training Plan identifies the agreed upon training parameters and user roles and is the foundation of user training. We provide onsite classroom training and web-based training. User-level-specific training will be provided for Advantage Suite. Hard copy training manuals are provided for classroom training. Electronic copies of the training manuals will be loaded to the BMS project repository and are readily available on our portal.

Each training session includes hands-on activities with coaching from our staff. Users have the opportunity to practice the lessons taught with training data that will produce predictable results. Near the
end of the training session, users are requested to anonymously complete a survey assessing the effectiveness of the training program and instructor. This data is compiled and delivered to BMS.

7.2.7.1 Thomson Reuters Training Methodology

The Thomson Reuters training team uses a multi-phase instructional design process to develop training programs. This process has been developed and refined by our team of 30 training, documentation and knowledge management professionals. Thirteen (13) of those team members focus specifically on product training, and have experience with diverse tools and user communities. We will leverage this experience in developing and delivering training for BMS. The phases in our instructional design process are outlined below.
7.2.7.2  Our Approach to Training and Professional Development

We will develop training programs customized to meeting BMS’s specific user community. We recognize that strong analysts develop over time and our approach is focused on training and coaching for both the analytic and professional development of the end user. Our end-user growth continuum provides a logical pathway to this end.

7.2.7.3  Other Continuous Learning Opportunities

In addition to simply responding to customer requests, we take a proactive role in helping users make effective use of our decision support tools. Our user support and training activities include a broad array of multi-client forums – web seminars, user groups, annual client conference – designed to inform users on case studies, client success stories, best practice methodologies, etc. As part of our standard service package, we offer you several well-organized opportunities throughout the year to network and exchange information with other customers. Our goal is to help our customers leverage these opportunities by understanding how others are driving change, reducing costs, and then using this knowledge at BMS to bring about similar change.

Annual Client Conference — Our annual Client Conference, first held in 1984, brings our customers together for a three-day conference, which generally attracts 300-400 Thomson Reuters customers in all markets. Every client is able to send as many of its staff to the conference as it desires. At the conference, most break-out and plenary sessions involve presentations from leading-edge customers and
other external national leaders. Our Client Conference routinely receives excellent reviews from customers who value the networking and learning opportunities offered during the event. To facilitate this networking, our base service package for BMS includes conference registration fees for two attendees for each year of the contract. Attendees at our Client Conference network with other customers facing similar challenges and hear about best practices in leveraging information to better managing program cost and quality.

**Annual Program Integrity User Group at NAMPI Conference** — For customers who use J-SURS and our other program integrity products and services, we sponsor a half-day user group meeting at the annual conference of National Association for Medicaid Program Integrity. This session includes presentations and case studies by state users and Thomson Reuters PI experts, as well as information on recent or upcoming product enhancements.

**Thought Leadership Sessions** — We help our customers maximize the value of our partnership is to offer various educational opportunities applicable to our broader user community. These live, online seminars help users extend their classroom training by working through examples of practical analytical applications. Each seminar consists of two presentations. In the first hour a clinician from our staff provides an overview of the topic in laymen’s language. In the second hour, an Advantage Suite Coach explains how to address the analytic issues. The first hour is appropriate for all clients, and the second hour is appropriate for hands-on users. We typically offer these sessions four times a year.

**Government Expert Series** — Throughout the year, we also host additional information sessions among our government customers to enable them to learn from each other and from us about new trends, emerging challenges and opportunities, and potential solutions to common problems. Previous Expert Series sessions have included our own experts presenting “Predictive Model Innovations for Fraud Detection”. Other topics included Cutting Waste from the US Healthcare System, Key Algorithms, Medicaid Managed Care and Encounter Data Strategies, Healthcare Cost Driver Trends, and Medicaid case studies. On average, 72 individuals from 24 states and CMS participate in our Expert Series.

### 7.2.8 Implementation Readiness

RFP §3.2.10, §3.2.10.1, §3.2.10.2, and §3.2.10.3

Prior to moving the DW/DSS into production and commencing operations, Thomson Reuters will seek approval from BMS to go live. We will collaborate with BMS to ensure that users are ready for implementation and that the Training Plan for initial training activities is complete. We will have conducted extensive testing and provided results via the following mechanisms. Refer to Section 7.2.6, System Construction and Testing, for a description of these tests and reports:

- System Integration Tests and Summary Reports.
- Analytic Tests and Summary Reports.
- User Acceptance Tests and Summary Reports.
- Organizational Readiness Tests and Summary Reports.
- Corrective Action Reports with updates as defects are resolved.
- Production Verification Tests and Summary Reports.

We will provide the following to BMS prior to requesting authorization to commence operations:

- User documentation (paper and electronic copies). All documentation is available on-line.
- As-Delivered System Documentation pertinent to the COTS applications that are proposed here.
- Organizational Readiness Report (Implementation Readiness Report). Our Operational Readiness Testing (ORT) process verifies that all infrastructure components are in place to support the go-live. This includes hardware, software, interface and network connections, user training, supporting processes and documentation.

7.2.9 Operations

RFP §3.2.11, §3.2.11.1, §3.2.20, and §3.2.20.1

- **RFP 3.1.14** Request written authorization from BMS to commence operations. Operations will commence upon signatory approval from the Bureau. Thomson Reuters will request written authorization from BMS before beginning Operations, which will commence upon the Bureau’s signature.

- **RFP 3.1.15** Receive approval from BMS to begin operations. Thomson Reuters agrees to await the receipt of approval from BMS to begin Operations.

- **RFP 3.1.28** Provide an Operations Management Manual within forty-five (45) calendar days of contract execution. Thomson Reuters agrees to provide an Operations Management Manual to BMS within forty-five (45) calendar days of contract execution.

Thomson Reuters agrees that we will support your use of the DW/DSS from Day 1 Operations through to the end of the contract and any renewal periods. We agree to maintain a staffing level consistent with our scope of work at all times. Refer to Section 9 for our Staff Organization Chart and staffing levels.
Turnover Plan — We will provide a Turnover Plan within 30 days of the request from BMS. We also have experience in transitioning to a new vendor in the rare occurrences where a client chose not to renew their contract with Thomson Reuters. In these few cases, we developed and subsequently provided for the client’s approval, a Turnover Plan that detailed the steps required to ensure a smooth and orderly transition to the new contractor. The Turnover Plan outlines, at a minimum, the timeline, tasks, milestones, and deliverables associated with the smooth transition of services to a new contractor. Additional details can be found in Section 7.14, Turnover Plan.

7.3 Certification

RFP §2.7.4

RFP 3.1.16: Provide support to BMS during the CMS certification process. Our proposal solution complies with both the traditional CMS certification review protocols for MARS and SURS as well as the new MITA Framework Certification Toolkit checklist requirements for (1) Program Management Reporting, (2) Federal Reporting, (3) Program Integrity, and (4) Decision Support System/Data Warehouse. We will team with BMS to ensure you are prepared for a successful certification review by CMS. While we play an important role in helping BMS prepare for certification, conducting the review itself is a CMS-State responsibility.

The most significant role we play in helping BMS achieve certification is to ensure that the CMS certification checklists, review procedures, and regulations are kept firmly in mind during the DDI design effort, so that the required data and reports are included in the DW/DSS. Thomson Reuters has been actively engaged recently in assisting two states with new MMIS/DSS systems with certification planning: Idaho and Maine. We are in the early stages of design in North Dakota and North Carolina, both of whom also plan to take our systems through certification as part of MMIS replacement projects. We are also supporting South Carolina, Indiana, and Nevada in seeking approval for their use of our systems to meet continuing certification requirements.

We consider the CMS certification review process as a major part of any Medicaid implementation, and we manage it like an important project. A detailed project plan is agreed to with the customer, roles are assigned, and deadlines are set. Usually, database and report documentation has been completed as part of the design process; central certification libraries are established and copies of report specifications and other documentation are moved to it. Since Thomson Reuters is usually participating but not leading the certification effort, we cooperate with the Fiscal Agent and the State in the plan they have co-authored.

The documentation we prepare includes lists of system reports that validate compliance with every checklist item, data designs, metadata definitions, report artifacts, responses to the CMS pre-review planning instructions, team roles and responsibilities for planning and participating in the review, and a sample remediation plan to invoke if remediation should be necessary. We agree to attend planning and review meetings, assist in developing and giving presentations, answering questions, facilitating system review and access, and other activities needed to support the certification process.
7.4 Help Desk and User Support

RFP §3.2.13

RFP 3.1.19  Provide a help desk during state office hours, which are typically Monday through Friday, 8:00 am to 5:00 pm EST. Thomson Reuters exceeds this requirement. Our standard help desk support hours are 8:00 a.m. to 8:00 p.m. Eastern Time, Monday through Friday, excluding Thomson Reuters holidays. We observe Daylight Savings Time. Our Product Support Portal is available to BMS users on a 24x7 basis. On-call support will be provided to BMS users via its assigned account team.

We believe help desk and user support is a team effort between the Thomson Reuters Account Team (described in Section 9) and our Product Support Team (help desk). We take great care to ensure that excellent service is provided to every customer, and we will do the same for BMS. We provide comprehensive user support and help desk services including on-site and toll-free help desk services. The Account Team members work closely with our Product Support Team. The first line of support for BMS will be our on-site Analytic Consultant, who will be knowledgeable about BMS data elements, program areas, and specific analytic requirements. We suggest that users with questions about query and analysis go first to the Analytic Consultant. We suggest that users who need passwords reset, or have access issues, or technical questions go first to our Product Support Contact Center.

Product Support provides experienced troubleshooting to determine the root cause of a problem. If the problem is identified as a product issue, the proper response objectives will be managed and escalation procedures followed to provide a timely resolution. Requests for user IDs and product enhancements also may be submitted directly through the Product Support group. Our Account Team also manages and directs service requests to the appropriate internal support specialists, whether the requests are received via phone, e-mail, or through the Product Support Portal. Additional information regarding our help desk services is provided below.

There is an extensive knowledge base on the Product Support Portal. Users may search all information contained on the site, including solutions to previously reported customer issues of general interest. We continually maintain and expand the articles and content to provide customers with the latest information on our products, as well as up-to-date system information for service center customers.

Tracking Issues

We use a Web-based, COTS customer issue tracking system, Salesforce.com. Customers can log issues on our Product Support Portal. A customer issue (“case”) is any question, concern, or request expressed by a product user. The site tracks issues, and users can get information on the status of their case by clicking on the Cases tab of the Portal’s home page. All communication between Product Support and the customer is logged, as well as the status of the incident, the cause of the problem, and the resolution. Additional reports of support activity include information on average time to close incidents and customer satisfaction scores. The system automatically escalates issues to Product Development when needed. Reports are available, by various cuts, for any time period. In addition to tracking open issues in the Product Support Portal, your Account Team tracks all issues, inquiries, requests, and problems in the Service Planning Workbook. All items are dated, and status and ultimate outcomes are documented. We discuss open issues with you during regular status meetings. Our Product Support team routinely surveys our customers to assess the quality of service we are providing. We are happy to provide this information upon request.
7.5 Approach to Phase Two: Enhancements and Mods

RFP §3.2.12

On this contract, we will use the following definitions to distinguish modifications from enhancements:

Modification: Change arising from normal business operations including, but not limited to: system maintenance, changes required to remain compliant with federal regulations and standards, and correction of system deficiencies.

Enhancement: Change initiated by the Bureau to achieve strategic objectives, implement new programs, and mature business capabilities.

Thomson Reuters acknowledges that funding for modifications and enhancements during Operations will come from a pool of 8,000 hours for which BMS will pay at a fixed hourly rate. Thomson Reuters is also willing to negotiate a fixed fee for defined-scope projects if BMS would prefer that: fixed fee arrangements usually are a better bargain for the customer.
Conversion to the New MMIS

BMS is procuring a replacement MMIS in parallel with this DW/DSS procurement. The most significant enhancement to the DW/DSS in Phase Two is likely to be the conversion to data feeds from the new MMIS. Our experience is that MMIS implementations rarely proceed as planned. The fact that the DW/DSS will have been in production for some time reduces the risk of conversion; the DW/DSS will have been fully documented, and BMS can make design decisions based on knowledge of how the DW/DSS actually functions.

We will manage the conversion project using our standard project management methods. We have a great deal of experience managing source system changes: across our 250 Advantage Suite installations, we are always managing changes in data suppliers. We have successfully managed the changeover to new fiscal agents in 4 state Medicaid agencies. In addition, we have experience partnering with all three of your MMIS bidders to bring joint projects to a successful conclusion.

Based on our experience, we see two primary risks. We describe these below, along with suggested mitigation strategies, for the Bureau’s consideration:

1. **Early Data Testing.** A new MMIS generates the potential for numerous data quality issues. Our source data tests are rigorous, and we often are the first party to discover an MMIS design problem. The earlier those problems can be identified, the better the result for the MMIS project and the DW/DSS later. We suggest that BMS leverage our expertise to perform data quality analysis of the new MMIS throughout the MMIS implementation, not just at the end of the project.

2. **Project Communication.** The DW/DSS conversion is highly dependent on the MMIS schedule. Having access to an accurate MMIS project schedule is necessary for the development of the DW/DSS conversion plan. We encourage the Bureau to keep Thomson Reuters informed of changes to the MMIS schedule and design as soon as they happen, which will help us stay coordinated and be able to deliver the DW/DSS changes on time. If the MMIS is significantly delayed, prompt notification will allow us to take appropriate corrective actions to avoid rework.

We offer a variety of product and services that may be of additional benefit to BMS as enhancements to the DW/DSS. We described those options in Section 15.

7.6 Project Management Methodology

RFP §3.2.14

**RFP 3.1.20:** Utilize an industry standard Project Management Methodology to complete the work associated with this RFP. Thomson Reuters uses a project management methodology we developed that follows the Project Management Institute PMBOK® guidelines for System Development Life Cycle (SDLC). Our methods cover the five major stages of a project: Initiation, Planning/Control, Execution, Development, and Closing. The three stages mentioned in the RFP are summarized below; we provide further information in Appendix F, Sample Project Management Plan.

1. **Project Initiation** – We set the stage by establishing a framework for communication and by kicking off project activity. Thomson Reuters works closely with the client’s Project Office to establish a close and secure partnership focused on project success. Establishing common understandings and expectations is a critical requirement for success.
2. **Project Control Plan** – This details the metrics and techniques we use to measure, report, and manage requirements, the project schedule, budget, resources, and quality.

3. **Project Closeout Plan** – A key aspect is to conduct a Lessons Learned session to look at what went well and what could have gone better. A Lessons Learned document is generated that helps both organizations become more effective and efficient in subsequent projects. We also generate a Post-Implementation Summary Report that summarizes implementation activity, identifies ongoing risks and ways to mitigate them, and prepares both organizations for implementing priority enhancements.

We acknowledge and agree that our methods must be consistent with overall BMS Project Plan and that cooperation between our team and the BMS’ Project Management Office (PMO) is critical to success. Appendix F provides evidence that our methodology incorporates the following tasks and processes, as required in the RFP: weekly status reports, monthly summary reports, status meetings, and an acceptance process for deliverables. Appendix F also addresses the controls, tasks, procedures, and communication mechanisms that we use to manage the project.

Our acceptance process is led by the Project Manager. The process for acceptance of major deliverables usually involves a walkthrough at the end with early agreement as to:

- Who must review, who must accept, and the form of acceptance
- The standards for documenting deliverables
- Identification of interim deliverables if needed (draft, final for acceptance, final)
- Criteria for acceptable deliverables
- Remediation approach

In our proposed project timeline (Appendix E), we have endeavored to provide the required 10 business days for BMS review and another 10 days for remediation if needed. Our plan covers the required activities, tasks, deliverables, dependencies, and resources for implementing the proposed solution. Our plan’s work breakdown structure supports both our project planning methodology and the project work structure specified by the RFP. See our Appendices for samples, templates, and outlines of our major project management tools and methods, especially Appendix F, our Project Management Plan Template.

### 7.7 Configuration Management Methodology

RFP §3.2.15

 má     RFP 3.1.21: Utilize a formal Configuration Management Methodology to complete the work associated with this RFP. We have developed a formal Configuration Management Methodology to control the migration of hardware and software to production, versioning, COTS products, system software, and databases. Our process follows the Project Management Institute’s Project Management Body of Knowledge (PMI PMBOK) Guide’s Integrated Change Control concept of configuration management with change control processes.
7.8 System Development Methodology

RFP §3.2.16

RFP 3.1.22: Utilize industry standard System Development and Change Management Methodologies to complete the work associated with this RFP. We use a standard framework for a common, flexible, and extensible system development process. As a company that focuses on the delivery of COTS products for data analysis, our development work couples our Product Development Methodology (PDM) with a proven database development process, called Advantage Build. We originally developed our PDM in 1996 using existing system development methodologies (SDM), including Ernst & Young’s Navigator and the Microsoft Development Discipline, as a baseline. Subsequently, the PDM has been revised several times. The Advantage Build methodology has remained stable over many years,
but we continuously improve the build process through greater automation and new techniques for analytic data enhancement and data quality assessment. See Section 7.9 for a description of our comprehensive Change Management Methodology.

Our product development process is summarized below. These major steps in the process help ensure a high standard of quality in all application software released, including upgrades and enhancements. See our Project Management Plan template, Appendix F, for a high-level description of the PDM: a list of the standard tools we use is shown on page 47 and more information starts on page 92. Below we summarize the QA aspects of the PDM:

- **Requirements:** We document business needs from current customers, RFPs, focus groups, and other market sources. Individual requirements are numbered and tracked throughout the development process to ensure delivery of expected results.
- **Specifications:** All features have written functional specifications.
- **Code reviews:** Code and other written deliverables are reviewed line by line by two or more programmers.
- **Unit testing:** This helps ensure that each module performs as expected and that boundary conditions are understood and do not present problems.
- **Version control:** All code, specifications, documentation, and test plans are stored in a version control system, Source Integrity, which tracks changes to code and allows for rollback if necessary.
- **Automated packaging:** The compilation of code into an installable package is an automated process, which, combined with our written procedures, ensures the product is compiled from the official code base.
- **The test bed:** A test bed of raw data is repeatedly built into the product’s test database. The test bed is periodically extended with additional data to test newly included functionality.
- **Integration testing:** A largely automated process, the purpose is to make sure that all basic functionality continues to work with the changes made in the new version of code.
- **Functional test plans:** The designer for each feature prepares a written step-by-step test plan. After the test plans are executed results are correlated and retained by QA.
- **System test:** System testing helps ensure that the software works the same as it will when it is shipped and installed on all supported client platforms.
- **Automated testing:** Automated scripts allow the performance of the same tests repeatedly. The scripts are of three basic forms: (1) Interactive scripts that use Mercury Interactive WinRunner to test for functionality; (2) Test reports on each release to ensure that the results remain stable or change as desired, using automated file comparison tools; (3) Advantage Build tests to ensure that the database will build correctly.
- **Test iterations:** Once the development team reaches the point of code completion where no additional features can be added, system tests are performed.
Defect tracking: Defects are tracked using the Onyx defect tracking system.

Post project review: A post-project review identifies potential improvements in the product development methodology.

Our PDM is designed to be tailored during project execution, for scalability. The concept of tailoring the PDM (known as “project routing”) allows project teams the flexibility to decide how much rigor and project planning is appropriate for their project. A large, complex project may require a much more rigorous approach than a routine legacy product update. Some projects may apply an Agile approach to development rather than Waterfall. Tailoring the PDM allows project teams to be both rigorous and flexible, solving the problem with the right tool / solution and managing expectations along the way.

System changes (i.e., product enhancements) are accomplished through new version releases. We use the same PDM for enhancements as for new development. Releases are coordinated with the client via our standard change management process. At least once a year, we preview with them the current product development plan and release schedule. When a new version is released, we conduct an impact analysis to show how it would affect the client’s operation. Then we jointly decide when to install the release. As a COTS solution, our PDM process is designed to prevent or minimize impact on the client’s existing file structures (i.e., reports and templates), data sets (i.e., database), and processing logic (ETL).

The second major component of our system development methodology is our database development methodology, Advantage Build. We build a customized database/data warehouse for each client. See Section 11.4.2.1 for a comprehensive description of Advantage Build.

7.9 Change Management Methodology

RFP §3.2.16

RFP 3.1.22: Utilize industry standard System Development and Change Management Methodologies to complete the work associated with this RFP. We use a Change Management Methodology that has proven successful across all of our Medicaid installations. The change process is the backbone of managing the project scope, recording all issues, tasks, assignments, and resolutions during DDI and operations. As with all deliverables, we will review our change management process with the West Virginia Project Management Office, which will determine if this process meets your needs. The mutually agreed upon Change Control Process documentation will be delivered at the agreed upon date after contract signing. Our system development methodology and system change methods are presented in Section 7.8.

We use various types of change control / change management methods across all of our customer delivery operations: product development, system operations, and client project management. All methods include processes and tools for tracking, monitoring, and documenting issues and their resolution, as well as carrying through changes that impact other processes and deliverables. Highlights of our change management methods for client project management are presented below. Additional information is provided in our Project Management Plan template, Appendix F, starting on page 92, and in our Change Control Template, Appendix O. Our change control process for client projects includes the:

- Change request form.
- Change request log.
- Change control procedure.
The change control process is a condensed set of actions that begin with the initiation of a change request and concludes with the closure of the change request. When any participant wishes to have a change considered, the requestor submits a change request to the State Project Manager or the Thomson Reuters Project Manager. Briefly, the steps of the procedure are listed below:

**Step 1:** Requestor identifies the change.

**Step 2:** Requestor researches and documents the change.

**Step 3:** Requestor completes the Change Request form, attaches supporting document(s), and sends it to the client’s Project Manager or Thomson Reuters Project Manager.

**Step 4:** Project Manager reviews the request and advises the requestor of any needed improvements or additional information. When the change request is complete, the Project Manager sends it to the Thomson Reuters Project Manager who forwards it to the Change Control Board and enters the request into the Change Request Log.

**Step 5:** Change Control Board reviews the request and makes one of the following decisions:
- Approve the request
- Request more information (i.e., impact assessment, etc.)
- Defer the request until a specific date or event occurs
- Deny the request

**Step 6:** The Thomson Reuters Project Manager updates the change request form and the Change Request Log and informs the Requestor. If the Change Control Board makes any decision other than approve the request, the Requestor can take the needed action and can then resubmit the request to the Change Control Board for approval.

**Step 7:** When the Change Control Board approves the request, the Project Manager informs all parties involved including the Requestor. The Project Manager also updates the change request and the Change Request Log.

**Step 8:** If the change impacts [agency] reporting, either the [client] Project Manager or Thomson Reuters Project Manager will notify the [agency] or any other impacted party.

**Step 9:** When the Change Request is implemented, the Project Manager reports the results at the Project Team meeting. The Thomson Reuters Project Manager updates the change request and the Change Request Log.

With regard to managing changes to the data source systems and their associated documentation, we use a tool we call the Transformation Design Workbook (TDW). An Excel-based tool, the TDW is a comprehensive mechanism for specifying, designing, maintaining, and changing the DataStage ETL logic that transforms the customer’s raw source data into the analytically-ready Advantage Suite database. It helps the Data Manager develop and organize field transformations prior to formal development in DataStage. It also serves as a functional specification for review and sign off. See Appendix F for additional information.
7.10 Quality Management Plan

RFP §3.2.17 and §3.2.17.1

RFP 3.1.23: Provide a formal Quality Management Plan within ten (10) calendar days of contract execution that includes a methodology and process for sampling, auditing and continuous quality improvement and which reflects that the Vendor is responsible for the quality of the data and the reports created from that data. Thomson Reuters agrees to provide a formal Quality Management Plan within ten calendar days of contract execution. Our Quality Management Plan defines key quality assurance processes that surround major project deliverables and tasks to ensure their satisfactory performance. We fully embrace our responsibility for the quality of the data and the resulting reports produced by our DW/DSS solutions.

Thomson Reuters has earned a reputation for high-quality products and services. The quality assurance methods we employ cover source data quality, database design and data integrity, operations and system performance, product quality, and the quality of the custom analytics we may do for each client. We also quality-assure our project deliverables and documents, and we assess client satisfaction with our services on a regular basis. We are certified compliant with SAS70 standards for operational controls, to ensure the reliability and protection of our client’s systems.

Our quality management process applies to plans and documents, programs, operational functions, and data and reports. Data quality is an exceptional strength; refer to Section 11.4.2.2 for that information.

We provide a detailed Quality Management Plan template in Appendix S. The template addresses our QA checklists, metrics, and tools. Appendix F, the Project Management Plan Template, provides additional information on our testing procedures and change management approaches.

7.11 Security, Privacy, and Confidentiality Plan

RFP §3.2.18 and §3.2.18.1

Our ability to maintain a premier position in the healthcare information market depends on our clients’ confidence in our data privacy and security protections. We commit to meeting all mandatory requirements as described in this section.

RFP 3.1.24 and 3.2.18.1: Provide a Security, Privacy and Confidentiality Plan within thirty (30) calendar days of contract execution. Thomson Reuters agrees to provide a Security, Privacy, and Confidentiality Plan within 30 calendar days of contract execution. Components of the plan include the seven requirements listed in the RFP: (1) the tools, hardware and software we use to form a comprehensive security architecture; (2) our approach to detecting and responding to security violations; (3) education and training for our and BMS staff; (4) policies, procedures and protocols; (5) designated responsible persons; (6) access controls (physical and electronic); and (7) policies and procedures related to security breaches. An outline of our proposed plan is provided as Appendix P. The Security, Privacy and Confidentiality plan for BMS will be tied closely to our corporate Information Security Plan (ISP) described later in this section.

RFP 3.1.25: Comply with all security policies and procedures of BMS and the WV Office of Technology. Properly protecting data entrusted to us by BMS is a top priority for Thomson Reuters. We
commit to complying with BMS and WV Office of Technology security policies and procedures as they apply to our proposed solution. Throughout the remainder of this section we describe our practices for protecting the data entrusted to us by our customers. Our Security, Privacy and Confidentiality Plan will be an overarching plan for all levels of security and will include components such as Data Security, Security Audit, Network Security, Application Security, and Physical Security. The plan will also include other policy and procedure information consistent with the services we propose for BMS.

Under HIPAA, Thomson Reuters is considered a Business Associate (i.e., we are not a health plan, provider, or clearinghouse). As such, we are committed to handling data in compliance with HIPAA’s Privacy and Security rules. We closely monitor HIPAA and other regulatory activity and respond appropriately. Many of our processes are more stringent than required by HIPAA. Even before HIPAA, we bore a responsibility, as a corporation and as individuals, to protect our customers’ confidential information and the privacy of individual patient transactions.

As required by our Information Security Plan (ISP), we conduct periodic (at least annual) technical and non-technical reviews to confirm that our policies and procedures meet the requirements of applicable laws and regulations and customer contracts.

We have a Corporate Security Officer (CSO) who has the authority to enforce the company’s policies and procedures. The CSO appoints Local Security Managers (LSMs) for each major location and business unit. The LSMs provide timely on-site guidance on security-related questions and approve special requests. In addition, each client’s Account Team designates a Data Security Manager (DSM) who is accountable for day-to-day compliance on a specific project, contract, or task. A Corporate Security Governance Board consisting of senior staff from across the company provides oversight and annual review of company policies and procedures.

Data Security — Our data security policies cover protection of explicit identifiers whenever possible by removing personal identifiers or masking/encrypting needed identifiers. We incorporate a series of Person ID encryption algorithms into our standard database build process. Claims, demographic information, and other patient identifying data are stored with each encrypted Person ID. During the data transformation phase, the specific encryption algorithms are applied to Person IDs in a consistent manner across all database data feeds. During the end stage of the database build phase, we verify the application of consistent encrypting. System users do not have access to the encryption algorithms, and individual names are not stored on the database. Other procedures for data security include:

- Explicit policies and procedures regarding external release of data.
- Privacy, security, and confidentiality clauses in subcontractor agreements, with no data shared with subcontractors that is not: (1) required to fulfill their duties; and, (2) protected contractually and procedurally.
- Employee training upon hire, and annually thereafter, on security, privacy, and confidentiality.
- Holding employees accountable to protect patient privacy.

Access to Data — Our employees are accountable for collecting, using, storing, disclosing, and protecting data entrusted to Thomson Reuters. Employee access to confidential data is based on the nature of the data in question—whether it is readily identifiable, non-readily identifiable, or non-identifiable. Access requires a “need to know” and is only available to a restricted number of our staff.
Staff are only authorized to access files related to their assigned projects and only on a need-to-know basis. Authorized users are specified by project in the Thomson Reuters data security log. All of our employees must sign a confidentiality agreement acknowledging that any unauthorized use or disclosure of a customer’s private information constitutes grounds for dismissal.

**Methods for Tracking** — Thomson Reuters has appropriate methods for tracking and controlling access to, use of, and changes to the data. See the responses to MDT SP1.12 and MDT SP1.13 in the table below, as well as our responses to those items in Appendix 1, and Appendix 2 TEC SP4.1 – SP4.4.
RFP 3.1.26: Comply with the baseline security controls for moderate impact information systems as put forth in National Institute of Standards and Technology (NIST) Special Publication 800-53, Revision 3, as updated May 1, 2010. The Thomson Reuters Information Security Plan (ISP) is a detailed, comprehensive, and complete plan based on the National Institute of Standards and Technology (NIST) Special Publication 800-53, Revision 3, *Recommended Security Controls for Federal Information Systems and Organizations*, August 2009 (includes updates as of 05-01-2010). The ISP applies to the DW/DSS solution proposed to BMS and states all security policies and procedures for the protection of data, equipment, and facilities, including receipt of and transmission of data.

**MITA 5.6.1 – Manage Program Information**

We provide the following information in response to the MITA Security requirements listed in Appendix 1.

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<th>RFP #</th>
<th>CMS #</th>
<th>DESCRIPTION OF REQUIREMENT</th>
<th>THOMSON REUTERS RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDT SP1.1</td>
<td>SP1.1</td>
<td>Verifies identity of all users, denies access to invalid users. For example:</td>
<td>All Thomson Reuters applications require a unique sign-on (ID and password) to authenticate into the system and initiate a session. (As a DW/DSS contractor, we do not expect to have the responsibility to transmit responses to eligibility inquiries.)</td>
</tr>
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<td>• Requires unique sign-on (ID and password)</td>
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<td>• Requires authentication of the receiving entity prior to a system-initiated session, such as transmitting responses to eligibility inquiries</td>
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<tr>
<td>MDT SP1.2</td>
<td>SP1.2</td>
<td>Enforces password policies for length, character requirements, and updates.</td>
<td>Our password policies require a minimum password length of 8 characters, passwords must be strong (complexity), and are required to be changed every 90 days.</td>
</tr>
<tr>
<td>MDT SP1.3</td>
<td>SP1.3</td>
<td>Supports a user security profile that controls user access rights to data categories and system functions.</td>
<td>Permissions within applications are based on the users security profile/ID.</td>
</tr>
<tr>
<td>MDT SP1.4</td>
<td>SP1.4</td>
<td>Permits supervisors or other designated officials to set and modify user security access profile.</td>
<td>Thomson Reuters has a defined and documented process and procedure in place to set up, modify, and revoke access associated with a user’s security access profile. All requests are tracked in our incident tracking system.</td>
</tr>
<tr>
<td>MDT SP1.5</td>
<td>SP1.5</td>
<td>Includes procedures for accessing necessary electronic Protected Health Information (ePHI) in the event of an emergency; continue protection of ePHI during emergency operations.</td>
<td>The Thomson Reuters support process allows us to quickly create and modify access in the event of an emergency, without endangering the privacy and security of ePHI.</td>
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<tr>
<td>MDT</td>
<td>SP1.6</td>
<td>Supports workforce security awareness through such methods as security reminders (at log on or screen access), training reminders, online training capabilities, and/or training tracking.</td>
<td>We provide all employees with security and privacy training during new hire orientation and annually thereafter; each employee must pass a recertification test. As the CSO periodically updates the privacy and security policies and procedures, every employee receives training on the changes.</td>
</tr>
<tr>
<td>MDT</td>
<td>SP1.7</td>
<td>Alerts appropriate staff authorities of potential violations of privacy safeguards, such as inappropriate access to confidential information.</td>
<td>We utilize system alerts and daily central log reporting to identify staff authorities of any potential violations of our security policies and safeguards, which includes inappropriate access to confidential information.</td>
</tr>
<tr>
<td>MDT</td>
<td>SP1.8</td>
<td>Contains a data definition for the Designated Record Set (DRS) that allows it to be included in responses to inquiries and report requests.</td>
<td>In the event that a subset of data included in the DW/DSS qualifies as a Designated Record Set under HIPAA, we will include a data definition allowing it to be readily identified and included in responses to inquiries and report requests.</td>
</tr>
<tr>
<td>MDT</td>
<td>SP1.9</td>
<td>Deleted per RFP Addendum 1</td>
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</table>
| MDT SP1.14 | SP3.2 | Generates alerts for conditions that violate security rules, for example:  
  - Attempts to access unauthorized data and system functions  
  - Logon attempts that exceed the maximum allowed  
  - Termination of authorized sessions after a specified time of no activity | Our system alerts and daily central log reporting capabilities ensure alerts are generated for conditions in which attempts are made to access unauthorized data and system functions, as well as failed login attempts. Session timeouts are also enforced after a specific time interval, requiring the user to re-authenticate into the system. |
| MDT SP1.15 | SP3.3 | Logs and examines system activity in accordance with audit policies and procedures adopted by the Medicaid agency. | We will review log and system activity in accordance with audit policies and procedures of the State of West Virginia. |
| MDT SP1.16 | SP3.4 | Provides security incident reporting and mitigation mechanisms, such as:  
  - Generate warning or report on system activity based on security parameters  
  - Terminate access and/or generate report when potential security violation detected  
  - Preserve and report specified audit data when potential security violation detected | As noted above, we utilize system alerts and a central log reporting database to ensure mechanisms are in place for security incident reporting and mitigation. Additionally, we utilize tools such as network-based IDS to monitor our environment to detect any potential security violations. |
| MDT SP1.17 | SP3.5 | Supports procedures for guarding, monitoring, and detecting malicious software (e.g., viruses, worms, malicious code, etc.). | All systems utilize anti-virus and anti-malware software to detect and protect against malicious software. Updated signature files for the software are made on a daily basis. |
| MDT SP1.18 | SP4.1 | Has the capability to respond to an authorized request to provide a report containing the DRS for a given individual. | In the event that a subset of data included in the DW/DSS qualifies as a Designated Record Set under HIPAA, we will have the ability to respond to an authorized request for a DRS report for a given individual. |
| MDT SP1.19 | SP4.2 | Contains indicators that can be set to restrict distribution of ePHI in situations where it would normally be distributed. | The DW/DSS can contain indicators of restricted ePHI as long as the indicator can be passed from the data source system that recorded the restriction. |
| MDT SP1.20 | SP4.3 | Tracks disclosures of ePHI; provides authorized users access to and reports on the disclosures. | Thomson Reuters does track disclosures of ePHI, where disclosure is defined as transmitting data to a party outside Thomson Reuters and the Covered Entity (BMS). |
| MDT SP1.21 | SP4.4 | Has the capability to identify and note amendments to the DRS for a given individual. | The DW/DSS can contain amendments to the DRS for a given individual, if an indicator and the amendment itself can be passed from the data source system that recorded the amendment. |
7.12 Business Continuity Plan

RFP §3.2.19 and §3.2.19.1

RFP 3.1.27: Provide a Business Continuity Plan within thirty (30) calendar days of contract execution. We maintain a comprehensive Business Continuity Plan designed to facilitate the timely recovery of critical business functions and minimize the impact on our customers in the event of an unplanned incident. We commit to sharing a Business Continuity Plan with BMS within thirty (30) calendar days of contract execution. An outline for our proposed Business Continuity plan is included in Appendix Q; it includes a summary of our corporate Business Continuity Plan.

The Business Continuity Plan provides guidelines for ensuring that necessary personnel and resources will be available in the event of an interruption of service and that appropriate steps will be carried out to permit the timely restoration of services. Procedures outlined in the plan are dynamic; as business conditions, customer requirements, and market and technological environments change, so will the emergency and recovery procedures. The Business Continuity Plan includes:
7.13 Service Level Agreements & Key Performance Indicators

RFP §3.2.21

Service Level Agreements (SLAs) and Key Performance Indicators (KPIs) play an important role in any contractual relationship because they set clear, shared expectations for service delivery and allow the
parties to objectively and regularly measure performance against these expectations. As a company that helps customers measure and improve the performance of their health benefit plans and programs, Thomson Reuters welcomes the opportunity to measure and track the effectiveness of our services on your behalf. We manage using SLAs and KPIs similar to those required by the BMS in most of our government health care contracts and have a strong track record of performance against these. We use key performance metrics, both within and across contracts, to drive quality improvements, where needed. Our process for meeting the SLAs and KPIs presented in RFP Appendix 7, which will be documented in our Quality Management Plan, includes steps such as:

- Meet with the BMS team during DDI to confirm our understanding of how the SLAs and KPIs are defined and will be measured in Operations.
- Identify and document existing Thomson Reuters-wide processes and tools that will be utilized to support SLA adherence and KPI measurement.
- Identify any gaps where existing processes or tools may need to be supplemented with BMS-specific activities or metrics and design solutions to address the need.
- Define organizational accountabilities and timeframes for implementing all required processes and calculating performance metrics for monthly reporting.

By the 10th of each month in Operations, we will submit a monthly report card to BMS on all KPIs as one component of our Service Planning Workbook, described above in Section 7.2.9. We routinely produce these report cards today for all customers with contract SLAs. We display the KPIs over time, to provide a cumulative record and help identify positive or negative trends. We provide detailed information and a corrective action plan for any missed KPIs, including a detailed description of the issue, the cause of the problem, and risks related to the issue, the resolution, and steps we propose or are taking to avoid missing the KPI in the future. We are happy to provide additional detailed data or information on request.

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**RFP 3.1.29** 

*Agree to perform according to approved Service Level Agreements (SLA) and identified Key Performance Indicators (KPIs) with associated metrics in the areas of system availability, performance, data quality, and problem management. Vendor must consent to retainage of a percentage of payment if agreed-upon KPI metrics are not achieved.*

Thomson Reuters agrees to perform according to the approved Service Level Agreements at a level that meets or exceeds the identified Key Performance Indicators for system availability, performance, data quality, and problem management. These performance dimensions are commonly used in SLAs for our other Medicaid contracts and we have successful experience with KPIs in these domains. We agree to a retainage of a percentage of payment, as specified in Appendix 7, if the agreed-upon KPI metrics are not achieved.

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**RFP 3.1.30** 

*Comply fully with all applicable state and federal requirements and regulations including but not limited to State Medicaid Manual, issued by the Centers for Medicare and Medicaid Services (CMS); West Virginia State Medicaid Plan; Section 1902 of the Social Security Act; Title 42, Code of Federal Regulations; Applicable West Virginia Code, Chapter 9, Human Services; and Section 508 of the Rehabilitation Act of 1973 as amended.*

We agree to comply fully with all applicable state and federal requirements and regulations including but not limited to those specified above.
RFP 3.1.31: Participate in audit activities, such as attending meetings, running reports, providing documentation, and providing access to all system components and modules as requested to do so by BMS. We will participate in audit activities as requested by BMS.

7.14 Turnover Plan

RFP §3.2.11

RFP 3.1.18: Provide to BMS, within thirty (30) days of being asked to do so, a Turnover Plan detailing the approach to transitioning systems and operational responsibilities to a successor.

Thomson Reuters will provide a Turnover Plan within 30 days of the request from BMS. This plan will detail how we will transition systems and operational responsibilities beginning four (4) months prior to the end of the operations period. We accept our responsibility to develop and deliver a Turnover Plan that details the steps required to ensure a smooth and orderly transition to a new contractor. The Turnover Plan will outline, at a minimum, the timeline, tasks, milestones, and deliverables associated with the smooth transition of services to the new contractor. Among other items, our Turnover Plan will encompass:

- A Turnover Project Work Plan including tasks, subtasks, and the project schedule.
- A chart depicting our total operation.
- The transfer of BMS documents.
- The transmission of State-owned data, including applicable back-ups.
- Provision of data dictionaries representing state-owned data.
- Sharing conversion tables/data mapping of state-owned data.
- A list of license and fee arrangements for software and methodologies that may be continued.
- Any related duties and functions necessary for a smooth transition to the appropriate party including operationally-oriented training for the designated successor.

Our Turnover Plan will include the following deliverables:

- Turnover Plan.
- Turnover Project Plan/Schedule.
- Detailed organization chart.
- All BMS documents.
- Data dictionary of state-owned data.
- List of license and fee arrangements for software and methodologies that may be continued.
- Turnover results reports.
- Turnover project status reports.
- Risk and Issue Management Plan, if needed.
- Corrective Action Plan, if needed.
- Joint Lessons Learned meeting notes.
- Turnover Project Close Report.

We agree that, during the four-month transition period, we will continue to fulfill all of our operational responsibilities to BMS.