Exhibit 1 Specifications

i. PURPOSE

As part of a broad-scale data modernization effort, OSDE intends to replace, update, and improve upon its current data management platform, the Wave (https://sde.ok.gov/wave-system), and overall modernization of data applications, which is operating as the core access point for a range of databases, software applications, tools, and reports. This RFP defines the requirements for a modernized data platform that will support OSDE in improving the efficiency, accuracy, and usability of the state's full array of education data collection, processing, and reporting activities and that will ultimately empower data-informed decision-making to enable improved student outcomes.

ii. Business Drivers

The following business drivers are the key factors that are the driving force behind this data modernization effort. Identifying these helps development teams understand how to shape and prioritize their work to align with the goals of OSDE stakeholders.

a. **Data Quality** - By improving Data Quality, SDE staff will spend less time reconciling or cleansing data, ensuring the correct data is available in the proper format at the right time to the right people or process. Data Quality will also increase confidence in reporting and movement of data from one system to another.

b. **Reporting Efficiency -** This business driver focuses on resolving challenges to reduce the burden on SDE and district and school personnel in reporting. Improving Reporting Efficiency will reduce the risk of missing reporting delivery timelines and support data-driven decision-making.

c. **Accessibility, Transparency, and Literacy** - This business driver focuses on increased and streamlined accessibility to datasets for internal and external stakeholders and data standardization.

d. **Modernization of Process and** Technology - The OSDE received a federal grant in 2012 to improve its data systems; however, SDE needs to modernize after a decade. The overarching goal of SDE's current data modernization efforts is to create a one-stop shop for collecting and reporting education data. The OSDE wants to improve our existing systems with a solution that supports informed decision-making by facilitating the collection, maintenance, and access to data in a responsible, efficient, and user-friendly manner.

e. **Privacy and Security** – This business driver emphasizes security and privacy as a requirement for planning next-generation systems and architecture. Ensuring privacy and security are at the forefront of all modernization efforts, from professional learning to technology to advancing interoperability, the OSDE can better protect student, teacher, and other stakeholder data successfully through measuring and performing activities and tasks aligned to this business driver.

iii. Goals of the Modernized Architecture

The following principles drive the architectural solution:

a. Improve the Timing and Frequency of Data Validation

- SIF Validations and OSDE Validations happen as soon as possible after ingestion
- Centralized point of validation
- Track vendor and OSDE Domain validation metrics
- Immediately report errors in the dashboard
- Define quality metrics at student, school, and district levels

- Prevent duplication and remove duplicate validations between Wave and Accountability systems
- Makes it easier to assess data quality early on

b. Scalable Data Pipeline

- Leverage cloud-native pipelining solutions that scale horizontally and automatically
- Support pluggable interactions with external systems (e.g., Student Testing Number matching APIs)
- Built-in retry on failure
- Integrated monitoring
- Collision detection
- Flexibility in vendor choices

c. Seamless Certifications

- SIF "current school year" fields and a method for tracking certified data will be utilized to differentiate rolled-over data in place of table-based sharing
- Horizontally scalable datastores are capable of filtering large datasets by year
- Districts will sign off on various snapshots (rollovers, federal reporting, etc.) throughout the year via a dashboard
- Reduced workload for data rollovers from one school year to the next
- Greater simplicity in the database, app, query, and report design

d. Data Quality Via Continuous, Instant Feedback to Local Education Agencies (LEAs)

- The Data System dashboard should have a notification system to alert district users of validation warnings and errors and facilitate communications between state and district users
- Display quality metrics at student, school, and district levels
- Display quality metrics by Student Information System (SIS) vendor
- More efficient response to data verification requests from districts
- Promote proactive action by district staff

e. Discoverable Data

- Expand data analysis and reporting tooling
- Favor data warehouse platforms that support documentation alongside data
- Implement a data dictionary for data elements to remove ambiguity in reporting and for those needing data for decision making
- Democratization of Data will enable flexible reporting for internal and external users
- Ability to manage multiple dashboards with varying access levels to represent ready-to-go, near-real-time data
- Visualization tools provide an accessible way to see and understand trends, outliers, and patterns in data

iv. Measures of Success - Goals

1. **Efficiency:** Centralize documentation of processes, rules, and data to improve the efficiency of the day-to-day working of the OSDE team
2. **Self-Serve Reporting:** Enable stakeholders with self-serve data to promote data-driven decision culture & timely delivery of data requests

3. **Automated Reports:** Create a centralized reporting repository to enable ease of automation for commonly requested data, increase confidence and reduce manual effort
4. **Accessibility:** Enable responsible access for educational stakeholders to applications, data & resources that promote transparency, visibility, and compliance
5. **UX/Usability:** Consistent user experience and message communication throughout the ecosystem that improves usability and learnability
6. **Data Input:** Enable districts to enter timely, high-quality data to promote reliable outcomes and reduce manual and duplicative efforts
7. **Error Detection:** Allow early data validations to avoid manual and duplicated work that will allow timely reporting
8. **Error Management:** Ability to handle errors to reduce the response time to fix an issue

v. Data Management System Core Functions

As a central component of the state's education data collection and reporting activities, the Modernized Data Management System will provide the state with more efficient and sustainable ways of performing the core functions currently administered within the WAVE and other incumbent systems, including:

DATA COLLECTION: The Modernized Data Management System will ingest data from the multiple Student Information System (SISs) utilized by Oklahoma schools and districts to centralize student enrollment, demographic, and accommodations data as well as ongoing attendance records, assessment results, graduation status, and other metrics generated through a range of education applications. This System will be used as a "sole source of truth" for the other Systems within OSDE.

DATA PROCESSING AND QUALITY MANAGEMENT: The Modernized Data Management System should support a wide range of current and future data processing activities that allow education stakeholders to validate data, perform quality control protocols, generate dataset certifications, reconcile records with previous data, and other required functions driven by regulatory statutes and emergent demands. The System should support the management of Data Validation Requests and Open Records Requests.

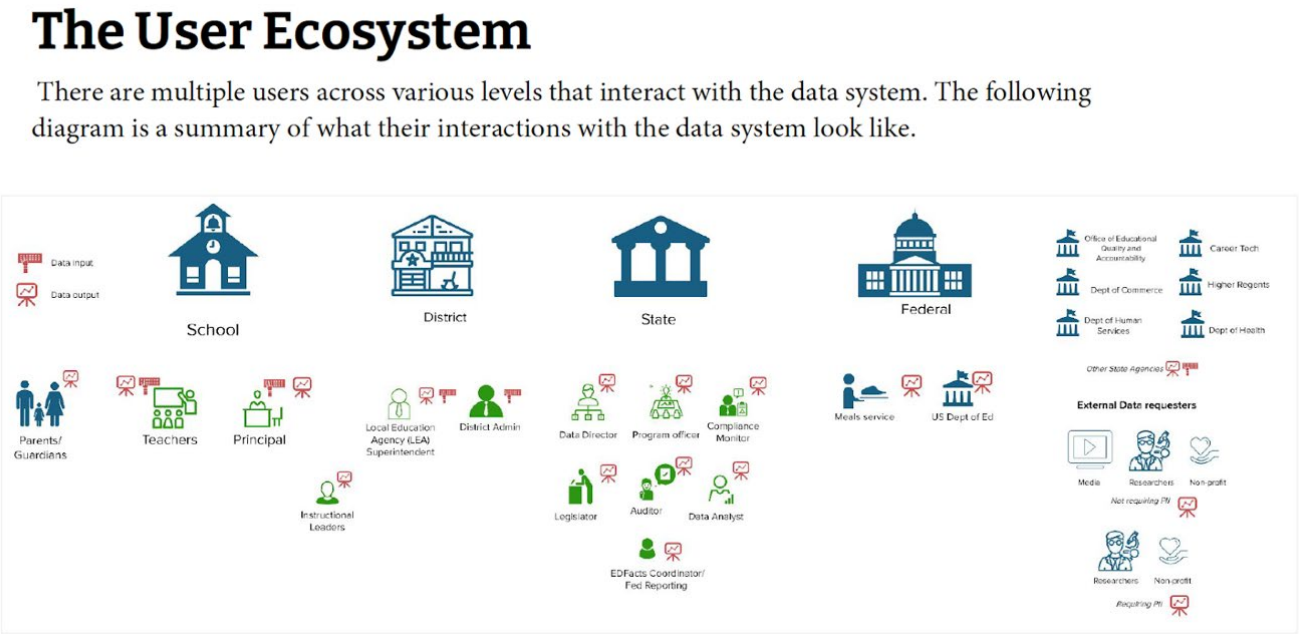
DATA REPORTING: Reporting is a critical function of effective education data infrastructure. The Modernized Data Management System will support the continued generation of multiple sets of required federal and state reports. It should expand the System's capacity to more efficiently query the data in the System and create customized reports at all data collection and aggregation levels.

LONGITUDINAL DATA MANAGEMENT: The Modernized Data Management System will enable the use of both current school year data and year-over-year information as required for enrollment and reporting functions, including improved support of the Rollover process for student information at the transition between the close of one school year and preparations for the next. In addition, the System should interoperate with the state's longer-term data warehousing solutions for managing multi-year longitudinal datasets.

vi. Sample User Profiles

Ultimately, internal and external users of OSDE are at the core of the design for the Modernized Data System. User profiles are developed to identify all the possible individuals that add, own, interact or consume data. The design of the Modernized Data System should account for a comprehensive User

Ecosystem that considers all users' struggles, potentials, and how they interact with the system appropriately.



OSDE has developed comprehensive and detailed user profiles that will be shared with the Supplier at project kick-off. Profiles include Direct Users who will log in to the system and access user interfaces, and Indirect Users who will not log in to the system but are critical consumers of data and reports generated within the system. These users include:

Direct Users

- Data Analyst
- Data Director
- District Administrator
- Local Education Agency (LEA) Superintendent
- EDFacts Coordinator (federal reporting)
- Auditor
- Compliance Monitor
- Program Officer

Indirect Users

- Teacher
- Principal
- Parent/Guardian
- Legislator
- External Data Requestor

vii. Key Constraints

The following constraints have been identified as most impactful to the overall project delivery.

a. Quality: Project quality measures how well your project deliverables meet expectations and requirements.

b. Technology: A technology solution that prevents the project from fully delivering the ideal solution to OSDE.

c. Budget: Cost constraints that may impact the project. (People, Software, Market Shifts & More)

d. Scope: Scope is typically defined in a range of business requirements or feature delivery. Refers to what can be delivered in a given time and budget.

e. Time: The project timeline is essential to project success. During execution, time elements are closely monitored (Overall Project timeline, Hours Spent, Project Phases)

f. Regulations: External factors can cause an impact to project timelines and costs. During execution, external factors such as regulations need to be monitored with the help of Subject Matter Experts.

g. People, Culture, and Processes: Embrace flexibility with people, culture, and process to manage project constraints effectively.

h. Internal Agency Communication: Cross-team collaboration or communication is essential for successfully managing project constraints.

i. Tech Debt: Tech debt is the implied cost of additional refactoring to be done later by the development teams when delivery is expedited over code quality.

viii. Current System Overview

The current data management system in operation by the state includes a user-facing component known as the Wave (https://sde.ok.gov/wave-system) and has the following functions and characteristics:

- Serves as a central data store for the state's education-related data
- Collects data from district systems (SIS) as well as from bulk uploads (assessment)
- Uses the SIF 2.0 data model and ZIS infrastructure for ingesting data from district systems
- Maintains unique student identification numbers for all students in the state
- Has built-in services to validate incoming data and manage student identifiers
- Supports a wide variety of reporting for various departments along with ad hoc reports
- Is currently hosted in Azure and leverages .Net stack (C#, SQL Server)

ix. Required Solution Overview

The next generation of data management systems for state education data will be required to embody the following design principles that support OSDE's goals of improving the efficiency, data quality, utility, and security of data collection, data processing, data reporting, and longitudinal data management. Outlined below include some examples of improvements and enhancements.

a. Modernized technologies and data processes

- External Integration: Support existing SIF standards and future protocols such as ReST and messaging
- Validation and Conflict Management - Data pipeline for step-by-step management of SIF records for quality and fixes
- Scalable Pipelines: Reusable pipelines for high volume consumption (attendance) and other data sources (assessments, demographics, HR, etc.)
- Notifications: Data quality dashboard and notifications to LEA/OSDE directly or through the SIF/SIS interfaces
- Reporting: Fast reporting and analysis, comparable between time periods and certifications
- Data Review: Qualified data available for review, certification, and management. Published for reporting promptly

- Usability: Data dictionary for discovery, data domain tuned for most common usages, exportable into required formats

b. Data Quality improvements

- Support data quality goals for all SDE departments in a common place
- Support data quality and processing for current SIF data, including high volume attendance records
- Support data quality and processing for non-SIF data such as assessment records, demographics, certifications, etc.
- Support best of breed 3rd party products through common integration
- Build a shared dashboard for:
  - Visibility of quality and conflicts
  - Resolution
  - Messaging and alerting
  - Student identifier management
  - Approvals and rollovers

c. Enhanced Reporting capabilities

- Review and certification of data by LEA stakeholders
  - Multiple certifications types, different school years, etc
- Support school and district rollovers in the same data stores
- Develop a reporting and analytics system that supports:
  - Hourly or daily versions of a reports
  - Comparisons between versions of a report
  - Compare certified and non-certified reports
  - Fast retrieval of reports once they are available
  - Analytic tooling from different vendors
- Data dictionary for discoverability and schema/data lineage

d. Advanced data security and privacy resilience

- Assuring legal compliance and supporting regulatory oversights
- Supporting quality and integrity measures for systems and data
- Empowering systems for next generation application of ML/AI and innovation
- Fostering trusted learning spaces that promote student academic success and exceptional educators
- Advancing interoperability and use of standards in processes and technologies
- Bringing cyber-risk awareness to education communities in an evolving digital world
- Operating in a manner to limit system access and minimize data footprints only for/during purposeful use
- Providing comprehensive and transparent disclosure of intent and purpose for information usage
- Supporting the rights and decisions of education stakeholders
- Enhancing student and other educational stakeholder safety and wellness while reducing risk of potential negative impact
- Building skills and knowledge to protect our systems and people
- Minimizing the target profile of educational assets to nefarious actors

x. Non Functional Requirements (NFRs)

Non Functional Requirements describe the measurable attributes of an architecture. They enable teams to directly assess whether the architecture's design will live up to the needs of the system. They also help development teams make decisions autonomously by setting priorities. The NFRs were collaboratively prioritized by OSDE and are listed in the preferred order.

- **Data Privacy**: The modernized system must comply with the OMES Data Privacy Policy. Oversight will be provided by the OSDE's Data Governance Board to help ensure that all PII is protected.
- **Security**: The modernized system must follow OMES security policies. Oversight will be provided by the state's Security & Privacy Workgroup to ensure that the system implements security best practices.
- **Maintainability**: The modernized system should be built to avoid unnecessary complexity and to limit the range of technologies used in order to help reduce long-term costs.
- **Usability**: Applications should comply with the Oklahoma UI/UX Standard.
- **Data Integrity**: The modernized system should enable timely data ingestion and process updates in near real time in order to ensure the most current data are visible in the system without delay.
- **Auditability**: User logins and report access should be logged and easily viewed by an administrator.
- **Performance**: SIF objects should be ingested and processed in less than 120 seconds and reports should take less than a minute to load.
- **Availability**: System should be up 99.9% of the time between 3am and 9pm Central Time.
- **Authorization**: The system should be able to configure access at both the user and role level to restrict users from accessing certain features and data elements to protect confidentiality.
- **Monitoring**: Server performance and job failures should be tracked and easily viewed by administrators.
- **Extensibility**: The system should be easily extended and allow new integrations, features, and data processing functionality to be quickly added.
- **Scalability:** The system should be able to dynamically adapt to changes in usage demands.
- **Resilience**: The system should notify appropriate users for system errors and failed processing jobs and gracefully recover when possible.

xi. Expectations for Suppliers' work with the State

The successful Solution will be developed and implemented in direct collaboration with the State of Oklahoma State Department of Education (OSDE) and the Oklahoma Office of Management and Enterprise Services (OMES). It will adhere to requirements for the long-term operation of the system by the State within established information technology and security infrastructure:

a. The technical components of the Modernized Data Management System must adhere to the OMES State Reference Architecture (https://oklahoma.gov/content/dam/ok/en/omes/documents/EnterpriseReferenceArchitecture.pdf) and related Information Services Policies and Standards https://oklahoma.gov/omes/services/information-services/policy-standards-publications.html

b. The Bidder's technical solution may propose any combination of custom developed, open source, commercial off-the-shelf (COTS), or software as a service (SaaS) components. The Bidder should clearly indicate these distinctions for each component in the submitted proposal. Regardless of product modality, once the System is operational at the end of the initial contract period, it will be managed and operated by OMES and OSDE, and the State will own all components. Intellectual property, ownership rights, and licensing, including provisions for source code escrow, will be governed by the terms and conditions of the State of Oklahoma as detailed in Attachment B: State of Oklahoma General Terms and Attachment D: State of Oklahoma Information Technology Terms.

c. The successful Supplier will work in direct collaboration with OMES and OSDE during development, configuration, pilot testing, and initial operation of the System. Bidders should plan for OSDE to play an active Product Owner (or equivalent) role in these processes, including regular collaborations of OSDE personnel with Bidder personnel on project teams

d. Most of the Supplier's meetings with OSDE and OMES will occur remotely via web conferencing; however, the Bidder should anticipate that the state may request a select number of in-person meetings.

xii. Major Activities

OSDE intends for the Modernized Data Management System to deploy through multiple major activities. The successful bidder should conduct various steps to allow adequate time for building and testing the system before any actions by OSDE to replace the current system components operationally. Bidders should provide a project plan including milestones aligned to the major activities as part of their submitted proposal.

Major Activities	Description
Activity 1: Requirements Validation and Architecture Confirmation	Work with OSDE to review technical and business requirements and validate the proposed solution architecture.
Activity 2: System Development and Configuration	Build system components for data collection, processing, reporting, and longitudinal management. Establish required systems integrations. Certify privacy, security, and performance level compliance.
Activity 3: Pilot Testing	Recruit pilot districts and agency stakeholders to utilize the Modernized Data Management System during a

	defined pilot period. Tune and update the system based on the outcomes of pilot district and agency experiences.
Activity 4: Parallel Deployment	Stand up the new system into production in a parallel deployment mode that should replicate data being managed in the WAVE and other legacy systems as they run in production simultaneously. Phase the migration of functions before the entire transfer of data and services to the Modernized Data Management System.
Activity 5: Full Operationalization	Complete data migration and technology transfer. Complete knowledge transfer and skills development of State staff in preparation for full operationalization within OSDE and OMES. OSDE and OMES assume permanent operations of the fully migrated Modernized Data Management System.

Section A: The Bid shall show the ability of the Bidder to meet or exceed the following Specifications:

A.1 Technology Specifications

A.1.1 Bidder's solution must align to the OMES State Reference Architecture (https://oklahoma.gov/content/dam/ok/en/omes/documents/EnterpriseReferenceArchitecture.pdf). Explain how the proposed components will meet the requirement. Provide evidence from current or previous contracts demonstrating the Bidder's ability to build and operate systems fully compatible with the state reference architecture.

A.1.2 Bidder's solution must adhere to the OMES Information Services Policies and Standards (https://oklahoma.gov/omes/services/information-services/policy-standards-publications.html). Explain how the proposed components will meet the requirement. Provide evidence from current or previous contracts demonstrating the Bidder's ability to build and operate systems that adhere to state information technology policies and standards.

While the Supplier should demonstrate and maintain adherence to the full range of the Policies and Standards, some standards have particular relevance to the Modernized Data Management System. Provide details of how the Bidder will meet requirements related to the following standards:

- Continuous Deployment Standard
- Custom Application Development for Agile Methodology
- Oklahoma UI/UX Standard
- State Data Platform Classification Standard
- State Data Platform Standard

- State Data Platform - Data Integration Standard
- State Data Platform - Data Sharing Standard
- Version Control and Hosting Standard
- Data Encryption Standard
- Data Privacy Standard
- Offshore Data Storage Standard

A.1.3 Technical Component Functional Requirements: Describe the proposed solution and complete the table of Functional Requirements in an Exhibit titled ***Exhibit 2 Technical Requirements***.

A.1.3.1 Technical Requirements. The Bidder must complete all requested information in Exhibit 2 Technical Requirements and submit it with the bid packet. Bidder must respond to each requirement defined in the Exhibit and indicate if the solution Meets or Does Not Meet the requirement.

A.1.3.2 Solution Overview. Provide a high-level summary of the Bidder's proposed solution, including descriptions of core components for Data Collection, Data Processing, Reporting, and Longitudinal Data Management and the data flow between the components.

A.1.3.3 Architecture Overview. Provide a high-level description of the Bidder's proposed system architecture, including the technologies proposed for core components, relevant data models, and protocols for data exchanges between the components and between the Modernized Data Management System and other State systems. The Bidder should submit a diagram of the proposed architecture in Section 8.2.

The Bidder's description should address the following:

- Whole system architecture of all interconnected elements
- Infrastructure components that support each of the applications and databases, including all specifications
- Elasticity of compute and data resources for capacity growth
- Network paths allowing for connecting to each of the components
- Methodology for access and control such as types of authentication and authorization
- Encryption methodologies for component integration and user access (in transit and at rest)

Explain how the Supplier will work with OSDE and OMES in the early stages of the project to validate and refine the proposed architecture to meet the requirements. Describe what additional information (that may not be provided in this RFP) the Supplier will need to determine the final Modernized Data Management System architecture, and discuss the proposed methodology for gathering additional specifications to complete the final architecture:

A.1.3.4 Product Roadmap. Provide information about the proposed solution's product roadmap, including short-term enhancements already identified and potential longer-term expansion of product capabilities being considered. The Bidder should submit the product roadmap in Section 8.2.

A.1.4 Technical System Non-Functional Requirements:

A.1.4.1 Software Development Methodology. Describe the software development methodology that Bidder will employ for the proposed solution. Include information about the Bidder's experience with the proposed methodology. Provide details for how the State should engage with the Bidder in the development process.

A.1.4.2 Data Privacy. The Solution must meet all required federal and state regulations related to education data privacy and the handling of personally identifiable information (PII), as detailed in the OMES Information Services Policies and Standards and ***Attachment D: State of Oklahoma Information Technology Terms***.

Describe the proposed approach to ensuring privacy requirements are met for the proposed solution throughout the successful Supplier's contract.

A.1.4.3 Data Security. The successful Supplier should maintain externally validated security practices that meet all state and federal regulations and policies, including established processes to audit/monitor for adherence as detailed in the OMES Information Services Policies and Standards and ***Attachment D: State of Oklahoma Information Technology Terms***.

Describe the proposed approach to ensuring security requirements are met for the proposed solution through the duration of the successful Supplier's contract.

The Bidder must complete the State of Oklahoma - Third-Party Vendor Security Assessment and submit in Section 8.2.

A.1.4.4 Maintainability. Bidder's solution should allow OSDE to maintain the technology, remain up to date with security updates, and make functional and non-functional enhancements to the system beyond the successful Supplier's contract period. Describe the Bidder's approach to the maintainability of the proposed solution.

A.1.4.5 Scalability. The solution should adequately meet the usage demands at all times, including during planning and unplanned surges of usage across the system. Describe how the Bidder plans to ensure that the system can scale as needed in response to variable demands on the usage of different components.

A.1.4.6 Usability. The Modernized Data Management System should be easy to use and intuitive for users with different skill levels and roles. Describe the Bidder's methodology for ensuring system usability. Provide specific examples, including screenshots of existing features or mockups of proposed features within the system that demonstrate the degree of usability.

A.1.4.7 Customizability. The proposed solution for the Modernized Data System should support custom configurations of product features and interfaces, data models, and custom software development, if necessary, to ensure that system components meet OSDE requirements. Describe the proposed process by which customization can be supported annually throughout the successful Supplier's contract period.

A.2 Project Management

A.2.1 Project Management Methodology. Describe the Bidder's proposed Project Management Methodology, including applicable information regarding specific industry-recognized frameworks and certifications.

A.2.2 Staffing Plan.

A.2.2.1 Provide a detailed staffing plan for the proposed solution development, testing, and deployment activities.

A.2.2.2 Include a table of key personnel, titles, roles, and estimated full-time equivalent (FTE) percentage dedicated to the project annually.

A.2.2.3 Provide the names, experience summaries for Key Personnel, and a summary of their responsibilities, including any subcontractors. Specific, required roles in the staffing plan are:

- Full-Time Program Lead
- Full-Time Project Manager
- Full-Time Technical Manager
- Quality Assurance Lead
- Privacy and Security Officer

A.2.3 Sample Schedule of Meetings. Provide a sample schedule of meetings, including meeting purpose and objectives, anticipated attendees, expected roles and responsibilities, meeting frequency, proposed outcomes, and artifacts for documentation. Describe the Supplier's approach to meeting tracking and management, including how OSDE and OMES will be engaged. Indicate the cycle of meetings specific to software development, including weekly and monthly product demos and project progress presentations.

A.2.4 Communications Plan. Include a sample communications plan, including proposed project management artifacts, progress reports to OSDE, and regulatory compliance documentation. Include information about who can produce, review, and update elements of the communications plan and on what schedule. Describe the communications tools Bidder proposes to facilitate collaboration, communication, meetings, and document management. Attach sample documents as relevant. Bidder should submit project communication artifacts in Section 8.2.

A.2.5 Risk Management. Discuss the known and potential risks involved in the proposed solution as may be identified from the information provided in this RFP and based on the Bidder's experience. Details relative risks to the State, risks to districts and schools, risks to the Supplier, and other pertinent stakeholders. Include possible mitigation strategies for identified risks. Provide a sample risk register for the proposed solution. The Bidder should submit a sample risk register in Section 8.2.

A.2.6 Quality Control and Assurance. Bidders should describe their approach to quality control and assurance for the proposed solution. Include information regarding specific industry-recognized methodologies, frameworks, and certifications, as applicable.

A.2.7 Architecture Governance. Bidder should acknowledge that the technical architecture of the successful Supplier's Solution will be included in the processes for information technology oversight to

be conducted by the OSDE Architecture/IT Governance Board. The Architecture/IT Governance Board meets no less than quarterly, with meeting agendas and schedules defined by the OSDE. The successful Supplier should attend.

A.3 Project Plan

A.3.1 High-Level Project Plan. Bidders should provide a high-level project plan for the proposed solution's development, testing, and deployment based on the requirements contained within this RFP. Describe the proposed major phases, milestones, and timelines. Attach a table view/GANTT chart of the proposed Project Plan. The Bidder should submit a high-level schedule in Section 8.2.

A.3.2 Project Roles and Responsibilities. Bidders should describe roles and responsibilities for major project activities that explain the proposed involvement of the stakeholders identified in this RFP, including the successful Supplier, OSDE, OMES, piloting districts, and SIS vendors. The Bidder should submit a RACI Chart in Section 8.2.

A.3.3 Knowledge Transfer Plan to OSDE/OMES. Describe proposed activities for developing the necessary knowledge and skill for OSDE and OMES organizations and personnel during the period of parallel deployment of the Modernized Data Management System and the incumbent WAVE platform and in transition for the full operationalization of the new system upon the completion of the successful Supplier's contract period.

A.4 Technical Support. The Bidder should provide the following aspects of Custom Service and Technical Support as part of their proposed solution. Describe the proposed approach for each required area, including relevant help desk platforms and supported modes of access by users with different roles, support ticket submission plans, incident management protocols, and escalation paths to resolution.

A.4.1 Level 1, Level 2, and Level 3 Technical Support to OSDE and OMES throughout the contract period.

A.4.2 Level 1, Level 2, and Level 3 Customer Support to users of the new Modernized Data Management System during the pilot period and the period of parallel deployment of the new System and the current WAVE platform.

A.4.3 Knowledge Base articles, tutorials, and user training materials.

A.4.4 Incident reporting and root cause analyses.

A.4.5 Regularly report usage metrics and support ticket categories, resolution times, and other relevant statistics.

A.4.6 Sample of a standard Service Level Agreement (SLA) for technical performance and technical support. The Bidder should submit a sample SLA in Section 8.2.

Section B: The Bid shall show the ability of the Bidder to meet or exceed the following Non-Mandatory specifications:

B.1 Analytical Tools. Describe any Supplier-built analytical tools or integrated third-party tools that may be included in the proposed Solution or available to include with the Solution on an optional basis that will support users in conducting advanced analyses, statistical operations, and other research queries from within the System. Do not include pricing for such options in this Bid section.

B.2 Ad Hoc Reporting. Describe capabilities of the proposed Solution for ad hoc reporting by users of different roles that would allow them to display and/or export the results of data queries that do not already exist as the output of a static or pre-programmed report. Provide information about the types and levels of data and the roles for which ad hoc reporting functionalities will be available

B.3 Additional Capabilities and Services. Describe other features, system capabilities, and services that the Bidder includes in the proposed solution.