



SLDS Issue Brief

Effective Project Planning and Managing Change

Like any project, successful implementation of a statewide longitudinal data system (SLDS) will require modifications to be made to the original plan. Circumstances that may require these modifications include failure of the state or its vendor(s) to meet program goals within the proposed timeline, a decrease in funding, or changes to policy at the state, local, or federal level. Best practices suggest planning for these changes: spending time and effort preparing for change will reduce its potential negative impact and help to secure the success of the SLDS.

In this product, the District of Columbia and the State of Washington share strategies and lessons learned when faced with unexpected challenges to their original SLDS plan. Although states encounter many challenges throughout the project, the conversation focuses on managing changes around vendor termination.

Build the Foundation

Identify the Business Owner¹

The business owner should be clearly identified before starting the project and committed to this role throughout the life of the work. SLDSs are built to fulfill a business need related to education, and the business owner should participate in identifying the business requirements and be responsible for making decisions around them. Additionally, because the business most often owns the relationships with the stakeholders, stakeholder communications should flow from and be received by the business.

Identify Requirements

At the start of SLDS planning—and well in advance of selecting a vendor—stakeholder needs should be gathered in order to identify and document business, technical, and ongoing maintenance requirements. Gathering needs, instead of assuming needs, will result in a leaner set of requirements and a system that aligns with the established SLDS strategic plan.

Establishing a business analyst role (the bridge between program areas and technology) will help to facilitate the process of cultivating relationships with the business. The business analyst is the conduit for ongoing communication between IT and the business, and makes certain that system design and implementation map back to requirements, thus allowing IT to maintain its focus on designing the system and making it function.

The Need for Business Analysts: District of Columbia

The District of Columbia began its SLDS program without a business owner or analysts. With an undefined customer and a set of requirements determined by the IT staff, they hired a vendor to design and build the system. The scope of the project quickly expanded. Now, the agency has implemented a change control process to limit the scope, and is investing in business analysis up front as it works with a new vendor.

¹ In the context of this document, “business owner” refers to the education policymaker/practitioner, data user, or data owner.

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Tom Fontenot
Matthew Brownlee
District of Columbia Office of the State Superintendent of Education

Christina McDougall
Point B
State of Washington Education Research & Data Center

Robin Taylor
SLDS Grant Program, State Support Team

For more information on the IES SLDS Grant Program or for support with system development, please visit <http://nces.ed.gov/programs/SLDS>.

Build or Buy

Before reviewing vendor solutions, additional analysis is necessary. First, existing data systems should be reviewed and assessed to determine if and how they can support the SLDS program. It is unlikely that these systems will be able to meet the business requirements of the SLDS, as they were designed for operational purposes, but it may be possible to scale existing systems to meet these requirements. In the likely event that the existing systems are insufficient, use the identified requirements to assess whether the state will buy a commercial-off-the-shelf (COTS) product, develop a fully customized product, or apply a hybrid approach. The approach that is best for each state depends upon the state's specific requirements, current capabilities, and ability to sustain the approach.

By definition, a COTS product requires mostly configuration and little customization (development), resulting in low initial cost and much less development time before being operable; however, COTS are usually less customizable. Implementing a COTS product is intended to allow organizations to efficiently and more cost effectively leverage best practices from what others have learned and developed, allowing system use to begin more rapidly. However, because the SLDS market is fairly new, SLDS solutions are immature relative to Human Resource or Accounting solutions. Therefore, when considering COTS, it is important to recognize that these solutions come with more risk than COTS products in more mature markets; they are less likely to meet a majority of requirements “out of the box” and may still require a substantial amount of development effort.

Developing a fully customized system can also be risky and time consuming, and creating functionality that already exists in a commercial product is not an efficient way to implement a system. However, if most of the state's SLDS requirements are not met by commercially available products, developing a fully customized system provides an opportunity to more fully meet them.

A hybrid approach to constructing an SLDS may entail purchasing software tools, or a tool set with interoperable functionality, and using them to build the rest of the system. The intent of this approach is to enable the project team to leverage efficiencies of the commercial tool set functionality and develop remaining functionality to meet unique requirements. Issues can arise, however, when tools from different vendors do not operate well together.

Resources and Skill Sets

Next, evaluate whether the agency staff already has the knowledge, skills, and resources to implement and maintain a solution that meets requirements. Consider how the SLDS team might obtain these, whether through training existing employees, recruiting new ones, or hiring a vendor. Understand that obtaining additional skill sets and resources add cost to the solution approach and should be considered when selecting the solution.

Risk is also a factor when considering how to staff the project team. Will the state bear all of the risk on the project by using in-house resources and contracting for missing skill sets, or attempt to share the risk with a vendor by hiring an implementation team? Contracting for an implementation team can be costly, but with a well-drafted contract an implementation team is one way that project risk can be carried and managed between the state and vendor.

Contracting

Regardless of the solution and staffing choices, contract negotiations for software and services are a critical factor in program success—both for the state and the vendor. Through informed and strategic negotiating, there is potential for substantial program dollars to be saved and many headaches prevented. A contract negotiation team should have representatives from both the business and IT and be led by personnel experienced in this type of negotiations, bringing contracting and legal knowledge.

Preparing for negotiations is very important—identifying the state's “must haves” and the “nice to haves” ensures participants know where they can and cannot compromise. Time spent up front to arrive at a well-defined contract helps set the stage for success by ensuring that both the state and vendor are clear on what is being agreed upon. This also saves time and money for both parties if an issue arises later.

Bridging Personnel Gaps: State of Washington

In order to bridge knowledge gaps in program staff, the State of Washington hired a consultant as an SLDS program manager to oversee project managers leading various project streams (data governance, data warehouse implementation, research and reporting activities, and source system implementations). The state also contracted with an experienced data warehouse expert who worked with the business to help identify the data warehouse vision and data model, and subsequently became the technical manager leading the project's technical team through implementation.

Manage Performance

Throughout the implementation of the SLDS, the performance of the state and vendor should be managed proactively. Clear and attainable goals, schedules, and milestones should be clearly identified. This requires having and articulating a true picture of the work and the level of effort required to accomplish it.

Consider, for example, the many steps involved between obtaining the data and having them accessible in the data warehouse. The vendor and the agency should clearly define and understand each of the steps, and determine who is responsible for each step. During contracting and project planning, it is important to ensure that documentation and communication is established around

- vendor and state expectations of each other;
- vendor and state deliverables; and
- definitions of vague terms (e.g., data readiness).

One approach to help ensure that everyone is on the same page throughout the life of the project is to schedule and plan for points in the project where upcoming work is reviewed and re-assessed, based on lessons learned from earlier work. This type of approach needs to be discussed during contract negotiations along with identifying impacts to deliverables and payments.

Plan for Change

Even with excellent communications around performance management, initial project plans are rarely implemented without adjustments. Therefore, project planning should always include a change management process—a process for managing risks and issues as they arise—which will help to minimize the change’s negative impact on the SLDS.

To begin creating the process, first identify and prioritize the risks and issues by collecting concerns from staff and leadership. Consider all risks and estimate the probability that each risk will turn into an issue. Identify the mitigation activities and their trigger points for each risk. In order to avoid over-planning, create detailed mitigation plans only for the risks with the highest probability of becoming an issue.

Effective risk mitigation can prevent risks from becoming issues; however, for those risks with a high probability of becoming an issue, it is advisable to create a contingency plan (Plan B). These plans should include details as to how the SLDS program will continue moving toward its intended outcomes. If the risk to the contingency plan is large enough, create additional plans (Plan C, D, E, etc.).

Effective communication around risks and issues can turn potentially huge obstacles into nearly non-events by ensuring project sponsors take ownership of risk, thereby reducing pushback and speeding up actions when a risk becomes an issue. When faced with a particularly large risk, the decisions around its Plan B should be documented and communicated to the appropriate project stakeholders. Communications should include the plan, the mitigation triggers, and which criteria need to be met to execute Plan B. Confirm that the appropriate stakeholders

- are aware of and agree on the risk;
- agree on its mitigation strategies;
- approve of Plan B;
- know when Plan B is triggered; and
- know their role in Plan B.

The Importance of a Communications Plan: District of Columbia

When working with its first SLDS vendor, the District of Columbia did not prioritize communications. The SLDS team had been focused on building the system and had assumed that “someone” had a communications plan. Because of this, the Mayor’s office and the U.S. Department of Education learned through the media that the vendor’s contract had been terminated. This strained the agency’s relationship with its funders, and the agency went from being able to spend freely to having to receive approval.

Note: Many state communication plans and examples can be accessed via GRADS360^o: grads360.org.

Manage Change

Even with good performance management, a vendor contract may need to be terminated. Effective management of a major program change can help to maintain positive relationships with vendors and avoid a sense of disorganization and the perception of mistreatment.

When faced with vendor termination, not only does the contingency plan need to be followed, but the details of the actual termination also need to be outlined and managed as a project itself. The moving parts should be planned down to the day and time when stakeholders are identified of the change, including a schedule of who notifies whom—from the agency director to the project team to the administrative assistant.

The plan should also include wrap-up activities, such as informing Human Resources so they can address system and building access. Additionally, protocols should exist for ensuring that all steps of the plan are carried out (possibly by two people together).

Maintain Momentum

During and after a major project change, efforts should be made to maintain project momentum. Consider which parts of the original plan—completed and uncompleted work—are solution neutral and can be applied to the contingency plan. Some of these parts might include business activities (data governance, data analysis, data readiness, etc.) and IT activities (design of the data model, data mapping, purchase and installation of infrastructure components, etc.). If the data model is being built in-house, the IT team can continue working on devising and building out the model so as to make progress during downtime while a different vendor is procured.

The same people that may be effective for implementing the original plan may not be the right group for the alternative plan; therefore, contingency plans should include procedures for staff changes. Staff strengths and weaknesses should be assessed for each plan in order to identify potential gaps and flexibility. Identify the utility players—smart, flexible people that can fill multiple roles—their strengths, and how you can use them. Conduct any additional training that staff may need to fill these roles so that they can be mobilized if needed. Sometimes vendors can be repurposed as well to fill a different role than originally intended.

Throughout the process of managing change, flexibility and transparency are crucial. Continually and iteratively communicate with stakeholders and inform them of what will be carried over from the original plan and what will be changed. If initial engagement with stakeholders was effective, they will already be prepared for and have confidence in the contingency plan. As the contingency plan is implemented, continue to monitor the program, looking for new possible risks and issues, and obtain some short-term wins to maintain stakeholder confidence.

Maintaining Momentum Through Major Change: State of Washington

The State of Washington employed a robust risk and issue management process on its SLDS program. Risks and issues were documented, evaluated, and communicated regularly. When the state identified a particularly large risk on the project, the project team planned, communicated, and received buy-in for its Plan B from project sponsors and key stakeholders. Specific, limited activities were carried out in parallel while the state continued to assess the current plan and status. As the large risk materialized into an issue and a change of course was required, the risk and issue management process allowed the team to maintain its momentum on the project without delay or pushback from stakeholders.

Additional Resources

SLDS Webinar: Managing Vendors. February 2011.
http://nces.ed.gov/programs/slds/webinars.asp#MW_Feb_2010_01

SLDS Webinar: Engaging Local District Stakeholders. September 2011.
http://nces.ed.gov/programs/slds/webinars.asp#MW_Sep_2011_01

Vendor Engagement: Tips from the State. March 2012.
<http://nces.ed.gov/programs/slds/pdf/brief3.pdf>