

OSPI DATA MODERNIZATION PROJECT PART 1: FEASIBILITY STUDY PREWORK 2026

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Washington Office of Superintendent of
PUBLIC INSTRUCTION

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SECTION 1: OSPI DATA MODERNIZATION FEASIBILITY STUDY PROJECT INTRODUCTION

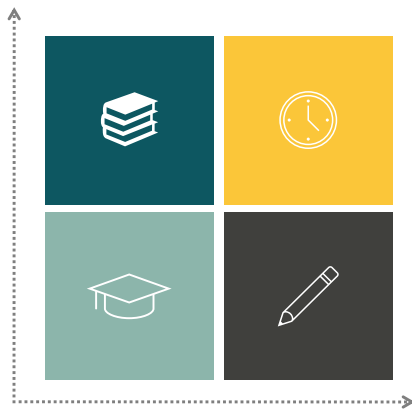
OSPI Data Modernization Feasibility Study Project

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Data Strategy & Student Information



Agenda / Concepts



Item 1 – Project Intent

Item 2 – Project Goals

Item 3 – OSPI’s Current State

Item 4 – OSPI’s Key Current-State Challenges

Item 5 – Questions to be addressed in Study

Item 6 – Feasibility Study Timeline

Item 7 – Keys to Success

Q & A



Item 1 – Project Intent

The study will assess the current state of OSPI’s Student, Educator, Fiscal, and Directory data systems, exploring their strengths, weaknesses, and integration gaps. It will also examine how the time and resources required to maintain these current systems compare to the efficiencies and benefits that a modernized system could offer with less effort. By analyzing the projected return on investment (ROI) for modernization—including cost savings and enhanced capabilities—the study aims to articulate the value of upgrading. This approach will help demonstrate how modernization can reduce maintenance efforts and unlock new efficiencies, justifying the investment in a new system.



Item 2 – Goals

This Feasibility Phase of Our Data-Modernization Project will:



Project Objectives

- Explore the scope of data modernization solution options from Microsoft
- Evaluate the capabilities of existing staff and identify training and staffing needs to support implementation and maintenance periods
- Fully describe the initiatives necessary to execute data modernization and long-term operational maintenance
- Develop the initial roadmap for the data modernization journeyPrepare use cases, data points, and funding needs to possibly submit a decision package to the 2025-2026 state legislature

Item 3 – OSPI’s Current State

- Four primary data domains are constrained by legacy applications that are siloed and lack the ability to interoperate
- Systems are in different stages of their respective lifecycles, which limits the ability to build or extend existing functionality
- Existing reporting capabilities are limited and highly manual. There are some data visualization capabilities using Tableau, but there are opportunities to consolidate tooling onto a single provider



Item 4 –OSPI’s Key Current-State Challenges

- Significant inefficiencies in managing and extracting data
- Linking data across domains, or data from domains to student data, is complicated and requires sizable time investment
- Constrained to being able to focus only on summarizing historical data with current resourcing
- Active, operational databases that continue to require adjustments each year
- Without normalized structure, existing inefficiencies grow and running data reports takes longer than before
- Flexibility and scalability to adapt to new legislative reporting requirements is limited

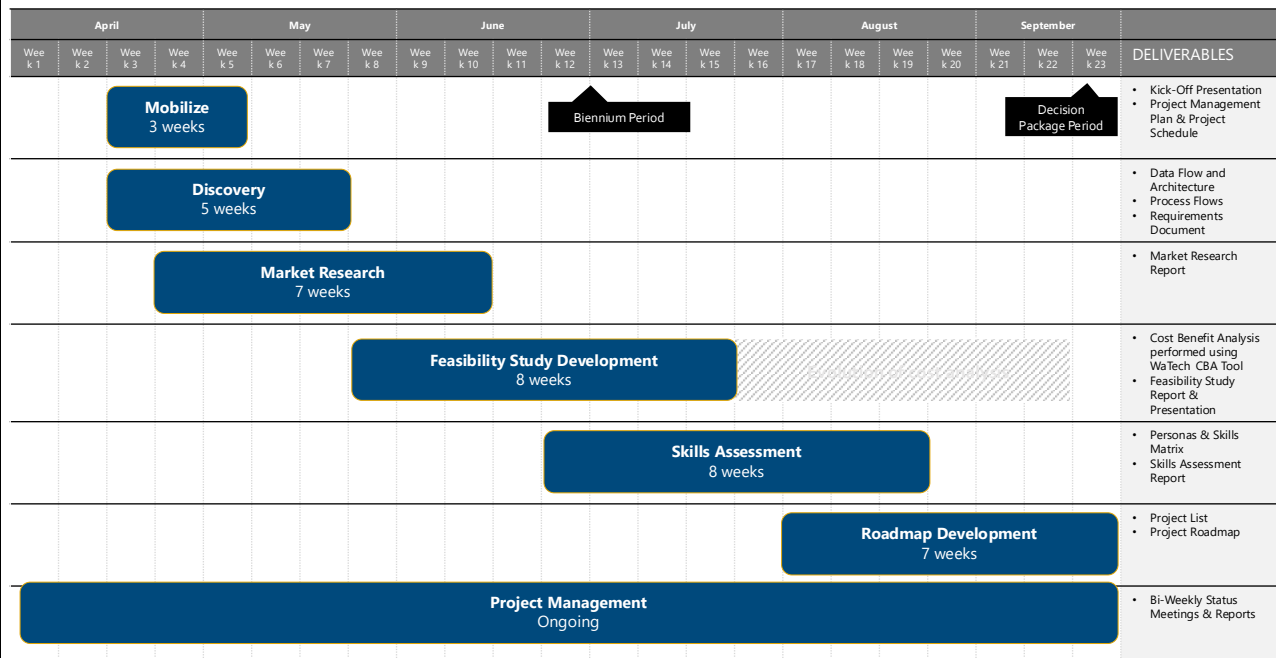


Item 5 – Key Questions to be Addressed in Feasibility Study

- **Technical Feasibility:** What are the technical requirements and challenges in transitioning these systems to a modern, cloud-based data lake solution?
- **Data Use Cases:** What are the key data use cases that the modernized system should support? How can data be used to inform educational policy, improve programs, and address equity gaps?
- **Cost and Resource Projections:** What are the projected costs, timelines, and resource needs for the cloud transition, and how can these estimates inform budget requests to the state legislature?
- **Governance and Compliance:** What governance structures and compliance measures need to be established to effectively manage the new system?



Item 6 – Feasibility Study Timeline



Item 7 – Keys to Success

The anticipated timelines and expected output of this project will require the following support from OSPI to ensure success:

- ✓ Support identifying candidates for peer state or peer agency benchmarking interviews
- ✓ Access to required subject matter resources at the outset of the project
 - ✓ Technology and Data leaders and supporting resources
 - ✓ Current Microsoft Account Manager
- ✓ Alignment on resource availability based on OSPI peak activity periods (e.g., student assessments, data aggregation activities)
- ✓ Early alignment with leadership on decision timing and path to confirm Microsoft fit prior to engaging additional vendors
- ✓ Build a pragmatic scaling model for Cloud service cost in close partnership with Microsoft and use real data from OSPI on their data sets

SECTION 2: DATA MODERNIZATION AND CLOUD ROADMAP: PROJECT MANAGEMENT PLAN

2.1.0 Introduction and Purpose

This Project Management Plan (PMP) provides references to the plans, processes, and procedures for managing and controlling the life cycle activities of the Data Modernization and Cloud Roadmap project. The information in this PMP provides the basis for communication and understanding among project team members and all other stakeholders.

2.2.0 Project Background

OSPI currently operates multiple data systems that are fragmented and hosted on aging local servers. These systems are constrained by legacy applications that are siloed and lack the ability to interoperate and present significant challenges in terms of maintenance, scalability, data integration, and timely access to information. Existing reporting capabilities are limited and highly manual and provide opportunities to consolidate tooling onto a single provider.

As part of initial efforts, OSPI conducted stakeholder engagements to identify key pain points and potential benefits of modernization. Stakeholder feedback emphasized the need for a centralized system capable of addressing current challenges, such as data silos and slow query response times. The preliminary research also highlighted the cost inefficiencies associated with maintaining outdated infrastructure, underscoring the financial advantages of transitioning to a cloud-based environment. Leveraging platforms like Microsoft Fabric is expected to streamline processes and provide a scalable solution for future needs.

2.3.0 Executive Summary

The Washington State Office of Superintendent of Public Instruction (OSPI) is initiating a project to explore the modernization of its data systems. The goal is to transition from aging, on-premises data infrastructure to a modern, cloud-based, data lake solution. This initiative is driven by the growing need for timely and accurate data to support decision-making in education. By transitioning to a cloud-based data lake, OSPI aims to improve operational efficiency, reduce technical debt, and enable advanced analytics capabilities. The feasibility study will serve as a foundational step in a larger effort to modernize OSPI's data infrastructure.

OSPI's vision is to establish a seamless, integrated, and scalable data infrastructure that empowers OSPI, school districts, policymakers, and educators with timely and actionable insights. By migrating to a cloud-based data lake solution, OPSI aims to eliminate data silos across Student, Educator, Fiscal, and Directory domains, enabling advanced analytics and AI capabilities. The envisioned system will offer real-time data access and seamless integration across various domains, enabling stakeholders to identify trends, forecast educational outcomes, and allocate resources

more effectively. This transition aims to foster a culture of data-driven decision-making within the state's education system.

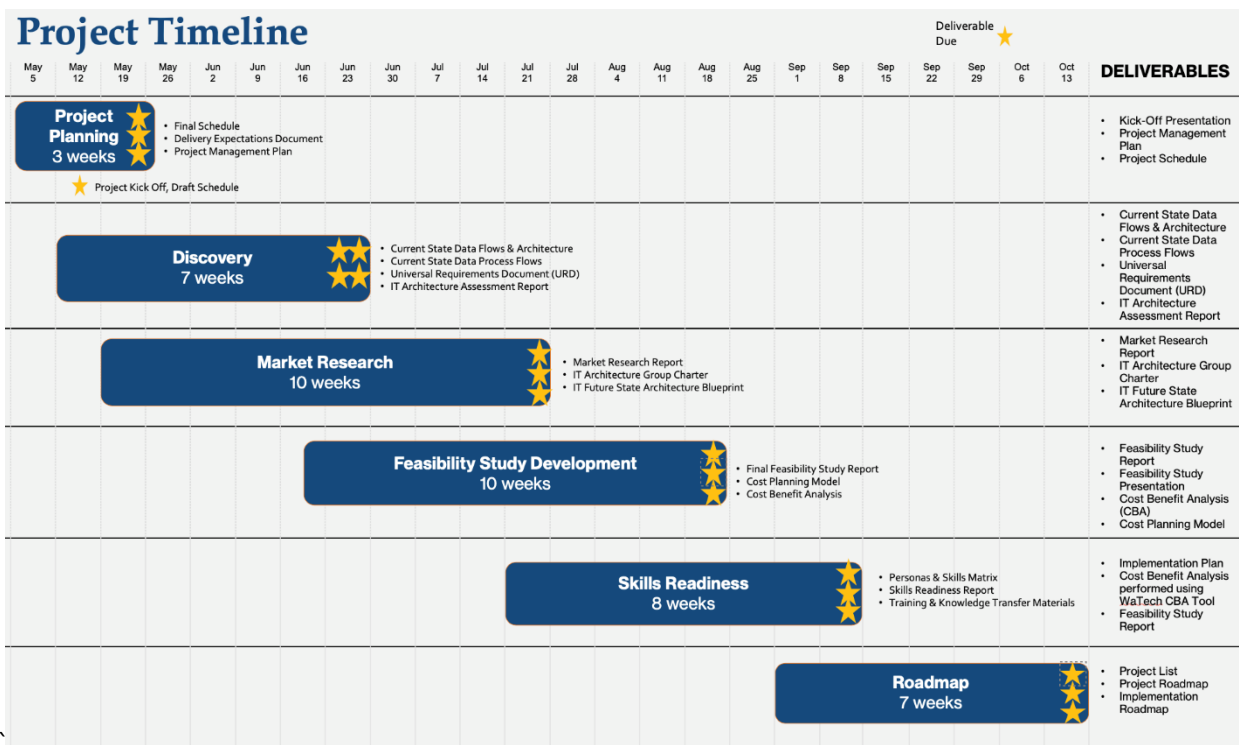
The primary goals of this project include:

1. Identify and Analyze Key Use Cases: Determine critical data applications to inform technical and staffing needs and address equity gaps.
2. Assess Technical Requirements: Evaluate existing gaps in current data and cloud infrastructure, the feasibility of modernizing OSPI's data systems, and confirm market capability to deliver data requirements.
3. Evaluate capabilities of existing staff and required upskilling and hiring needed to support implementation and maintenance periods.
4. Inform Legislative Budget Requests: Develop a compelling case for funding that clearly articulates the benefits of modernization for policymakers.
5. Prepare for Execution: Develop roadmaps for data modernization and cloud migration to enable OSPI to effectively staff and execute these long-term critical projects.

Anticipated Benefits include:

- Assessment of current data systems will target high impact upgrades and avoid wasted spend.
- The technical feasibility evaluation will help OSPI minimize risk and confirm cloud solution fit.
- Identification of data use cases will connect system design to real-world application and drive outcomes and streamline decisions.
- Cost and resource projections will enable smart funding and phased rollouts.
- Governance and compliance analysis will ensure that there is trust, transparency, and security within the future system.
- Skills analysis will help inform training and hiring plans to build internal capacity and reduce vendor reliance.
- Stakeholder engagement will boost adoption by ensuring the system meets user needs through the system design process.

The following timeline provides a high-level view of how the project will progress. Note deliverables are to be delivered upon completion to give the OSPI team as much time as possible to create their decision package. ISG will accelerate any timelines given the opportunity while still maintaining quality.



2.4.0 Project Management Plan Summary

This Project Management Plan (PMP) includes the processes and procedures that will be used to manage the project.

2.4.1 Governance Structure and Accountability

The purpose of this governance structure is to set the responsibilities and practices exercised by the governance bodies to provide strategic direction, ensure that objectives are achieved, appropriately manage risks and change, and ensure good stewardship of state resources.

The governance processes will facilitate effective communication of status, risks, issues, change requests, deliverables, and other information to support monitoring, performance evaluation, and decision-making by the governing bodies. The project has outlined the roles, responsibilities, and authority of each position involved in this project. The diagram below depicts those positions and represents the Core Team and the Supporting Stakeholders.

2.4.1.1 Governance Roles and Responsibilities

The roles and responsibilities of the positions engaged in the project are described below, as well as the roles' decision-making expectations.

- **Executive Sponsor:** The Executive Sponsor is the single point of authority and accountability for the project. They have the authority to make the final decision on any escalations made by the Business or Technology Sponsor.
- **Business Sponsor:** The Business Sponsor has the authority to make business decisions

impacting the project. The Business Sponsor and the Technology Sponsor will be partners in supporting the project. The Business Sponsor, together with the Technology Sponsor, will be presented with any issues and decisions that are escalated by the Project Manager, the Technology Sponsor, or any of the supporting Stakeholders.

- Technology Sponsor/Delegated Technology Sponsor: The Technology Sponsor has the authority to make decisions impacting the technical aspects of the project. The Business Sponsor and the Technology Sponsor will be partners in supporting the project. The Business Sponsor, together with the Technology Sponsor will be presented with any issues and decisions that are escalated from the Project Manager or any of the supporting Stakeholders.
- ISG Engagement Lead: The ISG Engagement Lead is responsible for the initial engagement of this project, as well as the final deliverables and outcomes. The ISG Project Manager will escalate any issues to the ISG Engagement Lead that may bring risks to the project. The ISG Engagement Lead may step in to assist the ISG Project Manager when needed.
- ISG Project Manager: The ISG Project Manager has authority over the day-to-day operations of the project. The Project Manager will triage matters escalated by project team members and stakeholders to make decisions on matters regarding the planning, executing, and reporting tasks/activities to complete the project's scope of work within the parameters set by the Statement of Work (SOW).
- Business Analyst: The Business Analyst, in coordination with the Project Manager, will be on point for executing many of the day-to-day project tasks. Any issues that arise, or escalations that may happen, will be directed first to the ISG Project Manager for attention. The Business Analyst may step in to assist the ISG Project Manager when needed.
- ISG Technical SME: The Technical SME, in coordination with the Project Manager, will lead all of the technical architecture, design, and solutioning options for the project.
- ISG Cloud Architect: The Cloud Architect, in collaboration with the Project Manager, will oversee all cloud roadmap components of this study, ensuring that the cloud adoption roadmap and architectural assessment outline the phased approach required to transition OSPI's data systems to a modern, cloud-based architecture.
- Additional Internal Stakeholders: The project will not be successful without the timely engagement of additional OSPI Stakeholders and SMEs to provide the detailed information needed to complete the project. These Stakeholders and SMEs will not be considered part of the core project team but will be assigned to specific tasks. They can be added later in the program with approval from the Technology and Business Sponsors.

2.4.2 Project Approach

ISG has successfully deployed a consistent methodology that is used for feasibility studies. The approach aligns to the WaTech Policy 121 Feasibility Study for completing the tasks and developing the required deliverables for a Decision Package submission, within a six-month timeline. Feasibility Study activities provide critical inputs to the other elements of this engagement across both the cloud roadmap and data modernization work. This approach is described in additional detail within the SOW.



2.4.3 Scope Management

For this project, the high-level scope with associated deliverables is documented in the Statement of Work (SOW).

For the purposes of this project, the Project Manager will present the latest information and any requested changes to the Technology and Business Sponsor and the ISG Engagement Lead for review in their weekly status meeting. Any proposed scope changes should be accompanied by an evaluation of any new risks that are introduced due to the addition or change in scope. The Technology and Business Sponsors, along with the ISG Engagement Lead, will determine if the change request needs to be escalated.

2.4.4 Schedule Management

The Project Schedule provides guidance on how the Feasibility Study will progress through the 6-month period from May 2025 to October 2025. The project will develop and maintain a Smartsheet Project Schedule documented throughout the life of the project, and progress will be reported in the status updates.

2.4.5 Financial Management

The budget for the IEP Feasibility Study is \$896,000 covering the expected six-month project duration. Any concerns or updates to this budget will be discussed in the weekly status meetings.

2.4.6 Resource Management

This Core Project Team is staffed by a combination of OSPI leaders and employees and ISG Consultants. The Core Project Team members are included in the Roster section of this document. It is expected that the Core Project Team will stay engaged throughout this project, and other resources will be engaged for specific tasks such as interviews, solutioning, or other business SME needs.

The OSPI PM will assign resources to the other tasks needed to complete this project according to the agreed timeline.

All OSPI resources must be approved by the Business and Technical Sponsor before the resource may begin any project work.

The ISG Engagement Lead, in consultation with the ISG Project Manager, is responsible for identifying and assigning any additional consultant resources.

2.4.6.1 Core Team Member Roster

Name	Project Role
Ted Loran	Executive Sponsor
Deb Came	Executive Sponsor
Eric Thornburgh	Delegated Technology Sponsor
Kris Hicks-Green	OSPI Project Manager
Dan Fussell	ISG Engagement Lead
Allison Lombardo	ISG Engagement Lead
Sean Dodson	ISG Project Manager
Tom Baker	Business Analyst
Thao Pham	Technology SME
Ed Acee	Cloud Architect

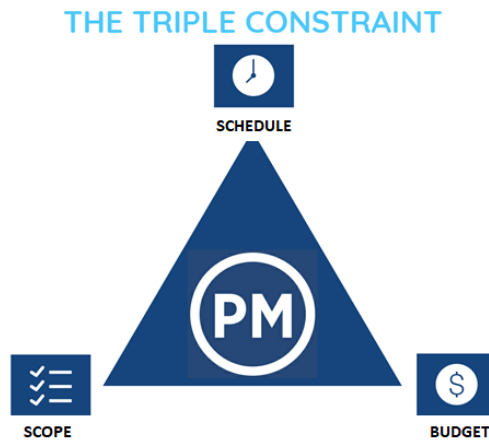
2.4.7 Communication Plan

This is the Communication plan that we will use throughout this project. The materials from the Bi-Weekly Leaders Status Meeting will be distributed to all Stakeholders listed in the Core Team Member Roster.

Meeting Title	Audience
Weekly Project Management Status Meetings - Receive PM support - Review the Status Report - Discuss Risks, Decisions, Address Questions	<ul style="list-style-type: none"> • Kris Hicks-Green (OSPI Project Manager) • Allison Lombardo (ISG Engagement Lead) • Sean Dodson (ISG Project Manager) • Tom Baker (Business Analyst) • Thao Pham (Technology SME) • Ed Acee (Cloud Architect)

2.5 Program Oversight Model

Effective oversight of this Feasibility Study may depend on a series of trade-offs and compromises to keep things moving towards successful completion. The triple constraint model helps all levels of governance know what trade-offs are going to work and what impact they will have on other aspects of the project. The project can trade between these three constraints; however, changing one of the constraints means that the other two will be impacted.



Think of the triple constraint as the governance boundaries in which the project operates and a framework that all project participants can agree on. More specific project and operational performance measures will be established to assess the overall success of the project.

For this project, the schedule is the least flexible aspect. To ensure deadlines are met, deliverables will be provided to OSPI immediately upon finalization at each stage. This approach allows the OSPI team to utilize them for their Decision Package as soon as they are available.

2.5.1 Project Timeline

To support these efforts, the project team will seek direct assistance from the OSPI team in specific tasks. This includes coordinating interviews to develop user journeys and validate system requirements.

2.6 Weekly Status Report Template

Example of Weekly Status Report Template

OSPI Data Modernization Feasibility Study & Cloud Roadmap

Highlights / Accomplishments		Project Status			
<ul style="list-style-type: none"> Conducted Kick-Off with full OSPI team (5/13) Finalized project schedule Conducted five interview sessions: <ul style="list-style-type: none"> SME interview (Group 1) SME interview (Group 2) SME interview (Group 21) Two Directors' groupings 	Scope ●	Schedule ●	Budget ●		
	Project Plan				
	Milestones/Deliverables	Target	Status	Comments / Next Steps	
	Mobilize and Discovery Phases:	-	●		
	Kick-Off Presentation	5/13	●		
	Project Schedule	5/23	●		
	Project Management Plan	5/23	●		
Current State Data Flow and Architecture	6/20	●	Data SME interviews and follow ups to be completed with Curtis Richardson, et al by 5/30		
Current State Process Flows	6/27	●	All critical documentation due to ISG by 5/23. ISG team to compile current state process flows from 6/6 to 6/27		
Requirements Document	7/8	●			
IT Architecture Assessment Report	7/8	●			
Planned Activities (5/19 - 5/23)	Issues, Risks (High/Medium/Low), Dependencies, Decisions				
<ul style="list-style-type: none"> Deliver Project Management Plan Deliver Project Schedule Continue discovery interview workshops to understand current state and desired future state Draft Use Cases 	Risks: <ol style="list-style-type: none"> (High) Scheduled interviews are lagging the target of 12 per week, impacting next steps in the project plan. Deadline for all calendared interviews is 6/6. (High) Azure Migrate utility not installed, will impact the initial discovery of the environment. (Medium) Completeness of OSPI documentation, lacking data flow and architectural artifacts. (Medium) Lack of benchmark peer candidates. 	Mitigation: <ol style="list-style-type: none"> Kris HG to schedule additional interviews per week to achieve average of 12 interviews. OSPI to install/configure tool by 5/23. Run discovery and upload reports and .CSV file(s) to project share by 6/9. KHG to provide contact. OSPI document owners to provide critical discovery documentation requests by 5/23, KHG to provide. Outreach made to Mississippi Dept. Of Education. Attempting to source other options from MSFT and WaTech. 	Decisions: N/A		

SECTION 3: OSPI CURRENT STATE SYSTEMS & ARCHITECTURE FLOWS

3.0 Summary

This Product Requirements Document details the Washington State Office of Superintendent of Public Instruction (OSPI) Data Modernization project, which seeks to replace outdated, fragmented on-premises data systems with a unified, cloud-based data lake. The initiative is designed to streamline data integration, improve analytics, and support more effective data-driven decision-making in the state's education sector.

3.1 Executive Summary

3.1.1 Purpose

This Product Requirements Document (PRD) outlines the specifications for the Washington State Office of Superintendent of Public Instruction (OSPI) Data Modernization project. The project aims to transition from aging, on-premises data infrastructure to a modern, cloud-based data lake solution, enabling improved data integration, advanced analytics capabilities, and enhanced data-driven decision-making in education.

3.1.2 Project Background

OSPI currently operates multiple data systems that are fragmented and hosted on aging local servers. These systems present significant challenges in terms of maintenance, scalability, data integration, and timely access to information.

3.1.3 Vision

OSPI's vision for data modernization is as below:

Our vision is to establish a seamless, integrated, and scalable data infrastructure that empowers OSPI, school districts, policymakers, and educators with timely and actionable insights. By migrating to a cloud-based data lake solution, the project aims to eliminate data silos across Student, Educator, Fiscal, and Directory domains, enabling advanced analytics and AI capabilities. The envisioned system will offer real-time data access and seamless integration across various domains, enabling stakeholders to identify trends, forecast educational outcomes, and allocate resources more effectively. This transition aims to foster a culture of data-driven decision-making within the state's education system.

3.1.4 Key Objectives

1. Transition from aging, on-premises data infrastructure to a modern, cloud-based data lake solution

2. Improve operational efficiency and reduce technical debt
3. Enable advanced analytics capabilities and data-driven decision-making
4. Eliminate data silos across Student, Educator, Fiscal, and Directory domains
5. Provide timely and accurate data to support decision-making in education
6. Enhance data security and compliance with regulatory requirements

3.1.5 Key Stakeholders

Architecture Team / Decision-Makers:

- Ted Loran, Project Sponsor
- Deb Came, Project Sponsor
- Eric Thornburgh
- Curtis Richardson
- Fred Purrington
- Paul Ferrell
- Daniel Whitney
- Kris Hicks-Green, Project Manager

3.2 Diagrams and Artifacts

You will find throughout this document diagrams we've developed to visualize key aspects of OSPI's data flows and systems, based on the information available within our two-week feedback review timeframe. In industry best practices, perfecting such comprehensive diagrams—incorporating full SME validation, iterative refinements, and querying systems for definitive data—typically takes 4-6 months for a team of analysts and diagramming experts. These diagrams we are providing can serve as valuable starting points for your internal discussions, offering high-level overviews that highlight data dependencies and potential bottlenecks. We recommend sharing them with your subject matter experts (SMEs) for annotations or comments directly on the diagrams, which can add context and accuracy when distributing the current diagrams amongst your team. Alternatively, treat them as initial drafts to build upon, iterating with your team's insights to create customized versions. This approach ensures immediate usefulness while allowing for ongoing improvements.

Our team developed these diagrams as an initial step to rapidly absorb and synthesize as much information as possible about OSPI's current data flows and systems within a constrained timeframe, enabling us to build a foundational understanding of your operational landscape. This knowledge directly informs our proposed data modernization plan, which is designed to deliver tangible value in the short-term (e.g., quick wins like process optimizations and immediate efficiency gains), mid-term (e.g., scalable integrations and enhanced data accessibility), and long-term (e.g., robust, future-proof architecture with advanced analytics and automation).

Ultimately, our goal is to pair these current-state diagrams with corresponding future-state versions once the modernization plan is finalized, providing OSPI with clear visual comparisons that highlight general improvements between current and future states.

3.2.1. Current State Architecture

3.2.2 Existing Systems Overview

OSPI currently operates multiple fragmented data systems hosted on aging local servers across the following domains:

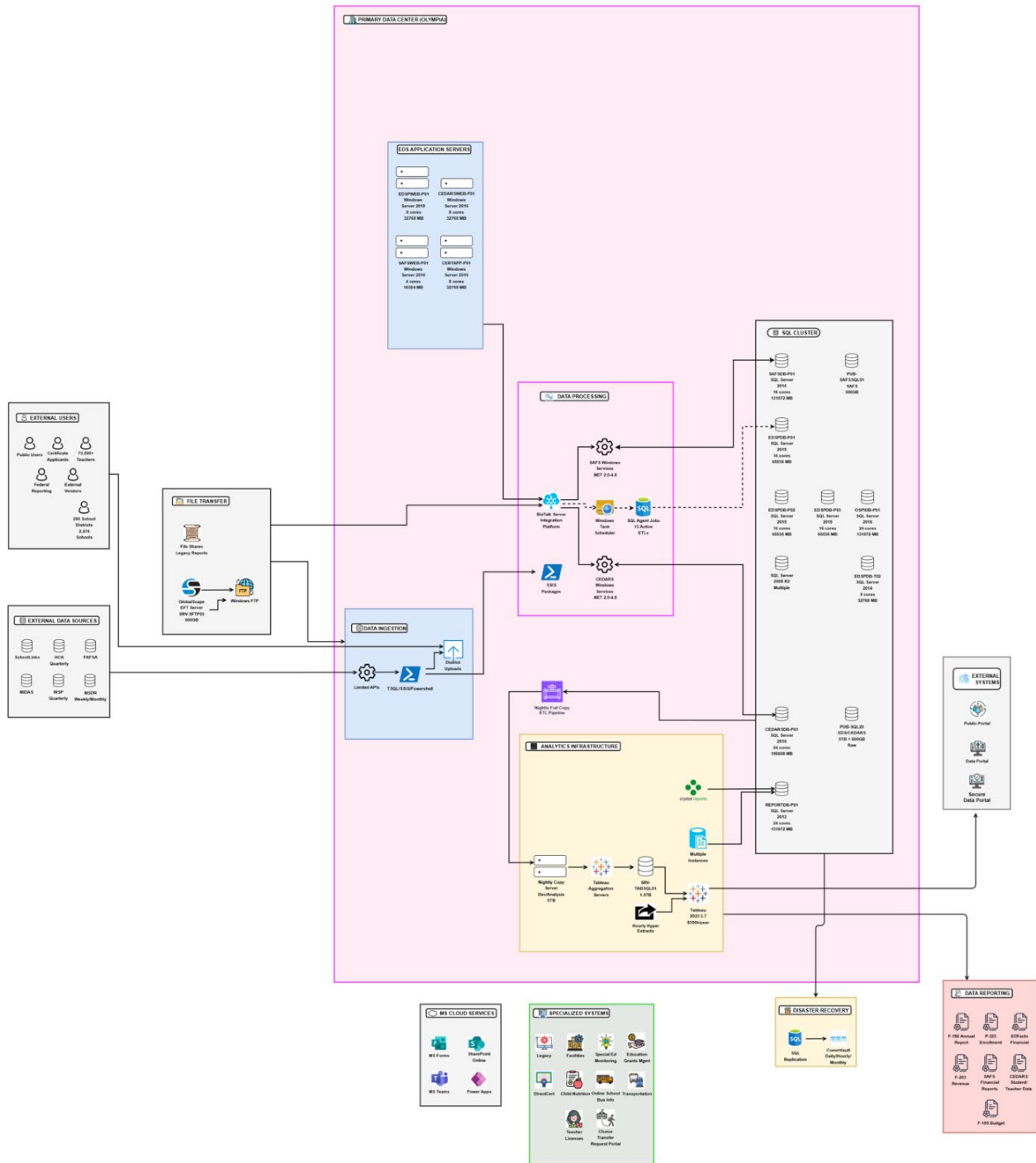
- Student Data Domain
- Educator Data Domain
- Fiscal Data Domain
- Directory Data Domain
- Facilities Data Domain (not an official domain, but has their own architecture and team)

Domain	Description	Major Systems
Student Data	Educational data related to students, including demographics, enrollment, assessment results, and program participation	CEDARS
Educator Data	Data related to teachers and staff, including certifications, assignments, and qualifications	CEDARS, eCert, SAFS
Fiscal Data	Financial data related to education funding, allocations, and expenditures	SAFS
Directory Data	Reference data for schools, districts, and educational organizations	EDS, EMS
Facilities Data	Not officially a data domain, but data is different enough in the context of data modernization to include here.	ICOS

3.3 Current Technology Stack

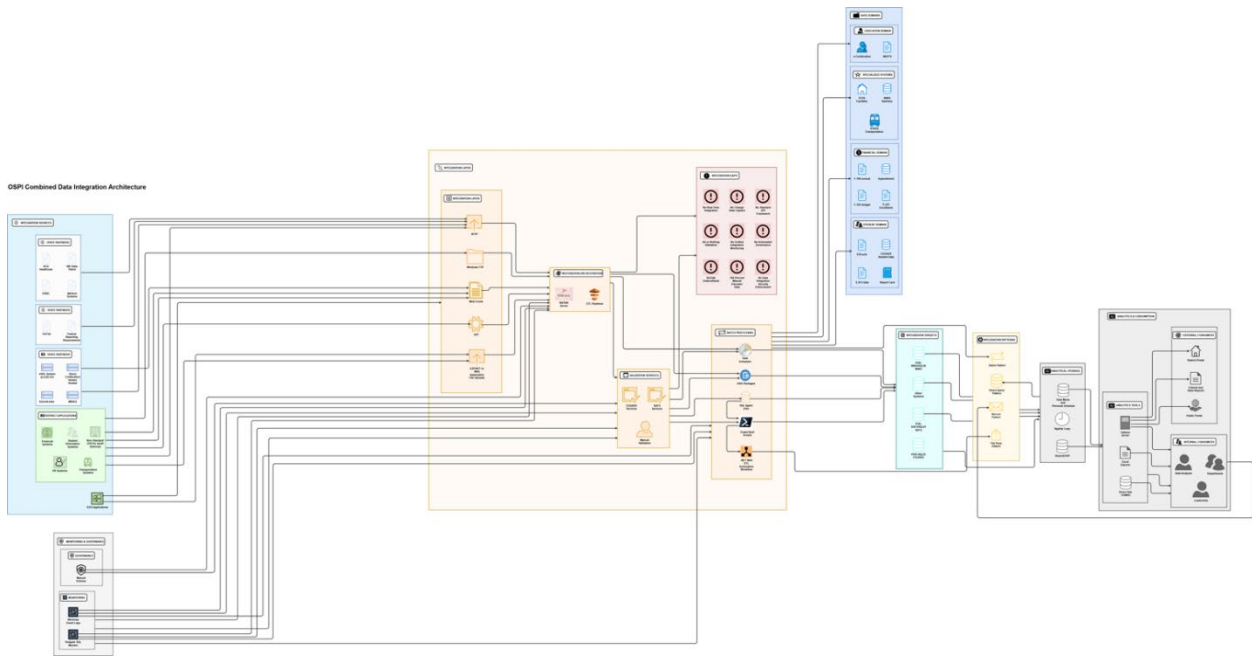
3.3.1 Systems Architecture

This diagram depicts OSPI’s internal system infrastructure, including perimeter security, application servers, databases, and other services. It shows data paths from external sources through firewalls, SQL Agent jobs, and clusters to endpoints where data rests. Key elements include authentication, data center, and disaster recovery components. This provides a high-level view of system architecture for IT planning or security audits. SMEs can note updates or corrections to reflect current configurations.



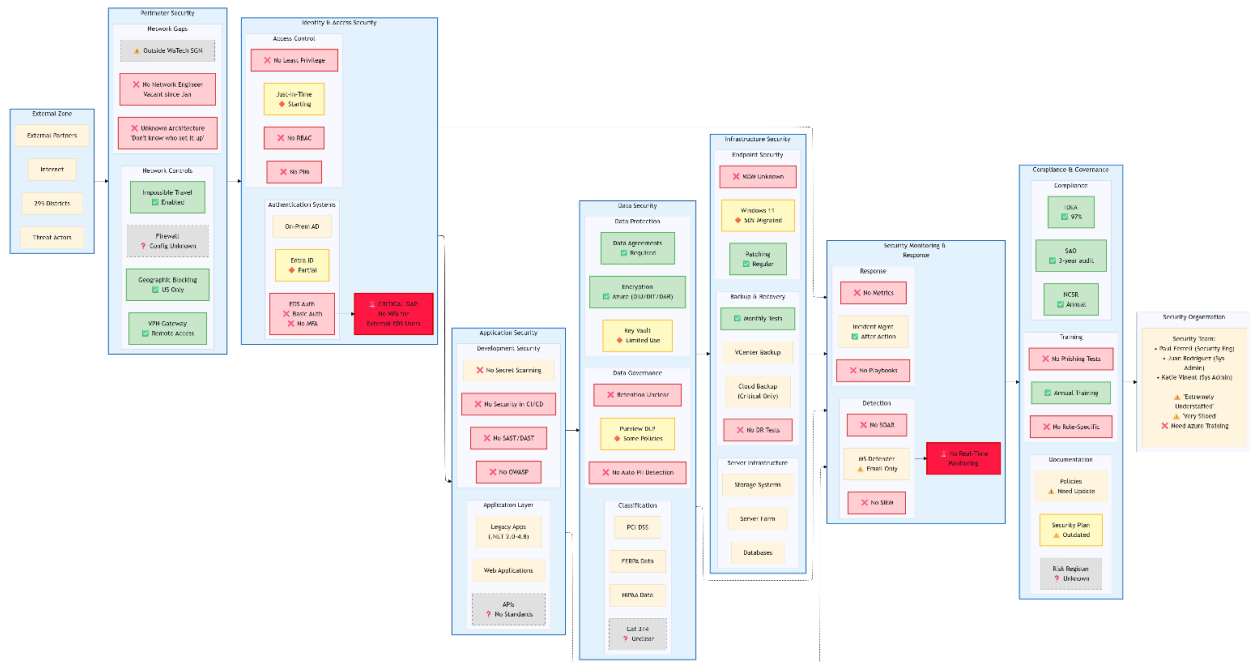
3.4.2 Data Integration Architecture

This diagram maps OSPI’s data integration (in the center) within the full data architecture, detailing pipelines from sources like CEDARS and district uploads through transformation layers, databases, and outputs. It showcases ETL jobs, integration patterns, and missing capabilities revealing integration complexities. Ideal for pinpointing bottlenecks in data movement and automation needs. Encourage SMEs to annotate with real-time workflow details or corrections.



3.4.3 Current Security Architecture

This diagram assesses OSPI’s security posture across categories like perimeter gaps, identity management, data protection, and compliance, using color-coded risks (e.g., red for high issues like no DR tests or outdated policies). It identifies vulnerabilities in areas such as encryption and monitoring, with recommendations for improvements. Serve as a tool for prioritizing security enhancements in modernization efforts. SMEs should comment on current mitigations or add context to risk levels.



3.5 Current Pain Points and Limitations

Initial feedback has identified challenges such as data silos, slow data request response times, and maintenance issues with outdated infrastructure. However, our in-depth analysis reveals these issues are symptomatic of deeper, systemic challenges that significantly impact OSPI's data tools and processes.

Critical Operational Impacts

The current environment forces staff to spend a significant amount of time on manual data processing tasks, with critical processes like enrollment verification that could take up to several hours daily instead of being automated. Federal compliance reporting that should take hours requires weeks of manual effort, creating a constant state of reactive crisis management.

Systemic Technical Debt

OSPI currently maintains many data silos across disparate systems, many running on a decade or older infrastructure with varying vendor support. Critical systems like CEDARS experience incremental failures during peak periods, forcing districts to repeatedly resubmit data. The absence of master data management means the same student or educator may have different identifiers across systems, making accurate tracking and reporting highly difficult. Legacy point-to-point integrations create a brittle architecture where changes to one system cascade into failures across multiple domains.

Human Resource Constraints

The technical complexity has created dangerous single points of failure, with critical knowledge residing in individual staff members. When key personnel are unavailable, entire processes halt. The lack of self-service capabilities means program managers must wait days or weeks for simple data requests, severely limiting their ability to make timely, data-driven decisions.

Data Quality and Governance Gaps

Without standardized definitions or validation rules being enforced and automated, districts submit inconsistent data that requires extensive manual cleaning. The absence of data lineage tracking means errors discovered in reports cannot be traced to their source. Multiple versions of truth exist across departments, leading to conflicting metrics.

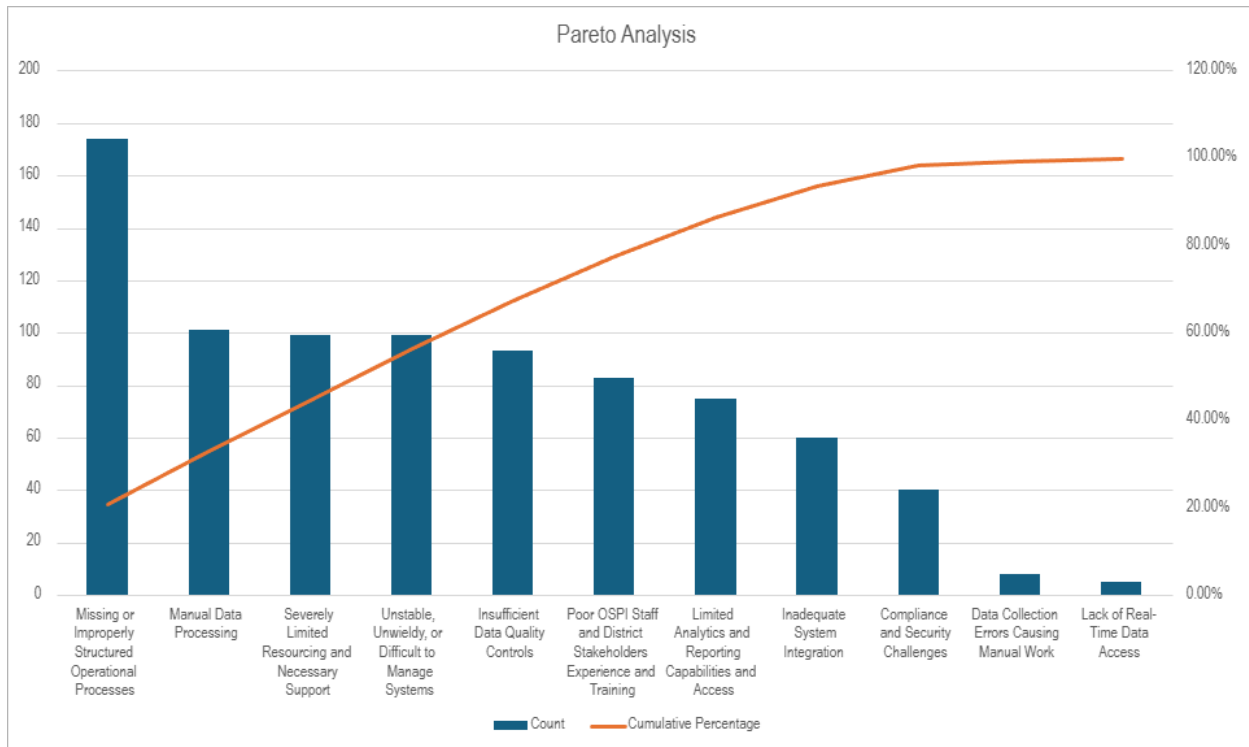
District and School Impacts

School districts face significant burdens, including duplicate data entry across multiple systems, unclear submission requirements, and limited visibility into their own data after submission. The lack of real-time validation means districts discover errors only after funding calculations are affected. Rural districts with limited technical resources are disproportionately impacted by complex submission processes and poor system performance.

Strategic Limitations

The current infrastructure prevents OSPI from meeting modern expectations for data-driven education policy. Legislative requests that should be answered in hours can take weeks to fulfill, if done thoroughly and more accurately. The inability to perform cross-domain analytics easily limits understanding of how different factors impact student outcomes.

We documented over 800 issues during our Discovery Phase across OSPI collectively. The below graph shows an analysis of the 800+ issues that we discovered.



This analysis shows that if we solve the first six Issues Categories of:

1. Missing or Improperly Structured Operational Processes
2. Manual Data Processing
3. Severely Limited Resourcing and Necessary Support
4. Unstable, Unwieldy, or Difficult to Manage Systems
5. Insufficient Data Quality Controls
6. Poor User Experience and Training for OSPI Staff and District Stakeholders

It would solve over 77% of OSPI's issues. With the number one priority being "Operational Processes Missing or Improperly Structured."

Here are the definitions of each category:

Missing or Improperly Structured Operational Processes - Issues where business processes lack proper definition, automation, or governance, leading to inefficient operations, unclear responsibilities, or inconsistent execution. This includes missing workflows, undefined procedures,

and poor change management.

Manual Data Processing - Issues where data handling requires human intervention to move, transform, or process information between systems or stages, rather than automated workflows. This includes manual data entry, file transfers, calculations, and reconciliation tasks.

Severely Limited Resourcing and Necessary Support - Issues where the resourcing is so inadequate that no matter how the processes and tools are improved, there is still going to be resourcing gaps that will still prevent the team from performing at optimal levels.

Unstable, Unwieldy, or Difficult to Manage Systems - Issues related to system reliability, performance, user interface design, or maintenance complexity. This includes frequent outages, slow response times, outdated technology, and systems requiring excessive technical expertise to operate.

Insufficient Data Quality Controls - Issues where systems lack automated validation, standardization, or error detection mechanisms, leading to inconsistent, incomplete, or inaccurate data. Normally leading to manual rework and multiple manual validation processes by multiple teams.

Poor OSPI Staff and District Stakeholders Experience and Training - Issues where system interfaces are not intuitive, users lack necessary skills or knowledge, or adequate training resources are unavailable. This includes complex workflows, missing documentation, and insufficient support for users to effectively utilize systems.

Limited Analytics and Reporting Capabilities and Access - Issues where users cannot easily analyze data, generate insights, or create reports due to system limitations, lack of tools, or restricted access. This includes inability to perform cross-domain analysis, generate custom reports, or access data for decision-making.

Lack of Real-Time Data Access - Issues where data is not available immediately when needed, requiring users to wait for manual data pulls, batch processes, scheduled updates, or manual refreshes. This prevents timely decision-making and responsive operations.

Compliance and Security Challenges - Issues related to meeting regulatory requirements (FERPA, CEDS, state laws), protecting sensitive information, maintaining audit trails, and ensuring proper access controls. This includes both technical security gaps and process compliance challenges.

Inadequate System Integration - Issues where systems cannot share data seamlessly, requiring manual bridges, duplicate data entry, or preventing unified workflows. This includes lack of APIs, incompatible data formats, and siloed applications that do not share automated data integration.

Data Collection Errors Causing Manual Work - Issues where incorrect, incomplete, or improperly formatted data submissions create downstream work to identify, communicate, and correct errors. This is distinct from data quality controls as it focuses on the manual effort required to remediate collection mistakes.

3.6 Requirements

Below is a selected group of requirements that will be used to assess vendors in the Feasibility Study. The full list of requirements that were developed during the Discovery Phase of this project can be found in the Requirements Traceability Matrix.

3.6.1 Functional Requirements

3.6.1.1 Data Ingestion Requirements

Req ID	Requirement Description	Priority
FR-DI-01	The system shall provide automated data ingestion pipelines with self-healing capabilities to eliminate manual data loading	Must
FR-DI-09	The system shall provide high-performance bulk data upload supporting 300+ simultaneous district submissions	Must
FR-DI-11	The system shall support multiple input formats (WSIPC, PowerSchool, custom Excel) with automatic standardization	Must
FR-DI-13	The system shall maintain automated nightly delta syncs across all assessment systems	Must
FR-DI-20	The system shall eliminate manual file pushing through EDS after district uploads	Must

3.6.1.2 Data Storage Requirements

Req ID	Requirement Description	Priority
FR-DS-01	The system shall maintain a centralized data lake with immutable data storage	Must
FR-DS-02	The system shall provide comprehensive data dictionaries and metadata management	Must
FR-DS-14	The system shall provide adequate memory and storage to prevent crashes during peak usage (e.g. movement of 7+ TB data ingestion at one time, petabytes of at rest storage)	Must
FR-DS-24	The system shall implement version control to prevent data override conflicts	Must
FR-DS-39	The system shall handle files larger than 2GB at data collection and at storage	Must
FR-DS-47	The system shall optimize CEDARS database sizing and storage for best performance and cost	Must
FR-DS-50	The system shall prevent CEDARS crashes through adequate storage	Must

3.6.1.3 Data Processing and Quality Requirements

Req ID	Requirement Description	Priority
FR-DPQ-01	The system must support ETL/ELT processes to transform raw data into usable formats	Must
FR-DPQ-03	The system must automate data quality checks and validation, including data anomalies	Must
FR-DPQ-09	The system must provide automated data refresh capabilities	Must
FR-DPQ-10	The system shall automate apportionment calculations eliminating Excel exports/imports	Must
FR-DPQ-20	The system shall have the capability to reduce complex calculation processing time from 4 hours to under 30 minutes	Must
FR-DPQ-45	The system shall implement medallion/multi-hop architecture (bronze/silver/gold)	Must
FR-DPQ-70	The system shall optimize inefficient queries automatically	Should
FR-DPQ-73	The system shall process data during business hours without performance impact	Must
FR-DPQ-99	The system shall enable data transformation updates within applications to be completed within one month (currently several months or over a year, some taking several years)	Must
FR-DPQ-127	The system shall process application validations within the same day	Must

3.6.1.4 Data Access and Analytics Requirements

Req ID	Requirement Description	Priority
FR-DA-10	The system shall provide automated cross-district comparison and analysis tools	Must
FR-DA-21	The system shall provide built-in forecasting and projection capabilities	Must
FR-DA-22	The system shall provide real-time data quality indicators and alerts	Must
FR-DA-29	The system shall provide multi-year grant tracking and analysis capabilities	Must
FR-DA-33	The system shall enable correlation analysis between facility conditions and student outcomes by joining different data sources from different systems	Must
FR-DA-51	The system shall provide real-time data access without processing lag	Must
FR-DA-85	The system shall be able to perform 10,000 queries per hour	Must

Req ID	Requirement Description	Priority
FR-DA-91	The system shall enable advanced analytics and AI capabilities	Must
FR-DA-97	The system shall natively support R/Python integration for data science	Must

3.6.1.5 Reporting Requirements

Req ID	Requirement Description	Priority
FR-REP-01	The system shall maintain reporting availability during system maintenance	Must
FR-REP-08	The system shall automatically generate recurring reports without manual file renaming	Must
FR-REP-10	The system shall enable automatic generation and access to recurring legislative reports on a regular schedule without manual intervention, reducing data access turnaround time from 2 months to under 4 hours.	Must
FR-REP-15	The system shall generate required dashboards within application interfaces (e.g. embedding Tableau in web, data updated in real-time for users)	Must

3.6.1.6 Integration Requirements

Req ID	Requirement Description	Priority
FR-INT-01	The system shall provide REST APIs replacing all CSV/SFTP transfers for external agencies	Should
FR-INT-03	The system shall provide seamless integration between EDS, CEDARS, and OSPI Data Portal	Must
FR-INT-30	The system shall support petabyte-scale data movement	Must
FR-INT-38	The system shall seamlessly integrate with and provide S-Drive alternatives	Must

3.6.2 Non-Functional Requirements

3.6.2.1 Performance Requirements

Req ID	Requirement Description	Priority
NF-PER-01	The system shall replicate manual data processing tasks including: data cleanup, formula calculations, cross-referencing, and report formatting - completing in under 4 hours	Must
NF-PER-06	The system shall handle large literacy datasets (e.g. terabytes) without performance degradation	Must

Req ID	Requirement Description	Priority
NF-PER-15	The system shall generate ad-hoc legislative reports same-day with accuracy rather than over multiple weeks.	Must

3.6.3 Scalability Requirements

Req ID	Requirement Description	Priority
NF-SCA-01	The system shall scale to handle 10x current data volume (e.g. 10+ terabytes) without outages	Must
NF-SCA-04	The system shall handle up to 2,000 simultaneous users during peak periods (such as report deadlines) while maintaining system responsiveness under 5 seconds.	Must
NF-SCA-05	The system must support ingestion of 10M+ student records within 1 hour (e.g. thousands of submissions, each submission huge excel files with hundreds of thousands of rows)	Must
NF-SCA-06	The system must comply with WaTech Security and support RBAC with MFA	Critical
NF-SCA-07	All systems must enforce FERPA and RCW 28A.300.507 requirements	Critical
NF-SCA-08	All portals must meet WCAG 2.1 AA accessibility standards	Must
NF-SCA-09	The system must support daily backups with 24hr RPO and 2hr RTO	Must

3.6.4 Availability Requirements

Req ID	Requirement Description	Priority
NF-AVA-01	The system shall maintain 99.9% availability with automatic failover	Must
NF-AVA-02	The system shall provide redundancy with no single points of failure	Must
NF-AVA-03	The system shall prevent downtime during critical funding windows (e.g. January-April, September, December)	Must

3.6.5 Security Requirements

Req ID	Requirement Description	Priority
NF-SEC-01	The system shall implement multi-factor authentication for all users	Must
NF-SEC-06	The system shall implement automated detection and monitoring of secure data	Must
NF-SEC-07	The system shall replace SSN with secure unique identifiers	Must

Req ID	Requirement Description	Priority
NF-SEC-20	The system shall implement NIST Zero-Trust Architecture	Must

3.6.6 Compliance Requirements

Req ID	Requirement Description	Priority
NF-COM-01	The system shall meet WaTech security standards	Must
NF-COM-15	The system shall meet all ERATE compliance requirements for data accuracy	Must
NF-COM-23	The system shall comply with IDEA, FERPA, and HIPAA requirements	Must

3.6.7 Usability Requirements

Req ID	Requirement Description	Priority
NF-USE-01	The system shall require no more than 4 hours of training for basic proficiency	Should
NF-USE-02	The system shall provide intuitive interfaces for non-technical users (e.g. end-users should understand how to navigate new tools within 5 minutes of seeing the interface)	Must
NF-USE-13	The system shall provide intuitive navigation reducing learning curve	Must

3.7 Cloud Requirements

3.7.1 Organizational Governance Requirements

Req ID	Requirement Description	Priority
ORG-GOV-10	The organization shall provide recurring training for technical staff on secure cloud practices, including least-privilege access, encryption, and cost awareness.	Should
ORG-GOV-09	The organization shall publish a decision-making framework to determine when new workloads should be hosted in cloud versus on-premises environments.	Should
ORG-GOV-08	The organization shall maintain a cloud glossary or data dictionary that defines commonly used technical and business terms used in cloud reporting and operations.	Should
ORG-GOV-07	The organization shall conduct quarterly cloud governance reviews to evaluate adherence to policies, tag compliance, and cloud cost variances.	Should
ORG-GOV-06	The organization shall define roles and responsibilities for cloud platform ownership, separating duties between security, operations, and data engineering.	Must

Req ID	Requirement Description	Priority
ORG-GOV-05	The organization shall define cloud onboarding documentation for new team members, covering environment access, approved tools, and escalation paths.	Should
ORG-GOV-04	The organization shall publish a minimal governance charter that outlines data stewardship roles, resource naming conventions, and acceptable use policies for cloud-based environments during the MVP phase.	Should
ORG-GOV-03	The organization shall provision and configure a cloud sandbox environment following a landing zone blueprint, inclusive of baseline networking, security policies, and access roles for experimentation and early deployment.	Must
ORG-GOV-02	The organization shall establish a 'CAB-lite' change control process that supports weekly cloud deployment reviews, tracks environment modifications, and enables rollback procedures for MVP workloads with minimal overhead.	Must
ORG-GOV-01	The organization shall define, document, and adopt a lightweight Software Development Lifecycle (SDLC) framework specifically tailored for cloud-based and iterative delivery models. This SDLC should include planning, testing, version control, and release guidelines.	Must

3.7.2 Cloud Migration: Data Storage & Architecture Requirements

Req ID	Requirement Description	Priority
CM-DSA-11	The system shall maintain a change history of all dataset modifications, including overwrite and deletion events.	Must
CM-DSA-10	The system shall enforce field-level encryption for sensitive attributes in all stored or streamed datasets.	Must
CM-DSA-09	The system shall include a data lineage view to trace the flow of data from source to consumption across services.	Must
CM-DSA-08	The system shall support schema evolution tracking to detect and manage changes to incoming data formats.	Should
CM-DSA-07	The system shall use immutable storage formats or snapshots to preserve raw ingested data for compliance or recovery purposes.	Should
CM-DSA-06	The system shall provide version control and rollback capability for data transformation logic and schemas.	Should
CM-DSA-05	The system shall automatically classify and tag data assets based on sensitivity and business domain during ingestion or creation.	Should

Req ID	Requirement Description	Priority
CM-DSA-04	The system shall support self-service data access for authorized users using catalog-driven query interfaces.	Should
CM-DSA-03	The system shall validate data completeness and duplication upon ingestion using automated pipeline checks.	Must
CM-DSA-02	The system shall store ingested data in logically separated cloud storage buckets based on environment (e.g., dev/test/prod) and data classification (e.g., PII, public).	Must
CM-DSA-01	The system shall implement a simple, scalable cloud landing zone using managed services to support initial data ingestion and storage needs.	Must

3.7.3 Cloud Migration: Infrastructure & Scalability Requirements

Req ID	Requirement Description	Priority
CM-COM-20	The system shall provide a rollback strategy for any failed cloud deployment, including rollback triggers and notification alerts.	Must
CM-COM-19	The system shall support version tagging of all production deployments with metadata describing purpose and origin.	Should
CM-COM-18	The system shall support automated escalation workflows for unresolved alerts based on time thresholds.	Should
CM-COM-17	The system shall allow filtering of operational alerts by environment, severity, and impacted component.	Should
CM-COM-16	The system shall archive monitoring and pipeline logs for a period of at least 12 months for compliance and trend analysis.	Should
CM-COM-15	The system shall emit custom business process metrics (e.g., records processed, anomalies flagged) to support operational insight.	Must
CM-COM-14	The system shall allow authorized users to run health diagnostics on deployed environments, including service uptime and performance indicators.	Should
CM-COM-13	The system shall publish health dashboards with status indicators for data pipeline stages, compute services, and storage availability.	Should
CM-COM-12	The system shall retain logs and metrics for a minimum of 90 days to support root cause analysis and compliance reporting.	Must
CM-COM-11	The system shall support role-based access control (RBAC) for deployment pipelines, environment access, and audit tools.	Must

Req ID	Requirement Description	Priority
CM-COM-10	The system shall require approval workflows for provisioning high-cost resources, such as compute instances above predefined vCPU thresholds.	Should
CM-COM-09	The system shall log all cloud resource creation, modification, and deletion events to a centralized audit log accessible to platform administrators.	Must
CM-COM-08	The organization shall automate startup and shutdown of non-production environments based on working hours.	Should
CM-COM-07	The system shall continuously monitor for cost anomalies and notify responsible teams within 24 hours of detection.	Should
CM-COM-06	The organization shall formalize change control with weekly board reviews, versioned approvals, and rollback documentation.	Should
CM-COM-05	The system shall enforce tagging of cloud resources for ownership, cost center, and data classification using policies or CI/CD controls.	Must

3.7.4 Cloud Migration: Operations & Monitoring Requirements

Req ID	Requirement Description	Priority
CM-CIS-13	The system shall support ephemeral environments for testing infrastructure or code without long-term resource allocation.	Should
CM-CIS-12	The system shall integrate infrastructure deployment checks into pull request workflows to catch violations before merge.	Should
CM-CIS-11	The system shall implement auto-remediation rules for critical misconfigurations, such as open ports or missing encryption.	Should
CM-CIS-10	The system shall support deployment rollbacks for infrastructure changes using Infrastructure-as-Code version history.	Should
CM-CIS-09	The system shall maintain centralized secrets and credentials management for all deployed services.	Must
CM-CIS-08	The system shall restrict resource deployment to approved geographic regions to align with data residency and compliance policies.	Must
CM-CIS-07	The system shall define thresholds and alerts for critical resources (e.g., storage nearing capacity, unresponsive services) to ensure proactive incident management.	Must
CM-CIS-06	The system shall use environment-specific configuration parameters (e.g., dev, test, prod) managed as code for all infrastructure deployments.	Must

Req ID	Requirement Description	Priority
CM-CIS-05	The system shall collect logs, metrics, and traces from all major cloud workloads and consolidate them into a centralized monitoring platform.	Must
CM-CIS-04	The system shall integrate infrastructure deployment with CI/CD pipelines for consistent provisioning and repeatability.	Should
CM-CIS-03	The system shall ensure all compute and storage components support growth of up to 3x in concurrent usage without redesign.	Must
CM-CIS-02	The system shall automatically scale resources based on workload thresholds (e.g., queue depth, CPU utilization) using pre-configured autoscaling policies.	Should
CM-CIS-01	The system shall use cloud-native, managed compute services (e.g., cloud-native, Fargate, managed database) to reduce maintenance burden and simplify scaling.	Should

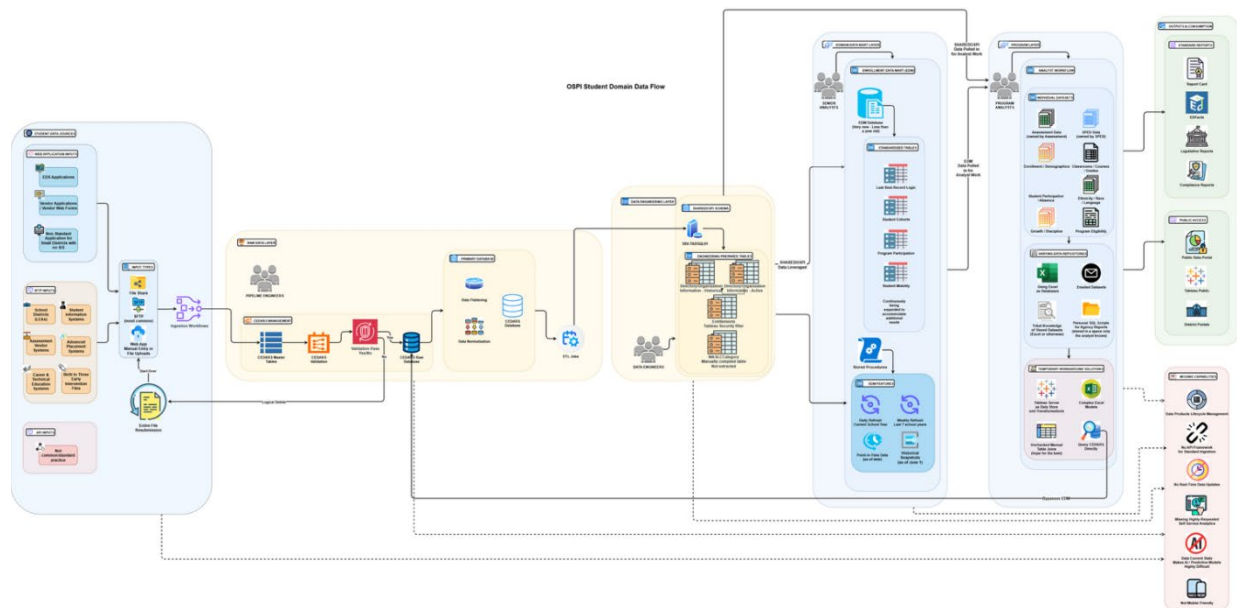
3.8 Process Flows and Data Flows

ASPECT	PROCESS FLOW	DATA FLOW
Shows	Business steps	Technical data movement
Verbs	Submit, Approve, Review	Extract, Transform, Load
Decision Points	Business rules	Data validation rules
Endpoints	Completed process	Data at rest

3.9 Domain-Level Data Flows

Student Data Domain

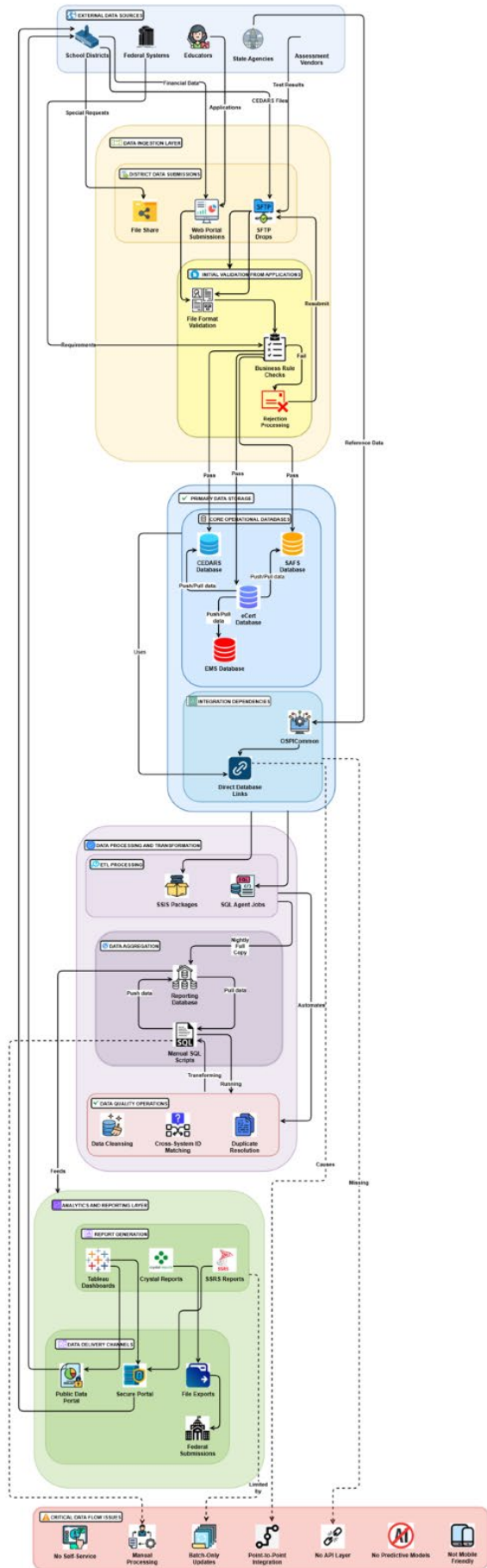
This diagram maps the student domain data flow, from inputs like CEDARS and district applications through processing layers involving ETL jobs, databases, and analytics tools. The flow includes validation, transformation, and output to public portals and reporting. It's useful for identifying data bottlenecks or integration points in student-related processes. Add SME comments to enhance accuracy on specific workflows.



Educator Data Domain

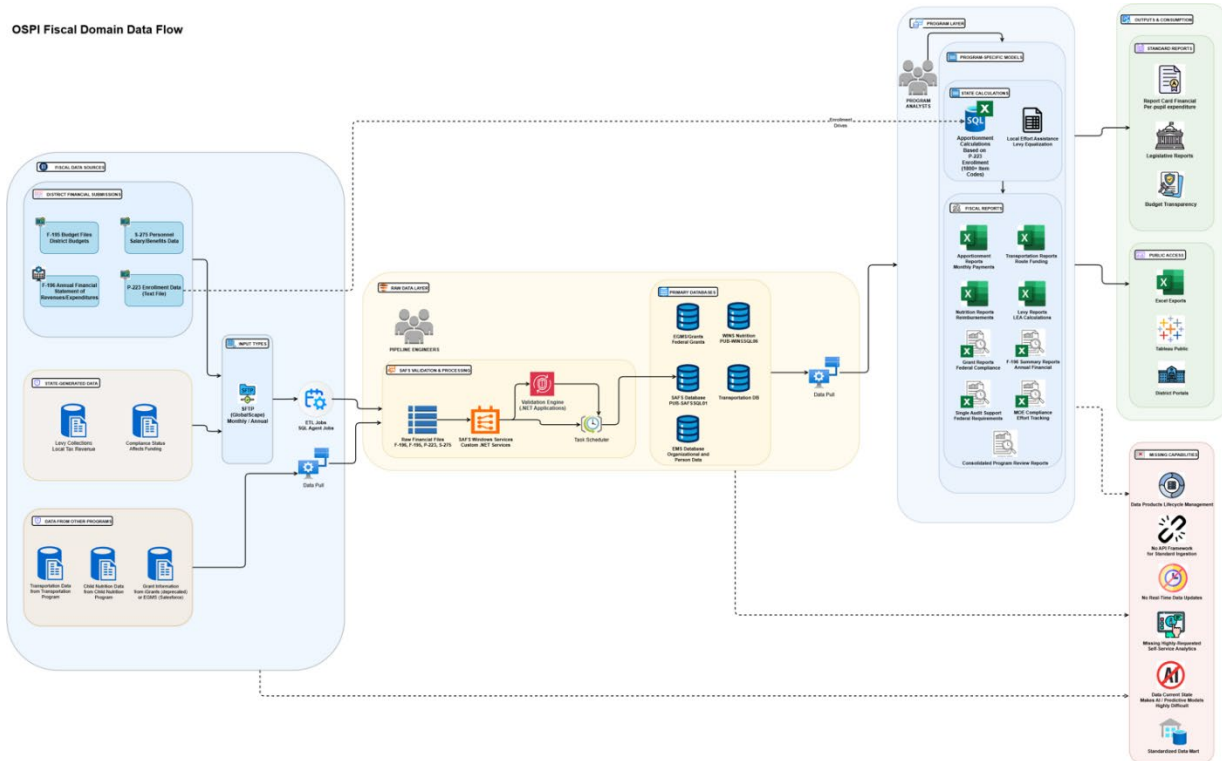
This diagram maps educator domain data management structure starting from sources like CEDARS, eCert, and S-275 through ingestion, validation, business rule application, and aggregation layers to output dashboards and federal submissions. It shows ETL jobs, SQL processing, and critical issues like no API layer or predictive models. Use this to identify bottlenecks in educator data management. SMEs can add details on specific integrations or pain points.

OSPI Educator Domain Data Flow



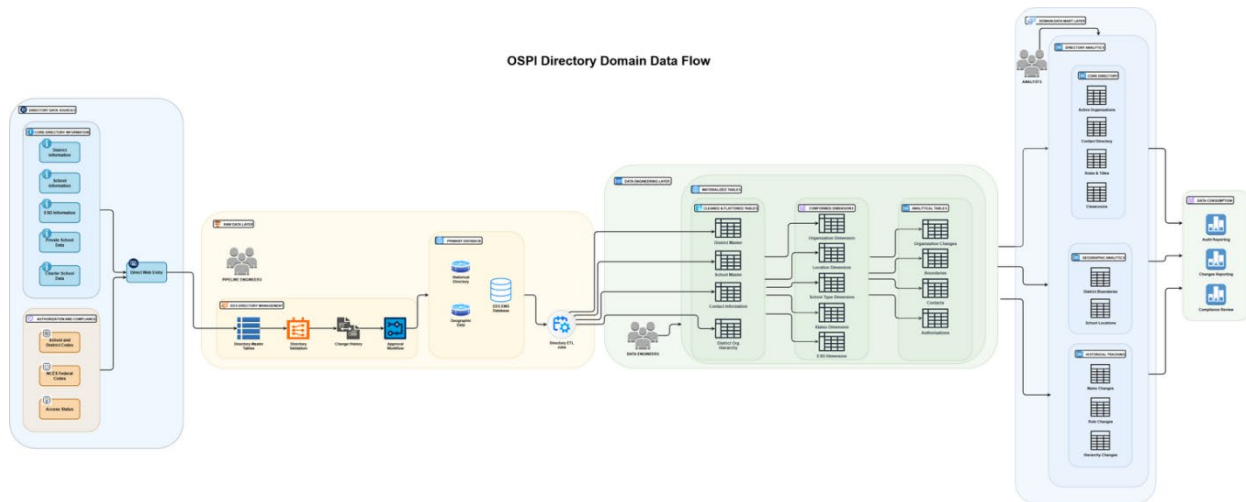
Fiscal Data Domain

This diagram visualizes the fiscal domain data flow, from district submissions and external data through ETL processes, databases, and outputs to financial reports and apportionment or funding reports. It highlights integrations with systems such as EGMS for grants and WINS for nutrition reimbursements, revealing manual elements and potential risks. Ideal for analyzing financial data lineage and compliance points. Encourage SMEs to add notes on calculation formulas or integration challenges.



Directory Data Domain

This diagram illustrates the flow of directory-related data within OSPI systems, starting from external sources like district uploads and moving through databases, ETL processes, and consumption layers. It highlights key tables such as Organizational, Contact Information, and District Student Demographic, showing how data is transformed and used for reporting and compliance. Use this as a reference for understanding current state data structure. SMEs can annotate any inaccuracies or additions for refinement.



3.9.A Key Process Flows Within Domains

3.9.A.1 Student Domain (CEDARS)

These programs primarily need student-level data:

Enrollment-Based Programs:

1. General Apportionment/Basic Education
2. Small School Assistance
3. Alternative Learning Experience (ALE)
4. Open Doors Youth Reengagement
5. Running Start
6. Choice Transfer Programs

Special Populations:

7. Special Education (IDEA)
8. Learning Assistance Program (LAP)
9. Transitional Bilingual Instruction
10. Highly Capable Program
11. Title I, Parts A, C, D
12. McKinney-Vento Homeless Education
13. Foster Care Education
14. Migrant Education Program
15. Native American Education

Student Services:

16. Child Nutrition Services (also uses WINS)

17. Pupil Transportation (also uses STARS)
18. School Health Services/Nurse Corps
19. 21st Century Community Learning Centers
20. Attendance/Truancy (BECCA)

Academic Programs:

21. Assessment/State Testing
22. Career & Technical Education (CTE/Perkins)
23. Advanced Placement/Dual Credit
24. Graduation Requirements
25. Social Emotional Learning (SEL)

3.9.A.2 Educator Domain (Multiple data sources)

These programs need educator/staff data:

Certification & Licensure:

26. Teacher Certification (eCert)
27. Administrator Certification
28. ESA Certification
29. Paraeducator Programs
30. CTE Teacher Certification

Professional Development:

31. BEST (Beginning Educator Support)
32. Title II, Part A (Teacher Quality)
33. TPEP (Teacher/Principal Evaluation)
34. National Board Certification
35. Professional Learning Days

Staffing Programs:

36. Title I Schoolwide (requires staffing data)
37. Class Size Reduction
38. Counselor/Social Worker Programs

3.9.A.3 Fiscal Domain (SAFS)

These programs are primarily financial:

Funding Programs:

- 39. School Apportionment (uses enrollment from Student Domain)
- 40. Local Effort Assistance (LEA)
- 41. Transportation Funding
- 42. Special Education Funding
- 43. CTE Funding
- 44. Levy Equalization

Federal Fiscal Programs:

- 45. Title I, II, III, IV, V (fiscal components)
- 46. IDEA Fiscal Management
- 47. Perkins Fiscal Management
- 48. ESSER/COVID Relief Funds
- 49. E-Rate Program

Grants Management:

- 50. Consolidated Program Review (CPR)
- 51. Federal Program Monitoring
- 52. State Grant Programs
- 53. Private Grants Administration

3.9.A.4 Facility Domain (ICOS)

These programs manage physical infrastructure:

Construction & Maintenance:

- 54. School Construction Assistance Program (SCAP)
- 55. Asset Preservation Program (APP)
- 56. Small Repair Grants
- 57. Energy Efficiency Programs
- 58. Healthy Schools/Indoor Air Quality

Facility Planning:

- 59. Enrollment Projections for Facilities
- 60. Capacity Analysis
- 61. Site Acquisition
- 62. Building Condition Assessments (BCA)

3.9.A.5 Directory Domain (EDS/EMS)

These programs manage organizational data:

Organizational Management:

- 63. School/District Directory
- 64. Charter School Authorization
- 65. Private School Approval
- 66. Tribal Compact Schools
- 67. ESD Administration

Access & Security:

- 68. User Authentication/Authorization
- 69. Data Security Management
- 70. Public Records Requests
- 71. Data Sharing Agreements

3.9.A.6 Cross-Domain Programs

These require data from multiple domains:

Accountability & Reporting:

- 72. Report Card (needs all domains)
- 73. ESSA School Improvement (Student + Educator + Fiscal)
- 74. Federal EDFacts Reporting (all domains)
- 75. Legislative Reports (all domains)
- 76. Comprehensive Needs Assessment (all domains)

Compliance Programs:

- 77. Civil Rights Compliance (Student + Educator)
- 78. Special Education Monitoring (Student + Educator + Fiscal)
- 79. Title I Compliance (Student + Educator + Fiscal)
- 80. Equity Programs (all domains)

Strategic Initiatives:

- 81. Closing Achievement Gaps (Student + Educator)
- 82. Career Connected Learning (Student + Facility + Fiscal)
- 83. STEM Education (Student + Educator + Fiscal)
- 84. Environmental Sustainability (Facility + Fiscal)

3.9.A.7 Key Insights:

1. **Student Domain** has the most programs (~30), explaining why CEDARS is so critical
2. **Educator Domain** do not have a central data store specific to their domain like CEDARS or SAFS
3. **Cross-Domain Programs** (~15-20) are the most challenging because they need integrated data from multiple systems
4. **Fiscal Domain** programs often need Student Domain data for calculations (enrollment drives funding)
5. The **“logical delete”** problem impacts all Student Domain programs simultaneously, affecting 30+ programs at once

This mapping shows why OSPI needs:

- Better domain integration
- A true educator database
- Cross-domain data governance
- Unified reporting capabilities

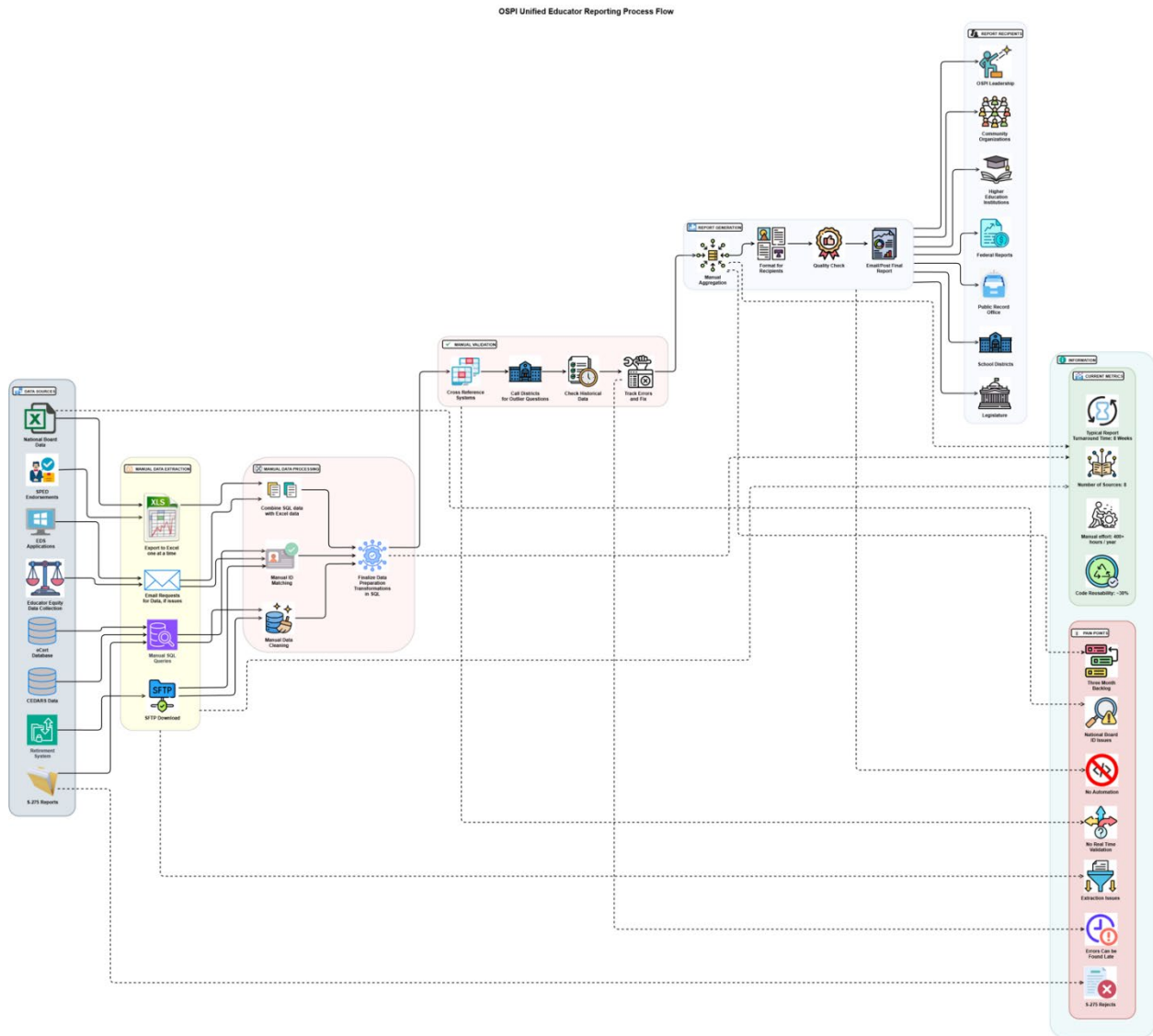
We identified a number of critical business processes during the discovery phase of this project. Those that have the highest impact across OSPI have been selected to be diagrammed in a detailed process flow.

Highest Impact Process Flows

1. Logical Delete (Cross-Domain)
2. Unified Educator Reporting (Educator Domain)
3. Apportionment Calculation (Fiscal Domain)
4. Report Card Generation (Cross-Domain)
5. Assessment Results Processing (Student Domain)
6. EDS User Access Management (Directory Domain)
7. Teacher Certification (Educator Domain)

3.9.B.1 Unified Educator Reporting Process Flow

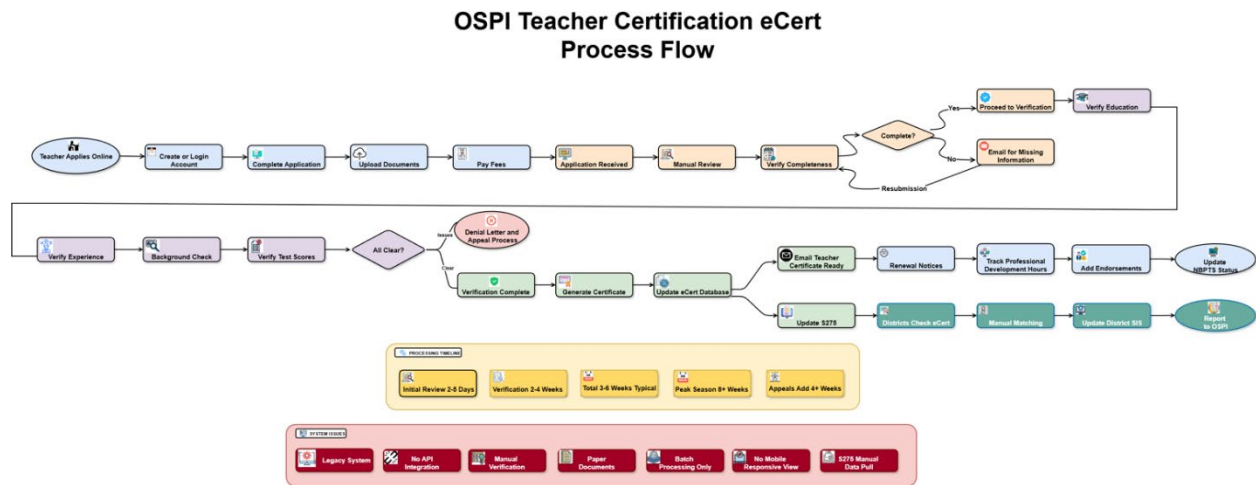
This diagram maps OSPI’s unified educator reporting process, from data ingestion via SFTP and Excel exports through cleaning, aggregation, and quality checks, to outputs for stakeholders like the state legislature, schools, and federal submissions. Use this to visualize reporting inefficiencies and identify automation potential. SMEs can annotate specific data paths, corrections, or issues for deeper insights.



3.9.B.2 Teacher Certification (eCert) Processing Process Flow

This diagram outlines the teacher certification process in OSPI’s eCert system, from initial online application through completeness verification, fee payment, manual reviews for experience and test scores, to certificate issuance or denial with appeal options. It includes ongoing elements like renewals, endorsements, and manual matching to personnel data, highlighting timelines such as 3-5 days for initial reviews and up to 8 weeks during peak seasons. Use this to identify bottlenecks

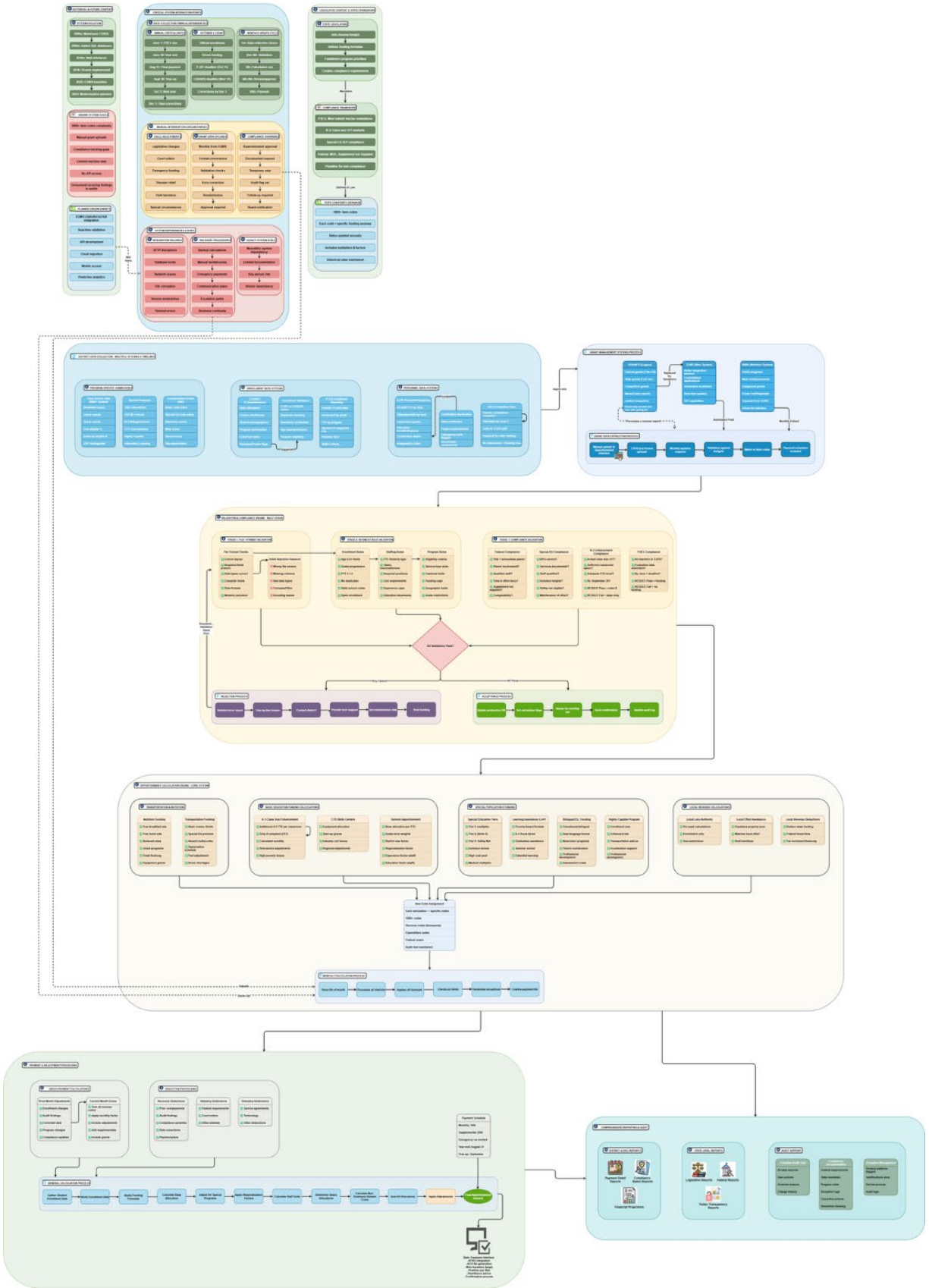
like legacy system dependencies and manual processes for modernization discussions. SMEs can add annotations on specific timelines or integration challenges for enhanced accuracy.



3.9.B.3 Apportionment Calculation & Distribution Process Flow

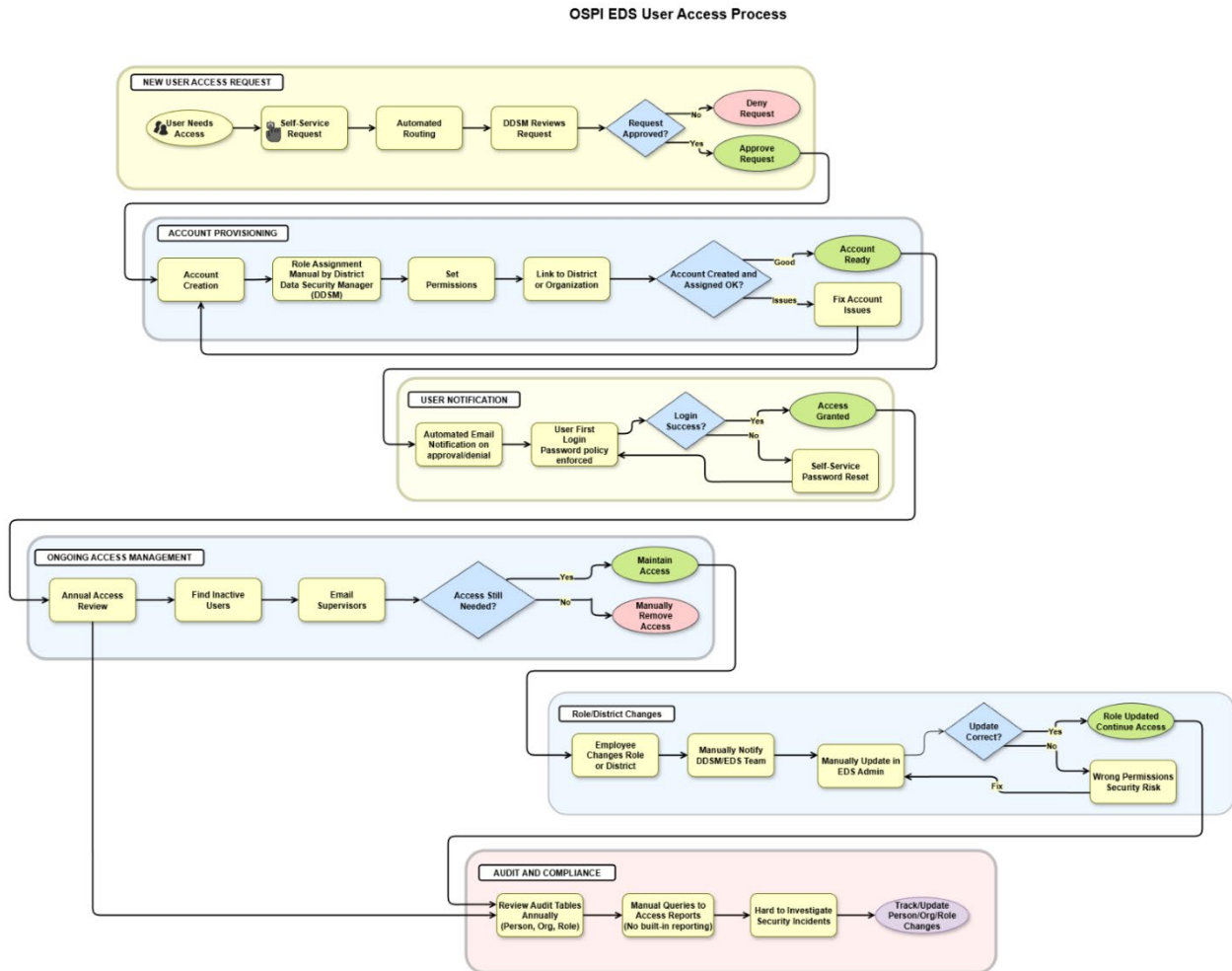
This diagram depicts the apportionment funding process, from legislative budgets and district inputs (e.g., enrollment, staffing) through compliance checks, layered calculations, and outputs to payments and reports. It includes gathering data for education and transportation, with manual reviews and revenue code assignments. Helpful for visualizing funding dependencies and optimization areas. SMEs should note any process variations or updates for accuracy.

OSPI Apportionment Funding Process Flow CS



3.9.B.4 EDS User Access Management Process Flow

This diagram details the user access management process in OSPI’s Education Data System (EDS), from new requests and provisioning through ongoing management, role changes, and auditing, with manual steps for approvals and notifications. It includes decision points for access grants, denials, and security risks like inactive users. Use this to evaluate access controls and streamline provisioning for better security. SMEs should comment on timelines or automation gaps for enhancements.

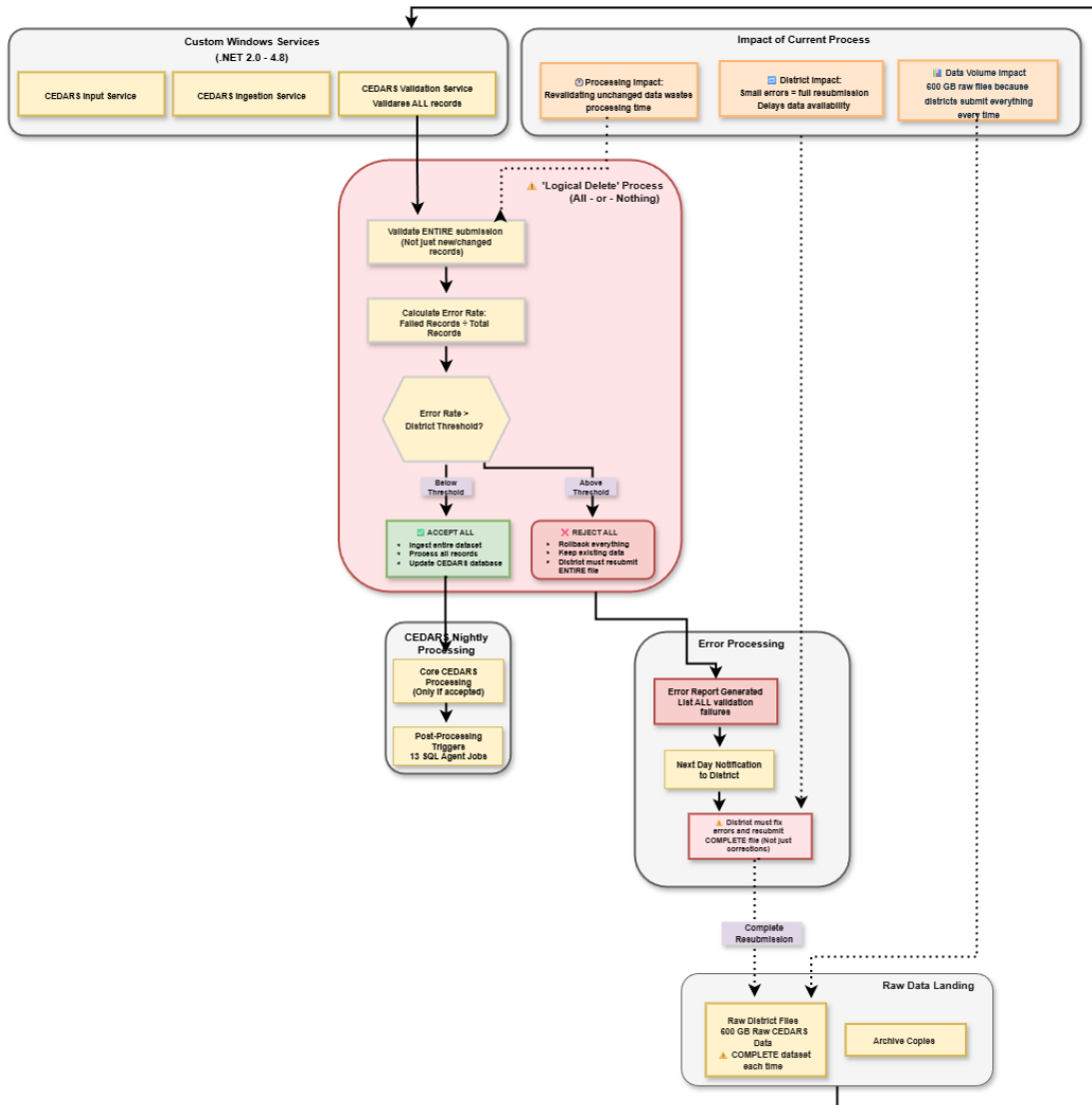


3.9.B.5 Washington State Report Card Generation Process Flow

This diagram outlines the end-to-end process for generating OSPI report card public reporting, integrating data from fiscal domain, student domain, and educator domain through Excel-heavy processing, SQL transformations, and quality assurance checks that outputs to Tableau. It emphasizes cross-domain metrics calculation using the Washington School Improvement Framework (WSIF) and publication scheduling for fiscal, student, and educator updates. Use this to map dependencies and identify automation opportunities in reporting workflows. SMEs can

Logical Delete Validation Process

Using CEDARS as an Example



Note: The "Logical Delete" process is a legacy all-or-nothing validation approach. If any district's submission exceeds their error threshold, the ENTIRE submission is rejected and must be resubmitted in full. This explains:

- Why raw data volumes are so large (600GB)
- Why processing takes all night
- Why small errors cause major delays
- Why OSPI wants to move to incremental updates in a new data platform

SECTION 4.0 REQUIREMENTS TRACEABILITY MATRIX

Issue ID	Issue Description	Source	Category
Issue-386	New district staff don't know rules and lack proper training	Enrollment Reporting	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-387	Districts must double report ALE enrollment in P223 and SAFS ALE separately	Enrollment Reporting	Manual Data Processing
Issue-388	200 districts must manually report where students live	Enrollment Reporting	Manual Data Processing
Issue-389	Monthly enrollment data extracted manually for calculations	Enrollment Reporting	Manual Data Processing
Issue-390	Districts must separately sign into SIS and EDS to upload info	Enrollment Reporting	Inadequate System Integration
Issue-391	Cannot message districts and ESDs simultaneously about errors	Enrollment Reporting	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-392	Compliance calculations difficult and take a lot of effort	Enrollment Reporting	Manual Data Processing
Issue-393	Wrong file submission could wipe out district funding	Enrollment Reporting	Insufficient Data Quality Controls
Issue-394	School staff high turnover requires constant retraining	Enrollment Reporting	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-395	Some ESDs weak and can't monitor things closely	Enrollment Reporting	Severely Limited Resourcing and Necessary Support
Issue-396	Many business rules and compliance calculations done manually	Enrollment Reporting	Manual Data Processing

Issue ID	Issue Description	Source	Category
Issue-397	Can't pull enrollment from CEDARS - districts must confirm count	Enrollment Reporting	Inadequate System Integration
Issue-398	CEDARS doesn't capture fractional FTE correctly (1.8 vs full time)	Enrollment Reporting	Insufficient Data Quality Controls
Issue-399	Wrong CEDARS data can wipe out poverty funding with no appeal	Enrollment Reporting	Insufficient Data Quality Controls
Issue-400	Staff can't input own calculations - must rely on IT	Enrollment Reporting	Severely Limited Resourcing and Necessary Support
Issue-401	Districts make changes while reports are running	Enrollment Reporting	Missing or Improperly Structured Operational Processes
Issue-402	Too many decimal places mess up processes	Enrollment Reporting	Insufficient Data Quality Controls
Issue-403	Not enough IT staff or money to fix needed things	Enrollment Reporting	Severely Limited Resourcing and Necessary Support
Issue-404	Apportionment system gets priority - everyone else gets leftovers	Enrollment Reporting	Severely Limited Resourcing and Necessary Support
Issue-405	Don't know who to contact at districts due to turnover	Enrollment Reporting	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-406	IT would say "no, we don't have time" to improvement requests	Enrollment Reporting	Severely Limited Resourcing and Necessary Support
Issue-539	District staff turnover impacts CEDARS data quality	Student Information	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-540	EDS system went down for 4-5 days - first time in 34 years	Student Information	Unstable, Unwieldy, or Difficult to Manage Systems

Issue ID	Issue Description	Source	Category
Issue-541	Data gets jammed requiring multiple submission attempts	Student Information	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-542	P210 graduate data takes 48 hours to appear in applications	Student Information	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-543	Tableau takes 48 hours to refresh	Student Information	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-544	System not robust enough due to age	Student Information	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-545	Data can only load at night - can't run during day	Student Information	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-546	Data gets stopped or stuck during processing	Student Information	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-547	Some programs take several days for data to reach reporting	Student Information	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-548	Different people get different data when asking for same thing	Student Information	Insufficient Data Quality Controls
Issue-549	Districts manually clicking through processes	Student Information	Manual Data Processing
Issue-550	Applications open at different times causing timing conflicts	Student Information	Missing or Improperly Structured Operational Processes
Issue-551	No reminders for districts about upcoming application deadlines	Student Information	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-552	Need to run parallel systems for 1-2 years during migration	Student Information	Missing or Improperly Structured Operational Processes
Issue-553	No data catalog - unclear what business rules were used in reports	Student Information	Missing or Improperly Structured Operational Processes

Issue ID	Issue Description	Source	Category
Issue-554	Districts don't understand business rules in reports	Student Information	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-555	No directory information for web form contacts at districts	Student Information Data Support	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-556	Developing and maintaining EDS apps is a nightmare	Student Information Data Support	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-557	No money for building apps when needed	Student Information Data Support	Severely Limited Resourcing and Necessary Support
Issue-558	EDS is "ball of string wrapped up together" - complex	Student Information Data Support	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-559	Took long time to remove unused app link from homepage	Student Information Data Support	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-560	No SQL access to database for analysis	Student Information Data Support	Limited Analytics and Reporting Capabilities and Access
Issue-561	Data requests include anomalies that could be stripped if had access	Student Information Data Support	Insufficient Data Quality Controls
Issue-562	Data Governance role and processes confusing - unclear authority	Student Information Data Support	Missing or Improperly Structured Operational Processes
Issue-563	Data Governance turns simple questions into lengthy explorations	Student Information Data Support	Missing or Improperly Structured Operational Processes
Issue-564	Takes months to get answers from Data Governance	Student Information Data Support	Missing or Improperly Structured Operational Processes
Issue-565	Told to not use web forms but no money for apps	Student Information Data Support	Missing or Improperly Structured Operational Processes

Issue ID	Issue Description	Source	Category
Issue-566	Takes 1.5 years to fix anything in CEDARS	Student Information Data Support	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-567	Frontend CEDARS access not useful - must filter to single district	Student Information Data Support	Limited Analytics and Reporting Capabilities and Access
Issue-568	Behavior and Weapons app has dead sections and breaks	Student Information Data Support	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-569	Strange split of weapons data between teams	Student Information Data Support	Missing or Improperly Structured Operational Processes
Issue-570	No Tableau Server license despite having Prep and Desktop	Student Information Data Support	Severely Limited Resourcing and Necessary Support
Issue-571	No ticketing system for data requests - can't track progress	Student Information Data Support	Manual Data Processing
Issue-572	No regular integration meetings with SI team	Student Information Data Support	Missing or Improperly Structured Operational Processes
Issue-691	No seamless way to bring educator data team into cross-domain requests	Student Information Data Team	Inadequate System Integration
Issue-692	Must manually summarize and resubmit to educator queue	Student Information Data Team	Manual Data Processing
Issue-693	Open-ended requests from non-data-driven departments	Student Information Data Team	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-694	Historical requests written in different formats (SQL vs R)	Student Information Data Team	Missing or Improperly Structured Operational Processes
Issue-695	Inconsistent data suppression rules awareness and application	Student Information Data Team	Compliance and Security Challenges

Issue ID	Issue Description	Source	Category
Issue-696	No peer review process since COVID	Student Information Data Team	Missing or Improperly Structured Operational Processes
Issue-697	Cannot pull data from different servers in CEDARS SQL 11	Student Information Data Team	Inadequate System Integration
Issue-698	CEDARS update at 5PM conflicts with 5:30PM work hours	Student Information Data Team	Missing or Improperly Structured Operational Processes
Issue-699	Different analysts get different data from same CEDARS query	Student Information Data Team	Insufficient Data Quality Controls
Issue-700	Reproducibility difficult - must manipulate rec start/end dates	Student Information Data Team	Insufficient Data Quality Controls
Issue-701	Last best record issues - most recent ethnicity not necessarily accurate	Student Information Data Team	Insufficient Data Quality Controls
Issue-702	Each analyst writes code differently - no consistency	Student Information Data Team	Missing or Improperly Structured Operational Processes
Issue-703	Volume of requests overwhelming during reporting seasons	Student Information Data Team	Severely Limited Resourcing and Necessary Support
Issue-704	Emergency legislative requests bypass normal process	Student Information Data Team	Missing or Improperly Structured Operational Processes
Issue-752	Legacy data extract using nested views calling views - everything function or view	Report Card and EDM	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-753	CEDARS data changes daily - difficult to look back at previous data	Report Card and EDM	Insufficient Data Quality Controls
Issue-754	Districts submit data at different frequencies (daily, weekly, etc.)	Report Card and EDM	Data Collection Errors Causing Manual Work

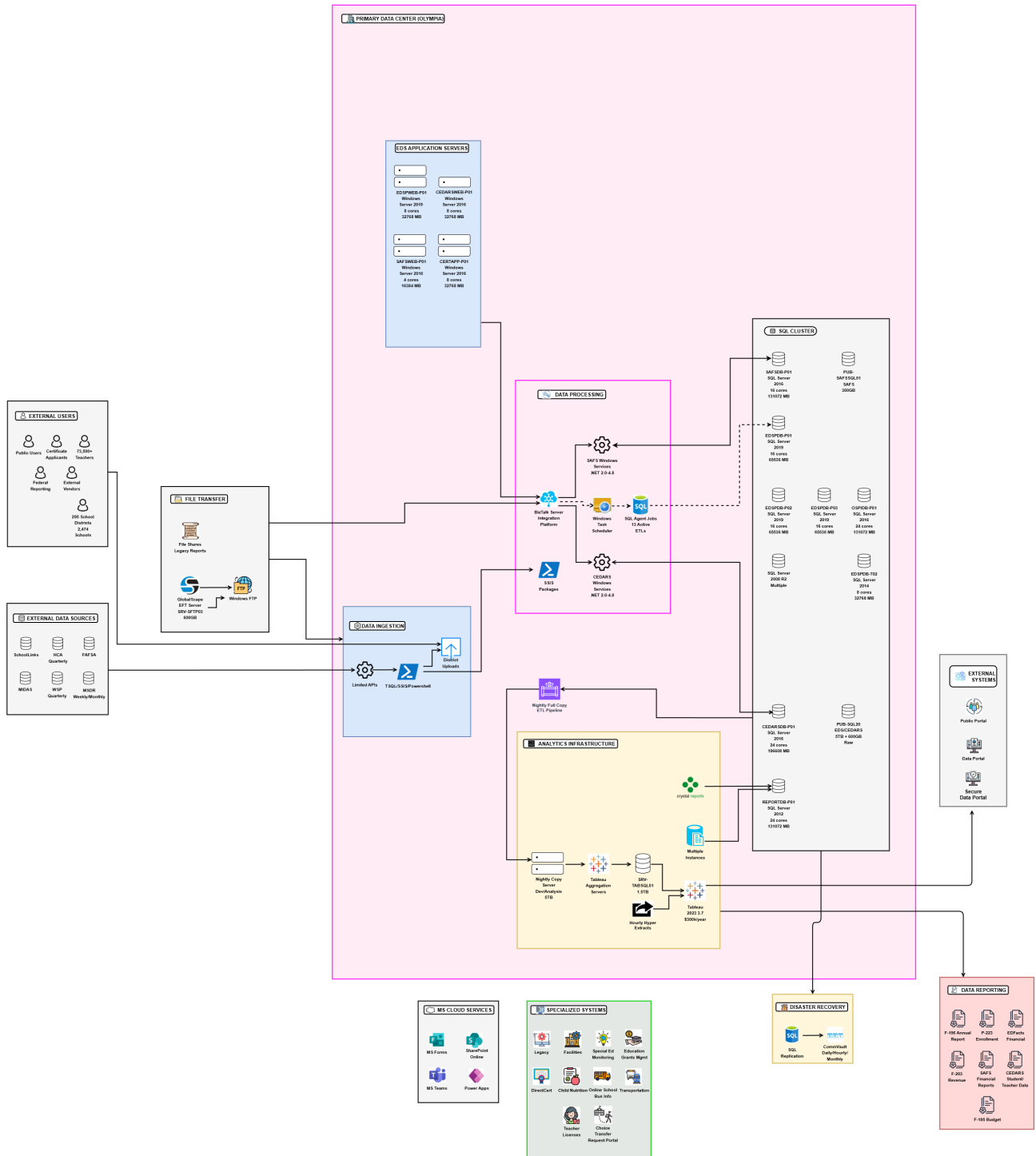
Issue ID	Issue Description	Source	Category
Issue-755	CEDARS stores bad data along with good data	Report Card and EDM	Insufficient Data Quality Controls
Issue-756	No API link - only CSV uploads unlike other states	Report Card and EDM	Inadequate System Integration
Issue-757	Legacy graduation application turned off without transition	Report Card and EDM	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-758	No culture of testing in parallel and validation operations	Report Card and EDM	Missing or Improperly Structured Operational Processes
Issue-759	Tableau has significant ADA compliance issues	Report Card and EDM	Compliance and Security Challenges
Issue-760	Districts can change data for 7 years - complicates storage	Report Card and EDM	Missing or Improperly Structured Operational Processes
Issue-761	Security not ideal - manual EDS account creation for Tableau access	Report Card and EDM	Compliance and Security Challenges
Issue-762	Cannot integrate R/Python code into Tableau pipelines	Report Card and EDM	Limited Analytics and Reporting Capabilities and Access
Issue-763	Need organizational structure supporting data strategy goals	Report Card and EDM	Missing or Improperly Structured Operational Processes
Issue-764	Bad student data directly impacts district funding	Report Card and EDM	Insufficient Data Quality Controls
Issue-765	No carrot/stick for districts submitting quality data	Report Card and EDM	Missing or Improperly Structured Operational Processes
Issue-766	Migrant data comes from separate source outside CEDARS	Report Card and EDM	Inadequate System Integration
Issue-767	Managing multiple roles - report card analysts, data mart builders, coordinators	Report Card and EDM	Severely Limited Resourcing and Necessary Support

Issue ID	Issue Description	Source	Category
Issue-802	Cannot allow CEDARS to crash due to data space again	Data Foundations	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-803	No API/direct connection from district SIS to CEDARS	Data Foundations	Inadequate System Integration
Issue-804	Low-budget districts need alternative to vendor-based SIS	Data Foundations	Severely Limited Resourcing and Necessary Support
Issue-805	No documentation for processes, data existence, lineage	Data Foundations	Missing or Improperly Structured Operational Processes
Issue-806	Documentation not easily accessible	Data Foundations	Missing or Improperly Structured Operational Processes
Issue-807	Constant recurring questions due to high turnover	Data Foundations	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-808	District staff literally crying on phone - overwhelmed	Data Foundations	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-809	WAMS allows record updates outside CEDARS - data quality risk	Data Foundations	Insufficient Data Quality Controls
Issue-810	Student records in demographic files not in enrollment tables	Data Foundations	Insufficient Data Quality Controls
Issue-811	Not operating off standard process or desk manual	Data Foundations	Missing or Improperly Structured Operational Processes
Issue-812	Validation processing takes excessive time	Data Foundations	Manual Data Processing
Issue-813	Had to relax/disable validations due to processing constraints	Data Foundations	Unstable, Unwieldy, or Difficult to Manage Systems
Issue-814	Documentation takes substantial time - forever	Data Foundations	Manual Data Processing

Issue ID	Issue Description	Source	Category
Issue-815	Heavily constrained budget especially for training	Data Foundations	Severely Limited Resourcing and Necessary Support
Issue-816	Only few people can do accessibility work	Data Foundations	Severely Limited Resourcing and Necessary Support
Issue-817	Cannot juggle new projects, current workload, and learning	Data Foundations	Severely Limited Resourcing and Necessary Support
Issue-818	Must teach ourselves things most of the time	Data Foundations	Poor OSPI Staff and District Stakeholders Experience and Training
Issue-819	Need real-time validations users can understand	Data Foundations	Limited Analytics and Reporting Capabilities and Access
Issue-820	Districts need funding support for data storage/submission	Data Foundations	Severely Limited Resourcing and Necessary Support

SECTION 5.0 OSPI DATA ARCHITECTURE

OSPI Current State Data Architecture



SECTION 6.0 COST BENEFIT ANALYSIS

Cost Benefit Analysis

OSPI Data Modernization Feasibility Study



Agenda

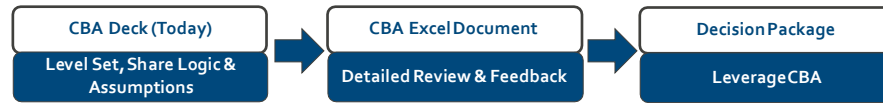
Goals for Today:

- Walk through the components of the Cost Analysis
 - Describe the primary assumptions and drivers of cost
 - Introduce major cost categories
 - Illustrate the cost differences between vendor approaches to data modernization

- Prepare the OSPI team for navigating the Cost Analysis
 - Screen-share of the cost spreadsheet contents

Framing for Today's Discussion

- CBA Delivery: This deck is a primer for the formal CBA excel document being delivered today.



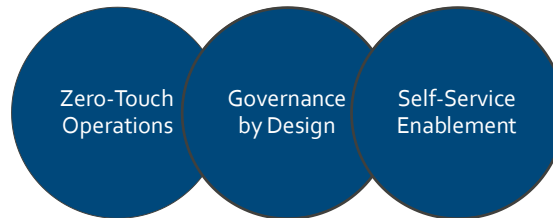
Framing for Today's Discussion (Contd.)

- **7 Year Timeline:** The WaTech Cost-Benefit Analysis (CBA) template reflects a 7-year timeline. ISG generated a cost model based on a 5-year data migration effort with cost ramps reflecting that.



OSPI's Data Modernization Solution

- Based on the 800+ issues that was collected during discovery interviews, ISG determined that the best data modernization solution for OSPI must achieve:



The tooling and labor costing, along with the requirements we searched for in the platform vendors, were specific to this solution.

Key Assumptions for Cost Modeling

The first year of effort is centered around a Proof of Concept and migration foundations .

- Vendor partners with OSPI employees, contractors, and professional services to perform PoC and foundational migration work.
- Prove the repeatable migration model through a pilot business segment.
- Ensure things are fully prepared and communicated for a successful migration (e.g. Cloud environments ready).

The significant portion of required resources for data modernization and cloud management do not exist at OSPI today and will require hiring

- OSPI has 11 of the 28 roles necessary to perform this work to successful completion.
- Cost model augments the staffing gaps.
- Gaps are heavily outsourced with FTCs to start, then transitions from FTCs to FTEs as OSPI gains traction.
- OSPI is short-staffed, even with the roles that are already present. The cost model estimates the headcount gaps required in each role.

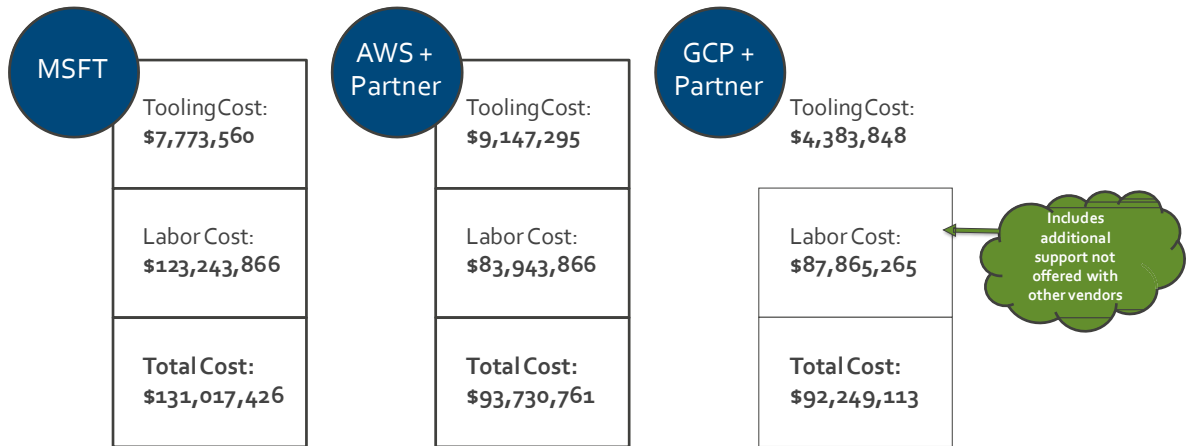
Training and upskilling costs will be required to build long-term internal capability

- Budgeted allocation for training current staff, new hires, and leadership on future state architecture.
- Training costs estimated to drop as OSPI establishes internal team development operations.

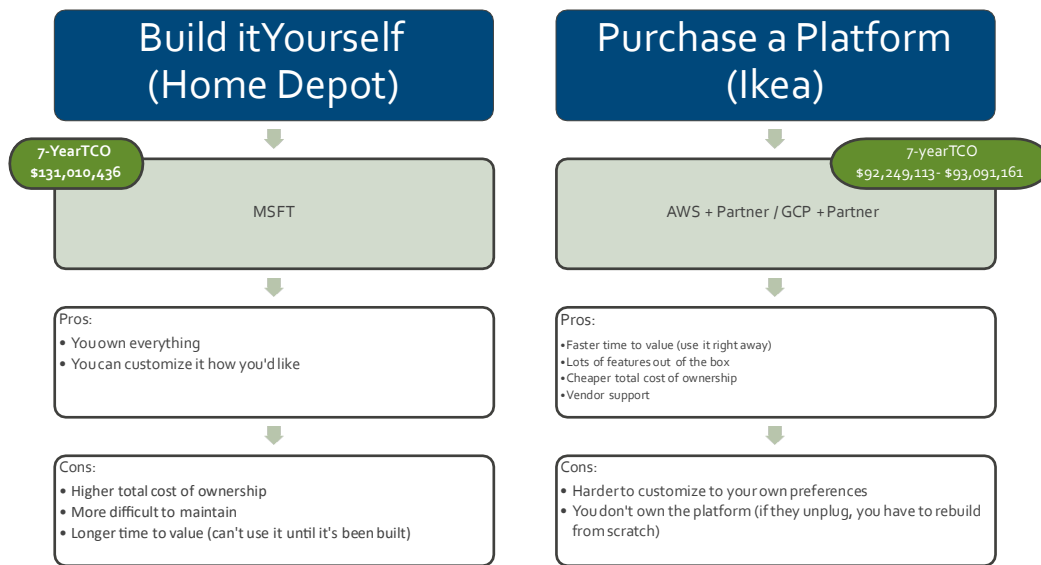
Key Assumptions for Cost Modeling (Contd.)

Cloud platform licensing and service costs will scale with migration progress	Tooling costs (e.g., governance, metadata, CI/CD, ETL) are assumed to follow a "good enough to start" approach.	Sustainment phase will use a lean operations model with targeted automation.
<ul style="list-style-type: none"> • Migration assumption is to move roughly 20TBs each year across several projects • As data is rebuilt in the cloud, costs will grow from the newly migrated and the data already migrated being maintained in storage. • Data volume also assumed to continue growing by 5TB each year with "business-as-usual". • In the first several years, operations will run parallel between on-prem processes and cloud processes (dual costs), with eventual sequential cutover and decommissioning. 	<ul style="list-style-type: none"> • Each year, based on work allocated, only the necessary tools would be "licensed" or added to the tech stack. • Some tools will drop off at the end of the migration (e.g. Integration Runtime VMs) 	<ul style="list-style-type: none"> • Clear drop of FTCs starting in Year 4 onward as FTEs are trained and ready to take over the work. • Training should continue through a Learning & Development program to keep skills sharp as OSPI's needs evolve.

Costing Summary (7-Year Totals)



"Home Depot" vs. "Ikea"



Navigating the Cost Analysis Spreadsheet

- Each vendor has three supporting tabs in the spreadsheet:
 - Summary: This is a summary output of total costs from the CBA tab
 - CBA: A categorized cost analysis including vendor inputs and ISG estimations.
 - Staffing Breakdown: A 7-year staffing model organized by full-time employees (FTE), full-time contractors (FTC), and Professional Services (PS). This tab feeds the staffing line-items in the CBA.
- Note the assumptions, logic, and vendor-provided notes as comments in various cells.
- Cost logic specific to Azure is located on a tab labeled "Calculations-Azure" at the far-right of the spreadsheet.
- Please review this information and tag any information that requires additional clarity.
- ISG will follow-up with the OSPI team in 1-2 weeks regarding this cost analysis.

To view the spreadsheets that accompany this section, please refer to Appendix 1A: Cost Benefit Analysis Spreadsheets

SECTION 7.0 OSPI ENTERPRISE ARCHITECTURE CHARTER

Purpose

The purpose of this charter is to formally establish a foundational Enterprise Architecture (EA) function within the Office of Superintendent of Public Instruction (OSPI) to support digital modernization, promote system interoperability, and guide technology decisions across the agency. This initiative recognizes that OSPI is at an early stage in architectural maturity and that teams are currently small, multifunctional, and distributed.

Rather than introducing a burdensome or overly formal process, the EA function at OSPI is designed to be lightweight, scalable, and pragmatic. It provides structure without slowing delivery, promotes alignment without enforcing rigidity, and encourages collaboration without centralized control.

Vision

The EA function at OSPI exists to guide the agency toward a more modern, coherent, and adaptable technology ecosystem, one that supports the long-term success of Washington's educators, students, and policy leaders.

This vision recognizes that OSPI's current systems are fragmented, difficult to evolve, and often misaligned with emerging educational data standards and reporting needs. By introducing a structured but lightweight architecture practice, OSPI aims to foster collaboration between business and technical teams, improve the quality and sustainability of technology investments, and ensure that all systems are designed with future integration, data flow, and security in mind.

The EA function will serve not as a gatekeeper, but as a trusted advisor and enabler, helping teams make better-informed decisions, reduce risk, and align efforts to common goals such as equity in education, data transparency, and responsive service delivery. Over time, this function will grow into a cornerstone of how OSPI approaches technology: with intent, with clarity, and with impact.

Scope

This EA charter applies to all technology initiatives at OSPI that involve significant system design, modernization, integration, or enhancement of digital services. It includes both internally developed and vendor-supplied solutions.

The scope extends to:

- Major modernization programs such as data platform redesign, modern infrastructure platforms, and system consolidation
- Design and implementation of cloud infrastructure and cloud-native services

- Interfaces and integration points between systems, particularly where educational data standards such as CEDS are relevant
- Foundational architecture patterns and practices, including security, identity management, data governance, and API strategies
- Enterprise data architecture, including data modeling, master data management, cross-data access, and metadata practices to support consistent reporting, integration, and stewardship across various systems

While this charter does not seek to impose heavy governance, it does aim to provide a consistent, practical reference point for how systems should be evaluated, designed, and deployed—particularly as OSPI matures its technical capabilities.

Goals

The goals of the OSPI EA function are to:

- Establish a repeatable, value-driven architecture practice that supports OSPI’s strategic goals and technical modernization efforts
- Provide clear architectural guidance for project teams, helping them make confident design decisions that align with long-term vision and standards
- Promote interoperability across systems, especially as OSPI transitions toward a more connected data ecosystem built on modern cloud services
- Encourage the use of shared services and common patterns, reducing duplication, technical debt, and maintenance overhead
- Ensure that architectural decisions are well-documented, transparent, and available for reference across teams and projects
- Build internal capabilities so that EA is not the responsibility of a single person or team, but part of OSPI’s organizational DNA
- Support the transition to cloud-native architecture

Core Principles

7.1 START SMALL, IMPROVE ITERATIVELY - We value progress over perfection. Architecture practices should not delay delivery but evolve through working systems, with lessons captured along the way.

7.2 DESIGN FOR INTEROPERABILITY AND REUSE - Systems must communicate well with each other, support standards like CEDS, and favor modularity and APIs to enable future integration.

7.3 PRIORITIZE SIMPLICITY AND SUSTAINABILITY - Solutions should be easy to maintain, transparent to support, and designed with long-term viability in mind—even by small or distributed teams.

7.4 BUILD ON OPEN STANDARDS AND SECURE FOUNDATIONS - OSPI will prefer technologies and practices that align with industry and government standards, especially where security and privacy are concerned.

7.5 SUPPORT AUTONOMY WITH GUARDRAILS - EA enables teams by offering clear direction and reusable tools—not by centralizing control or requiring excessive approval processes. +

Key Roles and Resourcing

To keep the architecture function lean and sustainable, OSPI will rely on a small number of clearly defined roles. These roles will support the initial standing up of the enterprise architecture capability and ensure it is embedded in day-to-day delivery. Wherever possible, existing staff will be empowered to take on part-time responsibilities aligned with these roles.

Key Roles and Resourcing Breakdown

Role	Primary Responsibilities	Commitment	Count
Architecture Steward	Leads the practice, facilitates reviews, curates principles, maintains repository	Part-time	1
Solution Architect(s)	Provides architecture support within specific domains or projects (e.g., Data, Infrastructure)	Part-time	2
Technical Advisor(s)	Offers consultative input on specific concerns such as security, integration, or data governance	As-needed	2–3

These roles are a minimal practical structure to launch the architecture function while minimizing overhead. The structure is expected to evolve as OSPI’s needs, ability, and architectural maturity grow.

Operating Model

To begin embedding this architecture function into OSPI’s day-to-day practices and project delivery, the following foundational steps will be taken to ensure adoption, usability, and early impact:

1. **CREATE AN ARCHITECTURE CHARTER** (this document) to establish shared purpose, scope, and team roles
2. **DEVELOP A STARTER ARCHITECTURE REPOSITORY** using SharePoint or GitHub to store templates, diagrams, and decision logs
 - A. A **shared architecture repository** will be maintained (starting in SharePoint or GitHub) to host:
 - i. Principles and decision logs (ADRs)
 - ii. Reference architecture diagrams

- iii. Templates and starter patterns for common solutions
 - B. **Visual models** (ArchiMate, Visio, Lucidchart) will be used to explain systems and support planning, with templates offered for new projects.
 - C. **Decision-making will be recorded** using a simplified Architecture Decision Record (ADR) format, capturing the rationale, alternatives, and outcome.
3. **RUN A PILOT ARCHITECTURE REVIEW** using an active project (e.g., Microsoft Fabric implementation) to test the review process and improve tools
4. **ESTABLISH A GOVERNANCE CADENCE** including a lightweight monthly Architecture Review Board and on-demand design reviews
 - A. A **lightweight Architecture Review Board** meets monthly to review active and upcoming initiatives, share lessons, and surface decisions that may affect other systems or teams.
 - B. **Design reviews** will occur on demand, based on project size, complexity, or risk. Reviews will be collaborative, not evaluative.
5. **TRAIN OSPI TEAMS** via short workshops on basic architecture, visual modeling (ArchiMate), and how to use reference materials

Foundational Frameworks

The OSPI architecture practice will begin with a small, targeted set of frameworks chosen for their adaptability, clarity, and suitability for low-maturity environments. These frameworks are intended as a reference set, not a strict requirement, designed to strike a balance between structure and flexibility as the Enterprise Architecture practice is being stood up. They offer enough formality to ensure consistent design thinking and decision-making while staying accessible and practical for OSPI's current size, skills, and project demands.

TOGAF (Core Only)

A simplified version of the TOGAF Architecture Development Method (ADM) will be used to guide project-level architectural thinking without unnecessary overhead. Only key phases will be adopted:

- **Reference:** [LINK](#)
- **Preliminary:** Define context, roles, and structure
- **Phases A–D:** Business, Application, Data, and Technology Architecture

ArchiMate

ArchiMate is a visual modeling language developed by The Open Group that complements TOGAF by offering a structured way to represent architectural components and their relationships. It is especially useful for visualizing dependencies and interactions across business, application, and technology layers. OSPI teams may use ArchiMate-specific tools or familiar alternatives to create

clear, accessible diagrams.

For more information, see: <https://www.opengroup.org/archimate>

Gartner-Style Playbooks

This approach, based on advisory models published by Gartner, emphasizes actionable documentation and iterative architecture practices rather than heavy formalism. It is especially well-suited for organizations at early stages of architectural maturity. OSPI will adopt select patterns and techniques inspired by this approach to support clarity in planning, design alignment, and communication. For more on Gartner’s approach to enterprise architecture, see:

<https://www.gartner.com/en/information-technology/insights/enterprise-architecture>

Instead of a formal methodology, this approach encourages clear, outcome-based documentation such as:

- Capability heat maps
- Current vs. target state diagrams
- Lightweight decision guides

These frameworks were selected to provide clarity without formality, with the ability to grow into more structured practices over time.

Initial Deliverables

The following deliverables are the foundational tools and reference materials that will support early architecture work at OSPI. These artifacts are intentionally lightweight and practical, meant to accelerate adoption, increase clarity, and reduce friction for teams engaging with the architecture function for the first time.

While these deliverables are not exhaustive, they provide a critical starting point for enabling repeatable patterns, informed decision-making, and shared understanding across distributed teams.

Deliverable	Description	Owner
OSPI Architecture Principles	A 1-page summary of agreed-upon design principles	Architecture Steward
Reference Architecture Templates	Visual models of common cloud-native and integration patterns	Technical Advisors
Architecture Decision Record (ADR) Template	Lightweight decision log format (Markdown or Word)	Architecture Steward
Current / Target State Maps	Maps showing current systems and target capability states	Solution Owners

Deliverable	Description	Owner
Architecture Review Intake Form	Simple checklist for projects requesting a review	Project/Product Leads
Data Architecture Blueprint	Visual and conceptual model outlining OSPI's enterprise data architecture	Architecture Steward

Success Measures (Year 1)

The following metrics will be used to track the effectiveness and adoption of the architecture function over its first 12 months:

Quantitative Indicators

- At least three major projects incorporate architecture input or follow published patterns
- A repository of five or more reusable diagrams or design patterns is created and used
- At least two design reviews per quarter are held and documented using ADRs
- Reduction in post-deployment rework, measured by a decrease in reopened tickets or urgent post-implementation changes
- Percentage of new systems using reusable reference architectures or principles
- Number of systems migrated to standard, sustainable platforms (e.g., Azure PaaS instead of custom infrastructure)

Qualitative / Perception-Based Indicators

- OSPI technical staff report increased clarity and consistency in how technology decisions are made (via informal surveys or interviews)
- Stakeholder satisfaction with system adaptability and alignment to business needs (via annual survey or project feedback)
- Improved onboarding time for new technical staff, based on feedback and observation

Strategic Indicators

- EA practice is referenced in project charters, vendor engagements, or design documentation on at least two modernization efforts
- Evidence of lifecycle planning, such as roadmaps for phasing out legacy systems or sustaining new ones

This charter should be reviewed after six months of implementation to assess value, identify gaps, and refine the approach as OSPI's technical maturity evolves.

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