U.S. Department of Education

Washington, D.C. 20202-5335

APPLICATION FOR GRANTS UNDER THE

STATEWIDE LONGITUDINAL DATA SYSTEMS
CFDA # 84.372A
PR/Award # R372A090008
Grants.gov Tracking#: GRANT10075714

OMB No. 1890-0004, Expiration Date:
Closing Date: SEP 25, 2008

Table of Contents

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OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424 Version 02

* 1. Type of Submission:	* 2. Type of Application:	* If Revision, select appropriate letter(s):
☐ Preapplication	☒ New	
☒ Application	☐ Continuation	* Other (Specify)
☐ Changed/Corrected Application	☐ Revision	

* 3. Date Received:	4. Applicant Identifier:
09/23/2008	

5a. Federal Entity Identifier:	* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:	7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:	Wisconsin Department of Public Instruction

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
39-6006487	809611254

d. Address:

* Street1:	P.O. Box 7841
Street2:	125 South Webster St.
* City:	Madison
County:	Dane
* State:	WI: Wisconsin
Province:	
* Country:	USA: UNITED STATES
* Zip / Postal Code:	53707-7841

e. Organizational Unit:

Department Name:	Division Name:
Lib/Tech/Community Learning	Information Technology

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:	Mr.	* First Name:	Rodney
Middle Name:			
* Last Name:	Packard		
Suffix:			

Title:	Chief Information Officer
Organizational Affiliation:	Wisconsin Dept. of Public Instruction
* Telephone Number:	(608)266-7049
Fax Number:	(608) 266-3644
* Email:	rodney.packard@dpi.wi.gov

OMB Number: 4040-0004
Expiration Date: 01/31/2009

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-GRANTS-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.):

State of Wisconsin

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

Developing a longitudinal data system to support 21st century learning in Wisconsin

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

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Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant: WI-002

* b. Program/Project: WI-all

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

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 07/01/2009

* b. End Date: 06/30/2013

18. Estimated Funding ($):

* a. Federal	0.00
* b. Applicant	5,769,269.00
* c. State	395,595.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	6,164,864.00

*** 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 Explanation

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:	Mr.
* First Name:	Michael
Middle Name:	
* Last Name:	Thompson
Suffix:	
* Title:	Executive Assistant
* Telephone Number:	(608)266-3584
Fax Number:	(608)266-5188
* Email:	michael.thompson@dpi.wi.gov
* Signature of Authorized Representative:	Michael Thompson
* Date Signed:	09/23/2008

Authorized for Local Reproduction

Standard Form 424 (Revised 10/2005)
Prescribed by OMB Circular A-102

OMB Number: 4040-0004
Expiration Date: 01/31/2009

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:
Wisconsin Department of Public I...

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	$ 1,019,600	$ 1,068,488	$ 805,418	$ 531,990	$ 0	$ 3,425,496
2. Fringe Benefits	$ 44,892	$ 45,790	$ 46,706	$ 47,640	$ 0	$ 185,028
3. Travel	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 0	$ 20,000
4. Equipment	$ 260,500	$ 435,500	$ 135,500	$ 135,500	$ 0	$ 967,000
5. Supplies	$ 24,298	$ 24,653	$ 25,015	$ 25,384	$ 0	$ 99,350
6. Contractual	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 0	$ 320,000
7. Construction	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
8. Other	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
9. Total Direct Costs (lines 1-8)	$ 1,434,290	$ 1,659,431	$ 1,097,639	$ 825,514	$ 0	$ 5,016,874
10. Indirect Costs*	$ 203,669	$ 235,639	$ 155,865	$ 117,223	$ 0	$ 712,396
11. Training Stipends	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 0	$ 40,000
12. Total Costs (lines 9-11)	$ 1,647,959	$ 1,905,070	$ 1,263,504	$ 952,737	$ 0	$ 5,769,270

***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? **[X]** Yes **[ ]** No
(2) If yes, please provide the following information:
Period Covered by the Indirect Cost Rate Agreement: From: 7/1/2008 To: 6/30/2009 (mm/dd/yyyy)
Approving Federal agency: **[X]** ED **[ ]** Other (please specify): _____
(3) For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:
[X] Is included in your approved Indirect Cost Rate Agreement? or, **[ ]** Complies with 34 CFR 76.564(c)(2)?

ED Form No. 524

U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:
Wisconsin Department of Public I...

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	$ 69,160	$ 69,160	$ 69,160	$ 69,160	$ 0	$ 276,640
2. Fringe Benefits	$ 29,739	$ 29,739	$ 29,739	$ 29,739	$ 0	$ 118,956
3. Travel	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
4. Equipment	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
5. Supplies	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
6. Contractual	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
7. Construction	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
8. Other	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
9. Total Direct Costs (lines 1-8)	$ 98,899	$ 98,899	$ 98,899	$ 98,899	$ 0	$ 395,596
10. Indirect Costs	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
11. Training Stipends	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
12. Total Costs (lines 9-11)	$ 98,899	$ 98,899	$ 98,899	$ 98,899	$ 0	$ 395,596

OMB Approval No.: 4040-0007
Expiration Date: 04/30/2008

ASSURANCES - NON-CONSTRUCTION PROGRAMS

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.

* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	* TITLE
Michael Thompson	Executive Assistant
* APPLICANT ORGANIZATION	* DATE SUBMITTED
Wisconsin Department of Public Instruction	09/23/2008

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

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 $10,00 0 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 subjec t to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* APPLICANT'S ORGANIZATION	Wisconsin Department of Public Instruction
* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE	
Prefix:	Mr.
* First Name:	Michael
Middle Name:	
* Last Name:	Thompson
Suffix:	
* Title:	Executive Assistant
* SIGNATURE:	Michael Thompson
* DATE:	09/23/2008

Close Form

SUPPLEMENTAL INFORMATION
REQUIRED FOR
DEPARTMENT OF EDUCATION GRANTS

1. Project Director:

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Mr.	Rodney		Packard	

Address:

* Street1: P.O.Box 7841
Street2: 125 S. Webster Street
* City: Madison
County: Dane
* State: WI: Wisconsin
* Zip Code: 53704-7841
* Country: USA: UNITED STATES

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

608-266-7049 608-266-3644

Email Address:

rodney.packard@dpi.wi.gov

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:

Please attach an explanation Narrative:

Add Attachment Delete Attachment View Attachment

Project Narrative

Abstract Narrative

Attachment 1:
Title: Pages: Uploaded File: **1234-Project Abstract_Final.doc**

SECTION 5: Project Abstract

(1) Project Title
Developing a Longitudinal Data System to Support 21st Century Learning in Wisconsin

(2) Project Description
Wisconsin's state education agency, the Department of Public Instruction (DPI), is submitting an application to continue development of our longitudinal data system (LDS) in order to meet the demands of our state's educational priorities: closing the achievement gap, building 21st century skills, and moving toward a PK-16 model in which all stakeholders—educators, students, business, government—can make informed decisions based on sound longitudinal data.

Developing a Longitudinal Data System to Support 21st Century Learning in Wisconsin is a proposal that will enable Wisconsin's data systems to move in step with State Superintendent Burmaster's vision of 21st century learning outlined in the *New Wisconsin Promise*. Our commitment is to close the achievement gap, equip students with 21st century learning, and create stronger links between PK-12 and the world of post-secondary education and/or work. So a rich educational picture of Wisconsin students can emerge in this data system—and we can evaluate whether Wisconsin is meeting the *New Wisconsin Promise*—we need to:

1) Build student-level datasets to inform a PK-16 data system, and to increase alignment to LDS data quality standards.
2) Move the public reporting of aggregate data into the LDS where disaggregated student data already resides to reduce redundant data and total costs
3) Develop (restricted-access) analytical tools and public reporting tools that allow a variety of users to access LDS data on an ad hoc basis

In order for educators and other stakeholders to gauge progress on meeting these priorities, we need to have data that follows students over time, ideally PK-16 data. Currently, Wisconsin's LDS system stores student-level achievement data from a variety of sources and while this data is critical, it is not comprehensive enough for our state's demands and cannot answer pressing policy questions. For example, currently we do not have a way to analyze test scores alongside, or in comparison to, courses taken. We are limited by the few K-12 data contained in the LDS, and limited by the lack of a PK-16 data structure. By adding the elements listed above, we will be able to follow student achievement in a more holistic way, provide a more robust picture of student learning in Wisconsin, and a richer context for policy decisions. All of this is necessary if we are to move forward with our vision of preparing students for the 21st century and fulfilling the New Wisconsin Promise.

(3) Expected Outcomes on State's education data system
Several outcomes are expected. We expect that adding three student-level datasets will lead to more robust research and analysis that will directly inform a PK-16 system. We expect that consolidating disaggregated student data with aggregated (publicly reported) data will result in improved data quality, and more accurate reporting. We expect a variety of stakeholders will begin to access the LDS for data-mining by way of the interactive reporting tools we build, relying on the system as the central repository of education data in the state.

Project Narrative

Project Narrative

Attachment 1:
Title: Pages: Uploaded File: **1240-SECTION 6-7_Project Narrative & Timeline_Final.doc**

SECTION 6: Project Narrative

(A) NEED FOR THE PROJECT

Wisconsin's state education agency, the Department of Public Instruction, is submitting an application to develop a comprehensive PK-16 data system. We will build upon the initial successes we have had with our state longitudinal data system (LDS). Department of Public Instruction (DPI) began building the LDS to track students over time, not simply to make longitudinal data available, but to have student-level data available to inform our work on the *New Wisconsin Promise*, a statewide initiative which aims to close the achievement gap, improve student achievement, and advance 21st century learning.

While our state LDS has the technical architecture, necessary governance, institutional support, and security/privacy protections in place, it does not contain key datasets that are needed to make evidenced-based decisions, nor does it have interactive research and analytic tools needed to properly evaluate educational effectiveness.

The data currently contained in the LDS cannot fully answer the myriad of questions around student achievement. The LDS does not include our publicly reported data (aggregate school-level and district-level results), nor does it include pertinent student data currently available at the local level. Without these additional data, we cannot obtain a complete K-12 profile of student achievement. We would like to better determine when and how achievement gaps have been closed. We would like to use data to determine which schools and districts are successful at preparing middle school students for high schools, and how high schools are preparing students for post-secondary course work. We are not able to differentiate between the preparation of Career & Technical Education (CTE) students and the preparation of non-CTE students. Our current data limits our ability to determine which students are prepared for post-secondary level work. As such, we cannot fully evaluate our progress relative to the *New Wisconsin Promise* with the current LDS.

We know that linking summative test data to other critical local data—such as course data—is key to properly evaluating student achievement. It would be short-sighted if we only viewed results from high-stakes testing. Yet this is what Wisconsin's LDS contains today. A comprehensive picture of student achievement must include a variety of data sources. We believe a sound longitudinal data system is a data portal that includes:

- Both aggregated (publicly reported) and disaggregated (individual student data available on restricted access to authorized users) data;
- Both data collected at the local-level and state-level;
- Multiple years of data showing trends over time and the ability to show growth in individual students, schools, and districts.

Currently, the LDS does not contain Wisconsin's publicly reported data. For the past ten years, our redacted data has been stored in a separate application called WINSS: Wisconsin's Information Network for Successful Schools. It was recommended by our LDS Implementation

Team that we convert the public reporting and data stored in WINSS to the LDS in order to leverage the original investment in our longitudinal data system and minimize total technology costs to the state. Transitioning the publicly reported data – collected since 1998 – into the LDS will mean the import of a significant amount of data, allowing for a longitudinal perspective of Wisconsin's accountability data.

We want to be responsive to these recommendations and keep our internal stakeholders engaged in the LDS initiative. As such, with this grant, we plan to migrate the aggregate data over to the LDS and publish public reports from this application.

The LDS also does not contain key data that is collected and stored locally by LEAs. Today, DPI does not have the required interoperability between the state and our districts to gather this critical data. With this grant we will develop the ability to collect course data from LEAs. The Data Quality Campaign lists ten essential elements of a longitudinal data system, and Wisconsin's objective with this grant is to address two major areas of need:

> Element #6
> *Student-level transcript information, including information on courses completed and grades earned. State will be able to track course-taking patterns and analyze their relationship to success on state assessments and readiness for college and work.*
>
> Element #7
> *Student-level college readiness test scores. Student performance on the SAT, SAT II, ACT, Advanced Placement, and other college readiness exams is a good indictor of whether students are prepared to succeed in postsecondary education and work.*

The collection of course data is also of prime importance to Wisconsin's higher education agencies. The University of Wisconsin system, the Wisconsin Association of Independent Colleges and Universities, and the Wisconsin Technical College Board have all expressed the need for this data. Echoing the need to link primary, secondary and post-secondary data, all of these institutions believe those links are critical to understanding student success. A number of recurring research questions have surfaced:

- Are Wisconsin students prepared for college-level work?
- What math classes are students taking and when? Does their sequencing affect secondary and/or post-secondary success?
- Does sequencing of math in HS make a difference in remedial course-taking?
- What districts/schools have the least amount of graduates requiring remedial education in the first year of college?
- With a focus on STEM, how can we track what student groups are taking which courses, with what success rate, and when in their high school careers?
- How can we better tie assessment data into standards and drive school improvement?
- How effective are the career and technical educational programs? How does student preparation here compare to prep for students outside of vocational programs?

Data itself is important, but providing data to support evidence-based decisions is critical. With this grant, Wisconsin would gain a longitudinal perspective using multiple sources of educational data. In addition we will leverage the available technology to create interactive datasets that can be constructed spontaneously according to the user's data question. Offering our stakeholders and Wisconsin's education community a chance to view a fuller picture of our state education data – rather than just static reports created for federal reporting – will allow DPI to fulfill our commitment to providing thoughtful, useful, quality services to Wisconsin's LEAs. We also know that reducing the burden of data reporting and analysis, and providing new information and analyses to districts are services that districts favor.

There is a pressing need to migrate the aggregated public data into the LDS so that users can view student-level, school-level, and district-level data in one data source. There is also a pressing need to compile, view, analyze, and make available local course data in conjunction with state testing data. We believe DPI is in an ideal position to implement these activities and to follow-through on the next stages of LDS development. Wisconsin has both the necessary governance requirements and technical requirements in place, which sets the stage for us to develop a truly effective PK-16 data system.

Technical Requirements

Wisconsin meets the core set of minimum requirements set forth in the request for applications. Because of the initial development of the LDS, our agency has developed the capacity of many staff members to build – and the agency as a whole to sustain – a longitudinal data system. However, we still need to develop significant parts of the system and shore up our technical requirements as outlined below.

Federal Reporting

Federal EdFacts reporting via EDEN became mandatory for the 2006-07 school year. The process for gathering the required data was substantial in Wisconsin because the required data is stored in a number of databases throughout the agency. In order to streamline our federal reporting processes, we need to consolidate competing data systems within DPI. We propose pulling data required for EdFacts from the LDS repository rather than the sundry data sources spread throughout the agency. The data quality processes that were put in place for EdFacts federal reporting will be remain in place, and we therefore believe, data integrity will increase since data pulled from the LDS will already be "cleaned."

In addition, aggregate reporting for state and federal accountability (that is now stored on WINSS) will be transferred to the LDS so that staff can access one data source, and complete state and federal reporting requirements in a more efficient manner. By accessing the data repository, we again believe data integrity will be improved because data pulled from the LDS will have already passed through data verification and data cleaning processes.

Privacy Protection and Data Accessibility

Confidential student data is at the heart of the LDS. Wisconsin residents have historically regarded the privacy of student records as extremely important. Suppression rules and privacy safeguards are therefore taken very seriously throughout the agency. Only authorized district and school personnel have access to individual student data, or unredacted data, at the school and

district level. Publicly reported data does not disaggregate further than student subgroup and will continue to be redacted when necessary to protect student privacy. DPI has a state-of-art security system and will continue to implement strict security rules, ensuring the LDS is a secure and confidential data environment.

Data Quality

DPI data collections have processes and tools in place to ensure the validity and reliability of the data. These include business rule validations and edits at the moment of data capture, limited progress, and summary reports allowing school districts to verify data prior to final submission. DPI technical staff provides comparison reports and follow-up with districts with a significant changes from year to year. These reports, however, are accessible only within the specific data collection tools. Currently there is no way for users to combine data from disparate data sets, and thus data remains in discrete silos. The ability to migrate and link student-level and aggregate data sets will allow users to view interrelated datasets, and will strengthen data quality efforts.

Wisconsin needs to leverage all LDS investments in technology and data cleansing to not only minimize the future effort necessary to satisfy federal reporting requirements, but also to improve the quality and accuracy of data submissions. The Applications Development team uses the same toolset to create EdFacts/EDEN data files that the LDS team uses to build ETL (extract, transformation, and load) routines. EDEN job streams are continually modified to take advantage of new data sets stored in the LDS production database, and therefore, Wisconsin plans to have improved data quality once we consolidate, via LDS, the data pulls required for EDEN reporting. We believe this consolidation will improve data quality and decrease the demands of responding to federal reporting.

Interoperability

Currently, LEA-SEA data exchange between the districts and DPI is primarily one-way, with the districts providing mandated data to DPI. Unfortunately, DPI does not currently have the tools to allow school districts to merge locally stored data with the state's data repository. School districts have asked for additional ways to merge local data with the data held in the state repository.

In part, the demand for increased interoperability is due to the number of data collections that districts are required to respond to in Wisconsin. We have over 1,000 discrete data collections in the agency—ranging from hard copy forms that local districts complete and mail into our offices—to state-of-art, electronic student-level data collections. Wisconsin needs to emphasize internet-based data collections to make these processes less burdensome and more efficient for LEAs and the SEA alike. We need to leverage the power of the longitudinal data system along with our statewide student identifier (implemented in 2005) to better capture student data.

DPI will accomplish this by developing a student-level data collection that captures local course completion data for Grades 6-12. Districts will be able to complete this data collection online and see student-level results in the LDS, increasing the interoperability and two-way traffic between the state and local districts.

Enterprise-wide Architecture

A significant component of this proposal is to strengthen the enterprise wide architecture by combining student-level and aggregate-level data into a single data repository. To date DPI has linked student-level enrollment data and student-level assessment data into a single data repository. An enterprise data model has been created and will continue to be updated as the publicly reported data as well as the additional data sets—such as ACT College Admissions data, Vocational Education Enrollment Reporting System (VEERS) data, and Course Completion data—are migrated into the LDS.

These datasets will lay the foundation for a PK-16 data system that will inform teams throughout the agency, districts throughout the state, and post-secondary institutions external to the agency. The migration of new data sets into the LDS also provides the opportunity to solidify common definitions across the agency. We will continue to develop a data dictionary to include these new datasets, and to provide standardized guidance to both internal and external users of the LDS.

(B) OBJECTIVES FOR PROPOSED SYSTEM

While the foundation of our state longitudinal data system has been established, key pieces have not been developed and the need for further development is apparent. We are ready to build on the initial success of the LDS by incorporating publicly reported data into the system. We will migrate our aggregate, summary data currently stored in WINSS to the LDS so that both aggregate and disaggregated data are available to authorized users. This will minimize total technology costs for the state. We will increase local-state interoperability by building the infrastructure to collect local course data. By doing so, we will be able to track student achievement holistically, and provide a more robust picture of student learning in Wisconsin. In turn, this will provide a richer context for PK-16 policy decisions. All of this is necessary if we are to move forward with our vision of improving student achievement, reducing the achievement gap, and preparing students with 21st century skills.

Objective 1: Create a Comprehensive Education Portal & Data Repository

Consolidating data systems under one roof for "one-stop-shopping" data needs is an advanced goal of any state longitudinal data system. Currently Wisconsin has several public reporting sites. Data needed to satisfy the ESEA Report Card requirements and the state mandated School Performance Report can be found on WINSS (Wisconsin's Information Network for Successful Schools). Other public reports are located throughout DPI's public website, usually on a program area team page. As such, users unfamiliar with DPI's organizational structure may have difficulty locating desired data. Integrating data from multiple locations can also be difficult as the reporting format is not always uniform. A comprehensive educational portal drawing from a single data repository can address some of these challenges by including not only student-level (restricted access) data, but also publicly reported data, aggregate test results, accountability data, course data and graduate information. This will allow users to create a cohesive data picture, allowing for more in-depth research and ultimately, more answers for stakeholders.

WINSS has been a valuable resource for parents, students and educators in Wisconsin for many years. The website reports assessment data, displays demographic data, and provides research and resources for school improvement efforts. It has become the cornerstone of Wisconsin's

public reporting of data with the data analysis section receiving 15 million hits last year. However, as with any system, technologies change, organizational needs change, and new strategies for state-level leadership emerge.

WINSS was developed more than ten years ago. At that time, the application was developed by an out-of-state vendor. This software development firm continues to host and support the application. In the years since the development of WINSS, the information technology team at DPI has grown significantly in terms of skills, knowledge and experience with web-based applications, but also in terms of actual full-time personnel. Publishing data and the public reports from the current system is labor intensive and costly. Much of the data used to populate WINSS is needed for data informed decision making and longitudinal research, thus duplicative effort is needed to populate and maintain both WINSS and the LDS system. Furthermore, anytime there are multiple sources for the same data, the potential for errors increases and data integrity decreases. Extensive effort is spent with quality assurance checks to ensure that the multiple reporting sites agree.

Wisconsin has begun to build a longitudinal data system, acquiring the technology and fostering the technical skills necessary to build a data repository. This work has been done internally with minimal outsourcing. Migrating the publicly reported data over to the LDS will eliminate the need to maintain two data systems, which is expensive and unnecessary. This will eliminate duplicative resources and streamline our data processes. It was also recommended by the LDS Project Implementation Team that we convert WINSS data to LDS in order to fully leverage the original investment in our longitudinal data system. As a result, it is a DPI priority to move the data, structure and governance of WINSS into the LDS.

In fact from the start, the LDS was designed and managed by DPI staff. Given the recent investment in LDS and the growth of the DPI information technology team, we would like to bring the hosting of our publicly reported data back in-house. This will eliminate the redundancies of having two data reporting systems and reduce our costs. In addition, not outsourcing the management of the public reporting system will allow DPI to have more ownership and control over the data and reporting architecture.

In addition, the technology driving WINSS is aged and limited by offering ASP/HTML defined reports that are no longer consistent with DPI technical architecture. The technology behind WINSS has become inconsistent with our educational priorities. Bringing this data and reporting functions back in-house will afford DPI more control over technology that is ever-changing. We believe this will allow us more flexibility with the LDS, and the ability to be more responsive to the data needs of our staff and stakeholders in Wisconsin's education community. The LDS will offer tools that provide greater flexibility for analysis that will better meet the needs of stakeholders.

Another goal of creating a single data repository is to ensure consistency between what is reported publicly on the DPI website with what is submitted to the US Department of Education through the EDEN Submission System. Federal reporting through the EDEN system became mandatory for the 2006-07 school years. In an effort to comply, DPI took steps to begin centralizing federal reporting through the agency's Data Management and Reporting team.

Meetings were conducted with program area staff to identify the data collection systems used and where that data is currently located. Business Analysts documented the source and transformations needed to comply with the EDEN file formats. Developers created the necessary data files, and program area users reviewed the data before submission. Data sources were wide and varied ranging from excel spreadsheets to large Oracle databases. Many files were interrelated, but because of the specific data collection systems involved, it was not uncommon to use multiple sources of data to create a single EDEN file.

With the development of a single data repository, it will be possible to use the same underlying data structures designed for the agency's public reporting site for the creation of EDEN files. This will reduce the potential for data quality errors and will increase data integrity between federally reported and publicly reported data. The improved datasets, in turn, will enable improved EDEN reporting processes.

Rather than expending resources to maintain and support multiple data systems, efforts can be focused on making the LDS data repository the gold standard of education data in Wisconsin – and create a central point of entry for education data. This repository will enable DPI staff, external stakeholders, districts, and researchers to analyze data in relation to the New Wisconsin Promise and 21st century learning by creating a more complete picture of the educational environment in Wisconsin.

There are strong financial, technical, and management incentives behind the plan to consolidate our public and restricted data. Rather than be constrained by the technologies chosen over ten years ago, we plan to leverage the growth and abilities of our technology staff and keep the maintenance in-house. This will allow us to adapt to changes in technology, changes in data reporting, or changes in the technical architecture of the system in a more efficient manner. Leveraging new technologies will also streamline our data, thus reducing the expenses incurred by maintaining a reporting structure that is dated.

Objective 2: Develop Student-Level Data Collection & Data Set-Course Data

Student course data (Data Quality Campaign, Essential Element# 6) in Wisconsin is currently collected in aggregate form only. It is collected by subject and topic at the district level. Individual districts have wide latitude in determining under which subject and topic area to report a specific course. This means two districts teaching the same course may report under different subject and topic areas. Furthermore, a given subject and topic area may include a wide range of courses. As a result it is hard to do comparative analysis between districts.

Next school year, Wisconsin schools will begin to use the *Secondary School Course Classification System: School Codes for the Exchange of Data (SCED)* taxonomy and course descriptions from the National Center for Education Statistics. By shifting to a set of common course codes, our state will achieve uniformity in course collection data, and will allow schools and districts to communicate, compare, and analyze the performance of their students under a standardized course code system.

This marks a great opportunity for the collection and analysis of courses taken across the state. DPI plans to build upon the shift to the new collection of course codes by requesting that districts

enter course data (using the NCES course codes) at the student-level into a new application. Currently DPI collects aggregate course data via Excel spreadsheets. This method is less than precise. We have found it is not efficient, effective, nor particularly relevant to schools. We will transition to a web-based application that will directly feed the LDS, to collect Grade 6-12 course data. The data that is collected will be the first set of data using consistent codes across the state based on the NCES taxonomy course descriptions. This will allow Wisconsin to not only examine trends on a district-by-district basis, but on a school and student level. Schools will be able to make comparisons to other similar schools, knowing that all schools across the state are using a common set of course codes.

These steps have long-range implications for the development of the longitudinal database system. As stated in the publication *Secondary School Course Classification System: School Codes for the Exchange of Data (SCED),* "growing national and state interest in building longitudinal databases that can measure the added value of education over time, as well as the accountability requirement of No Child Left Behind, suggest that SCED will be a useful tool for state and local education agencies. SCED will also be useful when school districts exchange transcript information electronically. On receipt of an electronic transcript, the course coding structure combined with course descriptions enable new students to be placed in appropriate classes with no delay."

Of course, there are a plethora of educational institutions in Wisconsin – external to DPI – that would like this data to be made available. DPI has had a number of discussions with higher education institutions in the state on the importance of applying primary and secondary course data to answer questions on student readiness for college-level work. They are eager to have data on incoming classes of students, particularly related to the course work that prepares students for successful completion of college-level coursework. In turn, the higher education schools in our state are also interested in understanding what gaps exist in preparing students for post-secondary success. As providers of numerous remedial mathematics and English courses, our colleges and universities have a vested interest in student-level course data.

Both the University of Wisconsin system and the Wisconsin Association of Independent Colleges & Universities are eager to strengthen our partnership in building strong PK-16 connections. Letters of support can be found in Appendix A.

Objective 3: Add Student-Level Data Sets-ACT Data

Another key student data set we will add to the LDS will be results from the ACT college admissions test. The Data Quality Campaign specifically calls for "student-level college readiness test scores" as a key feature of successful state longitudinal data systems (Essential Element #7).

Nearly 70% of Wisconsin graduates take the ACT, and Wisconsin students have historically outperformed students nationally on the ACT. However, we do not have the ACT scores linked to what courses our students may have taken to prepare them for this test, nor do we have ACT scores linked to other student achievement indicators such as the state accountability test given in Grade 10. With such a large proportion of Wisconsin students taking this test annually, ACT scores represent an important and highly relevant dataset for our longitudinal student data

system. By adding ACT test data into the LDS, links between curriculum, course taking, course sequencing, and standardized testing can be established, creating genuine PK-16 connections. This was recognized as a priority at a recent statewide meeting of school district administrators.

Currently, disaggregated ACT data is not available and comparative data cannot be generated, nor analyzed to establish these links between courses taken, ACT achievement and state test results. Therefore, with this grant we will incorporate five years of ACT results (2005-2009) and continue to add ACT data each year going forward.

Objective 4: Add Student-Level Data Sets-VEERS Data

Career and Technical Education (CTE) programs are very popular with Wisconsin students. In fact, over 90,000 students were enrolled in high school vocational courses in 2007. Career and Technical Education focuses on exploration of the self in relation to the world of work. Students discover their interests, talents, abilities, and the niches where their talents and abilities might best be used. Career and Technical Education also equips students with research skills to enable them to form a realistic picture of job opportunities. CTE prepares students for all post-high school opportunities. Whether moving on to further education, training or employment, every Wisconsin student moves through curriculum-based career awareness, exploration, planning and preparation leading to a realistic individualized career plan which is compatible with the student's abilities, aptitudes and interests.

The Vocational Education Enrollment Reporting System (VEERS) is an important aspect of the Carl Perkins Career & Technical Education Improvement Act as it collects career and technical education enrollment information from districts receiving federal Perkins funds. This enrollment information is used to fulfill mandated requirements including the Federal Performance Report; to gather information related to the districts for the State Plan; to assist districts in measuring progress to mandated Core Indicators of Performance; and as a criterion in the Office of Civil Rights process. While VEERS data is not reported at the individual level, it is collected at the student-level. This dataset, therefore, represents an excellent complement to data on post-secondary readiness and course data that is planned for the LDS, and would greatly inform the PK-16 model.

The federal VEERS data collection includes post-graduation plans. From the VEERS data set we will know how many students are planning to enter baccalaureate, non-baccalaureate, or career prep courses. This dataset details which CTE learning methodology was chosen: apprenticeship, state certified cooperative education, or industry sponsored programs. We also will have data on students who choose agriculture, business, economics, health occupations, marketing or technology concentrations. This information will undoubtedly be useful to Wisconsin's technical, vocational schools, as well as the college and universities that will be accepting these students into their institutions.

With this grant, we will populate the LDS with VEERS data, and we will add the preceding five years of VEERS data (2005-2009) to aid those measuring CTE effectiveness, but also to create a longitudinal dataset that concretely connects to the world of work and post-secondary success. The Wisconsin Technical College System Board (WTCSB) is highly supportive of these plans and has included a letter of support (Appendix A).

Objective 5: Build Next Generation Analysis and Reporting Tools
Currently available datasets contain aggregate data only. They are static and were designed to answer specific questions – generally addressing questions of state and federal accountability. These datasets do not lend themselves to answering today's complex and varied data-driven questions, nor do they support the interconnected research questions facing educators today.

Rather than providing "canned" reports, we will allow users to drive data output based on their specific research question. We will build interactive reporting solutions into the LDS. Building this interactive capacity will enable users to access to a variety of datasets, create ad hoc reports and enable research that was never possible before. In addition, the next generation analysis and reporting tools would allow longitudinal data analysis for schools and districts wanting to track student growth. Educators would be able to access reports and queries that would display individual growth of their students over time. As a result, LDS users will be able to view reports that combine course data, a variety of test scores, and demographic features on either a disaggregated or aggregated basis. Our regional partners, the Cooperative Education Services Agencies (CESA), are strongly in favor of this and have expressed the need for customized reports for regional education and economic purposes. (See Appendix A, Letters of Support.)

(C) PROJECT DESIGN

The main thrust of Wisconsin's plan is to establish a longitudinal data system that supports a PK-16 evaluation and decision support system. The components included in our request will work to achieve this goal and to reinforce the importance of clear, accurate data linkages as students move through the state educational system. This grant request is a combination of foundational data and systems work that the DPI has not had the capacity to embark on until now. The requested funds will build on the grant awarded to Wisconsin in 2006, *Longitudinal Data Systems to Support Data-Driven Decision-Making*. The hardware and software put in place over the last three years laid the foundation for work on new solutions to proceed immediately.

Objective 1 Design: Create a Comprehensive Education Portal & Data Repository
With the funding made available with this grant, DPI will:

- Move publicly reported aggregate data into the LDS production environment
- Finalize the EdFacts Management Portal and move to the LDS production environment
- Develop clean, consistent data sets in the data warehouse that will ultimately become the sole source for all reporting and analysis, including federal EdFacts reporting
- Build our internal expertise and capacity made available by the Oracle toolset

Wisconsin will migrate the aggregate data from the dated repository (WINSS) to the LDS so that publicly reported data can be accessed from the same source as student-level longitudinal data. Though a significant effort, this is necessary to solidify the importance of accurate longitudinal education data, and key to enabling our constituents to properly evaluate educational progress.

As part of the migration process, summary data tables and structures will be created within the LDS to house data from WINSS. Extraction, translation and loading processes will be developed to bring data from the original sources into the new aggregate data structures. Redaction algorithms will be run to create public data sets, reproducing all mandated reports in the LDS. Throughout the process, DPI will perform user acceptance testing and data verification procedures to ensure the accuracy and quality of data.

The LDS will contain more than data. DPI will load all of the standards and assessment information relevant to school improvement efforts on the WINSS website, along with best practices to support 21st century learning into the longitudinal data system. DPI will use this opportunity to update our presence on the web, and better meet the needs of parents and educators in search of tools/data related to education and student outcomes. Completion of this effort will establish the LDS as the comprehensive education data portal in Wisconsin.

Much of this data resides in existing DPI databases. Reporting data structures will be created in the LDS production environment with a new user interface. DPI will use Oracle portal technologies to provide the structure. This technology will also be used to develop search capabilities. Oracle technology will enable the LDS team to catalog, store and display all related school improvement documents and resources related to standards, assessments, accountability, best practices, school improvement and 21st century learning.

DPI will build upon components already in place, including a production server environment (Please see Appendix A, Attachment 1), a state-of-the-art security system, the Oracle Data Warehouse suite of tools and the Oracle Portal. This will lower the total cost of ownership because completion of this effort enables Wisconsin to terminate its contract with an external vendor that develops and hosts WINSS today. This will also permit the cost savings to be applied to DPI's continued support of the LDS.

Wisconsin will also incorporate the datasets used for EdFacts/EDEN reporting to the LDS. Wisconsin has built a prototype EdFacts Management Portal that enables the real-time monitoring of this federal reporting process. (Please see Appendix A, Attachment 2 for a screen shot.) This management tool documents the processes required for EDEN reporting, and allows DPI staff to track completion status. It was built using Oracle tools—the same platform that is used for the LDS—and therefore, DPI is confident that the transition of EDEN datasets over to the LDS will be smooth.

This effort will deliver a number of new datasets to the LDS. All data sets will be built utilizing conformed dimensions as defined by Ralph Kimball in *The Data Warehouse Toolkit*. This means all attributes that are coded (for example, race and ethnicity) will use the same codes no matter where the data comes from or how old the data is. These clean, consistent data sets will fulfill both public reporting needs and federal reporting requirements. By incorporating mandated, publicly reported data sets into the longitudinal data system, Wisconsin will be creating a comprehensive data repository that fulfill internal and external stakeholder data needs.

Work to accomplish this objective will be sponsored by Rick Grobschmidt, Assistant State Superintendent for the Division of Libraries, Technology and Community Learning who is also

the Executive Sponsor of LDS. It is estimated at 4.0 FTE for one year. The development team will include a part-time Business Analyst/Project Lead, a part-time education consultant and up to three full-time developers. This team will work with a cross-agency team that includes staff from the Data Management & Reporting team, the Title I School Support team, Content & Learning, and the Office of Educational Accountability. The work breakdown structure associated with these steps is included in Appendix A, Attachment 3.

Objective 2 Design: Add Student-Level Data Sets-Course Data

The Data Quality Campaign is a national, collaborative effort to encourage and support state policymakers to improve the collection, availability and use of high-quality education data and to implement state longitudinal data systems to improve student achievement. As such they have identified ten key elements to a successful LDS. Wisconsin currently collects seven of these and plans to add to our list of essential elements by creating a data collection to capture course completion data between Grades 6 and 12.

With student-level class participation data available, Wisconsin will lay the foundation for a comprehensive PK-16 system, and begin to answer key policy questions. For example, we will be able to identify which middle schools are doing the best job of preparing students for secondary course work.

Plans are in place to begin collecting aggregate level course data from Wisconsin districts using the NCES' national course code taxonomy, instead of the subject and topic codes currently used. A fitting complement to this transition will be our proposed student-level course data collection for Grades 6 to 12. A web-based application will collect this data from districts electronically. The collection tool will define a standard file format, enable districts to review the file and then upload into the database. DPI would then run a number of quality control checks, including producing any necessary error reports. Districts would be unable to submit their data until all necessary errors had been corrected. After the initial submission period, districts will be given a verification and edit period during which they can amend the course data before finalizing their submission. The system will also provide status and summary reports so DPI staff and the districts can see how complete the collection process is at that point in time.

This effort will be sponsored by Michael George, Director of Content & Learning in the Division of Academic Excellence and is estimated at 4.0 FTE for nine months. This development team requires a different skill set and will be separate from the team working on the LDS portal and data warehousing portions of the project. This team will include a project leader and three developers from the IT Applications Team. The development team will also work across the agency with staff from the Data Management & Reporting team, the Title I School Support team, Content & Learning, and the Office of Educational Accountability. A work breakdown associated with these steps is included in the timeline in Section 7. Please also refer to Appendix A, Attachment 3 for the work breakdown.

Objective 3 Design: Add Student-Level Data Sets-ACT Data

Though not required for federal reporting, ACT data is of primary importance to the high schools, colleges and the universities of Wisconsin. Unfortunately, aggregate ACT results can

only inform schools of so much. Therefore, student-level ACT data will be integrated into the LDS relying on the LDS-Student-Key systems already in place.

The development team will determine how the data will be used and establish what kind of reporting the agency will want to provide. The team will then model the data to support those needs, build the data structure, map the source to the LDS dataset location and test in the quality assurance environment. As with other student-level datasets, once the data is cleansed and stored in the LDS database, subsequent reporting is simplified. The accuracy of data increases thanks to the added data validation steps already in place.

This effort will be sponsored by Rick Grobschmidt, Assistant State Superintendent for the Division of Libraries, Technology and Community Learning who is also the Executive Sponsor of LDS. This effort is estimated at two full time employees for three months and includes a part-time Business Analyst/Project Lead, a part time educational consultant and one full-time developer. This team will model the data and design ETL specifications. The team will work across the agency with staff from the Data Management & Reporting team, Content & Learning, and the Office of Educational Accountability. A work breakdown associated with these steps is included in the timeline (Section 7) as well as in Appendix A, Attachment 3.

Objective 4 Design: Add Student-Level Data Sets-VEERS Data
Another key student-level dataset identified for the LDS comes from the federal Vocational Education Enrollment Reporting System (VEERS). Perkins Authorization defines the federal reporting requirements for VEERS, and though Wisconsin succeeds in meeting these requirements every year, the effort necessary to do so is considerable.

The development team will determine how VEERS data will be used and establish what kind of reporting the program areas and LDS team need to provide. The development team will then model the data to support those needs, build the data structure, map the source to the LDS dataset location and test in the quality assurance environment. As historic data is cleansed and incorporated into the LDS all subsequent reporting will be simplified due to the fact all "cleansing" has been completed ahead of time. In addition, automated processes can then be built that take standard input (student-level datasets) and create standard outputs (aggregated reporting data sets). This data will reside in the same location as all other LDS student-level data sets and have an appropriate key assigned to every student. This will enable research, analysis and reporting never before possible in Wisconsin.

This effort will be co-sponsored by Rick Grobschmidt, Assistant State Superintendent for the Division of Libraries, Technology and Community Learning who is also the Executive Sponsor of LDS, and Sharon Wendt, Director of Career & Technical Education. The project is estimated at two people for three months and includes a part-time Business Analyst/Project Lead, a part time educational consultant, and one full-time developer. The team will work across the agency with staff from the Career & Technical Education team, Data Management & Reporting team, the Title I School Support team, and the Office of Educational Accountability. A work breakdown associated with these steps is included in the timeline (Section 7) as well as in Appendix A, Attachment 3.

Objective 5 Design: Build Next Generation Analysis and Reporting Tools
Next Generation Analysis and Reporting Tools allow users to create ad hoc, interactive reports by selecting variables of interest. Because the LDS is planned to be the central data repository and main point of entry to education data in the state, Wisconsin must design a system that allows both technical and non-technical users to access desired data. The ability for non-technical users to obtain meaningful data has been and will remain a priority goal of DPI's student data system. Next generation reporting tools allow non-technical users to explore the data available on the system in a meaningful way, and allows technical users (e.g. DPI staff) the ability to analyze data from multiple sources.

In order to create a system that supports interactive reporting, DPI must upgrade the current reporting system that is foundational to the LDS. As the LDS continues to grow in size and complexity, Wisconsin will be required to upgrade both the production environment and the development/quality assurance (QA) environment. The production hardware will be upgraded as more data is moved to the system and to accommodate new data collections. The quality assurance environment will be created to allow system testing and verification procedures before moving to data into the production environment.

Certainly DPI will leverage the existing production and development environments as we enter the next phase of this project. This proposal includes a cost estimate to expand the existing development hardware to serve as both development and quality assurance environments. DPI will continue to utilize Oracle database solutions. This software requires the agency to continue to pay the licensing costs of the existing LDS infrastructure. These costs are mainly paid to Oracle for both their database solution as well as their Fusion Middleware Suite of products, which includes the security and web portal for the LDS system.

This effort will be co-sponsored by Rodney Packard, Chief Information Officer in the Division for Libraries, Technology, and Community Learning, and by Phil Olsen, Assistant Director for the Office of Educational Accountability. This effort is scheduled for late in the first year of the grant through the early part of the second year. It is estimated to require at least two FTE people for one year. This team will include a part-time Business Analyst/Project Lead from the IT Applications Team, part-time educational data consultant and one full-time developer. The team will work across the agency with staff from the Data Management & Reporting team, the Division for Libraries, Technology, & Community Learning, and the Division for Academic Excellence. A work breakdown associated with these steps is included in the timeline (Section 7) as well as in Appendix A, Attachment 3.

System Requirements: Governance & Policy Requirements
The Department of Public Instruction has developed significant data governance and rigor since the inception of Wisconsin's longitudinal data system. Steps have been taken at all levels of the organization to remove barriers to the integration of data and information systems.

Governance was first addressed with a Project Management environment by establishing a common process for all information technology projects. This included the establishment of a Data Management Steering Committee, which is chaired by the State Superintendent's Executive Assistant. Management representatives attend this committee from each program area as well as

the agency's Budget Director. This committee reviews and establishes priorities for all projects. This structure ensures communication with the State Superintendent's Cabinet, the highest level of agency management.

Another significant entity in the governance structure is the Student Data Workgroup (SDW), commissioned by the Data Management Steering Committee. The SDW is the gatekeeper for student-level data collections for the entire organization. Each request for student-level data from school districts must pass through this workgroup. It determines whether the data should be included in the Individual Student Enrollment System (ISES), which is based on unique statewide student identifiers, the Wisconsin Student Number system. The workgroup provides guidance and oversight in the continued development of student-level data systems including data elements, definitions, code sets, validation, report design, and the use of data to calculate publicly reported statistics.

In addition, the LDS Project Implementation Team was established specifically to tend to the detail of LDS related objectives and integration issues within the agency. This workgroup establishes the look and feel of the LDS portal and identifies tools that would be useful for future LDS development. With representatives from several different program areas, the LDS Project Implementation Team helps assure that the products of our student data system are relevant and useful to internal and external stakeholders alike. This group reviews plans for training and professional development of DPI staff, teachers, administrators and external LDS users. This implementation team is chaired by a program manager and is attended by representatives from the agency program areas, the IT data collection unit, and IT management.

DPI recognized the importance of managing specific data issues including data ownership, management, confidentiality and access in an open and transparent manner. After DPI received a Data Warehouse Planning Grant, the agency adopted a plan to develop a Data Dictionary of common data elements. This helps to ensure data integration and elimination of redundant and/or inconsistent data. Population of the electronic data dictionary continues in parallel with the LDS development. To address data confidentiality and access, the DPI established a Pupil Data Policy Advisor position in 2007. This position reviews all data access requests and has the authority to approve or deny such requests.

The DPI also has built rigor into our communication with external stakeholders. An entity with historical significance is the State Superintendent's Education Data Advisory Committee (SSEDAC). Chaired by the DPI Chief Information Officer, the SSEDAC includes district superintendents, district assessment directors, district IT directors, and representatives from the Cooperative Education Service Agencies (CESA), Wisconsin Education Association Council (WEAC), and local school boards. Plans and data issues are shared routinely with the SSEDAC, and they directly advise the State Superintendent and her Cabinet.

Additional workgroups are formed for specific LDS topics. For example, one workgroup addressed the issues of LEA-SEA data sharing. Attending to this issue, DPI developed a strong partnership with a local school district specifically for the purpose of conducting a pilot program to investigate sharing local data with DPI, and conversely, the state sharing data with the LEA. The results of this pilot and lessons learned will be used throughout this grant.

Another noteworthy group that handles critical SEA-LEA issues is the IT Directors of Wisconsin's ten largest school districts. DPI routinely addresses and gathers feedback on data, information systems, integration, and data policy from this group. DPI's Chief Information Officer elicits feedback and works through data obstacles collaboratively with this group.

System Requirements: Technical Requirements

Significant progress has been made in fulfilling the technical requirements. The status of DPI's efforts in relation to federal reporting, privacy protection and data accessibility, data quality, interoperability and enterprise-wide architecture are outlined here, as well as some accolades received for this work.

Federal Reporting

Recently, DPI staff received three awards for excellence and completion of several key data submissions through the federal Educational Data Exchange Network (EDEN) submission system. EDEN is a coordinated system for federal reporting to the US Department of Education, and replaces the need to report directly to specific federal program offices. Federal reporting via EDEN became mandatory for the 2006-07 school year, the same year for which DPI received multiple awards at the EdFacts Coordinators Meeting. The data quality processes that were put in place for EdFacts federal reporting will be replicated throughout the LDS.

All federal reporting efforts use the base technologies put in place during the first phase of the LDS project, specifically: Oracle Warehouse Builder, Oracle development databases, and where possible, LDS production data. The Wisconsin strategy is to leverage all LDS investments in technology and data cleansing to minimize the effort necessary to satisfy federal reporting requirements. Development processes have been documented and are stored in one single repository, allowing for better change management and the development of reproducible processes. For example, the Applications Development team uses the same toolset to create EDEN files that the LDS team uses to build extract, transformation and load routines, reducing the reporting burden on districts. In addition, EDEN job streams are continually modified to take advantage of new data sets stored in the LDS production database.

Recently, Wisconsin built a prototype EdFacts management portal that enables the real-time monitoring of our completion of this federal reporting. (Please see Appendix A, Attachment 2 for a screen shot.) This management tool that was built improved the processes required for EDEN reporting. It was built using Oracle tools, the same platform that is used for the LDS and therefore, we can be confident that the transition of EDEN reporting over to the LDS will be smooth.

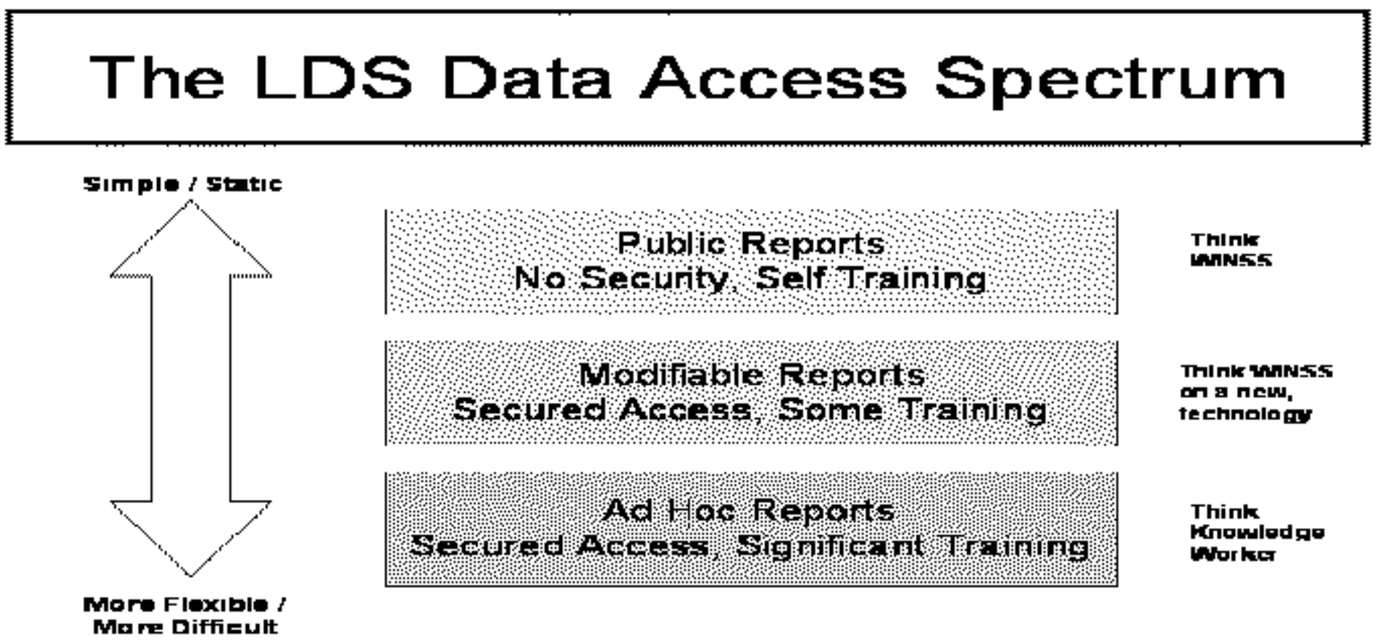
Privacy Protection and Data Accessibility

Wisconsin residents have historically regarded the privacy of student records as extremely important. DPI has strict suppression rules and state law provides additional safeguards to student data beyond the federal FERPA mandates. DPI strictly adheres to these student privacy rules and documents this as such in our data systems.

The priority of student privacy has been preserved in the state's Individual Student Enrollment System (ISES). The public does not and will not have access to this confidential database. Only authorized district and school personnel have access to individual student data, or unredacted data, at the school and district level. Publicly reported data does not disaggregate further than student subgroup, and will continue to be redacted when necessary to protect student privacy.

In ISES, districts use Wisconsin Student Numbers (WSNs) instead of student name or social security number when submitting data about student educational progress. Student performance data, always confidential, are attached to encrypted WSNs rather than to student names, and are then stored in a secure location on the network. WSNs are encrypted before storage at DPI to provide an extra measure of privacy. Confidential data is accessible only to legally authorized persons with legitimate educational interests. Only locally-authorized district and school personnel have access to WSNs with student names and other identifying information attached, for the purpose of registering students. Students are not expected to know their WSNs, nor are these identification numbers released to parents, the public or media.

Security and access to LDS data is role-based with authorization and authentication occurring at the individual user level. Only authorized users have access to confidential data. Role assignments are made at the district level under the supervision of district administrators. DPI has specified three levels of access; two of the three key methods to access the LDS data stores require security solutions. All of these security features are in place today.



The first level of the LDS data access spectrum is public access and requires no specific security beyond the application of Wisconsin's suppression rules for redacted data. Reports at this level are predefined, simple to use, and include redacted data to protect individual student identities from being revealed.

Applications at the second level of access enable a trained user to manipulate (via Oracle technology) the associated graphs and/or data being viewed. Within the constraints of the application developed by the LDS technical team, a trained user can further explore data by "dragging and dropping" new attributes into the report or, for example, change a pie chart into a bar chart. The security for this level of access was developed in coordination with a technical partner, Zirous LLP, and further builds on the functionality available through Oracle Access

Manager. In general, this security is designed to enable trained users from local districts to see their data and only their data.

When creating security solutions for these two levels, DPI focused on the following objectives:

- To ensure the protection of the student's identity and all student-level data made available through the LDS Portal. This protection will prevent people that do not have explicit access from seeing non-redacted summary data or detailed student-level data
- To enable the delegation of security administration, and thus explicit data access, to district level administrators. Delegated administration will push out the responsibility for adding users and managing access to the LDS Portal to the local educational authority responsible for the student
- To simplify the setup and administration of user level security for the LDS Portal.
- To leverage the user identifiers already setup for other State wide data collections. To leverage the existing user account base of accounts used by ISES and WSLS. User provisioning (creation/deletion/password reset) also gets leveraged by this system.

The third level of access is ad hoc and will most likely include users who are adept at accessing and analyzing data electronically. These users are comfortable accessing technology for data mining, and typically comprise the education research community, internal DPI staff and other "knowledge workers" who are savvy with education data. Access at this level requires significant training and an authorized user identifier. Security at this level is database security and will be provided by the Oracle database.

Student privacy is also addressed at a policy level. Within DPI, staff who work with individual student data or staff data receive training on FERPA privacy protections as well as Wisconsin's stringent state privacy laws. Training is also conducted on how to maintain student confidentiality, outlining the restrictions of data sharing. Access to confidential data is currently managed by a Pupil Data Policy Advisor and the Chief Information Officer (CIO). Access to data is granted only if necessary to the employees work, and only after sufficient training.

Data Quality

DPI has taken several steps to ensure the reliability and validity of data stored in the longitudinal data system. Data quality efforts begin with data collection, continue with agency-wide data verification procedures, and extend to all data collections whether they are collected externally or internally. Great strides were made in this regard in 2004-05 when Wisconsin instituted the unique student identifier and data collection system. Use of the Wisconsin Student Number system has improved data quality, improved DPI service to districts, and consequently, improved agency credibility in districts throughout the state.

As a standard part of every data collection, DPI publishes written documentation defining the data elements for that collection. Documentation includes a list of acceptable values. Automated web applications have built in validation and edit checks to prevent data mismatches from being submitted. This also ensures that data is collected in a consistent manner across the state. Training is provided to districts and schools through a variety of formats, on-site training, user manuals, and multi-media presentations posted on the agency website. Technical Support Staff

conduct biweekly teleconferences during the Wisconsin WSN and ISES collection periods in which vendors and districts can ask questions. These efforts are supplementary to the normal day-to-day Help Desk service. DPI is also developing a data dictionary project that will establish a data language with common definitions across our agency's many data collections.

Also part of DPI's data collection protocols, districts are able to review data submitted prior to final submission. This verification process is completed via summary reports. Some reports allow reviewers to select specific variables to be used in aggregation, allowing administrators to look at the accuracy of data for specific student groups. Internal DPI staff also review summary reports to enhance data quality, looking for reasonability and comparing to prior years data. District's administrators are contacted when anomalies are identified. Districts are given a sufficient window of opportunity to revise the data, and the window of time is announced to districts well in advance of the verification period. With the WSLS and ISES system, DPI also has dedicated staff members who address problem WSNs, including one position devoted to detecting and correcting duplicate student identification numbers.

Additional Agency Wide Data Quality Initiatives

Within DPI, efforts are being made to increase training on the importance of data quality, how data may be used for decision-making, along with efforts to develop and strengthen the data skills of agency staff. The Data Management Steering Committee commissioned a Data Training Workgroup to identify the data skill sets required for particular positions throughout the agency.

To assist in this effort, DPI hired a Training Officer. And surveys were sent to all DPI employees seeking feedback on staff familiarity and expertise with a number of software tools, including tools used for data analysis. Based on the feedback from staff, classes continue to be offered agency-wide at introductory and advanced levels. These courses are helping to build the technical skills of DPI staff in every division of the agency.

In addition, training sessions have been held to give program users a better idea of what data is collected through the ISES system, what data is available for analysis, and how it might be used to evaluate educational effectiveness. The ISES helpdesk and support staff work closely with program area experts, providing summary reports for data quality review.

DPI has also successfully applied for grants specifically targeting data quality. In 2008, DPI was awarded an NCES State Cooperative Special Task Order grant, which was used to create additional summary reports for districts to review and validate data. Given the recognition DPI has received for data quality efforts, we believe Wisconsin is poised to make great progress on developing a comprehensive and effective longitudinal data system that ensures a high level of data quality and effective data governance.

Interoperability

DPI supports and maintains a multitude of web-based data collection instruments that collect data using standard file formats. Most of these applications provide users with two options for submitting data, via file upload or via on-screen data entry. Common data definitions and business rule validations ensure that data collected by one district is comparable to other districts. Except in a few cases, the transfer of data is one way from the school or LEA to DPI.

The first student-level data collection utilizing unique statewide student identifiers was implemented in 2006-07. And in 2007, DPI built on its student-level data collections with a system to capture and report incidents of expulsion and discipline.

Enterprise-Wide Architecture

Wisconsin implemented a unique student identifier system in 2005. The first enterprise, student-level data collection—the Individual Student Enrollment System (ISES)—relied on these unique student identifiers and was implemented in 2006. Subsequent student-level data collections continue to build on this work by consistently using the unique student identifiers, and linking student records across data systems.

To date, DPI has linked student level enrollment data and student level assessment data into a single data repository. An enterprise data model has been created and DPI will continue to build on this rich source of data by adding student-level ACT college admissions test data, career and technical education data, and course completion data, laying the foundation for a PK-16 longitudinal data system.

In addition to district and school master data contained in the Wisconsin LDS, the system has a number of student-level data sets in place today including:

- Wisconsin Knowledge and Concepts Exam Results: 2006, 2007 & 2008
- Wisconsin Alternate Assessment Results: 2006, 2007, & 2008
- Individual Student Enrollment System (ISES) Year End Records: 2006, 2007 & 2008
- Individual Student Enrollment System (ISES) Count Date Records: 2006, 2007 & 2008
- Student Master File: All students enrolled in a Wisconsin school since 2006 and their associated demographics
- IDEA Child Count Data: 2008

Currently in progress:

- Individual Student Enrollment System (ISES) Discipline Records: 2007 and 2008
- English Language Proficiency (ELP) data: 2006, 2007, 2008
- Advanced Placement Data: 2006, 2007, 2008

These data sets will be supported by a newly implemented data dictionary early in 2009. Working with the state of Colorado, DPI is creating an electronic, web-based data dictionary similar to what is used in Colorado. The work to implement an agency-wide data dictionary is substantial and ongoing. However, once the exchange of technology is secured, DPI will put the dictionary into practice.

(D) INSTITUTIONAL SUPPORT

The DPI has a rich history of providing on-going support for information technology functions. Many of the items described in Section C describe an organizational culture of support along with strong management commitment to sustaining data systems. Two examples in particular reflect this commitment: DPI's project management structure and the Data Management Steering Committee.

The Data Management Steering Committee is chaired by the State Superintendent's Executive Assistant. Various management representatives from program areas are included in the committee's membership, along with the Budget Director. This structure ensures communication with the State Superintendent's Cabinet, the highest level of agency management. The committee has been charged with reviewing and establishing priorities for all data related projects. They established and disseminated the agency's Data Management Vision and Guiding Principles. This document can be found in Appendix A, Attachment 5. The guiding principles outline the critical aspects of data collection (privacy protections, valid and reliable data, minimize reporting burdens), and data reporting (privacy protection, actionable reporting, maximizing access to data reports). The vision that was established by this committee permeates agency data projects:

> *The Wisconsin Department of Public Instruction will maintain a comprehensive data management system of data collection and reporting to maximize the efficient collection and use of high quality data to improve the educational success of all Wisconsin students and meet federal and state reporting requirements. DPI data collection and reporting systems must be necessary and useful, protect student privacy, and address long-term capacity to develop and maintain.*

The DPI project management team recognizes that 60-80% of the cost of a system during the System Development Life Cycle (SDLC) is after the system goes into production. Decisions to support DPI technology projects, therefore, are made knowing the majority of costs are dedicated to sustainability and maintenance.

For a number of years, DPI has had in place a chargeback system that allocates funds from program areas to maintain the hardware and software infrastructure of the agency. This includes DPI's desktop environment, network, database and server environment. Where appropriate, DPI charges back on an hourly basis, in cases such as Application Development time. This is supported by detail project accounting, which tracks development time and is integrated within the Project Management environment.

In addition to those cited in Section C, there are numerous examples of agency support specific to data systems that have been demonstrated in recent years. The Library and Statistical Information team was reorganized into the Data Management and Reporting team. In 2007, a supervisory position—the Section Chief for the Data Management and Reporting team—was authorized for the data management, collection, cleansing and reporting functions of the agency, This position was authorized and funded in recognition of the importance of quality data and customer service. The Data Management & Reporting Section Chief reports to the CIO. In addition to the creation of this high-level position, DPI requested and was authorized to create two application development positions to support and maintain the state's Individual Student Enrollment System (ISES) in the 2008-09 Biennial Budget period. The ISES database includes student demographic and outcome data, and is the basis of virtually all data reporting mandated by state and federal government.

The fact that DPI has established high-level committees that address data issues within the agency points to the level of institutional support the project enjoys and how much of a priority it is to departmental leadership that we have a comprehensive, in-house LDS.
The positive environment of sustainability continues for the 2009-10 Biennial Budget period. In the early stages of the budget preparation, management has supported additional positions for the maintenance and sustainability of DPI data systems. The request specifically supports the LDS development and expansion activities outlined in this proposal.

External support for DPI's proposed LDS plans is evident in the letters of support (Appendix A). DPI has the support of the University of Wisconsin System, the Wisconsin Technical College System, the Wisconsin Association of Independent Colleges and Universities, Madison Metropolitan School District, the Cooperative Educational Service Agency (CESA 1) covering Milwaukee Public Schools, along with CESA 6, the Division of Public Health in the Department of Health Services for the State of Wisconsin and the Division of Enterprise Technology in the Wisconsin Department of Administration.

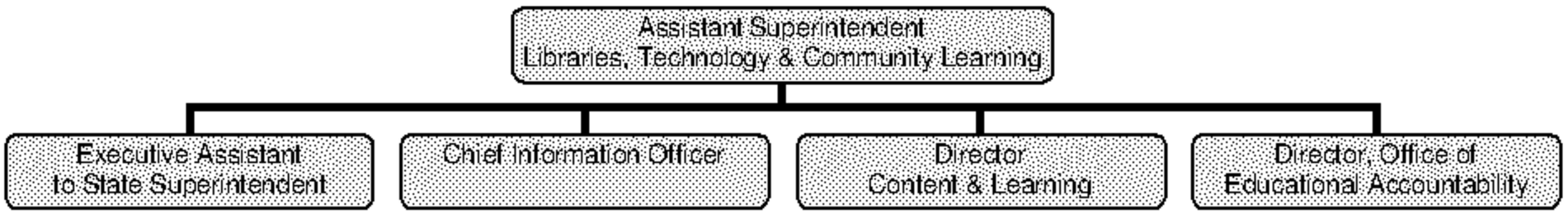
(E) PROJECT MANAGEMENT PLAN

This grant proposal is prepared with the full approval of all levels of agency management. At the highest level the project is the responsibility of the State Superintendent and by her delegation, the executive sponsor, who is the Assistant Superintendent of Libraries, Technology and Community Learning (see the enclosed resume of Rick Grobschmidt). He is ultimately responsible for the successful creation and completion of Wisconsin's longitudinal data system. The Executive Sponsor interfaces with the Superintendent's Cabinet on policy issues. On a daily basis, he actively participates in and facilitates collaborative LDS efforts with other divisions in the agency.

DPI has two key committees that drive LDS structure, governance, data policy and management issues: the LDS Executive Steering Committee and the LDS Implementation Team.

The LDS Executive Steering Committee is led by the project sponsor and made up of direct reports for the State Superintendent as well as other high level DPI staff. Membership of this committee was established under the LDS governance structure, and will remain in place through the next phases of LDS development. The primary responsibility of this Committee is to ensure the project remains aligned with the needs and priorities of educators and children in the State of Wisconsin, as well as to provide strategic oversight of project activities.

Wisconsin LDS Executive Steering Committee



The LDS Implementation Team is made up of content experts and program areas representatives who are responsible for executing the work of the project. Prioritizing work, testing new deliverables, communicating to others in the agency, and working with the project teams are the responsibilities of this team. The LDS Implementation Team is led jointly by the Assistant Director of the Office of Educational Accountability (OEA) and the Chief Information Officer (CIO). Please see enclosed resumes of Phil Olsen and Rodney Packard, respectively.

The organizational teams of Content and Learning and the Office of Educational Accountability are integral to the development of the LDS, and are both represented on the Executive Steering Committee and the LDS Implementation Team. Although the IT organization manages most of the development and project reporting, the LDS is a collaborative effort throughout the DPI. Various program teams shepherd information to the IT team. A Project Framework has been established for all information technology projects in the agency, including the Longitudinal Data System.

Daily project oversight will be the responsibility of the Chief Information Officer, who will assume the role of project director (see the attached resume of Rod Packard). The CIO reports to the Assistant Superintendent of Libraries, Technology and Community Learning. In addition to his role as the project director, the CIO will assign technical resources as appropriate to ensure necessary technical teams are in place to accomplish project work. The CIO is PMP Certified and has a strong track record of managing large technology projects on time and on budget. He is responsible for keeping LDS projects on time and on budget. His direct reports are also PMP Certified or apply project management best practices, as defined by DPI Information Technology methodology.

The Director of the Office of Educational Accountability (OEA) is a key stakeholder and works closely with the project team to ensure they stay aligned with the needs of the agency (see attached resume of Lynette Russell). In particular, the OEA Director is responsible for the majority of public reporting of data, and data analysis necessary to support policy decisions. The OEA Director reports to the Assistant Superintendent of Reading and Student Achievement. In addition to her role on the LDS Executive Steering Committee, the Director of OEA assigns resources to ensure that knowledgeable staff are routinely integrated into LDS planning and design issues, as well as data analysis and reporting teams. The OEA staff has expertise in assessment, accountability, data analysis, public reporting, suppression rules and data warehousing. OEA has assigned three people to the LDS Implementation Team and their membership will continue under this grant (see attached resumes of Phil Olson, Amy Marsman and Susan Ketchum).

Daily project management will be the responsibility of two project managers who report directly to the CIO. One project manager will lead the efforts to build the new data collection for class completion data. This person will be assigned from the IT Applications Development team and has significant experience in web-based technologies and existing DPI data collections (see attached resume of Sarita Jha).

For every IT project, DPI employs a somewhat traditional waterfall methodology, requiring involvement from multiple program areas. One key to this methodology is an Analysis and

Design Phase that produces a detailed estimate of costs in addition to a plan for the Execution Phase. With this information in hand, the project team and key stakeholders are better able to determine how to proceed with the project. The Execution Phase does not begin until a meeting is held and all parties agree on a method to proceed.
A second project manager/business analyst will lead a separate team of developers and representatives from the program areas to build the data warehouse and portal portions of this plan. Multiple work teams can be active at one time depending on resource levels, and the size of the effort. The project manager/business analyst is expected to manage time between efforts. These work teams meet routinely with the CIO, and once per month with the LDS Implementation Team to discuss progress and gather input from the cross-agency team.

These efforts will be structured in the same manner as DPI's other LDS activities. That is, a technical team will be partnered with a team of content experts. These content experts typically also serve on the LDS Implementation Team and are familiar with the aims of the longitudinal data system. Given their participation on the LDS Implementation Team, they come vested with a solid understanding of project objectives, history and stakeholder needs.

The grant proposal contains a high level Gantt chart for each of the five major objectives contained in our development plans. (Please see Appendix A, Attachment 4.) Each of the projects will follow the work breakdown structure, and maintain fidelity to the identified budget, resources, and schedule throughout the duration of work.

There will be additional project oversight throughout the duration of the project lifecycle by an Independent Verification and Validation (IV&V) team. This group is an independent team of IT and budget professionals who conduct periodic reviews of project deliverables, schedule, and budgeting. Results are shared with agency management.

A final note on the oversight of the proposed activities: a project of this magnitude is considered "High Profile" as defined by the Wisconsin Legislature and subject to additional monitoring by the state legislature. One of the criteria defining "High Profile" is any project with a budget over $1 million. DPI has been required, when efforts reach the $1,000,000 threshold, to submit monthly Dashboard Reports. These reports contain status updates for Schedule, Scope, Budget and Other Issues, and are signed by the Director of Information Technology, Executive Sponsor, Finance Authority, Business Authority and Contract Administrator. Dashboard Reports are sent to the Secretary of the Department of Administration.

(F) PROJECT PERSONNEL AND RESOURCES

The LDS development teams will work with a cross-agency team, which will include staff from the Data Management & Reporting team, the Title I School Support team, Content & Learning, and the Office of Educational Accountability. There is close, direct involvement of a number of program areas in this effort and DPI plans to leverage agency staff's deep knowledge and expertise covering content, assessment, accountability, data management and reporting. For example, the request contains an Educational Consultant (permanent staff members in the agency's program areas), who will bring program expertise and the perspective of a *user* of

educational data to the project. This position will be allocated to a number of LDS projects in order to positively influence the development and outcomes of the varied objectives. Staff from many program areas have been involved in LDS projects and committees, and will remain collaborative members of LDS teams throughout the duration of the project.
The DPI management representatives directly involved in the development of the LDS, and this request in particular, have many years of experience within the agency, as well as within their specific discipline. Key project leaders, discussed in Section E, and their qualifications are included in the résumés found in Appendix B.

The DPI has a number of qualified Business Analysts and Project Leaders, each of whom will be allocated half time to two projects outlined in this proposal. These staff members have over three years of experience working with DPI data systems, including Teacher Licensing, ISES, Special Education, Career & Technical Education, and Grant Automation. When needed, a Project Lead function will be filled with a contractor who has the specific qualifications required. For example, we expect that a Project Lead with experience using a specific set of software tools will be required for the development of the next generation reporting tools.

The contingent of Developers will be a combination of DPI staff and contractors, depending on the skill set availability and demands from other projects. A number of DPI Developers have experience with LDS system components, along with the Oracle software tools previously acquired. Developers have been entrenched in the development of the current LDS system. We expect to assign these contractors to the new LDS work in order to build on their experience and institutional knowledge already attained.

DPI has estimated the personnel and required time commitments with regard to the five objectives contained in this request. This breakdown can be found in Appendix A, Attachment 6. Staffing requirements are also displayed via a Gantt chart in Section 7-Timeline. The chart specifies staffing requirements for the four year timeline along with the number of staff that will be allocated by year quarter. This depicts the start and end of projects along with the respective quantity of staff by function. Some projects overlap during the four year period and the allocation of staff reflects the timeline.

SECTION 7: TIMELINE

Initial work for the grant will focus on building a comprehensive data repository, first by integrating additional individual student level data sets followed by the migration of publicly reported aggregate data into the LDS data repository. Focus will then shift to collecting student level course data and developing the next generation of analysis and reporting tools. Throughout this effort the hardware and software technologies of the LDS production and Quality Assurance (QA) environments will be upgraded.

A work breakdown structure (WBS) identifying project outputs or deliverables is provided for each objective below. (Please refer to the WBS in Appendix A, Attachment 3.) The main objective of the WBS is to create a common understanding of project scope and what work will be done. The work breakdown is hierarchical with each lower level providing further breakdown of the higher level. No sequencing or scheduling is implied, however the WBS is a key input to schedule development.

Please note that the timeline does not include the in-kind contributions of DPI staff, but rather delineates the staff time included in this request specifically.

Objective 1: Create a Comprehensive Education Portal & Data Repository

The design of a Comprehensive Educational Portal and Data Repository will begin in the first quarter. Based on analysis completed in 2007, it will take 4 FTE one year to complete. This portal will replace WINNS and satisfy necessary public reporting as well as provide other resources and tools to aid in the development of 21st Century Skills thus providing a new DPI presence on the web. The project team will consist of a ½ time project lead/business systems analyst, ½ time education consultant and three developers. Key technologies are already in place, specifically the Oracle Portal, the Oracle database (including necessary student-level data sets), Oracle Access Manager, Oracle Discover Plus (reporting tool) and a state-of-the-art security solution developed with DPI and Zirous. Other key deliverables of this effort are the aggregate data sets necessary for all reporting but housed today with an outside vendor. As the new datasets are moved into the data repository, it will become the source for federal reporting through EDEN/EDFacts.

Deliverables for the Comprehensive Education Portal & Data Repository include:

1.1. DPI Portal and Public Presence
1.2. Aggregate Datasets and Public Reports (migrate WINSS to LDS)
1.3. EdFacts data sets
1.4. Publish Promising Practices to support 21st Century Skills
1.5. User training & communication
1.6. Upgrade of the Wisconsin LDS production environment
1.7. Upgrade Quality Assurance environment

Objective 2: Develop Student-Level Data Collection & Data Set-Course Data

Work on the collection of student level course data is slated to begin in year two. Communications, analyses and planning for the data collection needed to provide student-level course data will begin in the fifth quarter (Q5). This work will take three months and lay the groundwork necessary for the project to succeed. Based on these results, final action steps will be determined to complete the new data collection. In Q6, a team of a ½ time project lead, three java developers and a part-time business systems analyst will be commissioned to build the system. (The business system analyst is an in-kind contribution, and not represented on the resource count of the Gantt chart.)

Based on the experiences of the last data collection project of similar scale, this development effort is estimated to take 3.5 FTE nine months to complete the applications development and implementation work. This team will be independent of the dedicated LDS team. Staffing for this effort will come from the IT Applications Team with experience in building web based collections. Once the collection is complete and the system has gone "live", a separate LDS team will work to move the data into the LDS database early in year three.

This estimate is based on DPI's recent effort to develop and implement a new student-level data collection for expulsion and discipline data. This was a new data collection for DPI, and the LDS team has projected time, budget, communication and management plans based on the success of that project. The key program area involved in this effort will be the Content and Learning.

Deliverables for Data Collection & Reporting for Course Completion Data (Grades 6 – 12) include:

2.1 Enhanced Student Level Data Collection
- 2.1.1 On-line data collection for course completion
  - 2.1.1.1 File upload for course completion
  - 2.1.1.2 On-line reports to monitor data quality & collection progress
  - 2.1.1.3 User documentation
  - 2.1.1.4 User training & communication

2.2 Course Completion Data in LDS for reporting
- 2.2.1.1 Data model for course completion data
- 2.2.1.2 ETL (extract, transformation, load) for course data from new data collection to LDS database
- 2.2.1.3 Cubes and summary data sets for course data
- 2.2.1.4 Federal reporting

Objectives 3 & 4: Add Student-Level Data Sets-ACT Data and VEERS Data

In the first quarter, work will begin with the inclusion of new student-level data sets into the LDS database. These data sets will include ACT and VEERS data. This work is similar to the work completed with the first grant and will be performed in a manner similar to the first grant. The team commissioned to accomplish this work will include one developer, ½ time project lead / business analyst, and ½ time educational consultant.

Working together, and with further input from appropriate program areas, this team will determine how to model the data in the LDS database, evaluate current sources of data and design ETL specifications. Based on these specifications the developer will create clean, consistent data sets. Summary and longitudinal data sets are also created as needed to support analysis or public reporting. Completion of both objectives is expected to take six months beginning in Q1 with ACT, and continuing through Q2 with the VEERS data sets. All necessary technologies and processes are already in place to complete these tasks.

Deliverables for Detailed Student Level Datasets include:

ACT College Admissions Tests

- 3.1 2005 ACT Student Level Data Set
- 3.2 2006 ACT Student Level Data Set
- 3.3 2007 ACT Student Level Data Set
- 3.4 2008 ACT Student Level Data Set
- 3.5 2009 ACT Student Level Data Set
- 3.6 ACT Longitudinal Data Cube

Vocational Education Enrollment Reporting System (VEERS)

- 4.1 2005 VEERS Student Level Data Set
- 4.2 2006 VEERS Student Level Data Set
- 4.3 2007 VEERS Student Level Data Set
- 4.4 2008 VEERS Student Level Data Set
- 4.5 2009 VEERS Student Level Data Set
- 4.6 VEERS Longitudinal Data Cube
- 4.7 Federal reporting

Objective 5: Build Next Generation Analysis and Reporting Tools

The Next Generation Analysis and Reporting Tools will be presented to the Wisconsin Educational Community through the portal discussed above. These tools provide a collection of solutions for school districts to analyze their data. A cross functional team of a ½ time project lead / business systems analyst, a ½ time education consultant, and at least one developer will develop these tools. Working in parallel with the portal team, some subset of solutions will go live in the fifth quarter (Q5) along with the portal. Work will continue on the enhancement and further development of these tools through Q6.

Communications and training for the newly created portal and tools will be conducted late in year two and through some part of year three. A qualified trainer familiar with the principles of adult learning will develop and conduct training for internal and external users. Given that the needs of the Wisconsin education community will change over time and new requirements are certain to be discovered, year three and year four of the grant will be dedicated to evaluating and enhancing solutions that enable us to support 21st Century Learning.

Deliverables for the Next Generation Analysis and Reporting Tools include

5.1 Longitudinal Achievement Trends Report (for schools)
5.2 One-click School Performance Report
5.3 Longitudinal Data Sets (view data over time)
5.4 Data Downloads (enable school districts to download LDS datasets in a secure manner)
5.5 Local Data Supplement (add a new data element A/B/C to standard reports)
5.4 User training & communication

Computer Hardware and Software Upgrades

In order to meet the above stated objectives, DPI will need to upgrade the LDS production environment in order to support more data and larger data sets. The production system will be upgraded first, in quarter 4, followed by the QA environment in quarter 6.

Deliverables for Computer Hardware / Software Upgrades include

5.1 Upgrade of the Wisconsin LDS production environment
5.2 Upgrade Quality Assurance environment

Below is a Gantt chart depicting timelines with regard to staffing requirements. This chart can also be found in Appendix A, Attachment 4. Please note that the timeline does not include the in-kind contributions of DPI staff, but rather delineates the staff time included in this request specifically.

Gantt Chart & Staffing Requirements

Developing a Longitudinal Data System to Support 21st Century Learning in Wisconsin

			Jul-09	Oct-09	Jan-10	Apr-10	Jul-10	Oct-10	Jan-11	Apr-11	Jul-11	Jul-12
			Year 1				Year 2				Year 3	Year 4
DPI Objective	WBS ID	PROJECT DELIVERABLE	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8		
	2.0	Build Detail Student Level Datasets										
3	2.2	Build ACT Data Sets	2.0									
4	2.3	Build VEERS Data Sets		2.0								
1	1.0	Build Corprehensive Educational Portal	4.0	4.0	4.0	4.0	Live					
		Implement Wisconsin Education Portal					2.0					
5	3.0	Build Nex Generation Analysis and Reporting			2.0	2.0	2.0	2.0				
1-5	4.1	Upgrade LDS Production Environment				Live						
2	2.1	Build Class Completion Data Collection (6-12)										
	2.1.1	Enhance Student Level Collection					1.0	3.5	3.5	3.5	Live	
	2.1.2	Incorporate Class Data into LDS									1.0	
1-5	4.2	Upgrade LDS QA Environment						Live				
1-5	5.0	Evaluate & Enhance							3.0	3.0	3.0	3.0
		Professional Development - User Training						1.0	1.0	1.0	1.0	0.5
		IT Staff Required	4.0	4.0	4.0	4.0	3.0	4.5	5.5	5.5	3.0	2.5
		Project Lead Required	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
		OEA Staff (Educational Consultant)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
		Total Staffing Requirements	6.0	6.0	6.0	6.0	5.0	6.5	7.5	7.5	5.0	3.5

Project Narrative

Other Narrative

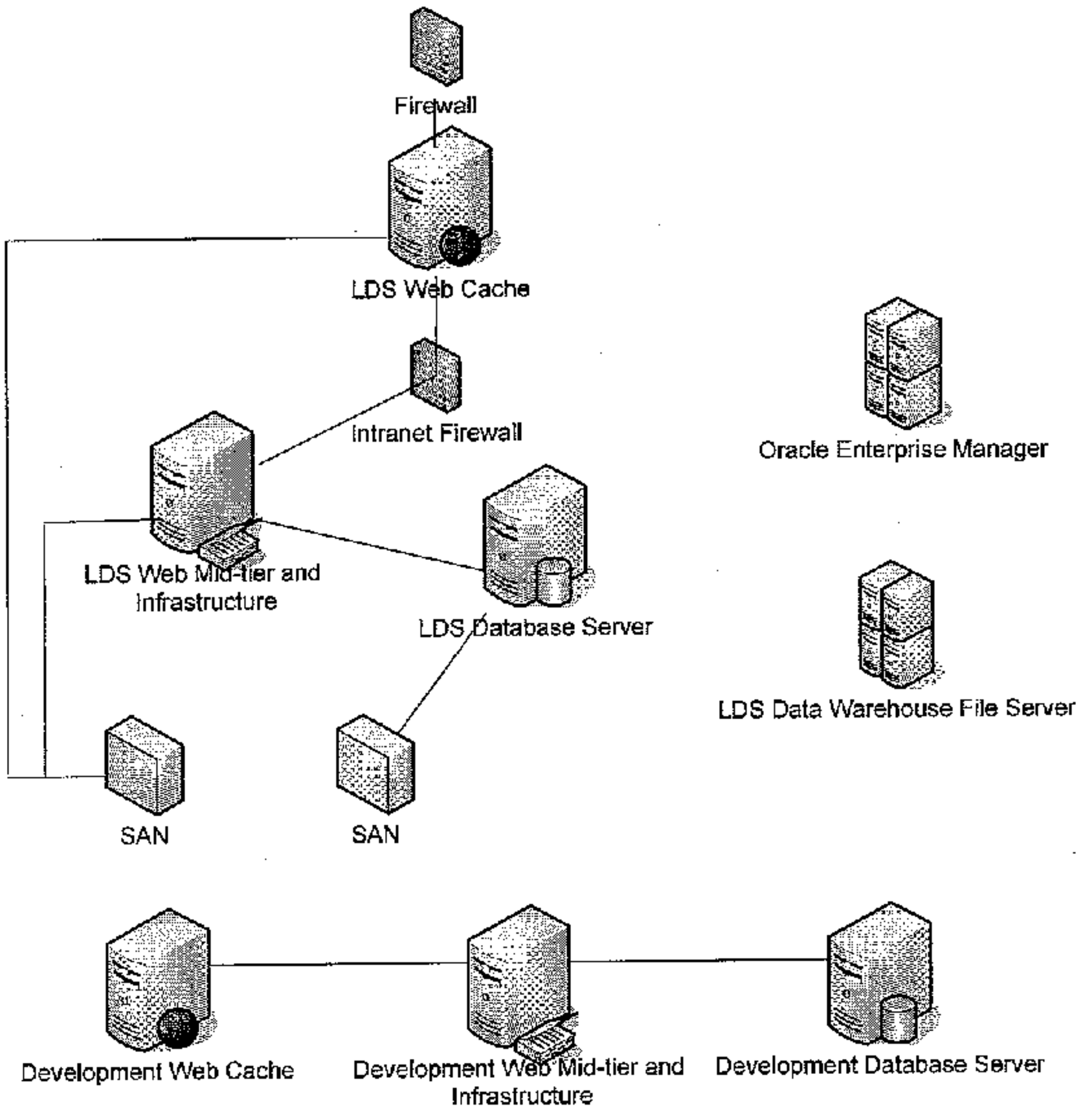
Attachment 1:
Title: Pages: Uploaded File: **1236-APP_A_1-6.pdf**

Attachment 2:
Title: Pages: Uploaded File: **1237-App A LOS.pdf**

Attachment 3:
Title: Pages: Uploaded File: **1238-APP_B_a-k resumes.pdf**

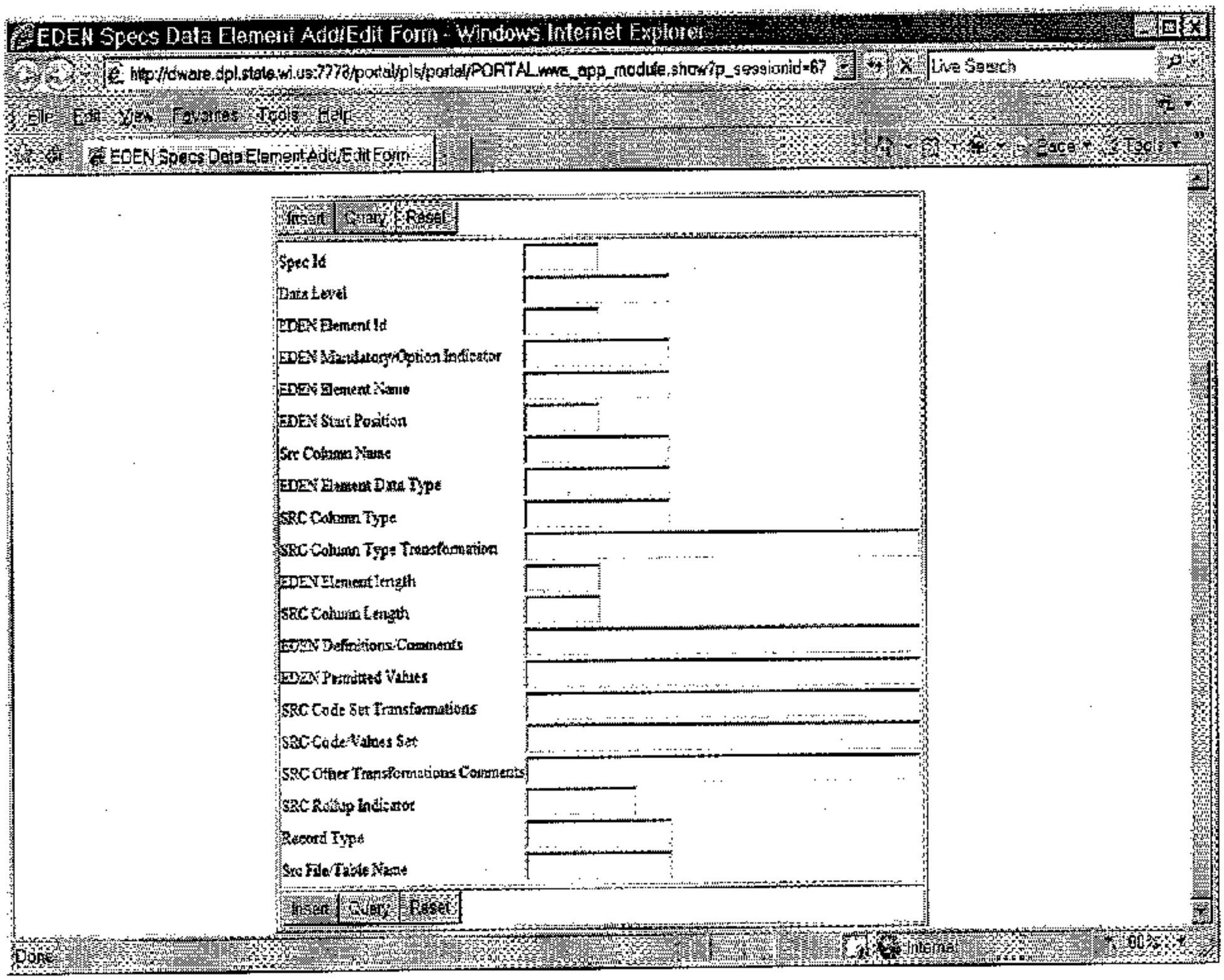
Attachment 4:
Title: Pages: Uploaded File: **1239-APP_B-l - z resumes.pdf**

APPENDIX A, Attachment 1
Current Production Architecture

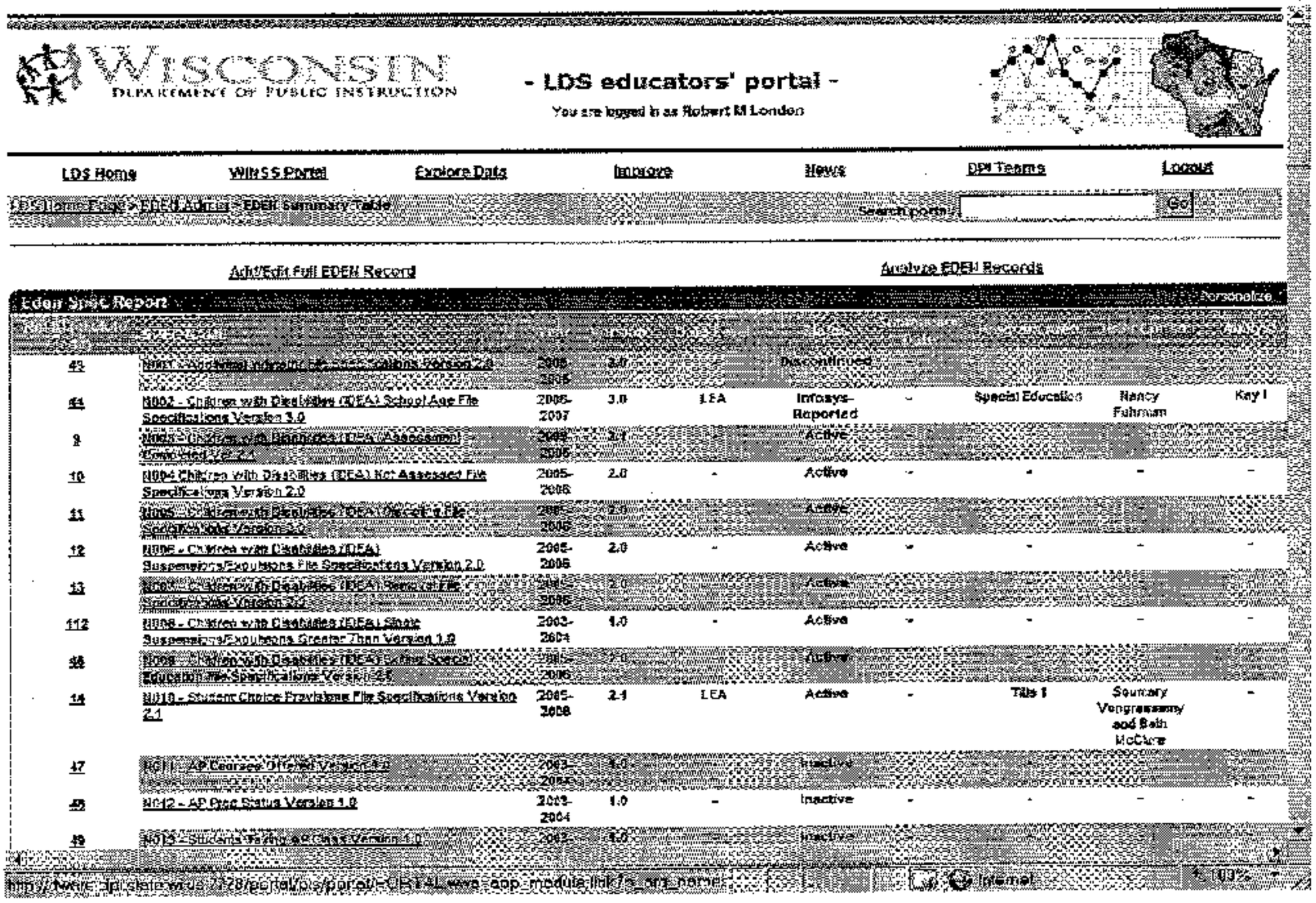


APPENDIX A, Attachment 2
Prototype for EDEN Reporting Management Portal – Screen Shots

Page #1 – Simple screen to collect basic data elements associated with each specification. This data enables subsequent reporting on project status.

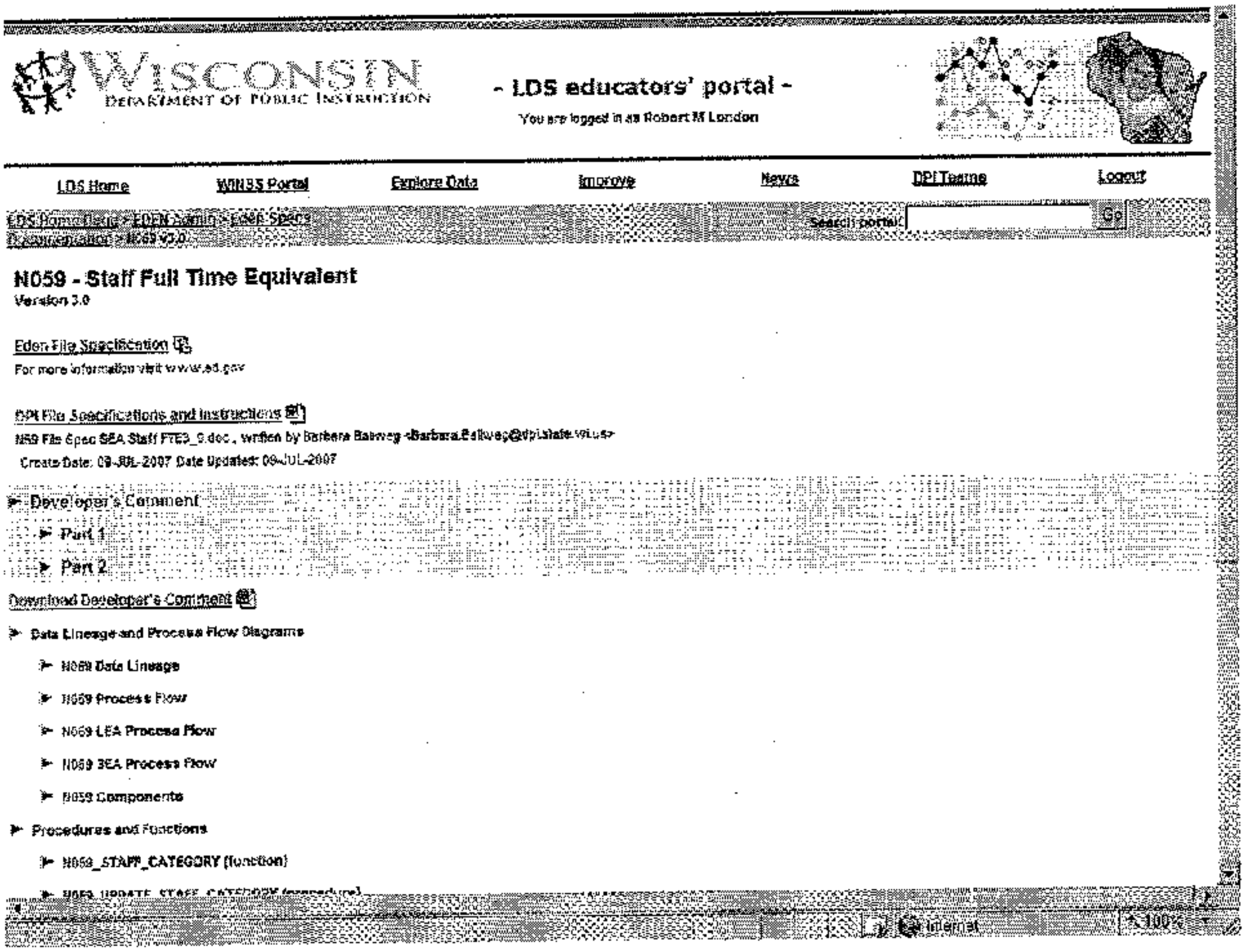


Page #2
Summary screen with a listing of all necessary EDEN specifications and a links to necessary detail.



APPENDIX A, Attachment 2
Prototype for EDEN Reporting Management Portal – Screen Shots

Page #3
Specific information on each EDEN specification including links to documents created by the analyst and programmers. This is intended to promote collaboration and full documentation of all work, including the ETL job streams.



APPENDIX A, Attachment 3
Proposed LDS Work Breakdown Structure

The work breakdown structure, or WBS, is a outcome-oriented decomposition of a project. It defines the project outputs or deliverables. The main objective of the WBS is to create a common understanding of project scope and what work will be done. The work breakdown is hierarchical with each lower level providing further breakdown of the higher level. No sequencing or scheduling is implied, however the WBS is a key input to schedule development.

1. Create a Comprehensive Education Portal & Data Repository (see Project Objective 1)

    1.1. DPI Portal and Public Presence
    1.2. Aggregate Datasets and Public Reports (migrate WINSS to LDS)
    1.3. EdFacts data sets
    1.4. Publish Promising Practices to support 21st Century Skills
    1.5. User training & communication

2. Develop Detailed Student Level Datasets (see Project Objective 2, 3, and 4)

    2.1. Data Collection & Reporting for Course Completion Data (Grades 6 – 12)
        2.1.1. Enhanced Student Level Data Collection
            2.1.1.1. On-line data collection for course completion
            2.1.1.2. File upload for course completion
            2.1.1.3. On-line reports to monitor data quality & collection progress
            2.1.1.4. User documentation
            2.1.1.5. User training & communication

        2.1.2. Course Completion Data in LDS for reporting
            2.1.2.1. Data model for course completion data
            2.1.2.2. ETL (extract, transformation, load) for course data from new data collection to LDS database
            2.1.2.3. Cubes and summary data sets for course data
            2.1.2.4. Federal reporting

        2.1.3. ACT College Admissions Tests
            2.1.3.1. 2005 ACT Student Level Data Set
            2.1.3.2. 2006 ACT Student Level Data Set
            2.1.3.3. 2007 ACT Student Level Data Set
            2.1.3.4. 2008 ACT Student Level Data Set
            2.1.3.5. 2009 ACT Student Level Data Set
            2.1.3.6. ACT Longitudinal Data Cube

        2.1.4. Vocational Education Enrollment Reporting System (VEERS)

            2.1.4.1. 2005 VEERS Student Level Data Set
            2.1.4.2. 2006 VEERS Student Level Data Set
            2.1.4.3. 2007 VEERS Student Level Data Set

2.1.4.4. 2008 VEERS Student Level Data Set
2.1.4.5. 2009 VEERS Student Level Data Set
2.1.4.6. VEERS Longitudinal Data Cube
2.1.4.7. Federal reporting

3. Next Generation Analysis and Reporting Tools (see Project Objective 5)

3.1. Wisconsin Longitudinal Achievement Trends Report
3.2. One-click School Performance Report
3.3. Longitudinal Data Sets
3.4. Data Downloads (enable school districts to download LDS datasets in a secure manner)
3.5. Local Data Supplement
3.6. User training & communication

4. Computer Hardware / Software Upgrades

4.1. Upgrade of the Wisconsin LDS production environment
4.2. Upgrade Quality Assurance environment

5. Evaluation & Enhancement

APPENDIX A, Attachment 4
Staffing Requirements

Gantt Chart & Staffing Requirements

Developing a Longitudinal Data System to Support 21st Century Learning in Wisconsin

			Jul-09	Oct-09	Jan-10	Apr-10	Jul-10	Oct-10	Jan-11	Apr-11	Jul-11	Jul-12
			Year 1				Year 2				Year 3	Year 4
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3	2.2	Build ACT Data Sets										
4	2.3	Build VEERS Data Sets										
1	1.0	Build Comprehensive Educational Portal					Live					
		Implement Wisconsin Education Portal										
5	3.0	Build Next Generation Analysis and Reporting										
1-5	4.1	Upgrade LDS Production Environment				Live						
2	2.1	Build Class Completion Data Collection (6-12)										
	2.1.1	Enhance Student Level Collection									Live	
	2.1.2	Incorporate Class Data into LDS										
1-5	4.2	Upgrade LDS QA Environment						Live				
1-5	5.0	Evaluate & Enhance										
		Professional Development - User Training										
		IT Staff Required	4.0	4.0	4.0	4.0	3.0	4.5	5.5	5.5	3.0	2.5
		Project Lead Required	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
		OEA Staff (Educational Consultant)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
		Total Staffing Requirements	6.0	6.0	6.0	6.0	5.0	6.5	7.5	7.5	5.0	3.5

Data Management Vision & Guiding Principles

Vision

The Wisconsin Department of Public Instruction will maintain a comprehensive data management system of data collection and reporting to maximize the efficient collection and use of high quality data to improve the educational success of all Wisconsin students and meet federal and state reporting requirements. DPI data collection and reporting systems must be necessary and useful, protect student privacy, and address long-term capacity to develop and maintain.

Guiding Principles

Data Collection

1. Protect privacy in all data collections as required by law.

2. Account for all students.

3. Only collect data required to meet state or federal reporting mandates, as a condition of receiving funding under a grant program, or that answer critical questions to improve educational success. Data not required by state or federal mandates, including new data requirements created by proposed DPI grant applications, must be approved by the State Superintendent and meet the following criteria:

- **Resources**—the department has the fiscal and human resources and capacity to collect data and report.
- **Maintenance**—the department has the capacity to maintain the data collection and reporting over time.
- **Reasonable for Districts**—the data is collected in a way that districts have the capacity to comply.

4. Ensure that data collected is *valid* (measures what intended to measure), *reliable* (comparable values in comparable situations across districts and schools), and *useful* (aligned with Wisconsin vision and standards for students, teachers, and school communities).

5. Design and modify data collection mechanisms to minimize data collection and reporting burdens on school districts and the department over time. This includes data standardization and efficient vertical and horizontal data transfer. Consolidation of collections should always be considered since it usually, if not always, reduces this burden.

Data Reporting (Data Presentation)

1. Protect privacy in all data reporting as required by law.

2. Plan for data reporting *as part of* the data collection planning process. Ensure up front that the

department has the fiscal and human resources to not only develop, but also update and maintain reports and reporting tools.

3. Design reports that present a clear picture of Wisconsin's vision of success. To the extent feasible, align reports with standards for students (Wisconsin model academic standards and standards of the heart), staff (PI-34), and school communities (characteristics of successful schools).

4. Design reports that enhance the ability of users to translate reports into action steps towards this vision. Promote efficient sharing of student data within and across schools over time. Include measures of growth or change and models of success that defy myths. Promote investigation of relationships across topics to provide possible explanations for strengths and needs and action steps.

5. Create reporting and ad-hoc query tools that maximize access, are user-friendly, and facilitate self-service for DPI and local educators, school communities and the general public. Consolidation and cross-referencing of these tools should always be considered since it usually if not always facilitates access and self-service and saves money.

6. Connect reporting and query tools with information on data use and interpretation.

Appendix A, Attachment 6
Personnel: Resources and Time Commitments

Objective 1: Create a Comprehensive Education Portal & Data Repository

Project Sponsor: Rick Grobschmidt, Assistant State Superintendent/Executive Sponsor of LDS
Resources: 4.0 people for one year (0.5 Business Analyst/Project Lead, 3.0 Developers, 0.5 Education Data Consultant)

Objective 2: Develop Student-Level Data Collection & Data Set-Course Data

Project Sponsor: Michael George, Director of Content & Learning
Resources: 3.5 people for 1+ year (0.5 Project Leader, 3.0 Developers)

Objective 3: Add Student-Level Data Sets-ACT Data

Project Sponsor: Rick Grobschmidt, Assistant State Superintendent/Executive Sponsor of LDS
Resources: 2.0 people for three months (0.5 Business Analyst/Project Lead, 1.0 Developer, 0.5 Educational Consultant)

Objective 4: Add Student-Level Data Sets-VEERS Data

Project Co-Sponsors: Sharon Wendt, Director of Career & Technical Education and Rick Grobschmidt, Assistant State Superintendent/Executive Sponsor of LDS
Resources: 2.0 people for 3 months (0.5 Business Analyst/Project Lead, 1.0 Developer, 0.5 Educational Consultant)

Objective 5: Build Next Generation Analysis and Reporting Tools

Project Co-Sponsors: Rodney Packard, Chief Information Officer
Phil Olsen, Assistant Director, Office of Educational Accountability
Resources: 2.0 people for 12 months (0.5 Business Analyst/Project Lead, 1.0 Developer, 0.5 Educational Consultant)

WISCONSIN DEPARTMENT OF ADMINISTRATION

JIM DOYLE
GOVERNOR

MICHAEL L. MORGAN
SECRETARY

Division of Enterprise Technology
Post Office Box 7844
Madison, WI 53707-7844
Voice (608) 267-0627
Fax (608) 267-0626

September 17, 2008

Elizabeth Burmaster
State Superintendent
Wisconsin Department of Public Instruction
125 South Webster Street
PO Box 7841
Madison WI 53707

Dear Ms. Burmaster:

We support your agency's grant application entitled *Developing a Longitudinal Data System to Support 21st Century Learning in Wisconsin* to support research, data-driven decision making and to help establish the foundation for a PK-20, pre-kindergarten through higher education environment.

One example of the value of the LDS involves educational achievement and health status. Recently, the Department of Health Services, along with the Departments of Population Health Sciences and Psychology at the University of Wisconsin-Madison, was awarded a grant to investigate the impact of early childhood lead poisoning on educational outcomes among elementary school children in the state. This type of novel partnership speaks to a comprehensive population health model, one in which educational opportunities are viewed as equally important to early childhood health status on the future health of the population.

This research would not have been possible without the ongoing cooperation of DPI and the presence of the DPI longitudinal data system (LDS). The LDS will allow the matching of records from the Wisconsin Childhood Lead Poisoning Prevention Program to results from the Wisconsin Knowledge and Concepts Exam. The presence of the LDS will be key to providing an answer to this research question in a meaningful and comprehensive way.

We consider this project as a model for other interagency research endeavors. The Office of the Chief Information Officer for the State of Wisconsin is a strong proponent of consolidated data, systems and interagency sharing.

We look forward to our ongoing partnership with the Department of Public Instruction for these integrated efforts and the development of the Longitudinal Data System.

Sincerely,

Oskar Anderson, Chief Information Officer
Department of Administration
State of Wisconsin

Jim Doyle
Governor

Karen E. Timberlake
Secretary

State of Wisconsin

Department of Health Services

DIVISION OF PUBLIC HEALTH

1 WEST WILSON STREET
P O BOX 2659
MADISON WI 53701-2659

608-266-1251
FAX: 608-267-2832
TTY: 888-701-1253
dhs.wisconsin.gov

September 12, 2008

Elizabeth Burmaster
State Superintendent
Wisconsin Department of Public Instruction
125 South Webster Street
PO Box 7841
Madison WI 53707

Dear Ms. Burmaster:

The Division of Public Health and the Department of Health Services enthusiastically support your agency's grant application, *Expanding Wisconsin's Longitudinal Data System to Support 21st Century Learning*. A robust longitudinal data system is critical to support data-driven decision making and research. Educational achievement and health status are tightly linked. The ability to document the relation of these two factors will lead to better understanding of child development and ultimately to improvement in childhood well-being in Wisconsin. The Department of Health Services, along with the Departments of Population Health Sciences and Psychology at the University of Wisconsin-Madison, was recently awarded a three year, $500,000 grant to investigate the impact of early childhood lead poisoning on subsequent educational outcomes among elementary school children in the state. This type of novel partnership speaks to a comprehensive population health model, one in which educational opportunities and achievement are viewed as equally important to early childhood health status on the future health of the population.

This research would not have been possible without DPI collaboration and the presence of the DPI longitudinal data system (LDS). The LDS will allow DPI to match records from the Wisconsin Childhood Lead Poisoning Prevention Program to results from the Wisconsin Knowledge and Concepts Exam. As all counties in Wisconsin have reported cases of childhood lead poisoning, this project would have been impossible had there not been a centralized data repository.

We consider this project as a model for other interagency collaboration. The "healthy homes" model is one of the primary agendas for the Centers for Disease Control. Other diseases of childhood that are linked to home-based environmental exposures, such as asthma and unintentional injury, have a great impact on children's learning and educational achievement. However, the magnitude of this relationship has not been quantified. An ongoing partnership

between DPI and DHS would allow us to understand these relationships, and translate research into programs and interventions to benefit Wisconsin children in multiple domains of life.

We look forward to hearing that your application was successful. Continuing our collaboration will improve the lives of Wisconsin's school children.

Sincerely,

Henry A. Anderson, MD
State Health Officer and Chief Medical Officer
Wisconsin Division of Public Health
PO Box 2659
Madison, WI 53701
608-266-1253
Henry.Anderson@WI.gov

UNIVERSITY OF WISCONSIN SYSTEM

Senior Vice President for Academic Affairs

1730 Van Hise Hall
1220 Linden Drive
Madison, Wisconsin 53706-1559
(608) 262-3826
(608) 262-3985 FAX

e-mail: vpacad@uwsa.edu
website: www.uwsa.edu/vpacad/

September 18, 2008

Elizabeth Burmaster
State Superintendent
Wisconsin Department of Public Instruction
125 South Webster Street
PO Box 7841
Madison WI 53707

Dear Superintendent Burmaster:

It is my pleasure to write this letter in support of your grant proposal, *Developing Wisconsin's Longitudinal Data System to Support 21st Century Learning.*

We have had the good fortune of being a part of the collaborative processes implemented during the first phase of this work. Thanks to your leadership and commitment to building the "next generation" of the comprehensive longitudinal data system (LDS), Wisconsin will be more effectively positioned to meet its educational priorities. Such a system will advance our current PK-16 model of education and enhance shared decision-making that is guided by relevant and accessible educational data.

As you know, President Reilly recently unveiled the University of Wisconsin System's Growth Agenda. One of the action steps within this dynamic agenda is to work collaboratively with UW System institutions and the PK-12 community to address the many challenges associated with mathematics preparation for Wisconsin's students, PK-16.

By completing the next phase in this PK-16 system, the educational community will have access to essential data, such as student course enrollment patterns and performance, PK-16. Not only will these data allow us to better understand the challenges facing today's student, but we will be able to create more relevant interventions and hold ourselves accountable for the efficacy of our implementation efforts.

The UW System looks forward to playing an active role in the development of Wisconsin's Longitudinal Data System. I know the LDS will have an important impact on the quality of education in Wisconsin, and I enthusiastically endorse your proposal.

Sincerely,

Rebecca R. Martin
Senior Vice President for Academic Affairs

WISCONSIN
TECHNICAL COLLEGE
SYSTEM

September 15, 2008

Elizabeth Burmaster
State Superintendent
Wisconsin Department of Public Instruction
125 South Webster Street
PO Box 7841
Madison WI 53707

Dear Superintendent. Burmaster:

The Wisconsin Technical College System (WTCS) is please to lend our support your agency's continued efforts to build a longitudinal data system to support research and data-driven decision making. As a state partner with the Wisconsin Department of Public Instruction (DPI) in the Wisconsin PK-16 Leadership Council, Partnership for 21st Century Skills, America Diploma Project, and other related efforts designed to lead to seamless educational transitions for Wisconsin students, the WTCS is fully committed working together with DPI to improve data resources about student course taking, test scores, and other measures of student achievement.

The proposed DPI longitudinal data system (LDS) will not only provide important information about student achievement, but also assist the staff from WTCS and DPI in working together to improve information about the kinds of courses high school students are taking and their subsequent enrollment and success in the rigorous and challenging postsecondary programming offered by Wisconsin's technical colleges and universities. The LDS will allow us to match student records from the technical colleges with information about high school course selection to provide to assist us in developing better linkages and alignment with K-12 school and provide better information to measure the impact of efforts to develop career maps and programs of study that bridge high school and technical college instruction. In addition, through data sharing agreements and projects with the University of Wisconsin System, we envision the LDS providing a useful component in helping the entire PK-16 educational community to better align our educational offerings.

We look forward to working with DPI on projects such as the proposed improvements to the LDS to support increased data-driven decision making and improved accountability measures for state and federal dollars invested both in the state's secondary and postsecondary education systems.

Sincerely,

Daniel Clancy

Daniel Clancy
President

Daniel Clancy, President
4622 University Avenue PO Box 7874 Madison, Wisconsin 53707-7874 608.266.1207
TTY: 608.267.2483 Fax: 608.266.1690
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Milwaukee School of Engineering
Mount Mary College
Northland College
Ripon College
St. Norbert College
Silver Lake College
Viterbo University
Wisconsin Lutheran College

September 11, 2008

Elizabeth Burmaster
State Superintendent
Wisconsin Department of Public Instruction
P.O. Box 7841
Madison, Wisconsin 53707-7841

Dear Superintendent Burmaster:

I am writing in support of the Department of Public Instruction's application for a Statewide Longitudinal Data Systems grant. Including data on the courses students take during their high school years is an important step towards strengthening the state's P12 system, as well as building a stronger foundation for the P20 system. Knowledge is power. I am confident the DPI will use the power of this data for positive improvement and advancement of seamless education.

The WAICU board (the presidents of the twenty member colleges and universities) has unanimously pledged a voluntary "data partnership" between WAICU and DPI. As WAICU moves forward in building its own longitudinal data system to follow our students during their college years, we believe the DPI-WAICU partnership will help both your agency and higher education institutions better understand how the specific courses high school students take, and the order in which the courses are taken, affect college readiness, persistence, and graduation rates.

As you continue to strengthen the P12 system, WAICU will provide feedback and input from a higher education prospective. I look forward to continuing to work with you to support research and data-informed decision making.

Sincerely,

Rolf Wegenke, Ph.D.
President

122 W. Washington Avenue, Suite 700
Madison, WI 53703-2718
www.waicuweb.org

ROLF WEGENKE, Ph.D.
President

Telephone 608.256.7761
FAX 608.256.7065
mail@waicuweb.org

Bridging
today's students
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September 16, 2008

Elizabeth Burmaster
State Superintendent
Department of Public Instruction
125 S. Webster St.
PO Box 7841
Madison, WI 53707-7841

Dear Superintendent Burmaster,

Congratulations to you and the Wisconsin Department of Public Instruction for proposing the innovative initiative, *Wisconsin's Longitudinal Data Systems to Support 21st Century Learning*. This proposal and its goals have the strong support of our Agency.

We are pleased to support this initiative because it will provide a critical capacity for our districts' transformational efforts to incorporate 21st Century Learning programs and instructional strategies. It will significantly enhance our regional effort to meaningfully transform our schools by providing both a comprehensive data system and the latest technology to provide interactive reporting options.

Furthermore this grant proposal establishes a data system that will enable our education, business, and civic policy makers to develop informed plans to align the PK-16 talent preparation efforts in our region. It will allow these decision makers on both the supply and demand side of the "PK-16 talent pipeline" to quantify and calibrate the talent pool needed for a vibrant economy. This will result in a much clearer picture of southeastern Wisconsin's talent pool and the alignment of our PK-16 "talent supply pipeline" with our future workforce needs.

Again, on behalf of CESA #1 I would like to commend you and the Department of Public Instruction for this far reaching initiative. It will provide a highly valuable and needed tool to support quality 21st Century education not only across our region but across the state as well. And we look forward to partnering with the DPI to address the priorities of building 21st Century skills; narrowing the achievement gap; and moving towards a PK-16 model in which all stakeholders – educators, students, business, government – can make informed decisions based on sound longitudinal educational data.

Sincerely,

Timothy C. Gavigan, Ph.D
Executive Director
CESA #1

Cooperative Educational Service Agency 6

Joan Wade, Administrator
P.O. Box 2568 • Oshkosh, WI 54903-2568 • Located at 2300 State Rd. 44
(920) 233-CESA • Fax: (920) 424-3478
www.cesa6.k12.wi.us

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Ripon
Rosendale-Brandon
Shiocton
Slinger
Waupun
West Bend
Weyauwega-Fremont
Winneconne

September 17, 2008

Elizabeth Burmaster
State Superintendent
Wisconsin Department of Public Instruction
PO Box 7841
Madison, WI 53707-7841

Dear Superintendent Burmaster,

I enthusiastically write this letter of support for the Wisconsin Department of Public Instruction's grant proposal entitled, *Developing Wisconsin's Longitudinal Data System to Support 21st Century Learning*. As the Administrator of CESA 6 and the Co-Chair of the Next Generation of Assessment task force, I would strongly advocate for continued development of the Longitudinal Data System.

The staff at DPI has been committed over the past several years to develop a statewide longitudinal data system. The system that is under development has been strategically planned and is well underway. Unfortunately, as is the case with many states, Wisconsin is facing a significantly tight budget. I am afraid that the work will not be able to continue without the support of this grant.

This grant will allow DPI to make forward progress with the current Longitudinal Data System so that we will meet the needs of the next generation of assessments AND we will be able to provide the necessary student data to allow school level and district level analysis of best practice. This next phase will work in collaboration with school districts to prepare students for the 21st Century.

I look forward to supporting DPI in their ongoing vision to develop and implement a comprehensive LDS that will provide interactive reporting of the student data based on the appropriate user type.

Sincerely,

Joan Wade

Joan Wade, Ed.D.
Agency Administrator

MADISON METROPOLITAN SCHOOL DISTRICT

INFORMATION SERVICES

545 West Dayton St. ● Madison, Wisconsin 53703-1995 ■ 608.663.4946 ▼ www.mmsd.org

Kurt Kiefer, *Chief Information Officer*

Daniel A. Nerad, *Superintendent of Schools*

Elizabeth Burmaster
State Superintendent
Wisconsin Department of Public Instruction
125 South Webster Street
PO Box 7841
Madison WI 53707

Dear Ms. Burmaster:

I am writing to enthusiastically support your application for continued funding in the development of the longitudinal data systems data warehouse to grow the repository in support of a PK-16 model. Having long been a data-driven K-12 school district with a home grown data warehouse we see the terrific benefit that all districts can achieve from such support systems. A central system that all schools and districts in Wisconsin can use would be a tremendous value to continuously improve and reform education in our state.

I point to a recent experience in our own District in which the concept of PK-16 data warehouse would provide value. Just this past week our Board of Education received the final report on an independent review of our math curriculum from a panel of leading experts from the University of Wisconsin-Madison. Some of the key questions that were attempted to be analyzed in the review are those very items proposed for development within a PK-16 system.

- What math classes are students taking and when? Does their sequencing affect secondary and/or post-secondary success?
- What districts/schools have the least amount of graduates requiring math remedial education in the first year of college?
- With a focus on STEM, how can we track what student groups are taking which courses, with what success rate, and when in their high school careers?

We struggled mightily in trying to obtain the data to answer these questions given our current data systems. An extended PK-16 data warehouse would have mitigated nearly all of the issues we faced.

This is only one limited example of how the system could benefit. There are dozens more across all 426 school districts in Wisconsin. We look forward to an expanded data warehouse within Wisconsin that can provide the best insights available to continue to learn what works for students.

Sincerely,

Kurt J. Kiefer
Chief Information Officer

Tiffany M. Boyd

PROFESSIONAL EXPERIENCE

Data Management and Reporting Section Chief **March 2007 - present**
WI Department of Public Instruction (DPI)

- Serves as *EDFacts Coordinator*, coordinating program personnel and development staff to assemble, generate and submit data to the U.S. Department of Education's EDEN Submission System and to DPI's public reporting site.
- Provides advice and assistance to DPI management on agency-wide issues pertaining to data quality and data consolidation efforts.
- Responsible for coordination of systems that capture, interrelate and report enterprise data in the department.
- Liaison between the technical and program areas for data management efforts.
- Determines staffing needs, established work plans and monitored progress of data management and reporting team staff and contractors.

Applications Development Team Supervisor
WI Department of Public Instruction (DPI) **September 2004- March 2007**

- Project manager and Technical Lead for the design and implementation of the Wisconsin Student Locator System (WSLS) and the Individual Student Enrollment System.
- Responsible for planning and direction for application development at DPI, including formulation of the application development budget and charge back to user areas
- Determined staffing needs, established work plans and monitored progress of application development staff and contractors.
- Worked Directly with DPI division administrators regarding information processing needs.

IS System Development Services Specialist
WI Department of Public Instruction (DPI) **January 2003- September 2004**

- Designed, developed and implemented P1202 Fall Staff Report Web Application using ASP and PL/SQL.
- Designed, developed and implemented Student Services Prevention Wellness AODA, Tobacco, and Safe & Drug-Free Schools End-of-Year Report Web Applications using ASP & PL/SQL.
- Maintained and enhanced ESEA Consolidated Web Application using ASP and PL/SQL.
- Maintained and supported the P1290 Enrollment, School Performance Data Collection, Wisconsin Student Assessment System Reports, Curriculum Resource Center, and Title 1 End-of-Year Report Web Applications.
- Served as Technical Lead for the Wisconsin Student Locator System work group at DPI, reviewing design specifications and coordinating DPI technical resources.

- Met with end-users to design and assess program at every phase of project.
- Wrote user and systems documentation for new programs.

Web Application Developer
Standard Networks Incorporation **January 2002 – January 2003**

- Developed a SOAP interface for MoveIT DMZ using VB.Net and XML.
- Developed a program to update and scrub improper tax account syntax for mortgage loan escrow accounts using C# in .Net and SQL Server 2000.
- Developed an expense voucher program to use direct transfer of funds for employee expense reimbursement using C# in .NET and SQL Server 2000.
- Designed, developed, and implemented Teller Performance program to create teller, branch and bank accuracy reports using VB, ASP, XML, XSLT, UTFTP, and SQL Server 2000.
- Designed, developed and Implemented Branch Balancing Program to reconcile processed items with the bank general ledger using VB, ASP, XML, XSLT, UTFTP, and SQL Server 2000.
- Developed and implemented Currency Ordering System to process currency and coin orders from individual bank branches and their respective vaults using VB, ASP, XML, XSLT and SQL Server 2000.
- Developed and implemented Customer Inquiry web interface that allows bank employees to verify customer account data using ASP, VB.
- Wrote proposals and systems documentation for each program.
- Met with end-users to design and assess program at every phase of project.

Independent Consultant and Web Applications Developer
Primen, Incorporation, Madison, WI **January 2001 – December 2001**

- Lead Developer on DataPoint Application for filtering customer data based on customer characteristics, energy use or geographic location using ASP, VB, SQL Server 2000, MapXtreme, and ChartFX.
- Developer for Energy Shapes Application that allowed users to display energy load shape wave forms using ASP, VB, SQL Server 2000, and Chart FX.
- Lead Developer for tool to allow users to perform complex database searches of the Load Management Programs and Technologies Database using ASP, VB, and ChartFX.
- Developed an interactive web-based Customer Relationship Management Program using VB, ASP and SQL Server 2000.
- Developed three interactive web based viewers for filtering databases of products, market profiles and survey results using VB, ASP and Access 2000.
- Developed automated mailing system to generate bulk mailings to customers using ASP, VB, SQL Server 2000 and ASPMail.
- Developed an interactive web-based skills inventory tool for filtering and updating employee skill profiles using VB, ASP and Access.
- Developed an interactive web-base Job Activation Form to facilitate project management on going project tasks and budgets using VB, ASP and Access.
- Wrote user guides for each program.
- Met with end-users design and assess projects at every phase of development.

Director of Mapping Services
Resource Technologies Corporation **October 1997 – December 2000**

- Project Manager and Lead Developer for GIS Model to assess impacts of mountaintop mining practices on coalfield communities in Appalachia using MapInfo and MapBasic.
- Project planning coordination and quality control for six GIS parcel conversion projects ranging in size from 30,000 to over 100,000 parcels.
- Supervised the creation of 3-D grid coal models for the Reserve Coal Valuation Model used to assess and appraise reserve coal in West Virginia.
- Supervised up to 18 employees including two shift supervisors, hired and trained new employees, conducted periodic performance reviews.
- Met with customers to ensure quality of work and fulfillment of contract.
- Provided week long, on-site customer training seminars for GIS customers.
- Assisted in development of two day long GIS seminars for state certified real estate appraisers and assessors.
- Represented company at conferences and trade shows, wrote project and grant proposals.
- Web page development and design using HTML and Front Page.
- Developed desktop Property Records System to interactively view and search assessment data and maps using VB, Access and MapX.
- Developed Mineral Tax System to update mineral assessment data for five Pennsylvania counties using ASP, VB and Access.
- Developed three plug-in programs to facilitate parcel management and maintenance of GIS parcels using MapInfo and MapBasic.

EDUCATION:

- Pennsylvania State University, University Park, PA. MS 1991; Masters Degree in Geography, GPA 4.0/4.0
- Dartmouth College, Hanover, NH. BA 1986; Double Major: Biology and Geography, *cum laude,* GPA 3.4/4.0

Michael G. George
Wisconsin Department of Public Instruction
125 S. Webster St.
Madison, WI 53707
Email: Michael.george@dpi.state.wi.us
Home: 920-836-3864; Office: 608-266-2364; Cell: 608-576-5557

Professional Goals

- To continue to learn.
- To make a difference.
- To work with dedicated colleagues.

Employment

Director, Content & Learning Team • Wisconsin Department of Public Instruction • 2004-Present

Director of Development • Wisconsin Foundation for School Music • 1994-2004

Executive Director • Wisconsin School Music Association (WSMA) • 1988-2004

Executive Director • Wisconsin Music Educators Association (WMEA) • 1988-2004

Executive Director • Wisconsin Foundation for School Music (WFSM) • 1994-2004

Coordinator of Fine Arts. • Madison Metropolitan School District • 1984-1988

Educational Consultant • Wisconsin Department of Public Instruction • 1972-1984

Director of Community Arts Development • University of Wisconsin Extension • 1970-1972

Instructor • Group Dynamics • University of Wisconsin School of Education • 1968-69

Teaching Assistant • • University of Wisconsin Madison • 1967-1968

High School Teacher • Dodgeville Public Schools • Dodgeville, Wisconsin • 1963-1967

Responsibilities for Content & Learning Team, DPI

- Financial Planning and Management
- Lead applications of technology to curriculum and instruction
- State Office Staff supervision & leadership
- Strategic and Long Range Plan Development and Implementation
- Development, Fundraising & Planning
- PK-16 Coordination & Collaboration
- Coordinate development and dissemination of curriculum resources.
- Leadership and Staff Development
- Coordinate professional development
- Collaboration with other associations, community organizations and businesses.

Formal Education & Training

Bachelor of Education • University of Wisconsin Madison • 1963

Master of Education-Curriculum & Instruction • University of Wisconsin Madison • 1965

PhD Degree Work • Adult & Continuing Education • University of Wisconsin • 1967-1969.

Certified Executive Training • American Society for Association Executives • 1996-1999

Nonresponsive

Brief Bio for Richard Grobschmidt
Assistant Superintendent, Division for Libraries, Technology and Community Learning
Wisconsin Department of Public Instruction

Richard Grobschmidt directs the Division of Libraries, Technology and Community Learning at the Wisconsin Department of Public Instruction. Appointed in January of 2003 by Superintendent of Public Instruction Elizabeth Burmaster, Grobschmidt oversees a multi-faceted division that provides services for the development and improvement of public and school libraries; fosters interlibrary cooperation and resource sharing; promotes information and instructional technology; and promotes early childhood education, family-school-community partnerships, and service-learning.

His division oversaw the development and implementation of Wisconsin's statewide individual student identifier and the Individual Student Enrollment System (WSLS/ISES). Currently his division is responsible for the development and deployment of a Department of Education grant establishing a Longitudinal Data System. His division also oversees the WINSS (Wisconsin' Information Network for Successful Schools). This electronic resource is the Data Analysis, Standards and Assessment, Continuous School Improvement and Best Practices guide for users to key local, state and national information about success in education.

A former high school social studies teacher, Richard successfully ran for the Wisconsin State Legislature in 1984, representing the Milwaukee area. In 1995 he was elected to the State Senate. He chaired both the Assembly and Senate education committees. Among his credits are laws creating a comprehensive school-to-work program; providing assistance to young children who exhibit significant developmental delay; mandating insurance carriers to pay for childhood immunizations; and requiring school busses to have safety gates, and he has authored legislation that promotes family-school-community partnerships.

Grobschmidt earned his bachelor's degree in education from the University of Wisconsin Oshkosh and a master's degree in curriculum and instruction from the UW-Milwaukee.

Gorm R. Heilskov
(b)(6)
(608) 267-0370 (W) (b)(6)

Objective: Opportunity to utilize technical and supervisory experience in the field of database administration.

PROFESSIONAL EXPERIENCE

Wisconsin Department of Public Instruction *August 1996 to Present*

DATABASE ADMINISTRATOR. Oracle

Served as DBA for five production and three test Oracle Databases on Netware 411 and 50 platforms and then on Windows platforms. Created, administered and upgraded these databases. Installed sqlnet in client/server environment. Upgraded these databases from version 7.1.6 to 7.2.4.14 and then to 8.0.4.2.3 and 8.0.4.2.6 and then to 8.1.7 and then to 9.2.0.4. Starting in July 2007, served as DBA on two Oracle 10g databases on an HP-UX Itanium platform.

UW-Madison Department of Information Technology *March, 1994 to August, 1996*

DATABASE ADMINISTRATOR. Oracle and ADABAS

Served as DBA for six Oracle Databases and two ADABAS databases on four IBM RS/6000 UNIX platforms. Created, administered and upgraded these databases. Built Oracle Data Warehouse for University Data. Installed sqlnet in client/server environment. Designed and implemented system for scheduling and loading tables into Warehouse automatically. Served as DBA for two additional ADABAS databases on a DOS/VSE platform.

University of Wisconsin-System Administration *February, 1990 to February, 1994*

SYSTEMS PROGRAMMER

Served as Systems Programmer in charge of installing and supporting Software AG products in a DOS/VSE environment on an IBM 4381. Installed and supported the SAG products ADABAS, NATURAL, NATURAL VSAM, NATURAL SECURITY, PREDICT, SUPER NATURAL, NATURAL CONSTRUCT, NATURAL ADVANCED FACILITIES, NATURAL CONNECTION. Installed and supported

ADABAS, NATURAL, PREDICT and NATURAL CONSTRUCT on an IBM RS/6000.

Became familiar with and trained others in the use of all of the above products excluding NATURAL CONSTRUCT. Wrote assembler user exits for ADABAS Hyperdescriptors and NATAF RJE.

Served as DBA starting in 1993.

University of Wisconsin-System Administration — *October, 1982 to January, 1990*

INFORMATION SYSTEM AREA CONTACT

Served as the area contact in coordinating work activities and performing all necessary lead work functions for all U.W. Centers and Office of Analysis Services computer systems operating at this office. Proposed and developed security system used as the standard in office on-line applications under Natural. Proposed and developed data access interface used as the standard in office batch COBOL applications which access ADABAS. Converted existing systems, brought up new systems and designed and implemented file structures under ADABAS.

University of Wisconsin Centers — *July, 1981 to October, 1982*

MANAGER OF INFORMATION SYSTEMS

Directed and reviewed work of two classified MIS programmer-analysts. Supervised Analysis, programming and operations efforts for a small data processing office.

University of Wisconsin Center System — *June, 1977 to June, 1981*

LEAD PROGRAMMER

Directed and reviewed work of one classified MIS programmer. Supervised programming and operations efforts for a small data processing office.

University of Wisconsin Center System — *February, 1976 to June, 1977*

APPLICATIONS PROGRAMMER

Programmed fluently in COBOL and RPGII.

Programmed in Fortran and Assembler.

EDUCATION

University of Wisconsin, Madison *19XX to 19XX*
Received BBA May 1980.
MAJOR INFORMATION SYSTEMS ANALYSIS & DESIGN.

SARITA JHA

(b)(6)

SUMMARY:

My experience as project manager, project lead, web architect, and senior developer are a good fit for Course Data collection project. In my 12+ years of experience I have managed, led, met user groups, gathered requirements, developed and worked on many web applications.

In last three years I have supported many large applications at DPI on various technologies. My in depth knowledge of how WSLS, ISES and Discipline applications works, and understanding the requirements will be a huge asset to this project.

I have also worked on procuring vendors, written RFI and RFP's. I have acted as DPI-IT liaison with other state agencies. As a team lead of major project, I have done many cost analysis, risk management and development team building. I have excellent leadership, analytical and team skills to deliver simple solutions to complex problems. I have professional experience in computer applications and programming and have used this experience within large organizations.

TECHNICAL PROFICIENCIES

HARDWARE: IBM PC, IBM AS400, HP, SUN

OS & UTILITIES: Windows XP Professional, Windows NT, Unix, VMS, and Novell NetWare

LANGUAGES: Java, C++, C, HTML, XML, JavaScript, ASP, VBScript, .NET, PL/SQL, Perl, UNIX Script, Pascal, Basic, Cobol, and IBM Assembly,

J2EE/WEB TECNOLOGIES: JDK, Servlets, JSP, JDBC, JNDI, JMS, RMI, LDAP, STUTS, ANT, HTML

DESIGN/MODELING: UML, Rational Rose, Visio, MVC architecture, J2EE Design patterns

DATABASES: Oracle, SQL Server, DB2, Access

SOFTWARE: Microsoft Project, RAD 7.1, IBM Websphere Studio Application Developer 5.1.1, IBM Visual Rational Rose Clearcase, ClearQuest, Crystal Reports 10, SQL navigator, Exceed, V1, VSS.

WORK EXPERIENCE:

Department of Public Instruction – State of Wisconsin ***March 2005 to Present***

Java Web Application Architect/Project Lead/Senior Developer

As a lead architect, project lead/manger and senior Java developer I am responsible for managing, developing and maintaining many Java based Internet applications.

- ***Individual Student Enrollment System (ISES)***
  The ISES application is currently in analysis stage of Phase 6. The approximate total cost for phase 5 was $400,000 and is expected to be the same for Phase 6 enhancements. The application is written in J2EE, Java, JSP, Struts framework, DOA pattern, Oracle backend with extensive store procedures, functions, triggers and view. The batch process uses SAX parser, XML, CSV, and HTML. At any given time 1 project lead (I), 2 developers, and one tester are working on this application.
- **Discipline**
  The discipline system collects data for students with incidents. This application is in phase 2 and analysis for phase 3 is being estimated. The application is written in J2EE, Java, JSP, Struts framework, DOA pattern, Oracle backend with extensive store procedures, functions, triggers and view. The batch process uses SAX parser, XML, CSV, and HTML. At any given time 1 project lead (me), 2 developers, and one tester are working on this application.
- ***Wisconsin Student Number Locator System (WSLS)***
  The WSLS application is currently in analysis stage of Phase 6. The approximate total cost for phase 5 was $300,000 and is expected to be a little less for Phase 6. The application is written in J2EE, Java, JSP, Struts framework, DOA pattern, Oracle backend with extensive store procedures, functions, triggers and view. The batch process uses SAX parser, XML, CSV, and HTML. At any given time on this project one project lead (me), one developer, and one tester is working on this application.
- ***Teacher Licensing***
  Any person seeking to teach in a public school, including a charter school, or in a school or institution operated by a county or the state has to first procure a license or permit from the department. Teacher licensing system incorporates many large and small projects. The ones I was responsible for are listed below.
  - Mentor Grant Program
  - Wisconsin Improvement Program
  - Online Educator Licensing Project: This project is in analysis and design phase. I am the technical project manger/lead representing DPI, IT. Parts of my responsibilities are to write status report, meet management, review requirements with the RFP team, meet representative from other agencies, write technical documents, resolve technical issues and answer vendors and questions from other agencies. I was also part of the RFI team.
  - Transfer files to and from DOR, DOJ, and NASDTEC
  - Epayment: Interns use WIP application to apply for teaching license and can you use epayment application to pay for their license

American Family ***January 2005 to 2005 March***
Java Web Application Project Manager/Project Lead/Senior Developer
As a project lead I was responsible for developing a Java based batch reporting application. The generated reports were used by management to make insurance rate decisions.

Kraft Inc ***2004 to 2005 January***
Java Web Application Architect/Project Lead/Senior Developer
As a lead architect and senior Java developer I was responsible for developing and maintaining many Java based Internet applications.

- ***Ships Transportation Management System***
  I worked on all four parts of ship application. I used WSAD 5.1.1 and Oracle for development of online web application. MVS and TSO for running the extracts and shell scripts to load the control files into Oracle

tables.

- ***Kraft Tracks***
  For this project I integrated using Crystal Reports with java API's as the main reporting tool. Created report in Crystal which were then called from web application with or without passing parameters. Using Crystal Reports helped the customers to export the data for further analysis and research uses.

Wisconsin Department of Health and Family Services ***September 2001 - Sep 2004***

Java Web Application Architect/Project Manger and Lead/Senior Developer

Lead architect and senior Java developer for many Java based Internet applications within Bureau of Information Systems (BIS) at the Department of Health and Family Services (DHFS). As part of the development team, mentored DHFS staff in Java, JSP, web application design and PVCS. The majority of applications were initially developed in IBM VisualAge 3.5.3 using Model-View-Controller architecture and deployed in Websphere 3.5.3 Application Server. Later, all web based applications were migrated to WSAD 5.0 with WAS 4.0 as the server. Security at DHFS consists of Novell's iChain proxy server and LDAP for user authentication. The applications I worked on and was responsible for are listed below:

- ***Intra Waldo***
  I was the Project Lead for Intra Waldo a web-based application that was developed for the Lead and Asbestos Bureau in DPH at DHFS. Waldo allows the public access to general information on a property's compliance with the state's standards on lead-based paint.
- ***Semi-public and Public Waldo***
  I was the Project Lead for semi-public Waldo web application that was developed by BIS for DPH to do Lead-Free/Lead-Safe Registry online. BIS maintains the application that was developed in VAJ 3.5, WebSphere Studio v3.5 for JSP and JS, iChain 2.0, and Oracle 8.1 as database.
- ***Campus***
  I was the main developer responsible for redesigning Campus (online training registration application) to incorporate the ability to be secured behind Novell's iChain proxy server. This involved restructuring the application to allow for URL based security as well as updating the code to be consistent with emerging DHFS standards.
- ***Senior Care Pre-Application Guide***
  I was the Project Lead for the Senior Care web based Pre-Application Guide that was developed to determine if a person meets the basic eligibility requirements to participate in the Senior Care program. By answering a few simple questions, the guide also gives information about how Senior Care could work for you. This application was developed in Visual Age for Java (3.5), WebSphere Studio v3.5, iChain 2.0, and Oracle 8.1 as database.
- ***SeniorCare Drug Inquiry program***
  I was the Project Lead for SeniorCare application, which is Wisconsin's Prescription Drug Assistance Program for Wisconsin residents who are 65 years of age or older and meet eligibility requirements. This application was developed in Visual Age for Java (3.5), WebSphere Studio v3.5, iChain 2.0, and Oracle 8.1 as database.
- ***Emergency Medical Services System***
  The EMSS application is a Web-based repository for the operational plans of ambulance service providers. It features the patient care protocols, EMT rosters, vehicle fleet details, information on service affiliates and associates, and other general information about ambulance service providers. I worked on phase 3& 4 of this application. It was developed in Java using WSAD 5.0, PVCS (for repository) and DB2 as database.

- ***Physician office Visit***
  Created a Web-based front-end to an existing batch-oriented data-submission system called Physician Office Visit (POV).

Consultant - Keane Inc.
US Cellular **October 2000 – September 2001**

- Conversion project at US Cellular, a major telephone company. The work involved executing previously defined processes for converting switch data for Northwest and Florida region between two applications: CBMS and CARES. CBMS and CARES both operate with Oracle databases running in Unix environments.

FedEx Ground: **1997 – August 2000**
Java Developer/ Programmer Analyst

- ***Transport Management System (TMS)***
  An automated system that streamlines the line-haul and dock-operations in order to improve service, reduces costs, and eases the information flow between people and facilities throughout the field.
  - Determined business rules, functionality and specifications of the system.
  - Constructed object model and design artifacts such as use cases and scenario diagrams using Rational Rose and Visio.
  - Developed Java code for screens and PL/SQL code for the server side.

- ***Marketing/Sales system*** **February 1996 – December 1996**
  VB Programmer/programmer Analyst
  - Team member in the conversion of a legacy Marketing/Sales system to PC platforms.
  - Conversion of legacy Payroll programs to PC platform.

University of Pittsburgh **Jan 1994 – May 1995**
Consultant & Independent Study

- Assisted students with software packages and equipment.
- Designed and implemented the homepage for a university department.
- Created online documentation and forms to be used by the students.
- Integrated departmental and university information on the main web page.

EDUCATION:

B.A. – Department of Information and Library Sciences, University of Pittsburgh

AWARDS

- Certificate of completion in training of Visual Age by IBM.
- Certificate of Achievement and completion of Java training from SUN Microsystems.
- Certificate of outstanding achievement in analysis and design by FedEx.
- Anthony Debons award in recognition of excellence and outstanding contribution to the undergraduate program in information science by a student (1994-1995).
- Dean's list for four semesters

SUSAN KATHERINE KETCHUM

(b)(6)

(608) 267-0425 (work), (b)(6)

susan.ketchum@dpi.state.wi.us, (b)(6)

EMPLOYMENT HISTORY

Education Consultant – Accountability: Office of Educational Accountability

WI Department of Public Instruction. May 8, 2000 – present.

Recommends policies and strategies related to measurement and implementation of state content standards, assessment and accountability requirements at the school, Local Education Agency (LEA), and state level including amendments to federal workplans.

Develops statewide systems of evaluation of Adequate Yearly Progress for school, district, and state educational accountability under state and federal laws includeing business rules, database development, and reconsiderations.

Provides technical assistance to school, LEA, Cooperative Educational Agency (CESA), and departmental staff regarding use of educational assessment data to plan for improvements in student learning and school performance including .

Designs, develops, synthesizes, analyzes, and reports statewide accountability results to various local, regional, state, and national educational agencies.

Education Program Specialist: Office of Educational Accountability

WI Department of Public Instruction. September 1991 – May 7, 2000.

Provided leadership and planning for the design and development of statewide assessments including the WI *High School Graduation Test* and *WSAS Knowledge & Concepts Examinations (WKCE)*, technical assistance, proposal specification and research design, statistical and psychometric methodology.

Provided consultation on interpretation of educational test results, improved assessment practices, proficiency score standard setting, accountability, sound measurement practices, and generalizability of performance assessments. Analyze, interpret, present and compose reports of statewide test results.

Supervised the development and implementation of the 1997 WSAS Proficiency Score Standards for grades 4, 8, and 10 at each WKCE content area tested and the 1998 Language Arts Cut-score Revision Study. Presented statewide: "Results of the WSAS Proficiency Score Standards."

Provided program planning and evaluation by working closely with departmental professional staff, individuals representing universities, school districts, national and state agencies and organizations, and private educational assessment contractors.

Provided fiscal planning, computer utilization, and research coordination for the Office of Educational Accountability team. Developed the April 1999 Request for Proposals (RFP) for the *Wisconsin High School Graduation Test (HSGT): Test Development, Research, Production, Distribution, Scoring, and Reporting.* Specified the RFP and assisted with contract negotiation for *Knowledge & Concepts Examination* (WKCE) Program 1996-98. Developed resource documents and technical support for statewide assessment. Served as program manager for the *Performance Assessment Development Project* contract with the UW Wisconsin Center for Education Research (WCER) from 1992-95.

Licensure Examination Specialist: Office of Examinations

WI Department of Regulation & Licensing. April 1987 – September 1991.

Developed occupational licensing examinations for 10 professional licensing boards including veterinarian, animal technician, accountant, chiropractor, physical therapist, occupational therapist, physician assistant, and real estate. Authored statutes and rules exams; practical and written licensure exams. Designed examinations, developed scoring rubrics, test questions, and cut-scores for test formats that included slides, laboratory specimens, demonstration, x-ray, skeletons, oxygen tanks, diagnostic equipment, and other artifacts of the particular profession.

Provided psychometric consultation to professional licensure boards appointed by the Governor on issues such as: examination development, standard setting for passing scores, sensitivity reviews, and content validity. Developed practical performance examinations for entry-level licensees, standardized oral exams, and written ethics examinations of the WI Administrative Code.

Planned and supervised the administration and scoring of national and locally developed licensing examinations; maintained security, objectivity, reliability, validity, and administrative efficiency of the examination process.

Received WDRL's ***ExceptionalEmployee Performance Award*** in July 1989 and 1990. Served on the 1987-91 **Advisory Council**, 1987-91 **Affirmative Action Committee**, 1989-91 **Employee Assistance Program.**

Education Specialist; Research and Planning Analyst: WI DPI. November 1974 – April 1987.

Developed objective-referenced mathematics, science, economics and reading tests for use in WI *Student Assessment Program* and the *WI Pupil Assessment Program* in schools for grades 4-12. Also developed mathematics problem-solving test items at the middle school level. With surveys, advisory groups, and teacher committees, identified curriculum objectives and developed test content specifications for statewide instruments. Conducted pilot and field tests, revised items, and produced final test instruments.

Specified, evaluated, and administered contracts with commercial test companies and WCER's university Testing & Evaluation service for the distribution, processing, scoring, and reporting of test performance data. Identified, negotiated, and monitored services required for large-scale testing at selected grade levels. Analyzed data and wrote reports for public, legislators, and educators.

Research Assistant: *Cooperative Accountability Program and Repository.* WI DPI, Madison, WI 1972-1974. Developed bibliographies and annotations of educational accountability documents from Wisconsin and other states.

A Room of One's Own Bookstore, Madison, WI. Fall 1974 to May 1987. Part-time bookselling, accounting and financial planning services for shareholder-run business.

Wisconsin Idea Theater, University of Wisconsin-Extension Arts, Assistant. July 1971–1972.

Heritage Ensemble: Contracts, fiscal management, forms design, music research, and publicity.

Middle School Teacher: Certified 1-8 in WI and TN: Teaching experience at 6th grade.
Waunakee Public Schools, WI 1970 to 1971
Knox County Schools, TN 1969 to 1970
Maryville and Alcoa Public Schools, TN student teacher, 1968-1969

EDUCATION

Graduate Certificate in Large-scale Educational Assessment, National Center for Educational Statistics (NCES) and the University of MD, July 2004 - June 2005.
The Graduate Certificate program was comprised of four courses and a research practicum.
Theory and Practice of Standardized Testing (IRT, Validity/Relability, Item Development, Administration Issues/Accommodations, Test Design, Classical Test Theory);
Research Methods and Materials (Quasi-experiemental Design, Sampling, Secondary Analysis of Large-scale NAEP Data Sets, Marginal Estimation, Standard Setting);
Data Analysis for School Systems (Exploratory Factor Analysis-PCA, and Hierarchial Linear Modeling); and
Design of Program Evaluations (Scoring, Reporting/Data Visualization, Program Evaluation, RFP Writing, Technical Ethical, and Legal Issues in Assessment).

Master of Science Degree, Educational Psychology–Quantitative Studies, December 1996.
University of Wisconsin-Madison, Thesis: *Mathematics Performance Assessment: A Generalizability Study*. Advisor, Prof. Michael J. Subkoviak, PhD; Thesis Advisor, Professor Michael T. Kane, PhD.
Course work: Statistical Methods Applied to Education I & II, Design of Educational Experiments, Classical Test Theory, Test Construction, Generalizability Theory, Test Validity, Educational Measurement, Theories of Cognitive Development, Introduction to Survey Sampling, and Computer Applications in Educational Administration.

Bachelor of Science Degree: Education, Maryville College, Maryville, TN 1965–1969.
Thesis: *Minority Heritage as an Integral Part of the Elementary School Curriculum.*

Professional Memberships:

National Council of Educational Measurement (NCME)

PROFESSIONAL EXPERIENCE

Wisconsin Department of Public Instruction - Madison, Wisconsin Jul 06 – Present
Technical and Customer Support Section Chief

- Managed the hardware infrastructure for the Longitudinal Data System Data Warehouse . Successfully created and implemented a request for bid to allow for an outside vendor to provide support and maintenance for the system.
- Assisted in the creation of the strategic information technology plan which included the implementation of the Longitudinal Data System to consolidate agency-wide data collection and reporting initiatives.
- Creation and implementation of a time-tracking process to process chargebacks to individual program areas throughout the agency.
- Migrated the agency from a legacy e-mail system to Exchange 2007 with web and smart phone availability.
- Implemented an annual replacement cycle to replace both workstations and servers that are not able to support the technology business needs.
- Managed a staff of 13 full and part-time employees.

Ciber - Madison, Wisconsin Sep 03 – Jul 06
Operations Manager / Project Manager

- Provided leadership and direction to the staff of 22 employees and contractors. This involved operational personnel such as server engineers, infrastructure engineers, desktop imaging and application support staff.
- Upgraded the network infrastructure to Windows 2003 Active Directory from a Windows NT domain structure. Determined staffing requirements and hired additional staff to complete the upgrade.
- Project manager for the consolidation and relocation of all servers to the Department of Administration.
- Planned the infrastructure upgrades throughout the system which were necessary to accommodate the deployment of an enterprise-wide system for offender management.
- Led the upgrade of all workstation hardware and software to the Windows XP operating system and Microsoft Office 2003 suite. Communicated with all divisions to test and certify every piece of hardware and software on the network.
- Assisted in the creation and execution of the annual budget.

Lovelace Health Systems - Albuquerque, New Mexico Sep 02 – Aug 03
Technical Support Director

- Led a team of over 20 staff members consisting of data center staff, system administrators, helpdesk, workstation technicians, and project managers.
- Led the operational systems during a period of a multi-company merger. Interfaced with business units of all companies to develop solutions that satisfied all business objectives.
- Lead project manager for the hardware infrastructure during the implementation of the Cerner Millennium medical management software throughout the organization.

Sun Healthcare - Albuquerque, New Mexico May 00 – Jun 02
Data Systems Manager

- Managed a group of 8 high-level system engineers responsible for Active Directory, Exchange, web and database applications, file and print servers, and all other infrastructure systems.
- Led the implementation of increased network security to comply with the government HIPAA regulations.
- Project manager for the Windows 2000 Active Directory project which upgraded the entire enterprise network from multiple Windows NT domains and Novell networks to an Active Directory structure.

Web Manager

- Managed a group of 6 web developers, infrastructure personnel, and contractors that were responsible for the corporate Intranet site and all related web servers.
- Project manager and technical lead the migration of the main Intranet site to a multiple-server Windows 2000/SQL 2000 cluster solution.
- Led multiple programming projects that allowed all users to access critical applications through the company Intranet.

Cerebus Consulting - Albuquerque, New Mexico Apr 99 – May 00
Contractor - Web Manager

- Managed the web department for Sun Healthcare's web department.
- Project manager for the migration of a single Intranet web server to a load balanced / clustered server farm.

Professional Computer Services - Minneapolis, Minnesota Nov 96 – Mar 99
Senior Network Engineer

- One of two senior network consultants responsible for all larger clients.
- Project manager for multiple companies involving Internet connectivity and e-mail implementation.
- Project lead and supervisor responsibilities for technical staff on many consulting engagements.
- Developed information technology objectives and direction for companies. Directly responsible for client account management which included the creation of detailed strategic planning documents.

ALT-KIE Computer Consultants - Minneapolis, Minnesota Jun 93 – Nov 96
Senior Network Consultant

- Provided network consulting for a client base of over 100 companies.
- Installation and configuration of many NetWare servers in different environments.
- Supervisor and technical mentor for multiple junior consultants.

Capital City Distribution - Madison, Wisconsin Feb 92 – May 93
Support Technician / Paradox Programmer

- End-user support technician for a multi-server Novell network.
- Extensive phone support of 19 remote Novell networks.
- Database programmer and support for Paradox DOS applications.

EDUCATION & CREDENTIALS

Bachelor of Science in International Relations · University of Wisconsin-Madison · Dec 91

WI Enterprise Management Development Academy Leadership Training · Oct 07-Oct 08

Informational Technology Infrastructure Library [ITIL]. Foundations Certified · Oct 07
Project Management Professional [PMP] · Sep 05
Microsoft Certified System Engineer [MCSE] plus Internet · Aug 99
Master Novell Certified Network Engineer [MCNE] · Oct 97

AMY MARSMAN

(b)(6)

(b)(6) • E: amy.marsman@dpi.wi.gov

OVERVIEW

Experienced analyst adept at meeting deadlines, communicating effectively and efficiently with excellent planning and organizational skills; accustomed to producing high quality reports, and managing large-scale education projects.

PROFESSIONAL EXPERIENCE

EDUCATION CONSULTANT
OFFICE OF EDUCATIONAL ACCOUNTABILITY
Department of Public Instruction, Madison, WI — June 2008–Present

- Assist in wide variety of assessment and accountability issues for state education agency
- Collaborate on development of longitudinal student data system with IT
- Conduct data analysis; respond to data requests; review internal and external research, reports, analyses, and studies for accuracy
- Represent DPI at Council of Chief State School Officers (CCSSO) meetings

EDUCATION RESEARCHER
Renaissance Learning, Madison, WI — May 2007–June 2008

- Project Manager for field research, including studies on formative and interim assessments in reading, mathematics, and writing
- State liaison responsible for data collection of multi-state research consortium in collaboration with CCSSO
- Plan file specifications, secure FTP transfer protocol, and data request in accordance with FERPA
- Review trends in education research, liaise with education researchers, analyze assessment data
- Researched and authored white paper on parental engagement in education

MANAGER, OFFICE OF RESEARCH & REPORTING
DIVISION OF ASSESSMENT & ACCOUNTABILITY
New York City Department of Education, New York, NY — Nov 2004–May 2007

- Provided project management to extremely fast-paced division responsible for the analysis and reporting of assessment results for nation's largest school system
- Assist director in providing data and analyses to the Mayor, Chancellor and media under tight deadlines
- Coordinate data collection and publication of school/district/regional reports required for state and federal accountability: http://schools.nyc.gov/daa/SchoolReports/default.asp

- Central contact for new interactive statewide database; liaise on technical issues with vendor and state; plan reporting and implementation hierarchy with vendor; report anomalies and advise on data corrections; communicate reporting plans to field; provide overall project management for NYC report roll-out
- Prepared training and provided technical assistance to 35 districts and 10 regions within NYCDOE on issues of assessment and accountability data analysis
- Report on annual and longitudinal trends in NCLB and NAEP testing, graduation rates, and promotion rates

RESEARCH CONSULTANT
New York, NY Nov 2002– Nov 2004

- As freelance researcher, completed various socio-political research projects for USAID, foundations and nonprofit clients. As Senior Project Manager, involved the coordination at all levels of international democracy research resulting in publication of high-level reports for the Asia Foundation: www.asiafoundation.org/pdf/democracy_in_indonesia.pdf and www.asiafoundation.org/pdf/afghan_voter-ed04.pdf
- Working for the Research Foundation of CUNY, helped conduct large evaluation of Pew Charitable Trusts investments in Campaign Finance Reform from 1998-2003.
- Assisted in development of database for the Bill & Melinda Gates Foundation
- Researched and compiled all content for definitive nonprofit development guide, consisting of the 'best of the best' in fundraising ideas, rules, tips, resources and strategies, for Cause Effective

RESEARCH EXECUTIVE
Ogilvy Public Relations Worldwide, New York, NY August 2000–October 2002

- Analyzed and presented quantitative and qualitative research results for wide variety of global clients
- Designed surveys, questionnaires, screeners, presentations and client reports
- Fielded surveys and focus groups according to budget and client deadlines
- Conducted media analyses; helped to expand proprietary media content analysis tool
- Conducted and evaluated secondary online research sources for internal and external client reports
- Provided daily hands-on training for new team member and junior researcher

RELATED NONPROFIT EXPERIENCE

TEACHER
GED Prep, Bellevue Center for Victims of Torture Fall 2005–Spring 2006
New York, NY

- Supported asylum seekers in their endeavor to pass the GED in New York State, taught class and provided tutoring in all subject areas.
- Led team teaching, assisted new teachers in starting and leading classes
- Advised student on various goals including college admissions, graduate school, and better employment

Excel Learning Center — Fall 2000–Fall 2002
New York, NY

- Taught Reading and Writing to children of recently immigrated families in grades 4-9
- Implemented session on American government

GRANT WRITER

The Community Service Society of New York, New York, NY — June 1999–Aug 2000

- Wrote and edited project proposals and status reports for well-respected antipoverty organization
- Managed donor reporting to deadline
- Identified and analyzed extensive research on foundation, corporate, and government donors
- Built capacity to respond to government grants, resulting in creation of a new position in the department
- Revamped department newsletter; maintained donor database and donor files; supervised interns

Russian Orphan Opportunity Fund (ROOF), New York, NY — July 2000–Nov 2000

- Prepared proposals for Russian-based educational organization working in Moscow orphanages to raise educational levels, and prepare older students for college and life outside of the institutional setting
- Identified potential funders, which increased foundation and corporate support, including a significant grant that prevented the closure of one orphanage.

EDUCATION

Graduate School & University Center, City University of New York — May 2004
New York, NY
Masters of Arts in Political Science
Human Rights & International Relations

Adrian College — May 1996
Adrian, MI
Bachelor of Arts, Cum Laude
Psychology and Philosophy

Institute for Humane Studies, George Mason University — July 1995
Arlington, VA
Liberty & Society Summer Scholar

Philip S. Olsen
Assistant Director, Office of Educational Accountability
Wisconsin Department of Public Instruction
125 S. Webster Street
Madison, Wisconsin 53707
Tel. 608.266.8779

Professional Profile

Test Development. Major duties include supervising development of a new alternate assessment for students with disabilities and translation accommodations for English language learners on the state assessment.

Statistical Analysis. Work with agency analysts to calculate Adequate Yearly Progress, Annual Measurable Achievement Objectives, Blue Ribbon Schools, and New Wisconsin Promise Schools of Recognition.

Management. Member of World-Class Instructional Design and Assessment (WIDA) Consortium executive board and Wisconsin Information Network for Successful Schools (WINSS) steering committee; agency representative for Cooperative Educational Service Agency – School Improvement Services; and supervisor of Office of Educational Accountability participation in development of a Longitudinal Data System grant and growth model evaluation study.

Education

Master of Arts – Teaching. School for International Training, Brattleboro, Vt., 2000. Completed thesis on using feedback from English language learners to improve teaching and learning.

Bachelor of Science. University of Wisconsin – Madison, Madison, WI, 1985. Majored in Journalism, English, and Philosophy.

Employment History

Assessment Consultant. Wisconsin Department of Public Instruction, Madison, WI.

English Instructor. Aomori Public College, Aomori, Japan.

Principal Instructor. James English School, Aomori, Japan.

English Instructor. Riverside Language Program, New York, NY.

RODNEY A. PACKARD, PMP

(b)(6)

PROFESSIONAL EXPERIENCE

State of Wisconsin, Madison, Wisconsin, May 2005 – Present

Information Technology Director / CIO, Department of Public Instruction, June 2008 - present
Responsible for the leadership of a forty person staff including applications, technical support and data reporting.

Section Chief, Information Technology, Department of Public Instruction, March 2007 – June 2008.
Responsible for the leadership of an eighteen person application development team working in alignment with the Department's mission for quality education for every child.

- Responsible for the development and implementation of the annual IT Plan, assuring alignment of IT efforts with agency needs. Meet routinely with Agency leadership to review their business needs and prioritize IT projects.
- Leading the $3M project to build the Wisconsin Longitudinal Data System (educational data warehouse). Developed and implemented a strategy to outsource the setup and support of server hardware plus low level Oracle technologies; enabling the DPI IT team to collaborate with the program areas and focus on building reports, data marts and business solutions.
- Representing the Department at State and National associations and educational conferences.

Application Supervisor, Bureau of Technology Management, Department of Corrections, May 2005 – 2007.
Responsible for the technical team's development and support of applications necessary to the daily operations of the Department of Corrections. Supervised fifteen direct reports including programmers, analysts, DBAs and project leaders.

- Developed the processes and procedures necessary to support efficient daily operations including clear roles and responsibilities for the team, problem ticket management and project management.
- Led the effort to build the department's first data warehouse, including the creation of a data warehouse development methodology.
- Actively built the team through hiring, JIT training and mentoring of staff.

Aquent, Milwaukee, Wisconsin, December 2004 – May 2005
Aquent is a professional services firm specializing in people, process and information technology consulting.

Project Manager – Responsible for leading client teams in the successful completion of IT projects.

- Led a technical team in the upgrade of an Image Management application at a Wisconsin based insurance company. Responsibilities included cost management, time management, quality management, communications management and risk management.

Marshall Erdman & Associates, Madison, Wisconsin, 1999 – May 2004.

ME&A is a national, fully integrated, Design-Build firm specializing in health care facilities. Supporting businesses units include manufacturing of architectural case goods, steel fabrication, and fine art sales. Combined sales total $240M+ annually.

Manager, Information Technology – Responsible for the technical team implementing and supporting business applications. Supervised up to ten direct reports.

- Led the effort to implement JD Edwards and a manufacturing execution system at ME&A's Techline furniture manufacturing facility. New system and business processes resulted in a reduction in lead time from 5 to 3 weeks and the shift from make-to-stock to make-to-order.
- Led the effort to implement JD Edwards at the ME&A Corporate offices including GL/AP/AR, payroll, purchasing and job cost management. This effort led to enhanced profitability by providing real-time information and better tools for analysis of long running construction jobs.
- Led the effort to select and implement Prolog Manager for use at large construction sites, thus enabling ME&A to standardize business processes across construction projects, capture consistent information from the job sites and better manage critical documents.
- Managed department and project budgets in excess of $1M annually.
- Responsible for the upgrade of the IT organization including the definition of staffing requirements, job descriptions, pay grades, career paths and training plans.
- Reviewed and recommended new business technologies.
- Identified, selected and negotiated contracts with hardware, software and telecommunications providers.
- Partnered with representatives from the business community to ensure IT resources remained aligned with business objectives.
- Facilitated cross-functional teams working to solve business problems and leverage IT investment.

Wipfli Young LLC, Madison, Wisconsin, 1998 – 1999.

Formally Williams Young, LLC. WY is a regional CPA and consulting firm specializing in accounting, business planning, people systems and information technology.

Management Consultant – Specializing in the business application of Information Technology and business process improvement initiatives. Engagements varied from the strategic to the tactical.

- Led client companies in the development of IT strategies, including the development of a technology plan for a large, multi-state, design/build firm.

- Led client companies in the selection of new software, including the selection of Oracle Financials for a national non-profit organization.
- Managed client projects, including the upgrade and standardization of PCs and networks across regional offices in seven states.

Whirlpool Corporation, Benton Harbor, Michigan, 1990 – 1998

Whirlpool is the world's leading manufacturer and marketer of major home appliances, with annual sales of over $11 billion and 68,000 employees around the globe.

Project Manager, 1996 – 1998. Implemented purchased software at North American manufacturing sites in support of Maintenance Management and Procurement functions. Pilot site implemented in June 1996, with full implementation for over 350 users, at 7 different North American sites, completed in late 1997.

- Led a team of technical analysts and business experts in the delivery of new non-production procurement and asset management functionality.
- Partnered with business experts in the redesign of business processes to maximize the value of new applications.
- Directly responsible for a capital budget of over $2M and an annual expense budget of over $1M.
- Supervised the activities, and completed the annual performance reviews, of eight team members.
- Delivery of the final manufacturing facility ahead of schedule resulted in bonuses for the entire team.

Lead Analyst/Project Leader, 1994 - 1996. Led cross-functional team of programmer/analysts and business experts in the development of Whirlpool's first data warehouse application.

- Managed project from conceptualization through implementation.
- Resulting application enabled Manufacturing and Technology groups to identify appliance field failures, and determine root-cause problem, significantly faster.
- Implemented in multiple phases with the first full year benefits exceeding $1M.
- Developed and delivered user training which was consistently rated superior by attendees.
- Instrumental in the subsequent development of the Whirlpool methodology for building the data warehouse.
- Awarded the Whirlpool *Exceptional Contributor* Award in 1995 as a result of this effort.
- Technologies included: NCR Teradata, Hummingbird BI Query, client/server, Windows.

Systems Analyst, 1990 - 1994. Supported Whirlpool manufacturing as a member of the team maintaining and enhancing the Whirlpool Manufacturing Control System including BOM, Routings, Cost and New Model Planning applications. Technologies included: IBM 3090, JCL, COBOL, ADSO, IDMS/R.

EDUCATION

PMP Certification, Project Management Institute, September 2005

Bachelor of Science Degree, Western Michigan University.
Double Major: Computer Science and Public Administration; Double Minor: Mathematics and Economics

LYNETTE K. RUSSELL, Ph.D.

(b)(6)

EDUCATION

Ph. D., Educational Administration, UW-MADISON, Madison, WI
Principal and Director of Instruction Licensing Program, EDGEWOOD COLLEGE, Madison, WI
M. S. Ed., Gifted &Talented Program Development, UW-STEVENS POINT, Stevens Point, WI
B. S. Ed., Elementary Education, UW-SUPERIOR, Superior, WI
B. S. Ed., K-12 Art Education, NORTHERN ILL. UNIVERSITY, DeKalb, IL

Wisconsin Administrative Credentials: Superintendent, K-12 Director of Instruction, K-12 Principal
Wisconsin Teaching Credentials: 1-6 Elementary Education, K-12 Art Education

PROFESSIONAL EXPERIENCE

DIRECTOR – OFFICE OF EDUCATIONAL ACCOUNTABILITY **2005 – present**
Wisconsin Department of Public Instruction

- Supervise statewide assessment system for all Wisconsin public schools, including alternate assessments for students with disabilities, and accommodations for English language learners
- Manage state process for determining adequate yearly progress of schools and districts

ASSISTANT DIRECTOR – TITLE 1: SCHOOL SUPPORT
2003 – 2005
Wisconsin Department of Public Instruction

- Managed state process for determining adequate yearly progress of schools and districts
- Coordinated development of statewide system of support for schools identified for improvement
- Oversight of state class size reduction program and comprehensive school reform program

COORDINATOR – STAFF AND ORGANIZATION DEVELOPMENT
Madison Metropolitan School District, Madison, WI **1998 – 2003**

- Managed the district school improvement process for 47 schools
- Supervised the Instructional Technology Department, developed district technology integration plan

GRADUATE SCHOOL INSTRUCTOR
Cardinal Stritch University – Madison Center, Madison, WI **2000 – 2004**

- Taught School Administration Courses: School Improvement, Systemic Change, Human Resources

Upper Iowa University – Madison Center, Madison, WI **1998 – 2002**

- Taught Business Leadership Courses: Organizational Culture and Climate, Organizational Development, Theories of Management in Organizations, and Research Process and Design.

K-12 DIRECTOR OF CURRICULUM & INSTRUCTION
Baraboo School District, Baraboo, WI **1996-1998**

PreK-8 PRINCIPAL
Coloma Elementary School, Westfield School District, Westfield, WI
1995-1996

K-12 EDUCATIONAL EXCELLENCE COORDINATOR
Poynette School District, Poynette, WI **1994-1995**

K-12 GIFTED & TALENTED PROGRAM COORDINATOR
Adams-Friendship Area School District, Adams, WI **1990-1994**

S. Paul Sandrock

Wisconsin Department of Public Instruction
s.paul.sandrock@dpi.wi.gov

Current Position

Wisconsin Department of Public Instruction
Assistant Director, Content and Learning Team, 2007 to present
Primary Responsibilities:

- Facilitation and coordination of Wisconsin's work with the American Diploma Project and Partnership for 21st Century Skills
- Liaison to PK-16 Leadership Council
- Facilitation of Implementation Team for Wisconsin's development of a Longitudinal Data System
- Leadership and management consistent with agency priorities, state and federal legal requirements
- Recommendation of policy and program priorities
- Supervision of mathematics, English language arts, world languages, and international education

Teaching Positions

Primary Positions:

1986-1992 Spanish teacher, Appleton West High School, Appleton, WI, grades 10-12
1985-1992 District Foreign Language Department Head, Appleton (WI) Area School District
1975-1986 Spanish and English teacher, Wilson Junior High, Appleton, WI, grades 7-9

Other Positions:

Spanish teacher to elementary school children, Appleton (WI) Area School District, summer school programs

Education

1981 Master of Arts - Spanish and Curriculum & Instruction, University of Wisconsin-Madison
1975 Secondary Teacher certification, Spanish and English, University of Wisconsin-Madison
1973 Bachelor of Arts, magna cum laude - Spanish and English, St. Olaf College, Northfield, MN

2007 Wisconsin Certified Public Manager, completed two-year program, University of Wisconsin-Madison, Division of Continuing Studies

Key

The Essentials of World Languages, Grades K-12: Effective

Publications

Curriculum, Instruction, and Assessment, with Janis Jensen and John Franklin, Priorities in Practice Series, Association for Supervision and Curriculum Development, 2007

Curriculum Handbook: World Languages, with Janis Jensen, Association for Supervision and Curriculum Development, 2005

"Building an Infrastructure to Meet the Language Needs of All Children," with Shuhan Wang, in *The State Education Standard*, National Association of State Boards of Education, 2005

Planning Curriculum for Learning World Languages, Wisconsin Department of Public Instruction, 2002

"Creating a Standards-Based Curriculum," in *Teaching Spanish with the Five C's: A Blueprint for Success*, American Association of Teachers of Spanish and Portuguese, 2000

Major Presentations

Texas Foreign Language Association
Keynote Speaker, Plano, TX, March 2007, "Create Global Literacy: Discover Languages and Bridge Cultures"

Kansas World Language Association
Keynote Speaker, Overland Park, KS, October 2006, "Designing Backwards: From Standards Through Assessment to Daily Instruction"

National Council of Less Commonly Taught Languages
Keynote Speaker, Madison, WI, April 2006, "Global Literacies for All Students"

California Language Teachers Association
Keynote Speaker, Fresno, CA, March 2006, "Discovering Languages for Students, Parents, and Communities"

Minnesota Council on the Teaching of Languages and Cultures
Keynote Speaker, Minneapolis, MN, October 2005, "Keeping Balance After the Year of Languages: Educate and Communicate After the Celebrate"

Trevor Conference on Early Language Learning
Keynote Speaker, New York, NY, May 2003, "Committing to Communication - Why Do We Teach Languages?"

Wisconsin Association For Language Teachers

Keynote Speaker, Appleton, WI, November 2002, "Collaboration, Collegiality, Commitment"

South Dakota Foreign Language Association
Keynote Speaker, Sioux Falls, SD, October 2002, "Bringing Standards into Our Classrooms"

Foreign Language Educators of New Jersey
Keynote Speaker, Lawrenceville, NJ, March 2001, "Targets, Tests and Teaching"

Foreign Language Association of Virginia
Keynote Address, Richmond, VA, October 2000, "In Sync: Connecting Language Learning K-Life"

Professional Service

American Council on the Teaching of Foreign Languages
- President-Elect, President, Past President, 2005-07
- Member of Executive Council, 1999-2002
- Project coordinator, ACTFL Department of Education Research and Studies Grant on Assessment, 1997-2000
- Workshop Presenter for Professional Development series to implement standards, 1997-98, and Integrated Performance Assessment workshops, 2002 to present
- Presenter at ACTFL conferences annually since 1993
- Reviewer for *Foreign Language Annals*

National Council of State Supervisors For Languages
- Delegate to Joint National Committee for Languages, 1996-98
- President, 1994 and 1995
- Co-authored paper "Learning Languages in Middle Schools," 2003
- Drafted position paper "Foreign Language and the Middle School of the 90's," 1993

American Association of Teachers of Spanish and Portuguese
- Member of K-16 Student Standards Task Force, 1996-98
- National Spanish Examination Review Task Force Member, 2003-04

Central States Conference on the Teaching of Foreign Languages
- Member of Board of Directors, 1995-2002
- Presenter of workshops and sessions, annually since 1991
- Member of Advisory Council, 1992 to present
- Chair of Leadership Program, 1996-97, 1998-99

Wisconsin Association For Language Teachers
- Distinguished Foreign Language Educator Award, 1998

- Executive Board member, 1990-2007
- Local Arrangements chair, 1988-91
- Presenter of workshops and sessions, annually since 1987
- Certificate of Recognition, 1990, 1997, 2007

Joint National Committee for Languages
- Delegate of the National Council of State Supervisors of Foreign Languages to JNCL Assembly, 1996-98
- Member of Board of Directors, 1996-98

National Assessment of Educational Progress
- Foreign Language Framework Planning Committee, 1999-2000
- Foreign Language Standing Committee for NAEP, 2001-04

New Visions in Action
- Participant in two visioning conferences, 1999-2000
- Co-chair of Curriculum, Instruction, Assessment, and Articulation Task Force, 2001-04

WGBH and Annenberg/CPB Video Project
- General Advisor, *Teaching Foreign Languages*, a project to develop a video library of language classrooms, methodology workshop videos, and online resources, 2001-04

The College Board
- Member, Foreign Languages Academic Advisory Committee, 1997-2000

Concordia Language Villages (Minnesota)
- Presenter at Teacher Seminars, 1992-96, 2001, 2002
- Consultant on curriculum and assessment development
- Advisor to CLVisa Language Portfolio Project, 2006-07

Workshops on Standards and Assessment for:
- Northeastern University, Boston, MA, August 2008
- Four District Consortium, New Jersey, July 2005
- Charleston County School District, Charleston, SC, June 2004
- National K-12 Foreign Language Resource Center, Iowa State University, Ames, IA, February 2002
- Center for Advanced Research on Language Acquisition, University of Minnesota, 2000-04
- East Bay Foreign Language Project, affiliate of the California Foreign Language Project, Oakland, CA, July 2000
- LOTE Center, Southwest Educational Development Laboratory,

Sharon W. Wendt
Department of Public Instruction
125 S. Webster Street
P.O. Box 7841
Madison, WI 53707-7841
sharon.wendt@dpi.state.wi.us
608-267-9111

HIGHLIGHTS OF QUALIFICATIONS

- Demonstrated oral and written communication skills
- Excellent interpersonal, team building and group facilitation skills
- Experienced in data-driven decision making and quality improvement techniques
- Experienced in designing and evaluating curriculum, instruction and assessments

EDUCATION

Master of Science in Educational Leadership - Cardinal Stritch University, Milwaukee, WI – May 2002

Bachelor of Science in Agricultural Education - University of Wisconsin River Falls, River Falls, WI – May 1986

Certifications: Director of Instruction #10
Principal (Pre-K-12) #51
Agriculture Education #200

PROFESSIONAL EXPERIENCE

EDUCATION ADMINISTRATIVE DIRECTOR
Department of Public Instruction, Madison, Wisconsin **August 2007 - Present**
Responsibilities include development and implementation of program policy and budget affecting career and technical education programs, alternative education programs and GED.HSED testing.
Specific duties include:

- Management of the Career and Technical Education Team;
- Leadership to develop model career and technical education programs and models for implementation by schools and school districts,
- Development of policy initiatives and legislation for effective programs in schools and school districts, and
- Leadership and coordination with businesses, councils/organizations and related workforce development groups.

CHARTER SCHOOL CONSULTANT
Department of Public Instruction, Madison, Wisconsin **November 2003 – August 2007**
Responsibilities included administering the Wisconsin Charter School Program in accordance with Section 118.40 of the Wisconsin State Statutes. Specific duties include:

- Grant Management: Oversee a three year budget of $52 million; responsible for federal grant submission, development and implementation of a competitive state grant process to distribute $17 million per year for charter school planning, implementation and dissemination. Coordinate and manage internal and external grant review process. Responsible for the completion of required charter school state and federal reports. Design, develop, and maintain internal and external structures in support of program administration.
- Technical Assistance: Provide technical assistance to parents, teachers and administrators in the development of a charter school. Conduct workshops and coordinate conferences/meetings to assist school planners.
- Program Resources: Facilitate the development of program resources to include the Charter School Yearbook, website, e-mail list serve and other documents.
- Legislative Analysis: Conduct charter school bill analysis and interpret legislation to recommend policy to the State Superintendent.

PROFESSIONAL EXPERIENCE Continued

EDUCATION CONSULTANT, Career and Technical Education Team
Department of Public Instruction, Madison, Wisconsin January 1994 – November 2003
Responsibilities included curriculum design, development, implementation and evaluation; inservice and preservice teacher training program development; program improvement policy and guideline development; provision of direct consultation to local school districts and teacher training programs. Responsibilities included:

- Beginning Teacher/Mentoring Program: Conducted workshops for first year teachers and provided follow-up technical assistance. Served as a presenter in the graduate level course for beginning agriculture teachers offered through the University of Wisconsin.

- Professional Development: Developed, conducted, and evaluated professional development programs for teachers and administrators on federal and state reform efforts. Communicated electronically with teachers on a weekly basis regarding researched based instructional practices and new resources.

- Curriculum Development: Facilitated the development of the Wisconsin Model Academic Standards for Agricultural Education and alignment of those standards with the Model Academic Standards for mathematics, science, English-language arts, and social studies. Facilitated the development of follow-up publications to assist school districts in implementing the standards. Participated in the development of a 2+2+2 curriculum project in partnership with the Wisconsin Technical College System and UW system.

- Carl Perkins Act (CPA) Supervision: Participated in the development of the state guidelines for the implementation of CPA funding. Presented technical assistance workshops to assist

local coordinators with grant development and implementation. Annually reviewed the Carl Perkins (formula allocation) grant applications and scored the 10% Reserve competitive CPA grant applications.

- Work Based Learning Programs: Participated in the development of the Wisconsin Cooperative Education Skill Standards Certificate Program and the Youth Apprenticeship program.

TEACHING EXPERIENCE

Agriscience Instructor, Grades 7-12 **1986-1991**
Mishicot Community Schools, Mishicot, Wisconsin

PERSONAL CAREER ACHIEVEMENTS AND PROFESSIONAL MEMBERSHIPS

Association for Career and Technical Education
Association for Supervision and Curriculum Development (ASCD)
National Association of Agriculture Educators (NAAE)

- National Outstanding Young Agriculture Teacher 1991
- Wisconsin Outstanding Young Agriculture Teacher 1991

Budget Narrative

Budget Narrative

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SECTION 8: BUDGET NARRATIVE

The information included in this section describes the resources necessary for the Department of Public Instruction (DPI) to accomplish the proposed scope of work. Proposed resource costs integrate personnel salaries, projected fringe benefits, travel, equipment, supplies, contractual services, indirect costs, and training-related expenses. All estimates are based on current costs and/or DPI past purchases, and accounting data. Following are the descriptions of the expenses included in each category:

1. Personnel

DPI has instituted a charge back system for all IT development work within the agency. Developers, regardless of whether they are contractors or permanent staff, are charged back to the program area that is developing the application. The chargeback rate takes into account the salary/contracting fee as well as fringe benefits for the permanent staff. DPI anticipates utilizing both permanent staff and contract staff for this project. The IT positions listed include the project manager, developers and a professional trainer.

The educational consultant utilized will be a DPI program area employee and charges to the project will be based on salary and fringe benefits.

Non-development work such as program management, hardware and software support, and database administration work would be considered DPI's in-kind contribution to the project. This is reflected in Section B of the Budget Summary document.

2. Fringe Benefits

Per the above Personnel section, developers are charged back at a fixed rate. Fringe benefit costs are incorporated into this rate. For the educational consultant position the rate will be 43% of salary.

3. Travel

All reimbursements for transportation, lodging, meals, and related costs are included in this category. Travel expense reimbursements are made on the basis of actual and reasonable expenditures. Payments are governed by Wisconsin State Statutes and Travel Regulations. Travel estimates are based on past accounting experience, allowable travel expenses based on the State of Wisconsin travel regulations and travel quotes from Madison travel agencies.

The budget includes travel for DPI to meet with key stakeholders throughout the state of Wisconsin. DPI collaborates with local school districts as well as LEAs and vendors. We also anticipate training travel expenses as we implement a professional development program during this grant period.

4. Equipment

Hardware: DPI will leverage the existing Longitudinal Data Systems production and development environment as we enter the next phase of this project. The production hardware will need to be upgraded as more data is moved to the system. DPI does not currently have a quality assurance environment to allow test users to work with the system before moving to production. This proposal includes a cost estimate to expand the existing development hardware to serve as both development and quality assurance environments.

Software: DPI must continue to pay for the licensing costs of the existing LDS infrastructure. These costs are mainly paid to Oracle for both their database solution as well as their Fusion Middleware Suite of products which includes the security and web portal for the LDS system.

DPI also anticipates the need to purchase next generation reporting tools as the system grows. As more data becomes available on the LDS system, the questions that will need to be answered will be more complex. The tools necessary to answer these questions will need to be purchased as well as the hardware to support them.

5. Supplies

This covers DPI fixed cost allocations and a desktop service fee charged to all full time employees. These charges have been applied to the salaried education consultant position only. As explained earlier, the charge back mechanism covers all other costs for IT resources.

6. Contractual

The budget includes the cost of contractual assistance to manage and implement the proposal. During the creation of the system, DPI discovered that it was not feasible to configure and maintain the complex environment with in-house staff. A request for bid was awarded to a vendor to remotely support this environment. A flat fee structure was utilized to hold these maintenance costs at a constant level.

7. Indirect Costs

This line covers the following project support costs: administration of grants, contracts, subcontracts and agreements; budget consultation and preparation; programmatic accounting; financial reporting/monitoring; fiscal consultation; expenditure audit/review; facility management; telephone installation, rental, and general usage; normal equipment service; normal editorial service; normal graphic service; office supplies; and miscellaneous program support; and facility operation and maintenance, and building usage charge.

8. Training Stipends

Training is budgeted for both internal DPI staff as well as external stakeholder training. The software and hardware being utilized is complex and difficult to master. Developers and technical support staff need to continue to expand their knowledge of the systems in order to obtain the most efficient use of the system. External stakeholders will need to be trained either in-person or via web-based training on how to access the system and utilize the tools that are available.

Developing a Longitudinal Data System
to Support 21st Century Learning in Wisconsin
BUDGET JUSTIFICATION DETAIL

	Year 1 7/09 - 6/10	Year 2 7/10 - 6/11	Year 3 7/11 - 6/12	Year 4 7/12 - 6/13	Total Budget
U.S. DEPT OF EDUCATION FUNDS					
1. Personnel					
Project Manager / Lead	$208,000	$208,000	$208,000	$0	$624,000
Developer #1	$176,800	$176,800	$176,800	$176,800	$707,200
Developer #2	$176,800	$176,800	$176,800	$176,800	$707,200
Developer #3	$176,800	$176,800	$0	$0	$353,600
Developer #4	$176,800	$88,400	$0	$0	$265,200
Educational Consultant	$104,400	$106,488	$108,618	$110,790	$430,296
Professional Trainer	$0	$135,200	$135,200	$67,600	$338,000
Total Personnel	$1,019,600	$1,068,488	$805,418	$531,990	$3,425,496
2. Fringe Benefits @ 43%	$44,892	$45,790	$46,706	$47,640	$185,027
3. Travel					
Travel Expenses	$5,000	$5,000	$5,000	$5,000	$20,000
4. Equipment					
Production Hardware Upgrade	$75,000	$0	$0	$0	$75,000
Quality Assurance Build	$100,000	$0	$0	$0	$100,000
Oracle Licensing Costs	$76,400	$76,400	$76,400	$76,400	$305,600
HP Licensing Costs	$9,100	$9,100	$9,100	$9,100	$36,400
Next Generation Tools - SW	$0	$250,000	$50,000	$50,000	$350,000
Next Generation Tools - SW	$0	$100,000	$0	$0	$100,000
Total Equipment	$260,500	$435,500	$135,500	$135,500	$967,000
5. Supplies					
Fixed Costs Allocation	$17,748	$18,103	$18,465	$18,834	$73,150
Desktop Fees	$6,550	$6,550	$6,550	$6,550	$26,200
Total Supplies	$24,298	$24,653	$25,015	$25,384	$99,350

6. Contractual					
Oracle Contract Support	$80,000	$80,000	$80,000	$80,000	$320,000
9. Total Direct Costs	$1,434,290	$1,659,431	$1,097,638	$825,514	$5,016,873
10. Indirect Costs					
DPI Indirect Costs @ 14.2%	$203,669	$235,639	$155,865	$117,223	$712,396
11. Training Stipends					
Training/Professional Devlpmt	$10,000	$10,000	$10,000	$10,000	$40,000
12. Total Costs	**$1,647,959**	**$1,905,070**	**$1,263,503**	**$952,737**	**$5,769,269**

Developing a Longitudinal Data System
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BUDGET JUSTIFICATION DETAIL

	Year 1 7/09 - 6/10	Year 2 7/10 - 6/11	Year 3 7/11 - 6/12	Year 4 7/12 - 6/13	Total Budget
NON-FEDERAL FUNDS					
1. Personnel					
Program Administrator @10%	$9,568	$9,568	$9,568	$9,568	$38,272
Applications Manager @10%	$8,736	$8,736	$8,736	$8,736	$34,944
Tech Services Manager @10%	$8,736	$8,736	$8,736	$8,736	$34,944
Database Administrator @20%	$16,640	$16,640	$16,640	$16,640	$66,560
Security Administrator @25%	$18,200	$18,200	$18,200	$18,200	$72,800
Server Administrator @10%	$7,280	$7,280	$7,280	$7,280	$29,120
Total Personnel	$69,160	$69,160	$69,160	$69,160	$276,640
2. Fringe Benefits @ 43%					
Program Administrator @10%	$4,114	$4,114	$4,114	$4,114	$16,457
Applications Manager @10%	$3,756	$3,756	$3,756	$3,756	$15,026
Tech Services Manager @10%	$3,756	$3,756	$3,756	$3,756	$15,026
Database Administrator @20%	$7,155	$7,155	$7,155	$7,155	$28,621
Security Administrator @25%	$7,826	$7,826	$7,826	$7,826	$31,304
Server Administrator @10%	$3,130	$3,130	$3,130	$3,130	$12,522
Total Fringe Benefits	$29,739	$29,739	$29,739	$29,739	$118,955
3. Travel					$0
4. Equipment					
Production Hardware Upgrade					$0
Quality Assurance Build					$0
Total Equipment					$0
5. Supplies					$0

6. Contractual					
Oracle Contract Support					$0
9. Total Direct Costs	$98,899	$98,899	$98,899	$98,899	$395,595
10. Indirect Costs					
DPI Indirect Costs @ 14.2%					$0
11. Training Stipends					$0
12. Total Costs	**$98,899**	**$98,899**	**$98,899**	**$98,899**	**$395,595**