Oregon Department of Early Learning and Care

Data & Analytics Strategy

2026-2029

The Department of Early Learning and Care's long-term data vision with a three-year strategy to achieve DELC's major business priorities



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Part I: Data Strategy Foundational Context

Data Strategy Purpose

DELC's data strategy establishes a clear and coordinated approach for how DELC governs, manages, and uses data to support internal operations and its mission of serving the early learning system of Oregon. The data strategy defines the long-term data needs of our agency to ensure DELC has the necessary resources, infrastructure, and capacity to effectively use data **to achieve and measure** progress towards fulfilling this mission.

Operationally, this means building data capacity to understand the quality and quantity of services, outcomes, business processes, and overall progress towards achieving the goals outlined in Growing Oregon Together. Strategically, this means clarifying roles and responsibilities and accountability with data across the agency and sets the long-term direction for strengthening data as a strategic asset.

Data Mission and Guiding Data Principles

The overall mission of this data strategy is to make sure that the data owned by DELC is accurate, trusted, accessible, secure, and effectively used to improve services, inform policy, and strengthen public trust.

Guiding principles associated with this mission include the following areas:

Data as a Strategic Asset

Data is valued within the agency as a critical asset to help understand DELC's programmatic and fiscal integrity, with resources and staff capacity allocated to support it. We minimize data collections, so we are only collecting what DELC minimally needs to track our work and compliance; we only procure technology and data systems to meet the critical business needs of DELC.

Data-Informed Culture

With a date-informed culture, all agency staff are informed and empowered to use data to fulfill and achieve their work; the responsibilities of data owners, stewards, and users of data are documented, understood, and enforced across the agency.

Data Equity

Data collection, analysis, and interpretation are designed to be fair, representative, ethical, and inclusive. We minimize the data that we collect.

Equity Data

Data collection, analysis, and interpretation are designed to report on disparities, representation, access, inclusion, and/or outcomes across different populations of Oregonians.

Standardized Data Governance

Data will be aligned by standardizing governance processes which improve operational efficiency, support data quality, and make data useful, accessible, and secure.

Transparency

Data will be accessible, provided to open data sources when recommended, and shared to build and maintain public trust.

Data Minimization

In order to ensure data minimization, DELC collects only the most critical and necessary data and minimizes IT systems that are one-off and not strategically aligned with the core data systems.

Data Vision

The vision for data strategy at DELC is to cultivate a culture where high-quality data is governed, shared responsibly, and used consistently to inform data-driven decision-making and operational effectiveness.

This vision includes ensuring:

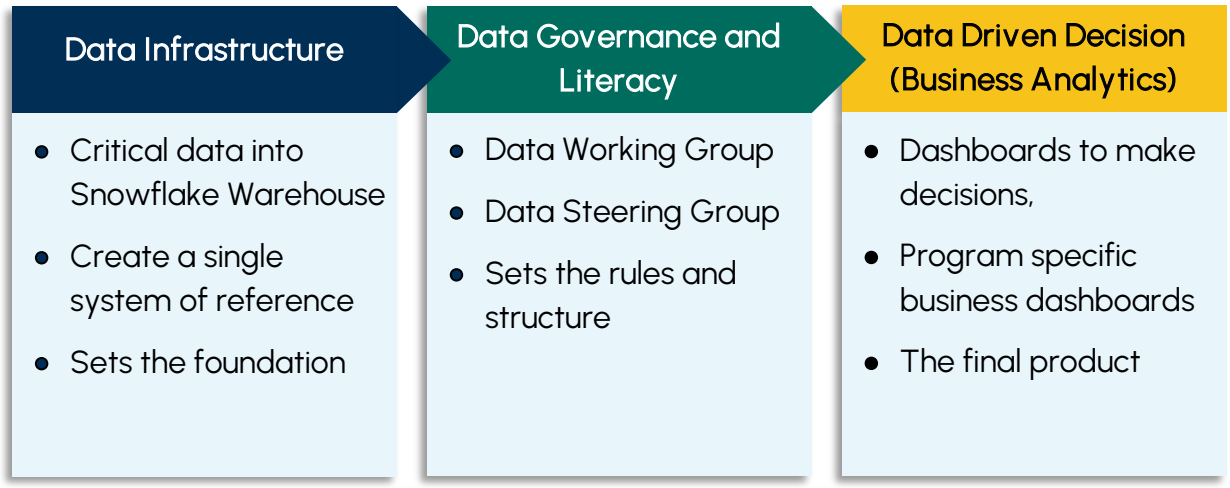
- DELC staff have the access, understanding, and tools necessary to measure and monitor the implementation and outcomes of their programs and policies
- DELC leadership has a holistic view of the outputs and outcomes of DELC-funded programs and initiatives to support effective policy-and decision-making.
- DELC leadership has a holistic view of our financial and operational health across all facets of Agency operations.
- DELC has an integrated master data set of early learning and care system data (providers, staff, children, etc.) and for each of the programs they administer. This process leads to systems of reference that allow DELC staff and leadership to understand what is true in near real time for their program or priority area.

The data strategy is in alignment with our strategic plan, Growing Oregon Together, which articulates that DELC must:

1. **See data as an asset**, not a liability. DELC manages and governs data proactively, not reactively.
2. **Use data** to answer questions, gain understanding, and make better decisions.
3. **Have timely access to useful data,** for DELC staff and leadership, to answer their most critical questions.

Part II: Building Three Core Data Strategy Pillars

The success of the data strategy relies on three essential core pillars. Each pillar is defined below in terms of its objective, importance, and priority areas.



These three core pillars come together to create the data strategy in procedural form, with each process building off of the other. The data infrastructure sets the foundation, the governance provides the rules and structure, and the business analytics is the final product to be used by business, leadership, and others as needed. Together, these three core pillars create a reliable, standardized approach to using data.

Pillar 1: Modern Data Infrastructure & Capacity

Objective

The objective of Pillar 1 is to integrate data systems of record or other originating data sources into the Snowflake data warehouse to create systems of reference for each data priority area. This improves the reliability, scalability, accessibility and security of data. It also supports timeliness of data insights and analytics for better decision-making.

Why it matters

DELC tracks workflows and outcomes in multiple disconnected systems of record including our Child Care Reference Information System (CCRIS), Oregon Early Learning Management System (Oregon ELMS), Awards Management System (AMS), our state accounting system SFMA, Smartsheets, and others. These systems are governed independently with no shared standards, defined and centralized ownership and no reliable way to answer cross system questions or understand operation metrics across multiple systems. Additionally, program and operations staff spend significant time reconciling conflicting numbers or manually correcting data errors rather than using data and building reports to make informed decisions.

Snowflake, a data warehouse, helps to solve the problem articulated above – it does not replace DELCs systems of record, it pulls from them into a single, centralized environment often referred to as a system of reference.

System of record - a software system or database that is the definitive, primary source for specific business data, for example, Oregon ELMS

System of reference – a single place where cross-program questions can be answered reliable, and consistently without requiring the integration of every single system of record; only used for answering specific, cross programmatic questions.

Focus areas

- Integrated data architecture strategy aligned with business needs
- Operate and maintain data governance procedures at the individual program level and across DELC in a universal place (e.g., Snowflake)
- Reduction of duplicative data siloes – create system of reference for each business priority
- Improved data integration and interoperability, which leads to the identification and operationalization of key performance metrics
- Standardized reporting and analytic platforms
- Standardized procedures and processes for reviewing the key performance metrics on the standardized reporting and analytic platforms
- Scalable storage solutions
- Metadata and master data management capabilities

Modern Data Infrastructure & Capacity Implementation Plan

DELCs current state data infrastructure is a series of disconnected data systems that are governed, managed, and operated independently of one another, leading to a variety of inconsistencies. The current state of technology procurement is uncoordinated and often led by one office or division and disconnected from a strategic plan. The data strategy, and this pillar specifically, set the standard for DELC staff and leadership to consider data and technology solutions not in isolation but in coordination with the overall data vision and strategy.

For a deeper understanding of our current state data system and information technology stack, please see the Current State IT and Data Systems– 2026 document.

Long-Term Vision

Much of this coordination can occur in Snowflake, a data warehouse where historic data is stored, governed and managed. Should there be an audit that requires historical records of a program, the ideal state is that Snowflake can be used as the place to store information that is static (i.e. Not updated on a recurring, automated basis).

Additionally, Snowflake ensures that DELC does not have to integrate multiple systems of record (like Oregon ELMS, AMS, Smartsheet, SFMA, etc.) with one another but instead can be integrated into Snowflake to create a system of reference for a specific set of business questions related to a DELC priority.

Roles and Responsibilities

Roles and associated responsibilities for DELC's data infrastructure fall primarily with the RAD and IT Offices in Operations.

- IT Data staff are responsible for tasks associated with overall monitoring, privacy, and security activities (e.g., granting access via role-based access control, monitoring billing and costs, and governing account-level settings).
- IT Data staff also support Snowflake-related needs for data integration: connecting data sources to Snowflake through API (Application Program Interface) and through other methods.
- Both RAD and IT Data staff share responsibility for Snowflake-specific data governance, both establishing and implementing policy as well as configuring secure data sharing with external entities and in the future, the public.
- RAD Office staff are responsible for data pipeline processes (moving data through transformation stages to production); architecting data designs aligned with business use needs; implementing data quality procedures to support data stewards and agency data quality standards; and creating presentation-level data schemas that feed into data products and produce DELC's golden record datasets.



Critical tasks for accomplishing long-term vision

Pillar 1 Task	Description	Connected Projects	Year Prioritized
Snowflake badge learning & SQL trainings	Skill and knowledge building for RAD Office staff	Foundations	2025-26
AMS data: Completed data ingestion and transformation processes	Ingest, transform, and compile presentation data for analysis	Fiscal and Programmatic Integrity	2026
Child level data collection planning for PSP & OPK and Coordinated Enrollment	As part of Cohesive preschool project, procure, govern, and help manage a coordinated enrollment tool like ChildPlus	Long-term Child Outcomes	2028
SFMA data: Completed data ingestion and data gov processes	Ingest, transform, and compile presentation data for fiscal golden record	Fiscal and Programmatic Integrity	2026
Snowflake proof of concept project completed with standardization recommendations	RAD Office led best practices project completed with recommendations for standards to be finalized in operations manual	Foundations	2026
Facilities/Site golden record	Design and implement data pipeline for creating site-level golden record, bringing historical CCRIS data into the schema	Measuring Child Safety and Customer Service	2026
Critical Oregon ELMS data: completed data ingestion and transformation processes	Brings Oregon ELMS data related to ERDC, findings and investigations, facilities, and other critical functions into Snowflake to match Oregon ELMS data with other critical data sets (PDAO sites, grants and awards data, etc.)	Fiscal and Programmatic Integrity. Child Safety & Customer Service	2027
Child golden record	Design and implement data pipeline for creating child-level golden record	Fiscal and Programmatic Integrity. Long-term Child Outcomes	2026-27

Metrics

Completion of these tasks should result in the following improvement and performance metrics:

- Standardized pipelines for processing data
- Clear, automated methods of data review for quality improvement
- Improved system interoperability
- Increased accessibility to golden records data for analytic use

Pillar 2: Data Governance & Literacy

Objective

The objective of Pillar 2 is to establish clear standards, expectations, and accountability frameworks for data across the agency for data governance.

Why it matters

Data governance and literacy create trusted, consistent outcomes for our data. It also establishes responsibility frameworks for data infrastructure and business analytics. Unclear roles and responsibilities around data hinder DELC's ability to use data efficiently and in a trustworthy way.

Focus areas

- Implementation of formal data owner, stewardship, and custodianship roles and responsibilities
- Establishment of data-related skill sets for data owners and stewards in data governance working group
- Establishment of data governance steering committee for decision-making and prioritization
- Standardization of data and metadata management through policy, process, and procedure development
- Establishment of data literacy framework and trainings
- Development of ethical data use guidance
- Establishment of data dictionaries

Data Governance and Literacy Implementation Plan

Data Governance has two complementary definitions.

1. Processes and Procedures – data governance refers to the system of cross-team processes for collecting, storing, organizing, owning, and sharing data in a way that is aligned with DELC's values and best practices in the field.
2. Structure - Data Governance can also refer to organizational bodies, rules and policies, responsibilities, and enforcement protocols related to data.

Data literacy is the ability to read, write and communicate data in context and implement a collection of practices and processes, Together, data governance and data literacy allow DELC staff responsible for the data to monitor data quality, ensure data are properly secured, which help ensure the intentional management of data as a strategic asset.

Long-Term Vision

Data governance will be embedded into every operational and programmatic project or initiative at DELC Below are the four critical business and operations projects DELC will focus on in the next three years, and the roles and responsibilities and tasks associated with data governance will be associated in each of these projects. All DELC program and operations staff have a part to play in data governance, and data governance project team members will be embedded within the launch of each DELC project or major initiative as part of fulfilling this data strategy.

Roles and Responsibilities

DELCs Data Governance Structure has three layers: The Working Group, which includes Data Stewards and Owners, The Strategy Group, which is our directional layer and comprises directors and other agencywide leaders responsible for making decisions, and the Executive Leadership Team as needed for final authority. For more information on DELCs data governance structure, please refer to our Data Governance Structure document.



Critical tasks for accomplishing long-term vision

Pillar 2 Task	Description	Connected Projects	Year Prioritized
Training staff in data literacy	Staff have a shared foundational understanding of how to work with and interpret data in their roles.	Foundations	2027
Data governance working and steering groups established & operating	Decision-making and implementation bodies for data governance work are stood up and functioning independently.	Foundations	2026
Data governance is attached to each major project, or initiative in DELCs 3-year strategic priorities	Data stewards in each division and office lead the data governance tasks and responsibilities in each major project – with support from RAD Office	Foundations	2027
Finalize and adopt foundational data governance policies, procedures, and templates	Foundational data governance policies are finalized and adopted by DELC. Stewards and owners have templates and procedures to do their jobs	Foundations	2027
Cohesive Preschool programs have aligned data governance procedures for adhering to policies	As PSP and OPK align more closely to deliver cohesive preschool, we ensure fiscal, programmatic and other critical reports are aligned	Programmatic Integrity and Compliance	2027
SFMA, Orbits, and all budget and fiscal tools have data governance	Data stewards, owners, and custodians are established with quality procedures and processes adopted and utilized	Fiscal Integrity	2026
Awards Management System policies & procedures established & implemented	Data governance support required to maintain high-quality data across time	Fiscal and Program Integrity	2026
Tribal data agreements are in place	Tribal data agreements are established for each of the nine federally recognized Tribes in Oregon to support Tribal data sovereignty goals	Foundations	2028
DELC data are inventoried	Information is gathered to help catalogue data across DELC offices and data domains by data owners and stewards. This will support our understanding of data in the agency.	Foundations	2027
DELC data are classified	Data within DELC are classified by owners and stewards to help provide clear security, sharing, and use guidance for data.	Foundations	2027

Metrics

Completion of these tasks should result in the following improvement and performance metrics:

- % of DELC datasets inventoried and classified according to procedure
- % of priority datasets with assigned data owners and stewards
- Data quality procedures created, adopted, and followed for every DELC division in accordance with the data inventory
- Adoption of data standards and policies
- Standardization, acceptance and use of data definitions across divisions
- % of governance policies with associated procedures developed and in use by offices outside of RAD

Pillar 3: Data-Driven Decision-Making

Objective

The objective of this pillar is to strengthen the consistent and responsible use of data in strategic planning, operations management, reporting, and policy development.

Why it matters

Data has limited value unless it informs decisions and improves outcomes.

Focus areas

- Standardized data dashboards for reporting, compliance monitoring, or performance indicators
- Clearly established and documented performance metrics aligned to agency mission
- Embedded analytics in operational workflows
- Program evaluation and outcome measurement
- Executive-level reporting and transparency tools

Data-Driven Decision-Making Implementation Plan

This pillar can also be understood as having strong business analytics with performance metrics for each goal for every section of our business and program area to make decisions that are driven from historical and accurate data. This pillar results in having high-quality data that is increasingly available for timely and accurate reporting in dashboards and reports to support staff operations and leadership decision making and insights.

Long Term Vision for data driven decisions

With the pillars of data governance and data infrastructure well established, DELC staff and leadership will be able to make well-informed decisions that are based on high-quality, timely, and accurate data. Additionally, we can share data and information with partners, our legislative branch, and other executive branch agencies and offices in a timely, reliable, and accurate way.

Reporting on critical business functions, from customer service to enrollment to licensing and investigations reporting becomes streamlined, centralized, reliable, and consistent. Automated dashboards and reports are validated for correct data and available to every data steward, data owner, data trustee, or program and operations leader that need them to make decisions.

Roles and Responsibilities

While the RAD Office and IT Office are most often responsible for providing the tools and generating reports for business intelligence, it is the responsibility of all DELC staff and leadership to use the tools to make decisions.

Building the tools with data will only prove reliable if the data supporting and creating the tools is accurate, which requires data steward involvement in developing and following data governance policies, as well as communicating and elevating any risks to data quality or integrity.

Directors are responsible not only for using the tools, but for informing the design of the tools to ensure the business analytic tools are answering the right questions. Directors are also responsible for ensuring their staff have the time and capacity for the necessary data governance work to ensure integrity in all reporting data. Directors are also responsible for ensuring there is centralized reporting and helping determine the source of truth for each data domain or report they are ultimately accountable for.



Critical tasks for accomplishing long-term vision

Pillar 3 Task	Description	Connected Projects	Year Prioritized
Universal program dashboard for cohesive preschool project	Scoped and wire framed in alignment with new program reporting alignment data.	Program & Grant Compliance	2027
AMS data: fiscal dashboard completed	Dashboard tracking funding for grantees – awards and claims	Program & Grant Compliance	2026
Comprehensive fiscal dashboard completed	Scoped and wire framed to incorporate AMS, SFMA, ERDC (later), SFMA data integrated with AMS data	Program & Grant Compliance	2026
Cross program site list	Compliance & licensing data from Oregon ELMS are combined in SF with program data from PDAO and other program areas to understand which DELC programs occur at DELC licensed and monitored facilities	Program & Grant Compliance; Customer Service	2027
ERDC family data from Oregon ELMS	Oregon ELMS tables are structured in Snowflake for ultimate source of truth and reporting on ERDC	Cohesive Preschool, Child outcomes, ERDC stabilization	2027
Child level data	Child level data from current source systems are ingested into Snowflake for a full picture of children served by DELC programs	Cohesive Preschool; child outcomes	2028
Legislative Key Performance Measures Dashboard	A product that allows for regularly tracking on DELCs legislatively mandated key performance mandates and accompanying processes to make decisions	Program Integrity; 3P	2027

Metrics

Completion of these tasks should result in the following improvement and performance metrics:

- Reduction in manual reporting
- Increased use of dashboards in leadership meetings for decision making and tracking
- Reduced time and capacity to generate required reports
- Improved alignment between performance metrics and strategic goals
- Documented examples of data-informed policy or operational changes

Part III: Critical Business Focused Data Strategy Priorities

DELC staff and leadership must successfully implement all data-related activities across each of the three pillars to fulfil the mission and vision of our data strategy and create efficient and effective data processes. For example, for DELC to actualize a high-quality data dashboard to monitor program activities and expenditures.

- **Data governance and data literacy foundations are required** (e.g., established processes and procedures, identified and trained data roles, and standardization);
- **Data infrastructure for all relevant data domains must be complete** (e.g., program activities and financials)

This leads to **appropriate and aligned data visualization products are produced** that support leadership in decision-making.

Below, we first outline prioritized projects for 2026 – 2029 and then scope out concrete data governance, infrastructure, and analytic tasks that will be required to complete these projects, as well as necessary foundational tasks that support these data areas more generally.

DELC's Four Critical 2026-2029 Business Goals

How DELC can make tangible, data-driven progress towards reaching our Strategies in Growing Oregon Together

Child Safety and Customer Service

DELC is responsible for providing customer service for all providers across the state and measuring the efficacy of the customer service we provide. This includes but is not limited to, where services are most requested, what kinds of services, and how we deliver those services. Analytics around payments to providers, approval of licenses, and overall customer service experience like complaint and investigations responses are critical, in addition to other critical measures identified by our licensing and customer services divisions.

Many indicators will be answered in the Oregon Early Learning Management System (ELMS), our new CCLD data system, while other critical metrics will be available in DELCs data warehouse, specifically for those questions that require intersection and licensing, grants, compliance, and programmatic data. The customer service unit is also procuring Amazon Web Server (AWS) as our new call center system, and many accountability metrics related to customer service will be available in this platform.

Focus on in the next few years will be building structured reports on compliance including metrics that will be identified with the customer service compliance team in the next few years to tell the story of compliance and investigations and the role they play in ensuring child safety. Additionally, bringing compliance and customer service into one single point of entry and with a single system of reference from a data perspective is a critical priority for the next three years. This involves streamlining customer service, provider interaction, and a centralized complaint intake process.

Programmatic Integrity and Compliance

DELC administers millions of dollars of grant-in-aid to providers and other community-based organizations (CCR&Rs, Hubs, universities, etc.) with the goal to provide critical business support, professional learning services, and free or affordable child care slots to families in Oregon. Part of ensuring this money does the most good for families is ensuring the integrity of our program delivery and that providers are using the money allocated to them to provide the services we expect them to provide.

DELC must have modern and integrated data collection systems, centralized processes, and analytics to ensure that programs are spending public dollars on providing care to children and building the critical business infrastructure needed to stay in operation. This is related to all grant-in-aid programs, including Hub, CCR&Rs and all contractual grants, as well as Employment Related Day Care (ERDC).

This priority ensures providers are using public dollars wisely and are staying in compliance with regulations for childcare providers across the state. Examples of priority questions include:

- Data matching of sites across different programs
- Matching ERDC providers with providers of DELC preschool and infant and toddler programs like OPK, PSP, Baby Promise, and others.
- Includes the integration of data in Oregon ELMS, AMS, Smartsheet, as well as other possible future systems (Apricot, ChildPlus)
- Full alignment of all grantee reporting that comes out of systems (example PDAO grants and ECB grants and the incoming data, PLSO & CSO progress reporting for system partners)
- Using tools and systems to measure what communities are receiving funding to ensure we are reaching all communities

To fulfil our critical Program Integrity goals, DELC needs to connect licensing and compliance data with program enrollment and grant level data, to track overall compliance for all facilities and providers DELC is responsible for monitoring. Additionally, the program needs tools and integrated systems to monitor a provider or grantees compliance with their grant agreement. Finally, we need to understand how all our enrollment-based programs work together to serve Oregonians as a whole, not just to understand how the programs work individually.

Cohesive Preschool and Long-Term Child Outcomes

While DELC funds and regulates providers and community organizations, all of that is in service of providing high-quality early learning and care throughout the state. Understanding how and if we are providing this care requires information about the children and families we are serving, where they are being served, and the quality and type of care and programming they are receiving. This ensures DELC understands the outcomes and impacts of our programs and services.

This priority sets the vision for **DELC to eventually be capable of measuring outcomes for families and children who receive DELC services.** This vision includes collecting child level enrollment data for DELC funded preschool programs, home visiting programs, and standardizing that with our current child level data collection for the ERDC program and our infant and toddler Baby Promise program.

To understand how DELCs services work in the long-term, the vision is more collaborative with other state agencies. DELC can share and receive data about DELC families and children with other

agencies, like the Department of Education, Higher Education Coordinating Commission, Oregon Department of Human Services, or others to understand how DELC services impact children and families long-term. This vision is in alignment with other states who participate in an Early Childhood Integrated Data Set, a concept and framework other states share for answering questions about the impact and outcomes of early childhood education on children and families long-term.

With appropriate control and data architecture, integrating all child level program data into Snowflake allows us to connect multiple programs and their disparate data sets together to understand which children receive more than one DELC funded program including:

- Childcare Programs: ERDC, Baby Promise, Preschool Promise, OPK
- Wraparound services: Health Families Oregon, Relief Nursery, Birth Through Five Literacy, Hub Enrollment

This priority can be fulfilled through agency projects including standardizing coordinated enrollment data from Hubs, operating and receiving child-level attendance data from Child Care Management Systems of other child-level databases from all child care providers who receive DELC funds, and utilizing our ERDC data to better understand short and long-term impacts on children and families.– Budget and Expenditure Tracking.

Fiscal Integrity – Budget and Expenditures

DELC is responsible for administering hundreds of millions of dollars in funding via grant-in-aid contracts, which requires a holistic standardized process of tracking the flow of DELCs budget and expenditures from initial funding award to program allocation to the final expenditure on behalf of our grantees.

While budget and expenditure information is stored in multiple systems of record, the long-term data strategy involves integrating critical budget and expenditure systems into the Snowflake data warehouse and building PowerBI dashboards and reports to do critical functions from payment reconciliations to grant compliance and monitoring.

To fulfill our critical Fiscal Integrity goals, DELC needs to integrate the data of all expenditures and claims data from disparate systems with the budgeted and awarded data into a single system of reference for DELCs financial portfolio and overall health.

This information will help us make future award and funding decisions and build projections for better program decisions making. Budget and actuals centralized tracking will also ensure we understand what our organizations and partners need from DELC for long-term financial stabilization.

Accountability & Implementation Approach

The Chief Data Officer (CDO) is responsible for oversight of these three pillars and the Agency's progress towards achievement of the stated goals within each pillar. This work includes leading projects to improve DELC's oversight and use of data within these three pillars and coordinating with leadership and other offices in the agency to ensure objectives are aligned and goals are met. Agency offices retain operational responsibility and subject matter expertise for and in the data they create and manage, but that responsibility must be aligned with data governance project implementation and the overall data strategy.

A rolling, three-year implementation plan will establish phased priorities, measurable targets, and resource alignment to meet these strategic goals. Progress will be reviewed annually and reported to agency leadership.

Closing

Fulfilling DELCs data strategy requires that everyone at DELC, as well as our partners, grantees, providers, and even families understand and coordinate with DELC in using high-quality, accurate data with a vision and end goal in mind; to use data and information to make better decisions about policies and programs that impact and change the lives of Oregon's children and families.

These changes will not happen all at once, and many of these changes may not be fulfilled by the time this strategy sunsets in 2029. However, this strategy provides a vision towards more centralized, well-governed, data infrastructure through thoughtful, strategic data system investments with technology stack minimization at the core.