

# Project Closeout Report

**Project Name:** K-12 Domain of the North Dakota Statewide Longitudinal Data System (SLDS)

**Agency:** Department of Public Instruction

**Business Unit/Program Area:** SLDS

**Project Sponsor:** David Massey

**Project Managers:** Sarah Lee, Jennifer Kunz

Project Objectives	Measurements	
	Met/ Not Met	Description
1. Timely data collection	Met	1.1 For PowerSchool pulls only, student-level enrollment data and attendance data is collected within one week of a student's entry/exit in PowerSchool at the conclusion of the project 1.2 NDSA results loaded into data warehouse three weeks from delivery of data at the conclusion of the project 1.3 ACT results loaded into data warehouse three weeks from delivery of data at the conclusion of the project 1.4 Assessing, Comprehension, and Communication in English State to State (ACCESS) for English Language Learners (ELL's) results loaded annually at the conclusion of the project 1.5 Northwest Evaluation Association (NWEA) results loaded within three weeks of district testing window closure at the conclusion of the project  <b>RESULT:</b> All measurements were met
2. Provide foundational content in data warehouse to meet grant requirements and allow for effective usage of data at a state and district level	Met	2.1 Data warehouse contains three years of enrollment history at the conclusion of the project 2.2 Project has met the required elements for ND's obligation of the Data Quality Campaign (DQC), element numbers 1 through 8 2.2.1 Statewide student identifier 2.2.2 Student-level enrollment data 2.2.3 Student-level test data 2.2.4 Information on untested students 2.2.5 Statewide teacher identifier with a teacher-student match 2.2.6 Student-level course completion data 2.2.7 Student-level Scholastic Aptitude Test (SAT), ACT, and Advanced Placement Exam data 2.2.8 Student-level graduation and drop-out data 2.3 Data warehouse has ability to match student-level P-12 and higher education data (DQC #9) 2.4 Data warehouse contains information from all ND public schools 2.5 Data warehouse contains information from interim student assessments  <b>RESULT:</b> All measurements were met

# Project Closeout Report

3. Provide appropriate delivery mechanisms with secure role-based access to data	Met	<p>3.1 Reports are available that have n-sized suppression implemented where required</p> <p>3.2 Teacher-level access to data regarding their students exists</p> <p>3.3 Reports are available that show users' authorization</p> <p><b>RESULT:</b> All measurements were met</p>
4. Data quality established to ensure data warehouse use will result in accurate reports	Met	<p>4.1 Audit features are in place that allow users to verify anomalies in their data (DQC #10)</p> <p>4.2 Validation reports delivered to the district-level information technology personnel providing them feedback on data quality in their source systems</p> <p>4.3 PowerSchool state report extracts match what data warehouse extracts provide to STARS (To perform this measurement: State provides districts with a report on what the State extracts from the data warehouse into STARS to compare to the PowerSchool extract. State will also run a sampling of districts' extracts. Is the Average Daily Attendance/Average Daily Membership [ADA/ADM] calculation correct?)</p> <p><b>RESULT:</b> All measurements were met</p>
5. Data warehouse features meet the requirements of the IES grant	Met	<p>5.1 School districts' fall and spring enrollment reports are generated from available elements in the data warehouse that have been extracted, and they are able to minimize their state reporting requirements to data that is not in their student information systems (e.g., PowerSchool)</p> <p>5.2 State can automatically assign state student identifier at the conclusion of the project</p> <p>5.3 There is a repeatable process to assign and complete linkages to higher education at the conclusion of the project</p> <p><b>RESULT:</b> All measurements were met</p>

Schedule Objectives					
Met/ Not Met	Original Baseline Schedule (in Months)	Final Baseline Schedule (in Months)	Actual Schedule (in Months)	Variance to Original Baseline	Variance to Final Baseline
Met	31  12/01/2010-06/28/2013	45  12/01/2010-08/22/2014	43  12/01/2010-06/30/2014	N/A	0%

Budget Objectives					
Met/ Not Met	Original Baseline Budget	Final Baseline Budget	Actual Costs	Variance to Original Baseline	Variance to Final Baseline
Met	\$4,915,680	\$4,625,552	\$4,721,496	N/A	2.0% over

Major Scope Changes
<p>The major scope changes for this project were caused by the addition and deletion of subject areas and reports based on the needs of DPI, the school districts, and other stakeholders. As the project progressed and the stakeholders started to see the reports and the data, new subject areas were deemed to be of higher value and previously-planned subject areas and/or reports were eliminated or reprioritized as optional – only to be done if there was time and money left in the project.</p>

# Project Closeout Report

<b>Success Stories</b>	
1.	The ability to provide advanced analytics on the data between high school and postsecondary enrollment in remediation was a full-cycle of data collection, data use, research and provide value add back to the contributors with remediation predictions, allowing districts the feedback they need for program evaluation. The cooperation with the university system and k12 was critical for the success of transitional data. The eTranscript application will provide cost savings and time savings for all districts in the state, including students and parents.
2.	A classroom teacher and a building principal have a "one stop shopping" so to speak place to find student information. I have seen this in practice. I have also seen grade level teachers look at the data collectively as a group to make decisions based on their student needs.
3.	Teachers and administrators seeing patterns in student data that confirm what they may have been thinking but weren't certain on.
4.	Better formative instruction developed from data.
5.	It has provided an efficient means for reporting which has given teachers time to focus on classroom instruction.
6.	We are able to get to and use the data so much easier...we are able to show parents where their kids are performing across the board.
7.	Teachers using the NWEA Teacher Report to change what they are doing in their classroom instruction. For instance, using the lexile sort ability to work with leveling of nonfiction articles on Newsela.

<b>Lessons Learned</b>	
1.	The iterative approach to building the K12 warehouse was very successful. It allowed for deployments of information to be handled in increments, where you left and came back to an area after more information was collected, or the vendor had made enhancements at another location and was able to bring that work done in for free. The stable contractors and type of contract in place with the K12 vendor was key to its success. By reducing the priority of schedule allowed the budget to be maximized for quality and scope; however, there were subcomponents of the project, such as security, where other vendors were involved and the quality of resources provided resulted in delays and turnover of contractual resources.
2.	I believe this project went well because the people involved looked, researched, and discussed other state's SLD projects. Second, the project is ongoing and has active involvement from the field, people who use the system. Third, the SLDS project is being implemented over time so it is growing based on user needs. Creating the SLDS for use was and remains a #1 goal.
3.	The project was so large that often times you didn't know if it was ever going to be complete. The early training wasn't as good as the current training but that was expected due to circumstances.
4.	Clearer communication with parents about the data collection (is a lesson learned)
5.	There were times when only a few people made decisions and things didn't get done because it wasn't a priority. There are certain tests going in the system now that should have been in a year ago.
6.	Plan data warehouses using an iterative schedule as data can be staged and loaded into the data warehouse by subject area, then released for use in creating reports (entered into lessons learned Wiki already)
7.	Data warehouse work is best done using one of the agile means of working on projects; however, since state reporting and work structures are not currently set up for an agile environment, use progressive elaboration of the schedule when portions of the work are unknown until other work is complete, and schedule rolling wave planning or re-plans into the schedule as work efforts will most likely change based on user feedback on completed work
8.	Though not common for time and materials contracts, a 10% retainage can be used on monthly or progress payments for deliverables to provide incentive for the vendor to stay on schedule (entered into lessons learned Wiki already)
9.	When doing a time and materials contract with deliverables, consider putting the NTE limit at the high level instead of on each deliverable

# Project Closeout Report

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| 10. Find out if the environment setup is new to the technical team – if so get all the areas together (Computer Systems, NOC, Network, etc.) before work to strategize who needs to do what, and in what order, and if any service requests or authorizations are required; consider creating a separate list within SharePoint for technical issues and collaboration |
| 11. When the schedule calls for re-plans or additional planning dependent on the status of the previous work, allow time at the end of any vendor contracts or work orders to accommodate the planning activities                                                                                                                                                      |
| 12. When working with grants, typically not all of the grant money will be allotted to the project budget, the agency will most likely keep some for indirect costs (salaries, equipment, etc.); therefore verify with the agency that the project budget from the grant will remain solely the project’s budget, separate from the indirect costs budget              |

Other Comments
1. Best practices from similar projects were not available with ITD and this project did a great job in watching, listening and discussing best practices with other states. Decisions were made on failures and success of other states. ND was able to bring forward a solution to building a complex K12 warehouse and SLDS system that reduced risks and someone guaranteed a level of success. The scope changes of the project were managed well, ND delivered a system that far exceeded the original scope by adjusting to what could be done as new information and technologies and best practices were identified. There was removal of some scope due to the value vs availability of data and business users, which was a smart choice as these can be added in the future when ready and allowed the project to focus on more critical elements of the K12 SLDS.
2. This was a large project that affected multiple agencies and changes in agency processes. The scope seemed to adapt to changes in current events (i.e. Succeed 2020); the project managers did an excellent job 'herding the cats.'
3. The deliverables in this project changed based on need and were constantly being reviewed and revised to make sure the project was delivering value. Therefore, while they fit into the objectives of the project, they were not necessarily exact to the original scope.
4. Testing a data warehouse requires not only technical resources, but really relies on the business using the data. As more and more adoption of the K12 warehouse increased, the finer quality issues are addressed that could not have been predicted in a technical test plan.
5. The SLDS K-12 project has always been focused on the user, the needs of the user, and easy to use for the user. I have always felt the project has kept that focus and is a useful tool for educators which is being used out in the field
6. The environment meets the needs for providing student dashboards and researched based data marts. As usage increases, demand for more advanced features such as: dynamic interaction (creating cohorts), aggregate comparisons against other districts and state as a whole, statewide reporting on advanced issues such as mobility and more predictive analytics is expected.