

Evaluation report 15-03  
February 2015

# The K-12 Longitudinal Data System (ISEE)

Office of Performance Evaluations  
Idaho Legislature





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**Senator Cliff Bayer (R) and Representative John Rusche (D) cochair the committee.**

## From the Director

February 11, 2015

Members  
Joint Legislative Oversight Committee  
Idaho Legislature

In conducting our evaluation of the K–12 longitudinal data system, commonly referred to as the Idaho System for Education Excellence (ISEE), we found that mistakes from past projects similar to ISEE were repeated.

For example, in 2006 we released the report *Idaho Student Information Management System (ISIMS)—Lessons for Future Technology Projects*. The report discussed reasons that ISIMS failed, and I wrote in my transmittal letter to that evaluation report:

Technology projects should clearly define the roles and responsibilities of all stakeholders and consider end user' views, needs, and resources at each stage. In addition, technology projects should maintain a realistic scope, supported by realistic expectations of technology and an updated project plan.

We believe the planning and implementation of ISEE fell considerably short on paying attention to the message of our 2006 report. In addition to identifying what went wrong with the ISEE implementation, this report makes recommendations for establishing ISEE as a sustainable K–12 longitudinal data system that is viewed by all stakeholders as an important state asset.

This evaluation could not have been completed without the full support of the many school districts we worked with during the course of this study. We are grateful for their cooperation and assistance.



Sincerely,



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**Included in the back of the report are formal responses from the Governor and the Superintendent of Public Instruction.**



## Acknowledgements

We appreciate the cooperation and assistance we received from the Department of Education.

Lance McCleve, Hannah Crumrine, and Jennifer Tomlinson of the Office of Performance Evaluations conducted this study. Margaret Campbell copy edited and desktop published the report.

Brad Foltman, former administrator of the Division of Financial Management and Bob Thomas of Robert C. Thomas and Associates conducted a quality control review.

Matthew Von Hendy of Green Heron Information Services conducted a literature review.

## Executive summary

# The K–12 Longitudinal Data System (ISEE)



## Legislative interest and study purpose

Since the implementation of ISEE, district personnel have expressed their struggle to complete monthly data submissions through letters to the department, legislative presentations, and survey responses.

In March 2014 the Joint Legislative Oversight Committee approved a study to evaluate Idaho’s K–12 statewide longitudinal data system known as the Idaho System for Educational Excellence (ISEE). The committee received three separate study requests including one from the Senate Education chair on behalf of his committee. These requests raised concerns about department data collections and uses, the burden that ISEE data collection has placed on districts, and data accuracy at the state and local levels.

Knowing that maintaining the K–12 longitudinal data system was a priority for the requesters, we used the information presented in the study requests, initial interviews with stakeholders, and a survey of superintendents to develop an evaluation approach that emphasizes the future and supports system sustainability. We designed the evaluation to focus on three major topics:

- Processes and practices for collecting, managing, and reporting accurate data

- Demands on department, district, and charter school resources

- Rationale for collecting data elements

**Although ISEE brought substantial changes in data collection technology, the technical aspects of ISEE were not the primary source of district burden.**

**The department underestimated the impact that the new system would have on districts and initially provided little assistance or direction.**

## Report message

Although ISEE brought substantial changes in data collection technology, the technical aspects of ISEE were not the primary source of district burden. In fact, the US Department of Education recognized that Idaho's department had "developed a robust K–12 longitudinal data system."

The main problem encountered by districts was that the new data system brought a rapid shift in data collection practices, and districts found themselves unprepared to meet the challenges. The department underestimated the impact that the new system would have on districts and initially provided little assistance or direction. Districts have criticized the department for a lack of training, communication, and financial support. In response, the department later acknowledged that the timeline for implementation was rushed and that the changes were disruptive to districts.

We intended to quantify the difference in districts data collection burden before and after ISEE but found that ISEE resulted not only in changes to the number of staff responsible for district data submissions, but also which staff would have the responsibility for data submissions. As a result, data collection and submission before and after ISEE are not directly comparable. However, we were able to identify commonalities among districts that characterized how ISEE affected the time and resources they dedicated to data collection and submission. We also identified four factors that drove district burden and were a direct result of decisions made by department officials:

1. Extracting, transforming, and loading data
2. Frequency of submissions
3. Department training, technical support, and communication
4. Number and characteristics of data elements required for ISEE

The department had the flexibility to develop a K–12 longitudinal data system tailored to its goals. Although federal education programs and grants influenced aspects of the systems design and the data collected, the majority of the system design and data specifications were the department's choice.

A consequence of the choices made by the department is that development and ongoing management of the project has been IT centric. Implementation and planning were done in relative

isolation with little input from department program areas or districts. As a result, department decisions about system functionality and data collection requirements reflect the department's need to comply with federal reporting and to calculate school funding, but they do not necessarily reflect districts' system capabilities, data needs, or business practices.

Sustainability of Idaho's longitudinal data system will always be at risk unless stakeholders develop a sense of ownership and see value in the ongoing success of the system. The value of ISEE is entirely dependent on its ability to meet the information needs of stakeholders.

The department has made efforts to increase support to districts in a variety of ways but has still not developed a formal process for ongoing collaboration with stakeholders when designing or refining data collection activities including processes, analyses, and reporting.

Aspects of the ISEE system are maturing and the recent changes in the department's leadership and IT management put the department in an excellent position to revise and improve its management strategy.

For the department to improve state data collection and reduce district burden going forward, it must transition from an IT-centric governance structure to a stakeholder-centric governance structure. We have identified three key areas the department should improve to ensure that ISEE is useful, valuable, and sustainable:

1. Develop a formal data governance structure that includes continuous structured input from key stakeholders, such as districts and policymakers
2. Document policies, roles, standards, uses, justification for collections, and the burden, feasibility, and cost of district collections
3. Evaluate data elements and collection activities and align them with the goals, needs, and capacity of stakeholders

**The development and ongoing management of ISEE has been IT centric.**

**The value of ISEE is entirely dependent on its ability to meet the needs of stakeholders.**



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**The department acknowledges the timeline for implementation was rushed, and it understands that the changes were disruptive to districts.**

# Introduction

## Legislative interest and study request

In March 2014 the Joint Legislative Oversight Committee approved a study to evaluate Idaho’s K–12 statewide longitudinal data system, known as the Idaho System for Educational Excellence (ISEE). Idaho’s Department of Education implemented the data system in October 2010 and has spent approximately \$12 million in state and federal funding to design, build, implement, and maintain the system.<sup>1</sup>

The new data system brought a rapid shift in data collection practices, and districts found themselves unprepared to meet the challenges. Districts have criticized the department for a lack of training, communication, and financial support. In response, the department acknowledges the timeline for implementation was rushed, and it understands that the changes were disruptive to districts. The department has made efforts to increase support to districts in a variety of ways, but challenges stemming from the initial system implementation persist.

Uncertainty about district burden and sustainability of the data system generated enough legislative interest that the oversight committee received three separate study requests, including one from the Senate Education Committee (appendix A). The requests identified four main areas of interest.

**The burden that ISEE data collection has placed on districts.** Districts have reported spending substantial time and resources to meet monthly ISEE data collection requirements.

**Department data collections and uses.** Current department efforts to provide information for why data are collected and how they are used have not satisfied districts.

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1. The \$12 million does not include dollars spent on the department’s statewide instructional management system Schoolnet.

**Data accuracy at the state and local levels.** Districts have been unable to cross-reference the data they submitted through ISEE with department reports and question where the discrepancy lies.

**System sustainability.** Study requestors are interested in creating a sustainable data system that provides the department with the data needed to meet the state and federal reporting requirements and to impose minimal burden on districts.

## Study scope and evaluation approach

Knowing that maintaining the K–12 longitudinal data system was a priority for the requestors, we used the information presented in the study requests, initial interviews with stakeholders, and a survey of superintendents to develop a study scope that emphasizes the future and supports system sustainability (appendix B). We designed the evaluation to focus on three major topics:

- Processes and practices for collecting, managing, and reporting accurate data

- Demands on department, district, and charter school resources

- Rationale for collecting data elements

In addition, we reviewed national guidance literature about education data system implementation, management, governance, and sustainability. We used the guidance literature to assess the department’s management of ISEE. We consulted a broad array of literature including programs within the US Department of Education, national education nonprofit groups, and data system consulting groups.

Each source presents different perspectives and ideas that can be organized into similar approaches to ensure system sustainability. To provide the Legislature, the department, and stakeholders with the most useful information, we chose to incorporate the system components of data use, system design, stakeholder engagement, and data governance into our report. The National Center for Education Statistics Grant Program uses those components to evaluate state longitudinal data projects. See appendix C for additional details on methodology.

## Report organization

We have organized the report into the following sections:

**Context** gives an overview of the national landscape of longitudinal data collection efforts, state and federal funding for Idaho's K–12 longitudinal data system, and the flexibility given to states when designing longitudinal data systems to meet unique needs. We discuss how the department used that flexibility to incorporate the longitudinal database into a larger initiative—ISEE.

**Implementation** discusses how the new education data system intentionally changed data collection activities for both the department and districts. We include information that explains longitudinal data and its uses. We present a timeline of major events and communication efforts associated with the department's effort to build and implement ISEE in less than two years. We also provide context for the burden that the rapid shift in data collection activities created for districts.

**Data collection and district burden** clarifies how ISEE has affected workload among districts. We address six major factors that we found drive burden. Some factors will always pose challenges because of the nature of data collection, whereas other factors can be mitigated through department and district action.

**System sustainability and stakeholder collaboration** explains how system sustainability is dependent on strengthening current management strategies and involving stakeholders moving forward. We give three recommendations that address data governance, department documentation, and evaluation of the education data system.

# Context

Since 1870 the federal government, through the US Department of Education, has collected education statistics and published reports used by stakeholders to allocate resources, develop programs, monitor services, and conduct research. During the first decade of 2000, the federal government enacted programs and policies encouraging states to develop statewide longitudinal data systems (SLDS) to collect individual student data across time. In addition to these federal programs, the US Department of Education began offering grants to support states' development of longitudinal data systems. Grants gave participating states flexibility to design and implement systems that would meet individual needs or preferences. Idaho's Department of Education used that flexibility to implement a K-12 SLDS as part of its larger education reform efforts. It funded this project with a combination of federal and state dollars.



**All 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands have a K-12 SLDS.**

## **State education agencies across the nation use statewide longitudinal data systems to collect individual student and staff data.**

The No Child Left Behind Act of 2001 is widely acknowledged for shifting data collection from aggregate to student level (disaggregate). The act did not require states to use an SLDS for data collection, but compliance with some of its new accountability measures (e.g., tracking student achievement by socioeconomic status) required states to track individual student data over time.

In 2005 the Data Quality Campaign, a nonpartisan national advocacy organization, identified 10 essential elements for an SLDS and started surveying states annually to assess nationwide progress on SLDS development. That same year, the US Department of Education announced a grant program to assist states in developing and implementing an SLDS.

States' longitudinal data systems link student and staff data across schools and districts over time. When included in longitudinal data systems, reporting and analysis tools make data accessible to policymakers, districts, and the public. Exhibit 1 defines the basic components and uses of an SLDS.

Although all longitudinal data systems typically include several basic components, states organize and structure their systems differently depending on the intended uses. Some states have developed only minimal capabilities whereas other states have expanded system capabilities that include components such as financial data or the ability to share student data with social service providers.

## Exhibit 1

## Statewide longitudinal data systems typically consist of 12 basic components.

Component	Definition	Use
Unique student identifier	A single, unduplicated number assigned to a student throughout K–12 education	Tracks students from grade to grade and across districts in the state
Student data	Student information for enrollment, attendance, demographic, program participation, and achievement	Allows stakeholders to understand characteristics of students as they move through the education system and for evaluation of program impacts
Teacher unique identifier	A single, unduplicated number assigned to each teacher	Matches teachers to students by classroom and subject
Teacher and staff data	Teachers and staff information such as education, certification, experience, and salary	Allows stakeholders to understand the relationship between student achievement and teacher quality and between staff attrition and mobility
Annual summative assessment data linked from year to year	A database of individual student performance on state assessments that provides disaggregate information	Matches student assessment records across years to follow student’s progress and determine proficiency
Data warehouse	A storage facility maintained by the state education agency where data are stored and integrated	Links student, school, and district information over time
Reporting and analysis tools	Software programs that calculate statistics and produces reports	Allows stakeholders to produce reports and evaluate the performance of programs, schools, and districts
Interoperability	The transfer of data between systems using a common set of technical software standards	Reduces reporting burden, collection redundancy, and staff time by allowing users to easily share information
Portability	The ability to exchange student transcript information electronically among districts	Reduces time and cost of transferring transcripts and makes student diagnostic information available to teachers
Privacy protection	Encryption and data security protocols to secure the transmission or transaction of data between and among systems	Protects personally identifiable information in compliance with federal and state privacy laws
Audit function	The process for ensuring data quality and accuracy	Provides assurances of quality information for stakeholders
Data sharing beyond K–12	An SLDS tracking individuals from early childhood through the workforce	Allows stakeholders to understand the relationship between education and employment

Source: National Forum on Education Statistics, *Traveling Through Time: The Forum Guide to Longitudinal Data Systems: Book One of Four: What is an LDS?*, NFES 2010–805, Washington, DC: National Center for Education Statistics, Institute of Education Sciences, US Department of Education (2010).

**The department has spent approximately \$12 million to develop, implement, and maintain its new longitudinal data system.**

## **In 2009 Idaho's Department of Education began developing a new data system, including a longitudinal database, funded with a federal grant and state dollars.**

Since fiscal year 2009, Idaho's Department of Education has spent approximately \$12 million to develop, implement, and maintain its new longitudinal data system. Of this \$12 million, \$5.9 million was awarded by a federal SLDS Grant Program administered by the National Center for Education Statistics in the US Department of Education. The department used grant funds in fiscal years 2010–2013.

In addition to the \$5.9 million in federal grant dollars, the Legislature has appropriated \$6.1 million in state funds since fiscal year 2009, which the department used to develop, implement, and maintain the data system. The department estimates ongoing costs for the data system to be \$1.4 million annually, comprised entirely of state funds.

Idaho received one federal grant to build a K–12 SLDS even though it has applied for three additional grants:

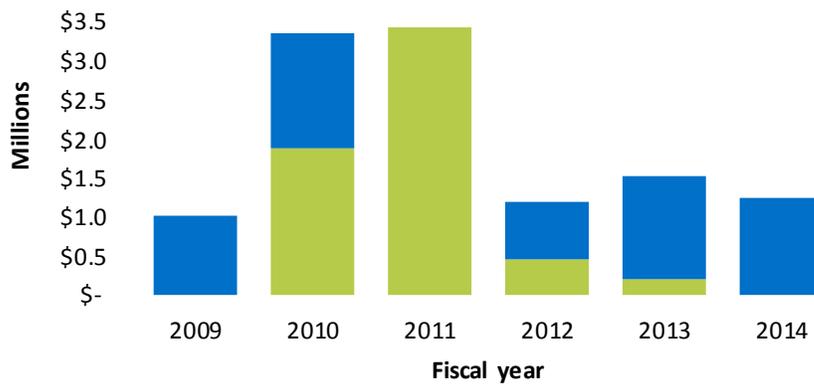
2005 US Department of Education, National Center for Education Statistics SLDS grant to develop a K–12 SLDS.

2009 US Department of Education, National Center for Education Statistics SLDS grant (funded by the American Recovery and Reinvestment Act) to develop a preschool through the workforce (P–20) system.

2009 US Department of Education Race to the Top Program Phase I (funded by the American Recovery and Reinvestment Act) to purchase a learning management system among other education goals.

As shown in exhibit 2, costs were not evenly distributed over each year. Heavy system development along with \$786,500 in subgrants awarded to districts accounted for the relatively high expenditures in fiscal years 2010 and 2011.<sup>2</sup>

**Exhibit 2**  
**ISEE expenditure of federal grant and state dollars by fiscal year.**



Source: State Department of Education longitudinal data system project expenditures.

2. The subgrants were allocated to districts as part of the 2009 federal SLDS grant Idaho received.

**The grant did not specify data elements that must be included nor did it dictate that Idaho use the K–12 SLDS for all federal reporting.**

**Each state receiving a federal SLDS grant determines what specific components and capabilities will be included in the longitudinal data system.**

## **The requirements of the 2009 federal SLDS Grant Program were flexible enough to give the department control over the design and implementation of its system.**

The 2009 SLDS grant request for applications required that states demonstrate how they planned to address minimum requirements in two categories: (1) governance and policy requirements and (2) technical requirements. The grant did not specify data elements that must be included nor did it dictate that Idaho use the K–12 SLDS for federal reporting. The grant program intentionally allows states to design systems that meet their unique education needs. The National Center for Education Statistics held Idaho accountable only for meeting the goals and objectives the department established in the approved grant application as part of the cooperative process.

In its grant application, Idaho identified nine project objectives that would allow it to implement the former state superintendent of public instruction’s larger vision that “every parent and educator will have access to the data they need to guide instruction on a daily basis and measure the academic progress of all students.”<sup>3</sup> To meet the nine objectives, Idaho’s grant application included six project goals for building a statewide K–12 longitudinal data system. Exhibit 3 identifies and explains how the department implemented each of the objectives and goals.

When the US Department of Education completed its final compliance review of Idaho’s 2009 SLDS Grant Program agreement in December 2013, it determined that the department had met the nine project objectives and six goals agreed upon in the approved grant application. The review stated that the department had “developed a robust K–12 longitudinal data system” with capabilities that exceeded the proposed project objectives and goals. The review was limited to the project objectives and goals and did not include a review of the overall performance of the system or the district concerns presented in study requests our committee received from legislators.

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3. Idaho’s statewide longitudinal data systems grant application, Application: R372A090025, CFDA Number 84.372A, 2008.

## Exhibit 3

**Idaho agreed to implement 15 SLDS grant goals and objectives.**

<b>Grant obligations</b>	<b>Implementation of obligations</b>
Build longitudinal data system	Installed and populated the data warehouse and created reporting cubes
Build reporting and analysis system	Made data reporting tools available to stakeholders
Create statewide data collection infrastructure	Built a single web-based portal where districts submit data that are validated before being loaded into the data warehouse
Enhance unique student ID system and create staff ID system	Transitioned from student identification system to person identification system giving each student, teacher, and staff member a unique identifier
Provide support to districts and charters for the extract, transform, and load process	Distributed subgrants to districts to assist with processes, software, and hardware to support monthly data submissions
Develop electronic transcript system	Deployed an instructional management system that provides the exchange of student record information
Facilitate analysis and research to improve academic achievement and close achievement gaps	Populated ISEE database with student, teacher, and staff data making growth model and student achievement data available to stakeholders
Provide historical district, school, student, and staff information to program offices	Populated ISEE database with historical state assessment results and teacher certification data with access for program areas
Link student and staff data across time and programs	Developed unique identifier system linking students and teachers by course enrollment with access to the data through an instructional management system
Support interoperability in districts and charter schools	Created Excel files that districts use to export data from local data systems and submit to ISEE each month
Provide safe and secure access to data from schools and districts	Deployed a secure, single web-based portal for accessing data using a single sign-on
Provide appropriate historical student assessment data to teachers and staff	Populated SLDS data warehouse with historical student assessment data with access through an instructional management system
Integrate data access and utilities in enterprise portal	Deployed a secure, single web-based portal for accessing data using a single sign-on
Reduce impacts of high mobility through support for efficient and complete transfer of education records	Made the electronic transcript system available to teachers through an instructional management system
Align K-12 data systems with higher education	Aligned data system architectures between the Department of Education and the Board of Education to support a P-20 Workforce system

Source: Institute of Education Sciences, *Grant Performance Report (ED 524B)*, Washington DC: Institute of Education Sciences, US Department of Education, December 2013.

## **In addition to the 2009 SLDS grant, Idaho accepted federal stimulus dollars contingent on developing and implementing an SLDS with assurances that the 12 elements in the America Competes Act would be included.**

In 2009 and 2010 Idaho received education funds under the State Fiscal Stabilization Fund Program. The program was funded through the American Recovery and Reinvestment Act of 2009, which distributed funds to help stabilize state and local budgets during the recession. The department did not use the stabilization funds to develop or implement the K–12 SLDS but allocated the funds to districts and postsecondary institutions.

States were allocated the stabilization funds by the US Department of Education in two phases, as outlined in the following sections:

### **Phase I funding**

In exchange for phase I funds, the department committed to advancing four education reforms:

1. Achieve equity in teacher distribution
2. Improve collection and use of data
3. Enhance the quality of standards and assessments
4. Support struggling schools

Idaho's commitment to these four reforms linked its receipt of stabilization funds to its establishment of a longitudinal data system that included the 12 elements described in the America Competes Act. Exhibit 4 shows the 12 elements and which education agency need to be involved in data collection. The postsecondary institutions were using eight separate data systems rather than one consolidated system and the Board of Education had not yet started developing a longitudinal data system that incorporated the elements specific to higher education.

Exhibit 4

**When Idaho submitted its phase II application, it reported having already implemented 4 of 12 America Competes elements.**

America Completes SLDS element		Status
For preschool, K-12, and postsecondary education	1. A unique statewide student identifier that does not permit a student to be individually identified by users of the system	
	2. Student-level enrollment, demographic, and program participation information	
	3. Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs	
	4. The capacity to communicate with higher education data systems	
	5. A state data audit system assessing data quality, validity, and reliability	
For preschool and K-12	6. Yearly test records of individual students for assessments under section 1111(b) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. § 6311(b))	
	7. Information on students not tested by grade and subject	
	8. A teacher identifier system with the ability to match teachers to students	
	9. Student-level transcript information, including information on courses completed and grades earned	
	10. Student-level college readiness test scores	
For postsecondary	11. Information on the extent that students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework	
	12. Other information determined necessary to address alignment and adequate preparation for success in postsecondary education	

 Implemented  
 In process

Source: Idaho's approved State Fiscal Stabilization Fund Phase II application, CFDA number: 84.394, 2010.

## Phase II funding

To receive phase II funds, Idaho agreed to answer 37 questions about its current and future plans to collect and publically report data indicators and descriptors for each of the four education reform areas. Acceptance of phase II funds required Idaho to submit evidence verifying it was able to answer the 37 questions as part of its compliance reporting. The state was not required to report the actual data collected to the US Department of Education.

Indicator (b)(1) of the phase II education fund under the State Fiscal Stabilization Fund Program required states to collect and publicly report information explaining how the 12 elements were included in the SLDS. As shown in exhibit 4 on the previous page, when Idaho submitted its phase II application in 2010, the department had not incorporated all of the 12 elements. As a result, Idaho was required to submit a plan for completion no later than September 30, 2011.

In February 2010 the department began sharing its timeline for meeting the September 2011 deadline with districts. The department told districts that the transition to the new data system would start with voluntary trial data submissions beginning in April 2010 and continuing until the first mandatory submission in October 2010.

In September 2011 the US Department of Education announced it was extending the compliance deadline by two months for all states that accepted phase II funds. A second extension date of December 31, 2013, was later available to those states struggling to complete phase II requirements. Twenty-four states ultimately received an extension; Idaho did not submit an application and met the requirements before the deadline.



## The department implemented its longitudinal database as part of a larger initiative called the Idaho System for Educational Excellence (ISEE).

Federal programs such as the SLDS Grant Program and the State Fiscal Stabilization Fund Program intentionally gave states flexibility in designing systems and data collections. Idaho’s department used the flexibility to develop a K–12 SLDS tailored to its goals. It **chose** to incorporate the longitudinal database into a broader redesign of the K–12 education data system, the Idaho System for Educational Excellence (ISEE). Exhibit 5 shows how the longitudinal database is one component of the larger ISEE initiative.

The K–12 SLDS also serves as a component of Idaho’s greater P–20 longitudinal data effort to combine individual level K–12, postsecondary, and workforce data.<sup>4</sup> States that accepted stabilization funds were required to develop K–12 longitudinal data systems capable of communicating with postsecondary longitudinal data systems. To meet stabilization fund requirements, Idaho developed a process to match data from the K–12 SLDS with the separate postsecondary SLDS. Exhibit 6 shows how the K–12 SLDS is one component of the larger P–20 system.

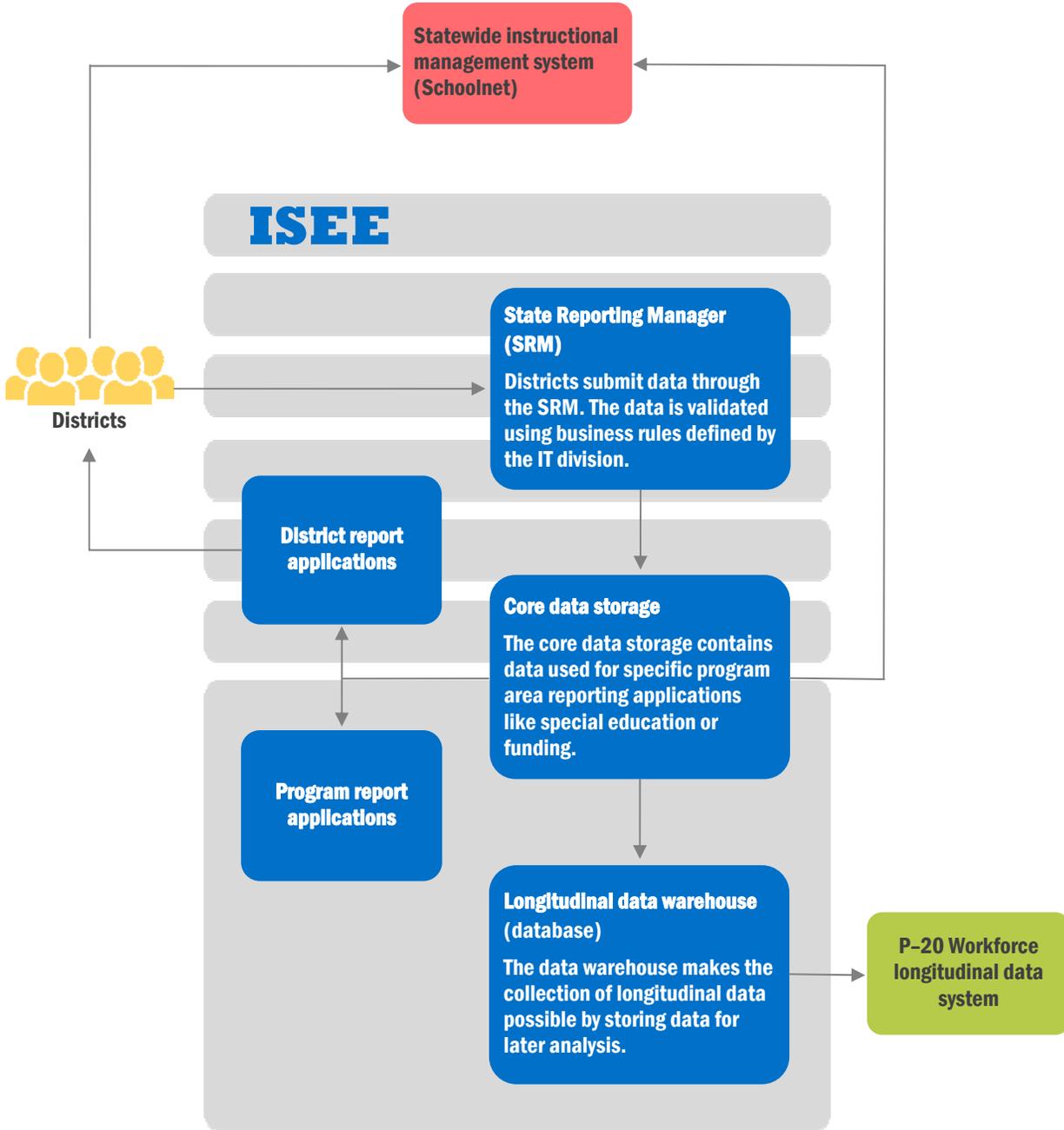
**Federal programs gave states flexibility in designing longitudinal systems and data collections.**

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4. P–20 is the national term used to describe longitudinal data systems tracking students from their earliest academic enrollment to their entrance into the workforce. Although Idaho does not offer preschool, it uses the term P–20.

Exhibit 5

**ISEE is made up of various components: longitudinal data storage is just one component.**



Source: Review of Idaho Department of Education documents.

Exhibit 6

**Idaho’s P–20 Workforce longitudinal data system is comprised of three separate data systems that share information.**



Source: Review of State Board of Education documents.

Although every state has an SLDS, we found no federal policy that mandates states to implement and use an SLDS. Having met the requirements of the 2009 SLDS Grant Program and the State Fiscal Stabilization Fund Program, Idaho’s department no longer has any federal obligation from either program to maintain a K–12 SLDS. However, the active federal grant related to Idaho’s P–20 system necessitates some of the functionality of the K–12 SLDS. Additionally, the US Department of Education has granted Idaho’s department flexibility for some requirements of the No Child Left Behind Act through a waiver. Idaho’s compliance with the waiver, in part, depends on longitudinal data—meaning that although an SLDS is not mandated, it is still important.

As noted in the US Department of Education’s final review of the 2009 SLDS grant that Idaho’s department received, the longitudinal data system itself is a solid system. The department has developed a system that exceeded the original project objectives and goals. Although the technical aspects of the department’s data system design and capabilities are sound, the department’s implementation and management of the system have contributed to district burden. As discussed in subsequent chapters, districts report spending a considerable amount of time each month completing data collection activities. Unlike other reviews of Idaho’s K–12 SLDS, our office was specifically directed to evaluate district burden. The remainder of this report discusses these topics and provides recommendations to decrease district burden and increase system sustainability to maximize its benefits for all stakeholders.

**In 2012 Idaho received a \$3.1 million federal grant from the SLDS Grant Program to develop a longitudinal workforce database that linked the K–12 SLDS with the postsecondary SLDS.**



**Throughout the report, the term district is used to reference both districts and charter schools.**

# Implementation

After securing state and federal funding to build and implement a K–12 SLDS, the Department of Education implemented its new longitudinal data system in less than two years. The department focused most of its efforts on the technical aspects of designing and building the new data system.

The department intentionally changed the way districts collect and submit data with the implementation of its longitudinal data system. However, the rapid shift in data collection activities created challenges for districts.



## The new education data system changed the way the department and districts collect data.

Data collection by the department remained relatively unchanged from the late 1990s until the implementation of ISEE in 2010. The old process required districts to submit data to multiple data management systems operated by the department. The Idaho Basic Education Data system (IBEDS), the department's primary data system, was used to collect staffing information. Examples of the department's other systems include student attendance and enrollment and special education. Few of the department's systems shared information with each other. Staff manually entered and manipulated data to federal and state reports. The department estimated that it was conducting 184 separate data collections each school year.

Four of the 184 data collections required individual data for federal reports: student dropouts, student assessments, student migrant status, and teacher assignments—all other data were aggregated by districts before submission. Having districts submit multiple aggregate reports led to duplicate district efforts. Additionally, the department was not able to cross validate data to ensure accuracy among and within districts.

In 2009 the department began reengineering its business processes and coordinating data collection efforts across program areas. The department replaced its separate data management systems with a single web-based system. The new system requires that districts submit all of the data that were included in the 184 data collections on a monthly basis instead of annually. Districts now complete monthly data uploads using a single portal—the State Reporting Manager. The reporting manager populates central, operational, and longitudinal data stores with district data. Department staff then use the data to generate federal and state reports.

Exhibits 7 and 8 provide a simplified illustration of how the new education data system streamlined data collection for the department. However, the exhibits also show how the changes shifted the burden of collecting data within districts. Beginning on page 35, we more thoroughly discuss changes in district burden.

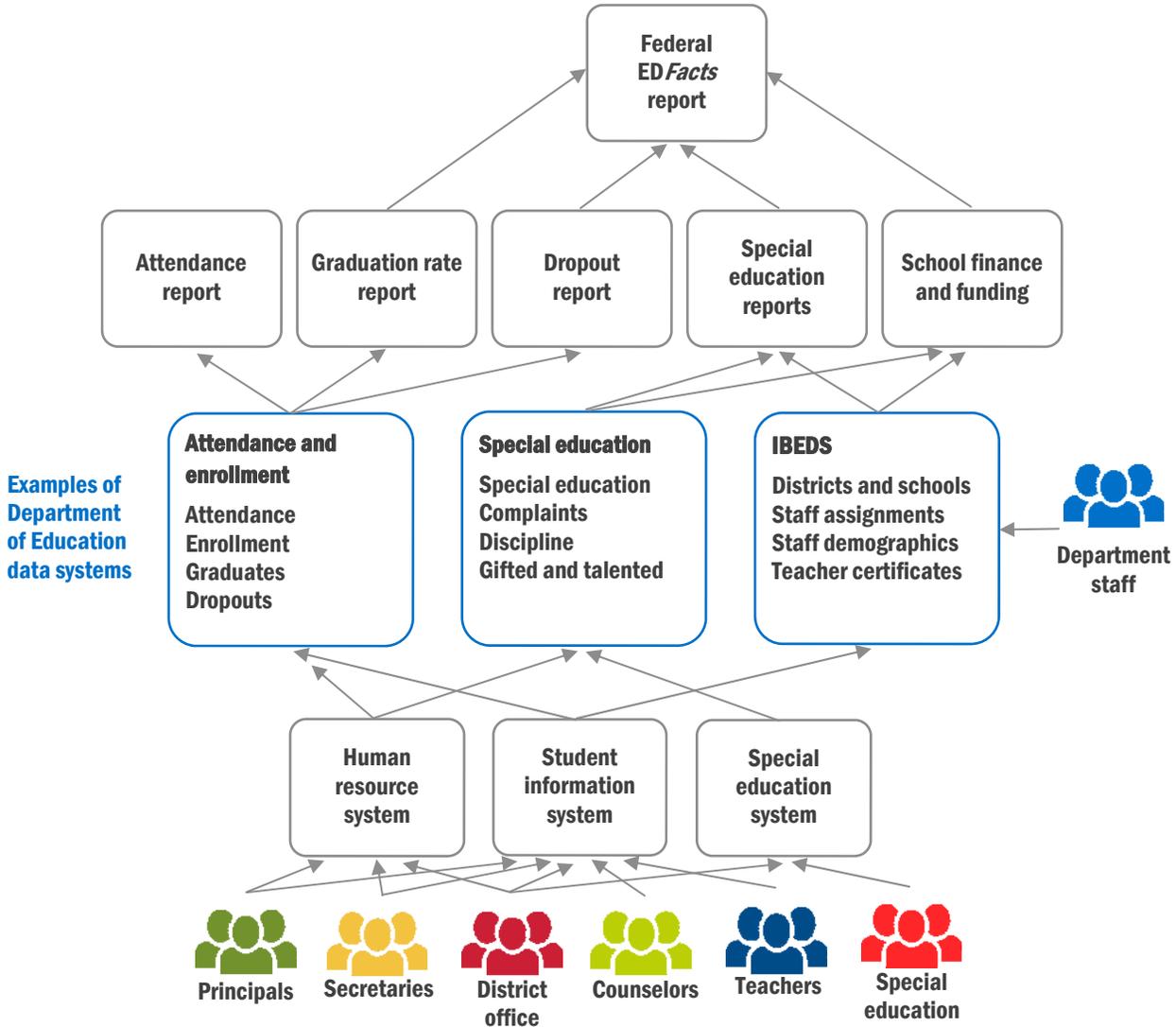
The new longitudinal data system requires districts to upload individual staff and student data, also called disaggregate data. In conjunction with unique identifiers, disaggregate data allows the department to cross validate data among districts to reduce

**Before ISEE, data were not tracked longitudinally nor linked from one program to another.**

**The department uses ISEE to calculate public schools' funding more than it does to drive policy decisions from longitudinal data.**

**Exhibit 7**

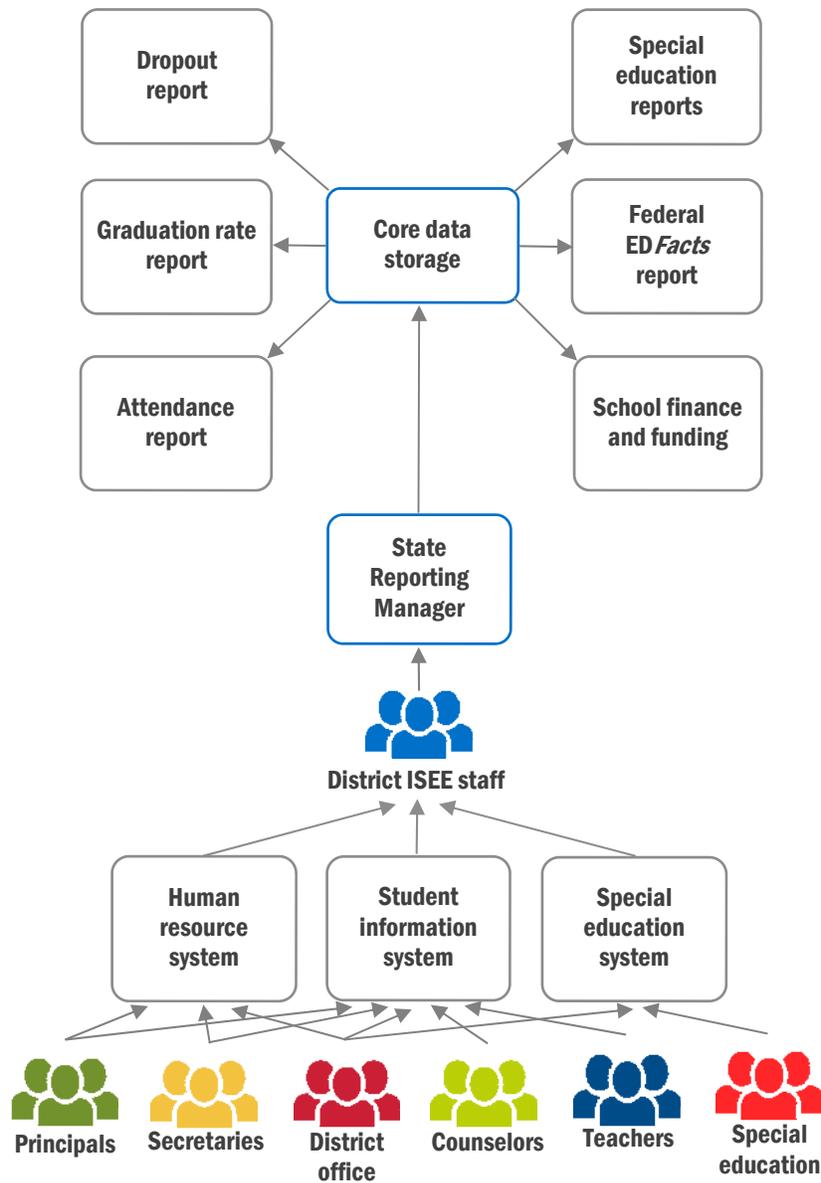
**Before the implementation of ISEE, many different district staff submitted data to the department using multiple data systems.**



Source: Department of Education documents and interviews.

Exhibit 8

**The implementation of ISEE centralized data collection activities.**



Source: Department of Education documents and interviews.

instances of multiple districts reporting attendance for a single student.

In addition to centralizing data collections and allowing the department to cross validate data, collecting multiple years of individual student and staff data allows the department to answer longitudinal questions. The National Center for Education Statistics has grouped longitudinal questions into three broad types:

**Trend design.** The data are needed for different samples at several points in time (for example, measuring county reading scores for third graders over a number of years).

**Cohort design.** The data are needed from the same group at points over time although different samples can be used (for example, [whether attitudes toward common core standards have changed over time for different samples of those who were teachers of first graders in 2010]).

**Panel design.** Data are needed from the same sample over time (for example, following the same group of sixth graders to observe the relationship between initial reading scores and gains in reading scores or educational persistence).

The department's longitudinal data system is capable of collecting data for all three design types. However, the department is using the system more for federal reporting and state funding calculations than for answering longitudinal questions. For instance, the department collects more data in ISEE for state funding calculations than for any other reason. To calculate funding, the department uses ISEE to centralize data storage, cross-check data from districts, and aggregate individual student and staff data submitted by districts. Cross validating district data requires unique student identifiers but does not involve trend identification or group comparisons over time.

## The department designed, built, and implemented the K–12 SLDS in less than two years.

In fiscal year 2009 the department received state and federal funding to build and implement the K–12 SLDS. After the department secured funding, it began transforming its initial design concepts into a functioning system. Additionally, the acceptance of stimulus funding required Idaho to collect and publically report how it would incorporate the 12 SLDS elements identified in the American Competes Act in the K–12 SLDS by September 30, 2011.

As shown in the timeline on the next page, the department published a Request for Information to replace the old education data systems in April 2009. The request included the functional requirements of the new system and laid out the initial structure and capabilities of the system. Specifically, the department wanted to replace the old data management systems (IBEDS and others) and develop a longitudinal data collection and reporting system.

The department first began providing districts detailed information about the new education data system in November 2009 through an online forum. The department also posted option sets for data collection files and PowerPoint presentations that had been given to professional education organizations in the Boise area. The ISEE website became functional in early February 2010, and the department began to use the forum to notify districts of updates to the ISEE website. Districts found value in collaboration through the discussion forum and continued to use the forum as a place for discussion even after the department shifted its primary communication to its website.

The department anticipated that districts would need additional assistance to modify their existing information systems and data collection activities. In January 2010 the department invited districts to apply for up to \$7,500 in subgrants to help ease the transition.<sup>5</sup> The department allowed districts to use grant money to develop local systems, processes, or to fund personnel, although it hoped districts would automate the new data submission process. The department awarded the district grants

**The department shifted the responsibility of data management and collection activities from its program areas to its expanding IT division.**

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5. Charter schools could receive \$5,000.

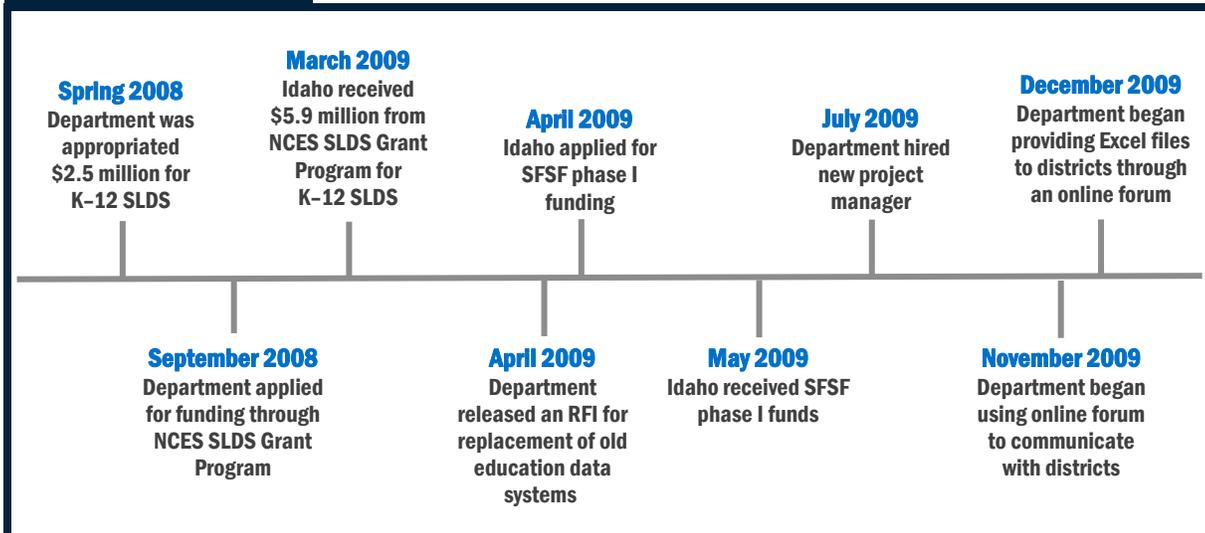
in three phases with different criteria and district commitments for each phase.

In preparation for trial uploads, the department hosted four online trainings about using the State Reporting Manager portal and uploading district data. The first training was held nine days before the first trial upload. Although the training and trial uploads were optional, 129 of the 148 districts participated in the trial uploads between April 30 and May 10, 2010. The trial uploads continued monthly until the first mandatory upload in October 2010.

Based on the department's interpretation of the requirement to publically report how it would incorporate phase II requirements by September 30, 2011, it decided that mandatory ISEE data submission from districts would begin in October 2010. However, the department did not limit the collection of data to those needed to satisfy phase II requirements. Department officials also decided to base November funding calculations for districts on data submitted in October.

The department gave districts a two-week window to complete the October upload. According to department officials, of the 148 districts in the state, 125 submitted data on time. However, only 14 had error-free submissions. In contrast, 111 districts encountered errors that had to be corrected, and 23 did not submit their data on time. Many districts believed that they received less funding as a result of reporting errors rather than reductions in student counts. On the other hand, the department has attributed funding cuts to the elimination of duplicate payments for the same student. This difference in views has not been resolved, and the department has limited ability to quantify the reasons for the cuts in funding.

### Timeline of ISEE implementation

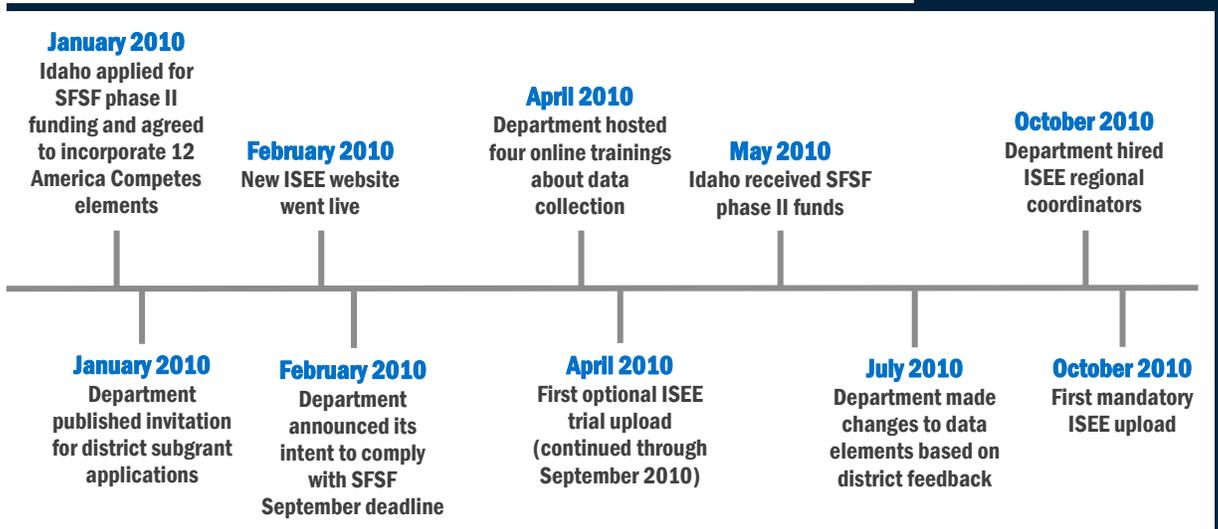


## The rapid shift in data collection practices created unexpected challenges for districts that persist today.

Idaho was the last state in the nation to develop a K–12 SLDS. Department documents noted that because Idaho was last to implement an SLDS, the department had learned from the successes and challenges of other states. Yet stakeholders, including those at the department, agreed the implementation of ISEE was anything but smooth.

By centralizing data collection to a single web-based system, the department shifted responsibility for data management and collection activities from its program areas to its expanding IT division. In response, districts made similar shifts by changing the data submission role of program areas. As shown in exhibit 8, district program areas continue to participate in data collection activities but are far less involved in submitting data to the department.

In some of the districts we interviewed, the responsibility for submitting data to ISEE fell to a single person who did not always have the skills or capabilities to complete the data collection activities without additional support. These new data collection activities overwhelmed districts largely because they lacked the necessary time, staff, preparation, skills, and training to complete the October 2010 upload. Districts struggled to understand how to extract and upload data from local systems to the reporting manager portal and how to correct errors.



**Challenges stemming from the initial implementation and ongoing management of ISEE persist, and data collection continues to burden districts.**

Districts felt that the department had not provided adequate financial support or training to prepare for the changes in data collection. Some districts also felt the department failed to consider business practices and data collection processes at a district level when designing the ISEE data elements, format, and system. Many of these initial issues continue to affect district support for and sustainability of ISEE.

Department officials acknowledged that they struggled to integrate ISEE and understood the timeline for implementation was challenging. They recognized that changing data collection practices was disruptive to districts. Officials said they learned from those early mistakes and were dedicated to rebuilding district relationships through increased communication and training. Districts agree that the department has made significant progress to communicate, train, and support them. Regardless, challenges stemming from the initial implementation and ongoing management of ISEE persist, and data collection continues to burden districts.



# Data collection and district burden

Districts recognize the need for longitudinal data collection and understand the benefits of a decision-making strategy that includes longitudinal data. However, the rapid shift in data collection activities created challenges that continue to burden districts today.

This section discusses broad reasons noted by districts for why data collection under ISEE has been challenging.<sup>6</sup> Some of these challenges may be inherent to data collection activities that must occur in an already busy school year. This section also discusses in detail six key factors that drive district burden:

1. Extracting, transforming, and loading data
2. Frequency of submissions
3. Number and characteristics of data elements required for ISEE
4. Local district information systems
5. Organization of ISEE data collection activities among district staff
6. Training, technical support, and communication from the department

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6. Our comments about districts are based on those for which we have information and are intended to portray commonalities.



**The ISEE workload is not directly comparable to the workload of collections before ISEE.**

## **We found three commonalities among districts that characterize how ISEE has affected their workload.**

Since the implementation of ISEE, district personnel have expressed their struggle to complete monthly data submissions through letters to the department, legislative presentations, and survey responses. To add further depth and clarity to past communications from districts, we interviewed district staff and, in some instances observed data collection activities. We intended to draw a clear comparison between districts' data collection workload before and after ISEE but found that the ISEE workload is not directly comparable to the workload of collections before ISEE.

Although we could not quantify the exact degree to which ISEE affected districts' data collection and submission workload, we identified three broad commonalities among districts that characterize the time and resources districts spent on data collection activities:

1. Although time spent on ISEE tasks can vary, districts of all sizes report spending about two weeks each month preparing for the ISEE upload.
2. Districts consider October to be the most time and labor intensive month for data submission.
3. ISEE workload is generally not time consuming enough to justify adding a full time position, but the workload is too time consuming to add ISEE tasks to existing job responsibilities.

## Districts reported challenges transforming and loading data from their local information systems to ISEE.

Idaho districts use a combination of information systems from a variety of vendors to collect data for business operations and reporting requirements. The primary information systems used by districts include student information systems, human resources and payroll systems, special education systems, and transportation systems.

Each system specializes in a particular type of data that districts need for conducting business. The department developed ISEE with the expectation that districts would use data collected in district systems to populate Microsoft Excel files. Districts would then submit the files to the State Reporting Manager portal within ISEE. The process for sharing data between systems is known as extract, transform, and load.

Districts reported that the most time consuming aspects of the extract, transform, and load process are preparing the department's Excel files in the transformation step and data validation during the load step.

Districts reported spending a significant amount of time preventing and correcting data errors.

### Extract, transform, and load (ETL)

Extracting, transforming, and loading data are the major activities that make up the data submission process at the district level. To **extract** data, districts take data from local information systems and **transform** the data into a compatible format. Districts export data from local systems into 12 Excel files developed by the department.\* Districts then **load** the 12 files into ISEE using the department's State Reporting Manager portal.

\*Two additional Excel files are required once each year rather than monthly.

**The ISEE data upload is not complete until the district has corrected all errors.**

## **Transforming data extracts**

Ideally, districts should be able to export data from their local information systems directly into the department's 12 Excel files. However, in some instances, district staff must manually combine and cross validate data from several of their systems to populate one of the 12 Excel files.

After combining the data, districts must cross validate the two sources of information. Districts have developed various methods to combine and cross validate data but still report that the process of manually combining files is cumbersome and time consuming.

For example, the process is especially time consuming when districts identify errors during cross validation. Some districts find the process of combining data stressful because a simple error can result in a loss of funding.

## **Loading and correcting data**

Many different district staff are involved in validating data errors as part of the data load process. The ISEE data load is not complete until the district has corrected all errors. The State Reporting Manager portal identifies data entry errors using business rules established by the department. Business rules flag data that are likely invalid such as a teacher's birth date identifying the teacher as more than 100 years old. The reporting manager portal also compares student and teacher data entered by districts with existing records in the department's database. Errors are flagged when data violate business rules or when data loaded by districts do not match data in the department's database. Districts and the department put substantial effort into preventing and correcting data errors each month.

In an effort to offer help, the department visited districts to observe their data collection activities and identify characteristics of more successful districts. Additionally, the department provided guidance to districts in its *ISEE Action Plan—District Playbook* to districts manage burden. The playbook primarily emphasizes the importance of preventing errors as opposed to correcting errors identified during the load process.

In some instances, correcting data errors is as simple as contacting the registrar or secretary to confirm an accurate date of birth or middle initial for a student. In other instances, the process is much more complicated. The person assigned to ISEE data submission might need to contact more than one person in the district or in a school, who in turn has to contact a student or parent to verify information. In this instance, correcting the data error takes considerable time.

The department and districts agreed that most data errors are random and stem from the initial data entry point. Other errors may be a result of combining multiple sources of data or manually merging district data to populate department Excel files. Although the reporting manager portal determines whether data are valid, it cannot determine whether data are accurate. As a result, districts can enter false data. For example, if a district reported a teacher as present for all periods in a given day, when in fact that teacher was absent in the morning, the portal does not have the ability to identify the data as false.

Regardless of the cause, data errors can result in a substantial loss of funding for districts. For example, a district reported losing thousands of dollars in pay for performance funding by accidentally entering a “1” rather than a “2” for teacher contract type. Data errors are more common at the beginning of each school year because schools have to enter large amounts of new data while also juggling other tasks associated with the beginning of a new school year. As a result, districts report spending considerably more time and labor on the October submission than for other monthly data submissions. The department made the September upload optional to ease the burden of the October upload and allow districts extra time to make necessary corrections.

The time and labor districts spend in preparation for October uploads has contributed to uploads with fewer data errors. We analyzed department data on district data errors for the 2012, 2013, and 2014 school years and found that about 94 percent of districts submitted error-free data on their first upload attempt for the 2014 October upload. Additionally, districts’ total data errors for the 2014 school year were about 77 percent less than total errors for the 2012 school year.

**For the 2014  
October upload,  
about 94 percent  
of districts  
submitted error-  
free data on their  
first attempt.**

**Districts are able to complete monthly uploads, but many struggle.**

**A reasonable upload frequency is one that balances the reasons for collecting data with the burden of providing data.**

## **Complying with the frequency of monthly ISEE data submissions places a burden on districts' time.**

The department initially intended to require districts to complete monthly uploads for the first year of reporting. The second year, districts would transition to weekly uploads, and in the third year, to support the department's instructional management system (Schoolnet), districts' data would be uploaded daily. After recognizing that districts would not be able to accomplish uploads on a weekly or daily basis, the department decided to require only monthly uploads.<sup>7</sup>

Districts are able to complete monthly uploads, but many struggle to meet the deadline because other factors contributing to burden are amplified by this monthly frequency. Districts differ in their opinions about the value of monthly uploads. Districts we visited noted that monthly data submissions did not align with their business practices and have adapted their practices to accommodate the department's monthly upload schedule. Several districts questioned why the department requires monthly uploads given that federal and state reports are due on specific dates throughout the year.

A reasonable upload frequency is one that balances the reasons for collecting data with the burden of providing data. The department explained to us that monthly uploads are useful for identifying student movement from one district to another, providing relatively timely data to teachers, adhering to federal deadlines, and improving data quality. Although some programs, such as public school finance, use district data for calculations or reporting only a few times a year, program staff review the data on a monthly basis to identify emerging problems. Other program staff within the department reported reviewing the data when submitting federally required reports, often only on an annual basis.

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7. According to the department, 32 districts submit weekly or daily uploads for 4 of the 12 Excel files so they can view that data in Schoolnet.

## Districts' data burden is compounded by the number of elements submitted each month.

Alone, most data elements are not burdensome, particularly when districts collect the same data for their own business practices. However, some data elements are especially burdensome, and collecting those data in greater numbers amplifies the burden. The department has defined a total of about 484 data elements. Districts are not required, however, to submit data for all 484 elements. The department has divided data elements into three categories: approximately 191 are required, 123 are optional, and 170 are conditional.

The following example highlights how the number of individual data elements in conjunction with the complexity of the elements required for ISEE uploads compounds district burden. To populate the Excel file for staff assignment data, districts must combine highly qualified teacher status with full-time equivalent status. Student information systems collect highly qualified teacher data whereas human resources systems collect full-time equivalent data.

After combining the data, districts must cross validate the two sources of information. Districts reported the process of manually combining data to create files as cumbersome and time consuming, especially when errors are identified during cross validation. Some districts also remarked that ensuring the final combined data are accurate is particularly stressful because a simple error can result in a loss funding. Although, districts have developed various methods to collect, combine, and cross validate difficult data elements, the process is still time consuming.

### Three data element categories

**Required:** Districts must provide data in required fields.

**Optional:** Districts provide data in these fields either voluntarily or if the district is participating in an optional program that requires specific data.

**Conditional:** Districts provide data in conditional fields contingent on the value entered in relevant required or optional fields.

**Districts depend on information system vendors' responsiveness when the department makes changes to data elements.**

## **Data collection is more difficult for districts when local information systems do not support data elements.**

In some instances, data elements as defined by the department fall outside of the intended uses of districts' information systems. In these cases, districts have to collect data outside of their information systems. Collecting data outside of districts' primary information systems increases the time districts must allocate to ISEE data collection activities each month.

For example, districts consistently reported that submitting teacher attendance data was the department's most challenging data collection requirement. The challenge results from a discrepancy in how the department requires districts to report teacher attendance and how districts report teacher attendance in local information systems. Districts collect teacher attendance by half day and full day, which aligns with their business practices used to determine compensation. However, the department requires districts to submit teacher attendance by instructional period.

Districts have developed unique but relatively time or resource intensive strategies to manage data collections that fall outside of the intended uses of their primary information systems. Districts vary in the degree of sophistication for addressing this burden. Some districts have created databases that mirror the department's longitudinal data system, some have developed custom applications, and others manually enter teacher attendance by period into the department's Excel file.

## **Districts' use of multiple local information systems contributes to their burden.**

The department estimates that in total, districts have vendor contracts for about 20 different systems. The combination of different vendors and different systems for data collection contributes to the burden districts experience when completing the monthly ISEE uploads.

The department makes changes to data elements throughout the year. When making changes, the department provides the new data specifications to vendors who then make the necessary changes in their systems. Vendors vary in system design and capabilities and may not consistently incorporate the changes specified by the department. Additionally, some vendors allow districts to customize local systems adding to inconsistencies in how districts implement changes specified by the department.

Data specifications provided to vendors that are unclear or do not accurately reflect the department's intent contribute to delays or inconsistencies in changes. Delays and inconsistencies can lead to confusion among districts about how to adjust data collection to align with the department's intent. Additionally, changes vendors made that did not align with the department's intent have caused significant district data errors.

Districts depend on information system vendors being responsive when the department makes changes to data elements. However, districts have reported instances of poor responsiveness from vendors. Districts and the department agree that some system vendors are slower to make changes than are others. Recently, districts with a specific vendor were unable to complete the September 2014 upload on time because of a delay in implementing changes.

**Any benefit from a statewide student information system would depend on implementation by the department and support from districts.**

**Although a statewide student information system could alleviate some district burden, it would not eliminate all of the challenges districts experience.**

## **A statewide student information system could reduce a limited amount of districts' data collection and reporting burden.**

A single statewide student information system could potentially alleviate some of the burden districts experience. Given the challenges that multiple information systems create, many districts support the implementation of a statewide student information system, which would be used to collect, extract, transform, and load the bulk of districts' data.

A statewide student information system would help ensure consistent system design and capabilities among districts. The department would have fewer vendors to communicate with and could develop more effective communication processes among districts, the department, and the vendor. Further, data collection changes could be implemented more consistently among districts. A statewide student information system would give the department, as a state education agency representing a large pool of districts, more leverage to ensure Idaho's needs are prioritized by the system vendor.

Any benefit from a statewide student information system would depend upon implementation by the department and support from districts. Department officials expect that because of local control and the need for district support, districts would have to initiate a statewide student information system. However, districts are not in a position to implement and manage a statewide student information system. Additionally, stakeholders generally agree that implementing a statewide student information system would meet resistance from districts satisfied with their system vendor.

Although a statewide student information system could alleviate some district burden, it would not eliminate all of the challenges districts experience with monthly ISEE uploads. Some of the most time consuming and challenging issues are associated with data collected in human resource and other district systems, not student information systems. The nature and number of data elements and the monthly upload cycle will continue to create challenges for districts regardless of a statewide student information system.

## Districts' organization of data collection activities affects their ability to adapt to the demands of ISEE.

We found that districts' organization of data collection activities affects their ability to adapt to the demands of ISEE. ISEE shifted the responsibility for data submission activities from multiple district program areas and staff to a small group of people, and in some cases, a single person. The new data collection activities increased the overall workload for the district staff assigned to complete ISEE tasks. ISEE also created the need for a new skillset combining knowledge of IT systems and education programs, placing further demands on the district staff assigned ISEE tasks.

Initially, districts responded to changes in data submission activities by assigning the first available person the task of extracting, transforming, and loading data for ISEE in addition to that person's primary job responsibilities. This ad hoc approach to ISEE data collection led to frustration among district management, program areas, and staff assigned ISEE tasks. Since the first ISEE data submission, districts have tried to accommodate the new data collection activities by refining their organization and processes, redirecting staff duties, or hiring additional staff. The callout box briefly describes three processes districts have developed to complete ISEE data collection activities.

**ISEE shifted the responsibility for data submission activities from multiple district program areas and staff to a small group of people.**

### Completing ISEE data collection



A single person completes the extract, transform, and load process in addition to their primary job responsibilities. That same person validates data with input from other district staff when needed.



A single person assigned exclusively to ISEE completes the extract, transform, and load process. That same person validates data with input from other district staff when needed. As a slight variation, a few districts share a single, full-time position.



Several people complete the extract, transform, and load process in addition to their primary responsibilities. Each person in the group is responsible for specific files and after all of the files are prepared, a single person loads the files into ISEE.

**Department officials and staff acknowledge that the department's insufficient training and support was a major source of district burden and frustration.**

We observed that districts tend to struggle when they have assigned primary responsibility for ISEE tasks to an individual in addition to the individual's primary job responsibilities. These district staff are overwhelmed by too many responsibilities. In contrast, districts with a single person assigned exclusively to ISEE tasks experience fewer challenges meeting the demands of ISEE but the expense of the position is a cost burden. Ultimately, how districts choose to organize their data collection activities influences the time and resources needed to comply with monthly ISEE uploads.

## **The department provided minimal training and technical support to districts during the implementation of ISEE but has been improving those efforts.**

Both during and since the implementation of ISEE, the department has focused its outreach to districts on helping them comply with new and ongoing data submission requirements. The department's early efforts to provide assistance to districts consisted of subgrants to automate or support district data submissions, limited web training, and six months of optional trial uploads. As districts moved from trial to mandatory submissions and afterward, they increasingly voiced their frustration about ISEE demands and management.

Department officials and staff acknowledge that the department's insufficient training and support was a major source of district burden and frustration. After the implementation of ISEE, the department directed its ongoing management of data collection activities toward consolidating data elements, improving communication with districts, and increasing training.

In October 2010 the department expanded its outreach efforts by hiring regional ISEE technical coordinators to provide on-site and phone support to districts. Districts overwhelmingly told us that increased technical support from the coordinators made a tremendous difference addressing challenges and meeting ISEE submission deadlines. However, districts also reported they had received conflicting information from department staff, including program area staff and IT staff.

In May 2013 the department broadened its training efforts by hosting the first annual ISEE boot camp. The IT division, along with program areas, delivered the content of the boot camp six times, once in each of Idaho's six education regions. Training

topics ranged from overviews of various data elements to the importance of data stewardship. Although districts had mixed opinions about whether the training sessions met their specific needs, they generally found the boot camp to be helpful.

As a separate effort to promote transparency and improve communication with districts, the department has devoted a portion of its website to serve as a clearinghouse for ISEE resources, such as manuals for complex data collections, the *ISEE Action Plan—District Playbook*, and other resources it has created in an effort to help districts. We found that districts appreciated the effort the department has put into developing resources to help with data collection activities, but districts would like additional documentation explaining or justifying why the activities are necessary and details about how the data are used. For additional information on department documentation, see our discussion beginning on page 50.

**Districts appreciated the effort the department has put into developing resources to help with data collection activities.**



**Department staff are not well versed in the capabilities and limitations of local information systems.**

## **Districts have no comprehensive resources about how local information systems and ISEE interrelate.**

Although the department has made efforts to increase training and technical support, resources are not available that combine expert knowledge of both local information systems and ISEE. The absence of these resources further complicates the challenges of an environment with multiple information systems. Department staff are not well versed in the capabilities and limitations of local information systems and are unable to answer questions about how the information systems interface with ISEE. Likewise, vendors are not ISEE experts and are limited in their ability to answer districts' questions about how Idaho data reporting requirements relate to data collection in local systems.

For example, if a district needs to find a particular data element in its local system, it would have to contact a national help desk rather than the department. We heard from districts that in some instances, there might be a three-week wait time for a response from a vendor. This wait time can delay districts' ability to complete the ISEE submission within the two-week timeframe.

Districts contracting with the same vendor have created user groups to address problems collecting or extracting data for ISEE using their systems. The user groups provide an opportunity to learn about solutions created by other districts. Additionally, the user groups create leverage for participating districts. Use of the same system vendor among districts enhances opportunities to standardize data entry, which in turn positively affects the districts' extract, transform, and load process.

## The department does not have a formal process for communicating information about new or changed data elements to districts.

The department is responsible for notifying local information system vendors and districts when it adds new data elements or makes changes to existing elements. The department only adds new data elements to ISEE once a year. However, the department adds or modifies data option sets or definitions throughout the year as needed. The department uses informal processes for adding and changing data elements and for relaying new information about elements to vendors and districts.

In response to past criticisms that the department did a poor job communicating in general, it now emails districts every time it makes a change. Districts appreciate that the department is working to provide thorough and timely information and have complimented the efforts of the IT division. Districts noted that the current quality of communication from the department is a tremendous improvement over communication in the first years of ISEE reporting.

However, the current informal processes for adding data elements and the department's communication strategy can cause a number of problems:

- Periodic miscommunication occurs between the department, vendors, and districts when vendors communicate changes to districts before the department does

- Periodic miscommunication between IT staff and program area staff can lead to conflicting information being communicated to districts

- The IT staff occasionally provide districts with conflicting answers to questions about new or changed data elements

- Districts struggle to keep pace with the department's frequent changes to data elements

Districts do not have a centralized source of information dedicated to newly updated data elements and have little time to wade through lengthy documents to find details about element changes.

**Districts noted that the current quality of communication from the department is a tremendous improvement over communication in the first years of ISEE reporting.**



**System sustainability depends on strengthening management strategies and collaborating with stakeholders.**

# Recommendations for sustainability and collaboration

National education organizations, such as the National Center for Education Statistics, have provided guidance on education data collection since at least the early 1990s. Beginning with the SLDS grants in 2005, organizations started to develop a more substantial body of guidance literature to help states reform their education data systems. The literature identifies strategies, good practices, lessons learned, and potential pitfalls for states as they implement longitudinal data systems. The guidance from these organizations consistently states that successful implementation and sustainability of data collection projects hinge on effective data governance strategies and structures, on statewide support for the project, and on continuous collaboration among department program areas, department IT staff, and districts.

Using guidance literature and experiences of other states, we have identified three key areas the department should improve to ensure that ISEE is useful and sustainable:

1. Develop a formal data governance structure that includes continuous structured input from key stakeholders, such as districts and policymakers.
2. Document policies, roles, standards, uses, justification for collections, and the burden, feasibility, and cost of district collections.
3. Evaluate data elements and collection activities and align them with the goals, needs, and capacity of stakeholders.

Sustainability of the department's longitudinal data system depends on strengthening management strategies and collaborating with stakeholders. Sustainability will always be at risk unless stakeholders develop a sense of ownership and see value in the ongoing success of the system.

## **The department's data governance structure is IT centric and does not align with national guidance literature. The department should collaborate with stakeholders in governance.**

Before the department centralized data collection with ISEE, each program area independently asked districts for the data that programs needed for state and federal reporting. There was no overarching governance, communication, or collaboration among program areas about what data the department collected. Data collections were determined on a program-by-program basis. As a result, the department needlessly collected the same data from districts multiple times. Additionally, data quality was poor because each program area used different data definitions and formats. Exhibit 9 on page 52 illustrates program areas collecting data in silos before ISEE without department-wide data governance.

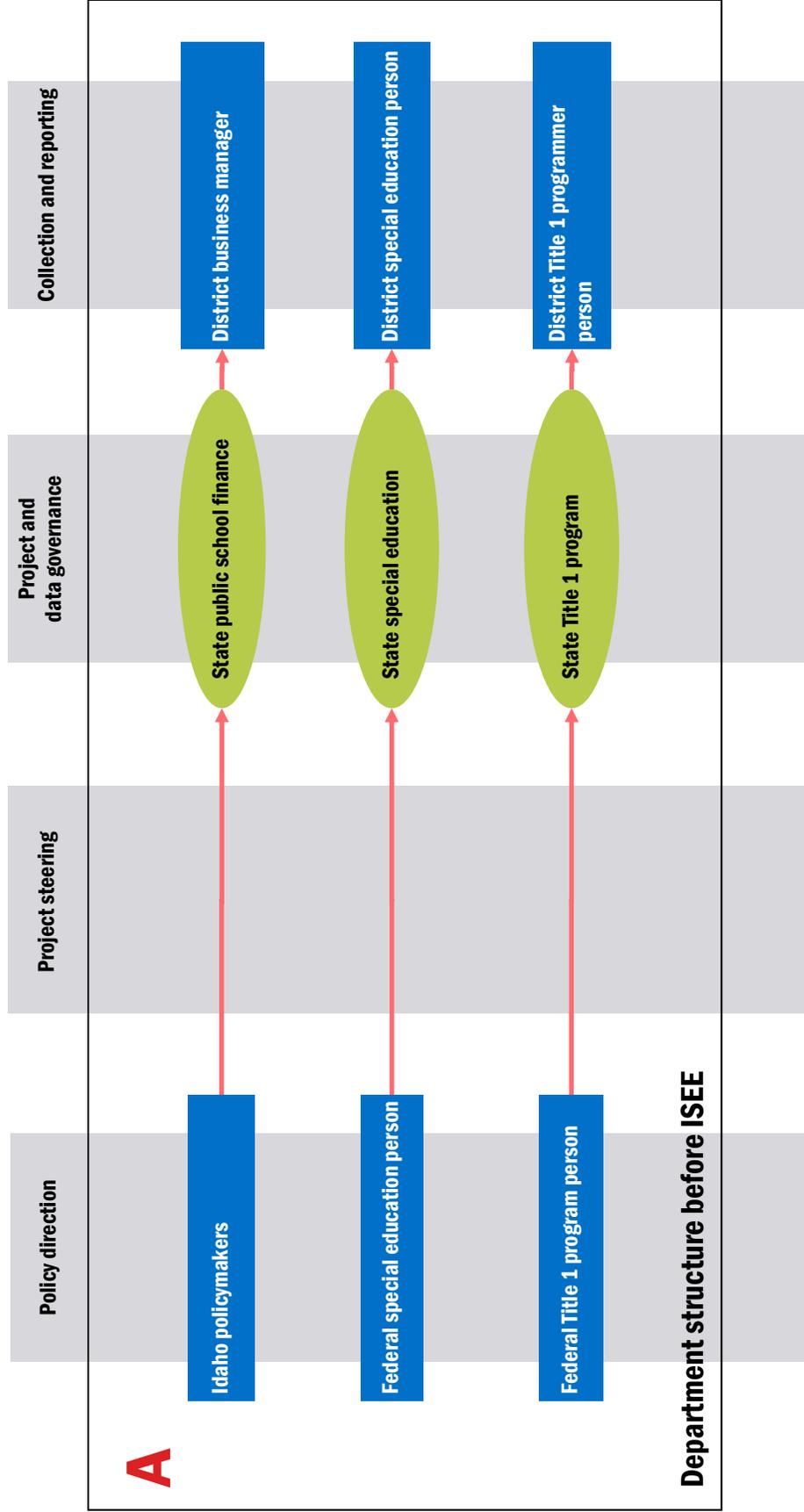
In part, the department implemented ISEE to centralize data collection and address the issues of program-by-program data collection and management. Moving away from program-by-program data collection was a positive step toward improving data governance. Typically, governance addresses organizational collaboration, data quality, and data use. Centralizing data collection should only be one component of an overall data management strategy. Centralized collection can facilitate but does not ensure collaboration, data quality, or data use.

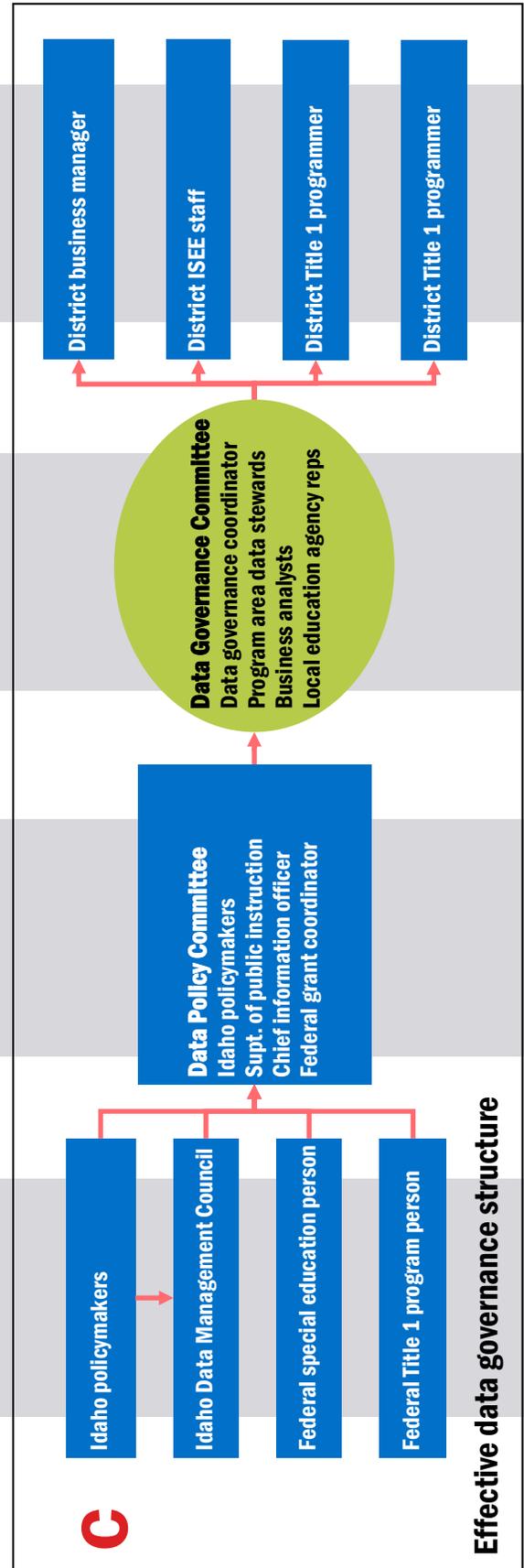
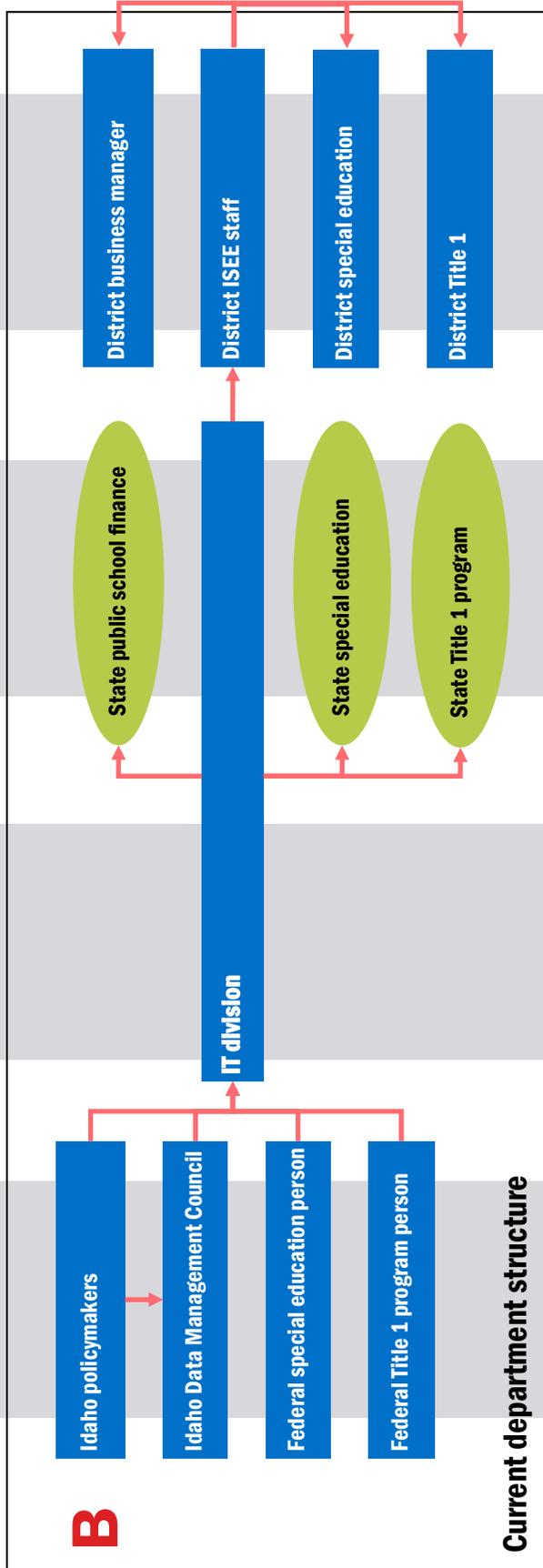
Idaho successfully made the technology changes required for centralized data collection but has struggled to make the cultural and organizational changes necessary for robust data governance. The ISEE project began as an IT-managed effort to update and redesign the department's data systems. IT staff consulted with program areas to identify the data that they were already collecting. The IT staff remained the predominant driver of the overall design, functionality, goals, and management throughout the project. According to the National Forum on Education Statistics, education agencies should establish a clear data governance strategy as part of the planning and development of a new data system, and ideally, the strategy should be established before implementing the system. We found no evidence that the department had established, documented, and maintained a data governance structure including roles and responsibilities for program areas.

**Idaho successfully made the technology changes required for centralized data collection but has struggled to make the necessary cultural and organizational changes essential for robust data governance.**

**Exhibit 9**

**Before ISEE was developed, the department did not have a data governance structure and communication was isolated within program areas. An effective governance structure allows for meaningful input from education stakeholders and will foster efficient data collection and district support.**





**We found no evidence that the department has established, documented, and maintained a data governance structure including roles and responsibilities for program areas.**

**The department's transition to a new administration puts it in an excellent position to revise and improve its data governance strategy and structure.**

Without established roles in place for affected department program areas, the transition to centralized data collection created uncertainty about the distribution of responsibilities for managing and supporting data collection activities. As a result, the IT division took on the majority of those responsibilities. Six years later, the department continues to rely almost exclusively on the IT division to manage all aspects of data collection activities. Ultimately, the lack of a data governance strategy with program areas at the center perpetuated organizational silos despite the department's move to centralized data collection. Organizational silos undermine the collaboration, data quality, and data use the department intended ISEE to promote.

The IT division's central role in the department's data management and the IT-centric structure of the department's data collection is illustrated in box B of exhibit 9 on page 53.

Although the National Council on Education Statistics recommends that agencies establish an effective data governance structure before implementing a new system, it recognizes that data governance is an ongoing process and can be established and improved upon after the system is functional. With ISEE system components maturing and the recent changes in department and IT management, the department is in an excellent position to revise and improve its data governance strategy and structure.

## The department's data governance structure is not designed to include meaningful stakeholder input.

The department focused much of its planning and design efforts on identifying and including in the new web-based system all of the data elements used at the time by the department. IT staff consulted with technology vendors about functional requirements for the system and with the department's program areas about program data needs. However, the department solicited little input from districts. As a result, department data collections reflect a need to comply with federal reporting and to calculate school funding, but they do not necessarily reflect district system capabilities, data needs, or business practices.

In its 2009 reference book *Project Management Success Factors*, ESP Solutions Group, the vendor Idaho used to develop major components of its longitudinal data system, succinctly stated the importance and challenges of fostering commitment from districts for statewide technology projects:

There is really no way to ensure participation. Of course, users can be mandated to use the technology that is born from the project. Often this causes resentment and resistance to change. The best way to encourage participation, even if the new technology is mandated, is through frequent communication of the benefits...

When an initiative is implemented statewide, local users do not always feel the need nor see a reason to meet the requirements of what is often perceived as an unfunded mandate. For example why should 'District A' expend its budgeted resources on a statewide project that it doesn't feel ownership for, doesn't recognize the benefits of, and doesn't feel responsible for its success? Without a continuous process of district communications and ownership training, this area of 'buy-in' concern will not improve. Most states follow a local control model for education, so unless there is a funded mandate coming from the legislature, the consequences for a district not participating and making the project a success are less clear. Thus, tailored, constant, and competent stakeholder and communications management is required. It is in these instances where a collaborative process across state education agencies, local education agencies, and vendors based on mutual agreement and respect becomes necessary and most effective.

**Department data collections reflect a need to comply with federal reporting and to calculate school funding.**

**Collections do not necessarily reflect district system capabilities, data needs, or business practices.**

**Including districts in data decisions would not prevent all of the challenges we have identified but could mitigate their impact.**

The department missed an important opportunity to foster districts' sense of ownership of the new data system by not consulting with districts about their established data collection activities, system capabilities, and business practices. Districts' lack of ownership and ambivalent commitment to the system are reflected in an ongoing perception that ISEE data submissions are a burdensome mandate handed down by the state. Today there is still no formal process for ongoing collaboration with districts when designing or refining data collection activities such as processes, analyses, and reporting. Including districts in data decisions would not prevent all of the challenges we have identified but could mitigate their impact.



## The department should align its data governance structure with national guidance literature and lessons learned from other states.

Our review of national guidance literature found that states' effective data governance structures vary in their details but share similar core roles. Guidance literature consistently recommend that data governance include at least the following roles:

**An executive committee** designed to bring together executive management, including executive leaders and data stewards from all program areas, to establish broad goals and policy for data collections.

**Data stewards** are individuals in each program area assigned responsibility for specific data elements. Data stewards should be the central source of expertise on the elements assigned to them. Stewards should be districts' point of contact for questions on elements.

**A data governance coordinator** is a single individual assigned to spearhead and oversee data governance efforts and foster the necessary cultural shift within state education agencies.

**A data governance committee** is the backbone of data governance and should include the data governance coordinator, all data stewards, and district representatives. The National Forum on Education Statistics identified the following as sample objectives for a data governance committee:

- Identify the owner of every data element
- Define all data elements
- Document all data processes
- Standardize data processes from year to year
- Reduce manual manipulation of data
- Identify the official source of data for all external reporting
- Eliminate redundant collections

For ISEE to be sustainable and useful, the department must establish ISEE as a statewide asset. Before ISEE can be a statewide asset, the department must establish stakeholder collaboration as an integral part of its data governance structure. A well-designed, supported data governance committee will formalize collaboration between department program areas, districts, and policymakers.



**For ISEE to be sustainable and useful, the department must establish ISEE as a statewide asset.**

Box C in exhibit 9 on page 53 illustrates how the key roles in an effective data governance structure interrelate. Further, comparing box C to box B clearly shows how an effective governance structure is designed to include meaningful stakeholder input and minimize the negative effects of organizational silos.

To reduce the impact of organizational silos and foster support for ISEE from department program areas and districts, the department should improve its communication internally and with districts. The department should complete at least the following steps to establish clearly defined roles and responsibilities for all department data management, collection, and use activities:

- Identify information needs
- Refine and communicate program requirements
- Manage and communicate changes to programs and data
- Identify and resolve data collection problems
- Develop and communicate data uses

## The department should improve documentation of its data elements, methods for generating reports and resources necessary for districts to collect and submit data.

The National Forum on Education Statistics suggests that state education agencies should document at least the following data collection activities:

- Rationale for all data collected
- Methods for generating reports
- Burden of data collections

### Document the department's rationale for all data collected

Documentation for data elements should include specifications and the department's rationale for at least each of the following items:

**Unit of collection:** The entity the data are describing, such as a teacher, student, or building

**Reporting level:** The level to which data are aggregated before being submitted to the department, such as a class, school, or district

**Reporting period:** The timeframe used to aggregate, calculate, or report on data, such as period, day, week, or school year

**Reporting frequency:** How often the data are submitted to the department, such as monthly

The department has made progress toward documenting the specifications of data it collects. Most notably, it has developed a data dictionary used to document data definitions, changes, option sets, and to a small degree the department program area driving the collection of each element. Representatives from national organizations noted that they use Idaho's data dictionary as a positive example when encouraging other states to improve the transparency of their data collections. The department updates the dictionary frequently and has made it publically accessible on its website.



**Districts remain unconvinced that all data collections and activities align with program requirements and established uses.**

**Districts have not documented total time and resources necessary to collect and report data for ISEE.**

Although the dictionary clearly documents the specifications for each element, it provides little information to help stakeholders understand the department's rationale for selecting those specifications. The dictionary also provides little information about how elements are used by program areas. Because the department's documentation lacks sufficient information about its rationale for each element's unit of collection, reporting level, reporting period, and reporting frequency, districts remain unconvinced that all data collections and activities align with program requirements and established uses.

### **Document procedures, data fields, criteria, operations, and processes for creating critical reports**

We found that districts would like the ability to generate reports at the district level using the same methods the department uses to generate aggregate federal reports and state funding reports. However, the department has not developed documentation showing the data fields, criteria, operations, and processes used by department IT programmers or program staff to generate those reports.

Without documentation from the department—districts and other stakeholders struggle to duplicate department reports and determine whether discrepancies are the result of data errors, district processing errors, or department processing errors.

### **Document the time burden of collection**

The department and districts alike recognize that data collection activities for ISEE are time-consuming for districts. The department has taken steps to help districts adjust to the demands of ISEE through recommendations the department developed after performing on-site observations of district data collection and reporting practices. The department also provided guidance in its *ISEE Action Plan—District Playbook*.

Districts recognize value in the department's guidance but have expressed concerns that the department is unaware of the real cost and burden associated with their data collection decisions. However, districts have not documented the time and resources necessary to collect and report data for ISEE.

The National Forum on Education Statistics suggests that state education agencies should identify the cost and burden of collection activities to ensure the cost of data does not outweigh the value of its use. The value of ISEE is entirely dependent on its ability to meet the information needs of stakeholders.

ESP Solutions Group has identified the following groups as the primary longitudinal data stakeholders:

- Leadership of divisions within the state education agency
- Local education agencies and the state education agency
- IT personnel at the state and local levels
- Administrative personnel at the state and local levels
- Classroom personnel
- Public (including parents and students)
- Governor's office
- Legislature
- Technology vendors
- Stakeholder advisory groups

The department, districts, and policymakers would all benefit from better documentation of districts' data collection burden and the factors that affect the burden. Because Idaho is a local control state and allows districts to decide the information systems and methods they use to collect and report data, the department and districts will need to work collaboratively to produce useful documentation of the cost and resources required to collect and report data.

To foster district commitment and ensure data collections are justified, we recommend the department clarify its documentation of the underlying policy or program for each data element. The department should also explicitly state its rationale for selecting the specific unit of collection, reporting level, reporting period, and reporting frequency for each element.

The department should also make publicly available its criteria, operations, data elements, and processes used by its IT programmers or program area staff to generate state funding reports and aggregate federal reports.

Improved documentation of the department's rationale for the unit of collection, reporting level, reporting period, reporting frequency, and reporting methods for each element will help build stakeholder confidence in the purpose of statewide data collection. In addition to building stakeholder confidence, improving documentation has several important benefits:

- Ensuring the department has assigned all elements to the appropriate data steward

- Identifying and establishing appropriate data stewards at the department and districts to improve data governance

- Enabling the department to evaluate whether data collections are optimized for their purposes

**The department, districts, and policymakers would all benefit from better documentation of districts' data collection burden.**

**Once the costs of collection are identified, the department can assess the value of the data collected relative to its cost.**

Clarifying data stewardship roles to stakeholders

Improving efficiency in making changes to data collections as policies and programs change

Building trust in reports produced from ISEE data

Until the department improves its documentation of the circumstances that make data collection activities necessary and specifically indicate how, by whom, and for what purpose data will be used, it runs the risk that districts will remain wary of and resistant to the department's requests for data. Likewise, districts may continue to resent the burden that data collection carries unless the department and districts work collaboratively to identify and document the costs and resources districts are dedicating to data collecting and reporting. Once the costs of collection are identified, the department can assess the value of the data collected relative to its cost.



**The department should evaluate and align its established data specifications and collection activities with existing state and federal reporting requirements, district data collections, and district business practices.**

As with any large-scale, ongoing project, periodic evaluation should be built into the management plan. At regularly scheduled intervals, the department should assess whether the system is meeting stakeholders' information needs, working optimally, and providing measureable benefits.

In 2013 the department commissioned AEM Corporation to conduct two independent reviews. The first review focused on whether department data collections aligned with *EDFacts* reporting requirements. The reviewers found the department's mapping of its data elements mostly aligned with *EDFacts*. They recommended that the department conduct a consistency review of its data dictionary and continue reviewing ISEE data elements annually to minimize reporting burden among districts.

The second review focused on data collection activities in the department and among districts in three areas: (1) data systems, (2) data quality and workflow, and (3) data use. The reviewers found no evidence of inaccurate use of data within the department and recommended continued and expanded support for districts to help with data collection. Although the second review did not address district burden, it found conditions similar to those described in this report, such as districts receiving inconsistent information from department program area staff and IT staff and challenges related to local information systems.

The second review was limited in that it did not allow for interviews with department program area staff. Instead, the reviewers drew conclusions from reports and applications made available by the department. Additionally, the reviewers met with six districts selected by the department. The department believed the review would put to rest any questions about the reasons data are collected, but the review did not provide the comprehensive evaluation needed to answer all stakeholder questions about district burden.



**To date, the department has not evaluated the system in its entirety.**

The department should provide the results of its evaluation to relevant policymakers.

Department evaluation results would ensure that policymakers are aware of the **capabilities** and **limitations** of the system, the data that are **available**, and the **impact** of policies on district burden.

The department should complete a comprehensive evaluation of its data specifications and data collection activities. The evaluation should include input from districts to determine whether the department can better align data collection requirements and activities with district business practices. In addition to aligning data collection activities with district business practices, the department should collaborate with all relevant stakeholders to ensure that the system meets all information needs.

Given the department's lack of an effective governance structure and its exclusion of districts in the design and management process, the department should make district collaboration a priority when evaluating data collection systems and activities. In addition, involving districts in an evaluation provides an opportunity for the department to help stakeholders develop ownership for the system, particularly if a cost burden analysis is included.

The department should include the six factors on page 35 as criteria for evaluating data collection activities. Addressing those factors will identify opportunities to mitigate the burden that districts are experiencing. The frequency of ISEE uploads and element specifications are particularly in need of evaluation. The department will likely need to document its rationale for the specifications of each data element before an evaluation of collection frequency and element specifications will be meaningful.

Because policies enacted by the Legislature have a direct effect on districts data collection burden, policymakers should be included as collaborators in a comprehensive evaluation of the system. The department should provide the results of the evaluation to relevant policymakers to ensure that they are aware of the capabilities and limitations of the system, the data that are available, and the impact of policies on district burden.

A complete evaluation can be a difficult undertaking, especially when the department is trying to meet the day-to-day demands of operating the system. However, by establishing an effective governance structure, many of the organizational components and collaborative relationships needed for evaluation already will be established. The data governance committee as described in this section would bring together the stakeholders relevant for evaluating data collection activities and would be an ideal group to spearhead an evaluation. Additionally, times of transition often create the ideal situation for evaluation. The election of a new state superintendent of public instruction, in combination with the information this report provides, could be an indication that the timing is right for such an endeavor.

Appendix A

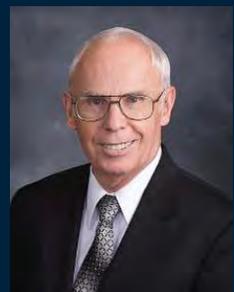
# Study requests



**Sen. John W. Goedde on  
behalf of the Senate  
Education Committee**



**Sen. Roy Lacey**



**Rep. Darrell Bolz**



## Idaho State Senate

State Capitol  
P.O. Box 83720  
Boise, Idaho 83720-0081

February 26, 2014

Mr. Rakesh Mohan, Director  
Office of Performance Evaluations  
State of Idaho  
STATEHOUSE MAIL

Dear Mr. Mohan:

Idaho was the last state in the country to develop their longitudinal data system for public education. The Idaho System for Educational Excellence (ISEE) is that system. ISEE is coupled with an instructional improvement system, currently Schoolnet, to form a statewide platform. Both systems have had implementation issues with local school districts concerns about the additional cost of gathering and submitting data into ISEE as well as accuracy. There are many examples of data systems available for comparison where service oriented architecture enables the free flow of data from a local level to a state level and back.

We, the Senate Education Committee, request an Office of Performance Evaluations study of both the ISEE system and the instructional improvement system with the focus directed on how both systems can be made to work effectively without additional pressure on local school district staff.

Respectfully,

John W. Goedde  
Chairman  
Senate Education Committee

JWG/esl



## Idaho State Senate

### SENATOR ROY LACEY

February 4, 2014

Hand Delivered

Senator Dean Mortimer  
Representative Shirley Ringo  
Co-Chairs, JLOC

Dear Senator Mortimer and Representative Ringo,

For many years the State of Idaho has been funding a program called "Schoolnet" in conjunction with donations from the J.A. and Kathryn Albertson Foundation.

I request a study from the Office of Performance Evaluation to determine the rationale of continuing to fund a program that has not provided results.

To this end, I request the following information:

1. A study from the Office of Performance Evaluation to determine the rationale of continuing to fund a program that has not provided results as evidenced in the Institute for Evidence-Based Change's external study commissioned by JKAF.
2. How much money has been expended on Schoolnet to date?
3. Why is this program still being called a "pilot" project after so many years with all schools being required to participate?
4. An analysis of acceptance from the school districts regarding the validity of this program, including accuracy and ease of use.
5. What other systems are the local school districts using to track students in longitudinal studies to ensure accuracy?

I would like to have this completed by December 31, 2014.

Thank you for your consideration.

Respectfully,

Senator Roy Lacey

**DARRELL BOLZ**  
DISTRICT 10-B  
CANYON COUNTY

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COMMITTEES  
AGRICULTURAL AFFAIRS  
VICE-CHAIRMAN  
APPROPRIATIONS  
JUDICIARY, RULES & ADMINISTRATION

## House of Representatives State of Idaho

March 6, 2014

To: Joint Legislative Oversight Committee

Subject: Study Proposal

Attached please find a proposal to study the Idaho System for Educational Excellence (ISSE).

The State Department of Education (SDE) had a study entitled "Idaho State Department of Education Data Element Review Report" done by Applied Engineering Management Corporation, but it did not focus on the issues that have been presented to me by the school districts. The Department also issued their report entitled "Idaho Statewide Longitudinal Data System (SLDS)". This report did not, in my opinion, address issues that school districts have reported to me.

Thank you for your consideration of this study.

  
Darrell Bolz

## **Office of Performance Evaluations Study Request**

Over the past two years a number of School District Superintendents have expressed a concern about ISSE. A request for a study of Idaho System for Educational Excellence (ISSE) was contemplated during the 2012 legislative session, but was not submitted in order to see if an additional year would provide time for the situation to improve. Superintendents continue to express concern of the program.

Concerns expressed include, but not limited to, the following:

- (1) Data submitted to the State Department of Education (SDE) is returned differently than what was submitted.
- (2) Districts are spending numerous hours preparing data for submission.
- (3) Districts are allocating personnel to input data taking them away from other duties. This is particularly true in the case of the smaller districts who may not have the personnel who might already be doing data entry work.
- (4) Some districts are concerned about some of the data that is required to be reported.

It is believed a study at this time would answer many questions in regards to the applicability of ISSE. It should also help superintendents understand why certain data is being requested by SDE. The State Department of Education could benefit from a study of ISSE as it could shed light on the issues that the school districts face in their attempts to comply with the data submission being requested by the department. Isolation of problems that deal with the data submission could be identified and enumerated. Why data returned to the districts is different than that submitted to SDE needs to be identified.

Based on information from the districts, there is a potential savings to the local school districts. Although the amount will vary, for some districts the amount could be substantial.



## Appendix B

# Study scope

## Statewide longitudinal data systems

All states use a statewide longitudinal data system to manage the modernization and expansion of access to educational data by education stakeholders.

Idaho began using its statewide longitudinal data system in 2010. Idaho's system, known as the Idaho System for Educational Excellence (ISEE), was intended to streamline data collection. The ISEE project was initially funded with \$8.3 million; \$2.4 million appropriated by the Legislature and \$5.9 million from a federal grant.

To meet requirements for federal stimulus funds, the three-year implementation plan for ISEE was shortened by one year. Local stakeholders across the state criticized the Department of Education for problems associated with the rushed implementation. In response to stakeholders' criticisms, both the Idaho Association of School Administrators and the Idaho Association of School Business Officials surveyed their members in 2011. The survey results found that some local stakeholders did not fully understand the reasons for and uses of ISEE and thought the department had done a poor job communicating. Some stakeholders also thought the implementation of ISEE had added a great deal of work, was time consuming, and was a financial burden.

## Instructional improvement system

The Department of Education envisioned linking the longitudinal data system with an instructional improvement system that would bring student data to the classroom. In 2010 the department selected Schoolnet as the statewide instructional improvement system and in 2011 received \$21 million from the J. A. and Kathryn Albertson

Foundation to implement a pilot project. Like ISEE, the implementation and usefulness of Schoolnet drew criticism from local stakeholders, and in 2013 the foundation commissioned an independent review conducted by the Institute for Evidence-Based Change. The institute confirmed a sense of frustration among local stakeholders but also a sense of hope about the future. Similar to the previous surveys, the institute found that data quality, communication, and an understanding of the value of the systems continued to be key concerns at the local level.

Despite the work done on both ISEE and Schoolnet, some local stakeholders continued to express frustration. During the 2014 legislative session, the Joint Legislative Oversight Committee received three separate evaluation requests about ISEE and Schoolnet. The committee combined the requests and approved the evaluation at its March meeting.

## Evaluation objective

The evaluation will identify sustainable approaches to the challenges that affect districts' and the department's ability to effectively and efficiently use ISEE and a statewide instructional improvement system. With an emphasis on future approaches, we will address the following:

- Processes and practices for collecting, managing, and reporting accurate data
- Demands on department, district, and charter school resources
- Rationale for collecting data elements

**Projected completion date: January 2015**



**Evaluation objectives:**

**Processes and practices for collecting, managing, and reporting accurate data**

**Demands on department and district resources**

**Rationale for collecting data elements**

## Appendix C

# Methodology

We developed the scope of this report based on the three study requests from legislators, preliminary interviews with stakeholders, and a survey of superintendents. Legislative questions about the Department of Education’s statewide instructional management system Schoolnet are not addressed in this report and will be released in a separate report.

District burden was a key concern of the study requestors and is central to this report. The nature of the questions we were asked to evaluate were well suited to qualitative methods supported by quantitative analysis where possible and appropriate. We developed our findings and recommendations based on areas where information generated from multiple methods converged.

## Quantitative analysis

The quantitative components of our methodology included the following:

Analysis of funding data for fiscal years 2009-2015. Funding data were gathered from the department, the Idaho Business Intelligence Solution (IBIS) system, the Legislative Services Office of Budget and Policy, legislative appropriations and budget reports, and an online search for state and federal funding allocations.

Analysis of error rates for district data submissions to ISEE for school years 2012-2014.

Analysis of the data elements found in the department’s data dictionary.

## District interviews and onsite visits

Districts' struggle and frustration with ISEE was well established when we were asked to conduct this evaluation. Over the past four years districts communicated challenges they experienced in a variety of ways including letters to the department, direct communication to the department, direct communication with their legislators, presentations to legislative committees, and responses to surveys regarding ISEE.

Although district had communicated their challenges in a number of ways, identifying the significance and sources of those challenges was a particularly difficult aspect of this evaluation. As part of our project scoping process, we surveyed district superintendents about their experiences with ISEE. Our survey results reinforced what districts had expressed, and showed that the nature, significance, and sources of the challenges experienced by districts varied from one district to another.

We selected 16 districts for interviews and onsite visits using superintendents' survey responses in conjunction with districts' past input on ISEE challenges, the information systems used by districts, and district characteristics. We selected a combination of districts in each of Idaho's six education regions that represented a cross-section of urban, rural, suburban areas, a variety of district information systems, and diverse challenges with ISEE data collection activities. We spoke with 31 district staff ranging from IT staff to administrative assistants to superintendents.

## Department interviews

We interviewed department leadership and staff to get their perspective on data collection activities, system design and capabilities, project management, data governance, and district challenges. We interviewed (in most cases multiple times) the former superintendent of public instruction, the former chief information officer, the ISEE resource manager, and the four ISEE technical coordinators each assigned to one of the six education regions. We interviewed staff in department program areas including student engagement and postsecondary readiness, advanced opportunities, the Elementary and Secondary Education Act, and public school finance.

## Observation of department and district interaction

We observed a meeting of the Eastern Idaho Power School User Group.

On August 7, 2014, we attended the Boise area ISEE Boot Camp hosted by the department's IT division. Collectively, the team attended ten training sessions:

1. ESEA-Elementary and Secondary Education Act
2. Schoolnet Assessments
3. Star Rating
4. ISEE Data Uploads
5. Five File Format
6. Playbook and Rules
7. 2014 Education Law Changes
8. State Reporting Manager
9. Data Quality Accurate Data
10. Attendance and Enrollment

One ISEE technical coordinator invited us to attend his meeting with a Boise charter school. During the meeting, we observed his demonstration of the State Reporting Manager portal and his process for helping districts understand the portal as well as other ISEE data collection activities.

## Input from stakeholders other than the department and districts

We interviewed two Idaho support staff from two district information system vendors to learn about their working relationship with the department and districts as well as learn about their working relationship with other states.

Because Idaho received stabilization funds in 2009 and 2010 that were linked to the development of an SLDS, we interviewed the program supervisor and program attorney with the State Fiscal Stabilization Fund.

Because Idaho received federal SLDS grant funds in 2009 from the Statewide Longitudinal Data Systems Grant Program administered by the National Center for Education Statistics, we interviewed the program officer and the senior education research scientist who work with Idaho.

We interviewed the Data Quality Campaign’s state policy and advocacy director, who is considered a national expert in longitudinal data systems and has worked with Idaho stakeholders.

We interviewed one member of the two-member team that conducted the Applied Engineering Management Corporation review of the department’s data elements in 2013.

We interviewed the postsecondary SLDS program manager who works with the Idaho State Board of Education. We also interviewed the board’s director of research. Through the interview we learned about the postsecondary SLDS, the larger P–20 Workforce longitudinal data system, and the Data Management Council.

We interviewed representatives from the Idaho Association of School Administrators and the Idaho Association of School Business Officials to learn more about issues or concerns of each organization’s membership.

We met with the legislative budget and policy analyst for public education to collect funding information and historical context surrounding legislative support of the longitudinal data system. We also worked with the department’s chief financial officer to collect itemized funding data for the ISEE project.

## **Comprehensive document review**

We reviewed national guidance literature about longitudinal data collection, systems, governance, management, and sustainability. We also reviewed literature about data collection and technology systems in general. We worked with a consultant specializing in library sciences and gray literature reviews. He confirmed the breadth of our review and conducted additional research focused on other states, which rounded out our initial review.

We reviewed Idaho’s 2008 SLDS grant application for which the state received \$5.9 million in 2009 from the US Department of Education to design, build, and implement the K–12 SLDS. The National Center for Education Statistics administers the Statewide Longitudinal Data Systems Grant Program. In addition, we reviewed the grant compliance report conducted in December 2013. The grant application and compliance report, in combination with other sources, were used to determine the requirements of the grant, the state’s obligation to the federal government, and whether the department successfully met those requirements and obligations.

We reviewed other federal grant applications submitted by Idaho, regardless of whether those proposals were funded to learn about related technology or longitudinal data projects.

We reviewed Idaho's applications for State Fiscal Stabilization Funds for both phase I and phase II as well as other department documents about compliance with the program. In addition, we reviewed federal registers and other documents published by the US Department of Education and the State Fiscal Stabilization Funds Program.

We reviewed Idaho Code and Administrative Rules to identify Idaho laws underlying data elements collected by the department. The review was also used to determine the degree to which the department has the discretion to interpret what elements districts must collect.

We reviewed the history of federal data collection and reporting. The review included research about what data is federally mandated, privacy and data protection, and federal programs and policies that depend in longitudinal data.

# Responses to the evaluation



**“We must ensure that only data necessary to provide aggregate information for decisions on how to best improve our educational system is collected in the first place.”**

**—Butch Otter  
Governor**



**“[The ] report delivers a fair and accurate review of ISEE challenges which have become increasingly burdensome to each Local Education Agency...”**

**—Sherri Ybarra  
Superintendent of  
Public Instruction**



C.L. "BUTCH" OTTER  
GOVERNOR

February 5, 2015

Rakesh Mohan, Director  
Office of Performance Evaluations  
954 W. Jefferson Street  
Boise, ID 83720

Dear Rakesh,

Thank you for the opportunity to comment on the evaluation of the K-12 Longitudinal Data System (ISEE) report. I appreciate the comprehensive research done to identify how to improve and simplify data collection. Our goal is to reduce the reporting burden on school districts while providing data important for informed decision making.

The Task Force for Improving Education, which I appointed in 2012, heard many of the same concerns regarding the ISEE data system. It deferred making comprehensive recommendations, but agreed that the Data Management Council should oversee the education data systems in Idaho.

The Data Management Council is comprised of members from the Office of the State Board of Education, public postsecondary institutions, the State Department of Education, urban and rural school districts, the Division of Professional-Technical Education, and the Department of Labor. It already is working to address such issues as data standards and quality, access and security, and communication with districts regarding data collection and reporting.

With heightened public interest in and concern about data collection and use, improving the data governance strategy and structure for these systems is important. We must continue to be diligent in protecting all data. Even more fundamentally, we must ensure that only data necessary to provide aggregate information for decisions on how best to improve our education system is collected in the first place.

Once again, thank you for your work on this issue and for the opportunity to review your report.

As Always – Idaho, "Esto Perpetua"

A handwritten signature in black ink, appearing to read "C.L. Butch Otter".

C.L. "Butch" Otter  
Governor of Idaho

CLO/mlw



**SHERRI YBARRA**  
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February 4, 2015

Rakesh Mohan, Director  
Office of Performance Evaluations  
954 W. Jefferson St.  
Boise, ID 83720

Dear Mr. Mohan,

On behalf of the Idaho State Department of Education (hereafter referred to as the State), I would like to extend our appreciation to you and the Office of Performance Evaluation's for your study on the *K-12 Longitudinal Data System (ISEE)*. The State also thanks you for allowing an opportunity to provide an official and formal response towards the recommendations made by your office. The State acknowledges and feels this report delivers a fair and accurate review of ISEE challenges which have become increasingly burdensome to each Local Education Agency (LEA), under the former administration.

*"Supporting schools and students to achieve, will be the foundation for everything we do."*

– Superintendent Sherri Ybarra

The State's new administration has a forward-facing vision which is focused on providing exceptional customer service to all Local Education Agencies, students and stakeholders. As well, the State will be focused on putting as much control back into the hands of the LEA's where it belongs. This vision will help to renew our enthusiasm for education in Idaho public schools.

The following are the State's responses to the recommendations given in the execution section of the report concerning ISEE.

#### Chapter 4: Recommendations for system sustainability and stakeholder collaboration

Recommendation 1: The State recognizes the need to develop a formal structure which includes continuous input from key stakeholders, including but not limited to LEA's and policy makers.

*The State plans to solicit input from LEA's by creating a working group to evaluate data collection elements, and make suggestions about possible changes to data collection elements, collection activities, and object sets. This group will be an ongoing committee to evaluate and make recommendation to future modifications to the ISEE project*

Recommendation 2: The State recognizes the need to produce and manage additional support which includes documenting policies, roles, standards, uses and justification for collections.

*The State will be creating a formal knowledge base and archive that will contain all policies, memos, communications, and other helpful information for LEA's and other interested parties which will be indexed and searchable.*

*The State will be publishing a document that identifies the purpose and reason for each data element being collected. This will include the how, why, and when each element will be used.*

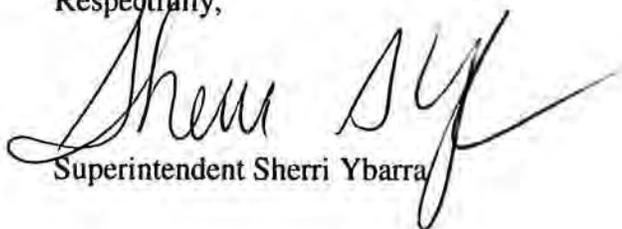
*The State already maintains a website that contains documentation of all data elements, option sets, and proposed changes.*

Recommendation 3: The State recognizes the need to regularly evaluate the data elements and collection activities and align them with the goals, needs and capacity of stakeholders.

*The State is in the process of evaluating each data element and collection activities to determine the necessity of each of the elements and collection activity. Any data element or data collection activity that is not required by law or necessary for data validation purposes will be eliminated. This will become an annual activity.*

Thank you again for researching and preparing this well-organized report and the time that was dedicated to understand the intricacies around and associated with the implementation and support of ISEE.

Respectfully,

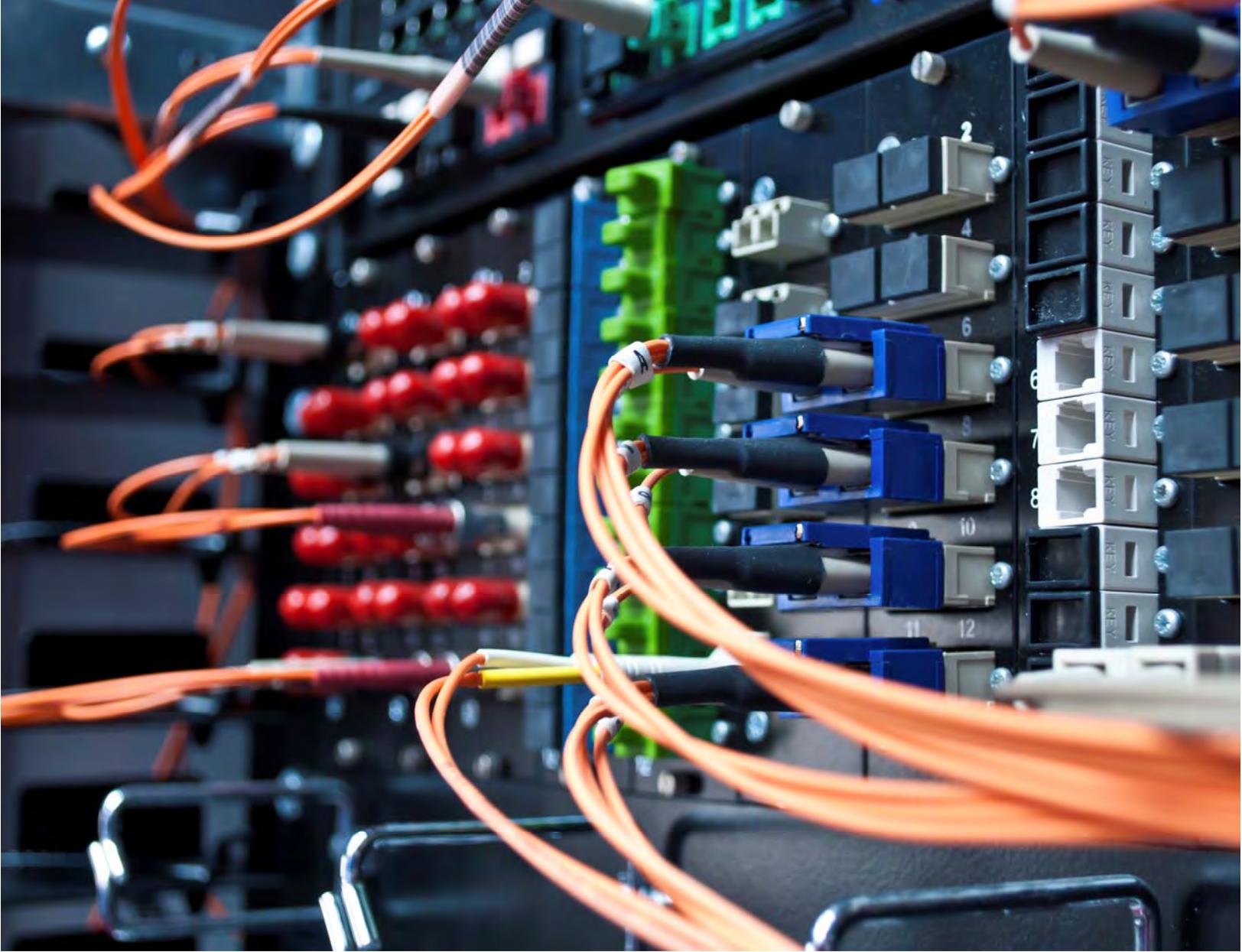
  
Superintendent Sherri Ybarra

## Reports of the Office of Performance Evaluations, 2012–present

Publication numbers ending with “F” are follow-up reports from previous evaluations.

Pub. #	Report title	Date released
12-01	Reducing Barriers to Postsecondary Education	January 2012
12-02F	Delays in Medicaid Claims Processing	January 2012
12-03	Lottery Operations and Charitable Gaming	February 2012
12-04	Establishing an Efficiency Commission	February 2012
12-05F	Coordination and Delivery of Senior Services in Idaho	February 2012
12-06F	Operational Efficiencies in Idaho’s Prison System	February 2012
12-07F	Idaho’s End-Stage Renal Disease Program	March 2012
12-08F	Idaho Transportation Department Performance Audit	March 2012
12-09F	Delays in Medicaid Claims Processing	November 2012
12-10F	Increasing Efficiencies in Idaho’s Parole Process	November 2012
13-01	Workforce Issues Affecting Public School Teachers	January 2013
13-02	Strengthening Contract Management in Idaho	January 2013
13-03	State Employee Compensation and Turnover	January 2013
13-04	Policy Differences Between Charter and Traditional Schools	March 2013
13-05F	Coordination and Delivery of Senior Services in Idaho	March 2013
13-06	Guide to Comparing Business Tax Policies	June 2013
13-07F	Lottery Operations and Charitable Gaming	June 2013
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15-02	The State’s Use of Legal Services	February 2015
15-03	The K–12 Longitudinal Data System (ISEE)	February 2015

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