**RFP# 18-051 (Enterprise Data Warehouse): Scope of Work**

# **Introduction**

In accordance with Indiana statute, including IC 5-22-9, the Indiana Department of Administration (IDOA), acting on behalf of the Indiana Family and Social Services Administration (FSSA), requests maintenance, operations, and enhancements services for the State’s Enterprise Data Warehouse (EDW) solution that provides data warehouse, decision support system, and business intelligence needs for FSSA.

# **Background and Purpose**

* 1. **EDW Overview**

The EDW is managed by the FSSA Division of Healthcare Strategies & Technology (DST) with several FSSA divisions as data generating stakeholders and recipients of Data Warehouse services. The FSSA Office of Medicaid Policy & Planning (OMPP) and FSSA Division of Family Resources (DFR) are the most significant EDW stakeholders.

The EDW is comprised of the following systems and services:

* Data warehouse platform infrastructure, tools, and services
* Data governance
* Clearinghouse, functioning as the staging, ETL (extract, transform, and load) and cleansing clearinghouse for data conversion
* Decision support and reporting tools and services
  + Federal reports and Management and Administrative Reporting (MAR)
  + Operational reports (financial reports, program performance measurement, including but not limited to trending and forecasting)
  + Program management reporting (e.g., using health care data as available through the advancement of Health Information Technology (HIT) in the State)
* Business intelligence tools and support staff dedicated to addressing program monitoring and analysis. Data analytic subject matter experts (SMEs) to serve as consultants to FSSA and liaisons to the technical data analytics team

While State DST staff manage the EDW, they are supported by two vendors. The first vendor, at a high level, manages and supports the EDW’s Teradata and Informatica ETL infrastructure and OMPP Data Warehouse (OMPP DW) healthcare-oriented data extraction and reporting. The second vendor supports the Social Services Data Warehouse (SSDW), which is used by several program areas across FSSA, along with other groups such as the Department of Child Services (DCS) Child Support Bureau (CSB). There is some overlap between the two vendors, and they both have had roles in furthering the EDW in recent years with consolidated infrastructure, standard data warehouse-oriented tools, and migration of data and reports from the previous data warehouse. Note: Although both the Medicaid and social service data extraction and reporting are contained under the Teradata/Informatica platform, they are considered to be two distinct systems.

The DST’s Data and Analytics (D&A) team is dedicated to supporting the EDW. They develop recurring and ad hoc reporting for business users as well as supporting oversight of the two vendors, including helping to review and prioritize change requests. One of their goals is to increase user self-service using data visualization tools (including cube construction) to both promote flexible business intelligence solutions and respond to data inquiries across the State, as appropriate.

FSSA has also contracted with an Operational Verification and Validation (OV&V) vendor to help review EDW solution changes (e.g. system changes, report configuration changes, etc.). They will provide checkpoints during the Systems Development Life Cycle (SDLC) that allow the SDLC process to move forward: Change Requests; Requirements; Design, Development, and Testing; Implementation. They also conduct a Post Implementation Review to ensure the change is working as expected, all documentation is correctly stored, and any post implementation defects are properly addressed. Additionally, they will be tracking predefined Service Level Agreements of the Contractor regularly to monitor and report on contractor performance.

* 1. **OMPP System**

The State implemented a Data Warehousing/Decision Support Systems/Business Intelligence solution in 2015 to address these needs for the Medicaid program and its associated State and Federal reporting and data analysis needs. As part of the implementation, in 2017 reporting from the legacy Advanced Information Management (AIM) system was transitioned to the OMPP DW system and to the new CORE Medicaid Management Information System (MMIS). The State anticipates that the transition of all reporting intended for the OMPP DW will be complete by the time the new OMPP DW vendor awarded from this RFP commences services in late 2018. The OMPP DW also provides Federal and State reporting to help secure CMS certification.

* 1. **Social Service System**

The SSDW system was originally established by DFR in 1996, to meet the Federal reporting requirements for Temporary Assistance to Needy Families (TANF) but has since expanded to cover several agencies, programs, and FSSA divisions. It collects source system data, matches clients across source systems, identifies qualifying persons and families, and reports benefits, services, and financial data to the Department of Health and Human Services (HHS), including CMS Health Coverage Program and operational data and ACF TANF Program and operational data, the Food and Nutrition Services (FNS), the Agency Controller, and FSSA Management. A summary of the categories of services provided by SSDW include Program Evaluation, Medicaid Reimbursement, Client Locator, Benefit and Service Indicators, Grants and Study Initiatives, Cross System Matching, Employment Indication, Audit Initiatives, Source System Clean Up, Cross State Auditing, Federal Reporting and State Reporting. Additionally, the SSDW contractor provides services such as:

* Supporting the reporting needs of other FSSA divisions such as the Division of Disability and Rehabilitative Services (DDRS) as well as other agencies such as the Department of Child Services (DCS), and Indiana State Department of Health (ISDH)
* Supporting OMPP and DFR with reporting and dashboard needs related to Medicaid and the Healthy Indiana Plan (HIP).
* Working closely with State Board of Accounts (SBOA) and DFR concerning TANF audits and DCS Child Support Bureau concerning IRS audits
* Working closely with the FSSA Privacy and Security Office and DFR concerning compliance, ongoing risk assessments, and corrective action management for example CMS POAM/ Minimum Acceptable Risk Standards for Exchanges (MARS-E) requirements and IRS Publication 1075 Audits

Attachment L contains portions of the SSDW Environment Document that is maintained and updated semiannually to capture the SSDW background, application environment, and services. It has been provided for informational purposes to give Scope B Respondents further clarity on the responsibilities for maintaining the SSDW. The State reserves the right to adjust some of the responsibilities during the contract term.

Note: in 2015, the State embarked on an initiative to migrate the existing SSDW environment to the EDW’s Teradata/Informatica ETL platform, transitioning away from Oracle, IBM WebSphere, and IBM InfoSphere. The State of Indiana is in the process of modernizing their client eligibility system (ICES). The conversion was completed in March 2017. The Indiana Eligibility Determination Services System (IEDSS), the new DFR eligibility determination system expected to roll out a pilot in mid-2018, with full implementation executed in stages. To produce SSDW deliverables from both the old eligibility system (ICES) and the new system (IEDSS), SSDW will need to bridge the data from the two sources to produce a statewide view until IEDSS is fully rolled out to all counties. IEDSS will also be on the Teradata/Informatica platform and the EDW will support reporting needs based on data from this system.

* 1. **RFP Scope Definition (Scope A and Scope B)**

The State is seeking to establish contracts for the following two scopes of work:

* **Scope A:** Provide the maintenance, operations, and enhancements of the State’s Teradata/Informatica warehousing platform’s infrastructure as well as manage and provide maintenance and operations (M&O) support for OMPP’s healthcare-oriented DW system.
  + The Scope A Contractor may be requested to purchase necessary Teradata hardware and software, and possibly other hardware and software on behalf of the State. These costs will be passed through to the State with no markup over the price paid by the Scope A Contractor. The rest of this section as well as Section 3.5 will provide further information regarding key elements of the infrastructure. Please see Table 4 of the “Maintenance and Operations” tab of Attachment D for necessary specific software and hardware.
  + A minimum of four staffing resources (Business Analysts and Cognos Developers) from the Scope A Contractor will be collocated with the OMPP team to provide direct support for their data warehouse needs.
* **Scope B:** Manage and provide M&O and enhancements support for the SSDW. The Scope B Contractor will also provide testing to software and hardware as needed by the State.
  + The current contractor’s team has their team of full time onsite resources dedicated to the SSDW, including data collection, cleansing and integration in order to meet state and federal reporting requirements. This onsite presence is expected to continue, though the State may adjust this expectation based on need and facility limitations.
  + As noted in Section 2.3, the SSDW Environment Document has been provided as Attachment L for informational purposes to give Scope B Respondents further clarity on the responsibilities for maintaining the SSDW. The State reserves the right to adjust some of the responsibilities during the contract term.

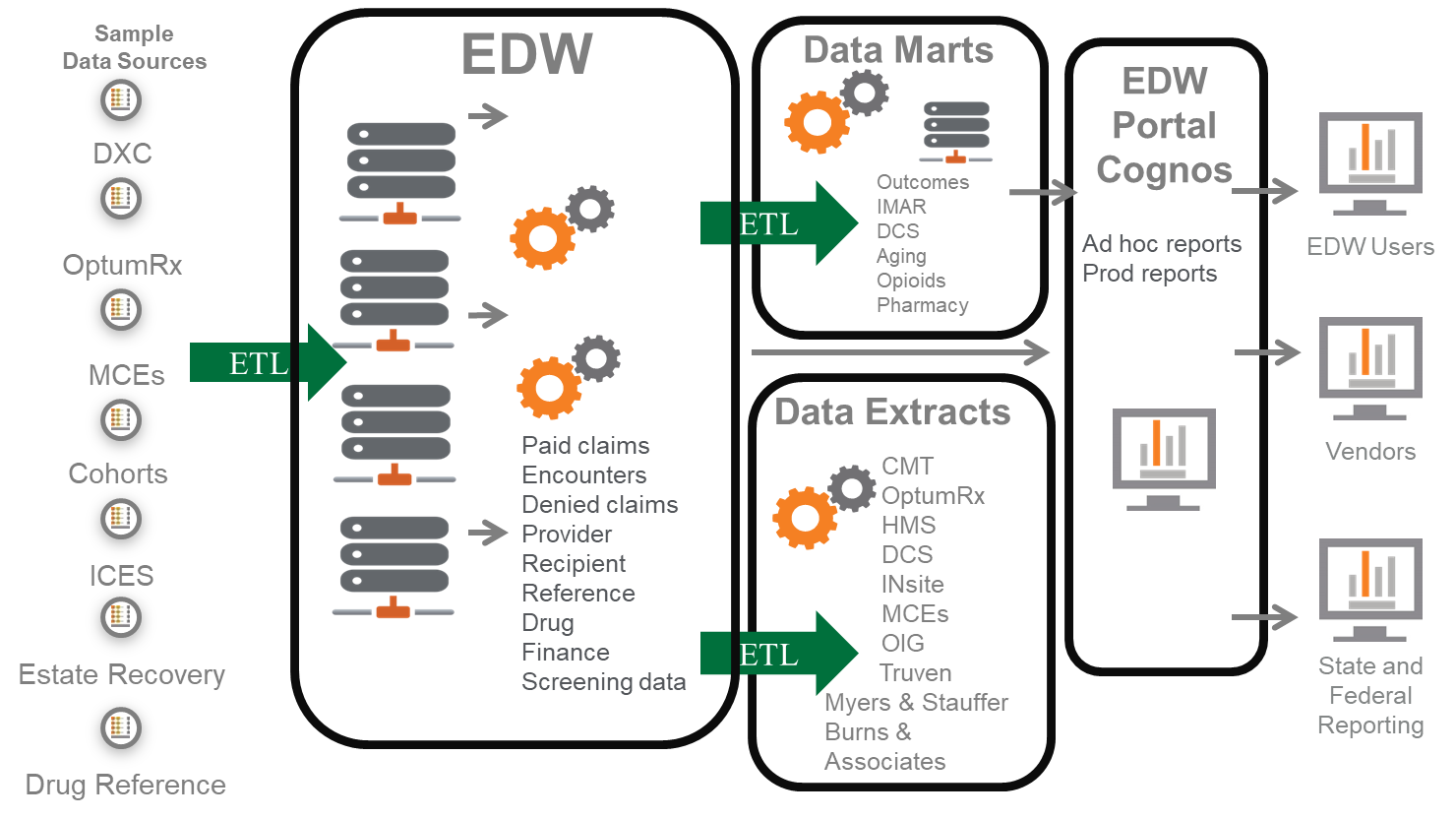
Respondents may propose responses to one or both scopes of work, but the State will evaluate the two scopes of work separately. If one Respondent is awarded both Scope A and Scope B, it is expected that they will maintain distinct teams to handle each Scope, with the exception of the Project Executive (See Section 8.2 for more information about this role). This maintenance of two distinct teams is critical as the State anticipates the need for scope-specific familiarity and expertise with the respective program areas throughout the contracts. Please see Section 8 for more information about the State’s staffing expectations.

* 1. **Organizational Overview**

Below is additional background information about the current and anticipated (near term) groups utilizing the EDW solution. Note some of these groups will also have contractors and other partners that may use the system.

1. **Office of Medicaid Policy and Planning (OMPP)** – Administers Medicaid programs and performs medical review of Medicaid disability claims. OMPP’s suite of programs, called the Indiana Health Coverage Programs, includes traditional Medicaid, risk-based managed care, HIP 2.0, a variety of waiver services, and a prescription drug program tailored to the needs of specific populations. Examples of some of the systems OMPP owns are the following: CORE MMIS, Pharmacy, and management and Administrative Reporting (MAR).
2. **Division of Family Resources (DFR)** – Establishes eligibility for Medicaid and Health Coverage, Supplemental Nutrition Assistance Program (SNAP – food assistance), and Temporary Assistance for Needy Families (TANF – cash assistance) benefits. Manages the timely and accurate delivery of SNAP and TANF benefits. Provides employment and training services to SNAP and TANF recipients. Focuses on the support and preservation of families by emphasizing self-sufficiency and personal responsibility. Examples of some of the systems DFR owns are the following: Indiana Client Eligibility System (ICES), FACTS, Indiana Eligibility Determination Services System (IEDSS), MRT, and Indiana Manpower and Comprehensive Training (IMPACT). (Please see Section 2.3 for additional information about IEDSS.)
3. **Department of Child Services (DCS)** - Protects children who are victims of abuse or neglect and strengthens families through services that focus on family support and preservation. The Department also administers child support, child protection, adoption and foster care throughout the state of Indiana. Examples of data covered by current EDW reports include child support payments, caseloads, collections, paternity establishment, and Support Enforcement Tracking System data. Please note that the State expects to replace the Indiana Support Enforcement Tracking System (ISETS) system in the next few years. This project is currently in the beginning stages but when the new system goes live, the data model is expected to be significantly different from that of ISETS.
4. **Indiana State Department of Health (ISDH)** - Supports Indiana's economic prosperity and quality of life by promoting, protecting and providing for the health of Hoosiers in their communities. Five areas where ISDH currently use the EDW: Vital Records, Maternal and Children Health, Long Term Care, Children and Hoosiers Immunization Registry Program (CHIRP), Children with Special Health Care Services (CSHCS); Lead and HIV/STD/Viral Hepatitis.
5. **Division of Aging (DA)** – Establishes and monitors programs that serve the needs of Indiana seniors. Focuses on home- and community-based services for the elderly and disabled. Responsible for nursing home reimbursement policies. Oversees the Residential Care Assistance Program. Includes Adult Protective Services (APS). Examples of data provided by the EDW to DA include Medicaid prior authorizations, paid claims, and client eligibility recertification dates for all DA clients. This information is sent to INsite (State Case Management System) to facilitate the work of the case managers.
6. **Division of Disability and Rehabilitative Services (DDRS)** – Manages the delivery of services to children and adults with intellectual and developmental disabilities. DDRS develops, finances and compassionately administers programs to provide healthcare and other social services to Hoosiers in need in order to enable them to achieve healthy, self-sufficient and productive lives. Examples of data covered by current EDW reports include First Steps program data analysis, monthly financial review metrics, and service detail report by provider.
7. **Division of Mental Health and Addiction (DMHA) Services** – Sets care standards for the provision of Mental Health and Addiction services to residents of the State of Indiana. Ensure that individuals have access to quality services that promote individual, family, and community resiliency and recovery. DMHA operates State Operated Facilities (SOFs) and certifies all Community Mental Health Centers and addiction treatment services providers. Provides funding support for Mental Health and Addiction services to target populations with financial need and administers federal funds earmarked for substance abuse prevention projects. Examples of data covered by current EDW reports include Psychiatric Residential Treatment Facility services breakdown by specific criteria (e.g., county, diagnosis, time period) and Early Childhood Intervention information.
8. **Indiana Office of Technology (IOT)** - Provides measurable, secure, consistent, reliable enterprise-technology services at cost-effective prices to our partner agencies so they can better serve our mutual customer, the Hoosier taxpayer.
9. **Management Performance Hub (MPH)** - Works with state agencies and external partners to unlock and leverage data to drive decisions, inform policy development, increase government efficiency and transparency, and improve outcomes for Hoosiers around the state. More information can be found at the following: http://www.in.gov/mph/.
   1. **System Design**

The diagram below represents the current data flow of the EDW solution. Note: The data sources, data marts, and data extracts are representative and do not represent the comprehensive list. Additionally, these elements may change by the time the contract begins.



* 1. **System Users**

The following table contains the user count by EDW system. Note that there is some user overlap across the various systems as a single user may have access to multiple systems. Other than the End Users and two (2) Administrators, the other users are with the Scope A and Scope B contractors.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **User Type** | **OMPP DW Users** | **Informatica Users** | **SSDW**  **Users** | **Teradata Users** | **Grand Total** |
| Administrator | 3 | 3 | 8 | 3 | **17** |
| Analyst | 3 | 7 | 27 | - | **37** |
| Application Account | - | - | - | 20 | **20** |
| Developer | 101 | 165 | 10 | - | **276** |
| End User | 47 | 100 | 805 | 196 | **1,148** |
| Metadata Manager | 8 | 8 | - | - | **16** |
| Service Account | - | 1 | - | - | **1** |
| Shared Development Account | 15 | - | - | - | **15** |
| Training/Test ID | 15 | - | - | 15 | **30** |
| **Total** | **192** | **284** | **850** | **234** | **1,560** |

* 1. **EDW Technology Tool Set**

The State mandates the use of the State-approved technology tool set for the current EDW solution. The tool set is shown in the table below along with the version, a brief description, and the party who is responsible for maintenance services. All listed technology tools are owned by FSSA

| **Software** | **Tool** | **Version** | **Brief Description of the Purpose** | **Responsible for Maintenance Services** |
| --- | --- | --- | --- | --- |
| Oracle Db | Oracle SQL Developer | NA | Will be phased out in the near future | IOT |
| Oracle Advanced Security | NA |
| Oracle Key Manager (Tape encryption) | NA |
| Toad | NA |
| Oracle Enterprise Manager | NA |
| SQL Plus | NA |
| IBM Information Server | DataStage | NA | Will be phased out in the future | D&A |
| QualityStage | NA |
| Information Analyzer | NA |
| Metadata Workbench | NA |
| Cognos BI | Cognos Server | 10.2.0, 10.2.2 | Accessing data and BI reporting out of both OMPP data warehouse and SSDW | D&A for the SSDW; Scope A Contractor for the OMPP DW |
| Cognos Framework Manager | 10.2.0, 10.2.2 | Modeling for Cognos packages. | D&A for the SSDW; Scope A Contractor for the OMPP DW |
| Cognos Transformer | 10.2.0, 10.2.2 | Modeling for Cognos Cubes | D&A for the SSDW; Scope A Contractor for the OMPP DW |
| Avnet\BSP MetaManager | 5.5.0.6 | Simplifies many of the complexities associated with developing, deploying, maintaining and supporting an IBM Cognos BI environments | D&A |
| Teradata Db | Teradata Query Grid: Teradata to Teradata | 2.03.00.01 | Use SQL across two Teradata databases | Scope A Contractor |
| Teradata Query Grid: Teradata to Oracle | 15.10.00.06 | Use SQL across one Teradata DB and one Oracle DB |
| Teradata OLAP Connector | 15.10.10.21 | Direct access to Teradata from Excel, Tableau, and Business Objects |
| Teradata Administrator | 15.10.1 | Database administration |
| Teradata BTEQ | 15.10.01.01 | Database scripting language |
| Teradata FastExport | 15.10.01.01 | Data exporting |
| Teradata FastLoad | 15.10.01.01 | Data loading |
| Teradata MultiLoad | 15.10.01.02 | Data loading |
| Teradata OleLoad | 15.10.01.02 | Data loading/exporting |
| Teradata SQL Assistant | 15.10.1.4 | SQL tool for Teradata |
| Teradata TPump | 15.10.01.01 | Data loading |
| Teradata Wallet | 15.10.01.01 | Secure password storage |
| Teradata Viewpoint | 16.00.00.03 | Database monitoring |
| Teradata TARA | 15.10.00.08 | Database backup |
| Teradata TPT | 15.10.01.01 | Data loading/exporting |
| Teradata Schema Workbench | 15.10.10.21 | Schema designer for OLDAP Connector |
| Teradata System Emulation Tool | 15.10.1.3 | Database administration |
| Informatica ETL | Informatica Developer | 9.5.0 | ETL | Scope A Contractor |
| PowerCenter Data Validation Client | 9.5.0 | Data validation and auditing |
| PowerCenter Repository Manager | 9.5.0 | Informatica Metadata |
| PowerCenter Studio | 9.5.0 | ETL |
| PowerCenter Workflow Manager | 9.5.0 | ETL |
| PowerCenter Workflow Monitor | 9.5.0 | ETL monitor |
| PowerCenter Designer | 9.5.0 | ETL |
| Informatica Data Quality | 9.5.0 | Address validation |
| Informatica Analyst | 9.5.0 | Data profiling |
| Informatica Metadata Manager | 9.5.0 | ETL Metadata |
| Informatica Administration | 9.5.0 | Informatica Admin |
| Informatica Web Services Hub | 9.5.0 | Web services |
| Informatica Developer | 10.1.1HF1 | ETL |
| PowerCenter Data Validation Client | 10.1.1HF1 | Data validation and auditing |
| PowerCenter Repository Manager | 10.1.1HF1 | Informatica Metadata |
| PowerCenter Studio | 10.1.1HF1 | ETL |
| PowerCenter Workflow Manager | 10.1.1HF1 | ETL |
| PowerCenter Workflow Monitor | 10.1.1HF1 | ETL monitor |
| PowerCenter Designer | 10.1.1HF1 | ETL |
| Informatica Data Quality | 10.1.1HF1 | Address validation |
| Informatica Analyst | 10.1.1HF1 | Data profiling |
| Informatica Metadata Manager | 10.1.1HF1 | ETL Metadata |
| Informatica Administration | 10.1.1HF1 | Informatica Admin |
| Informatica Web Services Hub | 10.1.1HF1 | Web services |
| Tableau | Tableau Desktop | 10.3.1 | Analytics and Advanced Visualizations | D&A |
| Tableau Reader | 10.3.1 | Analytics and Advanced Visualizations | D&A |
| Tableau Server | 10.3.1 | Analytics and Advanced Visualizations | IOT |
| Microsoft SQL Server | Microsoft SQL Server Management Studio | 2012/2014/2016 | Database Management | D&A |
| SQL Server Import and Export Data | 2012/2014/2016 | Database Management | D&A |
| Others | BMC  Footprints | 11.5 | Service desk and customer support tool  Will be phased out in the near future. | D&A |
| Optum Symmetry Tools (ETG, ERG, EBM/Connect) | 9.0.1 | Risk assessment, performance measurement, decision support | Scope A Contractor |
| ArcGIS | 10.41 | Mapping | IOT |
| Erwin | 9.64 | Data Modeling | D&A |
| Bitvise | 6.45 | SSH File Transfer | IOT |
| WinSCP | 5.6.3 | SSH File Transfer | D&A |
| Symantec Netbackup | 7.6.0.4 | Backup | Scope A Contractor |
| PuTTY | .7 | SSH / Telnet Client | D&A |
| Xming | 6.9.0.31 | X Window Display Server | Scope A Contractor |
| Microsoft Access | 2013 | Database | IOT |
| Microsoft Excel | 2013 | Spreadsheets | IOT |
| Microsoft Word | 2013 | Word Processing | IOT |
| Microsoft Visual Studio | 2013/2015/ 2017 | Custom Process Development | IOT |
| Microsoft Visio | 2013 | Diagramming/Vector Graphics | IOT |
| Microsoft Project | 2013 | Project Management | IOT |
| Windows | 7/10 | Operating System for Desktops | IOT |
| JIRA | 7.2.6 | Issue Tracking/Project Management | D&A |
| Windows Server | 2008/2012/ 2016 | Operating System for Servers | IOT |
| SUSE Linux | SLES11 SP2 & SP3 | Operating System for Servers | Scope A Contractor |
| Protegrity | 6.6.4 | Encryption | Scope A Contractor |
| Notepad ++ | 7.4.2 | Text Editor | IOT |

* 1. **System Enhancements and Expansion**

The State desires to continually expand the use of the EDW to perform State and Federal reporting. There are currently plans to incorporate DMHA, the Division of Aging, and DDRS into the EDW.

The table below has been provided for informational purposes to offer insight into the timeline for projected expansion and other enhancement initiatives. Each iteration of a data mart is estimated to be four months in length. The first iteration is expected to require 380-400 Contractor hours while subsequent iterations are expected to require 270-380 hours (assuming the use of a Project Manager, Business Analyst, and Design/Developer/Tester). The estimates will be refined with the Contractor during the planning for each enhancement. Please note that the State reserves the right to make changes to the release schedule, including addition and deletion of anticipated releases as well as changing release timeframes.

**Current Enhancements and Expansion Initiatives**

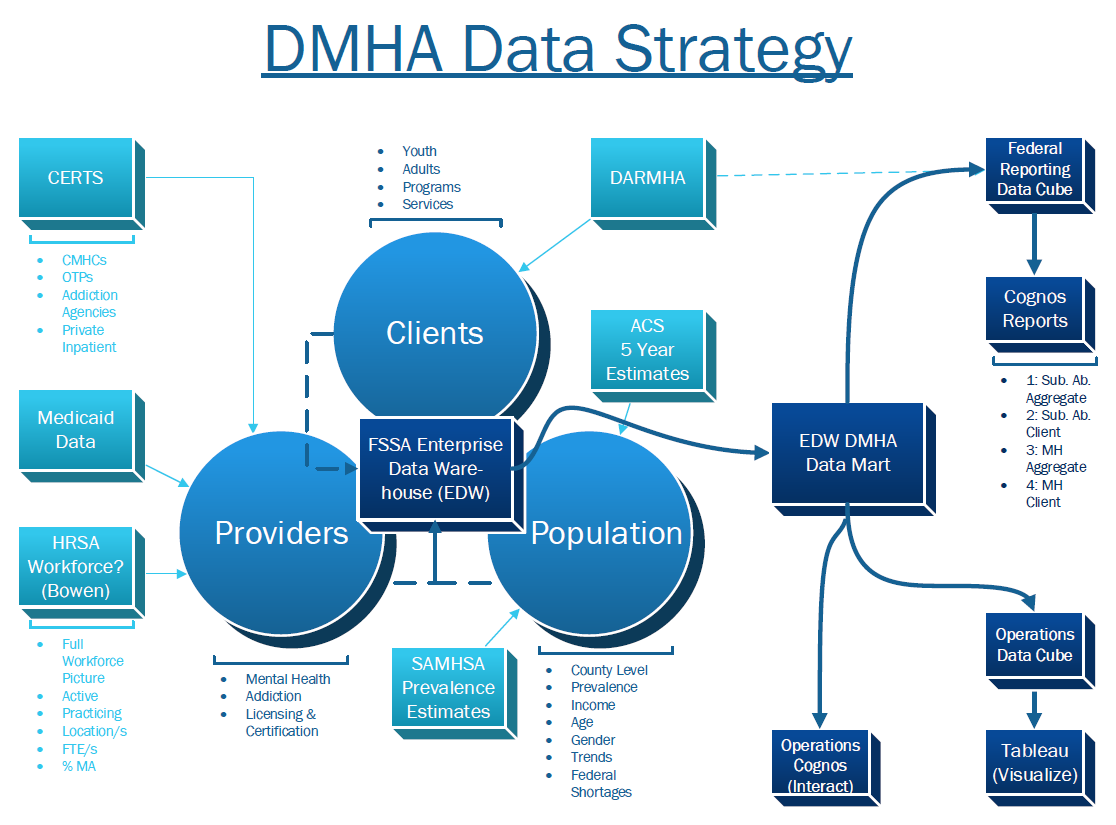
The requirements for each initiative will be further clarified with the appropriate Contractor during the planning of each enhancement and expansion initiative.

|  |  |
| --- | --- |
| **Initiative** | **Estimated End Date** |
| Healthy Indiana Plan (HIP) Operational Dashboard and new iterations (Scope A and B Contractors) | Phase 1 Q1 CY2018 |
| CORE MMIS Conversion (Scope A Contractor) | Q4 CY2017 |
| IEDSS Conversion (Scope B Contractor) | Q4 CY2018 |
| SSDW Medicaid Reporting Project (Scope B Contractor) | Q4 CY2018 |
| Care Management for Social Services (CaMSS) Conversion (Scope B Contractor) | TBD |

**Anticipated Future Expansion Initiatives**

|  |  |  |  |
| --- | --- | --- | --- |
| **Enhancement** | **Estimated Number of Iterations** | **Start Date** | **Estimated Project Duration** |
| Development of DMHA Data Mart (Scope A Contractor, with potential Scope B Contractor support) | 3 | Estimated 1st quarter 2018 | 12 months |
| Expansion of Division of Aging Data Mart (Scope A Contractor, with potential Scope B Contractor support) | 2 | Estimated 1st quarter 2018 | 8 months |
| Development of OMPP Data Mart (Scope A Contractor, with potential Scope B Contractor support) | 3 | Estimated 1st quarter 2018 | 12 months |
| Development of DDRS Data Mart (Scope A Contractor, with potential Scope B Contractor support) | 2 | Estimated 2nd quarter 2018 | 8 months |
| Addition of new Centralized Verification Organization contractor and Non-Emergency Medical Transportation vendors (Scope A Contractor, with potential Scope B Contractor support) | TBD | TBD | TBD |

As noted above, the expansion for DMHA is expected to begin in the first quarter of 2018. The diagram below offers a high-level visualization of the strategy to incorporate DMHA into the EDW and has been provided for informational purposes. The strategy is subject to change as requirements and design activities are conducted.



# **Scope of Services**

* 1. **Overview**

The Scope A and Scope B Contractors shall be required to provide M&O services for their respective systems. **The descriptions of the services in this section apply to both Scope A and Scope B Contractors unless otherwise noted.**

As a part of the M&O responsibilities, each Contractor shall provide the following services while meeting service level agreements.

* **System Support and Reporting:** Manage processes and procedures required to provide technical and functional support for the EDW and OMPP DW (Scope A), and the SSDW (Scope B).
  + Perform resolution of all defects discovered and prioritized by the defined processes.
  + Make routine maintenance changes in the ordinary course of the Contractor’s provision of services defined within the scope of its contract (such as changes to operating procedures, schedules, equipment configurations) at no additional cost to the State.
  + Conduct monitoring and analysis of system performance to determine if actions are required to meet or improve on Service Level Agreements.
* **Enhancements:** Design, develop, test, and implementenhancements to the system and reports, including modifications to existing reports, via the change management process. Note: It is the State’s expectation that most federally-mandated changes are included in the releases and upgrades as part of support and maintenance. If significant changes (defined as needing more than 40 hours of developer work) are required as a result of federal mandates, these changes will be considered enhancements and billed using the Enhancements Pool (described later in this section).
* **Service Desk:** Manage a service desk to address user requests and troubleshoot issues. Address all questions and reported problems related to the technical and functional operation of the Contractor’s respective system.
* **System Expertise:** Provide business and technical subject matter expertise on all Data Warehouse managed data and reporting. (The Scope A Contractor must provide health data expertise while the Scope B Contractor must provide social services and health care data expertise).
* **Incident and Problem Management:** Properly plan and conduct services to minimize the occurrence of incidents and/or problems with the system and service delivery. If incidents and/or problems are to arise, the Contractor shall work with the State to resolve issues in a timely manner based on the governance plan and priorities of the State.
* **Access Management:** Assist in the definition of user roles and security configurations, specifically the creation of new roles and monitoring of user access rights in relation to internal requirements. Manage unique logon IDs and security profiles for users authorized by the State, including other contractors, to have access to system and service operations.
* **Training:** Provide regularly scheduled training sessions for new state users and refresher training for existing users when needed.
* **MITA Support:**  Provide information to the State throughout their support lifecycle regarding applicable MITA maturity of the EDW solution, including maintenance of the conceptual data model and logical data model.
* **Business Continuity and Disaster Recovery:** The Contractor is required to comply with and maintain existing Business Continuity Plan (BCP) and Disaster Recovery (DR) plans and support FSSA in updating these plans, as applicable, based on the evolution of data, infrastructure/architecture, and tools. This includes an annual disaster recovery exercise.

**Scope A Contractor Only – Infrastructure/Application Management:** The Scope A Contractor shall maintain the infrastructure architecture and tools for all applicable users (see Section 2.7 System Users) for the current solutions. The State is responsible for necessary licensure while the Scope A Contractor must:

* Support applicable infrastructure architecture and tool transition as well as reporting transition and update as necessary when the State transitions to newer systems with which the EDW interfaces, such as IEDSS.
* Work with FSSA and IOT on maintaining EDW infrastructure architecture and tool set (State responsible for licensure) for all applicable users.
* Plan and execute tasks required to ensure the system stays relevant and useable. This includes resolution of functional issues, application of patches, preventative maintenance, planning/execution of upgrades, and regular performance monitoring and performance reporting. Conduct relevant SDLC procedures as necessary. Make all product releases and upgrades, such as predeveloped software accelerator packages, available to the State at no additional cost. At least on an annual basis, the Contractor shall communicate to the State any available information on the product roadmap, planned upgrades, and enhancements, and seek State input when necessary.

**Scope B Contractor Only – Infrastructure/Application Management:** The Scope B Contractor shall:

* Support the testing efforts related to the Scope A Contractor’s Infrastructure/Application Management tasks as described above.
* Manage the WP Audit Program: On a monthly basis, pull a sample of (a) approximately 50 TANF WP IMPACT cases and (b) approximately 45 SNAP IMPACT volunteers and Able-Bodied Adults Without Dependents (ABAWDs) who have IMPACT activity or employment hours statewide to facilitate auditing of employment hours and IMPACT hours.
* Manage the TANF Electronic Benefit Transfer (EBT) Matching application: Maintain list of prohibited locations for using EBT Card. Receive monthly feed from Alcohol Tobacco Commission (ATC), match against actual location of EBT transactions, and provide a list of possible violations to DFR.

The Contractors shall invoice a fixed monthly M&O fee for their scope. Approved enhancements shall be invoiced at the contractual hourly rates in compliance with the approach described in Section 3.3.1.

* 1. **System Support and Reporting**

At a high level, the Scope A and Scope B Contractors will provide the following services:

1. Provide required reports and business intelligence reporting in legacy data and new system data for State and Federal partners.
2. Provide State and federally-required reports including those for the Centers for Medicare and Medicaid Services (CMS), Administration for Children and Families (ACF), and Food and Nutrition Service (FNS), DCS, and Child Support Bureau (CSB).
3. Maintain legacy reporting requirements.
4. Maintain legacy interface and data sharing requirements.
5. Support the continuation and finalization of new reporting requirements, as well as maintenance of resulting reports.
6. Support the continuation and finalization of new interface and data sharing requirements, as well as maintenance of resulting interfaces and data sharing mechanisms.
   * 1. **Data Warehouse Management**

As a part of their responsibilities, the Scope A and Scope B Contractors shall:

* + - * 1. Manage Operational Data Stores.
        2. Manage any Data Marts to act as a summarized subset of the enterprise's data specific to a functional area or department, geographical region, or time period. Data Marts allow State users to create and run their own reports using the summarized subset of the EDW’s data. The State intends to develop Data Marts with Tableau and encourage end user self-service.
  + Currently there are Data Marts for Outcomes, iMAR, DCS, Pharmacy, Opioid, and the Department of Aging.
  + The State expects to expand the OMPP Data Mart and the Department of Aging Data Mart and add a DMHA Data Mart and a DDRS Data Mart. The Scope A Contractor will be responsible for the expansion and addition of these Data Marts as directed by the State. The State expects to add an informational executive dashboard for SLAs and an additional Opioid Abuse Data Mart.

1. Manage the Development Database for ad hoc and joint development purposes and ensure the database allows users to store results, data information, queries, and procedures.
2. Maintain tool development that includes but is not limited to the following: source data extraction and transformation, data cleansing, data load, data refresh, data access, security enforcement, version control/configuration management, backup and recovery, disaster recovery, performance monitoring, database management, platform, data modeling, and metadata management.
3. Maintain a notification protocol for all users to report any problem or issue that affects data accuracy or integrity immediately.
4. Maintain the current ETL that involves: extracting data from outside sources; transforming it to fit operational needs (which can include quality levels); and loading it into the end target (data mart or data warehouse).
5. Manage audit processes and audit trail for historical reference for any records such as deleted records and merged records which complies with Federal laws and guidelines for audits such as annual SAS-70 audit (or its successor), HIPAA Security Rule, compliance with all State and Federal privacy and security regulations.
6. Manage the Enterprise Data Store to act as a central repository which supplies atomic (detail-level) integrated information to the whole organization.
   * 1. **Information Management**

The Information Management section addresses the areas of data governance, architecture, models, standards and handling of the information for the FSSA. Further breakdown of information management responsibilities is described in this section.

* + - 1. **Data Governance**

The Scope A and Scope B Contractors shall maintain the data governance plan, data standard adoption process, data quality strategy, data retention and backup standards (State and Federal), data ownership standards, data security standards, and arbitration protocol set in place by the State.

* + - 1. **Data Architecture**

The Scope A and Scope B Contractors shall maintain the standard data-management procedures for the State’s data models to include but not be limited to the maintenance of the following:

* Data architecture
* Data dictionary
* Data model
* Business rules
* Data architecture plan
* Any other relevant design and schematics documents

Please see Attachment K Tabs 1-2 for the current EDW Data Dictionary. The SSDW Data Dictionary Table and Column descriptions can be found in Attachment K Tabs 3-4.

* + - 1. **Data Sharing Architecture**

The Scope A and Scope B Contractors shall:

1. Maintain the data-sharing architecture, definitions, schemas, dictionary, directory, and environmental standards to include but not be limited to data, applications, and infrastructure.
2. Manage conceptual and logical mechanisms used for data sharing to include but not be limited to data hubs, repositories, and registries.
3. Manage the data sharing data semantics, harmonization strategies, and ownership policy and procedure.
4. Maintain the data sharing security and privacy policy and procedure and quality standards.
5. Manage data exchange requirements, the service interface standards, and service interfaces.
6. Exchange information with systems that comprise the Indiana Medicaid Enterprise and systems included in the Social Service information network.
7. Exchange data with Federal entities to include but not be limited to:

* **Scope A:** CMS, external sources such as health plans, other public information sources to include but not be limited to Indiana State Department of Health and Regional Health Information Organizations (RHIO)
* **Scope B:** CMS**,** ACF, FNS, other external sources and other public information sources

1. Ensure all outbound data exchange shall meet timeliness and accuracy standards agreed upon by Contractor and State.
   * + 1. **Conceptual Data Model**

The Conceptual Data Model provides a mechanism to bridge the gap between subject matter experts and IT architects and designers. The model depicts the major business information objects (subjects/entities) in their relationships to each other using business terminology. The Conceptual Data Model has the following associated data: Entities, Relationships, Definitions, Domains, Related Standards, and Entity-Relationship Diagrams.

As a part of the model, the Scope A and Scope B Contractors shall manage the conceptual data model, standards, entities, relationships, definitions, domains, and entity-relationship diagrams.

* + - 1. **Logical Data Model**

The Logical Data Model provides policy and procedure for the establishment and maintenance of the following: physical data model, the business model, and the reengineering of business processes. The Logical Data Model has the following associated data: Entities, Relationships, Definitions, Domains, Related Standards, and Entity-Relationship Diagrams.

The Scope A and Scope B Contractors shall manage the Logical Data Model, including the following responsibilities:

1. Manage the logical and physical data model, standards, entities, relationships, definitions, domains, and entity-relationship diagrams.
2. Manage the established business model standards.
   * + 1. **Data Standards**

The EDW data standards provide a syntactic and semantic understanding of the State’s data and information. As a part of data standards, the Scope A and Scope B Contractors shall:

1. Manage the metadata development and maintenance approach, metadata, and standards.
2. Manage the data standards (specify how data should be formatted or structured).
3. Manage the structure data standards. The structure data standards and vocabulary data standards include the following: Title, Category, Objective, Source, Type, Version, Status, Applicability, References, relationships to other standards, and Key Terms.
4. Manage the vocabulary data standards (i.e. specify what the meaning of the data is).
5. Publish and maintain the metadata standards, data standards, structure data standards, and vocabulary standards.
   * + 1. **Manage Information**

This section discusses the management of State information, including but not limited to member, provider, payment, and program data and information.

1. **Manage Member Information:** Managing member information encompasses managing all aspects of the member data, which is the source of comprehensive information about applicants and members and their interactions with the Medicaid Enterprise. Member information includes but is not limited to member demographic, financial, socio-economic, and health status information.
2. **Manage Provider Information:** Managing provider information addresses managing all operational aspects of the provider data store, which is the source of comprehensive information about prospective and contracted providers, and their interactions with the State. The provider data store will encompass provider demographic, business, credentialing, enumeration, performance profiles, payment processing, tax information, and all other provider data and information.
3. **Manage Payment Information:** Managing payment information includes managing all the operational aspects of the payment information data store, which is the source of comprehensive information about payments made to and by the State for healthcare services.
4. **Manage Program Information:** Managing program information addresses managing all the operational aspects of the program information data store, which is the source of comprehensive program information that is used by all business areas and authorized external users for analysis, reporting, and decision support capabilities required by the enterprise for administration, policy development, and management functions. Program information will include all data and information required by the State, Federal stakeholders, business areas, and any other applicable stakeholder.
5. **Manage Information Requirements:** The Contractors shall:

* Adhere to the current data and information development and maintenance approach.
* Adhere to the data and information standards.
* Capture data and information from multiple sources as specified by State, Federal, and business areas.
* Validate that the data and information is received from an authorized entity as specified by State, Federal, and business areas. Validate the data and information, and determine if data and information validation is successful as specified by State, Federal, and business areas.
* Apply data and information hierarchy prioritization process in accordance with the State, Federal, and business specifications.
* Accept the data and information into the system in accordance with the State, Federal, and business specifications.
* Notify impacted processes and other stakeholders of the acceptance of the data and information.
* Associate data and information in accordance with the State, Federal, and business specifications.
* Establish an audit trail for data and information in accordance with State, Federal, and business area specifications.
* Update data and information sets with newly requested data and information in accordance with State, Federal, and business area specifications.
  + 1. **Decision Support Systems and Reporting Requirements**

This section addresses the Decision Support System (DSS) and Reporting requirements that apply to the Scope A and Scope B Contractors.

* + - 1. **Decision Support Systems User Interface**

The Decision Support Systems include front-end and query tools and interfaces. The front-end tools of the EDW support multiple levels of users, ranging from executive users to developers. State authorized software developers have access to all tool sets.

The Decision Support Systems include appropriate privacy and security features to allow for the sharing of data among State agencies. This also includes the support of de-identified data logic so that members receiving services from multiple agencies can be “linked” without violating any HIPAA, State, and Federal statutes.

The query interface tool set includes a user-friendly graphical query language tool to construct database queries that accommodate varying levels of user skills (from the basic, occasional user to the power user). There is an online library/catalog for storage and retrieval of standardized or frequently used queries, with security levels (creator, user, read-only) to eliminate inadvertent changes to the query. It has online capability for specifying query selection criteria (data element-specific for ad hoc queries), query computation, sort, and format (report presentation) characteristics and the capability to save and view or print the criteria used in the query.

The Scope A and Scope B Contractors shall be required to maintain their respective Decision Support System Interfaces. As a part of the Decision Support System User Interface management, the Contractors shall:

1. Maintain the Decision Support System solution, development and maintenance approach, and Help Desk.
2. Maintain a training plan to help users to effectively utilize the Decision Support System.
3. Maintain application availability as defined by the State.
4. Maintain the user interface(s) for the Decision Support System that allows users to develop reporting that can support multiple levels of users utilizing a structured query language. Notify the State of any issues with the User Interface within one (1) hour of detection of the issue.
5. Manage tool development and maintenance approach for Decision Support System tools.
6. Manage the procedure development and maintenance approach, the Decision Support System procedures, and the Decision Support System solution.
7. Maintain a notification protocol for all users to report any problem or issue that affects data accuracy or integrity immediately.
8. Maintain the State’s authentication protocol.
   * + 1. **Data Analytics**

The Decision Support Systems provide a wide range of analytic capabilities that allow for quantitative and qualitative analysis of data that meet industry standards. As part of Data Analytics, the Scope A and Scope B Contractors shall:

1. Manage the State’s current methodology for the development and maintenance of the data analytic capabilities.
2. Maintain analytic capabilities that include but are not limited to the following: data summarization, data comparison, forecasting, trending, and statistical analysis.
3. Maintain qualitative analytic capabilities and geo mapping functionality within the analytic capabilities.
4. Address identified necessary program changes.
5. Conduct modeling and analysis activities to manipulate and review what-if scenarios, identify impact of potential changes, and analyze potential program additions, modification, or deletions for fiscal impact.
6. Manage required program monitoring, quality and management reports per business area need, reporting for fiscal impact statements, and mechanisms that will track activity and effectiveness at all levels of monitoring.
7. Perform “what if” impact analysis.

**Scope A Contractor Only:**

* Manage Healthcare Effectiveness Data and Information Set (HEDIS) and HEDIS-like reporting
* Determine cost effectiveness by collecting information such as policy coverage and past usage to anticipate future need.
  + - 1. **Data Visualization**

The Decision Support Systems provide a range of dynamic data visualization capabilities, such as charts, graphs, and diagrams. The Scope A and Scope B Contractors shall be required to support Data Visualization, which includes the following responsibilities:

1. Maintain the methodology for the development and maintenance of the data visualization and presentation capabilities.
2. Support data visualization that includes but is not limited to the following: interactive graphical representation, dashboarding, and dynamic drill down capabilities.
3. Support data presentation that includes but is not limited to: editing capabilities, capability to interface with a variety of printers, and the ability to support a variety of formats and output options, such as Word, Excel, HTML, Access database, or GUI format.
4. Maintain data visualization and presentation capabilities.
   * + 1. **Reporting Overview**

The Scope A and Scope B Contractors shall be required to support all reporting needs of their respective scope. As part of the reporting responsibilities, the Scope A and Scope B Contractors shall:

1. Maintain existing reports and data extracts.
2. Develop, test, implement, and manage new recurring reports in a timely and accurate way in accordance with standards agreed upon by the Contractor and the State. Develop ad hoc reports when requested. For example, for Scope B, the SSDW also supports a wide range of ad-hoc report requests within FSSA, including DFR Management and DFR Program Policy report requests related to eligibility, maintenance of eligibility, employment, employment supportive services, and work participation.
3. Develop recommendations for ad hoc reports that should be moved into production.
4. Adhere to State, Federal, or business area defined format and distribution methodology.
5. Ensure that report requests are documented and validate that the delivered report meets the requester’s requirements for content, format, quality, and timeliness.
6. Notify the requester when report timeliness or quality standards cannot be met.
7. Store production reports based on State’s existing protocol.
8. Store historic reports in accordance with State, Federal, and business area retention schedules.
9. Review reporting and extract formats, criteria, coding, and distribution vehicle in order to ensure that they continue to meet State, Federal, and business area standards.
10. Capture requests for reporting and track and report on the status of each data and reporting request.
11. Revise existing measures, reports, and extracts when requested.
12. Track reporting utilization and demand.
13. Maintain detailed documentation for reporting/extract logic and design.

**Scope A Contractor Only:**

* Provide care management reporting and reporting as needed to help to secure CMS certification for OMPP. Certification is needed every three years. It is anticipated that the next certification will be needed in 2021. Please see Section 4.3 for more information on the support that the Scope A Contractor must provide for CMS certification.

**Scope B Contractor Only:**

* Work with DFR/TANF Program Policy as needed concerning TANF data discrepancy errors received from quarterly report submission.
* Submit requests for Live Federal Tax Information (FTI) Data Testing Request Form to IRS every 3 years to seek their approval for using FTI in pre-production testing activities.
* Support Audit Reporting as needed for ACF (DFR/TANF), State Board of Accounts (DFR/TANF/SNAP EBT), CMS, FNS, DMHA, and IRS (DCS/Child Support).
  + - 1. **Reporting**

The number of reports shown below in this section are estimates and serve to give potential Respondents insight into the EDW reporting types and volume. As reports are continually created, these figures are expected to evolve over time.

**Recurring Reports**

During the Initial Service Transfer Period (the time before the incumbent contractors transfer responsibilities over to the newly awarded Scope A and Scope B Contractors), each Contractor shall work with the State to clarify the report delivery deadlines for each recurring report.

As of September 2017, the State has identified approximately 744 unique “recurring” EDW reports. Please note that in Cognos, each summary and detail/drill-thru report is a separate report build and each are therefore included as unique reports in the figures below:

* There are 50 OMPP reports that are financial and CORE MMIS converted reports for select users. These will be managed and delivered by the Scope A Contractor.
* There are 519 reports/views in the current SSDW. These will be managed and delivered by the Scope B Contractor.
* There are 179 reports run by D&A on a recurring basis. These will be managed and delivered by the D&A.
* The figures above do not include reports that end users run independently. For instance, the Management Performance Hub team has a user log-in and runs reports on their own.

Attachment K Tab 6 contains a full listing of these recurring reports. Reports listed under the “EDW” and “Cognos-EDW” system will be managed by the Scope A Contractor, though reports in the “Cognos-EDW” system will be run by the State’s D&A team for State users. Reports listed under the “SSDW” system will be managed by the Scope B Contractor.

**Ad Hoc Reports**

Deadlines for ad hoc reports shall be determined by the State according to a scale of urgency.

* Type 1: 24 business hours turnaround time
* Type 2: Two (2) business days turnaround time
* Type 3: Five (5) business days turnaround time

As of September 2017, there were 118 ad hoc reports generated for the SSDW (Scope B) and 560 ad hoc reports generated for the OMPP DW by the D&A team for the prior 12 months. The Contractors will be expected to assist the D&A team with the generation of these ad hoc reports.

**Report Volume**

Over an approximate 12-month period (mid-September 2016 to mid-September 2017), there were 359,257 runs of recurring reports generated for the SSDW (Scope B) and 466 recurring reports generated by the D&A team. The recurring reports volume is not available for the OMPP-related reports (Scope A).

It is the State’s expectations this volume will continue to grow as new reports are created. The State estimates that the volume of reports will grow by an estimated 10% annually.

**Overview of Reports**

Below is a high-level summary of the key EDW reporting needs. Please see Attachment K Tab 6 for a full listing of the aforementioned 744 EDW reports. Attachment K Tab 9 includes screenshots of sample reports from the EDW to provide Respondents with an idea of the variety of output generated from the EDW.

|  |
| --- |
| **High Level Overview of Scope A Reports** |
| * Center for Medicare and Medicaid Services (CMS) reports   + Example: Produce the CMS-416 report including State-defined criteria, such as the number of children provided child health screening services, the number of children referred for corrective treatment, the number of children receiving dental services, and the State's results in attaining goals set for the State under section 1905(r) of the Act provided according to a State's screening periodicity schedule. * Transformed Medicaid Statistical Information System (TMSIS) reports   + Data sets for TMSIS reports to include the following adjudicated claims: inpatient hospital, long term institutional care, prescription drugs, and other origins.   + Merge into TMSIS data from outside sources, if required, such as capitation payment records from enrollment process, eligibility characteristic data from eligibility intake process, Medicaid services processed by non-MMIS State departments, such as mental health services, and utilization based on Managed Care encounter.   + Provide TMSIS tapes for submission in accordance with the tape delivery schedule.   + Maintain encounter data in appropriate claim file.   + Follow eligibility reporting guidelines (see <https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/index.html> for TMSIS Data Dictionary information). * Federal Budget and Expenditure Reporting (CMS-21, CMS-372, CMS-64, and Incurred but not Reported (IBNR) expenditure report)   + Show detail for all feeder forms required to be entered into the CMS Medicaid Budget Expenditure System (MBES). The reports are customized to show the total computable amounts entered into the MBES for each federal share column of the CMS-64/CMS-21 and only show lines with expenditure activity for each quarter.   + Report the breakout of weekly Indiana Health Care Program expenses by program and waiver Medicaid Eligibility Group (MEG). The report matches total expense issued for the week with all weeks in a quarter summing to the totals reported on the CMS-64 for the program/MEG. Monthly and quarterly summaries of the Weekly Payment Summary reports are also needed.   + The claims data is pulled in from the MMIS for fee-for-service claims and pharmacy claims are pulled from the Pharmacy Benefit Manager (PBM) system. These are combined with managed care claims. Thus, all of Medicaid claims information resides in the EDW and forms the basis of Medicaid financial reports.   + These reports described above are dynamic reports whose format are continuously revised per CMS directives, such as adding a service or procedure. The Contractor will proactively monitor CMS directives and bring the State’s attention to any changes needed to comply with new directives. * Children’s Health Insurance Program (CHIP) reports * Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) reports * Health Management Systems (HMS) reports * Home and Community Based Services (HCBS) Waiver reports, including the CMS-372 and CMS-372S Annual reports on Home and Community Based Waiver Reports, for any HCBS Waivers that exist in accordance with CMS requirements * Indiana Automated Information Management (AIM) reports (these may be phased out with the CORE MMIS conversion completion) * Information to support Diagnosis Related Group (DRG) audits * Managed Care Entity reports * Management and Administrative Reporting Subsystems (MARS) reports * Office of Inspector General (OIG) reports * Payment Error Rate Measurement (PERM) reports * Pharmacy Benefits Management (PBM) reports * Program Waiver reports * Quarterly enrolled provider file by County, by specialty * Quarterly Dental Reports * Surveillance and Utilization Review (SUR) reports as defined in 42 CFR 456.654 |
| **High Level Overview of Scope B Reports** |
| * TANF Reports * SNAP Reports * IMPACT Reports * EBT Reports * ACF Reports * Benefit Recovery Reports * Program Integrity QA/QC Reports * FNS Reports * Application Dashboard/Reports * HIP Dashboard/Reports * Medicaid Reports * Child Welfare Reports * Child Support Reports * Child Care Reports * Hearings and Appeals Reports * First Steps Reports * Key Performance Indicator Reports |

**Data Extracts**

As a part of the resulting contracts, the Scope A and Scope B Contractors will be required to complete data extraction from various internal and external source systems using the State’s Informatica ETL software based on the State’s developed data governance plan. Data extracts can be inbound, outbound, or bidirectional depending on the stakeholder. The inbound data extracts are from the EDW’s various source systems. Outbound data extracts compile predefined information that is sent to clients and customers based on their unique needs. Scope A and Scope B Contractors will be required to maintain EDW data extract interfaces. Note: not all data extraction is conducted automatically through an interface. Currently, other methods such as manual data transfer are also used. The Scope A and Scope B Contractors shall also offer the flexibility to handle all of FSSA delivery protocols, including BizTalk and Secure FTP.

* **Memorandum of Understandings:** FSSA has memorandum of understandings (MOU) with external agencies for thirty-one (31) data extracts necessary for program reporting. The Scope A and Scope B Contractor shall be required to support the requested data extraction based on the State’s developed data governance plan.

| **No.** | **Data From** | **Data To** | **Description** | **Frequency** | **Scope** |
| --- | --- | --- | --- | --- | --- |
| 1 | FSSA-OMPP | ISDH-MCH | Prenatal and Postnatal Medicaid Claims | Weekly | A |
| 2 | FSSA-DFR | ISDH-CSHCN | IHCP enrollees, including TPL | Weekly | B |
| 3 | FSSA-OMPP | ISDH-HIV | Eligibility for MA & TANF | Daily | A |
| 4 | ISDH-HIV | FSSA-OMPP | Verify Medicaid eligibility | Daily; Monthly | A |
| 5 | FSSA-OMPP | ISDH-HIV | Eligibility for MA & TANF | Annually; Monthly | A |
| 6 | ISDH-HIV | FSSA-OMPP | HIP eligibility | Monthly | A |
| 7 | FSSA-OMPP | ISDH-Immunization | MA ages 0-18 | Monthly | A |
| 8 | ISDH-Immunization | FSSA-OMPP | MA ages 0-18 | Monthly | A |
| 9 | FSSA-OMPP | ISDH-Lead | Blood lead data match (2-way) | Monthly | A |
| 10 | FSSA-OMPP | ISDH-Lead | Blood lead data match (2-way) | Real-time | A |
| 11 | ISDH-Vital Records | FSSA-DFR | Newborn records | Weekly | B |
| 12 | ISDH-Vital Records | FSSA-DFR | Newborn records | Daily | B |
| 13 | FSSA-DFR | ISDH-WIC | Medicaid, SNAP and TANF eligibility | Monthly | B |
| 14 | ISDH-Vital Records | FSSA-Audit | Birth and Death records | Upon request | B |
| 15 | ISDH-Vital Records | FSSA-Estate Recovery | Death records | Monthly | B |
| 16 | ISDH-Vital Records | FSSA-DMHA | Death records | Daily | B |
| 17 | ISDH-Vital Records | FSSA-DDRS (BQIS) | Death records | Upon request | B |
| 18 | ISDH-Vital Records | FSSA-Aging (QAQI) | Birth and Death records | Daily | B |
| 19 | ISDH-Vital Records | FSSA-Aging (CaMSS) | Death records | Monthly | B |
| 20 | ISDH-Tobacco | FSSA-OMPP | Tobacco Cessation Quitline | Monthly | A |
| 21 | FSSA-OMPP | ISDH-Tobacco | Tobacco Cessation Quitline | Monthly | A |
| 22 | ISDH-Vital Records | FSSA-OMPP | Mortality | Monthly | A |
| 23 | IDVA | FSSA-DFR | Monthly Draw Packet | Monthly; | B |
| 24 | IDVA | FSSA-DFR | Quarterly TANF Grant Outcome Reports | Quarterly | B |
| 25 | FSSA | IDVA | DFR Client Data | Monthly | B |
| 26 | DWD | FSSA-DFR | Monthly Draw Packet | Monthly | B |
| 27 | DWD | FSSA-DFR | Quarterly TANF Grant Outcome Reports | Quarterly | B |
| 28 | DCS | FSSA-DFR | Monthly Draw Packet | Monthly | B |
| 29 | DCS | FSSA-DFR | Quarterly TANF Grant Outcome Reports | Quarterly | B |
| 30 | DCS | FSSA-DFR | Annual TANF Grant Outcome Report | Annually | B |
| 31 | DOC | FSSA-DFR | Inmate Eligibility Determination Information | Upon request | B |

* **Additional Details on Scope A Inbound Data Extracts.** TheOMPP DW acquires inbound data extracts from the following stakeholders. The Scope A Contractor shall be required to support the requested data extraction based on the State’s developed data governance plan.

| Data Sources | Source | Data Sets | Refresh Frequency | Data Span/Volume |
| --- | --- | --- | --- | --- |
| CORE  (MMIS) | DXC | Paid Claims, Denied Claims, Encounter Claims, and Provider, Member, Eligibility, Prior Authorization, and Reference Data | Weekly | Claims history:  ~ 7 Years  Total claim volume:  530 Million |
| PBM | OptumRx | Pharmacy Claims | Weekly | Claims history:  ~ 9 Years  Total claim volume:  125 Million |
| Drug Reference | MediSpan | Drug Reference | Weekly |  |
| Estate Recovery | Milliman | Historical Estate Recovery Claims | One-time | Claims data since 1994 |
| ICES | Deloitte | Selected Eligibility Data | Monthly |  |
| Pharmacy | Anthem | Pharmacy Claims | Weekly | Source since Feb. 2016 |
| Encounters | Anthem | Encounters | Weekly |  |
| HNS | Anthem | Health Needs Survey | Monthly |  |
| Pharmacy | CareSource | Pharmacy Claims | Weekly | Source since Jan. 2017 |
| Encounters | CareSource | Encounters | Weekly |  |
| HNS | CareSource | Health Needs Survey | Monthly |  |
| Pharmacy | MDwise | Pharmacy Claims | Weekly | Source since Feb. 2016 |
| Encounters | MDwise | Encounters | Weekly |  |
| HNS | MDwise | Health Needs Survey | Monthly |  |
| Pharmacy | MHS | Pharmacy Claims | Weekly | Source since Feb. 2016 |
| Encounters | MHS | Encounters | Weekly |  |
| HNS | MHS | Health Needs Survey | Monthly |  |
| Cohorts | Aspire Indiana | Metabolic Screening data | Monthly |  |
| Cohorts | Community Healthnet | Metabolic Screening data | Monthly |  |
| Cohorts | Regional Southlake | Metabolic Screening data | Monthly |  |
| Cohorts | Four County Counseling Center | Metabolic Screening data | Monthly |  |
| Cohorts | Porter Starke Services | Metabolic Screening data | Monthly |  |
| Cohorts | Midtown Mental Health Center | Metabolic Screening data | Monthly |  |

* **Additional Details on CORE MMIS Outbound Data Extracts (Scope A Only):** The OMPP DW manages approximately 80 “standard” CORE MMIS outbound data extracts that are sent to the following stakeholders. The complete list of the CORE MMIS data extracts are listed in Attachment K Tab 7. There are also additional customized extracts run regularly for specific stakeholders. Please see the chart below for full list of Core MMIS data extract recipients. The Scope A Contractor shall be required to support the requested data extraction based on the State developed data governance plan.

| Stakeholder | Frequency | Description of Data |
| --- | --- | --- |
| INsite | Monthly | Claims and Spenddown Liability |
| CaMSS | Monthly | Claims and Spenddown Liability |
| Truven / Myers & Stauffer | Monthly | Member eligibility, provider eligibility, claims data, and financial data for all populations; Financial – Capitation History and Admin Fees |
| OIG | Monthly | Member eligibility, provider eligibility, claims data, and financial data for all populations; Financial – Capitation History and Admin Fees |
| Burns & Associates | Annually | Member eligibility, provider eligibility, claims data, and TPL for HHW and HIP populations |
| SSDW | Monthly | Data for PRTF Reports |
| T-MSIS | Monthly | 8 Files; 4500 + Data Elements |
| EGov | Weekly | Provider data |
| ISDH | Weekly/ Monthly | Prenatal and post-partum claims |
| Transparency Dataset | Annual | Claims file |
| DCS | Monthly | Psychotropic claim and membership |
| DMHA (CMT) | Monthly | Member eligibility, provider eligibility, claims data  Metabolic Screening data from Cohorts |
| OptumRx - Pharmacy | Monthly | Claims data for Rebates |
| OptumRx - MCAD | Monthly | Claims data |
| HMS | Monthly | Member eligibility, provider eligibility, claims data |
| Plan - Anthem | Weekly | ESSR & ADPaR |
| Plan - CareSource | Weekly | ESSR & ADPaR |
| Plan - MDwise | Weekly | ESSR, ADPaR, Provider Pay To file |
| Plan - MHS | Weekly | ESSR & ADPaR |
| CMCS | Monthly | PA Billing File, Provider files |
| Plan - Anthem | Monthly | PMP List, PE HHW, HNS errors |
| Plan - CareSource | Monthly | PMP List, PE HHW, HNS errors |
| Plan - MDwise | Monthly | PMP List, PE HHW, HNS errors |
| Plan - MHS | Monthly | PMP List, PE HHW, HNS errors |

* **Additional Details on SSDW Outbound Data Extracts (Scope B Only)**: The SSDW currently provides outbound data extracts from 23 source systems for social service and health care related data. The source systems and the estimated number of extract files associated with each system are listed in the table below.

|  |  |  |
| --- | --- | --- |
| **Source System** | **Estimated Number of Files** | **Update Frequency** |
| Child Support – Indiana Support Enforcement Tracking System (ISETS) | 37 | Weekly & Monthly |
| Client Eligibility – Indiana Client Eligibility System (ICES) – Note: this will be replaced by IEDSS. See Section 2.3 for more information. | 46 | Monthly |
| First Steps Database | 1 | Monthly |
| MaGIK (Management Gateway for Indiana’s Kids) | 1 | Monthly |
| Office of Early Childhood and Out-of-School Learning (OECOSL) | 10 | Monthly |
| State Student Assistance Commission of Indiana (SSACI) | 1 | Three times per year *(inactive as of FFY 2017)* |
| Earned Income Tax Credit (EITC) | 1 | Monthly |
| Healthy Families | 2 | Monthly |
| Electronic Payment Processing and Information Control | 11 | Daily |
| RCR IMPACT | 2 | Monthly |
| Division of Workforce Development | 1 | Quarterly |
| DMHA | 1 | Monthly |
| Developmental Disability Automated Resource Tool (DART) | 1 | Monthly |
| Indiana in-home services information system (INsite) | 1 | Monthly |
| Indiana Rehabilitative Information System (IRIS) | 1 | Monthly |
| Department of Corrections | 1 | Monthly |
| SNAP QC | 4 | Monthly |
| ATC | 1 | Monthly |
| Ascend (via DA) | 1 | *Inactive* |
| EBT Card Replacement | 3 | Monthly |
| OMPP | 1 |  |
| Office of Hearings and Appeals | 5 | Daily |
| HIP Data Files | 14 | Daily, Weekly, Monthly |

* 1. **Enhancements**
     1. **Overview**

Unless otherwise noted, both the Scope A and Scope B Contractors shall develop and complete enhancements as requested by the State through the change control process. The State will work with the Contractors to prioritize and plan enhancement requests.

* Enhancements are defined as any system improvement or adaptation to the properly working application that requires over 40 hours of developer work approved by the State (with exceptions).
* The Contractors shall provide, at the Enhancement Pool Hourly Rate, an Enhancements Pool capped at 500 hours of development work per month for Scope A and 200 hours of development work per month for Scope B. If the hours for a specific Scope is expected to exceed the cap in any month, the Contractor must receive formal written State approval before performing the work.
* The State is not required to use up the hours and dollars allocated for the Enhancements Pool each month.
* ~~A true-up shall be performed at the end of each State fiscal year and the State shall be credited for any unused hours on the Contractor’s final invoice for each fiscal year.~~
* Note: The maximum hours invoiced for an individual shall not exceed 40 hours a week, regardless of the number of hours worked by the individual to meet service levels and complete deliverables on time.

After completion of any enhancement, each Contractor shall provide actual hours worked by position. Each Contractor shall also submit a monthly report listing all hours worked by position for each approved enhancement and bill for actual hours worked, even if it is less than the initial estimates. The State will check invoice details before the invoice is processed. If services are to be provided in exchange for fixed or not-to-exceed compensation, the Contractor is solely responsible for any costs in excess of the specified compensation.

Changes that are needed to fix an enhancement after it is implemented and that are brought to the Contractor during the Software Warranty period will not count towards the Enhancements Pool. Please see Section 3.3.3 for information about the Software Warranty.

* + 1. **Use of Systems Development Life Cycle (SDLC)**

The Scope A and Scope B Contractors shall follow the industry standard SDLC processes to deliver any approved enhancement for each system enhancement, including the creation of the deliverables described in the remainder of this section. For simple modifications and enhancements, the State will provide guidance on what work products they expect from the Contractor as these may require fewer work products.

**SDLC Process for Scope A and Scope B Contractors**

The State has used both Waterfall and Agile SDLC methodologies for recent EDW initiatives but going forward prefers to use Agile, and Scrum in particular. There may be initiatives where Waterfall is required but those would be in the minority. As such, the Contractor shall use Agile methodologies for each enhancement unless otherwise approved by the State. The Contractor must use an approach that incorporates all the industry standard Agile deliverables and artifacts with emphasis on communication, collaboration, and iteration. The Contractor’s approach must incorporate iterative methods for development and testing of software and training.

The Contractor shall provide the following services and deliverables for each enhancement, unless otherwise approved by the State. Deliverables shall be on time, on budget, consistent in formatting and content, and meet the user-defined request. The State and/or the OV&V Contractor will monitor compliance with these standards and address consistently poor performance.

For each meeting with program areas and other stakeholders, the Contractor will be responsible for coordinating logistics, preparing meeting agenda, and documenting and publishing meeting notes and action items.

1. **Planning** –Prior to making each enhancement, the Contractor shall provide a proposal on the estimated number of hours and the workplan for the enhancement using a State’s Statement of Work (SOW) form provided at the start of the contract term and receive formal written State approval from the FSSA CIO or State-designated party prior to making any modification. The SOW and initial firm fixed price estimate or not-to-exceed price shall be completed at no additional costs to the State. Included in the proposal will also be a change impact analysis that describes impacts to the system from the enhancement. The proposal must be submitted within one (1) week from request submission. Additionally, the Contractor must provide a copy of the change request form submitted by the end user.

Deliverables**:** SOW and change request form.

1. **Requirements** – Through data gathering efforts with the State, the Contractor will develop requirements documents including the product roadmap, the product backlog with user stories, non-functional requirements, the release plan, and sprint backlog. Additional supporting documentation shall also be included as deemed necessary by the Contractor or the State. If the Contractor is using the Waterfall methodology, detailed functional and technical requirements must be developed.

The Contractor shall also cover stakeholders, business need, project estimates and completion date, and testing needs. The Contractor will conduct requirements validation to confirm the completeness and accuracy of all requirements.

Additionally, the Contractor shall develop a list of deliverables for the remainder of the SDLC work and accompanying brief descriptions of each deliverable. The State will review the list and provide feedback. The Contractor must receive approval on the deliverables list before beginning design activities.

Deliverables:Requirements documents relevant to the SDLC methodology used and list of remaining SDLC deliverables. All of these deliverables must be approved by the State before development begins.

1. **Design -** Design documents for each sprint should be based on approved requirements documents. The Contractor will submit with design documents any updated project schedules and any needs for new hardware, network, storage, or software. If the Contractor is using the Waterfall methodology, traceability of requirements, inputs and outputs, technical components, General System Design (GSD) and Detailed System Design (DSD), User Interface (UI), and database changes must be submitted. For smaller enhancements, the State may waive the need for some of the design documents. Please see Section 3.2.3.b above for more information the process for determining what design deliverables are required.

The Contractor shall provide an updated firm fixed price estimate or not-to-exceed price, which includes the positions responsible for the change, their hourly rates, estimated hours by position, the updated workplan, and other appropriate supporting details as requested by the State.

Deliverables:Design documents includingupdated schedule and pricing, updated product backlog. Sign-off must be obtained from designated approvers prior to commencement of coding.

1. **Development and Testing –** TheContractor shall conduct unit, system, interface, performance, and regression testing as well as facilitate/coordinate user acceptance testing per policy and procedures approved by the State. Testing responsibilities include, but are not limited to:
   * Comply with industry standard SDLC testing standards.
   * Provide component and integration testing that is designed to ensure that all components, data feeds, identity management solutions, etc., work together properly and, as a whole, meet the business and functional requirements of the system.
   * Provide system testing that shall include the development and use of automated system test scripts to validate that the system operates in accordance with the design specifications, for example:
     + - User roles are performing properly.
       - Authentication performs properly.
       - Workflows perform properly.
       - Data flows perform properly.
   * For User Acceptance Testing (UAT), the Contractor shall schedule and facilitate State-selected users to complete UAT, track their results, and present results to the State for review prior to requesting authorization for production releases.
   * Conduct testing and ensure that the modifications or enhancements are completed with 100% positive results and receive approval from State designee(s) before activating any modifications or enhancements. If there are minor issues (i.e., resulting in less than 100% positive results), the State may choose to approve the modification or enhancement release. In those situations, the Contractor shall be responsible for resolving issues on a State-approved timeline post release.

Deliverables:

* Testing documentation, that must contain traceability to requirements, identify environments being used, test plans with test cases and expected results, and identify defects with plans for correction. The test plan should include execution schedule and detail any inputs or conditions needed for particular cases. Following sign-off for all steps in testing, FSSA must provide a formal ‘Go’ Decision for the change to be promoted to the production environment.
* Release notes and standard release schedules

1. **Configuration Documentation**– The Contractor will be responsible for the maintenance of their scope-specific configuration documents. Documents will be updated by the Contractor when configurations are approved and migrated to the production environment. The Contractor shall be responsible for document version control. The Contractor will accomplish this using the State’s JIRA system or SharePoint.

Deliverables: Updated configuration documents.

1. **User Manuals, Training Materials, and Process Documents –** The Contractor shall be responsible for the maintenance of scope-specific user manuals, training materials, and process documents. Manuals will be updated to reflect changes or additions to functionality as they are approved and migrated to production. The Contractor will be responsible for updating the training content and for maintaining version control of all subject documents.

**Scope B Only:** The Scope B Contractor is responsible for updating the SSDW Environment Document twice a year. Portions of this document have been provided in Attachment L for reference.

Deliverables: Updated user manuals, training materials, and process documents.

1. **Formal Production Readiness Reviews –** TheContractor shall conduct formal production readiness reviews prior to production releases to ensure releases are ready for deployments (e.g., pass test cases, documents are updated, etc.). Formal review process must be agreed upon by the State.

Deliverables: Updated user manuals, training materials, process documents, and product backlog.

1. **Post Implementation Review** – The Contractor shall verify that the post-implementation production functionality meets approved requirements and provide the materials to support this verification to the State’s OV&V Contractor. The OV&V Contractor shall then validate the information. Any post-implementation defects shall be identified, corrected, and closed by the applicable Contractor. All documentation will be stored in a repository.

The State retains formal and final authority to accept and approve the Contractor’s deliverables.

Deliverables: Bug/defect correction, updated system documentation.

**OV&V Contractor Checkpoints**

The OV&V Contractor will review Scope A and Scope B deliverables at specific checkpoints during the SDLC process. The review at each check point will consist of the following items before a sign-off can occur and the process can move forward:

* Accurate and consistent documentation of project name, tracking numbers, and project managers.
* Completion of all critically pending items from prior SDLC gates.
* The primary deliverables have been shared both across internal vendor projects for potential scope or release conflicts and with critical external Medicaid enterprise stakeholders.
* The primary deliverables have been reviewed against a variety of phase-specific criteria to support completeness and accuracy.

The OV&V Contractor shall be granted access to the tool where the Contractors’ work for system changes is being tracked. This will allow the OV&V Contractor to easily access any documentation and follow changes as they are made.

There will be biweekly meetings with the OV&V Contractor. Deliverables must be submitted two (2) days prior to the meeting to allow for adequate review.

* + 1. **Software Warranty**

The State requires a 90-day warranty for all modifications and enhancements to the EDW. During the 90-day warranty period, the Contractors shall fix any post-production defects or bugs at no additional cost to the State. The hours required for the fixes will not count against the Enhancements Pool hours. Fit functionality in relation to user requests and agreed to specifications will be tracked by the State. Action may be taken to address consistently poor performance.

* + 1. **Scope Crossover Support**

There may be times where one Contractor team cannot meet deadlines or service levels due to a lack of resources to address the scope-specific needs. In those instances, the State may request temporary crossover support from the other Contractor team after ascertaining that there will be no impact on the ability to meet the requirements and service levels of its own scope of work. The pricing for the work will be mutually agreed upon with the State (e.g., deliverables based or based on hourly billings). It is expected that both Contractors shall agree to this giving and receiving of support when the need arises.

* 1. **Service Desk Management**

The Scope A and Scope B Contractors shall provide Service Desk Management services for their respective scopes of work and route questions, concerns, or requests to the appropriate Contractor staff. The Contractors are responsible for providing the subject matter expertise for all levels of support. The service desk will provide appropriate, accurate, courteous, efficient, timely and proactive responses to inquiries. Service requests can be submitted via email or phone.

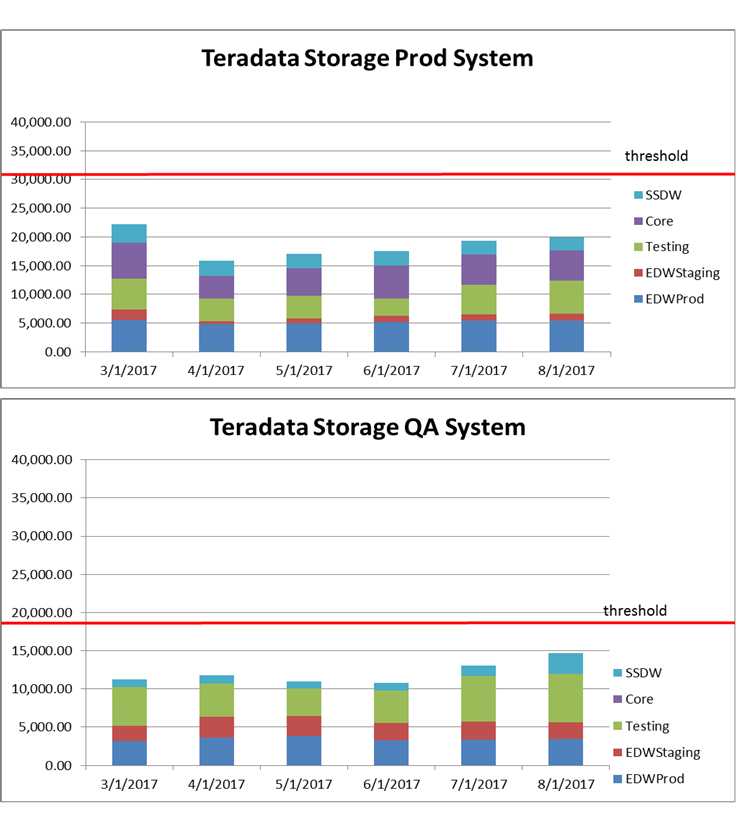
As a part of Service Desk Management, the Contractors shall:

1. Establish and utilize a dedicated e-mail address and toll-free phone line(s) for service requests. Provide telephone and email support where a qualified technician shall respond within the timeframes listed in Section 9.2.1 based upon the request’s function type and severity code. The Contractors shall document receipt of all requests in a request log that tracks each request’s receipt date and time, request type, details of the request, assigned Contractor staff, resolution, and resolution type and date. Note: in addition to phone and email requests, occasionally requests may be submitted in person.
2. Provide on-site qualified incident support from 8:00 AM to 5:00 PM Eastern Time, Monday through Friday. Incident support shall adhere to the timeframes listed in Section 9.2.1 based upon the request’s function type and severity code for problems that cannot be resolved via telephone.
3. After hours support (defined as from 5:01 PM to 7:59 AM Eastern Time Mondays to Fridays, as well as full day weekends and State holidays) will be provided via phone and email. Required response times for incidents reported outside of normal business hours will be determined based on the severity of the incident (see Section 9.2.1).
4. Perform a triage function for all inquiries received at the dedicated e-mail address and phone line(s). For those inquiries that are determined to be outside of the scope for the Contractor and should be handled by State staff, forward to the designated State staff within one (1) business day.
5. Provide adequate training and access to information to Contractor staff to facilitate timely and accurate responses to inquiries.
6. Provide responses and resolution per the service levels listed in Section 9.2.1.
7. Coordinate responses by following service desk escalation workflows that address proper handling of requests from State or Federal legislators, the Governor, the FSSA Secretary, and news media.

Note: During 2016, the Scope A incumbent contractor received on average 51 service desk requests per month, with knowledge transfer as most common request. In the same time period, the Scope B incumbent vendor received on average 25 service desk requests per month, with the top request categories being inquiries to support Program Effectives, inquiries to analyze a specific population (example: HIP Maternity), or a Legislative request in support of determining the impact of rule changes for specific programs.

* 1. **Infrastructure Management**
     1. **Teradata Platform**

The Production Teradata Platform is a 6800H and that the Dev/QA/DR System is a 6650H. The platform is scalable from one to 4,096 Teradata nodes and can accommodate from four Terabytes to 92 Petabytes of uncompressed user data space. The current space threshold of the database is approximately 50TB between the Production and QA systems. The EDW continues to expand as additional data is loaded on a weekly basis and the use of the EDW expands to other areas of FSSA and OMPP.



In addition to Teradata hardware, the State also utilizes the Teradata Database v15.10. The database is designed to grow at all points and uses a foundation of self-contained, parallel processing units to maximize scalability, performance, and high availability.

Please see Attachment K Tab 5 for an inventory of the current EDW servers.

* + 1. **Network Connections**

Below are the current network connections for the Production system. The Production server is located in the Indiana Office of Technology’s (IOT) Indianapolis datacenter. The Development and Disaster Recovery server will be moved to Bloomington, Indiana before the end of 2017.

* 10Gb connects to the database servers
* 10Gb connects to the backup server
* 1Gb connects to other servers
  + 1. **Scope A Contractor Responsibilities**

**Infrastructure Maintenance**

The Scope A Contractor shall maintain EDW’s infrastructure as laid out in Section 2.8 (EDW Technology Tool Set). The Scope A Contractor may be requested to purchase necessary Teradata hardware and software, and possibly other hardware and software on behalf of the State. These costs will be passed through to the State with no markup over the price paid by the Scope A Contractor. The Cost Proposal template for Scope A contains additional information on the types of hardware and software the State may wish to purchase through the Scope A Contractor.

**Informatica Support**

The Scope A Contractor will serve as a liaison to Informatica Corporation on behalf of the State to coordinate and manage any support services when needed. The State has purchased Standard Support from Informatica where such Standard Support is defined as consisting of the following:

* Error Correction: Upon receipt from the State of notice of a problem with the Informatica software (a problem which can be reproduced at an Informatica support facility or via remote access to the State's facility), Informatica shall use reasonable efforts to correct or circumvent the problem.
* Updates: Informatica shall notify the State of all new maintenance releases. Informatica shall make available to the State, at no additional charge, all currently supported updates that are developed or published by Informatica and made generally commercially available to Informatica Support Services customers at no additional charge. Updates shall not include any option or future products which Informatica licenses separately.
* Product Lifespan: A product release of the Informatica software shall be supported for a period of eighteen (18) months from the date of general availability of a subsequent major product release. For example, release 8.x shall only be supported for a period of eighteen (18) months after the general availability of release 9.0.
* Assistance: Informatica shall provide the State with access to technical support engineers for assistance in the proper installation and use of the Informatica software, and to report and resolve software problems. The hours for such assistance shall be from 9:00 a.m. to 5:30 p.m. local time in Indiana, Monday through Friday, excluding State holidays.
  + 1. **Scope B Contractor Responsibilities**

The Scope B Contractor shall conduct testing on software and hardware infrastructure as needed by the State.

* 1. **Incident and Problem Management**

As a part of the Incident and Problem Management responsibilities, the Scope A and Scope B Contractors shall:

* Perform tasks in a manner consistent with minimizing and avoiding problems.
* Monitor events and system performance with the goal of taking proactive actions to avoid problems.
* Prioritize and communicate tasks’ associated incidents and service requests.
* Notify the State of unplanned system downtime immediately upon, and at most within one (1) hour of confirmation. If the downtime is anticipated beforehand, the Contractors shall notify the State at least 72 hours prior to the planned downtime (Scope A Only).
* Maintain a system uptime of 99.99% (Scope A Only).
* Notify the FSSA Data Warehouse team and other pertinent stakeholders of system performance or functionality issues within one (1) business day of occurrence. The Contractors shall describe the issue, what is being done to remedy the issue, and when the issue is expected to be fixed.
  1. **Business Continuity and Disaster Recovery**

The Scope A and Scope B Contractors are required to comply with and maintain the existing Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) and support FSSA in updating these plans, as applicable, based on evolution of data, infrastructure/architecture, and tools. The Scope A Contractor shall maintain and take Data Domain backup and tape backups of all Teradata application data in development and production environments on a daily, weekly, monthly, quarterly and yearly basis. They will also be responsible for all backups and restores of application data from Data Domain and tape backups. The Scope B Contractor shall be responsible for database level backups.

* + 1. **Business Continuity**

The BCP must provide adequate backup and recovery for all operations, both manual and automated, including all functions required to meet the backup and recovery standards: Recovery Time Objective (RTO) and Recovery Point Objective (RPO). At a minimum, the BCP shall document the following:

|  |  |
| --- | --- |
| **Overview** | * Identify all critical information areas * LAN/WAN * Telecommunication * Applications and data * Identify potential disruptive events * Staff duties * Manmade events |
| **Scope and Plan Initiation** | * Describe operations (Contractor, State) * Create detailed account of work * List resources * Define management practices * Define roles and responsibilities * BCP Committee * Senior Management |
| **Business Impact Analysis (BIA)** | * Address three primary goals   1. Criticality prioritization   2. Downtime estimation (maximum tolerable downtime) not to exceed thirty (30) calendar days in the event of a catastrophic or natural disaster; not to exceed ten (10) calendar days in the event of other disasters caused by such things including but not limited to criminal acts, human error, malfunctioning equipment or electrical supply   3. Resource requirements * BIA Results * Assessment materials gathering * Vulnerability assessment * Quantitative loss criteria * Qualitative loss criteria * Information Analysis * Results and recommendation |
| **BCP Development** | * Recovery Plan * Continuity Strategy |

The Contractors shall support ongoing testing and validation of the BCP at a minimum, annually.

* + 1. **Disaster Recovery**

The Contractors shall support ongoing testing and validation of the DRP. The State will not acknowledge that recoverability exists until the plan is tested and it is able to verify the accuracy of the plan. The DRP must present:

1. Statement of actions taken before, during, and after a disruptive event
2. Procedures required to respond to an emergency, providing back-up operations during a disaster

At a minimum, the DRP must include the following:

|  |  |
| --- | --- |
| **Overview** | Goals and Objectives |
| **Data Processing Continuity** | Describe the consideration and ultimate selection of the following backup systems and facilities:   * Reciprocal (mutual aid agreements) * Subscription services * Hot site * Warm site * Cold site * Mobile site * Multiple centers * Transaction redundancy * Electronic vaulting * Remote journaling * Database shadowing * Backup and maintenance schedule |
| **Testing** | Describe the consideration and ultimate selection of the following:   * Testing checklist: how you will distribute the DRP for review * Structured walkthrough: how you will walk all business managers through the test plan review * Simulation: all involved people conduct practice sessions * Parallel: primary processing does not stop * Full interruption: cease normal operations |
| **Recovery Procedures** | * Describe Recovery Team duties * Implement the recovery procedures in a disaster * Assure critical functions operating at backup site * Retrieve materials from offsite storage * Install critical systems and applications * Describe Salvage Team duties separate from recovery team * Return primary site to normal operating conditions * Clear and repair primary processing facility * Describe Normal Operations Team, returning production from disaster recovery to primary * Address other recovery issues * External groups * Employee relations * Fraud and crime * Financial disbursement |

The Scope A Contractor is responsible for the disaster recovery of the hardware and operating systems of the EDW, including those supporting the SSDW database. The Scope B Contractor will be required to provide support when requested.

The Scope A Contractor must conduct a disaster recovery exercise once a year to confirm disaster recovery functionality and document the results with an action plan for correcting issues found during the disaster recovery exercise.

# **Compliance with Standards & Regulatory Requirements**

The Scope A and Scope B Contractors must ensure their systems comply with all State and Federal laws and regulations, including but not limited to the Americans with Disabilities Act (ADA), the Balanced Budget Act (BBA) of 1997 Subtitle H, and the Medicaid Managed Care rules, 42 CFR 438. The Contractor must also comply with FSSA Security Policies (<http://www.in.gov/fssa/4979.htm>).

* 1. **Privacy Standards**

The State of Indiana requires that all vendors comply with all current and future HIPAA privacy rules and the applicable privacy controls under Minimum Acceptable Risk Standards for Exchanges (MARS-E), as well as other State and Federal laws and regulations as they relate to protecting the privacy of and security over citizen information in the vendor’s safekeeping.

With regards to Privacy Standards, the Scope A and Scope B Contractors shall:

1. Uphold the State’s privacy guarantees as documented in Indiana Code 5-14-3: <http://www.in.gov/legislative/ic/code/title5/ar14/ch3.html>.
2. Comply and maintain with all HIPAA requirements for privacy and security in all activities related to the contract throughout the life of the contract.
3. Comply with the applicable privacy controls enumerated under the MARS-E Version 2.0 (and all subsequent versions).
4. Implement administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of the Protected Health Information (“PHI”) and Personally Identifiable Information (“PII”) that the Contractor creates, receives, maintains, or transmits on behalf of the State of Indiana.
5. Mitigate, to the extent practicable, any harmful effect that is known to the Contractor of PHI and PII obtained under this contract in a manner not provided for by this contract or by applicable law of which the Contractor becomes aware,
6. Ensure that any subcontractors or agents to whom the Contractor provides PHI or PII received from, or created or received by the Contractor, and subcontractors or agents on behalf of the State, agree to the same restrictions, conditions, and obligations applicable to such parties regarding PHI and PII.
7. Report to the State any security and/or privacy incident of which the Contractor becomes aware. Please see Section 4.2.d for additional details.
8. Train all staff on the privacy rules and requirements (it is the State’s expectation that the Contractor will develop and provide to its staff applicable training the successful completion of such training on no less than an annual basis; in addition, Contractor staff will need to undergo specific State-provided privacy and security training upon first hire and then on no less than an annual basis).
   1. **Security**
9. The State has robust and comprehensive security standards that permeate all levels of the organization. IOT has been tasked with establishing and maintaining these security standards. The security standards include assessing security risks, developing and implementing effective security procedures, and monitoring the effectiveness of those procedures. The following link introduces the IOT Information Security Framework that applies to the Scope A and Scope B Contractors: <http://www.in.gov/iot/files/Information_Security_Framework.pdf>. Note that IOT has additional operational and technical standards (see: <http://www.in.gov/iot/2394.htm>) with which the Contractor will need to comply.
10. In addition to the State standards outlined herein, the State requires that the Contractors support the Federal automated data processing requirements, such as 42 U.S. Code § 654a - Automated data processing​. The Contractors will also support and comply with new FSSA and IOT initiatives and directives regarding new or enhanced security measures. An example of such a measure is the employment of three-tier Protected Zones, as a means to isolate applications, data, and presentation services within the State network, including the EDW; these security measures necessitate enhanced access controls requiring two-factor authentication and employment of VPN’s, which may have an impact on system administration and operational use procedures. Note: the Informatica component is currently not in the Protected Data Zone but will be in the near future.
11. The Scope A and Scope B Contractors shall also adhere to the following Security Standards for the EDW:

* Use available Security Architecture assets in constructing EDW solutions.
* Comply with the State of Indiana security requirements found in IC 4-1-6, IC 4-1-10, and IC 4-1-11.
* Comply with the applicable privacy and security standards promulgated by the Centers for Medicare & Medicaid Services (“CMS”) enumerated under MARS-E, Version 2.0, including successor versions (note: MARS-E is based on NIST Special Publication 800-53R4 and contains enhancements defined by CMS), as required under 45 CFR §155.260.
* Comply with the HIPAA Privacy and Security Standards promulgated by CMS under 45 CFR Parts 160, 162, and 164.
* Comply with the applicable Internal Revenue Service safeguards requirements for Federal Tax Return Information as established in IRS Publication 1075.
* Comply with the applicable safeguard requirements for:
  + Substance abuse and mental health information established under 42 CFR Part 2.
  + SNAP information under 7 CFR §272.1(c) and within the [Federal Nutritional Service (FNS) handbook 901](https://fns-prod.azureedge.net/sites/default/files/apd/FNS_HB901_v2_Internet_Ready_%20Format.pdf) (including Chapter 9, Systems Security)
  + TANF information under 45 CFR §205.50 and IC 12-14-1.
  + Medicaid information under 42 CFR Subpart F and IC 12-15-27
  + Vocational rehabilitation information under 34 CFR §361.38.
  + Social Security Information (exchanged with the Social Security Administration) as defined under the Privacy Act of 1974.
* Comply with any other applicable Federal or State regulations and requirements.
* Comply with and uphold FSSA’s security standards found at: <http://www.in.gov/fssa/4979.htm>.
* Meet the HHSS IT Access Control Standard and MARS-E requirements for unique user identification (UUI). UUI access and security roles are assigned by FSSA Account Control in conjunction with IOT security administrators.
* Comply with IOT’s Information Resources Use Agreement (IRUA) found at: <https://www.in.gov/iot/IRUA.htm>.
* Meet the password control standard under MARS-E.
* Perform access authentication against the IOT-managed Active Directory (LDAP) service for all access (user and service accounts).
* Establish the system’s application access control (authorization) in compliance with MARS-E. The application access control must be based on unique roles (role-based security) defined for that user.
* Comply with IOT standards regarding encryption of all communications (FIPS 140-2).
* Encrypt all data stores to the FIPS 140-2 standard.
* Apply all security patches to the software and hardware it controls on a timely basis. Ensure that all hardware have relevant anti-virus and anti-spyware software to ensure a safe operating environment.
* Ensure operating system and application audit logs are generated in accordance with MARS-E (reference AU controls); audit logs are to be retained online for no less than 90 days and retained in accessible archive storage for no less than 10 years. In addition, Contractor will facilitate audit log integration with the State’s SIEM solution for event correlation, analysis, and alert functions.

The State excepts that the Contractor will secure all environments (e.g., development, integration testing, performance testing, user acceptance testing, production staging, and production) to no less than the MARS-E and State standards. As a matter of policy, production data cannot be used for testing unless such data is masked to the extent that any improper use or disclosure of such data would not constitute a breach under Federal and State laws and regulations. Further, Contractor’s design of the system must address the MARS-E and FSSA policy requirements for data minimization.

1. Please see Section 12 (Confidentiality, Security and Privacy of Personal Information) of Attachment B for additional compliance requirements.
   1. **CMS Certification Support (Scope A Only)**

The Scope A Contractor shall provide support for CMS certification in the following ways:

* 1. Compile reports and data required for the preliminary letter submission to CMS.
  2. Prepare required certification manuals, reports, forms, and documentation.
  3. Provide Contractor staff to assist State personnel in certification procedures, EDW operations, and information needed for the State to make certification presentations.
  4. Participate in CMS site visits including those at the Contractor’s operational facilities.
  5. Offer expertise to answer questions and locate and provide additional materials needed by the CMS review team.

The Scope A Contractor shall also provide additional certification assistance as needed by the State.

* 1. **Medicaid Information Technology Standards (Scope A Only)**

The Scope A Contractor shall comply with the MITA-directed data management, governance, and maturity model found at <https://www.medicaid.gov/medicaid/data-and-systems/mita/index.html>. Additionally, the Contractor shall work with the State and FSSA systems on improving MITA maturity with defined goals throughout the contract term.

* 1. **Other Technical Standards**

The Scope A and Scope B Contractors shall comply with:

* Data Warehouse best practices
* SDLC Agile best practices (see <http://www.in.gov/iot/2394.htm> for more information)

# **Project Management**

* 1. **Project Management Standards**

Decision governance structure and prioritization of M&O tasks and EDW enhancements will be set and managed by executive management and IT leadership. The Scope A and Scope B Contractors are expected to support the State in maintaining an efficient and effective decision governance structure by providing best practices and/or insights from previous experience maintaining and operating a system similar in size and scope as the EDW.

The Scope A and Scope B Contractors must each develop an overall Project Management approach that adheres to the guidelines established by the State. The Contractors’ project management approaches must also adhere to the IOT Project Review Policy, found at <https://www.in.gov/iot/files/project_review_policy_20110311_final.docx>. Compliance with the IOT Assistive Technology Policy (Section 508) must be done by submitting a Voluntary Product Accessibility Template (VPAT) if already available or completing the Assistive Technology Compliance Evaluation Form.

* 1. **Project Plan Components**

The Contractors shall each develop a Project Plan that addresses execution of their scope of work. The Project Plan shall be developed according to industry standards and best practices including the Project Management Institute’s (PMI) latest Project Management Body of Knowledge (PMBOK) and IEEE system and software processes where applicable. Once the Project Plan is approved by the State, the Contractor shall maintain and modify the approved Project Plan throughout the project by updating it to reflect the evolving schedule, priorities, and resources (i.e., it is a living document). At a minimum, the Project Plan shall include:

* Project Schedule with tasks and timeline for each enhancement and change request
* Project Organization and Resource and Staffing Plan, along with key personnel by name, title and job function, and whether the personnel are Contractor or subcontractor employees
* Configuration Management Plan
* Issue Management Plan
* Risk Management Plan
* Communication Plan
* Quality Assurance Measures to be employed throughout the project
* Descriptions of any tools that the Contractor will use to manage any component of the Project Plan
* MITA Maturity Improvement Plan, in conjunction with other FSSA systems (Scope A Only)

The Project Plan will be reviewed monthly, or at the State’s request, but the Project Schedule must be updated weekly. Any change to the Project Plan and Project Schedule will require State approval.

* 1. **Status Updates**

The Scope A and Scope B Contractors shall meet with the State monthly to provide project updates. The Contractors shall submit Weekly Status Reports that include updated risk logs with risk mitigation strategies, issues logs, and the latest Project Schedules and status updates. The Contractors shall review these reports during the monthly update meetings. The State may adjust the meeting frequency as needed, particularly when there is high degree of enhancement activities during a certain time period. Please see Section 5.6 for additional details about the management reporting requirements.

The Contractors shall also attend any ad hoc meetings requested by the State, including any meetings to provide executive project updates. If onsite attendance is necessary, the State will provide advanced notice. If presentation material is necessary, the Contractors shall develop the materials.

* 1. **Change Management and Control**
     1. **Integrated Change Control**

Performing integrated change control is the process of reviewing all change requests and approving and managing changes to evaluate the impact to time, cost, and quality. Having a well-defined and robust change control process are crucial to the EDW because of the multiple end user organizations involved. The Integrated Change Control process applies to the Scope A and Scope B Contractors and includes the following change management activities:

* The Contractor(s) will analyze, size, and provide proposal / cost estimates.
* The State will review estimates and either approve or disapprove changes based on estimates, priority, and other factors.
* The State will clarify priority and impact on existing enhancements and other change requests.
* The Contractor(s) will work with the State to update Project Control Documents.
* The Contractor(s) will work with the State to Communicate status to stakeholders.
* Both the State and the Contractor(s) will monitor outcomes.

Any Contractor requests for changes to approved deliverables, software, processing, procedures, manuals, forms, reports, and other approved project artifacts will follow the same change management process.

A critical trigger for change is policy changes. The Contractors shall assist the State in identifying policy changes at the local, state, and federal level that may impact the EDW. The EDW is expected to respond efficiently and effectively to the need for changes stemming from the ever-increasing complexity of the health care and social services environment brought about by policy changes at the local, state, and federal level. To stimulate and support innovative responses to the demand for change, each Contractor is required to actively participate in the change evaluation process and ensure that they analyze and understand the impact of all changes regardless of the originating party.

* + 1. **Change Management Process**

All proposals for change must be initiated through a change request. Any document resulting from the change request shall be binding upon agreement and signature of all associated parties. As a part of the change management process responsibilities, the Scope A and Scope B Contractors shall:

1. Adhere to the State’s change management process and requirements including but not limited to review and approval of change requests being released into production, including post-implementation review changes.
2. Develop an impact analysis as part of enhancement proposals that includes estimates for effort, resources, timing, cost, and impacts to system.
3. Adhere to the Information Technology Infrastructure Library (ITIL) standards associated with change management activities – Request for Change.
4. Submit a change request for any identified deficiency within three (3) business days or within a timeframe defined by the State.
5. Ensure that there is adequate planning to accommodate the State and any impacted vendors.
6. Maintain the change request process and ensure that the process and testing results comply with specified quality and timeliness standards.
7. Provide a weekly report that includes a listing of each outstanding change request along with the State’s requested documentation.
   * 1. **No Cost Impact: Routine Changes and Software Warranty**

Routine changes made in the ordinary course of the Contractors’ provision of services defined within the scopes of their contracts, such as changes to operating procedures, schedules, equipment configurations, shall be made at no additional cost to the State. Examples of routine changes that are included in the routine maintenance of the EDW solution and are to be performed at no additional cost to the State are:

* Activities necessary for the EDW to (a) function in compliance with Federal and State laws and administrative rules, the State Plan, State waivers, State policies, and the operating manuals in effect at the time of proposal submission and (b) to correct deficiencies found after implementation of modifications. The State expects the EDW to maintain continual Federal and State regulation compliance.
* Activities necessary to comply with new industry standards and operating rules associated with those standards.
* Activities necessary for the system to meet the contractual performance requirements.
* Activities necessary to ensure that data, tables, programs, and documentation are current and that errors are found and corrected.
* Data maintenance activities for updates to tables, including database support activities.
* Changes to scripts or system parameters concerning the frequency, number, sorting, and media of reports.

All change requests are considered either covered under the Software Warranty (See Section 3.3.3) or are no cost maintenance change requests unless the State approves additional compensation through the change control process. Determination of such status including Contractor dispute of status shall not delay the implementation of the change request.

For changes that are considered neither maintenance nor Software Warranty-covered, please see Section 3.3 (Enhancements).

The State is dependent on the Contractors for providing products and services that fully comply with the requirements and deliverables set forth in the contract. State approval of each Contractor’s work product associated with the responsibilities, requirements, and deliverables does not in any way relieve the Contractor from full financial responsibility should the Contractor’s work product not meet the State requirements, as set out in the RFP and the subsequent contract.

* 1. **Quality Management**

Quality Management describes the processes that will be used by the Scope A and Scope B Contractors in ensuring that deliverables are of satisfactory quality to the State. It is the responsibility of each Contractor to clarify with the State if uncertainty exists on the part of the Contractor with regard to applicable quality standards.

Each Contractor must ensure that it has an ongoing quality management process and that this process is designed to fully integrate with the efforts of the State and the other designated vendors. This will take the form of information sharing, regular meetings to review quality data feedback, and the establishment of common continual improvement goals and objectives. As a part of quality management responsibilities, the Contractors shall:

* 1. Develop quality assurance (QA) functions to regularly monitor performance and compliance of each business process managed by the Contractor. Assign staff to conduct the QA process who are independent of those performing the work.
  2. Work with the OV&V vendor on quality assurance as directed by the State.
  3. Develop an approved Quality Management Plan that focuses on being proactive and preventing problems rather than allowing problems to occur, and ensuring that work products and deliverables meet business objectives, end-user expectations, and defined requirements.
  4. Provide information about the impact of a system deficiency, the proposed action plan, and describe any appropriate workaround to appropriate State stakeholders.
  5. Provide a well-researched and clearly-explained root-cause analysis (RCA) for any issue including, but not limited to, a description of the problem, action plan to be taken, and measures that will be taken to prevent such a problem in the future. The written root-cause analysis (RCA) shall be provided within seven (7) calendar days of the resolution of the situation addressed by the RCA.
  6. Develop monthly QA reports that summarize the quality assurance activities performed during the month.
  7. Report results of any State-required audit within thirty (30) calendar days of the audit, providing the Contractor's detailed response including actions to be taken by the Contractor to effectively correct any negative findings.
  8. Implement Corrective Action Plans (CAPs) as needed to correct quality concerns.
  9. Complete all necessary corrective measures within ninety (90) calendar days of receipt of the audit findings or on a schedule agreed to by the State.
  10. Provide a report within ninety (90) calendar days of receipt of the audit or on a schedule agreed to by the State detailing the corrective measures undertaken to respond to audit findings.
  11. **Management Reporting**
      1. **Status and Performance Reports**

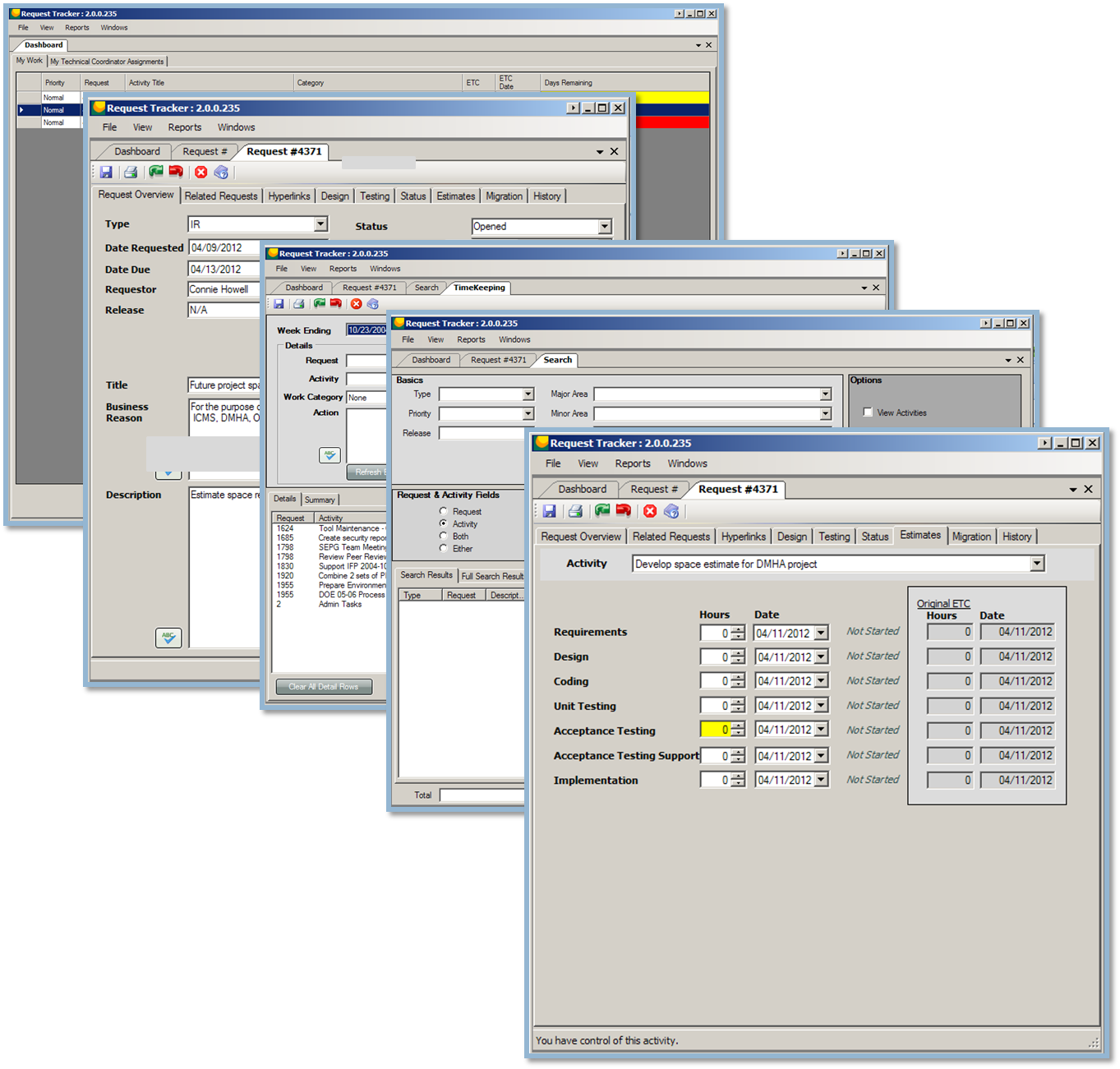
The Scope A and Scope B Contractors shall provide the following reports in the format and timeframe as agreed upon with the State:

1. **Weekly Status Report:** Report on the general health of the project-related work including:
   * Activities completed in the past week
   * Activities planned in the next four weeks
   * Project issues
   * Project risks and mitigation strategies
   * Maintenance and Operations phase specific:
     + Number of open helpdesk tickets/issues
     + Number of closed helpdesk tickets/issues
     + Milestone dates for on-going development activities
     + Planned application release and bug fixes

Reports are due by 5:00pm each Tuesday. If the Tuesday is on a State holiday, the report will be due the next business day.

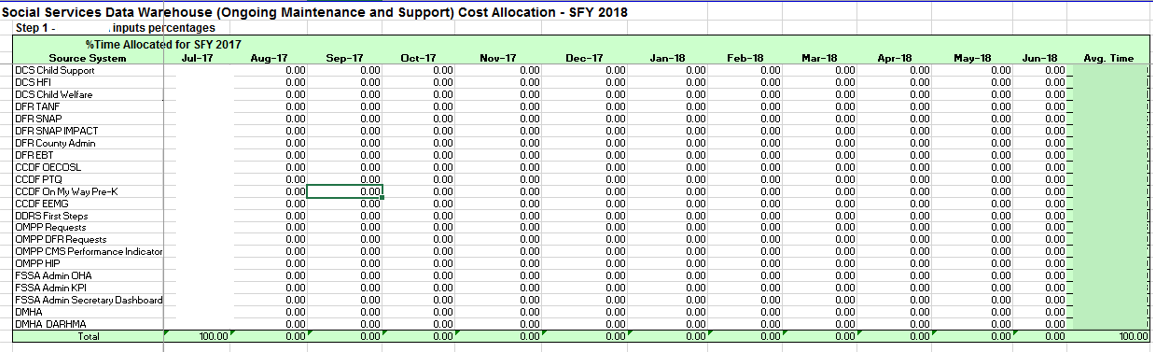
1. **Monthly Service Level Agreement Report:** Report detailing previous month’s performance in accordance with Service Level Agreements in Sections 9.2.3.a and 9.3.a. Monthly status reports for the previous month will be due no later than the 10th of the month. If the 10th is on a weekend or holiday, the report will be due the next business day.
2. **Quarterly Performance Report:** Report detailing deviations to SLAs for the past quarter and reasons for the deviations. Quarterly status reports for the previous quarter will be due no later than the 10th calendar day of the current quarter. If the 10th is on a weekend or holiday, the report will be due the next business day.
3. **Annual Summary Reports:** Annual reports for the previous year’s performance will be due by the end of the first month in the new year. If that day is on a weekend or holiday, the report will be due the next business day.
   * 1. **SSDW Task and Hours Tracking (Scope B Only)**

The Scope B Contractor is required to track their tasks and hours by staff for the purposes of cost allocation due to the multiple users of the SSDW. Currently, the incumbent vendor accomplishes this though the use of a homegrown tool called the SSDW Work Request Tracker. Multiple tabs are provided in the SSDW Work Request Tracker to capture and view the various aspects of a request such as Request Overview, Related Requests, Hyperlinks, Design, Testing, Status, Estimates, Migration and History. Below are a few screen shots from the Request Tracker.



The State may allow the Scope B Contractor to utilize their own tool instead, provided that all the fields of the SSDW Work Request Tracker are included, the alternate tool provides the level of transparency that the Request Tracker currently provides, and the output meets the reporting needs of the State.

The Scope B Contractor shall provide monthly reports to FSSA Finance for allocating SSDW expenses and SSDW IEDSS Conversion project expenses (professional services and environment related) across program areas served by SSDW in a given month. Below is a screen shot of a Monthly Time Allocation Report provided to FSSA Finance.



# **Training**

As a part of the training responsibilities of this contract, the Scope A and Scope B Contractors shall provide:

* **System Usage Training:** Establish and maintain a training plan to help users to effectively utilize the Data Warehouse. Provide training to users on the use of report and business intelligence portals. Training needs to be frequently or readily available for new employees to avoid lengthy wait times for new employees to be allowed into the system prior to official training.
* **SDLC Training:** Provide training on the SDLC methodologies for State staff who become involved in the SDLC process but are unfamiliar with the SDLC methodologies being employed by the Contractor.
* **Security Training:** Provide required security training.
* **Training for Updated Content:** Update training content to reflect any system enhancements.
* **Ongoing Training:** Provide refresher trainings for new and select incumbent staff, including updates based on minor modifications and enhancements to the system.
* **Needs Analysis:** Conduct a quarterly analysis of support tickets and create additional training to address any areas of frequent inquiries/issues.

The Contractors shall develop and maintain a comprehensive Training Plan for the EDW project detailing all required training activities for the Contractor and State staff. For each major enhancement that has new training requirements, the plan must be submitted no later than 90 days from scheduled go-live. The plan shall include:

1. Training methodology
   * Outline an agenda for proposed training sessions designated for each designated audience
   * Plans for remedial training and sessions needed to cover new or modified systems, business processes, subject matter, and policies which occur as a result of change
   * Plans for continuing education of State and Contractor staff and orientation training for new staff
   * Description of the professional background, skills, training experience, and knowledge of subject matter of proposed trainers
   * Evaluation criteria and description of how evaluations will be used to improve course content and presentations
   * Training schedule for all stakeholders including the proposed number of classroom style sessions for completion prior to implementation of the EDW
2. Examples of training materials
3. Process for operational inputs as a result of training including but not limited to issues identified through evaluation of service requests and provider outreach activities

The Contractors shall conduct all training in accordance with the State-approved Training Plan. Training Materials shall be submitted no later than 30 calendar days from each training session, unless otherwise approved by the State. Training materials shall be updated by the Contractors as needed to reflect system changes.

The Contractors shall submit an annual Training Plan Update for State review and approval within 30 business days prior to the end of the contract year.

# **Transition**

**Initial Service Transfer Period**

Prior to taking over the M&O services, the Scope A and Scope B Contractors shall work with the State to develop and manage plans for transferring services from the incumbent M&O for their respective Scope over a 60-calendar day period. As a part of the Transfer Period, the incumbent contractor will leave behind system documentation such as reporting/extract logic. Following the Transfer Period, the Scope A and Scope B Contractors will have sole responsibility for their requirements of their respective Scope.

**End of Contract Transition**

The State seeks to ensure that program stakeholders experience no adverse impact

from the transfer of the M&O services to either the State or to a successor contractor when the contract is complete or terminated early. In addition to the requirements in Attachment B Contract clause 13 (Continuity of Services), the following end of contract transition requirements apply:

* Twelve (12) months prior to the end of their base contract period, each Contractor must develop and implement a State-approved Transition Plan covering the possible turnover of the system or operational activities to either the State or a successor contractor. The Transition Plan must be a comprehensive document detailing the proposed schedule and activities associated with the turnover tasks outlined in the sections below. The plan shall describe the Contractor's approach and schedule for transfer of inventories, code/logic, training materials, SDLC artifacts, correspondence, documentation of outstanding issues, and operational support information. The information must be supplied on media specified by the State and according to the schedule approved by the State. Transition task requirements and approximate timeframes are provided in the sections below. The dates and data requirements in the following sections are illustrative only and do not limit or restrict the State's ability to require additional information from the Contractor or modify the transition schedule as necessary.
* Nine (9) months prior to the end of the base contract period, or any extension thereof, each Contractor must transfer the following information to the State or its agent on a medium acceptable to the State:
* A copy of non-proprietary systems or database(s) used. Please see the section entitled Ownership of Documents and Materials in RFP Attachment B (Sample Contract) for requirements regarding ownership of work products;
* Internal logs and balancing procedures used during the contract to ensure compliance with operational requirements; and
* Other documentation including, but not limited to, user, provider, and operations manuals, and documentation of any interfaces developed to support business activities between contractors.
* Five (5) months prior to the end of their contract or any extension thereof, each Contractor must begin training State staff or its designated agent's staff, in the operations and procedures performed by Contractor staff. Such training must be completed at least two (2) months prior to the end of the contract. The State’s transition of services to the new contractor will take place two (2) months prior to the end of the contract. The Contractor shall be available for the last two (2) months of the contract to provide support as requested by the State. This support will be invoiced according to the contractual hourly rates.
* Each Contractor shall appoint, with State approval, a Transition Manager with at least one (1) year of recent information technology experience to manage and coordinate all End of Contract Transition activities. Each Contractor shall submit their manager's qualifications as part of their Transition Plan. The Contractor shall not reduce operational staffing levels during the transition period without prior approval by the State. The Contractor shall not in any way restrict or prevent Contractor staff from accepting employment with any successor contractor. The State will work with the incumbent and successor contractors on the timing of any transition of incumbent staff. Each Contractor shall provide to the State, or its agent, within fifteen (15) business days of request all updated data and reference files, scripts, and all other documentation and records as required by the State or its agent.
* If the optional contract terms are exercised during transition activities, these activities shall shift to the next year. If the transition is halted due to the State exercising an optional term extension, invoices will not include transition manager costs after the State's date to halt transition activities until those activities resume (with the State's approval) in the following year.
* Transition costs will only include the transition manager’s costs. Any additional staff costs shall be covered by the M&O fees unless otherwise approved by the State. Non-staff costs shall be included in Attachments D and E’s Table 3 (Non-Staff Costs).

# **Staffing**

* 1. **General Staffing Requirements**

The Scope A and Scope B Contractors shall develop and adhere to an approved Staffing Plan that addresses their resource plans during all phases’ enhancements as well as the M&O services. Specifically, the staffing plan shall include the following:

* 1. Number, type, and categories or staff proposed
  2. Staff qualifications
  3. Staff work location
  4. Ongoing training requirements
  5. Plan for new or reassigned staff that includes:
* Recruitment of new staff
* Staff transition
* Training

During the contract term, the State reserves the right to require replacement of any Contractor or subcontractor employee found unacceptable to the State. Reasons for unacceptability include, but are not limited to, the inability of the individual to carry out work assignments or unsatisfactory job performance as determined by the State. The individual must be removed within two (2) weeks of the request for removal, or sooner if requested by the State, and be replaced within thirty (30) calendar days after the position is vacant, unless a longer period is approved by the State.

As a part of the staffing responsibilities, each Contractor shall:

* 1. Update the Staffing Plan annually for approval by the State.
  2. Perform criminal background checks for Contractor staff at no additional cost to the State. Submit for review results of criminal background checks for Contractor staff to the State. Note: for any Contractor staff that will have authorized access to Federal Tax Information (from DCS), IRS Publication 1075 has specific background check requirements that must be followed.
  3. Identify and immediately dismiss any employee with a background unacceptable to the State.
  4. Identify, report, and resolve performance issues for its entire project staff including but not limited to employees and subcontractors.
  5. **Key Personnel**

Key Personnel are Scope A and Scope B Contractors staff members deemed by the State as being both instrumental and essential to the Contractor’s satisfactory performance of all contract requirements. The following general provisions apply to Key Personnel for the Scope A and Scope B Contractors:

1. Employed full-time and have their primary workplace location within Indianapolis, preferably within fifteen (15) miles of the Indiana Government Center-South, 402 West Washington Street, Indianapolis, 46204. The Project Manager and Reports Manager positions shall be dedicated full time to the EDW contract.
2. Staffed by one and only one specific individual at any given point in time. That is, it is not permissible to have multiple Contractor staff perform one Key Personnel position’s responsibilities unless approved by the State.
3. If Scope A and Scope B are being delivered by the same Contractor:
   1. The same individual can serve as same Project Executive but must meet the requirements for both Scopes.
   2. The remaining Key Personnel must not be the same individuals for Scope A and Scope B.
4. Key Personnel are subject to approval by the State. As part of their Project Plan, the Contractor shall have named back up Key Personnel in the event of a prolonged illness or unexpected absence/departure who can be take over the vacated role within two (2) weeks of the Key Personnel’s absence or departure. The Contractors shall receive State approval before replacing any Key Personnel or back up Key Personnel. The Contractors may not make any temporary or permanent changes to Key Personnel or back up Key Personnel without at least four (4) weeks prior notice to the State and the State's prior written approval unless the replacement is due to termination, death, or resignation. The Contractors shall replace Key Personnel with personnel of equal or greater ability and qualifications, subject to approval by the State, regardless of the reason for replacement.

The Key Personnel positions and responsibilities listed below for the Scope A and Scope B Contractors are considered essential. The general responsibilities and minimum qualifications cover the State’s minimum expectations. To accommodate differences in organizational structures or if a Respondent believes that an alternative organizational design could improve service levels or decrease costs, the State will consider suggestions for alternative alignment of duties. Changes to the positions and responsibilities will only be allowed with written permission from the State.

**Project Executive (Applies to Scope A and Scope B).** Responsibilities:Ensures contract compliance and contract quality assurance. Oversees overall project planning and execution.

Minimum Qualifications:

* At least two (2) years of executive experience with enterprise application oversight
* At least three (3) years of experience on public-sector systems projects. If proposing for Scope A: at least one (1) year of experience with a health care. If proposing for Scope B: at least one (1) year of experience with social services, with additional healthcare experience preferred.
* At least two (2) years of experience with data warehouse projects
* At least two (2) years of experience with system implementation, maintenance, and operations
* Strong written and communication skills

**Project Manager (Applies to Scope A and Scope B).** Responsibilities:Perform contract administration and project management for the applicable EDW scope. Manages the M&O services team and ensures the service level agreements are sustained. Communicate with the State through formal correspondence. Perform quality assurance, in conjunction with the OV&V vendor. Escalate issues timely within the Contractor organization.

Minimum Qualifications:

* Five (5) years of successful (on time, within budget) project management experience for government or private-sector data warehouses projects of this size and complexity and in the area of the Scope (Scope A: health care, Scope B: social services, with additional health care experience preferred)
* At least two (2) years of experience managing the M&O and enhancements of data warehouse systems of a similar size and complexity to the EDW system
* Expertise in the principles of the Project Management Body of Knowledge (PMBOK®)
* Experience in Agile and Scrum SDLC methodologies
* Bachelor’s degree
* Effective communication and writing skills

Preferred Qualifications:

* PMP Certification
* Scope A: Previous experience with Medicaid, MMIS development, management of projects that required collaboration with other vendors, and management of projects of similar size and complexity desirable
* Scope B: Previous experience with management of social services and healthcare projects that required collaboration with other vendors and management of projects of similar size and complexity desirable
* Experience in Relational Database Management Systems and structured query tools

**Reporting Manager (Applies to Scope A and Scope B).** Responsibilities:Provide Federal and State Reporting Expertise. Certify Federal Reports. Review for quality assurance all new reports. Effectively use resources to generate a variety of reports, listings, and quality control metrics along with ad hoc reports. Manage and promulgate information reports and statistics policy and procedures. Project management scheduling and provision of resources. Communicate with the State through formal correspondence. Perform quality assurance. Plan and direct EDW work tasks. Work in conjunction with other project components to define data, storage, and retrieval requirements.

Minimum Qualifications:

* Five (5) years of successful state and Federal reporting experience for government or private-sector data warehouses projects of this size and complexity and in the area of the Scope (Scope A: health care, Scope B: social services, with additional health care experience preferred)
* Experience in Agile and Scrum SDLC methodologies
* Bachelor’s degree
* Effective communication and writing skills

Preferred Qualifications:

* Scope A: Previous experience with Medicaid, MMIS development, management of projects that required collaboration with other vendors, and management of projects of similar size and complexity desirable
* Scope B: Previous experience with management of social services and healthcare projects that required collaboration with other vendors and management of projects of similar size and complexity

**System Administrator** **(Applies to Scope A).** Responsibilities:Perform system administration. Ensure compliance with all system specifications. Project management scheduling and provision of resources. Communicate with the State through formal correspondence. Perform quality assurance. Plan and direct EDW work tasks. Work in conjunction with other project components to define data, storage, and retrieval requirements.

Minimum Qualifications:

* Five (5) years of successful system administration experience for government or private-sector data warehouses projects of this size and complexity in the area of the Scope (Scope A: health care)
* Experience in Agile and Scrum SDLC methodologies
* Bachelor’s degree
* Effective communication and writing skills

Preferred Qualifications:

Previous experience with Medicaid, MMIS development, management of projects that required collaboration with other vendors, and management of projects of similar size and complexity

**Platform Administrator (Applies Only to Scope A).** Responsibilities:Perform platform administration. Ensure compliance with all technical specification. Project management scheduling and provision of resources. Communicate with the State through formal correspondence. Perform quality assurance. Plan and direct EDW work tasks. Work in conjunction with other project components to define data, storage, and retrieval requirements.

Minimum Qualifications:

* Five (5) years of successful database administration experience for government or private sector health care data warehouses projects of this size and complexity
* Experience in Agile and Scrum SDLC methodologies
* Bachelor’s degree
* Effective communication and writing skills

Preferred Qualifications:

* At least two (2) years of prior experience working with a Teradata data warehouse infrastructure
* Previous experience with Medicaid, MMIS development, social services, management of projects that required collaboration with other vendors, and management of projects of similar size and complexity desirable
  1. **Other Essential Personnel Requirements**

The State requires that the Scope A and Scope B Contractors maintain other essential personnel who assist and support the Key Personnel. Duties of other essential personnel will largely be left to the determination of each Contractor, as each Contractor is best situated to make this determination.

For informational purposes, we are providing staff positions from the incumbent contractor teams in Attachment K Tab 8.

* 1. **Facilities**

The Contractor’s key personnel, at a minimum, must be located in a business facility within Indianapolis, preferably within fifteen (15) miles of the Indiana Government Center-South, 402 West Washington Street, Indianapolis, 46204. The decision of which staff will be required to be on site will be finalized with the State. The State does not allow remote work. Exceptions will be granted on a case by case basis. The Contractor is responsible for its facility, including but not limited to, all associated equipment, furnishings and security.

* 1. **Subcontractors**

The Contractor shall be fully responsible for managing all subcontractors used to execute the services of the Contract. The subcontractor(s)’s compliance with all requirements, terms, and conditions shall be the responsibility of the Contractor.

# **Service Level Agreements**

* 1. **Service Levels Overview**

Failure by the Scope A and Scope B Contractors to meet Service Level Agreements (SLAs) may cause the State to incur economic damages and losses, including but not limited to:

* Federal penalties
* Lost Federal match funding if certain implementation deadlines are missed
* Staff productivity losses due to downtime/poor response times
* Costs incurred due to any overtime necessitated
* Applicant time lost if interface is partially or completely down
* Impact on other State systems due to downtime or other processing issues
* Negative project impact and/or risk of negative audit findings due to lack of proper documentation or improper procedures
* Impact to timeline/budget due to unavailability of key staff resources and/or adequate resources on site

As such, compensation to each Contractor will be tied to the SLAs below. The Contractors will provide periodic (monthly and quarterly) updates on their performance in relation to the SLAs. FSSA will hold each Contractor accountable to these SLAs and failure to meet SLAs on a consistent basis could have a significant impact on compensation levels to the Contractor (please see Performance-Based Withholds in Section 9).

* 1. **Maintenance and Operations Service Levels**

The following are service levels for the M&O services. All service levels will be reported monthly to the State in a written report, per Section 5.6. Validation of the SLAs will be conducted by the State and/or the OV&V Contractor, and each Contractor must provide any supporting documentation requested as part of validation activities. The Contractors shall provide full transparency via designated Local Area Network (LAN) for the State staff to access all materials and work products associated with the EDW, including but not limited to staff time reports, staff status reports, staff calendars, agendas, meeting notes, charters, and SSDW Request Tracker.

* + 1. **Resolution Timeliness (User Requests/Incidents/Defects/Bugs)**

The table below provides a description of four severity codes that apply to items such as user requests, incidents, defects, and bugs. The severity code for each item will be assigned by the State, but may be adjusted based on discussions with each Contractor.

|  |  |
| --- | --- |
| **Severity Code** | **Definition** |
| **1** | A problem has made a Critical function unusable or unavailable, and no workaround exists. |
| **2** | A problem has made a Critical function unusable or unavailable, but a workaround exists.  *or*  A problem has made an Important function unusable or unavailable, and no workaround exists. |
| **3** | A problem has diminished Critical or Important functionality or performance, but the functionality still performs as specified in the user documentation. |
| **4** | A problem has diminished Supportive functionality or performance. |

The table below provides descriptions for each type of function.

|  |  |  |
| --- | --- | --- |
| **Function Type** | **Description** | **Examples** |
| **Critical** | These functions are critical to ensuring services are able to be provided to clients within the State of Indiana, in turn impacting User Agencies’ reputation. Extended failure will impact or damage clients and/or User Agencies’ reputation. | * Data submission to IMAR / T-MSIS for Federal (CMS) Reporting * Data extract submission to other vendors (Milliman, Truven, Optum Rx, etc.) to support their critical functions * Reporting and data analysis |
| **Important** | These functions are important to business productivity, but are not critical. | * Provision of user access to research capabilities * Storage of current and historical data in one single place. Used for creating analytical reports for business units throughout the State * Business intelligence * Identification of clinical episodes of illness and the services involved in their diagnosis, management, and treatment by the use of Symmetry |
| **Supportive** | These functions support productivity, but are not essential to business effectiveness. | * Improvement of data quality by providing consistent codes and descriptions. Flag or go to the source systems to fix bad data * Consistent presentation the organization's information * Simplification of the writing of decision–support queries * Integration of data from multiple sources into a single database and data model so that a single query engine can be used to present data quickly. |

Based on the severity codes listed above, the State will track the timeliness of the following four phases:

|  |  |
| --- | --- |
| **Phase** | **Definition** |
| Initial Response | Time taken from when the request/incident/defect/bug is originally reported by the State to when the Contractor acknowledges the request/incident/defect/bug by updating status in system. |
| Estimation Response | Time taken from when the request/incident/defect/bug is originally reported by the State to when the Contractor logs the estimated response time into the system. |
| Status Updates | Frequency of status updates logged into the system if there is an update to the request/incident/defect/bug. |
| Resolution Completion | Time taken from when the request/incident/defect/bug is originally reported by the State to when the Contractor implements the request/incident/defect/bug resolution and the end user has indicated the resolution is accepted. |

The required response time SLAs by severity code and phase for opened items are provided below. Response and resolution times are measured from when the request/incident/defect/bug is ~~received~~ reported by the State. (Note: All minutes and hours are calendar minutes and hours, not business minutes and hours.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Severity Code** | **Initial Response** | **Estimation Response** | **Delivery of Update (if there is an update)** | **Resolution Completion (unless otherwise approved by the State)** |
| 1 | 15 minutes | 2 hours | Every 2 hours | 4 hours |
| 2 | 30 minutes | 2 hours | Every 2 hours | 8 hours |
| 3 | 1 hour | 8 hours | Every 4 hours | 4 calendar days |
| 4 | 1 hour | Next business day | Weekly | 20 calendar days |

The SLA compliance threshold for response time is provided in Section 9.2.3.

Note: During the Initial Service Transfer Period (See Section 7 for more information), the State will work with the Contractors to build out the list of user requests and the expected service levels that may deviate from this resolution timeliness approach (e.g., password reset requests).

* + 1. **User Requests/Incidents/Defects/Bugs Resolution**

Each Contractor will report the number of items (user requests, incidents, defects, and bugs) resolved and remaining open items in a given monthly period, the amount of time each item has been open, and the amount of time originally estimated for each item’s resolution. The SLA compliance threshold is provided in Section 9.2.3.

* + 1. **Performance-Based Withhold**

1. **Thresholds for Compliance**

The table below provides the SLA thresholds that define compliance and is the basis for determination of loss of the performance-based withhold of the monthly M&O fee.

| **SLA#** | **Key Service Level Agreement** | **Threshold for Compliance (Reported Monthly)** | **Scope** |
| --- | --- | --- | --- |
| 1 | **System Uptime.** Maintain system uptime against a 24-hours per day, 7 days per week operating schedule, excluding maintenance time.  Note: Any maintenance exceptions should be either for a standing window (such as 2:00 A.M. to 4 A.M. on Sundays) or require written pre-approval from the State. | 99.99% uptime other than scheduled maintenance time | A |
| 2 | **Response Timeliness.** Provide response time compliance for user requests, incidents, defects, and bugs based on Severity Code timeliness standards outlined in Section 9.2.2. | 98% of total measured response times are met  For example, if there are 25 items opened in a month, that equates to 100 response time measurements (25 items X 4 response stages). The Contractor must meet the response times for at least 98% of these measurements in the month. | A, B |
| 3 | **Resolution Timeliness.** Resolve opened incidents in the required timeframes to the satisfaction of the State | 99% of opened incidents resolved on time | A, B |
| 4 | **Extracts Accuracy/Timeliness.** Conduct inbound and outbound file exchange in accordance with approved requirements accurately and on time | 100% of total measured inbound and outbound exchanges reports are accurate and completed on time\*  Any detected inaccuracies will be corrected on a schedule based on critical nature of the deviation as determined by the State | A, B |
| 5 | **Recurring Reports Accuracy/Timeliness.** Produce recurring reports in accordance with approved requirements accurately and on time  (Any unapproved deviation from timeliness and accuracy standards will be corrected on a schedule based on critical nature of the deviation as determined by the State) | 100% of reports are accurate and delivered on time\* | A, B |
| 6 | **Ad Hoc Reports Accuracy/Timeliness.** Produce ad hoc reports in accordance with timeline associated with the State’s assigned level of urgency – see Section 3.2.3.5  (Any unapproved deviation from timeliness and accuracy standards will be corrected on a schedule based on critical nature of the deviation as determined by the State) | 100% of reports are accurate and delivered on time\* | A, B |
| 7 | **Work Product Compliance.** Ensure work products comply with all standards identified in the RFP. (Any unapproved deviation from standards will be corrected within ten (10) calendar days of detection by vendor or State) | 100% compliance, unless otherwise approved by the State | A, B |
| 8 | **Security Incident Notification Timeliness.** Security Incidents shall be made known to the FSSA Privacy & Security Office and the Data & Analytics team within fifteen (15) minutes of when Contractor discovered the Security Incident.  Please see Section 12 of Attachment B for the definitions of “Security Incident”, “discovered”, and “discovery”. | 100% compliance, as measured by time elapsed from Security Incident discovery | A, B |
| 9 | **Privacy and Security Compliance.** Compliant with key federal laws and regulations (e.g. ADA, OSHA, Medicaid, SNAP, TANF, IRS, SSA, etc.), Indiana Law, MARS-E, and HIPAA requirements for privacy and security in all activities.  Please see Section 12 of Attachment B for the definition of “breach” and additional relevant information. | No incidents of non-compliance.  (Any incidents of non-compliance discovered by or reported to the State shall be cured by the Contractor within 30 calendar days upon notice by the State; satisfactory failure to cure would subject the Contractor to the Withhold established below and repeated failures to cure would be cause for termination of the agreement.) | A, B |

\* If an error is identified by a State or representative on a data extract or report, and it is confirmed by another State or another representative as an avoidable error, then that error will be sent to the D&A team and logged as an inaccuracy for the month.

1. **Withhold Amount and Conditions**

During each month of the contract, the State will withhold 10% of that month’s fees as listed in the contract. The State will evaluate service level noncompliance monthly. If two (2) or more service levels as defined in Sections 9.2.3.a are not reached for any given month, the performance withhold amount for that month will be at risk for forfeit unless all metrics are met in the next two consecutive months. At the State’s request, each Contractor shall perform a Corrective Action Plan (CAP) that outlines how the Contractor plans to correct poor performance.

If two or more instances of failure to meet an SLA (as detailed in above) are reported in two (2) consecutive months, the Contractor must prepare and submit a root-cause analysis and remediation plan to the State, the form and scope of which shall be agreed to by the parties.

1. **Other Service Levels**

The service levels in the table below are established in the contract but are not included in the determination of whether the 10% performance withhold mentioned above will be released for any given month. Instead, in cases of non-compliance with regards to the service levels in the table below, the Contractor shall perform a Corrective Action Plan (CAP) at the State’s request that outlines how the Contractor plans to correct poor performance. The State may also require the Contractor to prepare and submit a root-cause analysis and remediation plan to the State, the form and scope of which shall be agreed to by the parties. If there are multiple instances of non-compliance, the State reserves the right to pursue additional corrective actions or contract termination.

| **SLA#** | **Key Service Level Agreement** | **Threshold for Compliance** | **Scope** |
| --- | --- | --- | --- |
| 10 | Forward all communications received that should be handled by State staff within one (1) business day of receipt | 100% compliance, unless otherwise approved by the State | A, B |
| 11 | Notify the sender that communications have been forwarded to the State within one (1) business day of receipt | 100% compliance, unless otherwise approved by the State | A, B |
| 12 | Propose a replacement of key staff positions within 30 (thirty) calendar days of vacancy | 100% compliance, unless otherwise approved by the State | A, B |
| 13 | Provide monthly management reports within ten (10) calendar days of the end of the month being reported | 100% compliance, unless otherwise approved by the State | A, B |
| 14 | Submit status meeting agenda at least one (1) business day prior to meeting | 95% compliance, unless otherwise approved by the State | A, B |
| 15 | Provide status meeting minutes in specified format within ten (10) business days of the meeting | 95% compliance, unless otherwise approved by the State | A, B |
| 16 | Provide Service Level Agreement status reports in specified format at least one (1) business day prior to each meeting | 100% compliance, unless otherwise approved by the State | A, B |
| 17 | Provide annual summary reports in specified format | 100% compliance, unless otherwise approved by the State | A, B |
| 18 | Notify State of issues with reports within two (2) business days of detection | 100% compliance | A, B |
| 19 | Produce accurate documentation within ten (10) days of required change | 100% compliance, unless otherwise approved by the State | A, B |
| 20 | Respond to requests for additional information regarding reports according to deadlines agreed upon by Contractor and the State | 100% compliance, unless otherwise approved by the State | A, B |
| 21 | Notify the State of any issues with the User Interface within one (1) hour of detection of the issue | 100% compliance | A, B |
| 22 | Resolve a minimum percentage of defects by the initial fix | Threshold will be established with each Contractor during contract negotiations | A, B |

* 1. **System Enhancements Service Levels**
     1. **Thresholds for Compliance**

The following are service levels for Enhancements. These will be reported monthly to the State in a written report, per Section 5.6.

|  |  |  |  |
| --- | --- | --- | --- |
| **SLA#** | **Key Service Level Agreement** | **SLA Threshold for Compliance** | **Scope** |
| 23 | **Enhancement Estimates Timeliness.** Provide enhancement cost and time estimates within one (1) week from request submission | 95% compliance | A, B |
| 24 | **Enhancement Completion Timeliness.** Complete requested enhancements within estimated timeframes approved by the State | 100% compliance | A, B |
| 25 | **Defect/Bug Correction Timeliness.** Correct defects and bugs found during User Acceptance Testing per the timeframes agreed upon with the State at the time the defects/bugs are reported. The Contractor shall receive State approval on which bugs are allowed to be uncorrected before production. | Correct 100% of defects (Severity Level 1 and 2) and 95% of bugs (Severity Level 3 and 4) per the timeframes agreed upon with the State | A, B |
| 26 | **Budget Adherence.** The Contractor shall complete requested enhancements within the State-approved budget. The Contractor shall be responsible for any expenditures over the State-approved budget if no changes in scope were made. | 100% compliance | A, B |

* + 1. **Performance-Based Withhold**

During each month of the contract, the State will withhold 10% of that month’s invoiced enhancements fees. The State will evaluate enhancement-related service levels monthly for noncompliance. If two (2) or more service levels as defined in Sections 9.2.3.a are not reached for any given month, the performance withhold amount for that month will be at risk for forfeit unless all metrics are met in the next two consecutive months. At the State’s request, each Contractor shall perform a Corrective Action Plan (CAP) that outlines how the Contractor plans to correct poor performance.

If two (2) or more instances of failure to meet an SLA (as detailed in above) are reported in two (2) consecutive months, Contractor must prepare and submit a root-cause analysis and remediation plan to the State, the form and scope of which shall be agreed to by the parties.