

# **U.S. Department of Education**

Washington, D.C. 20202-5335



## **APPLICATION FOR GRANTS UNDER THE**

**STATEWIDE LONGITUDINAL DATA SYSTEMS**

**CFDA # 84.372A**

**PR/Award # R372A090016**

**Grants.gov Tracking#: GRANT10075947**

OMB No. 1890-0004, Expiration Date:

Closing Date: SEP 25, 2008

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This application was generated using the PDF functionality. The PDF functionality automatically numbers the pages in this application. Some pages/sections of this application may contain 2 sets of page numbers, one set created by the applicant and the other set created by e-Application's PDF functionality. Page numbers created by the e-Application PDF functionality will be preceded by the letter c (for example, c1, c2, c3, etc.).

## Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application		* 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision		* If Revision, select appropriate letter(s): <input type="text"/> * Other (Specify): <input type="text"/>	
* 3. Date Received: 09/24/2008		4. Applicant Identifier: <input type="text"/>			
5a. Federal Entity Identifier: <input type="text"/>			* 5b. Federal Award Identifier: <input type="text"/>		
<b>State Use Only:</b>					
6. Date Received by State: <input type="text"/>		7. State Application Identifier: <input type="text"/>			
<b>8. APPLICANT INFORMATION:</b>					
* a. Legal Name: NORTH DAKOTA DEPARTMENT OF PUBLIC INSTRUCTION					
* b. Employer/Taxpayer Identification Number (EIN/TIN): 45-6002426			* c. Organizational DUNS: 803755057		
<b>d. Address:</b>					
* Street1:	600 E BOULEVARD AVE DEPT 201				
Street2:	<input type="text"/>				
* City:	BISMARCK				
County:	<input type="text"/>				
* State:	ND: North Dakota				
Province:	<input type="text"/>				
* Country:	USA: UNITED STATES				
* Zip / Postal Code:	58505 0602				
<b>e. Organizational Unit:</b>					
Department Name: ND Dept of Public Instruction			Division Name: Ed Support/Community Learning		
<b>f. Name and contact information of person to be contacted on matters involving this application:</b>					
Prefix:	Mr.	* First Name:	David		
Middle Name:	<input type="text"/>				
* Last Name:	Massey				
Suffix:	<input type="text"/>				
Title:	Assistant State Superintendent				
Organizational Affiliation: North Dakota Department of Public Instruction					
* Telephone Number:	(701) 328-2393	Fax Number:	(701) 328-4770		
* Email:	dmassey@nd.gov				

**Application for Federal Assistance SF-424**

Version 02

**9. Type of Applicant 1: Select Applicant Type:**

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

**\* 10. Name of Federal Agency:**

U.S. Department of Education

**11. Catalog of Federal Domestic Assistance Number:**

84.372

CFDA Title:

Statewide Data Systems

**\* 12. Funding Opportunity Number:**

ED-CRANTS-062608-001

\* Title:

Statewide Longitudinal Data Systems Grant Program CFDA 84.372

**13. Competition Identification Number:**

84-372A2009-1

Title:

**14. Areas Affected by Project (Cities, Counties, States, etc.):**

Statewide

**\* 15. Descriptive Title of Applicant's Project:**

ND is seeking federal funding to design, plan and develop a statewide longitudinal educational data warehouse that will provide data analysis tools to ND schools, teachers, parents, etc.

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

## Application for Federal Assistance SF-424

Version 02

## 16. Congressional Districts Of:

\* a. Applicant \* b. Program/Project 

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

## 17. Proposed Project:

\* a. Start Date: \* b. End Date: 

## 18. Estimated Funding (\$):

* a. Federal	<input type="text" value="6,723,090.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="1,199,852.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="7,922,942.00"/>

## \* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

- a. This application was made available to the State under the Executive Order 12372 Process for review on
- b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- c. Program is not covered by E.O. 12372.

## \* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)

Yes  No

21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

 \*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

## Authorized Representative:

Prefix:  \* First Name:

Middle Name:

\* Last Name:

Suffix:

\* Title: \* Telephone Number:  Fax Number: \* Email: \* Signature of Authorized Representative:  \* Date Signed:

**Application for Federal Assistance SF-424**

Version 02

**\* Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.



**U.S. DEPARTMENT OF EDUCATION**  
**BUDGET INFORMATION**  
**NON-CONSTRUCTION PROGRAMS**

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:  
 NORTH DAKOTA DEPARTMENT OF PUBLI...

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

**SECTION A - BUDGET SUMMARY**  
**U.S. DEPARTMENT OF EDUCATION FUNDS**

Budget Categories	Project Year 1(a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	\$ 122,500	\$ 220,750	\$ 220,750	\$ 114,700	\$ 0	\$ 678,700
2. Fringe Benefits	\$ 36,750	\$ 66,225	\$ 66,225	\$ 34,410	\$ 0	\$ 203,610
3. Travel	\$ 20,020	\$ 20,020	\$ 14,140	\$ 14,140	\$ 0	\$ 68,320
4. Equipment	\$ 3,000	\$ 1,228,000	\$ 357,600	\$ 357,600	\$ 0	\$ 1,946,200
5. Supplies	\$ 2,500	\$ 3,000	\$ 4,000	\$ 2,500	\$ 0	\$ 12,000
6. Contractual	\$ 248,400	\$ 1,651,500	\$ 1,096,800	\$ 668,500	\$ 0	\$ 3,665,200
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 11,500	\$ 11,500	\$ 2,500	\$ 2,500	\$ 0	\$ 28,000
9. Total Direct Costs (lines 1-8)	\$ 444,670	\$ 3,200,995	\$ 1,762,015	\$ 1,194,350	\$ 0	\$ 6,602,030
10. Indirect Costs*	\$ 24,228	\$ 38,461	\$ 36,920	\$ 21,451	\$ 0	\$ 121,060
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 468,898	\$ 3,239,456	\$ 1,798,935	\$ 1,215,801	\$ 0	\$ 6,723,090

**\*Indirect Cost Information (To Be Completed by Your Business Office):**

If you are requesting reimbursement for indirect costs on line 10, please answer the following questions:

(1) Do you have an Indirect Cost Rate Agreement approved by the Federal government?  Yes  No

(2) If yes, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement: From: 7/1/2008 To: 9/30/2008 (mm/dd/yyyy)

Approving Federal agency:  ED  Other (please specify): \_\_\_\_\_

(3) For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:

Is included in your approved Indirect Cost Rate Agreement? or,  Complies with 34 CFR 76.564(e)(2)?



**U.S. DEPARTMENT OF EDUCATION**  
**BUDGET INFORMATION**  
**NON-CONSTRUCTION PROGRAMS**

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:  
 NORTH DAKOTA DEPARTMENT OF PUBLI...

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

**SECTION B - BUDGET SUMMARY**  
**NON-FEDERAL FUNDS**

Budget Categories	Project Year 1(a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	(b)(4)					
2. Fringe Benefits						
3. Travel						
4. Equipment						
5. Supplies						
6. Contractual						
7. Construction						
8. Other						
9. Total Direct Costs (lines 1-8)						
10. Indirect Costs						
11. Training Stipends						
12. Total Costs (lines 9-11)						

## ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

<p>* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</p> <p>Frank Snow</p>	<p>* TITLE</p> <p>Assistant State Superintendent</p>
<p>* APPLICANT ORGANIZATION</p> <p>NORTH DAKOTA DEPARTMENT OF PUBLIC INSTRUCTION</p>	<p>* DATE SUBMITTED</p> <p>09/24/2008</p>

Standard Form 424B (Rev. 7-97) Back

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## CERTIFICATION REGARDING LOBBYING

### Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

### Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

<b>* APPLICANT'S ORGANIZATION</b>	
NORTH DAKOTA DEPARTMENT OF PUBLIC INSTRUCTION	
<b>* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE</b>	
Prefix: Mr.	* First Name: David
Middle Name:	
* Last Name: Massey	Suffix:
* Title: Assistant State Superintendent	
<b>* SIGNATURE:</b> Frank Snow	<b>* DATE:</b> 09/24/2008

Close Form

SUPPLEMENTAL INFORMATION  
REQUIRED FOR  
DEPARTMENT OF EDUCATION GRANTS

**1. Project Director:**

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Mr.	David		Massey	

Address:

* Street1:	600 E BOULEVARD AVE DEPT 201
Street2:	
* City:	Bismarck
County:	
* State:	ND: North Dakota
* Zip Code:	58505 0602
* Country:	USA: UNITED STATES

\* Phone Number (give area code) Fax Number (give area code)

701-328-2393	701-328-4770
--------------	--------------

Email Address:

dmassey@nd.gov
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**2. Applicant Experience:**

Novice Applicant  Yes  No  Not applicable to this program

**3. Human Subjects Research**

Are any research activities involving human subjects planned at any time during the proposed project Period?

Yes  No

Are ALL the research activities proposed designated to be exempt from the regulations?

Yes Provide Exemption(s) #: 

--

No Provide Assurance #, if available: 

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**Please attach an explanation Narrative:**

	Add Attachment	Delete Attachment	View Attachment
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# **Project Narrative**

## **Abstract Narrative**

Attachment 1:

Title: Pages: Uploaded File: 1234-ndSLEDS Abstract.pdf

## **Project Abstract: North Dakota Statewide Longitudinal Data System (ndSLEDS)**

The North Dakota Department of Public Instruction (DPI) does not have a statewide longitudinal data system to provide stakeholders ready access to decision making-useful educational data for improving student outcomes. This grant proposal is to fund the planning, design, development, and implementation of a statewide longitudinal data system that will provide data transparency and data analysis tools to North Dakota school districts, schools, teachers, administrators, legislators, researchers, and parents. By providing access to quality and timely data, the State of North Dakota will be better able to identify promising instructional practices, improve student achievement, and reduce achievement gaps among student groups.

DPI has spent several years establishing content standards aligned with assessments to achieve one of its primary goals, “to ensure a comprehensive system of accountability for results-based decision making.” DPI has developed a data system, the State Automated Reporting System (STARS) to collect much of the data sufficient to meet the No Child Left Behind Act (NCLB), *EDFacts*, and state accountability reporting requirements. STARS also provides the financial data to generate district financial support.

While STARS contains a wealth of K-12 data, it was designed as a “one-way” operational reporting system where data come into DPI, but are not readily accessible to other stakeholders. Although North Dakota has lacked the resources to create a statewide education data warehouse, North Dakota has been able to study how other states are implementing their data warehouses and learn from their experiences while data warehousing technologies and processes mature. North Dakota will use federal funding to help implement national best practices to create an enterprise longitudinal data system that will:

- Consist of a robust data dictionary, data model, extract, transformation and loading processes, and business intelligence toolset
- Provide all key stakeholders with secure, role-based access to longitudinal program, teacher, course, assessment, and student data to analyze ways to improve achievement
- Reduce the reporting burden on districts and the state through the implementation of standardized electronic data exchange
- Meet the ten essential elements of the Data Quality Campaign
- Establish a governance structure that leads statewide adoption of data definitions, data quality procedures, and data stewardship to ensure consistent, reliable data.
- Develop statewide training and research initiatives to build professional learning communities

Other activities will include building on DPI’s K-12 foundation to create a statewide longitudinal data system to improve services to North Dakota’s citizens across the K-16 education and workforce spectrum. In addition, North Dakota will implement an e-Transcript functionality to share student course data among districts for student transfers, and to post-secondary institutions as appropriate.

# Project Narrative

## Project Narrative

Attachment 1:

Title: Pages: Uploaded File: 1238-ndSLEDGrant\_Final.pdf

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## Project Narrative

### Need for the Project

#### Background

All states are held to state-defined high standards of accountability as required under the No Child Left Behind Act (NCLB), but not all states have the same advantages in providing the technical support needed to improve learning. Larger states benefit from economies of scale and can fund substantial and highly leveraged personnel and technology resources. However, as the 49th most populous state in the Nation,<sup>1</sup> North Dakota has limited state education agency resources to develop an accountability infrastructure that goes beyond reporting of data to a system that provides data useful to advancing professional practice in the classroom and educational research that informs both policy and practice.<sup>2</sup>

The North Dakota primary and secondary education system is comprised of the State Department of Public Instruction (DPI), and approximately 184 active locally controlled school districts. Districts are supported by eight Regional Education Associations (REAs). All but 13 of the 184 districts have fewer than 1,000 students. While the five largest districts in North Dakota have their own data warehouse, the small size of North Dakota's other districts limits the availability of their resources to conduct research and data analysis. North Dakota has already made significant investments in its data system but needs federal support to create an integrated longitudinal data system and improve the equitable access of data resources between larger districts, who can afford their own data systems, and smaller districts, who cannot.

#### Current Investments to Meet Data Needs

North Dakota prides itself on creating and maintaining an accountability system that meets the federal reporting requirements of *EDFacts* and the Family Educational Rights and Privacy Act (FERPA). North Dakota has invested over \$3 million in developing its statewide data collection systems. DPI began building an online system, the State Automated Reporting System (STARS) for collecting data to meet NCLB requirements and establishing a state student identifier. STARS also provides the data collection and calculations required for State financial aid. The online collection system has been rewritten to meet heightened data needs as demands for data required by the Education Data Exchange Network (EDEN)/ *EDFacts*, technology standards and data quality issues have increased.

The second generation STARS expands the state collection system in program areas to meet more *EDFacts* requirements and increase data validations and quality enhancements to improve the data. STARS has created a strong foundation to build upon as North Dakota moves toward

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<sup>1</sup> US Census Data, 2005.

<sup>2</sup> The ND DPI has 90 current state employees (Source: Interview with DPI executive staff), compared to comparable SEAs - District of Columbia Office of the State Superintendent (257), Rhode Island (211), and Delaware (224). Source for other SEAs: Study of State-level Education Costs in the District of Columbia, Government of the District of Columbia, 2007.

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collecting the data elements and quality audits needed to provide a robust collection system for a statewide longitudinal data system (ndSLEDS).

The State of North Dakota has funded DPI and the Education Standards and Practices Board (ESPB) over \$1 million in the 2007 biennium to rewrite existing 25 year old mainframe applications for foundation aid, teacher licensure and school approval and accreditation which were not capable of supplying longitudinal data. The North Dakota Department of Career and Technical Education (CTE) and DPI also began investigating data collections and determined that duplicate collections existed. As a result, CTE retired an online collection system by adding additional elements to STARS. DPI's, ESPB's and CTE's understanding of the need for preparing for a longitudinal data system and the importance of data quality yielded combined projects to consolidate systems and use a single state education database to form a master data management strategy for achieving a 'single version of the truth.'

In 2006 DPI, school districts and special education units, began work to establish a single statewide special education data system that provides on-line capacity to manage and develop Individualized Education Programs (IEPs), meets state and federal reporting requirements, reduces the reporting burden on the special education units, and meets the State's master data management strategy. All data that districts must supply to the special education data system pass through STARS to eliminate duplicate data collections. The statewide special education data system completed implementation in September 2008.

### **Needs to Be Met by ndSLEDS**

STARS is the primary operational data store responsible for collecting data from school districts. STARS provides limited reporting back to school districts as it concentrates on data collection validations and has no real capacity to allow external access for mining its longitudinal data to conduct research or analysis. As described in Objective #2 below, STARS requires extensive manual compilation from multiple data sources to meet federal and state reporting requirements. North Dakota education stakeholders need a tool that allows them to access and analyze data on student academic growth and achievement at the school level. There are three primary needs:

- Need for usable, timely, and quality data
- Provision of data and analysis tools to schools
- Training of teachers and administrators to use data to improve student achievement

#### *Usable, Timely, Quality Data*

STARS is missing data and linkages in core areas, including the linkage of teacher to course and student data. Districts need to improve availability of education data to stakeholders for analysis of student achievement. Most districts do not properly track staff data, hindering their ability to better support educators in raising student achievement. STARS also lacks formative assessment data to provide timely interventions to students in need of additional academic support. Further, STARS does not meet four of the Data Quality Campaign's (DQC) ten essential elements for an efficacious SLDS, including:

- A teacher identifier system that matches teachers to courses to students

- Student-level transcript information, such as courses completed and grades earned
- Student-level college readiness test scores
- Ability to match students from P-12 and higher education systems

*Provision of Data and Analysis Tools to Schools*

To transform North Dakota’s raw natural data resources into a rich array of knowledge and lessons learned, North Dakota must plan, design, develop, and implement a statewide longitudinal data system, to be named “ndSLEDS,” the North Dakota Statewide Longitudinal Education Data System. The core technical components needed for ndSLEDS are described in more detail in the Project Design section and include:

- Source data systems
- A robust data dictionary and data model
- Hardware and data warehouse platform
- Extract, transformation, and loading software and/or processes
- Business intelligence toolset
- Privacy and security protection

*Training and Governance*

Improved and new data and technology alone are not sufficient to transform how data are used within the state to achieve the student achievement goals of NCLB. The system must provide training and support for users and be properly governed and managed especially as it serves as the basis for data sharing among state agencies.

In 2007, the State Legislature authorized the Information Technology Department (ITD) to form a Statewide Longitudinal Data System Committee to plan for and propose a SLDS capable of disseminating data on North Dakota Workforce Intelligence and Education Outcomes. The committee hired a consultant to develop a strategic roadmap for establishing a Workforce SLDS. The roadmap made a priority recommendation for the development of a K-12 SLDS and a separate higher education SLDS that can contribute to the future statewide Workforce Intelligence and Education Outcomes Longitudinal Data System. The roadmap recognized an education SLDS as the fundamental component of a comprehensive statewide multi-agency data system capable of studying services provided to North Dakota’s citizens across the P-20 education and workforce spectrum.

**Objectives for Proposed System**

North Dakota is applying for funding to create a K-12 SLDS and link K-12 data with data from agencies outside of the state education agency (SEA). North Dakota has nine objectives for the proposed K-12 SLDS grant that will meet the needs described above. A crosswalk of how each objective meets the needs of North Dakota is below.

<b>North Dakota LDS Need</b>	<b>ndSLEDS Objective</b>
<b>Usable, Timely, Quality Data</b>	<b>Obj. #1</b> Improve student achievement and reduce gaps among student achievement by providing transparent and longitudinal

North Dakota LDS Need	ndSLEDS Objective
	<p>formative and summative assessment data at the item level by student.</p> <p><b>Obj. #5</b> Meet all 10 Data Quality Campaign elements of a successful Longitudinal Data System, providing a data system that is comprehensively relevant, user-friendly, accurate, and secure.</p> <p><b>Obj. #6</b> Link student high school performance with workforce unemployment insurance.</p> <p><b>Obj. #9</b> Enable the electronic transfer of student grades by course (eTranscripts) from 9-12 among districts and to institutions of higher education.</p>
<p><b>Provision of Data and Analysis Tools to Schools</b></p>	<p><b>Obj. #2</b> Improve the data collection and reporting process for state and federal reports by automating and consolidating data collections to provide transparent, timely and quality source of data available to districts and program administrators.</p> <p><b>Obj. #7</b> Plan, design, implement and support a statewide longitudinal education data system comprised of a robust data dictionary, data model, extract, transformation and loading processes, and business intelligence toolset.</p> <p><b>Obj. #8</b> Provide secure accessibility of the Statewide Longitudinal Data System to all districts and other appropriate stakeholders (subject to FERPA).</p>
<p><b>Training and Governance</b></p>	<p><b>Obj. #3</b> Provide a governance structure that collaboratively sets direction, drives full participation, and validates data quality.</p> <p><b>Obj. #4</b> Provide universal training and support to improve data quality and use.</p>

**Objective #1:** Improve student achievement and reduce gaps among student achievement by providing transparent and longitudinal formative and summative assessment data at the item level by student. Begin to establish the data infrastructure to assess the impact of professional development on teaching and learning. Initiate statewide agreement on the data elements required and ways to categorize professional development within the state. Support analysis of the impact of professional development on student outcomes as a priority research area for the North Dakota higher education and educational research communities.

**Outcome:** Districts will have access to ndSLEDS data marts of three years of longitudinal assessment data at the item level, and teacher data linked to courses and students.

**Current system:** Summative assessment data are currently collected, but are not readily available to stakeholders outside the DPI. Formative assessment data are not widely collected or

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analyzed. DPI is currently working with the Governor's office on behalf of educational constituents to fund the use of formative assessments for all districts. Professional development data are not readily available from districts.

**Proposed system:** DPI will form a professional development committee to spearhead the collection and addition of professional development data to the ndSLEDS data warehouse to assess the impact on student achievement. DPI will procure an enterprise web based business intelligence (BI) tool. The BI environment will provide the longitudinal data from the SLDS to appropriate stakeholders in a secured role-based structure that meets FERPA requirements.

**Objective #2** Improve the data collection and reporting process for state and federal reports by automating and consolidating data collections to provide transparent, timely and quality data available to districts and program administrators.

**Outcome:** A single, stable repository of data for consistent federal and state reporting will be created providing districts and program administrators quality and timely data. State and school district data administrators will identify, test and pilot an enterprise strategy for replacing manual file extractions and reporting with automated data exchanges.

**Current system:** STARS requires districts to manually upload or directly input data into its system. School districts' reporting requirements have increased to nearly daily uploads resulting in undue burden on the districts. Data submitted into STARS are not available for districts to readily access or in formats that provide the districts feedback. There remain manual data collections that lack validations, quality and coordination with State and district data stewards. North Dakota demographics are extreme. The more than 100 of North Dakota's school districts are considered small, local school districts and do not have the resources to implement and support a student information system (SIS) nor data warehouses.

**Proposed system:** This inequity in district capacity may only be addressed through enterprise architecture and centralized services for support and training. ndSLEDS will build upon the North Dakota education enterprise architecture comprised of a single state education database, the statewide special education data system and the state's initiative to fund and support a statewide SIS. STARS will be enhanced to include data collections that are manual today and to supply ndSLEDS with these elements and the *EDFacts* reports.

DPI and school districts are very interested in implementing Schools Interoperability Framework (SIF) to standardize and automate data collections and benefit from SIF's data exchanges to other entities. This project will procure a consultant who will evaluate and recommend how DPI can develop the enterprise architecture to more cost effectively create an SLDS that automates data collections, and validates and corrects data errors at the source. Additionally, the consultant will recommend a short-term and long-term strategy for integrating the SIF architecture into DPI's and the districts' enterprise architecture. The project will conduct a pilot program to implement SIF based on consultant recommendations.

**Objective #3:** Provide a governance structure that collaboratively sets direction, drives full participation, and validates data quality.

**Outcomes:** The Data Governance charter will be created. Periodic checks on districts' success in meeting data standards will be instituted.

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**Current system:** DPI lacks a comprehensive data governance system to ensure institutional collaboration and support, and consistency, accuracy and quality of data. The DPI Data Advisory Council (DAC) consists of 13 members representing eight districts and three state agencies (DPI, CTE, and the Education Technology Council). The DAC is responsible for addressing DPI data reporting issues, including data management, and data confidentiality and access. The DAC is not a legislatively authorized body that can officially rule on data definitions, require data submissions, or mandate data audit and verification procedures. There is also a lack of structure and resources at the district level to provide adequate data stewardship and verification of data.

**Proposed system:** Building on the successful governance structures that have been established in other states, DPI will expand DAC membership create a formal data governance structure as described in Project Design, Phase 1, and supported by the Governor and ND Legislature. DPI will also create a master data management plan to establish structure and resources at the district level, with the goal of providing adequate data stewardship and verification of data. The data governance system will establish a process for continuous improvement of data quality and sharing among programs.

**Objective #4:** Provide universal training and support to improve data quality and use.

**Outcomes:** Districts will have administrators, teachers and other relevant stakeholders trained as “super-users” who will train remaining district stakeholders through a train-the-trainer model.

**Current system:** North Dakota invests some dollars in training a portion of educators to use data, but lacks the resources for statewide training and support of a SLDS. While the number of classroom teachers collaborating on item analysis of assessments to pinpoint student strengths and weaknesses and differentiate instruction accordingly has increased, much more training is needed. There is no comprehensive statewide support structure for helping stakeholders discuss and resolve issues related to data-driven decision making, as well as, research, learn and promulgate best practices.

The State also participates in NCES forums and CCSSO events related to longitudinal data systems.

**Proposed system:** In cooperation with local school districts, DPI will train relevant stakeholders as “super-users”.

Because data quality must begin at the source of the data, training will emphasize the need for adhering to consistent data policies and outline training procedures for all staff that generate key data elements. Super-users will train remaining district stakeholders within their districts through a train-the-trainer model. REAs will receive additional training and provide ongoing consultation and support to districts. For very small districts, regional education staff will serve as the district trainers. Satisfaction with training will be measured through questionnaires distributed at the end of training. On-line surveys will be sent periodically after training to assess perceived impact of ndSLEDS on instructional practice and student achievement. In addition, annual data retreats will be supported in every district and REA to review reports generated by ndSLEDS and assist teaching staff in using those reports to modify instruction.

**Objective #5:** Meet all 10 Data Quality Campaign elements of a successful Longitudinal Data System, providing a data system that is comprehensively relevant, user-friendly, accurate, and

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secure.

**Outcome:** All ten Data Quality Campaign elements will be met.

**Current system:** DPI has been engaged in achieving the ten elements of the DQC and evaluates policy and systems regularly on opportunities to achieve all elements. DPI has realized six of the ten elements today and has prepared for the implementation of the remaining elements as much as possible.

**Proposed system:** DPI realizes that the DQC ten elements form the foundation of a comprehensive longitudinal data system and will fulfill the remaining four elements by enhancing the STARS system to collect additional data elements, implementing automated data reporting, and developing and implementing data policies and procedures.

In order to meet all ten data quality campaign elements and supply this information to ndSLEDS, North Dakota will need to do the following:

- DQC Element #5 - A teacher identifier system that matches teachers to courses to students: While North Dakota has established a unique teacher id and quality assurances of two teachers not sharing ids, North Dakota has not completed the linkage of teachers to courses and to students. North Dakota will change its data collection system to collect this information at all grade levels within the STARS collection system, as well as leverage SIF student record exchanges and vertical reporting to automate the collections as described in Objective 2. North Dakota is well positioned to succeed in this task as state course code alignment is well established. DPI can leverage the experiences of North Dakota districts that have implemented their own data warehouses to address this challenge.
- DQC Element #6 - Student-level transcript information, including information on courses completed and grades earned: North Dakota will change its data collection system to include grades and course completion records, and will utilize SIF.
- DQC Element #7 - Student-level college readiness test scores: North Dakota will design and implement the data warehouse with ACT, SAT, and Advanced Placement exams results.
- DQC Element #9<sup>3</sup> - Ability to match students from ndSLEDS to higher education systems: North Dakota districts and the North Dakota University System (NDUS) are currently implementing a policy that includes state student identifiers on high school transcripts. All North Dakota Institutions of Higher Education (IHEs) will collect the identifier from the transcripts. Additionally DPI and NDUS are currently working together to electronically provide historical student ids to IHEs in order to populate the state student ids within IHEs.

**Objective #6:** Link student high school performance data with workforce unemployment insurance data to accomplish two goals: 1) enable research on how students' academic

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<sup>3</sup> While addressing this element is out of the scope of this grant, this grant provides the foundation for enabling this element and North Dakota has committed resources to achieve this element.

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performance impacts workforce success and progress post-graduation., and 2) measure the impact of work on the academic performance of students who maintain jobs while attending high school.

**Outcome:** Create a datamart which combines North Dakota students to unemployment insurance wage and employment data to allow for research on student outcomes.

**Current system:** Education and workforce research is conducted using flat file data extracts, but low matching rates limits the value of the research.

**Proposed system:** CTE and DPI will have a joint data mart enabling them to research workforce status and high school performance. The system will utilize a probabilistic matching engine DPI is currently implementing which results in higher match rates to deliver larger data sets capable of meaningful research.

**Objective #7:** Plan, design, implement, and support a statewide longitudinal education data system comprised of a robust data dictionary, data model, extract, transformation and loading processes, and business intelligence toolset.

**Outcome:** A successful pilot of ndSLEDS will be implemented in Year 2. The statewide roll-out of ndSLEDS will be completed in Year 3.

**Current system:** “The State Automated Reporting System (STARS) is an ASP .Net application utilizing SQL Server 2005, recently deployed in the fall of 2007. This system is a replacement of the first generation data collection system implemented in 2001. Districts are required to report data to DPI three times per year, however STARS is available year round and many districts use STARS on a daily or weekly basis. STARS primarily collects: student enrollment information within a district and school; student program services such as 504, ELL, Title I, Migrant, etc.; Licensed Personnel and the courses/units they instruct aligned with a state course code, Non Licensed Personnel, Title I consolidated application, and a variety of other programs.

“North Dakota does have a state student identifier which is implemented through STARS by means of an online interface. Districts needing to assign many student ids will send a file to DPI who in-turn runs a routine to determine probabilistic matches and assign new ids and returns the file to the district; this is an iterative process.

“North Dakota does have a Teacher License Number issued that is not the SSN.”<sup>4</sup>

**Proposed system:** STARS will serve as one of the operational data stores from which data will be extracted to ndSLEDS. DPI will manage the planning, design, development, and implementation of the ndSLEDS (see enterprise architecture). The planning and design phases of this project will evaluate the available data sources to determine the highest quality and viable data sources; STARS, student information systems (SIS) via SIF, district data warehouses and direct access to SIS databases. Existing data stores will be cleaned and new data stores will be added as necessary. The data dictionary will be improved to include other data sources outside of DPI, which will provide the toolsets needed to better manage metadata. Web-based data marts accessible via business intelligence tools will be created from requirements identified in the project planning based on input from district administrators, teachers, parents, DPI program

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<sup>4</sup>From RFP issued to provide a report for the planning and budgeting of Statewide Longitudinal Data Systems primarily focused on our PK-12, Higher Education and Workforce development initiatives.

managers, researchers, legislators and other key stakeholders.

**Objective #8:** Provide accessibility of key data via ndSLEDS to all districts and other appropriate stakeholders (subject to FERPA). This objective ensures student privacy is protected while reducing the inequity of data resources among districts, furthering educational research, and enabling districts, schools and teachers to improve their curriculum and instructional strategies.

**Outcome:** All of North Dakota districts will have secure access to data via ndSLEDS.

**Current system:** North Dakota education data including student assessment, teacher qualifications, education program, school finance data and others are not available for analysis through a web-based business intelligence tool.

**Proposed system:** Web-based data marts will be created based on stakeholder needs identified in project planning requirements sessions. DPI will compile a list of named users (subject to role-based security) and provide access to appropriate data marts (subject to FERPA requirements) via ndSLEDS. DPI will procure sufficient business intelligence licenses to meet estimated usage demand.

**Objective #9:** Enable the electronic transfer of student grades by course (eTranscripts) from 9-12 among districts and to institutions of higher education.

**Outcome:** Student records will be electronically transferred in 2011.

**Current system:** STARS currently doesn't have student grades by course or the ability to electronically transfer student course information among institutions. North Dakota needs the ability to provide data transition from high school to college and between districts to transfer electronic data about students in a timely manner.

**Proposed system:** Districts will be capable of transferring student record transcript information to college or other districts.

## Project Design

North Dakota's Project Design is based on the activities required to create a statewide longitudinal data warehousing system, ndSLEDS. The Project Design occurs in five phases implemented over a four-year timeline and is comprised of the following core design components:

ndSLEDS Project Phase	Project Design Component
<b>Phase 1</b> ndSLEDS Project Initiation and Structure	<ul style="list-style-type: none"> <li>• Data Governance</li> <li>• Project Management</li> <li>• RFP Development</li> </ul>
<b>Phase 2</b> ndSLEDS Infrastructure Initiatives	<ul style="list-style-type: none"> <li>• Plan and Execute SIF Pilot</li> <li>• Expand Data Dictionary</li> <li>• Enhance STARS</li> </ul>
<b>Phase 3</b>	<ul style="list-style-type: none"> <li>• Project/Program Planning</li> </ul>

<b>ndSLEDS Project Phase</b>	<b>Project Design Component</b>
Build and Pilot ndSLEDS	<ul style="list-style-type: none"> <li>• Design, and Development of Data Warehouse</li> <li>• Business Intelligence Tool</li> <li>• ndSLEDS Pilot</li> </ul>
<b>Phase 4</b> Conduct Statewide Roll-out and Training of ndSLEDS	<ul style="list-style-type: none"> <li>• Staged Roll-out</li> <li>• Statewide Training</li> </ul>
<b>Phase 5</b> Enhance and Sustain ndSLEDS	<ul style="list-style-type: none"> <li>• Design and Implement eTranscript Initiative</li> <li>• Design and Implement Workforce Data Integration</li> <li>• Execute Support Plan</li> <li>• Implement System Enhancements</li> <li>• Provide Ongoing Training</li> </ul>

Details for each project design component are provided below. Descriptions include objectives accomplished, requirements met, requirements needing to be developed, and approach.

**Phase 1: ndSLEDS Project Initiation and Structure**

<b>Design Components:</b> Data Governance, Project Management, and RFP Development
<b>Proposed Objective(s) Accomplished:</b> Objective #3
<b><u>Requirements Met:</u></b>
<b>Governance and Data Quality</b> - DPI established the DAC to form the beginnings of data governance between DPI and school districts. Through the past four years the DAC has advised all aspects of new data collections and the design of new systems. The current data governance has responded to these short-term cyclic needs for decisions, agreements, and communications in an informal fashion creating subcommittees when needed. While the current structure may respond to terminable projects, it must formalize governance and data stewardship to implement and maintain an enterprise data collection system and longitudinal data system.
<b><u>Requirements Needing to be Developed:</u></b>
<b>Governance</b> – DPI needs to establish a statewide governance model that expands the scope and quality of data and identifies key entities and positions responsible for operating ndSLEDS at the state, regional and local educational agency level (for data quality and validation purposes). North Dakota also needs to create a project management structure and plan for implementing ndSLEDS.
<b>Data Quality</b> – North Dakota needs to develop an ongoing plan for training those entering or using data, as well as procedures for monitoring the accuracy of information.
<b><u>Approach:</u></b>
DPI will create a formal data governance structure. The support from the Governor and Legislature is expected to support DPI in developing and sustaining structured data governance. The following governance structure will be formed to design, implement and manage ndSLEDS

data collections.

**State Education Data Policy Committee (DPC)**

The Data Policy Committee will be comprised of senior DPI, CTE and ESPB officials. These agencies are the custodians of the data which comprise the state education database and ndSLEDS. The committee ensures the data governance mission and objectives align with and support the goals of the agencies and programs participating in the ndSLEDS and data collections. The Data Policy Committee addresses any data issues that cannot be resolved by the Data Management Committee (see below), or other data stakeholders. The Data Policy Committee also provides support to the Data Management Committee and data stewards, as needed, in implementing data governance policies.

The Committee is responsible for privacy policy and ensures adherence to FERPA and all other state or federal data privacy policies. Data sharing agreements with entities and efforts within and outside the P-12 education such as Department of Human Services, ND Universitys, research communities, and workforce intelligence initiatives will be approved and governed through this committee and the Data Research and Collaboration Data Stewardship Committee.

**Data Management Committee (DMC)**

The DMC will supersede the existing DAC and be comprised of the existing eight representatives from districts and additionally the DPI Data Quality Manager, the DPC representatives from DPI, CTE and ESPB, an ED*Facts* coordinator, a district superintendent, DPI technical staff, and district technical staff. The DMC will proactively define and align rules affecting data collections and usage, including privacy. DMC members will construct data stewardship subcommittees comprised of DMC members and program managers at the SEA and district level and provide a resolution to any data issues

**Data Stewardship Committees**

The Data Stewardship Committees will be created as subcommittees of the DMC. The stewardship committees will be responsible for data elements comprising their domains and will provide data definitions and quality standards published through the data dictionary. The stewardship committees will coordinate between themselves for common data elements and the Data Management Committee to determine methods of enforcing quality through validations at the source. Training and usage standards will be developed and published by the subcommittees. Each subcommittee will develop a process of auditing data for completeness and integrity and conduct the audits on an appropriate schedule. A process of auditing and evaluating the SLDS published reports will be created to evaluate and monitor privacy and accuracy of data usage. The stewardship committees will report their activities to the DMC to ensure proper coordination across data domains and to serve as an added check for data consistency.

<b>Subcommittees</b>	<b>Responsibilities</b>
Data Collection	Creation of uniform data collection process within the SIS systems, SIF manifests, student record exchange and SLDS. All data stewards will coordinate their collections though this committee and ensure data validations and quality are applied during the collection process.
Data Dictionary	Compiling data definitions and standards from domain subcommittees

	coordinating and monitoring data elements that cross domains, and publishing the data dictionary.
Program Areas	Specific program areas will be created with DMC members, SEA and district representatives that are engaged in the specific data domain. The responsibilities include auditing data elements for usefulness, auditing the reports utilizing these elements and identifying new elements.
Assessment	Collection/report usage of all summative and formative assessment data.
Teacher Licensure	Teacher licensure data and usage in ndSLEDS.
Career & Technical Education	Usage of CTE data elements and coordinating CTE and K12 common data elements.
Data Research and Collaboration	Creation and auditing of data sharing agreements. An inventory of data elements that are exported and imported will be maintained and audited for quality and appropriateness. Audits of exported data usage will be conducted and made available to the DMC and DPC.

### **Project Management**

In this component, North Dakota will organize team resources and establish the detailed project scope. In addition, the team will begin work on creating deliverable templates and setting up the project management structure. The approach for this complies with the Project Management Institute's Project Management Body of Knowledge (PMBOK) standards and is described in the Project Management Plan (Section e) below.

### **RFP Development and Contractor Selection**

DPI's approach to developing ndSLEDS will be to contract with a third party for establishing the data warehouse. DPI does not have the internal resources to plan, design, develop and implement a data warehouse. DPI also believes that qualified vendors have developed best practice data models and implementation approaches that can be leveraged for North Dakota without reinventing the wheel. DPI will assign resources to work collaboratively with the vendor team to enable support of DPI as described in the Sustainability section below. DPI will write an RFP for creation of the ndSLEDS data warehouse and distribute it to qualified vendors. DPI will create an evaluation committee composed of representatives from K-12 districts, ITD, CTE, and ESPB, and a set of processes and protocol to select a vendor.

### **Phase 2: ndSLEDS Infrastructure Initiatives**

**Design Components:** Plan and Execute SIF Pilot, Expand Data Dictionary, Enhance STARS

**Proposed Objective(s) Accomplished:** Objective #2(b), and portions of Objectives #5, and #7,

**Requirements Met:**

**Data Quality-** North Dakota has established a data dictionary internally and continues to build on the definitions.

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**Requirements Needing to be Developed:**

**Data Quality** – ndSLEDS will need to improve data quality at the data source. Validations currently are at the state level post-submission which creates multiple iterations of uploads. DPI adds more validations on a yearly basis which further burdens the districts to achieve quality data after their data collections are complete. They are not able to proactively change their collection systems and processes until after the fact. Implementation of SIF will facilitate data validations at the source. Additionally, data stewardship committees will be engaged in further developing the data dictionary, contributing to greater data consistency at the source.

**Interoperability** - Collecting data from districts will apply an enterprise approach like that used for establishing ndSLEDS. North Dakota expects to receive state funding and support for a current initiative to adopt and fund a statewide SIS for all school districts to implement by May of 2012. The systems will be hosted centrally within ITD. The ndSLEDS project will build upon this local data architecture and provide a budget and proof of concept for North Dakota to automate data collections from the districts. The SIF will be installed and tested. Additionally, evaluations of the architecture will be conducted to take advantage of this enterprise approach.

**Federal Reporting** - Combining a statewide SIS with SIF is expected to reduce the local reporting burden.

**Approach:****SIF Pilot**

The Schools Interoperability Framework will be installed and piloted. This effort will determine the value SIF can contribute to the state selected SIS for reducing the burden on district reporting through automated data collections. Student Record Locator, the Student Record Exchange and vertical reporting will be implemented to identify the extent of element collection that can be realized through this architecture. Results are expected to deliver a cost benefit analysis of reduced district labor which will justify statewide purchasing in the following biennium.

**Data Dictionary Expansion and STARS Enhancement**

DPI will expand on its current data dictionary to incorporate additional elements, including elements discovered during the SIF pilot which STARS will be expanded to collect. The data stewardship committees will engage in this process and become responsible for the element definitions and usage, as well as determining the proper validations and where validations should occur, always striving for validations at the source.

DPI will begin developing an enterprise metadata management strategy to identify the requirements and the incorporation of the data dictionary. This effort will define the methodology to be used for the development of the data warehouse.

**Phase 3: Build and Pilot ndSLEDS**

**Design Components:** Data Warehouse, Business Intelligence Tool, ndSLEDS Pilot

**Proposed Objective(s) Accomplished:** Objective 7.

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**Requirements Met:**

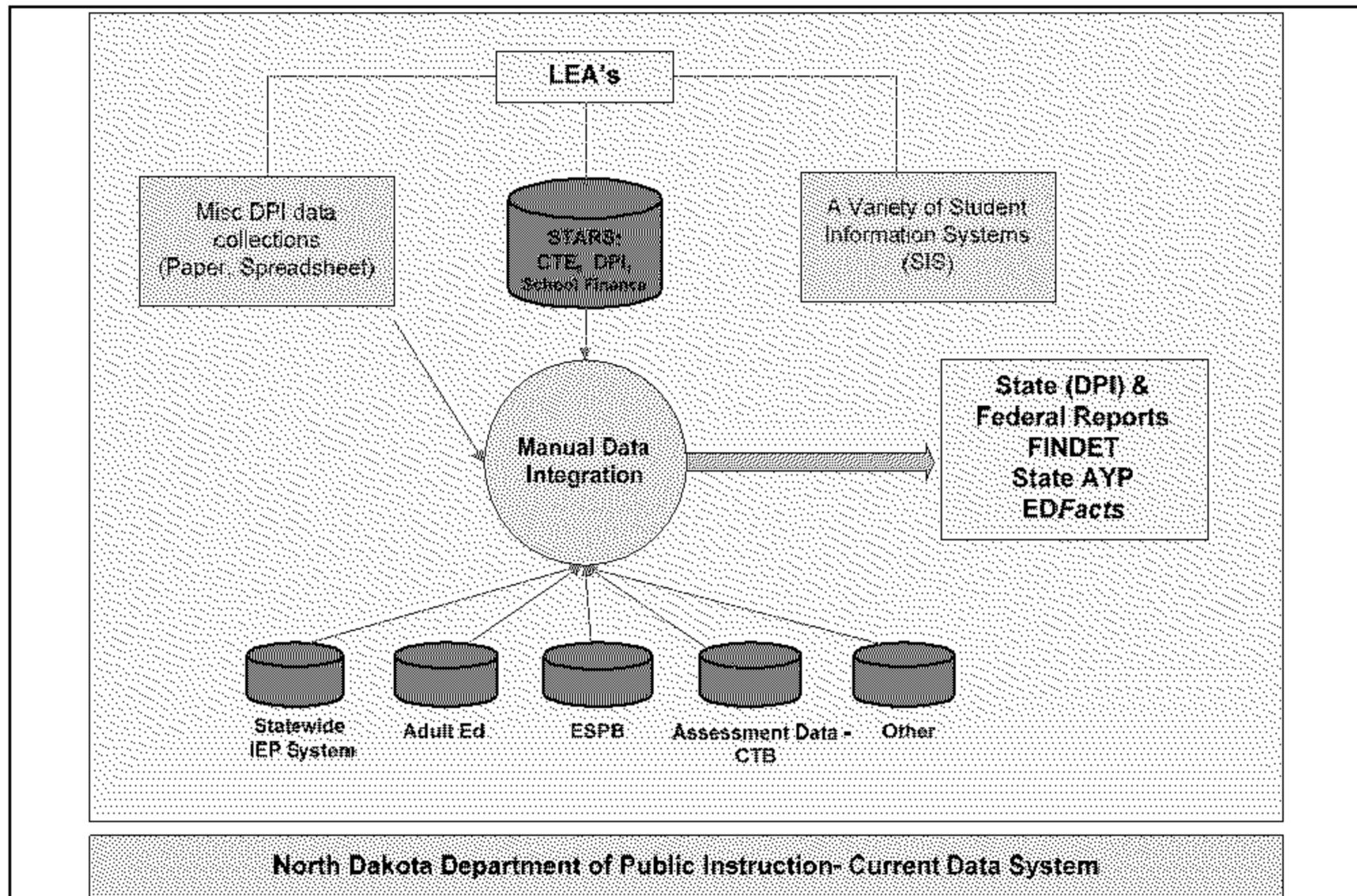
**Needs and Uses** – DPI used Federal NCLB Title II, Part D funds to create professional learning communities to build district capacity. Specifically, teachers learned how to use assessment item-level information to analyze student performance and improve instructional practice. Of the state's 184 school districts, five districts participated in introductory and data retreats in 2007-2008. In addition, North Dakota's Math-Science partnership program tracks student achievement in math and science using CTB assessment data. Teachers get an electronic summary of item level analysis, but it is in a spreadsheet format and presumes comfort with the data dictionary, which many teachers do not have.

**Privacy Protection and Data Accessibility** – North Dakota currently complies with FERPA requirements.

**Enterprise-Wide Architecture** – DPI and its partners ESPB, CTE, ITD, EduTech and school districts have implemented enterprise architecture for education in North Dakota. A state education database comprising data from CTE, ESPB and DPI forms the foundation of a single operational system for storing and collecting K-12 education data. The statewide special education data system is a single system chosen by DPI and North Dakota Special Education Units and districts that integrate with the state education database for ensuring single data collections.

Leveraging enterprise architecture is not new to DPI or most state agencies in North Dakota; the demographics in North Dakota do not afford North Dakota alternatives. The more than 100 small local school districts do not have the resources to implement and support a SIS nor data warehouses. This inequity in district capacity may only be addressed through enterprise architecture and centralized services for support and training.

As shown in the diagram below, North Dakota's current enterprise-architecture is a data collection and reporting system that involves extensive manual effort.



**Requirements Needing to be Developed:**

**Needs and Uses** – North Dakota needs to better understand the needs and uses of data to improve student achievement and reduce achievement gaps among students for its district and school administrators, teachers, researchers, legislators, parents, and other stakeholders. For example, North Dakota recognizes the immediate need to provide item level analysis by student to teachers to enable disaggregated analysis of their students. Through ndSLEDS, North Dakota will make data more visual and more impactful, replacing spreadsheets with more sophisticated analytical and reporting tools. Stakeholders will log in and see a real-time dashboard of what is happening within their own district, school, or classroom so they can better analyze how to improve student achievement. The provision of this data will enable improved data-driven decision making and advance professional practice throughout the state.

Establishing ndSLEDS and linking students to teachers to courses to grades will allow North Dakota to look at a specific program and how that program impacts student achievement. For example the state’s Math-Science Partnership program aims to strengthen student knowledge and skills by enhancing teachers’ content knowledge and teaching skills. The Math-Science Partnership Program assesses teacher improvement and subsequent impact on students. North Dakota will also collect the highly detailed data required to discern discrepancies on local grading compared to objective assessment measures.

As the core operational data store for ndSLEDS, enhancement of STARS will improve the data quality, availability, and timeliness. North Dakota will continue to analyze performance of STARS and define requirements through focus group sessions with stakeholders and review of

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help desk/support issues. As STARS is also critical to collecting inter-agency data, its enhancement will support expansion efforts to align ndSLEDS data with higher education and workforce data.

**Privacy Protection and Data Accessibility** – North Dakota will create enterprise policies, procedures and rules regarding the protection of student data to ensure compliance with FERPA in all areas, including data reporting, data accessibility, and providing data to the research community. For example, North Dakota proposes reporting student data by the regions to provide a mechanism for aggregating data (e.g., into groups such as, small, rural, high needs based) so individual students are not identified. To support the state’s research community, North Dakota will pursue a “de-identification” approach where DPI will form an agreement with research groups to provide a data mart that complies with FERPA standards, while still providing the fine grain level of data. All data presented over the web will be protected with the highest levels of security and access.

**Enterprise-Wide Architecture** – North Dakota needs to develop an enterprise-wide data architecture that links records across LEAs and data elements across time and that allows for longitudinal analysis of student data.

**Approach:**

**Project/Program Planning**

The purpose of the Project/Program Planning is to identify the user needs and uses of the system, as well as create the project templates, standards, and overall planning documents. Requirements definition is the collection of information needed to ensure ndSLEDS meets the needs of all users. System planning is the development of the tasks, deliverables and resources required to accomplish project objectives. The ndSLEDS project will include the development of communication, change management, training, security, and testing plans.

The project team will finalize functional requirements through interviews and focus group sessions of stakeholder groups (e.g., districts, teachers, DPI program managers). These focus groups will identify a prioritized list of report/data needs (e.g., data and use, data accessibility/presentation, security, frequency, source data, distribution) and core issues (e.g., data quality, data availability, and authoritative source).

Plans will be developed in the following areas:

Communication – Formalized communication process and means by which to reach each ndSLEDS stakeholder group (e.g., face-to-face meetings, newsletter, e-mail, website, conference calls); also provides master communication schedule providing a calendar of when information is distributed to whom.

Training - Describes user groups and skills/courses required to help each user group learn how to use ndSLEDS to improve student outcomes. Describes how training will be provided (e.g., instructor-led, web-based tutorial). Calculates how many trainers are needed based on the curriculum and estimated class sizes. Lays out the statewide strategies for developing professional practice communities based on data-driven decision-making.

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Change Management – Identifies user/stakeholder resistance to change and strategies to overcome resistance, including communications, training, meetings, and incentive programs (e.g., award/recognition programs). Identifies organizational structural, job description, and policy/procedural areas that impede effective implementation of ndSLEDS.

Security – Defines each authorized role allowed to access ndSLEDS, the components of ndSLEDS each role is able to see, and the functions each user can perform within ndSLEDS.

Testing – Outlines the testing procedures required to ensure ndSLEDS' quality, including system testing, data quality testing, and user testing.

### **Design and Development: Enterprise-Wide Architecture**

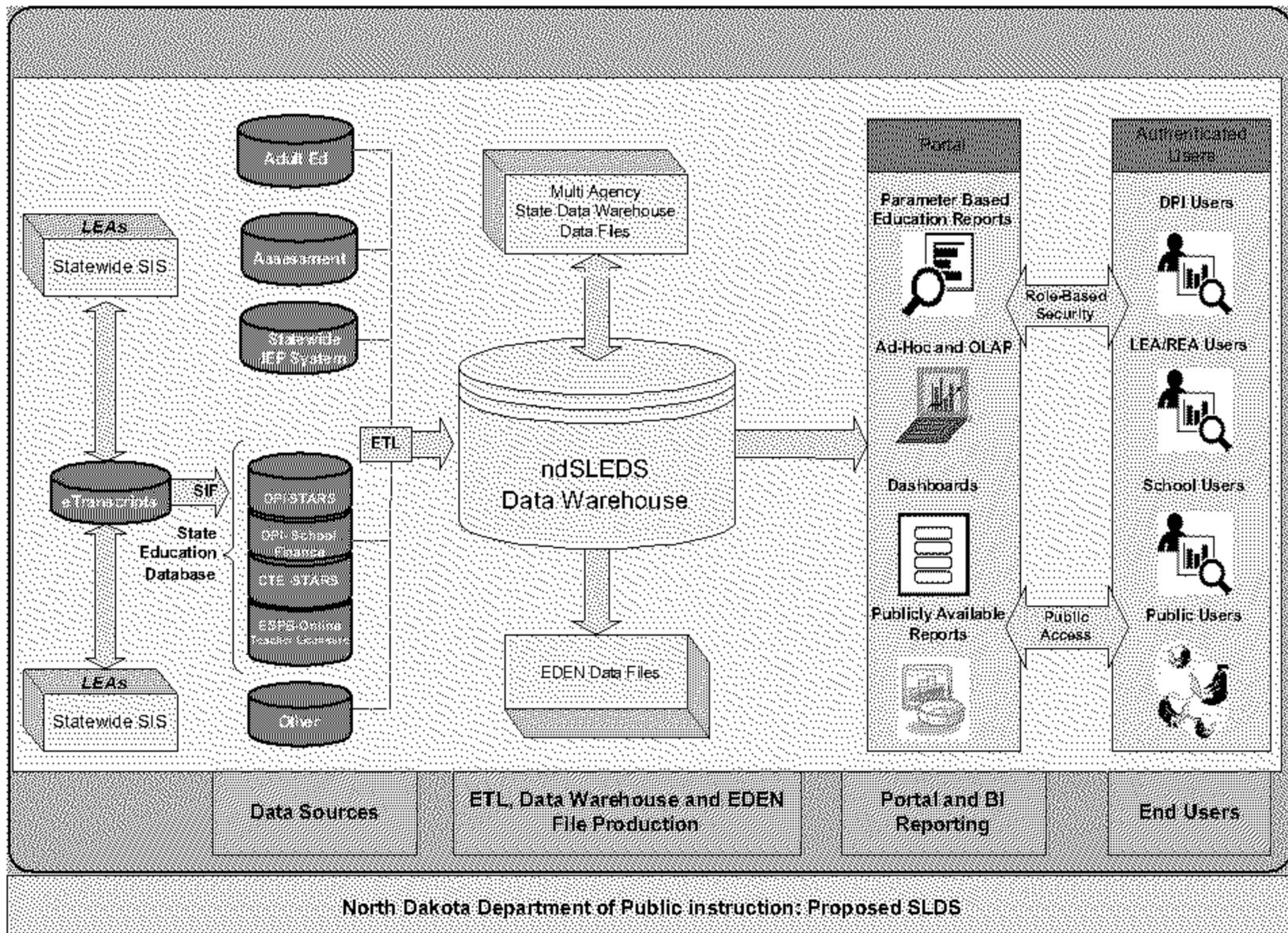
North Dakota's approach to designing and developing an enterprise-wide architecture is to build upon the North Dakota education enterprise architecture and implement an enterprise data warehouse housing all districts' longitudinal data. The business intelligence tool that is selected will be an enterprise product capable of scaling to all 8,000 North Dakota teachers in a secured environment.

Collecting data from districts will apply an enterprise approach as well. North Dakota is currently working to adopt and fund a statewide SIS for all school districts and anticipates achieving 100 percent participation among districts by May 2012. The systems will be hosted centrally within the Information Technology Department.. DPI will apply an enterprise approach to automating the data collection and student locator by utilizing SIF. Additionally DPI will evaluate the enterprise architecture established to take advantage of this architecture to determine the most cost effective means of collecting data.

**Interoperability** - ndSLEDS will provide further automation of *EDFacts* data collection, and faster compilation of SLDS data. This project will automate the collection of district data by providing electronic generation of student identifiers utilizing SIF with district SIS systems and additionally automating the collection of data elements for state and federal reporting utilizing vertical SIF reporting solutions and direct database access. ndSLEDS will also serve as the foundation for research initiatives in the workforce and post-secondary arenas.

As shown in the diagram below, the design approach for ndSLEDS is to build a statewide foundational longitudinal data system that consolidates critical K-12 data sources into one digital repository and provides this data to a wide array of stakeholders including teachers, administrators, legislators, state agency personnel, and the general public. North Dakota's current state education data base, comprised of DPI-STARs, school finance, CTE-STARs, and ESPB On-Line Teacher Licensing will become an operational data store providing core district student demographic, financial, teacher and course and grade information. ndSLEDS will integrate with the statewide special education data system (IEP system), TIENET, for special education data, and include extractions from assessment and adult education sources as well. ndSLEDS will encompass the majority of data required for *EDFacts* reporting. Data will be accessed by users through a portal that requires user authentication based on defined roles. Data

will be presented through an array of tools and views including, parameter-based education reports, ad-hoc queries, dashboards, and publicly available reports.



### Business Intelligence Tool

DPI will procure an enterprise web-based business intelligence (BI) tool. The BI environment will provide the longitudinal data from the SLDS to appropriate stakeholders in a secured role-based structure that meets FERPA requirements. Data will be provided in an array of transparent, user-friendly methods as described in the Enterprise Architecture entry,

### ndSLEDS Pilot

DPI will provide an initial introduction of ndSLEDS to a small group of districts--the ndSLEDS Pilot. The purpose of the ndSLEDS Pilot is to ensure that ndSLEDS meets user needs and operational performance measures. Communication and training materials will also be assessed. Based on user feedback, DPI will make program and system improvements in preparation for the statewide roll-out.

### Phase 4: Statewide Roll-out of ndSLEDS and Statewide Training

**Design Components:** Staged Roll-out of ndSLEDS, Statewide Training

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**Proposed Objective(s) Accomplished:** Objectives 1, 4, 7, and 8.

**Requirements Met:**

Since Phase 4 is an extension of Phase 3 activities, expanding from a pilot system to a statewide application of ndSLEDS, please refer to the Phase 3 ‘Requirements Met’ section.

**Requirements Needing to be Developed:**

The requirements needing to be developed in Phase 3 also apply to Phase 4 of the project design. The requirements developed in Phase 3 at a pilot level would then be extended to the full state for the Phase 4 Statewide Roll-out of ndSLEDS. An additional requirement needing to be developed is included below.

**Data Quality** – As ndSLEDS is released statewide, there will be a need to train all education stakeholders to give them an understanding of the system, its data sources, and how data can be accessed, analyzed and transformed into knowledge that drives educational improvements at all levels. Since quality data is an essential part of the success of ndSLEDS, it is imperative that ndSLEDS training instruct data stewards and all stakeholders on data policies that ensure the integrity, security and proper use of information that feeds into and out of ndSLEDS.

**Approach:**

**Staged Roll-out**

Based on the results of the ndSLEDS Pilot in Phase 3, DPI will make documented improvements in all areas including, governance, project management, system functionality, technical architecture, and training and communication materials. DPI will develop a roll-out strategy to make ndSLEDS available to districts on a phased basis to allow for a carefully managed and resource-efficient implementation. A staged process will help provide adequate levels of support for new users and capitalize on opportunities for improvement as they occur.

**Statewide Training**

DPI will identify user groups and skills/courses required to help each user group learn how to use ndSLEDS to improve student outcomes such as increased student achievement and graduation rates. DPI will develop a statewide training plan identifying how training will be provided (e.g., instructor-led, web-based tutorial). The training plan will identify how many trainers are needed based on the curriculum and estimated class sizes. Training will include use of actual student data relevant to the user’s role to “conduct longitudinal analysis, analysis of cohorts, and analysis of individual student performance at the learner outcome level. This will help teachers adjust lesson plans, content and delivery as needed to meet individual group needs.”<sup>5</sup> In addition to evidence-based decision making, training will instruct data practitioners in data policies to improve data quality and consistency at the source. Upon acceptance of the training plan, the training materials will be developed and training courses will be delivered to education stakeholders throughout the state.

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<sup>5</sup> Business case for a student data reporting system, DPI, July 2002.

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## Phase 5: Expand and Sustain ndSLEDS

**Design Components:** Design and Implement eTranscript Initiative, Design and Implement Workforce Data Integration, Execute Support Plan, Implement System Enhancements, Provide Ongoing Training

**Proposed Objective(s) Accomplished:** Objectives 1-4, 6, 8, and 9.

**Requirements Met:**

**Interoperability** – DPI’s current system allows for efficient data sharing from school district to state. Additionally, the state education database facilitates data sharing among its contributing agencies—DPI, CTE, and ESPB.

**Sustainability** – DPI currently provides support resources for the State data collections through their research and development staff members.

**Requirements Needing to be Developed:**

**Needs and Uses** – The ndSLEDS help desk will identify additional user needs based on analysis of calls into the help desk and user satisfaction surveys.

**Interoperability** – Adding electronic transcript capabilities to ndSLEDS will enable school districts to exchange student information among each other as students transfer facilitating higher data quality and continuation of key student services, especially for mobile student populations. Additionally, implementation of eTranscripts is needed to improve communication between K-12 and post secondary so students are better served.

**Sustainability** – North Dakota needs to establish a comprehensive support structure to provide resolution to user issues with ndSLEDS and associated data collections. In addition, North Dakota needs to develop and implement a continuous improvement process to iteratively improve ndSLEDS.

The DPI is working with the Governor and the Information Technology Department to establish the resources needed to sustain the North Dakota statewide SIS effort which will include the resources to support the expansion of student data into a statewide LDS. Additionally, the budgets will include the creation of personnel to provide training and ongoing research of educational data for the districts and regions.

**Approach:**

**Design and Implement eTranscript Initiative**

North Dakota will procure services that will allow school districts to exchange electronically transcript information for students in grades 9-12 and deliver such transcripts to institutions of higher education. Through eTranscripts, ndSLEDS will help schools ensure high school transfer students remain on track to graduate high school fully prepared to succeed in college or the workplace. The eTranscript system must employ the proper securities to protect student information. For example, it would not allow an eTranscript to be delivered to a higher education institution without parent or student permission.

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### **Design and Implement Workforce Data Integration**

DPI will work with CTE, and Job Service North Dakota to develop a data mart of shared data between the agencies. The agencies will identify data elements that will inform educators in preparing students for post-secondary education and the workforce, and inform Job Service North Dakota of career fields in which students have received training from DPI and CTE. Unemployment insurance data from Job Service North Dakota will be included in the data mart and probabilistic data matching will be used as a way of identifying students who have not returned to school or who qualify for special programs.

### **Execute Support Plan**

North Dakota will provide an ongoing commitment of resources to sustain ndSLEDS after the initial implementation is complete. North Dakota's approach to ongoing operations and maintenance includes the following support structures:

North Dakota will provide a four-tiered support structure to help all users in resolving issues with ndSLEDS. Level 0 will be a list of frequently asked questions (FAQs) on the ndSLEDS website, along with a quick reference guide, and other ndSLEDS supporting material. Level 1 will be the designated Data Stewards at each district who will have been trained by the Data Governance Office (DGO) established in DPI by the Program Manager and Project Director. Level 2 will be through the REAs which will be supported through two new positions trained in data driven decision making on ndSLEDS. These trainers will be responsible for supporting and training regional resources to build their capacity.

Level 3 support is DPI's DGO which will provide policy and operational support for Level 1 Data Stewards and Level 2 REA resources, including, but not limited to:

- Facilitating and coordinating meetings of Data Stewards
- Collecting metrics and success measures and reporting them to data stakeholders
- Providing ongoing Stakeholder Care in the form of communication, access to information, record-keeping, and education/support
- Overseeing resolution of ndSLEDS bug/fixes and system enhancements
- Reporting on common issues and help desk trends

### **Implement System Enhancements**

As the DPI's DGO collects and analyzes success metrics for ndSLEDS, including data quality, the office will identify ways to continuously improve the system. Each year, stretch targets will be set in goal areas and project success will be measured against achievement in these areas. Additionally, the DPC will annually identify any needed technical or data enhancements to ndSLEDS and will adopt and execute a plan for enhancement implementation.

### **Provide Ongoing Training**

The structure and approach of the ndSLEDS training will serve as a structure for the DPC to provide ongoing training related to responsible use of data to improve education outcomes.

## Institutional Support

Education of our citizens is by nature a complex and collaborative undertaking where many individuals, groups, and organizations contribute knowledge, expertise and support at all stages of life. North Dakota has a history of statewide collaboration, partly enabled by our small size, which has created a close-knit state community. Collaboration in the development of ndSLEDS is critically important to enable inter-agency agreements about data sharing, use and definitions, to conduct educational and workforce research and apply the results to the classroom, to provide targeted and effective professional development, and to smooth the transition of citizens as they move through life's stages (i.e., birth to pre-k to elementary and secondary to post-secondary and/or the workforce). The table below describes the supporters of ndSLEDS and their role in its implementation, including authorization and/or support for development and implementation of ndSLEDS, commitment of resources, and for those sharing data, a common vision and objectives for ndSLEDS. Copies of letters of support for ndSLEDS are attached to the application.

Supporter	Role in ndSLEDS
ND Governor's Office	The ND Governor supports the development of a statewide K-12 LDS. His office is available for consultation.
ND Legislature	The ND Legislature supports the building of longitudinal data systems. The legislative IT Committee is committed to supporting this system.
North Dakota University System	Will advise DPI in development and identification of essential elements for collection. Will serve as partner in development of the governance process. Provide any research pertaining to the system.
Department of Career and Technical Education	Responsible for all Career Tech. Education in North Dakota. This agency will be part of the data governance council. The agency will also contribute their data to the warehouse.
ND Information Technology Department (ITD) and CIO chair of the Statewide Longitudinal Data System Taskforce (SLDST)	The North Dakota State Information Technology Department hosts all databases and systems for state agencies. Provides system administration, enterprise architecture, project management and software development services for agencies. Additionally the CIO serves as the chair of the SLDST. The Taskforce will serve as advisor to the DPI and the project manager. It will also facilitate collaboration among other agencies
Education Technology Services (EduTech)	Responsible for the training and support of student information systems and other district school technologies.
Department of Commerce	This department is developing its own business intelligence programs. Will share their data and also assist in analyzes of data.

<b>Supporter</b>	<b>Role in ndSLEDS</b>
Job Service North Dakota	Job Service will provide workforce data for inclusion in ndSLEDS.
Education Standards and Practices Board	ESPB sets the standards for teacher training and licensing Of teachers in ND. ESPB will share (when permitted) data with DPI to coordinate teacher information for analysis.
North Dakota Leadership & Educational Administration Development (LEAD)	State funded, educator driven organization which provides training for local teachers and administrators – for instructional improvement. LEAD will provide training for local school personnel on data usage, data driven decision making and how to use data for student achievement.

## **Project Management Plan**

North Dakota Century Code requires all projects of this size follow the state standards on project management known as the Project Management Institute’s PMBOK. Additionally the size of this project requires Large Project Oversight, a Legislative Information Technology review committee whose staff monitors projects on a quarterly basis. Vendors and contractors who participate in the project are required to utilize this common framework of project management which has resulted in many successful projects in North Dakota and within DPI.

DPI will prepare the project management plan using the following organizational structure and responsibilities:

### **Project Sponsor**

G. David Massey, Assistant State Superintendent for DPI will serve as the Project Sponsor, and will be responsible for securing the funding and human resources to design, implement, and sustain the project. The Project Sponsor must consider for approval all actions affecting budget, scope, schedule, and quality that are escalated with recommendations by the Project Manager (PM). Based upon the input of the Project Team, the PM, and the Executive Steering Committee, the Project Sponsor will provide final sign-off on any escalated change.

### **Executive Steering Committee**

This committee is chaired by the Project Sponsor and comprised of DPI managers, the North Dakota Enterprise Project Manager, the North Dakota State Chief Information Officer (CIO), the director of the Educational Technology Council, and project vendors. The PM meets with this committee quarterly to convey status of the project, outstanding issues, budget information and escalation of project issues or risks. A meeting of the Executive Steering Committee can be requested at any time by the PM or any member of the committee.

### **Project Manager**

The DPI PM will hold a Project Management Professional certificate and have experience in similar sized projects. The PM is responsible for ensuring that the Project Team completes the project. The PM develops the project plan with the team and manages the team’s performance of

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project tasks. It is also the PM's responsibility to secure acceptance and approval of deliverables from the Project Sponsor and Stakeholders. The management controls developed and monitored by the PM will encompass: Cost, Scope, Schedule, and Quality Management (CSSQ). Formal processes of managing the CSSQ include: Integrated Changed Control, Human Resource Management, Communications Management, Risk Management and Procurement Management.

### **Project Business Case and Charter**

A business case and project charter shall be developed and executed to initiate the project and to secure commitment for the resources (human, financial, equipment, etc.) necessary for the project. The Project Sponsor shall formally approve the project charter in writing. An Executive Steering Committee shall be established to provide management support to the project. A project plan shall be developed as the primary planning document for the project. The project plan shall follow PMBOK guidelines, and the guidelines of the North Dakota Project Management Guidebook and Project Plan Template.

### **Project Team**

The Project Team is the group that is responsible for planning and executing the project. It consists of a PM and a variable number of Project Team members who are brought in to deliver their tasks according to the project schedule.

### **Program Manager**

DPI will assign a role responsible for coordinating tasks between the State and school districts. This key role will provide communication plans, coordinate status meetings and design meetings with the school districts and represent the districts cohesively as a member of the Project Team.

### **Large Project Oversight**

The project status report shall be submitted to the State Information Technology Department Large Project Oversight on a quarterly basis, or when a milestone exceeds twenty percent of planned cost or schedule. The report should include an executive summary, budget, schedule, issues, risks, project accomplishments and upcoming activities. Throughout the life of the project, if changes occur which would impact the project objectives as stated in the original business case, or changes to cost, schedule, scope or quality as defined in the project plan, those impacts shall be included in the project status report.

### **Prior Successful Experience**

A 2006 Title II-D grant was received from the U.S. Department of Education to cover some of the start-up costs associated with implementing the Viewpoint data warehouse. Fifty thousand dollars was used to pay for development of the North Dakota data model and \$25,000 was used to pay for professional development for administrators and teachers in the first school districts that adopted the Viewpoint data warehouse. Both projects were implemented on-time and within budget.

### **Project Personnel and Resources**

The proposed ndSLEDS will require dedicated human and capital resources to go from concept to an operating system. The table in this section outlines the specific roles, responsibilities, and time that will be committed to ndSLEDS.

(\* indicates a sustained role, Assigned Time is indicated as sustain if different than development)

	<b>Role</b>	<b>Responsibilities</b>	<b>Assigned Time</b>
*	Executive Sponsor	Overall responsibility for funding, sustaining and project signoff.	5% DPI 5% sustain In-Kind
*	Program Manager	Establish and formalize the data governance structure. Coordinate with school districts and other agencies. Establish the data governance office within DPI to formalize communications and support for district data collections and problem escalation.	100% DPI Open Position In-Kind starting Yr 4
*	Project Director	Data Quality Manager Responsible for coordinating the data stewardship and program managers. Creation of the data dictionary, data collections, SIF pilot project results and eTranscripts.	75% DPI 35% sustain
*	Data Stewards	Data Stewards are representatives from the SEA, Education Standards and Practices Board, Career and Technical Education, and School Districts that are considered the domain experts on specific data sources. Data Stewards are existing State resources with responsibilities that include working with the ndSLEDS project implementation team to define and implement data governance processes, evaluate and fix data quality issues, and provide domain expertise to integrate and use data in the ndSLEDS.	5%
*	QA/Testing	Responsible for testing and verifying quality of software products for all projects including the SIF Pilot, the ndSLEDS Data Warehouse, and the ndSLEDS BI Reporting Tool.	50% DPI 20% sustain
*	Sr. Research Analyst	DPI research director responsible for statistical analysis; developing requirements and performing analysis on data and defining report requirements.	50% DPI
*	DPI Programmer	Experienced .Net developer responsible for STARS collection enhancements.	50% DPI In-Kind
*	DPI Programmer	Experienced SQL Server and .Net developer responsible for state education database enhancements, metadata management.	50% DPI In-Kind
*	STARS Contractor	Responsible for enhancement to the state education database and the integration of STARS student locator to SIF.	20% 10% sustain In-Kind
*	EdFacts Coordinator	Team member providing support for EdFacts reporting and providing guidance regarding collection expansions	30% DPI/ 30% sustain

	<b>Role</b>	<b>Responsibilities</b>	<b>Assigned Time</b>
		and element definitions.	In-Kind
*	DPI Trainer	The Trainer will work with the contractor to develop end-user training materials and course room content and sustain ongoing training post implementation.	50% DPI
*	District Help Desk Support	Help desk personnel responsible for working with districts on SIF reporting and data collections. Provide Level 1 support at a Regional level before escalation to State.	50% Open Position
*	DPI Help Desk Support	DPI help desk provides Level 3 reporting supporting regional and district data stewards issues, problem resolution and monitoring problem logs for efficiency.	50% DPI In-Kind
*	Regional Trainer	Responsible for supporting and training district regional resources in data driven decision making	100% Open Position In-Kind
*	Regional Trainer	Responsible for supporting and training district regional resources in data driven decision making	100% Open Position In-Kind
	RFP Writer	ITD contract resource responsible for writing the data warehouse RFP.	10% in Phase 1
*	Project Manager	ITD contract resource responsible for overall project management of all ndSLEDS initiatives. Certified PMP.	100% ITD 20% sustain
*	IT Engineer	ITD contract resource providing system administration of hardware and software infrastructure	50%
*	DBA ETL Developer	ITD contract resource responsible for implementation, configuration, and testing of the data warehouse and ETL programs. Coordinating with the Project Director and team members involved with metadata management.	75% 50% sustain
*	Portal Report Developer	ITD contract resource responsible for configuring end-user access and security related to all BI reports and related content.	100% 30% sustain
*	Report Developer	ITD contract resource responsible for designing, developing, and testing of BI reports.	100% 30% sustain
*	QA/Tester	ITD contract resource responsible for working with the state QA staff to develop quality assurance and test procedures for software products for all projects including the SIF Pilot, the ndSLEDS Data Warehouse, and the ndSLEDS BI Reporting Tool.	50% 10% sustain
	Data Analyst	ITD contract resource during Phase 1 responsible for defining data quality standards and establishing formal	50% Phase 1

	<b>Role</b>	<b>Responsibilities</b>	<b>Assigned Time</b>
		processes for sustaining quality through the DMC committee.	
	DW Vendor	Vendor team selected from an RFP process to install, configure, and launch the data warehouse and BI reporting tools.	Phases 2-4
	Enterprise Consultant	Contract resource during Phase 1 responsible for reviewing existing enterprise infrastructure and recommending cost effective strategies to leverage and expand existing platforms.	Phase 1
	eTranscripts Vendor	Vendor team selected from an RFP process to install, configure, and launch the eTranscripts solution. The vendor is expected to provide implementation and training services.	Phase 5
	SIF Vendor	Vendor team selected from an RFP process to install, configure, and launch the SIF pilot. The vendor is expected to supply the necessary resources to provide services to install, integrate, and train State staff for Student Locator interface, Student Record Exchange and Vertical Reporting.	Phase 1-2

Resumes of key staff who will contribute to the success of ndSLEDS are included as attachments to the application.

## Summary

North Dakota needs a robust longitudinal data system that provides value back to the districts through providing data transparency and making quality and timely data available to practitioners and researchers to inform practice and improve student achievement.

The funding proposed in this grant application will pay for DPI's K-12 longitudinal data system software, hardware, development and implementation costs, as well as the seed money required to develop improved governance, training, and research initiatives. DPI will contribute the staff necessary to support and sustain ndSLEDS. These efforts establish the K-12 foundation as part of a larger collaborative statewide vision where students are tracked from K-12 to post-secondary education and to the workforce through a seamless integration of data across core state institutions.

## ndSLEDS Timeline

The ndSLEDS project is anticipated to begin April 2009 for completion by April 2013. Accordingly, the timeline is presented by project year, starting with the second quarter of the calendar year and ending with the first quarter of the calendar year. The shaded boxes corresponding to the beginning of each phase shows the duration of the phase. An 'X' indicates activity in a quarter, and a '▲' indicates a project milestone.

Tasks	Year 1				Year 2				Year 3				Year 4			
	Q2	Q3	Q4	Q1												
<b>Phase 1: ndSLEDS Project Initiation and Structure</b>																
<b>Establish Data Governance and Project Management</b>																
1 Establish ndSLEDS Project Committee	X															
2 Hire consultant to review ND enterprise data collection strategy & SIF	X															
3 Establish Data Governance structure		X														
4 Establish and enforce LDS-wide data standards		X	X													
5 Define a data integration strategy			X													
6 Implement formal data quality process			X													
<b>Objective #3: Outcome/Milestone: The Data Governance charter will be created.</b>																
			▲													
<b>Project Planning</b>																
1 Communicate with Institutional Partners	X															
2 Establish DPI project management structure and plan	X															
3 Develop Project Charter	X															
4 Research BI Tool		X														
5 Develop and Issue SLDS RFP			X													
<b>Phase 2: ndSLEDS Infrastructure Initiatives</b>																
<b>1 Procure, install and configure SIF pilot</b>																
				X	X											
<b>2 Execute SIF Pilot</b>																
					X	X										
<b>3 Continue to expand K-12 Data Dictionary</b>																
					X											
<b>4 Improve core operational data store (STARS)</b>																
					X	X										
<b>Objective #9 Sample student records will be electronically transferred by 2011.</b>																
								▲								
<b>Objective #2b Data administrators will identify, test, and pilot an enterprise strategy for replacing manual file extractions and reporting with automated data exchanges.</b>																
								▲								

Tasks	Year 1				Year 2				Year 3				Year 4			
	Q2	Q3	Q4	Q1												
<b>Phase 3: Build ndSLEDS</b>																
<b>Plan, Design and Develop Data Warehouse</b>																
1 Award Contract				X												
2 Finalize project plan				X												
3 Develop communication, training, testing, and change management plans				X												
4 Select and procure hardware and software					X											
5 Define data and reporting requirements					X											
6 Create high-level enterprise architecture design					X											
7 Design and develop ndSLEDS data model					X											
8 Design and develop data conversions and ETL programs					X	X										
9 Create stakeholder-specific data marts						X										
10 Test ETL system							X									
11 Make corrections based on system testing							X									
<b>Objective #2a Outcome/Milestone - A single, stable repository of data for consistent federal and state reporting will be created providing districts and program administrators quality and timely data.</b>							▲									
<b>Implement Business Intelligence Tool &amp; Pilot ndSLEDS</b>																
1 Procure and configure business intelligence toolset						X										
2 Develop BI reports (Pilot set)						X	X									
3 Test Reports/QA/User Acceptance Testing							X									
4 Make corrections based on system testing							X									
5 Develop pilot training materials							X									
6 Roll-out pilot reports to stakeholder groups								X								
7 Roll-out pilot Federal reports to stakeholder groups								X								
7 Provide ndSLEDS pilot training								X								
<b>Objective #7a Outcome/Milestone - A successful pilot of ndSLEDS will be implemented in Year 2.</b>								▲								
<b>Phase 4: Conduct Statewide Roll-Out and Training of ndSLEDS</b>																
1 Evaluate pilot results								X	X							
2 Based on evaluation, make improvements to ndSLEDS data, reports, and training methodology									X	X						
3 Plan staged statewide roll-out of ndSLEDS										X						
4 Develop and implement statewide system, and support plans										X	X					
5 Develop and deliver statewide ndSLEDS training										X	X					
6 Go-live statewide with ndSLEDS											X					
<b>Objective #1 Outcome/Milestone - Districts will have access to ndSLEDS data marts of three years of longitudinal assessment data at the item level, as well as, teacher data linked to courses and students.</b>												▲				
<b>Objective #4 Outcome/Milestone - Districts will have their administrators, teachers and other relevant stakeholders trained as "super-users" who will train remaining district stakeholders within their districts through a train-the-trainer model.</b>													▲			



# **Project Narrative**

## **Other Narrative**

### Attachment 1:

**Title: Pages: Uploaded File: 1236-Letters of Support.pdf**

### Attachment 2:

**Title: Pages: Uploaded File: 1237-Key Personnel Resumes.pdf**



State of  
**North Dakota**  
*Office of the Governor*

John Hoeven  
*Governor*

August 29, 2008

Statewide Longitudinal Data Systems Grant Review Committee  
National Center for Educational Statistics  
1990 K. Street, NW  
Washington, DC 20006

Dear Committee Members:

I am pleased to learn that the Department of Public Instruction has prepared a project grant application for a Statewide Education Longitudinal Data Warehouse. Once fully functional this data warehouse will play a major role in helping local schools address student achievement issues as well as local staff in decision making. In addition this data base will be of tremendous help in providing timely and much needed educational data to the legislature, my office and other decision makers.

I fully support the department's application for the Statewide Education Longitudinal Warehouse.

I appreciate your consideration of this grant application. Please feel free to contact my office should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "John Hoeven".

John Hoeven  
Governor

38:64:59

600 E Boulevard Ave.  
Bismarck, ND 58505-0001  
Phone: 701.328.2200  
Fax: 701.328.2205  
[www.nd.gov](http://www.nd.gov)  
e0

September 8, 2008

Statewide Longitudinal data Grant Review Committee  
National Center for Educational Studies  
1990 K. Street, NW  
Washington, D. C. 20006

Dear Committee Members;

I am delighted to provide a letter of support for the North Dakota Department of Public Instruction's Statewide Longitudinal Data Warehouse proposal. I understand that once built, the project will provide accurate, timely, and easy access to information about the ND student's achievement to users.

As Chairperson of the Legislative Information Technology Committee, I support this project for many reasons. First, access to student level data will give teachers and administrative staff the tools they need to help improve student achievement. The longitudinal data and analytical tools will also assist schools in making data research driven decisions.

Secondly, the data warehouse will assist the state in meeting a number of NCLB data requirements. A rural state like ND has many challenges when it comes to meeting needs of all students. Many small and rural schools just do not have the capacity to use the data as they should to address student needs. In my judgment, this project, if approved, will address the critical needs of many schools and students.

Thirdly, this project will help provide information that my colleagues, in the legislature, and I need to address many time sensitive decisions. I will also work with my colleagues during the upcoming session to assure sustainability of this project.

I urge you to give this proposal your serious consideration. I thank you in advance for your consideration. Should you have any questions, please feel free to contact me directly.

Sincerely,

Larry Robinson, State Senator, District 24  
Chairperson, Interim Information Technology Committee

# NORTH DAKOTA UNIVERSITY SYSTEM

## The Vital Link to a Brighter Future

September 15, 2008

The Statewide Longitudinal Data System Review Committee  
National Center for Educational Statistics  
1990 K Street, NW, Rm.9023  
Washington, D.C. 20006

Dear Committee Members:

As chancellor of the North Dakota University System, I fully support development of a K-12 Data Warehouse by the North Dakota Department of Public Instruction.

Once in place, the warehouse will provide student-level data that will be used to increase student academic achievement. The Data Warehouse will provide timely and accurate information about the K-12 education process for use by legislators and policymakers.

This data will be useful to the NDUS as we work with K-12 to strengthen curriculum and staff development and as we collaborate on the development of an e-transcript initiative. It also will enhance faculty and student research opportunities.

For these reasons, I encourage you to provide funding for this project that will critically important to improving education in the state of North Dakota.

Sincerely,



William Goetz  
Chancellor

g:\terry\goetz\letters\k-12 data warehouse letter of support 9-15-08.docx

State Capitol - 600 E. Boulevard Ave., Dept. 215, Bismarck, ND 58505-0230  
Phone: 701.328.2960 • Fax: 701.328.2961  
E-mail: NDUS.office@ndus.nodak.edu • Web: www.ndus.nodak.edu

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The North Dakota University System is governed by the State Board of Higher Education and includes:  
Bismarck State College • Dickinson State University • Lake Region State College • Mayville State University •  
Minot State University • Minot State University-Bottineau Campus • North Dakota State College of Science •  
North Dakota State University • University of North Dakota • Valley City State University • Williston State College.

North Dakota Department of Career and Technical Education  
600 E Boulevard Ave., 15<sup>th</sup> Floor  
Bismarck ND 58505-0610  
701-328-3180 (fax) 701-328-1255 website [www.nd.gov/cte](http://www.nd.gov/cte)

September 15, 2008

Statewide Longitudinal Data System Grant Review Committee  
Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room 9067  
Washington, DC 20006

Dear Review Committee:

The K-12 Longitudinal Data Warehouse application is critically important to the Department of Career and Technical Education not only for the required reporting that we have to submit to the US Department of Education but also for use within the state to guide program improvement.

The North Dakota Statewide Longitudinal Education Data System (nd-SLEDS) will enable local schools and our agency to focus on data surrounding students, schools, and curriculum so that better program decisions can be made. This system will enable an enhanced two-way communication of data between individual schools and state agencies. It will also enable schools to get more complete, up-to-date information and reduce the amount of duplicate information that is requested of schools from our state education agencies.

Our agency wholeheartedly supports nd-SLEDS and asks that you look favorably on this application.

Sincerely,



Wayne Kutzer  
State Director



## ***Information Technology Department***

600 E Boulevard Ave., Dept 112 • Bismarck, ND 58505-0100 • (701) 328-3190

September 15, 2008

Statewide Longitudinal Data System Grant Review Committee  
Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room 9067  
Washington, DC 20006

Grant Review Committee:

This letter serves two purposes. One, it serves as a letter of support for the North Dakota Statewide Longitudinal Education Data System (ndSLEDS). Secondly, it will outline the role of the Information Technology Department in the support of ndSLEDS as well as other data systems in the State of North Dakota.

While serving as the CIO for the State of North Dakota, it has become abundantly clear to me that ND needs a longitudinal data system, not only at the K-12 level but throughout the student's academic life and into the workforce. Although ND's population is small, 638,000, we have a workforce shortage of 18,000 positions. With extensive growth in the energy, agriculture, and high tech industries, we have a long term need for human resources in many areas. A longitudinal data system will help us address those needs by matching education and skills with workforce training and job opportunities.

In 2007, with the support of the governor and the legislature, a Longitudinal Data System Committee was formed to plan and propose the implementation of such a system. With the help of a consultant, a longitudinal data system roadmap was developed with the K-12 longitudinal data system serving as the basis for future developments. DPI is a strategic partner in our committee and has a clear vision of what the expectations are and a complete understanding of the work that lies ahead. Speaking on behalf of the committee, we strongly support DPI's grant application for the ndSLEDS project.

The second point of this letter is to explain the role of the Information Technology Department (ITD), not only for ndSLEDS, but for the state as a whole. ITD maintains the state network for all state agencies, cities, counties, K-12 and higher education institutions. ITD also maintains a centralized technology infrastructure for all ND state agencies. In other words, ITD's staff of 267 implements, maintains, and supports the network, servers and applications for all state agencies. In addition, ITD also hosts the majority of K-12 student information systems as well as the data warehouses for the large K-12 districts within the state. ConnectND, the ERP system for both state and higher education, is also hosted at ITD. The department has the expertise of software developers, system administrators, business analysts, business intelligence specialists, network analysts, customer support specialists and many more, whose role it is to keep mission critical applications running around the clock.

The advantage for DPI with the implementation of ndSLEDS is that ITD staff already understands the systems and architecture of the existing applications that will need to interface with ndSLEDS. ITD maintains and supports DPI's STARS application, the K-12 student information systems and data warehouses, and ConnectND. ITD will host ndSLEDS and our staff of system architects, BI specialists, system administrators, and customer support specialists will provide the expertise to implement and maintain the system. ITD is committed to the success of this project.

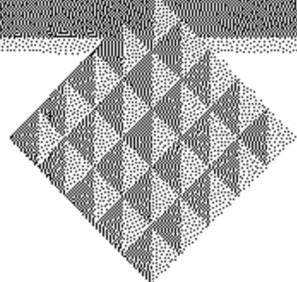
Our youth are the future of North Dakota and on behalf of both the Information Technology Department and the Longitudinal Data System Committee I strongly support the ndSLEDS initiative.

Respectfully,

A handwritten signature in cursive script that reads "Lisa Feldner".

Lisa Feldner, Ph. D., CIO  
Chair of the Longitudinal Data System Committee

LF/dmw



NORTH DAKOTA  
EDUCATIONAL TECHNOLOGY COUNCIL

P.O. Box 5036  
1510 12<sup>th</sup> Avenue N.  
Fargo, ND 58105-5036

Phone: 701-231-6032  
Fax: 701-231-6050

danpullen@nd.gov

www.ndetc.k12.nd.us

Statewide Longitudinal Data System Grant Review Committee  
Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room 9067  
Washington, DC 20006

September 12, 2008

Dear Grant Review Committee Members:

On behalf of the North Dakota Educational Technology Council, I welcome the opportunity to support the North Dakota Department of Public Instruction's NCES grant application to implement a state-level longitudinal data system for our state's PK-12 schools. I was able to contribute a few ideas and background information as the application was developed and I have studied the final version of the proposal.

Several North Dakota school districts have some experience with analysis and use of quality school-level data and they understand its value. School leaders are now anticipating the longitudinal system that the ND DPI is proposing. The five largest districts in the state implemented their own local data warehouse systems, they are actively using those systems to improve instruction, and understand how the proposed state-level system will add more value to their work – better educating our students for their future. The five large districts have begun sharing their data analysis experiences with their colleagues across the state, so interest and knowledge is building statewide.

Because North Dakota has so many small and rural districts, the implementation of local data warehouse solutions is not practical in every school. The proposed statewide system and the use of regional training and support is a practical way to bring the advantages of DDDM to all North Dakota schools.

In a small state like North Dakota, statewide, enterprise-level IT solutions are cost-effective and have proven their efficacy. Beyond ND ETC's experience facilitating the start-up of the data warehouses in the large districts, our PK-12 IT service entity, EduTech (<http://www.edutech.nodak.edu/>), has implemented and supports a state-hosted student information system for the past six years. Our plan is to expand that system to all schools and ensure that it is a quality component in the statewide data system proposed by DPI. We look forward to working closely with you as DPI moves toward full implementation of that system in the next years.

Sincerely,

Daniel Pullen, Director  
ND Educational Technology Council

September 15, 2008

Statewide Longitudinal Data System Grant Review Committee  
Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room 9067  
Washington, DC 20006

To Whom It May Concern:

This letter is being written in support of the Department of Public Instruction's K-12 Longitudinal Data Warehouse (nd-SLED) funding application.

The North Dakota Department of Commerce strongly supports a statewide system for collecting and sharing longitudinal data, while protecting the privacy and security of personal information, necessary to meet the management information needs of stakeholders and partners of North Dakota education, training, and workforce delivery system.

North Dakota business and industry require an available and skilled pool of talent in order to compete in a global market. The K-12 education system is the primary feeder to the pipeline for the workforce of the future. A Longitudinal Data Warehouse with the capacity to support integrated performance information and shared accountability for the development of the talent needed by North Dakota business and industry to succeed is critical to our State's ability to compete. The K-12 education systems are primary partners to the development of a statewide system which is inclusive of all of education (primary, secondary and postsecondary), economic development and workforce.

Thank you for the opportunity to support this initiative and the funding application of the North Dakota Department of Public Instruction.

Sincerely,

  
Shane Goettle  
Commissioner

*"We lead North Dakota's efforts to attract, retain and expand wealth."*



[www.jobsnd.com](http://www.jobsnd.com)

September 17, 2008

Statewide Longitudinal Data System Grant Review Committee  
Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room 9067  
Washington, DC 20006

Dear Grant Review Committee Members:

It is with great enthusiasm that I support the North Dakota Department of Public Instruction (DPI) application for a Statewide Longitudinal Data System Grant. Job Service North Dakota's mission is "Job Service North Dakota provides customer-focused services to meet the current and emerging workforce needs of the state." Educating our students, and training them to meet the current and future workforce needs of North Dakota, is an important element in achieving this mission. A key element to success in this area is efficient, timely data. Data impacts students, parents, teachers, administrators and others in their quest for maximum outcomes. Data also expands the capacity for research that leads to enhanced quality of instruction and thus to greater student achievement. Therefore, DPI's plan, through this grant, to design, develop and implement a Statewide Longitudinal Data System will build/enhance several key components to meet North Dakota's current and emerging workforce needs.

It is my understanding that DPI's proposal, titled "The K-12 State Longitudinal Education Data Warehouse (nd-SLEDS)" will meet the information needs of stakeholders by:

- Serving as the State Educational Data Warehouse for all education agencies as well as local schools.
- Sharing data with other agencies (as permitted under the FERPA Rules).
- Enhancing data collection and reducing duplication of data input.

Stakeholders (students, educators, families, schools, researchers, workforce agencies, etc.) will be able to rely on secure and consistent data to assure that all children reach their highest potential. We are particularly interested in 1) research on how students' academic performance impacts workforce success and progress post-graduation and 2) measuring the impact of work on the academic performance of students who maintain jobs while attending high school. We applaud DPI's efforts and look forward to partnering with them as they develop the data system.

Thank you in advance for the time and attention you will give this proposal. Please feel free to contact me at 701-328-2836, or via email at [mdaley@nd.gov](mailto:mdaley@nd.gov) if you would like additional information.

Sincerely,

A handwritten signature in black ink that reads "Maren L. Daley".

Maren L. Daley  
Executive Director

cc: David Massey



Education Standards and Practices Board  
2718 Gateway Avenue, Suite 303  
Bismarck, ND 58503-0585  
(701) 328-9641 Fax (701) 328-9647  
<http://www.nd.gov/espb>

September 16, 2008

Statewide Longitudinal Data System Grant Review Committee  
Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room n9067  
Washington DC 20006

Dear Grand Review Committee Members:

This letter is written in support of “The K-12 State Longitudinal Education Data Warehouse (nd-SLEDS)” proposal submitted by the State of North Dakota. The SLED warehouse project in North Dakota will serve as the State Educational Data Warehouse for all education agencies (including teacher licensure and teacher preparation programs) as well as local schools. This will enable the educational agencies to share data with other agencies (permitted under the FERPA Rules) and it will enhance data collection and reduce duplication of data input.

The Education Standards and Practices Board (ESPB) is the independent licensing board for the State of North Dakota with authority for teacher education program approval, teacher licensure, educator professional development, and educator professional practices. Board members are appointed by the Governor for two 3-year terms.

ESPB will assist in the development and implementation of this warehouse. If you have any questions or concerns, please feel free to contact me.

Sincerely,

Janet Placek Welk, PhD  
Executive Director



*Leadership & Educational Administration Development*

121 East Rosser Avenue • Bismarck, ND 58501 • 701-258-3022 • Fax: 701-258-9826

Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room 9067  
Washington, DC 20006

September 17, 2008

To Whom It May Concern:

I am pleased to write a letter of support for the North Dakota Department of Public Instruction development of a Statewide Longitudinal Data Warehouse for K-12 Schools.

According to Rich Stiggins, "society has changed the mission of its schools, requiring that assessment serve in important new ways fundamentally different from the past." I believe that the need for educators at all levels from preschool to college to access information about students and their progress, has never been more important.

This proposal is for a comprehensive statewide data system where all schools will be able to participate. The system provides the possibility of connecting K-12 to Higher Education, with feedback to K-12 schools on the progress of their students at the next level. This would be a powerful tool in the assessment of the programs and outcomes for K-12 schools.

When fully functional the system will be an important tool for school administrators, teachers, school board members, and other policy makers towards making informed decisions for planning and implementing academic programs for our students.

The North Dakota LEAD Center is interested and willing to serve as a partner with North Dakota Department of Public Instruction in providing training for local school personnel regarding the best usage and application of data for improved student achievement.

North Dakota has an outstanding track record in education, but in order to remain great, it is important that quality data be available for quality feedback on the status of meeting our mission of providing a world-class education for all of our students.

I support the Department of Public Instruction's request for funding this important project and am willing to assist in providing any appropriate training to K-12 educators.

Sincerely,

A handwritten signature in black ink, appearing to read "James Stenehjem".

James Stenehjem  
Director, North Dakota LEAD Center

*"Developing Excellence in Educational Leadership"*

September 5, 2008



415 4<sup>th</sup> Street North  
Fargo, ND 58102-4514  
701.446.1000  
Fax: 701.446.1200  
www.fargo.k12.nd.us

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Dr. Rick Buresh  
Superintendent  
701.446.1005

Mr. Dan Huffman  
Assistant Superintendent,  
Business Services  
701.446.1027

Dr. Robert Grosz  
Assistant Superintendent,  
Instruction  
701.446.1010

Mrs. Nancy Jordheim  
Assistant Superintendent,  
Human Resources  
701.446.1038

Mr. Lowell Wolff, APR  
Assistant to the  
Superintendent,  
Communications & Planning  
701.446.1043

Statewide Longitudinal Data System Grant Review Committee  
Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room 9067  
Washington, DC 20006

Dear Grant Review Committee Members:

I am please to write a letter of support for the ND Department of Public Instruction's application to develop a statewide longitudinal data system. The Fargo School District, one of the largest districts in the state, currently participates in a locally developed data warehouse. However, our district is very interested in a comprehensive statewide data system. We believe such a system will assist us and other schools in the state in data driven decision making which will lead to improved student academic improvements.

We are also excited about this project because it will streamline the data input process through automation and will also help us in meeting the NCLB reporting requirements. When fully functional this system will be another needed tool for a number of school administrators, teachers, school board members and other policy makers as we attempt to make informed decisions for planning and implementing academic programs for our students.

Thank you for your consideration of this project. Should you have any questions for me, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Rick Buresh". The signature is written in a cursive, flowing style.

Rick Buresh

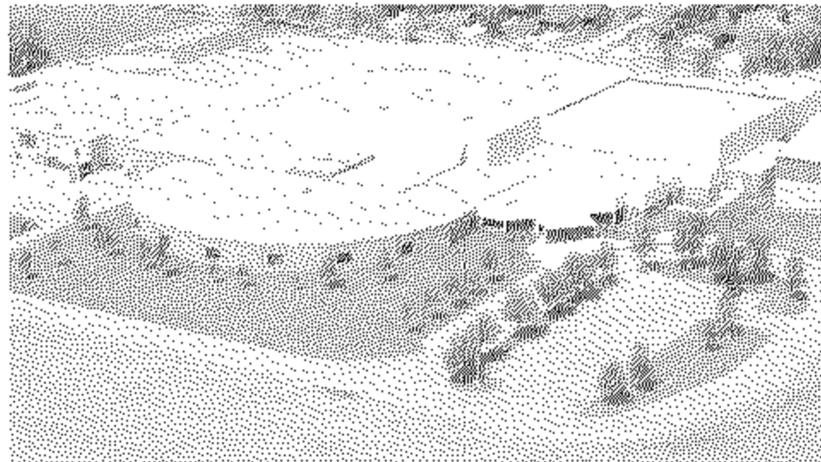
# Grafton Public Schools

GRAFTON, NORTH DAKOTA 58237

**BOARD OF EDUCATION**  
Daniel Gaustad, President  
Tom Torkelson, Vice President  
Julie Callahan  
Russell Carignan  
Amanda Hanson  
Mark Presteng  
Donald Suda  
Cathi Heuchert, Business Manager

**SUPERINTENDENT**  
Jack Maus  
1548 School Road  
701-352-1930  
701-352-1943 Fax

**ACTIVITIES DIRECTOR**  
Matthew Fetsch  
1548 School Road  
701-352-1930  
701-352-1943 Fax



**SENIOR HIGH PRINCIPAL**  
Darren Albrecht  
1548 School Road  
701-352-1930  
701-352-1943 Fax

**MIDDLE SCHOOL PRINCIPAL**  
**CENTRAL 5-8**  
Dennis Hammer  
725 Griggs Avenue  
701-352-1469  
701-352-1120 Fax

**ELEMENTARY PRINCIPAL**  
**CENTURY K-4**  
Nancy Burke  
830 W. 15th Street  
701-352-1739  
701-352-0163 Fax

*To Prepare Individuals for Lifelong Learning and To Promote Citizenship*

September 4, 2008

Statewide Longitudinal Data System Grant Review Committee  
Institute of Education Sciences  
National Center for Educational Statistics  
1990 K Street, NW, Room 9067  
Washington, DC 20006

This letter is in support of the North Dakota Department of Public Instruction to receive a grant award for development of the Statewide Longitudinal Data System. North Dakota school districts have adopted rigorous academic standards and have implemented a state assessment to track whether students are achieving the standards set for them. Implementation of a Statewide Longitudinal Data System is the vital next step needed for state and local education agencies, policymakers, as well as local administrators and teachers to make data-driven decisions to monitor student progress properly to improve student learning in the state of North Dakota.

Data is available at the local and state level however; it is not maintained electronically in a central repository for wide-ranging analysis. As an elementary principal, having immediate access to information and the ability to characterize, group, and analyze collected data over time would allow placing students appropriately in school, provide for program evaluation, and the ability to make quality financial decisions. As an administrator, I have the responsibility of maintaining strategies for educators to raise student's academic skills. A Statewide Longitudinal Data System would allow for monitoring and will ensure educational goals are being met. I fully support DPI's application for this grant.

Sincerely,  
  
Nancy Burke, Elementary Principal

**G. DAVID MASSEY**

(b)(6)

**HOME:**

(b)(6)

**OFFICE:**

(b)(6)

**WORK HISTORY**

**North Dakota Department of Public Instruction - Bismarck, North Dakota**

**1999 - Present**

**Assistant State Superintendent**

In this position I serve as one of the senior members of the State Superintendent's Executive Cabinet. I also directly supervise Child Nutrition and Food Distribution, Management Information Systems, Adult Education and the School Health Unit. In this capacity I supervise over 40 employees, their unit budgets and all personnel matters.

Advise the State Superintendent on policy and planning and legislative initiatives. Advise local schools on state and federal rules and regulations. Represent the department on several boards and committees.

**1979 - 1999**

**State Director, Adult Education and Literacy Division**

Responsible for the administration of the state adult education and literacy programs. The unit's responsibilities include Adult Basic and Secondary Education, Education of Homeless Adults, GED Testing Administration, WIA Administration, Displaced Homemaker Program, External High School Diploma Program, English as a Second Language, and Federal plans and budgets.

**State Director, Adult Education, Guidance, and Counseling & State Testing**

Responsible for the administration of adult education and school guidance and counseling program. Supervise statewide testing, approval of counseling credentials, provide in-service for counselors, be an advocate for the counseling profession and provide leadership in development of legislation and rules and regulation.

**1976-1999**

**Coordinator, Career and Community Education**

Responsible for Career and Community Education program coordination within the guidance and counseling unit.

**Rocky Boy Elementary School - Rocky Boy, Montana**

**1975 - 1976**

**Director, Staff Development**

Responsible for Native American Elementary School Staff Development Program. Coordinate college course work with Montana University System. Provide in-service to staff.

**Turtle Mountain Community School - Belcourt, North Dakota**

**1973 - 1975**

**Director, Federal Programs**

Administration - Title VII Federal programs

**EDUCATION**

**Northern Montana College - Havre, Montana - 1975 - 1976**

Masters of Science in Guidance and Counseling

**Moorhead State University - Moorhead, Minnesota - 1968 - 1970**

Graduate Studies and completion of teacher certification requirements.

**North Dakota State College of Science - Wahpeton, North Dakota - 1966 - 1968**

Educational and vocational courses.

**Murray College - Sialkot, Pakistan - 1962 - 1966**

BA in Social Sciences

**CERTIFICATES AND CREDENTIALS**

- |   |   |
|---|---|
| • State of North Dakota   | Educator's Professional Certificate           |
| • State of North Dakota   | Professional Guidance/Counseling              |
| • State of North Dakota   | School Administrator's Credential             |
| • State of North Dakota   | Secondary School Principal's Credential       |
| • ND Department of Public Instruction   | Civil Defense Instructor Training Certificate |
| • Council of Chief States School Officers<br>Officers, Washington D.C.  | Sex Equity in Education Certificate           |
| • American Management Associates Program  | Certificate of Completion                     |
| • Strategic Leadership for State Executives<br>The Governor's Center at Duke University<br>Durham, North Carolina | Completion of Program                         |
| • Time Management for Increased Productivity<br>North Dakota L.E.A.D. Center<br>Bismarck, North Dakota            | Completion of Program                         |
| • Total Quality Leadership<br>North Dakota L.E.A.D. Center  | Completion of Program                         |

## PROFESSIONAL MEMBERSHIPS AND AWARDS

Member, American Association of Adult and Continuing Education  
Member, Past-President, Missouri Valley Adult Education Association  
Member, Past-Executive Director, North Dakota Adult Education Association  
Member, Past-Regional Representative, National Assn. of State Directors of Adult Education  
Member, North Dakota Governor's Workforce Development Council  
Member, Special Advisory Committee to the Governor on North Dakota Job Corps Center  
Member, North Dakota Teacher of the Year Selection Committee  
Member, North Dakota Educational Advancement Task Force  
Member, Governor's Committee on Adolescents at Risk  
Presenter, Governor's Conference on Education  
Chair, COABE/MVAEA National Conference 1992  
Member, Commission on Americorp and Community Service  
Member, National GED Advisory Committee  
Member, Advisory Committee on Adult Education National Reporting System (NRS)  
Member, GED Task Force on Delivery of 2002 tests

## COMMUNITY AND CIVIC GROUPS

Member, Local Parent/Teacher Organizations  
Past Board Member, Bismarck Hockey Booster Club  
Past Board Member, Coach, Bismarck Soccer League  
Exalted Ruler, Trustee, Bismarck Elks Lodge  
Co-Chair, Bismarck/Mandan Annual Folk Festival 1992  
Deacon, Elder, and Chair of Pastor Search Committee, First Presbyterian Church, Bismarck  
Elks - District Deputy Grand Exalted Ruler West  
President, North Dakota Elks Association

## REFERENCES

Dr. Gary Gronberg, Assist. State Superintendent  
Department of Public Instruction  
600 E Boulevard Avenue  
Bismarck, ND 58505-0440

(b)(6)

Ms. Valerie Fischer, Director  
School Health & Adult Ed Programs  
Department of Public Instruction  
600 E Boulevard Avenue  
Bismarck, ND 58505-0440

(b)(6)

Mr. Mike Dean, Program Officer  
US Office of Adult Education and Literacy  
600 Independence Avenue SW  
Washington D.C. 20202

(b)(6)

## Dan Pullen

(b)(6)

N.  
36

[dan.pullen@sendit.nodak.edu](mailto:dan.pullen@sendit.nodak.edu)

### Professional Experience

Director of the North Dakota Educational Technology Council, 2001 - present.

Dan Pullen is the director of the North Dakota Educational Technology Council and serves as the North Dakota Director of K12 Educational Technology.

The ND Educational Technology Council is a state agency responsible for coordinating educational technology initiatives for elementary and secondary education. The ND ETC serves as the policy board for two service agencies: EduTech, a statewide learning technologies professional development and IT service center (21 employees), and the ND Center for Distance Education, the state's distance education high school (42 employees).

See <http://www.state.nd.us/itd/etc/> and <http://www.state.nd.us/itd/etc/docs/org.pdf>.

Director of the Center for Innovation in Instruction, 1993-2001

The ND C.I.I. provides professional development for K12 teachers in the use of learning technologies in the classroom (8 employees).

Education Coordinator, SENDIT K12 telecommunication network, 1989-1993.

SENDIT provided North Dakota K12 schools their first Internet access, email and bulletin board services.

### Education.

M.A. Organizational Communications  
1989 NDSU, Fargo, ND

B.S. Mass Communications  
1972 MSUM, Moorhead, MN

### Related Experience.

- Managed the start-up of three statewide school technology service entities and a number of other statewide initiatives in the last 18 years.

Dorice Miller

600 E. Boulevard Ave, Dept 201; Bismarck, ND 58505 W – (701) 328-2395 [ddmiller@nd.gov](mailto:ddmiller@nd.gov)

---

**SKILLS PROFILE**

- Obtained strong organizational, planning, project management, leadership, communication and technical skills while working in current position for past 7 years.

**Languages**

- ASP.Net, Visual Basic.NET, VBScript, JavaScript, HTML, T-SQL, COBOL, Natural II, SAS, Visual FoxPro, Progress, Pascal, JCL

**Software**

- Microsoft Office Products, Dreamweaver, Visio, Microsoft Visual Studio, Infragistics
  - Database: Microsoft SQL Server, Microsoft Access, DB2, Adabas
  - Platforms: Microsoft Windows 2000, Microsoft Windows XP, Linux, OS/32, Macintosh
- 

**EDUCATION**

**North Dakota State College of Science, Wahpeton, ND**  
Associate of Applied Science in Computer Information Systems, July 1989

**University of North Dakota, Williston, ND**  
Certificate of Completion in General Business, May 1986

---

**CAREER HISTORY &  
ACCOMPLISHMENTS**

**Senior Programmer Analyst**  
**Programmer Analyst III**  
**Programmer Analyst II**

May 1997 - Present

*North Dakota Department of Public Instruction*

- Assistant MIS Director: Ability to perform all duties of the MIS Director position when needed.
- Manage staff, programs and services: Coordinate communications with vendors, State Information Technology Department and users. Team leader for the applications development work unit. Evaluate performance and review the work of the applications development unit. Participate in developing and monitoring the IT budget. Assist with the development of the agency's technology plan.
- Manage projects by estimating timelines, developing work plans, coordinating communications between vendors and users and monitoring progress.
- Project Administration: Consult with agency directors to determine data processing needs. Provide solutions to the data processing needs from the planning state to final design. Review federal regulations and state statutes with program directors in order to develop or enhance systems that comply with the requirements.
- Computer Systems Analysis/Design/Develop/Test/Implement: Formulate plan to design and develop automated systems. Determine hardware and communication methods to be used. Determine needs of the users by analyzing data procedures forms and reports. Determine feasibility for an automated system and investigate alternative solutions. Determine software, programming languages and methodology to be used. Design database structures, reports, screens, and procedures. Create prototypes, test plans and user documentation.
- Provide technical assistance and support to internal staff and local education agencies.

**Programmer Analyst I**  
**Programmer II**  
**Programmer I**

December 1995 – April 1997  
October 1988 – May 1995

*Information Services Division  
(Information Technology Department)*

- Analyzed, designed, developed, and maintained computerized information and reporting systems.
- Performed complex programming.
- Acted as a lead worker, exercising supervision over lower level programmers.
- Assisted team leader responsibilities.
- Created and maintained system documentation.
- Analyzed and fixed program abends.
- Obtained skills writing JCL.
- Conferred with other data processing personnel and user agency personnel to assist in the continued revision and installation of new and improved operational systems.

**Programmer Analyst**

**May 1995 - November 1995**

*North Central Data Cooperative*

*(National Information Solutions Cooperative)*

- Modified and tested Purchase Order system using Progress.
- Conferred with data processing personnel to assist in the continued revision and installation of a new Purchase Order system for the Accounting Department.

**Office Clerk**

**December 1986 – May 1988**

*Agricultural Stabilization & Conservation Service*

- Managed the conservation programs.
  - Assisted the public with farm programs and sign-ups.
  - Developed computer skills and performed secretarial duties.
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Doris Tonneson

1040 Chambly Ave.; Bismarck, ND 58503 W – (701) 328-1310

[dtonneson@nd.gov](mailto:dtonneson@nd.gov)

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Summary Experienced at tedious research and methodical problem solving  
Eager to learn new concepts, able to adapt current skill set to variety of situations  
Skilled at meeting assigned deadlines and working under pressure  
Demonstrated ability to communicate ideas clearly and effectively  
Experience with wide range of programming languages (including SQL, SAS, Natural VB.Net, Visual Studio and COBOL)  
Practical knowledge of desktop applications ( including MS Office suite)

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Education B.S. Computer Science *Jun 1989*  
*Dickinson State University; Dickinson, ND*

(b)(6)	Subjects:
	- 1 Sem)

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Career History & Accomplishments Programmer Analyst III, Management Information Systems, *ND Dept of Public Instruction* *Nov 99 – Present*

- State EdFacts Coordinator, responsible for formatting and submitting state education data to US Department of Education
- Writing and testing programs using SQL, Natural and SAS programming languages
- Utilized VB.Net, ASP.Net, Visual Studio, MS Excel and Access, Crystal Reports daily.

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<p>Systems Analyst, ReliaStar/United Services Life Insurance, <i>Bismarck ND</i></p> <ul style="list-style-type: none"> <li>- Wrote, tested and implemented programs using COBOL MVS, COBOL II, CICS, SAS, etc., programming languages</li> <li>- Experience using MS Access, Excel and Word</li> <li>- Performed on-call duties two nights per month</li> </ul>	<p><i>Mar 97 – Oct 99</i></p>
<p>Programmer Analyst I, Management Information Systems, <i>ND Dept of Public Instruction</i></p> <ul style="list-style-type: none"> <li>- Wrote and tested programs using Natural and SAS programming languages</li> <li>- Utilized Word Perfect 6.1, and Windows 95 daily.</li> </ul>	<p><i>Jan 96 – Mar 97</i></p>
<p>Programmer Analyst I, Information Services Division, <i>ND Office of Management and Budget</i></p> <ul style="list-style-type: none"> <li>- Wrote, tested, and maintained existing programs for several state agencies.</li> <li>- Worked on Mainframe system, transitioned to Personal Computers on LAN.</li> <li>- Used COBOL I &amp; II, COBOL II/ADASQL, Natural, CICS programming languages, Microsoft Word 6.0, Flowcharting, Microsoft Excel 5.0, plus other software packages.</li> </ul>	<p><i>Nov 93 – Jan 96</i></p>
<p>Secretary/City Clerk, City of Beulah, <i>Beulah ND</i></p> <ul style="list-style-type: none"> <li>- Secretarial duties for city coordinator</li> <li>- Worked on IBM Leading Edge computer system using Word Processing and TWIN.</li> </ul>	<p><i>Mar 90 – Oct 93</i></p>
<p>Assistant Manager, Beulah Dairy Queen, <i>Beulah ND</i></p> <ul style="list-style-type: none"> <li>- Lead trainer for employees</li> <li>- Programmed tills, completed payroll and time cards, completed work schedules, counted till drawers, made nightly deposits, performed inventory, ordered/stocked supplies, cooked, opened and closed store.</li> </ul>	<p><i>1983 - 1988</i></p>

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**Summary**

Demonstrated achiever with exceptional knowledge of management techniques and telecommunications hardware  
 Skilled at learning new concepts quickly, working well under pressure and meeting assigned deadlines and communicating ideas clearly and effectively.  
 Extensive computer training (modems, ISDN, Satellite phones, STU/STE, TACLANes, cabling, wiring, servers, and PC support), including knowledge of CISCO platforms (3600, 72XX series routers, 29XX, 35XX and 36XX switches) and networking operating systems.  
 Experience with network management software (HP Openview, Solarwinds, CISCO works, Remedy)  
 Experienced equipment and computer systems trainer with knowledge of course development  
 Experience with desktop applications ( including MS Office suite, MS Visio)

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**Security Clearance** Top Secret (awarded Jan 1987, last updated Nov 2006, valid to Nov 2011)

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**Education**

Master of Information Management *May 2008*  
*Bowie State University, European Division,  
 Heidelberg, Germany*

B.S. Computer and Information Science *Aug 2005*  
*University of Maryland University College,  
 European Division, Heidelberg, Germany*

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**Career History & Accomplishments**

Director, Management Information Systems, *ND* *Apr 08 – Present*  
*Dept of Public Instruction*

- Develop and implement technology plan for agency
- Manage \$2M biannual budget
- Direct multi-unit IT projects
- Assist ND education agencies with IT and data issues
- Supervise 12 person unit

Director, Network Infrastructure, *USAF, RAF* *Aug 06 – Jan 08*  
*Mildenhall, UK*

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- Directed/performed daily maintenance on \$40 million Foundry and CISCO based network infrastructure; including Voice over IP and network servers (classified and unclassified networks)
  - Analyzed/directed projects affecting network design/modifications, ensured strict security requirements maintained; developed most cost effective solutions
  - Managed \$7.5K yearly budget
  - Supervised/evaluated 17 technicians
- Director, Deployable Infrastructure, *USAF, RAF Mildenhall, UK.* *Aug 04 – Aug 06*
- Designed and implemented CISCO based network infrastructure and REDCOM based voice networks at various deployed sites; directed and performed modification and maintenance actions
  - Control \$7.5M equipment account
  - Primary trainer for 42 assigned team members
  - Managed \$100K yearly budget
  - Directly supervised 23 people
- Director, Airfield Systems, *USAF, RAF Mildenhall, UK* *Jan 04 – Aug 04*
- Directed the modifications and daily maintenance of airfield communications systems
  - Supervised 3 sections/18 people
  - Received highest rating during two Air Force level inspections
- Manager, Maintenance Control Section, *USAF, Spangdahlem AB, Germany.* *Jul 03 – Jan 04*
- Directed all maintenance actions for 150-man squadron
  - Monitored maintenance database, produced reports for management personnel
  - Managed training of 150-man squadron
  - Directly supervised 5-man team
- Manager, Voice Systems, *USAF, Spangdahlem AB, Germany/Hill AFB, UT* *Dec 00 – Jul 03*
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- Designed and implemented of voice networks
- Directed modification and maintenance actions for voice systems
- Control \$2.5M equipment account
- Control training and monitored equipment qualifications

Voice System Technician, USAF, *Hill AFB, UT*

*Jan 96 – Dec 00*

- Supervised 3; monitored training/equipment qualifications of 42 person team
- Performed daily maintenance, management/modification of \$100K contingency voice communications infrastructure including telephone switches (AF proprietary), data infrastructure (Bay Network switches), bulk and point-to-point encryption systems, secure and non-secure telephone units, fax machines, network equipment and copper and fiber optics cabling

Manager, Intelligence Systems, USAF, *Osan AB, Republic of Korea*

*Dec 94 – Jan 96*

- Performed modification and maintenance actions for UNIX based SunSPARC systems, display units, tape drives, encryption systems, and air to ground communications system

Telecommunications Systems Technician, USAF, *Ellsworth AFB, SD*

*Dec 86 – Dec 94*

- Performed modifications and maintenance actions for ITT based mainframes, display units, disc drives, patch panels, encryption systems, and power supplies to the component level

Memberships and  
Affiliations

*Association for Computer Machinery*  
*Institute of Electrical and Electronic Engineers*

Girish Budhwar

600 E Boulevard Ave, Dept 201.; Bismarck, ND 58505 W – (701) 328-4886 gbudhwar@nd.gov

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Summary

Computer Skills

Statistical Packages: SPSS (attended 4 weeks of training provided by SPSS), SAS, and Minitab.

Databases: Access and some Visual dBase.

Spreadsheets: Excel and 1-2-3.

Presentation Software: PowerPoint and Harvard Graphics.

Word Processing: Word and WordPerfect.

E-mail: Outlook and Notes

Statistics Coursework

Biostatistics, Survival Analysis, Asymptotic Theory, Multivariate Analysis (theoretical and applied), Computer Simulation, Jackknife and Bootstrap Techniques, Time Series Analysis, Regression (advanced and applied), Sampling, Experimental Design, Linear Models (advanced and theoretical), Mathematical Statistics, Advanced Inference and Probability, Econometrics, Stochastic Processes, and Decision Theory.

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Education

All requirements towards a Ph. D. in Applied Statistics completed, with the exception of the dissertation.

1991 – 1994

*North Dakota State University; Fargo, ND*

1991

M.S. (Applied Statistics)

*North Dakota State University; Fargo, ND*

Thesis: "SAS Macros For Some Problems in Multivariate Analysis".

1985

B.S. (Computer Science)

*University of Manitoba, Winnipeg, Canada*

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Career History & Accomplishments

Education information processing analyst, *ND Dept of Public Instruction*

2005 – Present

- Lead Research Analyst – supervise a staff of three.
  - Common Core of Data (CCD) Coordinator – financial and other reporting to the Census Bureau National Center for Education Statistics (NCES), National Education Association (NEA).
  - Analyst for the Employee Compensation Report – presented to the Legislature
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<ul style="list-style-type: none"> <li>- Mapping Coordinator – school district maps for the Department of Public Instruction and the Census Bureau.</li> </ul>	
Adjunct Instructor, <i>Rasmussen College, Bismarck, ND</i>	<i>2003 - Present</i>
<ul style="list-style-type: none"> <li>- Teach College Algebra, Microcomputers, and Business Mathematics</li> </ul>	
Math Instructor, <i>United Tribes Technical College, Bismarck, ND</i>	<i>2003 - 2005</i>
<ul style="list-style-type: none"> <li>- Teach College Algebra and General Mathematics.</li> <li>- Serve on the Assessment Committee.</li> <li>- Serve on the UTTC President’s Task Force on the Feasibility of Advanced Degrees</li> </ul>	
Research Analyst III, <i>ND Dept of Human Services</i>	<i>1994 - 2003</i>
<ul style="list-style-type: none"> <li>- Performed social, statistical, and economic (fiscal) analysis and evaluation of Human Service programs (forecasting and budgeting functions).</li> <li>- Designed studies and evaluated program / service and payment accuracy and effectiveness.</li> <li>- Conducted needs assessments and program evaluations.</li> <li>- Provided analysis and integration of various data sources.</li> <li>- Have worked with almost all program divisions within the Department of Human Services.</li> <li>- Supervise other analysts and administrative staff on projects where I was designated the lead analyst</li> </ul>	
Research Analyst II, <i>ND Dept of Human Services</i>	<i>1992 - 1994</i>
<ul style="list-style-type: none"> <li>- Same duties as the Research Analyst III position above, except with less autonomy</li> </ul>	
Graduate Statistical Consultant, <i>Department of Statistics, ND State University</i>	<i>1987 - 1992</i>
<ul style="list-style-type: none"> <li>- Assisted faculty and graduate students with their research, thesis, and other projects / publications</li> </ul>	
	<i>1990 - 1992</i>
Statistics Tutor, <i>Student Support Services &amp; Athletic Department, ND State University</i>	

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- Tutored for Student Support Services, a federally funded service, which was designed to provide assistance to students with disabilities and older-than-average students
- Research Associate, *Center for Multivariate Statistics, Pennsylvania State University* 1990 – 1991  
Summer
- Worked on problems in relation to my Master's thesis
- Research Assistant, *Department of Statistics, North Dakota State University* 1989 Summer
- Project: "Medical Patterns of Care".
  - Organization: Blue Cross Blue Shield of North Dakota.
  - Project Director: Dr. David Cummings
- Graduate Teaching Assistant/adjunct instructor, *Dept of Statistics, ND State University* 1986 - 1990
- Independently taught, "Introductory Statistics" and "Regression Analysis using SAS" to graduate and undergraduate students. Class sizes ranged from 40 to 60 students
- Graduate Research Assistant, *Dept of Computer Science, ND State University* 1985 - 1986
- 

Publications and Presentations

- "Social Indicator Study", Sue Tohm and Girish Budhwar, North Dakota Department of Human Services. 2001 Alcohol and Drug Abuse Summit sponsored by the University of North Dakota's Division of Continuing Education.
- "Use of the Arcsine and Square Root Transformation for Subjectively Determined Percentage Data", Dr. W. H. Ahrens, Dr. D. J. Cox, and G. Budhwar. *Weed Science*, Volume 38, No. 4-5, July-September 1990, pp 452-458.
- "SAS Macros for Some Problems in Multivariate Analysis", G. Budhwar, Dr. D. S. Gill, Dr. M. B. Rao, and Dr. R. Khattree. *American Statistical Association 1991 Proceedings of the Statistical Computing Section*, pp 265-269
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Joleen Gross

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Summary

Programming languages: VB.Net1.0, VB.Net 2.0, Sql Server 2005, Cobol, Natural, RPGII, Fortran, Dbase, FoxPro, Java, JavaScript, VbScript, Asp, Html, VBe, VBa, Visual Basic, Delphi.

Applications: Crystal Reports, Word, Excel, Access, PowerPoint, Word Perfect, QuattroPro, Novell, Melyx, Atlas, PageMaker, CorelDraw, Photoshop, Illistrator, SPSS, On-Q, I-Q, MsWorks, Ws\_Ftp, Eudora, MsOutlook, Telnet, PCAnywhere, Microsoft Image Composer, Dreamweaver, Microsoft SQL Server, Visio.

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Education

B.S., Computer Information Systems, minor in Business Administration. *May 1993*

*University of Mary, Bismarck, ND*

Associate in Applied Science, Associate in Arts, Certificate in Data Processing. *Jun 1980*

*Bismarck Junior College, Bismarck, ND*

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Career History & Accomplishments

Sr. Programmer/Analyst I, *ND Department of Public Instruction* *Sep 2001 – Present*

- Analyze, design, develop, test and maintain windows and web applications in a 3-tier environment in VB.Net1.0, VB.Net2.0, Visual Basic, ASP, Html, Javascript, VBScript.
  - Designed applications using Excel, Sql Server 2005 and MSAccess Databases, Crystal Reports for clients in DPI.
  - Function in a team environment; provide problem solving and analytical skills to issues in dept.
  - Provide computer support, training and encouragement for DPI staff.
  - Solve hardware, software and network problems.
  - Troubleshoot security and network permissions, develop applications using the outlook, Ldap, crystal reports objects
  - Provided application support for MsAccess, MsExcel.
-

- Worked with the team to build Stars and team lead in ConApp, TI Targeting, Fall Enrollment, Pupilmembership, Summer School, Transportation, Graduation Rate and Undocumented Transfers collections in Stars.
- *Accomplishments:* Built Stars Amin tool as a data collection and reporting tool for DPI staff. Creating functionality Crystal Reports for Stars, designing Crystal Templates, deploying, trouble shooting problems, creating solutions.

Technology Learning Specialist for Educational Enhancement Services, *Dickinson State University*

*Nov 1997 – Jun 2001*

- Tutored in Delphi, Visual Basic, Access, Excel, Word, Word Perfect, Pagemaker, Corel Draw, Photoshop and Dreamweaver, assisted in academic planning, personal counseling & career exploration.
- Presented workshops such as Get Connected to Internet, Interview Skills, Graphic Design, Internet Research, Web Design.
- Downloaded data from HECN using Cobol and Natural, processed data in Action Track using MsAccess and Vba.
- Generated DSU statistics using MsAccess and SPSS.
- Designed and maintained web pages for EES and SSS.
- Served on Selection Committee. Interviewed and selected applicants for positions.
- *Accomplishments:* Built MsAccess database to handle data reporting needs.

*Jan 1994 – Dec 1998*

Adjunct Lecturer, *Dickinson State University*

- Taught MS Access and Paradox

Consultant, *Dickinson Public Schools*

- Assisted in conversion of software applications form IBM Sys 34 to IBM PC based system using FoxPro.

*Jan 1996 – Nov 1997*

Educator, <i>Dickinson Public Schools</i>	<i>Sep 1993 – May 1996</i>
<ul style="list-style-type: none"> <li>- Taught MsWorks and MsAccess for Adult Continuing Education</li> </ul>	
Programmer/Data Processing Manager/Systems Administrator, <i>St Luke's Nursing Home</i>	<i>Sep 1993 – Nov 1997</i>
<ul style="list-style-type: none"> <li>- Processed payroll, accounts receivable, accounts payable, general ledger, inventory, fixed assets, Medicare A claims</li> <li>- Trained office employees in MsWorks, Word Perfect, Atlas Payroll systems, Medicare A claims, Quicken</li> <li>- Analyzed data problems, designed and implemented solutions using FoxPro, Excel, MsWorks and WordPerfect</li> <li>- Installed and maintained Novell network</li> <li>- Set up and maintained Melyx software</li> <li>- Supported hardware and software issues</li> <li>- Accomplishments: Built a payroll scheduling system, General Ledger Balance Spreadsheet, Censudays spreadsheet, and Acuity Calculator</li> </ul>	
Programmer/Analyst, <i>ND Hospital Association</i>	<i>Sep 1992 – May 1993</i>
<ul style="list-style-type: none"> <li>- Wrote RPGII programs using IBM Sys34 with PC emulation</li> <li>- Analyzed changing data needs</li> </ul>	
Programmer, <i>ND Department of Vital Statistics</i>	<i>Sep 1992 – May 1993</i>
<ul style="list-style-type: none"> <li>- Wrote software for Dept of Vital Statistics using Clipper on IBM PC</li> </ul>	
Assistant to Computer Center Manager, <i>University of Mary</i>	<i>Sep 1991 – Sep 1992</i>
<ul style="list-style-type: none"> <li>- Programmed in Dbase</li> <li>- Provided technical and software support</li> <li>- Set up computers</li> </ul>	
Receptionist, <i>Job Service North Dakota</i>	<i>Oct 1989 – Jun 1990</i>
<ul style="list-style-type: none"> <li>- Answered telephone</li> <li>- Processed data entry</li> <li>- Scheduled appointments</li> </ul>	
Data Processing, <i>Bismarck Tribune</i>	<i>May 1982 – Nov 1983</i>
<ul style="list-style-type: none"> <li>- Entered and processed transactions for display, classified, and transient advertising, General Ledger, Newsprint, and daily lineage</li> </ul>	

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Data Processing, *Clairmont Incorporated*

*Aug 1980 – May  
1982*

- Entered and processed daily transactions for bank's general ledger, checking, savings, loan and CD accounts
  - Entered and processed job cost, accounts payable, unit cost, fuel adjustments, payroll, general ledger, monthly and yearly reports
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# Budget Narrative

## Budget Narrative

Attachment 1:

Title: Pages: Uploaded File: 1235-ndSLDS Budget Narrative Final.pdf

## Budget Narrative (Justification)

### Year 1

#### Year 1 Project Highlights and Major Milestones:

- Establish ndSLEDS Project Committee
- Hire consultant to review ND enterprise data collection strategy & SIF
- Establish Data Governance structure
- Establish and enforce LDS-wide data standards
- Define a data integration strategy
- Implement formal data quality process
- Communicate with Institutional Partners
- Establish DPI project management structure and plan
- Develop Project Charter
- Research BI Tool
- Develop and issue SLDS RFP
- Procure, install and configure SIF pilot
- Award SLDS Contract
- Finalize SLDS project plan
- Develop communication, training, testing, and change management plans

#### 1. Personnel (Yr. 1)

**Budget Request: \$122,500**

**In Kind: \$92,350**

The ndSLEDS program will require a number of state personnel to be involved. While the State will leverage contractual labor for specific technical and functional expertise, the State understands the need to commit its own resources to this program to ensure stakeholder buy-in, user adoption, and future sustainability. The State plans to establish a core team of State resources that will be dedicated to the program and other State resources contributing on a part-time basis.

#### Executive Sponsor

**Budget Request: \$0**

**In Kind: \$4,500**

The Executive Sponsor role will be filled by an existing DPI resource. This resource will be 5% dedicated to the program during Year 1. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### Program Manager

**Budget Request: \$70,000**

**In Kind: \$0**

The Program Manager role is a new “key” position in DPI responsible for coordinating tasks between the State and school districts. This role will provide communication plans, coordinate status meetings and design meetings with the school districts and represent the districts cohesively as a member of the project team. This resource will be 100% dedicated to the program in Year 1.

#### Project Director

**Budget Request: \$32,500**

**In Kind: \$0**

The Project Director role is a new “key” position that will be filled by the DPI MIS Director. This resource will be re-assigned to support the program and be responsible for coordinating the

## Budget Narrative (Justification)

### Year 1

data stewardship and program managers. This resource will be 50% dedicated to the program in Year 1.

#### **Data Stewards**

**Budget Request: \$20,000**

**In Kind: \$0**

Data Stewards are representatives from the SEA, Education Standards and Practices Board, Career and Technical Education, and School Districts that are considered the domain experts on specific data sources. Data Stewards are existing State resources with responsibilities that include working with the ndSLEDS project implementation team to define and implement data governance processes, evaluate and fix data quality issues, and provide domain expertise to integrate and use data in the ndSLEDS. During Year 1, the budget includes up to 10 Data Stewards dedicating 5% of their time to the program.

#### **DPI Programmer**

**Budget Request: \$0**

**In Kind: \$36,050**

There will be two DPI Programmer positions contributing to the program providing general programming support and enhancements for various source systems including STARS. These positions will be filled by existing DPI resources. These resources will be 35% dedicated to the program in Year 1. The State will fund 100% of the cost of these roles as an **in kind** contribution.

#### **STARS Contractor**

**Budget Request: \$0**

**In Kind: \$35,000**

There will be one STARS Contractor position contributing to the program providing business and data analysis support for STARS. This position will be filled by an existing Contractor responsible for STARS development today. This resource has been budgeted for approximately 320 hours in Year 1. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### **EDFacts Coordinator**

**Budget Request: \$0**

**In Kind: \$16,800**

There will be one EDFacts Coordinator position contributing to the program providing support for EDFacts reporting. This position will be filled by an existing DPI resource. This resource will be 30% dedicated to the program in Year 1. The State will fund 100% of the cost of this role as an **in kind** contribution.

### **2. Fringe Benefits (Yr. 1)**

**Budget Request: \$36,750**

**In Kind: \$27,705**

The State of North Dakota contributes 30% of base salary for health benefits, retirement, social security, workers compensation, and unemployment insurance.

<b>Position</b>	<b>Budget Request</b>	<b>In Kind</b>
Executive Sponsor	0	\$1,350
Program Manager	\$21,000	0
Project Director	\$9,750	0
Data Stewards (10 people)	\$6,000	0
QA/Testing	0	0
Sr. Research Analyst	0	0

## Budget Narrative (Justification)

Year 1

Position	Budget Request	In Kind
DPI Programmer	0	\$6,090
DPI Programmer	0	\$4,725
STARS Contractor	0	\$10,500
EDFacts Coordinator	0	\$5,040
DPI Trainer	0	0
District Help Desk Support	0	0
DPI Help Desk Support	0	0
Regional Trainer	0	0
Regional Trainer	0	0
<b>Total:</b>	<b>\$36,750</b>	<b>\$27,705</b>

<b>3. Travel (Yr. 1)</b>	<b>Budget Request: \$20,020</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
Annual Trip to DC		
Airfare (2 persons @ \$800 per ticket)	\$1,600	
Lodging (2 persons @ \$180 per night @ 3 nights)	\$1,080	
Transportation / Parking (2 persons @ \$35 per day @ 3 days)	\$210	
Meals / Incidentals (2 persons @ \$75 per day @ 3 days)	\$450	
	0	
Data Stewards (5 people per Quarter)		
Lodging (5 persons @ \$65 per night @ 4 nights @ 4 trips)	\$5,200	
Transportation / Parking (5 persons @ \$180 per trip @ 4 trips)	\$3,600	
Meals / Incidentals (5 persons @ \$25 per day @ 4 days @ 4 trips)	\$2,000	
	0	
BI Training (3 people)		
Airfare (3 persons @ \$800 per ticket)	\$2,400	
Lodging (3 persons @ \$180 per night @ 4 nights)	\$2,160	
Transportation / Parking (3 persons @ \$35 per day @ 4 days)	\$420	
Meals / Incidentals (3 persons @ \$75 per day @ 4 days)	\$900	
	0	
<b>Total:</b>	<b>\$20,020</b>	<b>\$ 0</b>

<b>4. Equipment (Yr. 1)</b>	<b>Budget Request: \$3,000</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
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## Budget Narrative (Justification)

Year 1

**7. Construction (Yr. 1) Budget Request: \$0 In Kind: \$0**

Not Applicable

**8. Other (Yr. 1) Budget Request: \$11,500 In Kind: \$ 0**

Description	Budget Request	In Kind
SIFA Membership Fee	\$2,500	
BI Tool Training	\$9,000	
<b>Total:</b>	<b>\$11,500</b>	<b>\$ 0</b>

**9. Total Direct Costs (Yr. 1) Budget Request: \$444,670 In Kind: \$120,055**

**10. Indirect Costs (Yr. 1) Budget Request: \$24,228 In Kind: \$13,326**

DPI will use the Federally authorized rate of 11.1% to cover indirect costs. This rate is applied to all costs except equipment and only the first \$25,000 of any contract labor. It is expected that DPI will establish 4 separate contracts with vendors to complete the project.

**11. Training Stipends (Yr. 1) Budget Request: \$0 In Kind: \$0**

Not Applicable

**12. Total Costs (Yr. 1) Budget Request: \$468,898 In Kind: \$133,381**

## Budget Narrative (Justification)

### Year 2

#### Year 2 Project Highlights and Major Milestones:

- Procure, install and configure SIF pilot
- Execute SIF Pilot
- Continue to expand K-12 Data Dictionary
- Improve core operational data store (STARS)
- ndSLEDS Data Warehouse
  - Select and procure hardware and software
  - Define data and reporting requirements
  - Create high-level enterprise architecture design
  - Design and develop ndSLEDS data model
  - Design and develop data conversions and ETL programs
  - Create stakeholder-specific data marts
  - Test ETL system
  - Make corrections based on system testing
- ndSLEDS BI Tool
  - Procure and configure business intelligence toolset
  - Develop BI reports (Pilot set)
  - Test Reports/QA/User Acceptance Testing
  - Make corrections based on system testing
  - Develop pilot training materials
  - Roll-out pilot reports to stakeholder groups
  - Roll-out pilot Federal reports to stakeholder groups
  - Provide ndSLEDS pilot training
  - Evaluate pilot results

**1. Personnel (Yr. 2)**

**Budget: \$220,750**

**In Kind: \$222,800**

During Year 2 additional State resources are added to the program as major project components are begin implementation including the SIF Pilot, the ndSLEDS Data Warehouse, and the ndSLEDS BI Reporting Tool.

#### **Executive Sponsor**

**Budget: \$0**

**In Kind: \$4,500**

The Executive Sponsor role will be filled by an existing DPI resource. This resource will be 5% dedicated to the program during Year 2. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### **Program Manager**

**Budget: \$70,000**

**In Kind: \$0**

The Program Manager role is a new “key” position in DPI responsible for coordinating tasks between the State and school districts. This role will provide communication plans, coordinate status meetings and design meetings with the school districts and represent the districts cohesively as a member of the project team. This resource will be 100% dedicated to the program in Year 2.

## Budget Narrative (Justification)

### Year 2

#### **Project Director**

**Budget: \$48,750**

**In Kind: \$0**

The Project Director role is a new “key” position that will be filled by the DPI MIS Director. This resource will be re-assigned to support the program and be responsible for coordinating the data stewardship and program managers. This resource will be 75% dedicated to the program in Year 2.

#### **Data Stewards**

**Budget: \$20,000**

**In Kind: \$0**

Data Stewards are representatives from the SEA, Education Standards and Practices Board, Career and Technical Education, and School Districts that are considered the domain experts on specific data sources. Data Stewards are existing State resources with responsibilities that include working with the ndSLEDS project implementation team to define and implement data governance processes, evaluate and fix data quality issues, and provide domain expertise to integrate and use data in the ndSLEDS. During Year 2, the budget includes up to 10 Data Stewards dedicating 5% of their time to the program.

#### **QA/Testing**

**Budget: \$15,000**

**In Kind: \$0**

There will be one internal QA/Testing position contributing to the program providing quality assurance and testing support to all projects during Year 2 including the SIF Pilot, the ndSLEDS Data Warehouse, and the ndSLEDS BI Reporting Tool. This position will be filled by an existing DPI research staff member. This resource will be 50% dedicated to the program in Year 2.

#### **Sr. Research Analyst**

**Budget: \$27,000**

**In Kind: \$0**

There will be one Sr. Research Analyst position contributing to the program providing statistical analysis, developing requirements, performing analysis on data, and defining report requirements related to the ndSLEDS project. This position will be filled by an existing DPI resource. This resource will be 50% dedicated to the program in Year 2.

#### **DPI Programmer**

**Budget: \$0**

**In Kind: \$51,500**

There will be two DPI Programmer positions contributing to the program providing general programming support and enhancements for various source systems including STARS. These positions will be filled by existing DPI resources. These resources will be 50% dedicated to the program in Year 2. The State will fund 100% of the cost of these roles as an **in kind** contribution.

#### **STARS Contractor**

**Budget: \$0**

**In Kind: \$35,000**

There will be one STARS Contractor position contributing to the program providing business and data analysis support for STARS. This position will be filled by an existing Contractor responsible for STARS development today. This resource has been budgeted for approximately 320 hours in Year 2. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### **EDFacts Coordinator**

**Budget: \$0**

**In Kind: \$16,800**

There will be one EDFacts Coordinator position contributing to the program providing support for EDFacts reporting. This position will be filled by an existing DPI resource. This resource will be 30% dedicated to the program in Year 2. The State will fund 100% of the cost of this role as an **in kind** contribution.

## Budget Narrative (Justification)

### Year 2

**DPI Trainer**

**Budget: \$25,000**

**In Kind: \$0**

There will be one DPI Trainer position contributing to the program providing end-user training support. This position will be filled by an existing DPI resource trained in data driven decision making and the BI tool. This resource will be 50% dedicated to the program during Year 2.

**District Help Desk Support**

**Budget: \$15,000**

**In Kind: \$0**

There will be one District Help Desk Support position contributing to the program providing level 1 help desk support to school districts for the ndSLEDS project. This is a new position. This resource will be 50% dedicated to the program during Year 2.

**DPI Help Desk Support**

**Budget: \$0**

**In Kind: \$15,000**

There will be one DPI Help Desk Support position contributing to the program providing level 3 help desk support for the ndSLEDS project. Level 3 supports policy and operational issues for regional and district data stewards. This position will be filled by an existing DPI resource. This resource will be 50% dedicated to the program during Year 2. The State will fund 100% of the cost of these roles as an **in kind** contribution.

**Regional DDDM trainer and researcher**

**Budget: \$0**

**In Kind: \$100,000**

There will be two **Regional DDDM trainer and researcher** positions contributing to the program providing training and research support for school districts. These positions will be filled by State resources outside of DPI. These resources will be 100% dedicated to the program in Year 2. The State will fund 100% of the cost of these roles as an **in kind** contribution. Regional trainers will assist district data stewards as level 2 support issues reported through the District Help Desk Support.

**2. Fringe Benefits (Yr. 2)**

**Budget Request: \$66,225**

**In Kind: \$66,840**

The State of North Dakota contributes 30% of base salary for health benefits, retirement, social security, workers compensation, and unemployment insurance.

Position	Budget Request	In Kind
Executive Sponsor	0	\$1,350
Program Manager	\$21,000	0
Project Director	\$14,625	0
Data Stewards (10 people)	\$6,000	0
QA/Testing	\$4,500	0
Sr. Research Analyst	\$8,100	0
DPI Programmer	0	\$8,700
DPI Programmer	0	\$6,750
STARS Contractor	0	\$10,500
EDFacts Coordinator	0	\$5,040
DPI Trainer	\$7,500	0
District Help Desk Support	\$4,500	0

## Budget Narrative (Justification)

Year 2

Position	Budget Request	In Kind
DPI Help Desk Support	0	\$4,500
Regional Trainer	0	\$15,000
Regional Trainer	0	\$15,000
<b>Total:</b>	<b>\$66,225</b>	<b>\$66,840</b>

<b>3. Travel (Yr. 2)</b>	<b>Budget Request: \$20,020</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
Annual Trip to DC		
Airfare (2 persons @ \$800 per ticket)	\$1,600	
Lodging (2 persons @ \$180 per night @ 3 nights)	\$1,080	
Transportation / Parking (2 persons @ \$35 per day @ 3 days)	\$210	
Meals / Incidentals (2 persons @ \$75 per day @ 3 days)	\$450	
	0	
Data Stewards (5 people per Quarter)	0	
Lodging (5 persons @ \$65 per night @ 4 nights @ 4 trips)	\$5,200	
Transportation / Parking (5 persons @ \$180 per trip @ 4 trips)	\$3,600	
Meals / Incidentals (5 persons @ \$25 per day @ 4 days @ 4 trips)	\$2,000	
	0	
BI Training (2 people)	0	
Airfare (2 persons @ \$800 per ticket)	\$2,400	
Lodging (2 persons @ \$180 per night @ 4 nights)	\$2,160	
Transportation / Parking (2 persons @ \$35 per day @ 4 days)	\$420	
Meals / Incidentals (2 persons @ \$75 per day @ 4 days)	\$900	
	0	
<b>Total:</b>	<b>\$20,020</b>	<b>\$ 0</b>

<b>4. Equipment (Yr. 2)</b>	<b>Budget Request: \$1,228,000</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
Warehouse Servers/ License/ Storage (initial purchase)	\$116,000	
Servers SIF (initial purchase)	\$8,000	
Network Switches / Firewalls (initial purchase)	\$40,000	
BI Tool (initial purchase; enterprise license)	\$500,000	
DW Software (initial purchase)	\$280,000	
SIF Pilot license	\$125,000	

## Budget Narrative (Justification)

Year 2

Description	Budget Request	In Kind
eTranscripts license	\$159,000	
<b>Total:</b>	<b>\$1,228,000</b>	<b>\$ 0</b>

<b>5. Supplies (Yr. 2)</b>	<b>Budget Request: \$3,000</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
General Office Supplies	\$3,000	
<b>Total:</b>	<b>\$3,000</b>	<b>\$ 0</b>

<b>6. Contractual (Yr. 2)</b>	<b>Budget Request: \$1,651,500</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
<p>ITD Contract (expanded from Year 1)                      Expand the contract with ITD to fill technical roles on the ndSLEDS implementation team. The ITD positions will complement similar positions filled by the SLDS Implementation Team (below) supporting the installation, configuration, and launch of the data warehousing and reporting tool. Team includes multiple roles including:</p> <p>Project Manager                      Rate = \$85/hr for 1,900 hrs                      IT Engineer (hosting support)      Rate = \$85/hr for 950 hrs                      DBA and ETL developer              Rate = \$85/hr for 1,520 hrs                      Portal/Report developer              Rate = \$85/hr for 1,140 hrs                      Report developer                      Rate = \$85/hr for 1,140 hrs                      QA/Testing                              Rate = \$85/hr for 950 hrs</p>	\$593,300	
<p>SLDS Implementation Team                      Establish contract with a vendor to install, configure, and launch the ndSLEDS data warehouse and BI reporting tool. Team includes multiple roles including:</p> <p>DW Project Manager                  Rate = \$160/hr for 1,520 hrs                      DW ETL Engineer                      Rate = \$140/hr for 1,900 hrs                      DW BI Developer                      Rate = \$140/hr for 1,900 hrs</p>	\$908,200	

## Budget Narrative (Justification)

### Year 2

Description	Budget Request	In Kind
DW Training and Content                      Rate = \$140/hr for 950 hrs		
eTranscript Implementation Team Establish contract with a vendor to install, configure, and launch an eTranscript implementation including district to district and district to higher education data exchange.	\$25,000	
SIF Pilot Team Establish contract with a vendor to install, configure, and launch a pilot implementation of the Schools Interoperability Framework (SIF).	\$125,000	
<b>Total:</b>	<b>\$1,651,500</b>	<b>\$ 0</b>

**7. Construction (Yr. 2)                      Budget Request: \$0                      In Kind: \$0**

Not Applicable

**8. Other (Yr. 2)                      Budget Request: \$11,500                      In Kind: \$ 0**

Description	Budget Request	In Kind
SIFA Membership Fee	\$2,500	
BI Tool Training	\$9,000	
<b>Total:</b>	<b>\$11,500</b>	<b>\$ 0</b>

**9. Total Direct Costs (Yr. 2)    Budget Request: \$3,200,995    In Kind: \$289,640**

**10. Indirect Costs (Yr. 2)            Budget Request: \$38,461            In Kind: \$32,150**

DPI will use the federally authorized rate of 11.1% to cover indirect costs. This rate is applied to all costs except equipment and only the first \$25,000 of any contract labor. It is expected that DPI will establish 4 separate contracts with vendors to complete the project.

## Budget Narrative (Justification)

Year 2

**11. Training Stipends (Yr. 2) Budget Request: \$0 In Kind: \$0**

Not Applicable

**12. Total Costs (Yr. 2) Budget Request: \$3,239,456 In Kind: \$321,790**

## Budget Narrative (Justification)

### Year 3

#### Year 3 Project Highlights and Major Milestones:

- Evaluate pilot results
- Based on evaluation, make improvements to ndSLEDS data, reports, and training methodology and materials
- Plan staged statewide roll-out of ndSLEDS
- Develop and implement statewide system, and support plans
- Develop and deliver statewide ndSLEDS training
- Go-live statewide with ndSLEDS
- Implement eTranscripts
- Design and Implement Workforce Data Integration
- Execute support plan (e.g., assign resources, begin tasks)
- Monitor ndSLEDS operations
- Monitor data quality via audits
- Address ndSLEDS bug/fixes and install software upgrades
- Analyze help desk tickets and conduct user satisfaction surveys to identify opportunities for improvement
- Make system enhancements
- Provide ongoing training

#### 1. Personnel (Yr. 3)

**Budget: \$220,750**

**In Kind: \$222,800**

During Year 3 the same level of State resources are maintained from Year 2.

#### Executive Sponsor

**Budget: \$0**

**In Kind: \$4,500**

The Executive Sponsor role will be filled by an existing DPI resource. This resource will be 5% dedicated to the program during Year 3. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### Program Manager

**Budget: \$70,000**

**In Kind: \$0**

The Program Manager role is a new “key” position in DPI responsible for coordinating tasks between the State and school districts. This role will provide communication plans, coordinate status meetings and design meetings with the school districts and represent the districts cohesively as a member of the project team. This resource will be 100% dedicated to the program in Year 3.

#### Project Director

**Budget: \$48,750**

**In Kind: \$0**

The Project Director role is a new “key” position that will be filled by the DPI MIS Director. This resource will be re-assigned to support the program and be responsible for coordinating the data stewardship and program managers. This resource will be 75% dedicated to the program in Year 3.

#### Data Stewards

**Budget: \$20,000**

**In Kind: \$0**

## Budget Narrative (Justification)

### Year 3

Data Stewards are representatives from the SEA, Education Standards and Practices Board, Career and Technical Education, and School Districts that are considered the domain experts on specific data sources. Data Stewards are existing State resources with responsibilities that include working with the ndSLEDS project implementation team to define and implement data governance processes, evaluate and fix data quality issues, and provide domain expertise to integrate and use data in the ndSLEDS. During Year 3, the budget includes up to 10 Data Stewards dedicating 5% of their time to the program.

#### **QA/Testing**

**Budget: \$15,000**

**In Kind: \$0**

There will be one internal QA/Testing position contributing to the program providing quality assurance and testing support to all projects during Year 3 including the SIF Pilot, the ndSLEDS Data Warehouse, and the ndSLEDS BI Reporting Tool. This position will be filled by an existing DPI research staff member. This resource will be 50% dedicated to the program in Year 3.

#### **Sr. Research Analyst**

**Budget: \$27,000**

**In Kind: \$0**

There will be one Sr. Research Analyst position contributing to the program providing statistical analysis, developing requirements, performing analysis on data, and defining report requirements related to the ndSLEDS project. This position will be filled by an existing DPI resource. This resource will be 50% dedicated to the program in Year 3.

#### **DPI Programmer**

**Budget: \$0**

**In Kind: \$51,500**

There will be two DPI Programmer positions contributing to the program providing general programming support and enhancements for various source systems including STARS. These positions will be filled by existing DPI resources. These resources will be 50% dedicated to the program in Year 3. The State will fund 100% of the cost of these roles as an **in kind** contribution.

#### **STARS Contractor**

**Budget: \$0**

**In Kind: \$35,000**

There will be one STARS Contractor position contributing to the program providing business and data analysis support for STARS. This position will be filled by an existing Contractor responsible for STARS development today. This resource has been budgeted for approximately 320 hours in Year 3. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### **EDFacts Coordinator**

**Budget: \$0**

**In Kind: \$16,800**

There will be one EDFacts Coordinator position contributing to the program providing support for EDFacts reporting. This position will be filled by an existing DPI resource. This resource will be 30% dedicated to the program in Year 3. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### **DPI Trainer**

**Budget: \$25,000**

**In Kind: \$0**

There will be one DPI Trainer position contributing to the program providing end-user training support. This position will be filled by an existing DPI resource trained in data driven decision making and the BI tool. This resource will be 50% dedicated to the program during Year 3.

#### **District Help Desk Support**

**Budget: \$15,000**

**In Kind: \$0**

## Budget Narrative (Justification)

### Year 3

There will be one District Help Desk Support position contributing to the program providing level 1 help desk support to school districts for the ndSLEDS project. This is a new position. This resource will be 50% dedicated to the program during Year 3.

#### **DPI Help Desk Support**

**Budget: \$0**

**In Kind: \$15,000**

There will be one DPI Help Desk Support position contributing to the program providing Level 3 help desk support for the ndSLEDS project. Level 3 supports policy and operational issues for regional and district data stewards. This position will be filled by an existing DPI resource. This resource will be 50% dedicated to the program during Year 3. The State will fund 100% of the cost of these roles as an **in kind** contribution.

#### **Regional DDDM trainer and researcher**

**Budget: \$0**

**In Kind: \$100,000**

There will be two **Regional DDDM trainer and researcher** positions contributing to the program providing training and research support for school districts. These positions will be filled by State resources outside of DPI. These resources will be 100% dedicated to the program in Year 3. The State will fund 100% of the cost of these roles as an **in kind** contribution.

Regional trainers will assist district data stewards as level 2 support issues reported through the District Help Desk Support.

### **2. Fringe Benefits (Yr. 3)**

**Budget Request: \$66,225**

**In Kind: \$66,840**

The State of North Dakota contributes 30% of base salary for health benefits, retirement, social security, workers compensation, and unemployment insurance.

<b>Position</b>	<b>Budget Request</b>	<b>In Kind</b>
Executive Sponsor	0	\$1,350
Program Manager	\$21,000	0
Project Director	\$14,625	0
Data Stewards (10 people)	\$6,000	0
QA/Testing	\$4,500	0
Sr. Research Analyst	\$8,100	0
DPI Programmer	0	\$8,700
DPI Programmer	0	\$6,750
STARS Contractor	0	\$10,500
EDFacts Coordinator	0	\$5,040
DPI Trainer	\$7,500	0
District Help Desk Support	\$4,500	0
DPI Help Desk Support	0	\$4,500
Regional Trainer	0	\$15,000
Regional Trainer	0	\$15,000
<b>Total:</b>	<b>\$66,225</b>	<b>\$66,840</b>

## Budget Narrative (Justification)

Year 3

<b>3. Travel (Yr. 3)</b>	<b>Budget Request: \$14,140</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
Annual Trip to DC		
Airfare (2 persons @ \$800 per ticket)	\$1,600	
Lodging (2 persons @ \$180 per night @ 3 nights)	\$1,080	
Transportation / Parking (2 persons @ \$35 per day @ 3 days)	\$210	
Meals / Incidentals (2 persons @ \$75 per day @ 3 days)	\$450	
	0	
Data Stewards (5 people per Quarter)	0	
Lodging (5 persons @ \$65 per night @ 4 nights @ 4 trips)	\$5,200	
Transportation / Parking (5 persons @ \$180 per trip @ 4 trips)	\$3,600	
Meals / Incidentals (5 persons @ \$25 per day @ 4 days @ 4 trips)	\$2,000	
	0	
<b>Total:</b>	<b>\$14,140</b>	<b>\$ 0</b>

<b>4. Equipment (Yr. 3)</b>	<b>Budget Request: \$357,600</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
Data Warehouse Servers and Storage (annual support)	\$50,000	
Servers SIF (annual support)	\$1,000	
BI Tool (annual support)	\$100,000	
DW Software (annual support)	\$47,600	
eTranscripts license	\$159,000	
<b>Total:</b>	<b>\$357,600</b>	<b>\$ 0</b>

<b>5. Supplies (Yr. 3)</b>	<b>Budget Request: \$4,000</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind
General Office Supplies	\$4,000	
<b>Total:</b>	<b>\$4,000</b>	<b>\$ 0</b>

## Budget Narrative (Justification)

Year 3

**6. Contractual (Yr. 3)                      Budget Request: \$1,096,800                      In Kind: \$ 0**

Description	Budget Request	In Kind
<p>ITD Contract (continued from Yr. 2) Continue contract with ITD to fill technical roles on the ndSLEDS implementation team. The ITD positions will begin replacing similar positions filled by the SLDS Implementation Team (below) supporting the installation, configuration, and launch of the data warehousing and reporting tool. Team includes multiple roles including:</p> <p>Project Manager                      Rate = \$85/hr for 1,900 hrs                      IT Engineer (hosting support)      Rate = \$85/hr for 950 hrs                      DBA and ETL developer              Rate = \$85/hr for 1,900 hrs                      Portal/Report developer              Rate = \$85/hr for 1,900 hrs                      Report developer                      Rate = \$85/hr for 1,900 hrs                      QA/Testing                              Rate = \$85/hr for 950 hrs</p>	\$754,800	
<p>SLDS Implementation Team (continued from Yr. 2) Continue contract with a vendor to install, configure, and launch the ndSLEDS data warehouse and BI reporting tool. Team includes multiple roles including:</p> <p>DW Project Manager                  Rate = \$160/hr for 475 hrs                      DW ETL Engineer                      Rate = \$140/hr for 475 hrs                      DW BI Developer                      Rate = \$140/hr for 475 hrs                      DW Training and Content              Rate = \$140/hr for 950 hrs</p>	\$342,000	
<b>Total:</b>	<b>\$1,096,800</b>	<b>\$ 0</b>

**7. Construction (Yr. 3)                      Budget Request: \$0                      In Kind: \$0**

Not Applicable

**8. Other (Yr. 3)                              Budget Request: \$2,500                      In Kind: \$ 0**

## Budget Narrative (Justification)

### Year 3

Description	Budget Request	In Kind
SIFA Membership Fee	\$2,500	
<b>Total:</b>	<b>\$2,500</b>	<b>\$ 0</b>

**9. Total Direct Costs (Yr. 3) Budget Request: \$1,762,015 In Kind: \$289,640**

**10. Indirect Costs (Yr. 3) Budget Request: \$36,920 In Kind: \$32,150**

DPI will use the Federally authorized rate of 11.1% to cover indirect costs. This rate is applied to all costs except equipment and only the first \$25,000 of any contract labor. It is expected that DPI will establish 4 separate contracts with vendors to complete the project.

**11. Training Stipends (Yr. 3) Budget Request: \$0 In Kind: \$0**

Not Applicable

**12. Total Costs (Yr. 3) Budget Request: \$1,798,935 In Kind: \$321,790**

## Budget Narrative (Justification)

### Year 4

#### Year 4 Project Highlights and Major Milestones:

- Implement eTranscripts
- Design and Implement Workforce Data Integration
- Monitor ndSLEDS operations
- Monitor data quality via audits
- Address ndSLEDS bug/fixes and install software upgrades
- Analyze help desk tickets and conduct user satisfaction surveys to identify opportunities for improvement
- Make system enhancements
- Add additional education data
- Provide ongoing training

#### 1. Personnel (Yr. 4)

**Budget: \$114,700**

**In Kind: \$292,800**

During Year 4 State resources begin to ramp down as major initiatives are completed and the program enters operations and maintenance

#### Executive Sponsor

**Budget: \$0**

**In Kind: \$4,500**

The Executive Sponsor role will be filled by an existing DPI resource. This resource will be 5% dedicated to the program during Year 4. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### Program Manager

**Budget: \$0**

**In Kind: \$70,000**

The Program Manager role is a new “key” position in DPI responsible for coordinating tasks between the State and school districts. This role will provide communication plans, coordinate status meetings and design meetings with the school districts and represent the districts cohesively as a member of the project team. This resource will be 100% dedicated to the program in Year 4. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### Project Director

**Budget: \$32,500**

**In Kind: \$0**

The Project Director role is a new “key” position that will be filled by the DPI MIS Director. This resource will be re-assigned to support the program and be responsible for coordinating the data stewardship and program managers. This resource will be 50% dedicated to the program in Year 4.

#### Data Stewards

**Budget: \$20,000**

**In Kind: \$0**

Data Stewards are representatives from the SEA, Education Standards and Practices Board, Career and Technical Education, and School Districts that are considered the domain experts on specific data sources. Data Stewards are existing State resources with responsibilities that include working with the ndSLEDS project implementation team to define and implement data governance processes, evaluate and fix data quality issues, and provide domain expertise to integrate and use data in the ndSLEDS. During Year 4, the budget includes up to 10 Data Stewards dedicating 5% of their time to the program.

## Budget Narrative (Justification)

### Year 4

#### **QA/Testing**

**Budget: \$6,000**

**In Kind: \$0**

There will be one internal QA/Testing position contributing to the program providing quality assurance and testing support to all projects during Year 4 including the SIF Pilot, the ndSLEDS Data Warehouse, and the ndSLEDS BI Reporting Tool. This position will be filled by an existing DPI research staff member. This resource will be 20% dedicated to the program in Year 4 and will sustain QA/Testing ongoing.

#### **Sr. Research Analyst**

**Budget: \$16,200**

**In Kind: \$0**

There will be one Sr. Research Analyst position contributing to the program providing statistical analysis, developing requirements, performing analysis on data, and defining report requirements related to the ndSLEDS project. This position will be filled by an existing DPI resource. This resource will be 30% dedicated to the program in Year 4.

#### **DPI Programmer**

**Budget: \$0**

**In Kind: \$51,500**

There will be two DPI Programmer positions contributing to the program providing general programming support and enhancements for various source systems including STARS. These positions will be filled by existing DPI resources. These resources will be 50% dedicated to the program in Year 4. The State will fund 100% of the cost of these roles as an **in kind** contribution.

#### **STARS Contractor**

**Budget: \$0**

**In Kind: \$35,000**

There will be one STARS Contractor position contributing to the program providing business and data analysis support for STARS. This position will be filled by an existing Contractor responsible for STARS development today. This resource has been budgeted for approximately 320 hours in Year 4. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### **EDFacts Coordinator**

**Budget: \$0**

**In Kind: \$16,800**

There will be one EDFacts Coordinator position contributing to the program providing support for EDFacts reporting. This position will be filled by an existing DPI resource. This resource will be 30% dedicated to the program in Year 4. The State will fund 100% of the cost of this role as an **in kind** contribution.

#### **DPI Trainer**

**Budget: \$25,000**

**In Kind: \$0**

There will be one DPI Trainer position contributing to the program providing end-user training support. This position will be filled by an existing DPI resource trained in data driven decision making and the BI tool. This resource will be 50% dedicated to the program during Year 4.

#### **District Help Desk Support**

**Budget: \$15,000**

**In Kind: \$0**

There will be one District Help Desk Support position contributing to the program providing level 1 help desk support to school districts for the ndSLEDS project. This is a new position. This resource will be 50% dedicated to the program during Year 4.

#### **DPI Help Desk Support**

**Budget: \$0**

**In Kind: \$15,000**

There will be one DPI Help Desk Support position contributing to the program providing Level 3 help desk support for the ndSLEDS project. Level 3 supports policy and operational issues for



## Budget Narrative (Justification)

Year 4

Description	Budget Request	In Kind
Annual Trip to DC		
Airfare (2 persons @ \$800 per ticket)	\$1,600	
Lodging (2 persons @ \$180 per night @ 3 nights)	\$1,080	
Transportation / Parking (2 persons @ \$35 per day @ 3 days)	\$210	
Meals / Incidentals (2 persons @ \$75 per day @ 3 days)	\$450	
	0	
Data Stewards (5 people per Quarter)	0	
Lodging (5 persons @ \$65 per night @ 4 nights @ 4 trips)	\$5,200	
Transportation / Parking (5 persons @ \$180 per trip @ 4 trips)	\$3,600	
Meals / Incidentals (5 persons @ \$25 per day @ 4 days @ 4 trips)	\$2,000	
	0	
<b>Total:</b>	<b>\$14,140</b>	<b>\$ 0</b>

**4. Equipment (Yr. 4)                      Budget Request: \$357,600                      In Kind: \$ 0**

Description	Budget Request	In Kind
Warehouse Servers/ License/ Storage (annual support)	\$50,000	
Servers SIF (annual support)	\$1,000	
BI Tool (annual support)	\$100,000	
DW Software (annual support)	\$47,600	
eTranscripts license	\$159,000	
<b>Total:</b>	<b>\$357,600</b>	<b>\$ 0</b>

**5. Supplies (Yr. 4)                      Budget Request: \$2,500                      In Kind: \$ 0**

Description	Budget Request	In Kind
General Office Supplies	\$2,500	
<b>Total:</b>	<b>\$2,500</b>	<b>\$ 0</b>

**6. Contractual (Yr. 4)                      Budget Request: \$668,500                      In Kind: \$ 0**

## Budget Narrative (Justification)

Year 4

Description	Budget Request	In Kind
<p>ITD Contract (continued from Yr. 3) Continue contract with ITD to fill technical roles on the ndSLEDS implementation team. The ITD positions will assume all operations and maintenance duties for the data warehouse. Ongoing expansion of education data into the warehouse and the creation of statewide reports and public reporting.. Team includes multiple roles including:</p> <p>Project Manager                      Rate = \$85/hr for 1,900 hrs IT Engineer (hosting support)      Rate = \$85/hr for 950 hrs DBA and ETL developer              Rate = \$85/hr for 950 hrs Portal/Report developer              Rate = \$85/hr for 1,900 hrs Report developer                      Rate = \$85/hr for 1,900 hrs</p>	\$527,000	
<p>Analysis, design and development to load unemployment insurance data in the data warehouse and build reports. Tasks include: Data analysis, data matching and definition, data modeling, design and build ETL, design and build reports, testing, and deployment.</p>	\$75,000	
<p>SLDS Implementation Team (continued from Yr. 2) SLDS vendor will provide ongoing end-user training sessions on data driven decision making and usage of the BI environment. Establishment of standard training methodologies and transfer of knowledge to DPI and district trainers:</p> <p>DW Training and Content              Rate = \$140/hr for 475 hrs</p>	\$66,500	
<b>Total:</b>	<b>\$668,500</b>	<b>\$ 0</b>

<b>7. Construction (Yr. 4)</b>	<b>Budget Request: \$0</b>	<b>In Kind: \$0</b>
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Not Applicable

<b>8. Other (Yr. 4)</b>	<b>Budget Request: \$2,500</b>	<b>In Kind: \$ 0</b>
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Description	Budget Request	In Kind

## Budget Narrative (Justification)

Year 4

Description	Budget Request	In Kind
SIFA Membership Fee	\$2,500	
<b>Total:</b>	<b>\$2,500</b>	<b>\$ 0</b>

**9. Total Direct Costs (Yr. 4) Budget Request: \$1,194,350 In Kind: \$380,640**

**10. Indirect Costs (Yr. 4) Budget Request: \$21,451 In Kind: \$42,251**

DPI will use the federally authorized rate of 11.1% to cover indirect costs. This rate is applied to all costs except equipment and only the first \$25,000 of any contract labor. It is expected that DPI will establish 4 separate contracts with vendors to complete the project.

**11. Training Stipends (Yr. 4) Budget Request: \$0 In Kind: \$0**

Not Applicable

**12. Total Costs (Yr. 4) Budget Request: \$1,306,801 In Kind: \$331,891**