

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

Washington, D.C. 20202-5335



## **APPLICATION FOR GRANTS UNDER THE**

**STATEWIDE LONGITUDINAL DATA SYSTEMS**

**CFDA # 84.372A**

**PR/Award # R372A090009**

**Grants.gov Tracking#: GRANT10075713**

OMB No. 1890-0004, Expiration Date:

Closing Date: SEP 25, 2008

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

## Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application		* 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision		* If Revision, select appropriate letter(s): <input type="text"/> * Other (Specify) <input type="text"/>	
* 3. Date Received: 09/23/2008		4. Applicant Identifier: <input type="text"/>			
5a. Federal Entity Identifier: <input type="text"/>			* 5b. Federal Award Identifier: <input type="text"/>		
<b>State Use Only:</b>					
6. Date Received by State: <input type="text"/>		7. State Application Identifier: <input type="text"/>			
<b>8. APPLICANT INFORMATION:</b>					
* a. Legal Name: Maryland State Department of Education					
* b. Employer/Taxpayer Identification Number (EIN/TIN): 52-6002033			* c. Organizational DUNS: 183071471		
<b>d. Address:</b>					
* Street1:	200 W. Baltimore Street				
Street2:	<input type="text"/>				
* City:	Baltimore				
County:	<input type="text"/>				
* State:	MD: Maryland				
Province:	<input type="text"/>				
* Country:	USA: UNITED STATES				
* Zip / Postal Code:	21201				
<b>e. Organizational Unit:</b>					
Department Name: MD State Dept. of Education			Division Name: Accountability & Assessment		
<b>f. Name and contact information of person to be contacted on matters involving this application:</b>					
Prefix:	Dr.	* First Name:	Leslie		
Middle Name:	<input type="text"/>				
* Last Name:	Wilson				
Suffix:	<input type="text"/>				
Title:	Assistant State Superintendent				
Organizational Affiliation: <input type="text"/>					
* Telephone Number:	410-767-0090	Fax Number:	410-333-0257		
* Email:	lwilson@msde.state.md.us				

**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.):**

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

Maryland Longitudinal Data System

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

## Application for Federal Assistance SF-424

Version 02

## 16. Congressional Districts Of:

\* a. Applicant

1-8

\* b. Program/Project

1-8

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

Add Attachment

Delete Attachment

View Attachment

## 17. Proposed Project:

\* a. Start Date:

04/01/2009

\* b. End Date:

03/31/2014

## 18. Estimated Funding (\$):

* a. Federal	8,999,248.00
* b. Applicant	23,554,071.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	32,553,319.00

## \* 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

09/25/2008

 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: Dr. \* First Name: Nancy  
Middle Name: S.  
\* Last Name: Grasmick  
Suffix:

\* Title: State Superintendent of Schools

\* Telephone Number: 410-767-0462

Fax Number: 410-333-6033

\* Email: ngrasmick@msde.state.md.us

\* Signature of Authorized Representative: Janice Quinton

\* Date Signed: 09/23/2008

**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:  
 Maryland State Department of Edu...

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	\$ 95,000	\$ 96,900	\$ 98,838	\$ 100,815	\$ 102,831	\$ 494,384
2. Fringe Benefits	\$ 7,125	\$ 7,268	\$ 7,413	\$ 7,561	\$ 7,712	\$ 37,079
3. Travel	\$ 4,500	\$ 4,950	\$ 5,445	\$ 5,990	\$ 5,762	\$ 26,647
4. Equipment	\$ 0	\$ 675,000	\$ 0	\$ 0	\$ 0	\$ 675,000
5. Supplies	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
6. Contractual	\$ 700,000	\$ 1,700,000	\$ 2,600,000	\$ 2,000,000	\$ 712,000	\$ 7,712,000
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
9. Total Direct Costs (lines 1-8)	\$ 806,625	\$ 2,484,118	\$ 2,711,696	\$ 2,114,366	\$ 828,305	\$ 8,945,110
10. Indirect Costs*	\$ 10,343	\$ 10,584	\$ 10,835	\$ 11,094	\$ 11,282	\$ 54,138
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 816,968	\$ 2,494,702	\$ 2,722,531	\$ 2,125,460	\$ 839,587	\$ 8,999,248

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

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

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

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

Period Covered by the Indirect Cost Rate Agreement: From: 7/1/2008 To: 6/30/2009 (mm/dd/yyyy)

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

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

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



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

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:  
Maryland State Department of Edu...

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	\$ 313,763	\$ 407,148	\$ 415,294	\$ 423,598	\$ 340,048	\$ 1,899,851
2. Fringe Benefits	\$ 53,340	\$ 69,215	\$ 70,600	\$ 72,135	\$ 57,808	\$ 323,098
3. Travel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
4. Equipment	\$ 1,265,000	\$ 360,000	\$ 432,000	\$ 432,000	\$ 432,000	\$ 2,921,000
5. Supplies	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
6. Contractual	\$ 4,936,356	\$ 3,372,992	\$ 3,438,025	\$ 3,276,722	\$ 3,386,027	\$ 18,410,122
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
9. Total Direct Costs (lines 1-8)	\$ 6,568,459	\$ 4,209,355	\$ 4,355,919	\$ 4,204,455	\$ 4,215,883	\$ 23,554,071
10. Indirect Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 6,568,459	\$ 4,209,355	\$ 4,355,919	\$ 4,204,455	\$ 4,215,883	\$ 23,554,071

## ASSURANCES - NON-CONSTRUCTION PROGRAMS

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

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

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

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

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

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

<p>* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</p> <p>Janice Quinton</p>	<p>* TITLE</p> <p>State Superintendent of Schools</p>
<p>* APPLICANT ORGANIZATION</p> <p>Maryland State Department of Education</p>	<p>* DATE SUBMITTED</p> <p>09/23/2008</p>

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



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## CERTIFICATION REGARDING LOBBYING

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

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

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

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

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

### Statement for Loan Guarantees and Loan Insurance

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

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

<b>* APPLICANT'S ORGANIZATION</b>		
Maryland State Department of Education		
<b>* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE</b>		
Prefix: Dr.	* First Name: Nancy	Middle Name: S.
* Last Name: Grasmick	Suffix:	
* Title: State Superintendent of Schools		
<b>* SIGNATURE:</b> Janice Quinton	<b>* DATE:</b> 09/23/2008	

Close Form

SUPPLEMENTAL INFORMATION  
REQUIRED FOR  
DEPARTMENT OF EDUCATION GRANTS

**1. Project Director:**

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Dr.	Leslie		Wilson	

Address:

* Street1:	200 W. Baltimore Street
Street2:	
* City:	Baltimore
County:	
* State:	MD: Maryland
* Zip Code:	21201
* Country:	USA: UNITED STATES

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

410-767-0090	410-333-0257
--------------	--------------

Email Address:

lwilson@msde.state.md.us
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**2. Applicant Experience:**

Novice Applicant  Yes  No  Not applicable to this program

**3. Human Subjects Research**

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

Yes  No

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

Yes Provide Exemption(s) #: 

--

No Provide Assurance #, if available: 

--

**Please attach an explanation Narrative:**

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

## **Abstract Narrative**

Attachment 1:

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

## **Abstract: Maryland's Longitudinal Data System: Continuing the Vision**

### **Description of Project**

Maryland's enthusiasm is building and expectations are high with the initial components of the state's longitudinal data system (LDS). However, Maryland must continue to build on this successful start to meet the needs of the policy-makers that are eager to use data for decision-making. Maryland needs to create linked longitudinal student records, standardize and update its data collection methodology, increase data collections, expand user access for data reporting and offer training. The state has a Special Education longitudinal data system to assist educators in making decisions that increase student achievement in the crucial area of special education. The processes and lessons learned as a result of this "prototype" LDS informed the vision for the statewide system for all students. Part of the current project will be to integrate the two systems. The project objectives are as follows:

1. Re-engineer the current Education Data Warehouse to accommodate all new data elements that will expand upon previous Maryland Longitudinal Data System (MLDS) initiatives;
2. Add modules to the Web Data Collection System to facilitate all data collection and reporting activities and increase efficiency and data quality;
3. Provide advanced business analysis and reporting tools to an expanded user base;
4. Plan and implement the collection of student-level course-related information allowing for the creation of virtual student records used for program evaluation, analysis, and reporting across Local school system (LSS) and school boundaries;
5. Increase the capacity of the Maryland Unique Student Identification System (USIS) for the inclusion of Higher Education and state Workforce data;
6. Provide the knowledge and ability to access MLDS data directly to an expanded user base.

### **Expected Outcomes**

As a result of this project, Maryland expects to:

- Complete the linking of student data across data collections and years;
- Further reduce the silo structure of major program data collections and integrate the Special Education program with the state's system;
- Increase capacity to provide educators and policy –makers with new and useful data reports to enhance and improve program evaluation and policy decisions;
- Open access to data repositories for schools;
- Work with local school systems to develop a standardized process of defining courses at all three levels (elementary, middle and high) and implement a data collection that will populate the MLDS with student course and performance (grades) data, adding significantly to Maryland's capacity to use data in policy-making and evaluate student educational experiences;
- Make significant progress in converting all major data collections to the web data collection format that will be used to collect, validate and report Maryland's data. This system includes a Statistical Process Control feature that analyzes submitted data for discrepancies from previous five-year trends, and will improve the accuracy of EDfacts files;
- Increase the capacity of MSDE to provide needed data to policy-makers, especially the State Board of Education and legislators, thereby further reinforcing the need for and value of the longitudinal data system.

# Project Narrative

## Project Narrative

Attachment 1:

Title: Pages: Uploaded File: 1237-PROJECT NARRATIVE MLDS\_Grant.pdf

## **6. Project Narrative**

### **6(a) Need**

As states continue to strive to meet the requirements of *No Child Left Behind* legislation and Department of Education data reporting requirements, the need for an efficient longitudinal data system that supplies schools with linked historical data on student performance has become clear. In addition, states need state-of-the-art data warehouses and reporting mechanisms to meet the reporting requirements of EdFacts.

Maryland has always assumed a progressive stance in the collection, validation and reporting of data. The state established its first Educational Data Warehouse (EDW) in 1999 and today strives to achieve the ten essential elements and fundamentals for PreK-12 longitudinal data systems established by the Data Quality Campaign.

Because of the advancement in technologies and efforts of MSDE to move forward with tracking students over time, the current educational data infrastructure (people, processes and technologies) is in need of modernization. Additionally, Maryland must take action to increase the capacity of its systems to automate the collection and validation of additional data to meet the expectations of its stakeholders who require more information in the decision-making process. MSDE also needs to meet the demands of the stakeholders for more timely reporting and advanced analysis of their own data, with tools and processes which they directly control. The stakeholders include participants at all levels: state, district and school. Increasing data demands include such categories as student level course information, grades, assessment results, and special services information, and the seamless access and reporting of this information both longitudinally and across school and district boundaries.

Maryland seeks funding to meet these additional needs and requirements. This funding will augment other state and federal resources being allocated for other components of the system. The state requests these resources in order to meet federal compliance requirements and provide Maryland educators and policy makers with meaningful data with which to continually improve the education of Maryland's students.

### **Accomplishments to date**

- Development and implementation of a unique student ID system;
- Establishment of engaged and functioning internal stakeholder group representing all MSDE program offices;
- Completion of internal and external stakeholder needs assessments;
- Initiation of a state-funded project to standardize and update data collection and reporting methodology (with an emphasis on EdFacts data file requirements) to further improve data quality, integrity, and validity;
- Increased ability to edit and verify local data submitted to the state;
- Defined high school cohorts resulting in expected compliance with federal requirement to report cohort graduation rate 2 years early (2011 instead of 2013);
- Data illustrating the impact of Early Childhood programs and the addition of kindergarten readiness data to the system;

- Establishment of permanent positions to support the unique ID system;
- Increased department-wide commitment (all programs) to meet EdFacts reporting requirements through reduction of data silos and data collection redundancy by supporting a state LDS;
- USDE recognition of EdFacts file submissions timeliness, quality and number of files submitted;
- Successful application to participate in the United States Office of Education (USDE) Differential Accountability Pilot Program;
- Renewed commitment to address the ten essential requirements of a state data system as defined by the Data Quality Campaign;
- Increased awareness and support on the part of the State Board of Education, State General Assembly and institutes of higher education of the benefits of a longitudinal data system; current discussions about how to extend the system into higher education and workforce using the unique student identifier;
- Increased awareness of the planning and funding required to establish a longitudinal data system as well as protocols for success;
- State-funded contract to enhance current school improvement data analysis website ([www.mdk12.org](http://www.mdk12.org)) with a classroom focused improvement model that is data-driven to support schools;
- Increased opportunities to encourage school systems to use technology, including on-line state assessments;
- Local school systems awareness of future state data needs;
- Initiation of a data dictionary and data governance effort for the management of MSDE data;
- Development and implementation of a public web-based portal with business intelligence tools for the State Performance Plans (SPP) and Annual Performance Reports (APR) for Maryland's early intervention and special education systems (<http://mdideareport.org>); this site is being used as a model for the public display of longitudinal data;
- Development of the Maryland Special Education/Early Intervention Accountability and Decision Support Systems (MSEADDS) longitudinal data warehouse;
- Development of a set of SPP indicator reports and predictor reports based on the MSEASDDS SPE/EIS longitudinal data warehouse;
- Development of the MSEADDS Scorecard, a Cognos-based set of analytical tools for display and analysis of SPP indicators by decision-makers at SEA, LEA, and school levels;
- Initiation of the development of online professional development offerings to help principals and school-based leaders improve outcomes for students with disabilities.

## **6.a.1 Governance and Policy Requirements**

### **6.a.1.1 *Need and Uses***

Maryland's LDS is being designed specifically to inform decision-making at a variety of levels (state, school system, and school building). As stated previously, the State Superintendent of Schools has been discussing the system with a variety of stakeholders (State Board of Education, Governor's Commission, Maryland General Assembly) and

highlighting the increased capacity Maryland will have to improve student achievement, make data-driven decisions, and monitor the success of policies and programs. There is keen interest, from these groups, in data that will inform Maryland policies to address challenges such as dropouts, truancy, the achievement gap, predictors of success, identification of successful interventions (such as Early Childhood programs), class size and middle school course requirements.

#### **6.a.1.2 Governance**

The successful establishment of the internal stakeholders group has provided a venue for discussion over data ownership, data management and data confidentiality and access. At the agency division level, program managers are responsible for the integrity of their data; the program is the owner of the data. In the near future, this group will be developing a procedure to be used to propose changes to their data that may impact other programs. This is part of the development of the data dictionary that is funded under the 2005 grant. In addition, Maryland has a long history of data governance rules that have been successfully implemented across the state. Local superintendents are required to sign documentation attesting to the integrity of the data they submit to MSDE, they are given the opportunity to review data prior to public release, and it is understood that the data belong to the individual school districts. The advent of the capacity to transfer individual student records between school systems will require the development of additional business rules, which will be developed in the usual collaborative manner that has been so successful in the past.

The department leveraged the work of the internal stakeholder group, established as part of the original grant, to educate the different programs about the EdFacts requirements, the importance of a department-wide data dictionary, the benefits of reducing the redundancy of data collections and data quality. It was through this group that support for the Maryland LDS was generated as a result of the group's empowerment once they had access to the information informing them of the benefits of a LDS. The group has requested to continue meeting beyond the grant period, and has formed a working relationship across departments. The stakeholder group remains active in contributing to Maryland's EdFacts transition plan and is engaged in meeting EdFacts requirements for their programs. Maryland's model of data integrity lies with the involvement of the program with their data. All programs understand that the responsibility of training local school systems on their data collections, the cleansing of the data and the validation of the accuracy of the data reside with the program.

Another group recently engaged with the LDS is the Bohanan Commission. This group was formed by Maryland's Governor to recommend accountability systems for Maryland's institutes of higher education (IHEs). The membership of this group are discussing how the Pre-K to Grade 12 (PreK-12) data system can be utilized and extended into the post high school years and used for research, and are identifying the need for data not currently included in the system. Expected recommendations (due in October) from the Commission include the linking of PreK-12 data to higher education through the unique student identifier to be funded using state dollars.

### **6.a.1.3 Institutional Support**

Maryland has demonstrated a commitment to its data system over the years. The Education Data Warehouse (EDW) was established in 1999, to support an accountability system, including reports, to the public. The warehouse was designed to provide a strategy to store data over time, report trends, and ultimately, calculate Adequate Yearly Progress (AYP) for schools and school systems. As the state data system did not have a unique student ID, data could not be linked between collections or across years. The state did, however, develop and maintain an effective system to exchange data between the state and local school systems. It also used the EDW to generate some of the required EdFacts files. Maryland continues to use state funds to maintain the EDW.

Please refer to section 6 D for a detailed discussion of MSDE's institutional support.

### **6.a.1.4 Sustainability**

These initiatives will be rolled into MSDE's existing operations to ensure the gains realized through development efforts continue once grant award funds have been dispersed. MSDE is committed to continuing the grant's initiatives under the lead management of the Division of Accountability and Assessment after the grant's term of award is reached. The majority of funds requested in this proposal are earmarked for contractor consulting and technical design services. Once the interfaces are built and redundant processes are collapsed, existing staff and resources will be able to continue the objectives described in this LDS plan.

## **6.a.2 Technical Requirements**

### **6.a.2.1 Federal Reporting Requirements**

Maryland is moderately successful in meeting federal reporting requirements, but is striving to make the process more efficient in order to free up additional staff time to complete additional data analyses needed by programs and policy-makers. The web data project is instrumental in collapsing redundant data collections thereby reducing the amount of data required to be submitted by school systems. The project also includes the construction of data tables that will aggregate the data required for each file but these tables must be adjusted every year as EdFacts file specifications change. Maryland's state-funded data warehouse maintenance contract will address this need.

### **6.a.2.2 Privacy Protection and Data Accessibility**

While Maryland has a long-standing policy regarding the confidentiality of student data (only aggregate data are reported beyond the firewall) the new availability of individual student historical data is of special interest to schools to help them meet the needs of their transient student populations. One component of the web data collection module currently being implemented is a system to restrict access only to those authorized to have it. At this point, only district level staff has access to individual student data. Stakeholders at the school system and school level will assist the contractor in determining the rules for individual student data access.

Maryland is in the process of defining additional documentation concerning data availability as a result of the LDS. Previously, only local school systems were given their

students' assessment results in a secure environment, and no other data with student identifying information were ever released to anyone for any purpose. In most cases, Maryland releases only aggregate data. Once the new web data system is in place, Maryland will work with local school systems to provide a secure access system for identified staff to access student records according to FERPA and state regulations.

#### **6.a.2.3 Data Quality**

Data quality has always been paramount to Maryland. However, current systems span multiple technical environments and require extensive manual intervention. The development of the Web Data Collection System (WDCS) and the assignment of unique student IDs have provided an opportunity to add automated data verification processes to the system. The introduction of Maryland's LDS along with the Web Data Collection System tools will include built-in data verification edits as well as a Statistical Process Control (see Appendix A) to provide an even more sophisticated verification process.

#### **6.a.2.4 Interoperability**

Currently minimal interoperability exists between MSDE data collection and reporting systems and those of its LEAs. While Maryland has had a secure system to transfer flat file data to and from local school systems, this requires manual staging, processing, and validation. As a result of this project, Web Data Collection will automate the process, providing a transparent, seamless system precluding the exchange of flat files.

#### **6.a.2.5 Enterprise-wide Architecture**

Currently there is limited seamless integration of systems and data. MSDE's EDW is a point-in-time data repository with independent silos. In school year 2007-2008, the state began to assign unique state IDs (SASIDs). Now that SASIDs are being reported, these data elements will allow the state to build a longitudinal system. In the existing design, MSDE cannot accommodate the linking of student data across data collections, school boundaries and educational years. In order to comply with EdFacts, multiple data collections capture aspects of redundant data. Special Educations' LDS is not integrated with MSDE's EDW.

#### **6.a.3 Limitations of the Current System**

As a result of years of planning and implementation through the use of both state and federal funding, Maryland is well-positioned for the creation of a statewide longitudinal data system. However the state still has work to do to meet longitudinal data system requirements. A good system meeting all requirements takes significant planning and time to develop, and significant resources to fund and maintain. The 2005 Federal Grant was instrumental in illustrating that the Maryland team is effective in planning, developing and implementing the components of a viable longitudinal system. The following limitations, corresponding to the objectives (stated in section 6.b), still exist and are the focus of this new grant application.

1. Maryland's current Educational Data Warehouse (EDW) was designed and developed in 1999, prior to MSDE having a statewide unique student identifier. The EDW was designed with stand-alone subject matter student level and summary data tables within a

star schema design that does not link the student level data for a longitudinal data system. The pre-defined summary tables served MSDE very well for accountability reporting, but have been limited when new types of requests for information occur that cross the specific subject matter tables. There is no longitudinal student level data in the current EDW.

2. Maryland's current data collection process is inefficient. The current process requires the Local School Systems to manage a multitude of data collection processes, each with its own entry, validation and submission procedures. A new system will standardize and simplify the process improving the quality of the collected data.
3. Maryland's current reporting tools are limited to developer dependent reports. These reports cannot be linked across non-heterogeneous data sets. Access is limited to MSDE staff only. Timeliness of the reports is dependent upon MSDE staff availability.
4. Maryland's current system is limited to data on statewide assessments, discipline, services and attendance. At this time, Maryland and many of the local school systems do not have the capacity to collect and report course participation and performance data at all levels (elementary, middle and high). Each Maryland school system maintains its own unique scheduling processes and course numbering systems, making it impossible to look at this data statewide. This has made program reporting, analysis, and evaluation problematic.
5. Maryland does not have the capability or communication infrastructure to convey K-12 student level demographics to Higher Education. This functionality also does not exist for state workforce programs.
6. Maryland does not have a systematic professional development program for its data collection analysis. With the increasing necessity for the use of student data for decision-making at all levels, understanding and knowledge of such analytical processes is imperative.

## **(b) Objectives for Proposed System**

This grant request will further the advances that Maryland has made in establishing a culture that uses data not only for compliance, but also for the improvement of student achievement. Longitudinal data systems are powerful tools to increase the efficiency and effectiveness of solutions that improve student performance, and close gaps among disaggregated groups of students. By increasing and simplifying access to those tools, expanding the understanding of how to use them, and formulating and answering the fundamental questions that drive desired improvements, MSDE seeks to accomplish this goal. By making more data (Special Education data repositories, statewide course and grade data) useable for larger audiences, the proposed initiatives will further efforts to engage researchers, policy-makers, program managers, superintendents, administrators, teachers, and the public in MSDE's improvement efforts. By continuing efforts to increase the quality of data (through the development of additional Web Data Collection modules), this project will further the confidence of stakeholders and constituents in the ability to rely on this data for data-driven decision-making and policy initiatives.

With successful award of grant funding, MSDE will focus on **six objectives** to better coordinate measures of student performance and dissemination of those measures:

1. Re-engineer the current Education Data Warehouse to accommodate all new data elements to expand upon previous LDS initiatives;
2. Add modules to the Web Data Collection System to facilitate all data collection and reporting activities;
3. Offer advanced business analysis and reporting tools to an expanded user base;
4. Collect student level-course related information to allow for the creation of virtual student records used for program evaluation, analysis, and reporting across LSS and school boundaries;
5. Increase the capacity of the Maryland Unique Student Identification System (USIS) for the inclusion of Higher Education and state workforce data;
6. Provide the knowledge and ability to access Maryland's LDS data directly to an expanded user base

### **Objective 1: Re-Engineer Education Data Warehouse for Maryland's LDS**

MSDE must re-engineer or re-build the Education Data Warehouse as the foundation of the LDS. A comprehensive re-design, and development of the existing EDW must be performed to build the LDS. The LDS must include the additional objectives described in this grant request such as additional federal programs to comply with EdFacts reporting, reporting and analysis that allows for three dimensional slicing and dicing of data aggregates, student record access for schools and local school districts across the state and the integration of students with disabilities contained in the special education LDS prototype. New data subjects not in the current EDW will be added such as the Title III assessment, Las Link, MSDE's kindergarten assessment, and Career and Technology Education student data under the Perkins Act. The design of the database that sits behind these objectives must be built for ease of user access and prompt

performance. The linking of student data would be accomplished by MSDE's statewide unique student identifier that was originally assigned to students in the 2007-2008 school year.

Data conversion of existing summary data tables for the accountability program and all student level data back to 1993 must be included in the new EDW/LDS. Business rules for linking the student level data must be defined in detail since Maryland collects data from local school systems at different points of time during the period of July 1 through June 30 annually. Assessment vendors also provide data to MSDE for all assessment results.

MSDE will require the expertise of a contractor that has both sophisticated technology experience and education practice for PreK-20 and that has developed a longitudinal system for another state. The vendor will be required to use Maryland's System Development Life Cycle (SDLC) methodology for performing this objective.

A full evaluation of the existing EDW will be performed to determine if any components of the existing design may be used. The contractor will be required to define and document the requirements based on interviews with in-house staff as defined in the budget narrative, local school system personnel and researchers. Once all requirements have been defined that include new data definitions from objective 2 and objective 4 along with business intelligence analysis and reporting, design and development work will begin. Testing will proceed with each beta release of the re-engineered EDW by in-house staff and a sampling of local school system personnel. Data that was converted will be validated by MSDE quality assurance personnel prior to full implementation of the product.

Successful outcomes will include:

- Ability to create one unique student-level record to span all collection activities;
- Provision of the framework for access to relevant data stores for districts and schools;
- Provision of the infrastructure to successfully generate all EdFacts reports;
- Historical conversion of summary tables as well as the data will allow.

## **Objective 2: Web Data Collection System (WDCS) – Centralized Consolidated Reporting**

The second objective of the project is to complete the Web Data Collection System (WDCS) project to include the remaining data collections to ensure data quality and validity and establish a standard collection method across all data collections.

The current process requires the local school systems to prepare the data for each collection to specifications described in an annual published manual. The file is then uploaded to a secure file server where MSDE staff retrieves the data file which is then processed in an Oracle application. Once processing is complete, edit reports are run and published on secure transport for the LSS to review and amend the submission. The amended submission repeats the process. In most instances, the file submission process has multiple iterations for a single collection. With a fully developed Web Data Portal, the LSS will have one single dedicated portal that will process files. The front end of the portal will restrict data that does not meet business rules, contains illogical data, data that does not meet statistical process controls or data that is outside of acceptable

values. Files that clear logistical edits, adhere to defined business rules and are within defined ranges according to MSDE's statistical process control convention will move on to the next phase of review. Error records are held and sorted by error to allow the data custodian to review and correct. Once the additional records meet all criteria, they append to the master data set and the entire submission continues along the approval and processing chain. The WDCS will standardize data collection and storage procedures in a way that allows technical staff to easily define and program changes on an annual basis as well as add new datasets. This interface will also allow for a transparent process to validate SASIDs as each file is submitted. The modules currently under state-funded development are:

- School Data Set
  - Demographic Data
  - Federal Data Identifiers
  - Data Items (for various school level counts)
  - Data Analysis Items (used to classify schools for various data analyses)
- Attendance
- Statistical Process Control (SPC)
- Class Level Membership used to report Highly Qualified Teachers
- Federal Programs (Title I, Title III)

The modules included for the proposed grant project address the following collections:

- September 30 Enrollment
- Standardized Course Participation and Grades
- Suspensions
- Truants
- Staff
- Assessments
  - MSA
  - Alt-MSA
  - High School Assessments

Data from all the WDCS modules serve the following purposes:

- Monitor compliance with Federal and State laws and standards
- Design school improvement plans
- Determine school performance sanctions and awards
- Prepare federal reporting requirements
- Respond to State legislative and local board of education data requests
- Produce annual statewide summary publications
- Determine State funding allocations
- Determine if classes are receiving instruction from Highly Qualified Teachers

The expanded WDCS portal will simplify data collection processes as data standardization initiatives are enforced back to the point of data capture. Once data is reported consistently, MSDE will be able to collapse multiple duplicative collection processes into one centralized

location and data from reporting cycles can be disseminated to all stakeholders in their required formats.

Successful outcomes will include:

- All data submissions through one WDCS portal
- All business rules, SPC and edit reports housed in a web-based application

### **Objective 3: Business Intelligence (BI) for analysis and reporting**

MSDE plans to expand reporting functionality by harnessing the strength of modern analysis and reporting tools such as Cognos Business Intelligence (BI). BI will allow for a customizable portal that will allow users to:

- Conduct analysis among different data stores without a primary key
- Create reports to permit end users to drill down within predefined schemas
- Design dashboards and interfaces to the needs of the educational stakeholder community

To accomplish the third objective, MSDE plans on using the functionality of Cognos Reportnet 8.3. The Cognos BI tool is an ideal instrument to achieve this objective due to the Cognos' multidimensional analysis (cubes) features. This tool allows visibility into large volumes of data. Cognos BI allows users to present complex data in easy to understand formats. The tool also allows users self-service access to data. Users can define and set dimensions, categories and measures. These tools also allow users to slice, sort, drill-down and exclude non-relevant data when conducting analysis. Cognos BI also permits leveraging of relational databases as well as heterogeneous data sets. This functionality will allow users to set their own parameters among data stores for which their role has been authorized. Cognos' asymmetrical analysis allows users to integrate different rows and column in the business context. These tools will permit focus on relevant data so they can analyze based on their needs.

MSDE can encourage expanded use by designing premade reports that permit drilldown functionality. These ready reports will be supplemented with additional training as conditions warrant. Successful outcomes will include:

- The ability of end users to create their own reports
- School Level Access to MSDE's data repositories
- Allow for massive expansion of new user community including LEA central office staff and extending for the first time to school based personnel

### **Objective 4: Creation of a Student Record Web Portal (SRWP)**

The fourth objective of this project is to carefully plan, develop and implement a new state data collection that will enable Maryland to monitor and report on the courses taken by students at all levels and by all subgroups. This will provide for the seamless communication of course information across school boundaries as well as from PreK-12 through higher education and the

means to evaluate the effectiveness of the many programs and initiatives within the Maryland Education System.

The key components of this objective include:

- The creation of a master table/index for course standardization across the state
- The creation of a Web Data Collection module to assist in the collection process
- The creation of the Student Record Web Portal allowing school-based administrators to access virtual student records (VSR)

Due to a concerted effort on the part of the State Superintendent of Schools, The Maryland State Board of Education and the Maryland General Assembly are well aware of the positive impact the Maryland LDS will have on Maryland's ability to provide additional high quality data for use in policy decisions. A constraint of the current system is that the data available are the data collected to meet limited previous requirements for information. Besides expressing interest in linking data to Higher Education and Workforce data, legislators are beginning to ask for data the system does not collect, and other stakeholders are eager for data linked across the various data collections. Maryland must take action to increase the capacity of its local school systems as well as its own systems to collect additional data to meet the expectations of its stakeholders who require additional information in the decision-making process. Topics of special interest to policy makers are related to the effect of early childhood programs, truancy and dropout prevention, course sequencing for success, discrepancies between test performance and grades, and the adequacy of preparation for high school and college. This summer, new initiatives were announced to strengthen the middle school experience for Maryland students. These initiatives suggest new coursework that is expected to increase the preparation of students for high school, inclusive of completion of algebra by the end of Grade 8.

Evaluation of the success of these new initiatives is dependent on having the required course data at the state level. The current system is limited to data on statewide assessments, discipline, services and attendance. At this time, Maryland and many of the local school systems, does not have the capacity to collect and report course participation and performance data at all levels (elementary, middle and high). Each Maryland school system maintains its own unique course numbering system for high school, making it impossible to look at this data statewide. This fourth objective will enable the state to look at grades and how they correlate to other performance measures (especially standardized assessments), permit the easy transfer of more complete longitudinal student records between schools and most important, gain the capacity to do the research necessary to assist schools to identify patterns of student behavior that increase the likelihood that they may drop out or not be successful in time to provide meaningful intervention. In this way, the system will provide data that can be used in educational decision-making at multiple levels: state, school system, and individual schools.

Successful outcomes will include:

- Creation of a master table/index for course standardization
- Creation of a virtual student record
- Make the VSR accessible to stakeholders including school-based administrators

## **Objective 5: Increase Capacity of USIS for the Inclusion of Higher Education and Workforce**

The fifth objective addresses the need for the linkage of data between the PreK-20 communities. The current activities in the PreK-12 and Higher Education segments are focusing on the needs within their respective areas. Increasing the performance of students in the education system will require the expansion of accountability both within the segment and throughout the entire education system. The development of increasingly more complex accountability measures and the need to analyze student performance requires the use of detailed student level data. This data needs to be collected, usable and available across education segments in Maryland. This means developing an ability to track students longitudinally through their entire education experience and beyond into any lifelong education and employment.

Recently Maryland's Governor has formed the Bohanan Commission to recommend accountability systems for Maryland's institutes of higher education (IHEs). One of the charges of this group is to lay plans for the establishment of a higher education longitudinal database which will be funded through state dollars. The membership of this group including representatives from MSDE, recognizes a key component of the higher education longitudinal database is the ability to link to the pre-K to Grade 12 (PreK-12) data contained within the Maryland Longitudinal Data System (MLDS).

Through previous efforts, MSDE has established the Unique Student Identification System (USIS) assigning all PreK-12 students State Assigned Student Identification numbers (SASIDs). The architecture of USIS currently only accommodates PreK-12 institutions. In the continued commitment toward the attainment of the DQC standards, this objective will lay the ground work for the 9<sup>th</sup> essential element of the DQC. Through this project, the capacity of USIS will be expanded for the potential inclusion of both Higher Education and workforce data. This will allow the MLDS to link and exchange data with both the newly created higher education longitudinal database and the workforce database.

Successful outcomes will include:

- Higher Education will be able to obtain SASIDs from the MSDE's Unique ID System
- Workforce will be able to obtain SASIDs from the MSDE's Unique ID System

## **Objective 6: Professional Development**

Maryland has been instrumental in providing data and data analysis support to schools as well as the public. A website is devoted to the support of schools in analyzing their data that also provides access to state standards, sample assessments, downloads of aggregate data for researchers, and other supports ([mdk12.org](http://mdk12.org)). The project proposed in this application will add significantly to this effort. A new initiative, currently known as the Breakthrough Center (see Appendix A), is an innovative model for supporting school systems in Maryland. The Center will partner with school systems to identify organizational and instructional needs and assemble a customized and coordinated approach for methodologically and strategically addressing needs. Much of the training for educators related to the use of longitudinal data and data-driven decision-making will be brokered through the Center.

The sixth objective addresses the professional development required to ensure that the solutions developed under this grant are properly utilized and fully employed to accomplish the planned objectives. The professional development activities include:

- Identification of potential obstacles to success;
- Assessment of the impact of the solution's change on the responsibilities of individuals in the organization;
- Development of a change strategy that will include targeted and cascading communications about the solution;
- Definition of incentives to use the MLDS data, analytical tools, and reports;
- Identification of the knowledge, skills, and abilities (KSA) required to use the MLDS data, tools, and reports effectively;
- Definition of the training requirements to match those KSAs; and
- Creation, delivery and assessment of professional development needed for MLDS stakeholders and end-users to learn how to best use the MLDS data, tools, and reports.

Training activities are developed to teach user personnel the use of the system as specified in the training criteria, including the target audience and topics on which training must be conducted. The training strategy defines how the topics will be addressed and the format of the training program, the list of topics to be covered, materials, time, space requirements, and proposed schedules. The training activities will enable user communities to meet these objectives by increasing and simplifying access to those tools, expanding the understanding of how to use them, and helping formulate and answer the fundamental questions that drive desired improvements in education and achievement.

Successful outcomes will include training on the following components being provided by this grant:

- Cognos Business Intelligence Analysis and Reporting tools
- Student Record Web Portal
- Web Data Collection modules
- USIS end user training

### **(c) Project Design**

#### **Vision**

Maryland's vision encompasses a statewide longitudinal data system that is integrated with all components of data required to ensure that data collected from Local School Systems and assessment vendors is accurate, timely, and meets the highest standards for presentation for the user audience. The vision must result in an enterprise-wide data system or central repository that allows customers to access the information in an easy understandable manner. This vision begins with data collected from the local school systems and spreads to an end product for schools and school systems.

#### **Current Systems**

Maryland has completed some of the work toward achievement of the vision. Currently, MSDE has an Education Data Warehouse (EDW) and another database known as EDWF that includes

solutions for a portion of the EdFacts file submissions. The current EDW was designed and developed in 1999, prior to MSDE having a statewide unique student identifier. The EDW was designed with stand-alone subject matter, student level, and summary data tables within a star schema design that does not link the student level data for a longitudinal data system. The pre-defined summary tables have served MSDE very well for accountability reporting, but have been limited when new types of requests for information occur that cross the specific subject matter tables. There is no longitudinal student level data in the current EDW by subject matter or across years.

Beginning with the 2007-2008 school year, MSDE implemented a Statewide Student Unique Identifier System and began a new initiative (Web Data Collection System – WDCS) with a technology vendor to begin capturing data via a web interface solution for a small portion of the data collected from local school systems. Part of this new initiative includes Title I, Part A through Part D and the Title III program. Through internal stakeholder’s meetings, MSDE identified the two most critical federal programs for improvement based on the number of EdFacts files required for reporting and the desire to improve data quality. Some of the federal program data was being collected in the aggregate and does not allow for unduplicated counts when students transfer between local school districts. The WDCS will standardize the data collection processes, reduce redundant requests between federal program data and accountability data requests to local school districts along with the implementation of the Statistical Process Control component to ensure accuracy of data. Appendix A includes a description of this process.

Maryland has a completely separate system for students with disabilities. Linking of individual student-level data within this system has been accomplished, although this system is not integrated with the regular education student population.

Maryland’s reporting system currently utilizes Cognos Impromptu and staff members stage these reports on a secure server for local school systems to download. Reports are not readily viewable over the internet and user audiences have no ability to create ad hoc reports. The current audience includes local school systems and special requests from researchers, legislators and other stakeholders.

### **Limitations of Current Systems**

1. The EDW was designed with stand-alone subject matter, student level, and summary data tables within a star schema design that does not link the student level data for a longitudinal data system. There is no longitudinal student level data in the current EDW for linking student level data across subject area or years.
2. Maryland’s current data collection process is inefficient. The current process requires the Local School Systems (LSS) to manage a multitude of data collection processes, each with its own entry, validation and submission procedures. A new system will standardize and simplify the process improving the quality of the collected data.
3. The current reporting tools are limited to developer dependent reports. These reports cannot be linked across non-heterogeneous data sets. Access is limited to MSDE staff only. Timeliness of the reports is dependent upon MSDE staff availability.

4. Maryland's current system is limited to data on statewide assessments, discipline, services and attendance. At this time, Maryland and many of the local school systems, does not have the capacity to collect and report course participation and performance data at all levels (elementary, middle and high). Each Maryland school system maintains its own unique scheduling processes and course numbering systems, making it impossible to look at this data statewide. This has made program reporting, analysis, and evaluation problematic.
5. Maryland does not have the capability or communication infrastructure to convey K-12 student-level demographics to the higher education community. This functionality also does not exist for state workforce programs.
6. Maryland does not have a systematic professional development program for its data collection analysis. With the increasing necessity for the use of student data for decision-making at all levels, understanding and knowledge of such analytical processes is imperative.

## **Methodology for Accomplishing Objectives**

### **Overview**

The overall design of this project follows a logical, top-down sequence of activities and tasks structured to complete the construction of the MLDS and to articulate and implement the processes needed to maximize the utility of the MLDS. The project begins with a comprehensive review of the purpose of the MLDS, and a re-development and re-articulation of how the MLDS can be used to improve teaching and learning. The strategic plan will provide the rationale and direction for the rest of the project. Based on the plans and requirements developed by this strategy, the project will proceed with the RFP and procurement process to obtain the most qualified partners available to assist MSDE with the project.

On-going project management and oversight will carefully enforce the state's standard Systems Development Life Cycle processes for the technology-based components of the project (data warehouse expansion, revised data collection tools, additional analysis and reporting tools, etc.). Formal project management processes for the planning, tracking, and reporting of all project activities will keep senior management advisers and all stakeholders apprised of project progress and issues. The existing MLDS Stakeholders Group will serve the new project in multiple capacities – steering committee, strategy team, requirements providers, etc. This group will also help identify additional end-users for detailed requirements design and acceptance testing.

### **Methodology**

The MSDE grant team will plan and write a request for proposal to obtain the services of a highly skilled technology vendor that has a proven track record in designing and developing longitudinal systems in other states. Mandatory requirements for vendors will be explicit in requiring the necessary experience and skills technically, in addition to educational PreK-20 experience. MSDE plans to design one multi-year procurement that reflects an incremental roll-out of the grant objectives that have been defined. The vendor that receives the award must have a PreK-20 practice. The procurement will be designed as deliverable based on the full complement of steps performed in the System Development Life Cycle (SDLC). MSDE's grant team will design a procurement that is modular based on the six objectives defined in the grant request with an incremental roll out of each objective.

The State of Maryland employs a Systems Development Life Cycle (SDLC) methodology. This methodology has been very successful with other projects where services have been procured to perform the necessary work. The ten SDLC phases that will be employed are:

1. Initiation Phase
2. System Concept Development Phase
3. Planning Phase
4. Requirements Analysis Phase
5. Design Phase
6. Development Phase
7. Integration and Test Phase
8. Implementation Phase
9. Operations and Maintenance Phase
10. Disposition Phase

SDLC Phase one and two above have been completed by the Grant Project Team and the vision definition that Maryland has developed. Each step of the SDLC must be followed by the vendor for each objective defined beginning with the Planning Phase and ending with the Disposition Phase. These efforts are collaborative with MSDE staff personnel, the Grant Project Team and local school systems. The vendor will be required to deliver documented requirements resulting from the requirements gathering and collaboration efforts with all stakeholders. All requirements will be fully vetted prior to any design and development work by the Grant Project Team. Design requirement documents delivered by the vendor must be approved by MSDE prior to any development work beginning. Once a beta version of the product has been delivered to MSDE, testing of the product by in-house staff will begin. Upon successful completion of in-house testing, a sampling of the 24 local school districts and schools will be asked to pilot test with oversight by the vendor and MSDE personnel.

### **Governance Structure**

The project will be overseen and managed by four key groups with overlapping members and diverse representation. These groups have expertise in specific areas and include staff at the Deputy Superintendent and Assistant State Superintendent level. The groups will be called upon to provide guidance and input in their areas of expertise as well as interact and collaborate to facilitate engagement in the project activities and goals. The Leadership Team will be responsible for approving any official documentation as well as providing sign-offs to project deliverables. Because effective project management is critical to the accomplishment of all project goals, Maryland employs Project Managers for all major projects and will continue this practice for the proposed project. Maryland's on-going collaborative relationship with people in various roles in the school systems is independent of the proposed project, but serves well as a vehicle to enhance stakeholder involvement and input. For more detailed information on governance, please refer to Section e, the project management section.

### **Maryland's Expectation**

At the end of this process, Maryland will have a fully integrated enterprise-wide data system that provides individual student longitudinal data to the user community through an easy to use web interface. This same web interface will be used to report aggregate level data from the MLDS

with the flexibility of ad hoc reporting. The foundation behind the MLDS will be an Education Data Warehouse that has improved efficiencies and superb data quality based on the collection and validation of data prior to entering the EDW through the Web Data Collection. Students with disabilities will be integrated with all other accountability and federal program data. Standardized course information and grades for all students will be included along with every other subject of data required for accountability and EdFacts through one streamlined web portal. The integration of these systems will be transparent to all users. Local school systems and schools will have access and information that previously was unavailable. The higher education and workforce development communities will continue planning the expansion of the Unique Identifier for K-12 students to their own systems in an efficient manner.

Maryland expects to provide state funding for the operations and maintenance phase of the SDLC upon completion of the grant project to continue enhancements suggested by the user community, changes in federal compliance issues and inclusion of additional federal programs such as career and technology education, and Title II. Maryland has no current plans to link teacher information to student level data. Please refer to Appendix A for an enterprise-wide architecture diagram.

### **Project Authority**

The project will be the responsibility of Project Director, Dr. Leslie Walker Wilson, MSDE Assistant State Superintendent for Accountability and Assessment. Dr. Wilson reports to the Deputy Superintendent for Administration in the State Superintendent's Office. Maryland has a LDS Leadership Team composed of a Deputy Superintendent, two Assistant State Superintendents (Early Intervention and Special Education and Accountability and Assessment) and two project managers (EDEN/EdFacts and Maryland LDS) that have met bi-weekly since 2006. They will continue the role of directing the project by monitoring project objectives, timelines and budget, making decisions, and approving deliverables. The State Superintendent stands ready to intervene to ensure that any obstacles to progress are removed.

### **Project Partners**

There are two key partners critical to the success of the proposed project. The first is the internal stakeholders group that was formed in 2006. This group represents every program at MSDE that collects and reports data, with a special emphasis on those with EDEN Ed/Facts reporting requirements. The group was instrumental in identifying the challenges Maryland faces in meeting federal reporting requirements as well as data needed to inform policy decisions for programs. The group has come a long way from an initial silo approach to embracing the need for a comprehensive longitudinal data system solution that will minimize redundancies in data collection and improve data quality. The membership will continue to be instrumental in the evaluation of contractor proposals, development of web data collection solutions, reporting tools, needed updating, and revisions to data governance and training issues.

The second key group is the local school systems. They are the source of the data collections and are important to the success of the LDS. Some have sophisticated systems that store information beyond that required by the state. Others struggle to meet the state requirements for data collections. Therefore, Maryland must continue to fully engage and work closely with schools systems to help them see the benefits of an LDS as well as to ensure success of the

project. Current processes are in place to schedule new data collections one year prior to collection and provide necessary support and training on these data collections. Because this project will require additional resources and effort on the part of local school systems, the budget includes a small grant for them to complete course numbering alignment relative to Objective 4 and to implement this additional data collection from schools.

### **State and Local Stakeholders**

Due to a concerted effort on the part of the State Superintendent of Schools, The Maryland State Board of Education and the Maryland General Assembly are now well aware of the positive impact the LDS will have on Maryland's ability to provide additional high quality data for use in policy decisions. Besides expressing interest in linking data to higher education and workforce data, legislators are beginning to ask for data the system does not collect, and other stakeholders are eager for data linked across the various data collections. This project will be leveraged to garner further support to increase the capacity of Maryland's local school systems as well as its own systems to collect additional data to meet the expectations of its stakeholders who require additional information in the decision-making process. Maryland is a small state with only 24 local school systems. The State Superintendent has built and maintained significant opportunities for stakeholder involvement on all issues on a regular basis. The LDS will continue to be discussed with the various departmental Advisory Groups, Task Forces, and across established school system personnel groups (Superintendents, Assistant Superintendents, Directors of Special Education, Accountability Coordinators, Chief Information Officers, etc.)

### **(d) Institutional Support**

Three years ago using \$1.95 million in state funding, a procurement process was begun to secure a contractor to develop and implement a web data collection project for the Division of Assessment and Accountability. The original purpose of this project was to increase data quality by automating much of the data cleansing process, provide reports to allow school systems to see their data and verify it more simply, to standardize the way all data collections are submitted from school systems and take advantage of updated on-line technology systems, as well as data security and access and reporting systems. It was also anticipated that this project would provide a more efficient and accurate process to meet EdFacts reporting requirements. However, the internal needs assessment conducted as part of the original grant awarded in 2005 served to provide clear and different priorities for this project, and the original data collection modules were sacrificed to instead include other divisions to reduce the silo nature and redundancy of some of the data collections done across the agency, increase data quality, and provide additional reporting capabilities for use in policy decisions.

The project was divided into six modules to increase the probability of success and ensure modules could be implemented as funding was obtained. In 2008, a state-funded contract was awarded to begin work on the first two modules. The first module, and by far the largest project, is to update the School Data Set (SDS). The SDS is the backbone of the Division of Assessment and Accountability data collection, reporting, and analysis. The intention of the SDS is to incorporate, into one location, the comprehensive descriptors of a school that would aid in the analysis of school data for accountability purposes. The SDS is currently being used for processing data received from local school systems regarding enrollment, attendance,

suspensions, staffing, and assessments. The second module will consolidate data collections done by the Title I and Title III offices and store the data that was previously in paper reports, excel spreadsheets and stand-alone Access databases as part of Web Data Collection System (WDCS). Reporting for web data collection will be done using Cognos tools. Training for stakeholders (program managers) to expand the department's capacity to produce data reports is included in the development of each module. These modules are expected to be completed by March 2009.

The original procurement included six modules. At the current time, Maryland anticipates using funding from the 2005 grant to fund the attendance data collection module and the highly qualified teacher module. The staff data collection module will be completed using state resources. Statistical Process Control (See Appendix A) methodology, that uses regression to discover changes in data trends to identify possible data errors, and the final module of the original six, will be funded through special education funds. Additional modules through the 2008 grant competition would extend the project to involve additional, yet essential, data collections, such as September 30 enrollment data and assessments.

The hardware and software tools/licensing requirements for the unique ID system, the web data collection warehouse, and the Educational Data Warehouse for Federal reporting (EDW-F) were all funded using state funds. The hardware to support the migration of the special education system to MSDE was funded through the Division of Special Education/Early Intervention Services. Licenses for the Cognos reporting software to be used for the web data collection project were also funded using state funds.

Over the next five year period, Maryland will expend \$18.5M on systems and contracted personnel and approximately \$3M on hardware and software. In-kind support for this grant is inclusive of personnel, equipment and state contract support and is detailed in the budget. Approximately \$.5M is dedicated each year to the support and maintenance of the Unique Student ID system, another \$.75M per year is dedicated to the support and maintenance of the Education Data Warehouse, and approximately \$1.3M to the support of the related websites. Three positions support the system, a project manager, a systems analyst, and a programmer at approximately \$.5M per year. The Web Data Collection System is at \$1.95 during Year 1 and will be maintained thereafter with \$.3M per year.

Finally, Maryland's accountability branch supports the unique ID system with one new staff member and several existing positions. Since all staff is dedicated to high quality data and information for policy makers as well as the public, all staff supports the development of the MLDS and is actively engaged in the planning and development of the project along with the contractors.

### **Sustainability**

In Maryland, sustainability is defined in the way systems are designed and business is conducted. Training in data collections and data definitions is an established component of work with local school systems. Staff turn-over is an issue that is constantly addressed. Quality control is part of every contract and every job description. All data submitted by local school systems are subjected to edits and verification. Maryland runs parallel systems for all data analyses to verify

the accuracy of the programming and the process. A goal of the web data collection project is to increase sustainability by automating more of this work and making the Division of Accountability and Assessment less people-dependent. As many of the funds requested for this project are developmental in nature and will not be required upon project completion, Maryland will be able to use its continuing maintenance and support contracts to maintain and support the newly developed LDS. As a result of the more efficient data cleansing, editing and reporting procedures, current staff and contractors are expected to provide personnel needed to sustain the system once it is developed. There are currently 15 full time state-funded positions with direct responsibility for data collection and reporting activities. Special Education funds have been used to purchase hardware and software necessary to relocate the Special Education data warehouse to MSDE in order to facilitate the integration process. The state has committed significant resources to the development of its Education Data Warehouse and supporting systems. Historically, maintenance and support contracts are a regular component in the State budget.

**(e) Project Management Plan**

Effective project management is critical to the success of the project, where success is defined as achieving the objectives of the project, on schedule and within budget. The Project Manager will facilitate task completion and effective communication. Detailed task planning and management will include defined deliverables, resource assignments, task estimates, schedules, dependencies, and project milestones. The Project Manager will track weekly progress against the plan, reporting status and variance to the management and stakeholders on a regular basis.

The Project Manager, with the MLDS project team, will track the progress weekly against the project plan. This tracking of data is the basis for quarterly reporting to stakeholders and management, and is used to identify variances from the plan. Addressing these variances early is critical to the success of the project in order to avoid major impact on project schedule and cost. A fundamental tenet of the MSDE approach to this project is to use a phased development methodology. This ensures that the solution developed meets the needs of all interested parties and stakeholders by breaking the project into a logical series of smaller-sized segments, each with their own activities, tasks, estimates, and deliverables.

One particularly critical aspect of project management is change management. The purpose of change management is to insure that the deliverables developed during the project are in agreement with baseline documents such as the Requirements Document, unless changes to these baseline documents are approved by management. This ensures that changes are approved only by personnel who are authorized to review the potential benefits, schedule, and cost impact of the proposed change.

The project will be the responsibility of the Project Director, Dr. Leslie Walker Wilson, the MSDE Assistant State Superintendent for Accountability and Assessment. The project will be informed by four primary groups:

- Leadership Team – Assistant State Superintendents and the MSDE Chief Information Officer who will advise the Project Director;
- MSDE Data Management Team – key staff from MSDE who will provide technical guidance in the structure, format, and design of the MLDS solutions;

- Internal Stakeholders Group – key stakeholders from the Department who will advise the Project Director and Project Manager throughout the project;
- Project Teams – staff from MSDE and selected consultants who will work under the direction of team leaders and the MLDS Project Manager.

### **Entities Responsible for Approval and Oversight of Project Activities**

Maryland has a Steering Committee composed of a Deputy Superintendent, two Assistant State Superintendents (Early Intervention and Special Education and Accountability and Assessment) and two project managers (EdFacts and MLDS) that have met bi-weekly for the duration of the first grant with much success. Although timelines sometimes needed to be adjusted to adapt to issues beyond the control of the team, the team was instrumental in monitoring budget and progress, making decisions, and directing the project with the assistance of the project manager. The internal stakeholders group is now a permanent group in the department. As stated previously, Maryland’s on-going collaborative relationship with people in various roles in the school systems is independent of the grant, but serves well as a vehicle to enhance stakeholder involvement and input. Maryland proposes to continue this system of governance.

The Steering Committee and some internal stakeholder group members will be instrumental in the selection of appropriate contractors to complete the work, and in approving deliverables before invoices are processed. Members of the Steering Committee will attend grantee meetings and share lessons learned. As with any technology project in Maryland, the state will also monitor the progress of the project on a quarterly basis.

### **SEA Management Control for Achievement of Objectives**

Management control of the project will be assured through careful and regular monitoring and communication of project progress against plan. Effective, efficient and timely project communication is critical to the success of a large, complex project such as the Maryland Longitudinal Data System (MLDS). It is important that concise communication takes place at all project levels. The primary methods of communication are presented below:

#### **1. Bi-weekly Project Team Meetings**

These meetings will keep all project team members informed as to the status of tasks, milestones and deliverables. Project issues can be raised and resolved quickly with team leadership representing all aspects of the project.

#### **2. Monthly MSDE Status Meetings**

The monthly meetings will serve to keep MSDE Data Management Team members well informed as to the status of the project, provide a forum for presenting issues needing resolution at management levels, and allow time to review feedback from the stakeholders to ensure that needs are being met.

#### **3. Quarterly Stakeholder Advisory Committee Meetings**

The Quarterly Stakeholder Advisory Committee meetings will provide the project team with information needed to ensure that stakeholder needs are met and project outcomes are attained. These meetings will keep stakeholders informed as to the status of the project, provide a forum for presenting issues needing resolution, and allow for

interchange of ideas among the stakeholders and the project team. Stakeholder subcommittees will meet more frequently during the project.

#### **4. Quarterly Written Status Reports**

Project status reports are generated quarterly, and can be presented and discussed at scheduled status meetings. Project status reports include: project schedule, accomplishments, milestones completed, issues requiring attention, recommendations to resolve issues, plans for the next reporting period, and a project change control summary. The quarterly reports will be presented to the Leadership Team by the Project Director.

#### **Project Milestones**

Year 1 of the project will require planning and writing of RFPs that will be delegated to staff with the appropriate expertise. Year 1 will also require “kick off” meetings to inform stakeholders of the new grant and what is to be accomplished. Needs assessment work will begin with local school systems to determine their capacity and readiness to report course and grade data at the elementary, middle and high school level. At the same time, work will begin defining the requirements of the migration of special education data to the state’s longitudinal data warehouse, as well as the new web data collection modules.

Major project milestones from Year 1 will include the completion of vendor selection and contract award processes and the initiation of the Requirements Analysis phase.

During Year 2, the re-engineering of the Education Data Warehouse activities will continue with the design and development work of the EDW that serves as the foundation for the Maryland Longitudinal Data System. Data conversion of existing EDW data back to 1993 will begin during Year 2 and all associated pre-defined summaries of data that support the current accountability program and EdFacts reporting. The comprehensive analysis continues on Objective 3 (Business Intelligence for Analysis and Reporting) and Objective 4 (Student Record Access) in collaboration with all stakeholders. Design and development for two of the four additional modules will begin for Objective 2 that will consolidate and centralize all local reporting through one local submission activity and source to assist MSDE in compliance with EdFacts reporting.

Major milestones from Year 2 will include the completion of the Requirements Analysis and Design phases for Objective 1 and the first group of WDCS modules, and the initiation of the data conversion efforts. Objective 3 and Objective 4 milestones during Year 2 will include the completion of Requirements Analysis and the development of the statewide course index.

During Year 3, the re-engineering of the Education Data Warehouse work will be completed with a product fully implemented for in-house use by MSDE personnel only to fully validate and ensure there are no anomalies, prior to full implementation with the user community. Vendor activities will include design and development activities for Objective 4 (student record access) that includes the course standardization codes across Maryland. Work will also continue on the LDS component of the EDW. Design and development activities for additional modules to the Web Data Collection-Centralized Consolidated Reporting (Objective 2) will begin with testing and implementation of two modules designed and developed in the previous year. Design and development of Objective 3 (Business Intelligence for Analysis and Reporting), canned reports

and ad hoc reports, will begin. Design and Development of the web interface for Objective 4 (Student Record Access) work will also begin.

Year 3 milestones include the completion of the re-engineering of the EDW, completion of the Requirements Analysis and Design phases for the second group of WDCS modules and completion of the Development and Implementation phases of the first group of WDCS modules.

During Year 4, training for in-house personnel and a pilot group of 5 local school districts and five schools will be established as defined in Objective 6 (Professional Development). Testing and full implementation of Objective 3 (Business Intelligence for Analysis and Reporting) and Objective 4 (Student Record Access) will be completed. The LDS component of the EDW (Objective 1) will be fully completed and refined based on feedback from stakeholders. Work will continue work on the design and development of additional modules within the existing Web Data Collection System (Objective 2) to satisfy EdFacts reporting.

Major milestones for Year 4 include the implementation of the analysis and reporting tools (Objective 3) and the Student Record Portal (Objective 4).

During Year 5, additional training will be provided for local school systems and schools as defined in Objective 6 (Professional Development). Refinements and enhancements to the completed products for Objective 3 (Business Intelligence for Analysis and Reporting), and Objective 4 (Student Record Access) will be performed. Full implementation of Objective 2 (Web Data Collection – Centralized Consolidated Reporting) will occur. Objective 5 (Increase Capacity with the Unique Student Identifier System for Higher Education and Work Force) will commence and be completed in Year 5.

Project milestones for Year 5 include the completion of the professional development activities, the Implementation of the WDCS modules, and the attainment of Objective 5.

## **(f) Project Personnel and Resources**

### **Adherence to the Code of Fair Employment Practices**

Under Executive Order 01.01.1995.19, the State of Maryland operates according to the Code of Fair Employment Practices. MSDE policy affirms equal opportunity for employment in principle and practice.

Maryland currently has the staff required to carry out the project, and the staff has shown that it can successfully implement the project as demonstrated by the first grant. The same team will work on this new project, with some important additions of new talent. Résumés of all key staff are included in Appendix B. Roles and responsibilities are as follows:

**Grant Sponsor/Project Director.** The Project Director is Dr. Leslie Walker Wilson, MSDE Assistant State Superintendent for Accountability and Assessment. Dr. Wilson will assume ultimate responsibility for the successful completion of the proposed project.

**Functional Requirements Facilitator.** The Functional Requirements Facilitator is Janice Johnson, Chief of the Accountability Branch in MSDE's Division of Accountability and Assessment. She will be responsible for defining the requirements to the project and writing the RFP to procure all required contractor services. She will also coordinate and monitor participation in contractor meetings and ensure that essential departmental staff is involved in design and decisions.

**Functional Requirements Manager.** Doug Strader will serve as Functional Requirements Manager. In his current role as Section Chief, Accountability, he is responsible for the design and implementation of all data collections. Mr. Strader will continue this responsibility as new data collections are added and current data collections are modified. Mr. Strader and his staff will play key roles in defining the requirements for the automated data editing and verification processes. He will serve as a key member of the MSDE Data Management Team for the project.

**Technical Coordinators (2).** The Technical Coordinators provide expertise to the contractors in the structure format and design of Maryland's current systems and will work closely with the contractors to maintain the integrity of the current systems while facilitating the development of the LDS. Mike Pautz, Section Chief of Information Management, and Tom Johnston, Manager of the Unique Student ID System, both in the Division of Accountability and Assessment, will serve as Technical Coordinators for the project.

**Technical Support (3).** Marc Allen, Gilbert Toth and James Hedgepeth will provide additional technical support as required for specific data collections and applications.

**Quality Assurance Specialists (2).** Mike Pautz, Section Chief of Information Management and Timothy O'Quinn, Education Program Specialist, will provide the necessary expertise and assistance to the contractor to implement the effective data validation and cleansing edits to ensure data quality. They will also design reports to be used by programs and school systems to evaluate and verify the accuracy of data prior to production of Edfacts files, AYP calculations, and other accountability measures.

**Subject Matter Experts (6).** The six subject matter experts named in the budget narrative each have extensive experience and expertise relative to various programs and data collection requirements. These experts will be key to the efficient identification of needed data elements, data edits and validation reporting necessary to meet federal reporting requirements as well as program reporting needs.

**Special Education Executive.** Dr. Carol Ann Heath-Baglin is the Assistant Superintendent Special Education and Early Intervention. She will continue to serve on the LDS Leadership Team. Dr. Heath-Baglin will also serve as the executive responsible for the integration of the Special Education Data warehouse into the LDS and advisor to additional project activities.

**Documentation Specialist.** Challis Breithaupt is the EDEN/EdFacts Coordinator and a Project Manager in the Division of Accountability and Assessment. She will continue to serve on the Leadership Team, and will be responsible for maintaining all documentation related to the LDS system, including business rules and governance.

**Project Manager.** The Project Manager, Joe Rabenstine, will facilitate and coordinate all grant activities, including communication and reporting between IES and Maryland's team. The Project Manager will also engage in hands-on management of activities related to each objective including task completion, schedule adherence, up-to-date status, and effective communications. Detailed task planning and management will include defined deliverables, resource assignments, task estimates, schedules, dependencies, and project milestones. The Project Manager will track weekly progress against the plan, reporting status and variance to the management and stakeholders on a regular basis.

**Chief Information Officer.** MSDE's CIO, Mr. Sidney Drake, will provide expertise and technical guidance as to the integration of information systems. Mr. Drake will be responsible for coordinating activities with local school system chief information officers.

An organizational diagram can be reviewed as a final component of Appendix A.

# **Project Narrative**

## **Other Narrative**

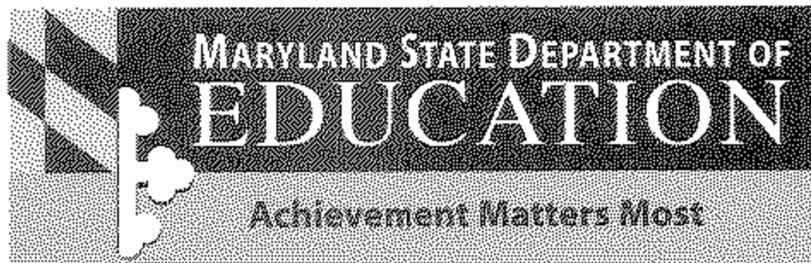
Attachment 1:

**Title: Pages: Uploaded File: 1236-Appendix A and B.pdf**

# Appendix - A

## List of Attachments:

- State Superintendents Letter of Support
- Statistical Process Control
- The Breakthrough Center Highlights
- Maryland's Longitudinal Data System Timeline
- Enterprise-Wide Architecture
- Maryland's Longitudinal Data System Functional Organization Chart



Nancy S. Grasmick  
State Superintendent of Schools

200 West Baltimore Street • Baltimore, MD 21201 • 410-767-0100 • 410-333-6442 TTY/TDD

September 22, 2008

Dr. Tate Gould  
Institute of Education Sciences  
National Center for Education Statistics  
1990 K Street NW, Room 9023  
Washington, DC 2006-5651

Dear Dr. Gould,

The Maryland State Department of Education (MSDE) is pleased to have the opportunity to submit this application for funding of the Maryland Statewide Longitudinal Data System. Based on information provided at the technical assistance meeting, we request consideration for further development of the foundation system as well as expansion of that system.

At a time when Maryland faces extensive budget cuts due to the projected state deficit, the opportunity provided by this grant competition becomes even more critical in building a longitudinal data system which will enable MSDE to respond to the federal, state, local school system, school administrator and classroom data requests. Having invested significant resources in professional development to support data-driven decision-making, it is critical that the state be able to generate data reports that provide a sound basis for legislators at the federal and state level, superintendents, principals and teachers as they strive to enhance student achievement.

The expected outcomes of this grant project include completing the linkage of student data across data collections and years, reducing the silo structure of major program data collections, integrating the Special Education longitudinal data system with the state system, increasing the capacity of vital data reports to enhance and improve program evaluation and policy decisions, providing access to data repositories for schools, working with local school systems to develop standardized course definitions and reducing redundancy in data collection, and converting all major data collections to the web data collection format that will be used to collect, validate and report Maryland's data.

Your consideration of this funding request is of vital importance in Maryland's ability to successfully meet reporting requirements at the federal, state and local level and further the ability of educators to make critical decisions in a timely manner to enhance student achievement in order to prepare the highly skilled workforce of the future.

Sincerely,



Nancy S. Grasmick  
State Superintendent of Schools

NSG/jeq

## Statistical Process Control (SPC)

### Statistical Process Control (SPC)

SPC is a new process added to our education data collection system to ensure the logical nature of the aggregates MSDE is publishing on our website for state and federal compliance reporting. It has been our experience that MSDE's education data can meet all validation edits for valid values and cross row edit validations, but the data may be totally illogical (i.e. no male students reported in a particular local district).

SPC is a process whereby a comparative analysis is performed of current year reported data against a predicted value projected from previous year's historical data. If the current year's data does not meet the confidence values, the information is considered incorrect. According to the most recent specifications, there are a large number of SPC summarizations to process. This is due in large part because SPC summary points are calculated based upon a combination of fields in the dataset and their range of values. For example, we could generate a number of SPC summary points by combining codes for Race and Gender. Assuming 4 codes for Race and 2 codes for Gender, we have 8 summary points ( $4 \times 2 = 8$ ) or possible combinations of data. Therefore, there could potentially be 340,000 aggregated datapoints for all datapoint possible combinations. The summary datapoints must be defined for each module in collaboration with the contractor. Some of the summary datapoints are available in the EDW, but not all.

The system will compare the SPC summary point for the current year with predicted value for the current year using the following formulas:

- The first comparison will be a minimum threshold test. If the difference between the two years is X or less, the summary point will be skipped.
- If the ratio between the two numbers is less than Y%, the summary point will be skipped.
- If the actual value falls outside of a C% confidence interval of predicted value, a critical error flag will occur.
- If the actual value falls outside of a W% confidence interval of predicted value, a warning error flag will occur.

A technical staff member will set the SPC thresholds X, Y, C, and W as noted above. X, Y, C and W are configurable by year. These thresholds will be performed by year and Dataset (i.e., attendance – March, Attendance – June and Staff).

This logic will be based on trends of five (5) years of summary data that will be calculated from detailed student and staff data by the Contractor and loaded into the database. The Contractor will calculate summaries by year specific rules. The Contractor must validate the accuracy of calculations in collaboration with MSDE. Its primary goal is to identify errors in submitted data.

SPC is based on a confidence interval whereby the data results are highlighted and reviewed by MSDE. Linear or curvilinear regression will be used to determine a C% and W% confidence for the predicted values. The higher degree of confidence, the wider the confidence interval. The following confidence interval variables must be considered on behalf of SPC:

- The high confidence levels, or considered the friendly level, must be set to 99% to include a larger range of values that the predicted SPC value must fall between.

- The low confidence level, considered the critical level, must be set to 95% to include a smaller range of values.
- The initial proportional difference will be set to Y % which will allow the SPC checking to only check values where the difference between the predicted values and reported values is greater than 25%.
- The initial SPC minimum amount will be set to (X) which will allow the SPC checking to only check values where the difference between predicted value and reported value is greater than 5.

The Contractor must calculate SPC for up to six previous years. Each year's aggregation rules may be different and must be maintained by year and executable by year. Current year predicted values will be based on the following:

- SPC will not be applied to the first year's data.
- Linear regression will be used for values that have 3 years of data.
- Curvilinear regression will be used for values that have 5 or more years of data.

Business object error checking is performed and errors are recorded in the database. An error report will be generated by the system that shows flags on the data. The report will indicate which flags are critical and which flags are warnings. The system generated report allows LEAs to view the cause of their SPC flags and provide an explanation for all critical flags that they do not eliminate before submitting data to MSDE for approval. MSDE can impose an approval of a file with critical SPC errors as long as comments are made regarding the flags. To obtain more information regarding generalized regression, please access URL, <http://curveexpert.webhop.biz>.

## The Breakthrough Center Highlights

The Breakthrough Center is a bold and innovative model for supporting districts and schools across the State of Maryland in accelerating the performance of people, districts, and schools. It will partner with local school districts to identify organizational and instructional needs and assemble a customized and coordinated approach for methodically and strategically addressing those needs. The Breakthrough Center will facilitate the coordination of services between MSDE Divisions, external service providers, and private donors to ensure that the RIGHT services are being delivered at the RIGHT time. It will expose breakthrough people and practices in the State and make them accessible across the State by offering incentives to districts willing to share them.

.....

The Breakthrough Center offers two categories of support services. The first category, Buildup Services, accommodates districts and schools demonstrating broad areas of need with systemic support in areas considered central to improvement: data analysis and strategic planning, curricular and instructional alignment, and professional development--including leadership and instructional training. However, Buildup Services will not be reserved exclusively for Comprehensive Schools. Alert Schools will also have access to Buildup Services in order to prevent progression into improvement.

The second category, Access Services, accommodates districts and schools demonstrating isolated areas of need---Focus Schools missing AYP due to one subgroup or one service subgroup. The focused services available in this category include, for example, professional development programs and cross-state learning communities that will support districts and schools to make the organizational, curricular, instructional, or behavioral changes necessary to support achievement across *every* subgroup. As appropriate, districts and schools also receiving Buildup Services may also benefit from Access Service offerings as well.

The coordination, delivery, and brokerage functions will occur through innovative uses of technology and facilitation of cross-district and cross-sector connections. The Center will provide a means for districts and schools to access strategies, programs, practices and people with proven success across the State---and across sectors.

Though the level of involvement in the Breakthrough Center and intensity of support will vary among districts and schools according to need, the effort will be collaborative. MSDE and districts will work closely to identify needs and assemble solutions.

...

The Breakthrough Center provides two categories of support services: Buildup Services and Access Services. Buildup Services are provided in three categories: data collection, analysis, and evaluation (assisting local school systems to use quantitative and qualitative data for strategic planning); curriculum (assisting local school systems ensure that curriculum and intervention programs are aligned with the voluntary state curriculum);

and professional development (focusing professional development on improving teaching and leadership).

Access Services are intended to assist local school systems coordinate services from the Maryland State Department of Education (MSDE) with services from other providers and to assist schools to coordinate intervention programs. The Breakthrough Center will provide a materials and services repository, which will contain information on intervention programs available to assist schools in particular areas. It will help schools develop a common focus for supporting special services students and for creating professional development communities. It will also provide resources for accelerated and enrichment programs (i.e., Advanced Placement programs, science, technology, engineering, math programs) and links to programs in the private sector. These services are intended to support local school systems and schools make the organizational, curricular, instructional, or behavioral changes necessary to support improved student achievement.

Buildup Services are intended primarily for schools in the Comprehensive category of school improvement, but will also be made available to Alert schools in order to prevent their progression into school improvement. Access Services are available to schools in all categories of school improvement, including Alert Schools

These services are different from other State services because they will blend MSDE and local school system expertise to offer the best, custom-designed technical assistance. In the past, State services have tended to operate independent of one another, and at the request of local school system. The Breakthrough Center will better coordinate both internal MSDE services and outside services available to schools and school systems. In addition, The Breakthrough Center will offer one resource for information and services and the Executive Director of the Breakthrough Center can maximize the support by coordinating all areas of expertise.

To administer these services, The Breakthrough Center will partner with districts and schools to administer, consolidate, and analyze sophisticated diagnostic tools\* to assess operational and performance needs. The Breakthrough Center will build a network of specialized service providers and partners—internal and external to the Department—and interface between these providers and the districts to ensure that customized solutions are assembled and deployed strategically. The response to this question is multi-layered. While The Breakthrough Center's primary aim is to support breakthrough performance in districts, schools, and people—it will not be achieved without creating breakthroughs in thinking on the part of those who are providing the support. Specifically, in thinking differently about what type of support is *really* needed, who can best supply it, and how.

There are four components to The Breakthrough Center process, an *internal* operation of MSDE:

1. *Interface*. The Breakthrough Center will **not** assume the role of delivering the range of services that are currently delivered by various Divisions throughout the

Department, but it will serve as an interface between these services, those delivered by external partners, and the districts that receive them by:

- coordinating the need, placement, and timing of service delivery,
- eliminating overlap between services delivered by various Divisions,
- clarifying and formalizing the criteria for district participation and level of involvement,
- establishing uniform standards of quality to measure impact of these services
- integrating public and private services to create a cohesive and methodical approach

In the start-up phase, the services will include many that are currently offered. However, with a strong evaluation component, the Maryland State Department of Education (MSDE) expects to collect information that will result in the enhancement of many services and possible elimination or redirection of others in order to meet the unique and emerging needs of our districts—and to ensure that limited resources are optimized.

For a depiction of how the Center will be structured please reference Attachment A.

2. *Solutions Network.* The intervention services are a compilation of the technical assistance offered by MSDE augmented by an inventory system of services within the 24 LEAs. The Breakthrough Center will serve as a broker of services to be distributed to schools based on need. Examples are:

- Practice on the use of manipulatives in elementary mathematics. (All modules of service include a leadership component that instructs the principal on the monitoring and leadership necessary to support this type of instruction.)
- A presentation to introduce and implement the Teacher Capacity Needs Assessment. This includes the process a school can use to determine their ability to deliver the Voluntary State Curriculum.
- Instruction and embedded support for the teachers of inclusion classes. Those general education teachers who regularly have students with special needs in their class need special support and strategies to individualize their instruction.
- Once schools reach Priority Status, alternative governance plans will be customized based on needs assessments and whether the school has Comprehensive Needs or Focused Needs.

All services must meet Maryland's Standards for Professional Development, which have been adopted by the State Board of Education. Such services must be evaluated for effectiveness.

*[\* Note: MSDE offers a number of high quality diagnostic tools. In the start-up phase of The Breakthrough Center, triangulation of the results of these diagnostic tools will drive the assembly of partnered solutions (between MSDE and districts); however,*

*on-going and intensive efforts to improve the sophistication and exactness of these tools, or the development of a series of specialized tools will occur.]*

3. *Globalization.* The Breakthrough Center gives high priority to the provision of strategies to ensure high-capacity teaching and a personalized learning environment for students. Adoption and expansion of such strategies is essential to breakthrough, and there are many districts among our twenty-four local school systems that have demonstrated remarkable success in isolating these strategies and implementing them. While we know that effectiveness cannot be “bottled”, we believe that finding ways to make strategies and their implementation accessible to other districts and schools will catalyze necessary change and improvement. Technology will assist in facilitating this access—whether through a materials and services repository, professional networking utilities, or web-based professional development—but strong relationships with partner districts, businesses, and organizations will drive it.
4. *Incentives.* The Breakthrough Center will offer incentives for participation as either a recipient or a contributor of services to The Breakthrough Center. Participation requirements will vary depending on a district’s or school’s Needs Pathway; however, the menu of incentives offered to Center recipients or contributors will constantly expand.

In summary, The Breakthrough Center aims to provide simple and straightforward access to high quality and transformative breakthrough solutions. Its structure is what will make access simple and straightforward; its focus on innovation and attention to relationship building is what will ensure high quality, innovation, and transformation.

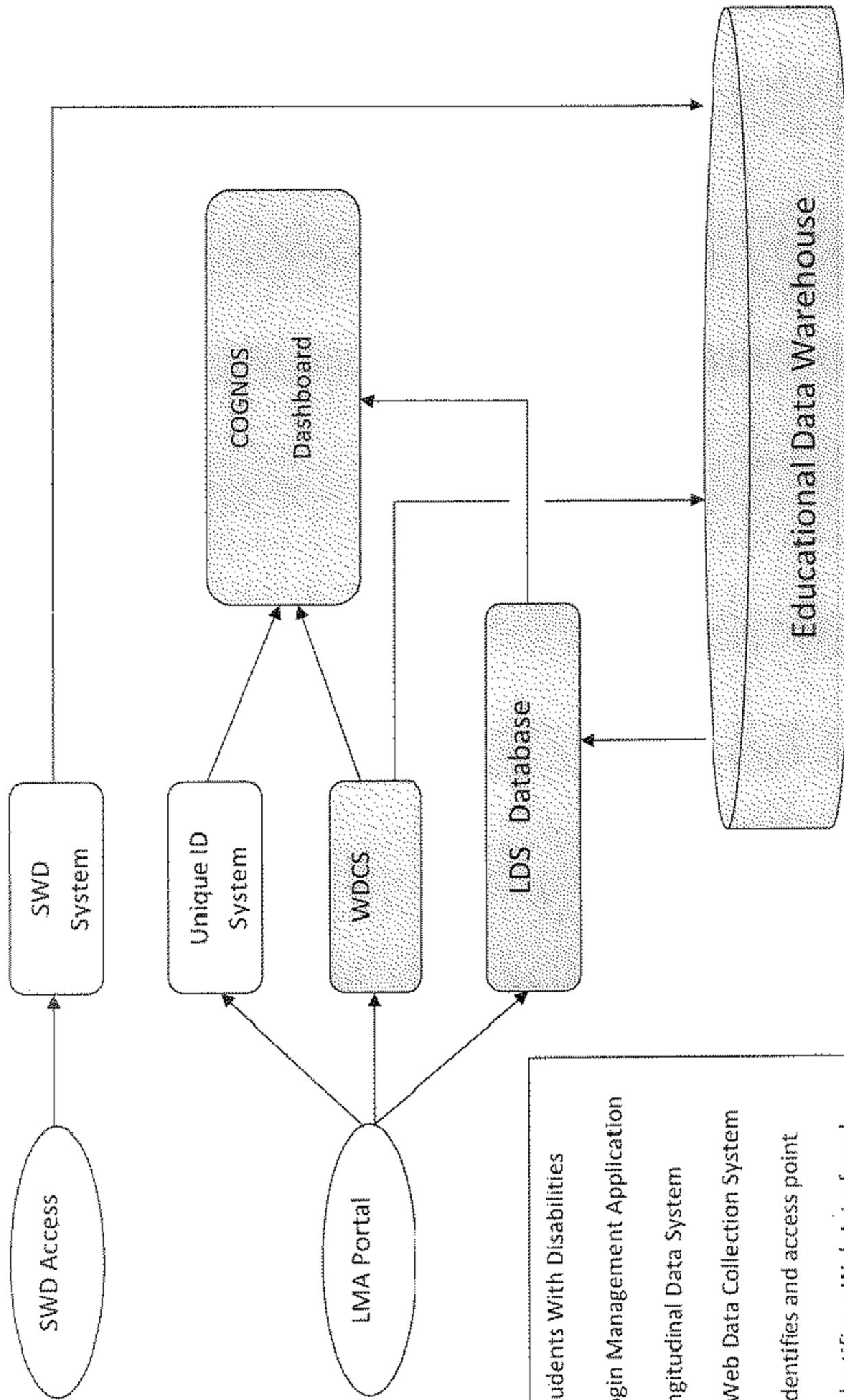








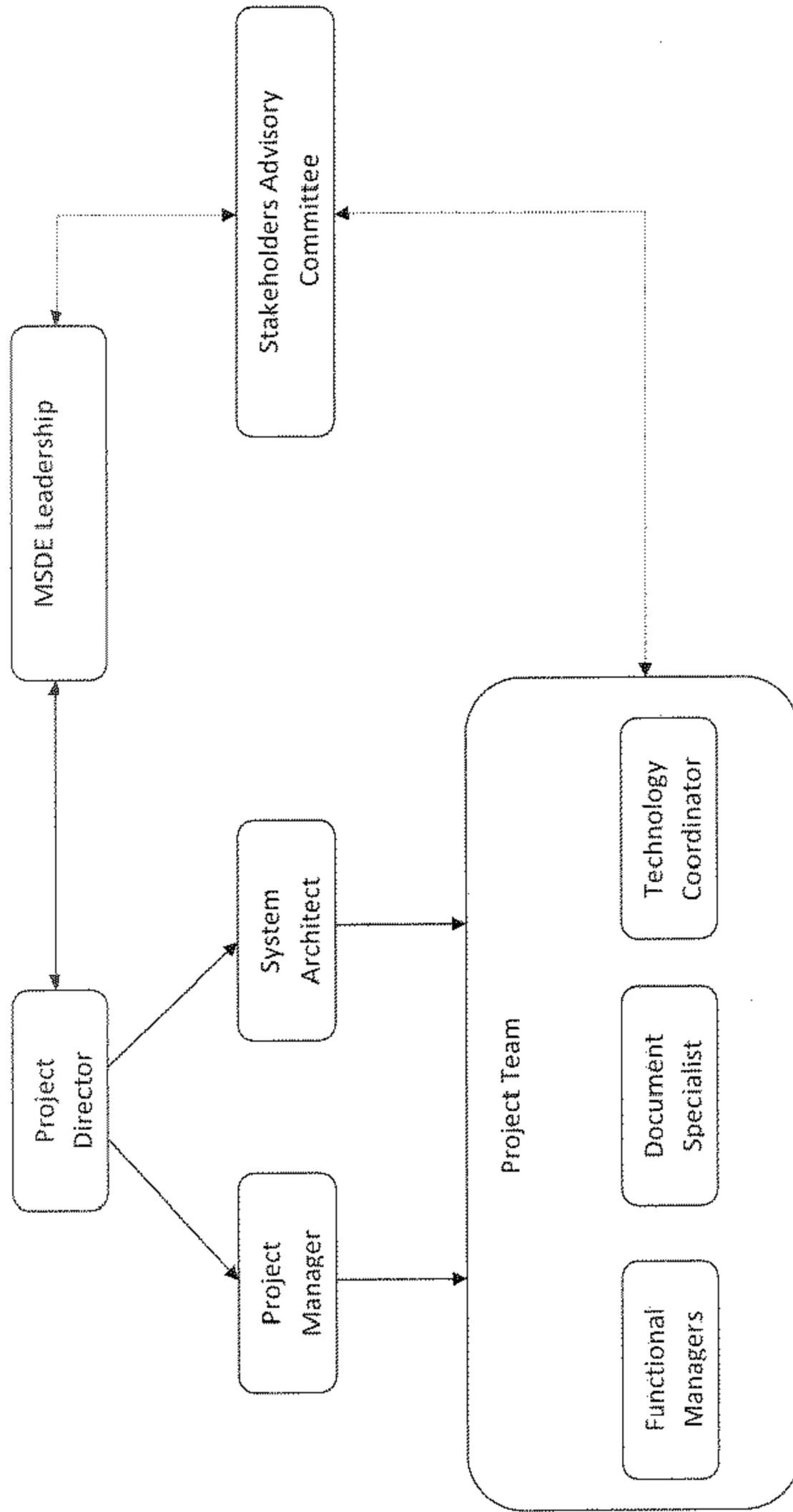
Enterprise-Wide Architecture



SWD – Students With Disabilities  
 LMA – Login Management Application  
 LDS – Longitudinal Data System  
 WDCS – Web Data Collection System  
 ○ - Identifies and access point  
 □ - Identifies a Web Interfaced application  
 Shading identifies focus areas of grant

Maryland's Longitudinal Data System

Functional Organization Chart



# Appendix – B

## List of Attachments:

- Maryland Longitudinal Data System  
Project Manager Position Description
- Bio-Sketches of Key Personnel

**Position Description:**

**Maryland Longitudinal Data System Project Manager**

The project manager provides leadership to direct and implement technical assistance to local school systems to support the planning, operational development, implementation, and maintenance of the statewide longitudinal data grant. The position provides strategic direction for the planning, management, and use of longitudinal accountability information and data to support educational reform efforts throughout the State.

**Roles and Responsibilities**

The Project Manager manages the Department's design and delivery of the longitudinal data system program. This position provides leadership and technical expertise to the design and development of the longitudinal data system program. In particular, this position manages the technical development team and the execution of the related service contracts. On behalf of the Department, the Project Manager directs the MLDS work plan and resolves operational management issues in accordance with the direction and guidance of the Assistant State Superintendent of Accountability and Assessment.

- Leads the design and development of the MLDS data architecture. Coordinates the data administration effort needed to support the MLDS.
- Assists the vendor selected with the design, development, test, documentation, and maintenance of data extracts, transformations and loads of MSDE data from separate data silos and programs for the MSDE Education Data Warehouse.
- Coordinates and defines user requirements, dimensional data modeling, query selections, support user interface design, and data presentation reports; designs frameworks in which database administration and applications development can deliver data solutions, and develop documentation and training materials for MSDE staff who support the LDS activities.
- Mentors MSDE staff and other LSS IT groups on the use of data collection tools and best practices. A key role for this position is to work in conjunction with other IT/development groups to understand functionality, scalability, and performance, security, and integration requirements and translate these requirements into functional, scalable, and reusable components for staff developer framework.
- Develops and tracks performance indicators and policy analyses as part of Maryland's efforts in restructuring and improving data management for Education; supports other activities of the policy research section through acting as liaison to MSDE divisions and other public agencies to support research, data collection, and contributions to the ongoing development of the Education Data Warehouse.
- Reviews federal laws, regulations, policies and procedures as they affect the Department and its dissemination of school, school system and State data.
- Advises senior leadership on dissemination of school, school system, and State data procedures.

- Services on cross divisional committees and work groups to set Department priorities for use of grant resources.
- Directs the information and communication collaboration efforts between project staff and multiple groups of internal and external stakeholders to assure all have input into the system design and implementation. Assures system specifications meet the needs of all local school systems and avoid creating undue hardship for them. Resolves related planning issues under the direction and guidance of the Department Executive Steering Committee.
- Establishes process for identifying data requirements and decision-making needs of all stakeholders.
- Conceptualizes communication needs and approaches as it relates to planning, implementation, and monitoring of the longitudinal data system.
- Conceptualizes and design decision-support tools and professional development resources related to the potential of and process for using longitudinal database.
- Translates the longitudinal data system grant program for local school systems and collaborates with local school personnel to meet grant required and State and federal requirements for data collection and dissemination.
- Tracks, monitors and continues to define data system specifications for each Division.
- Provides direction and leadership on a Department and Division wide basis in education program development and management to support grant priorities.
- Works in collaboration with the Department Executive Steering Committee to determine department priorities related to the successful delivery and dissemination of the State's longitudinal data system program.
- Provides leadership in the development, tracking, and reporting of the data and related warehouse functions to determine progress toward meeting federal and State goals and grant requirements.
- Identifies, allocates and monitors both fiscal and human resources in order to meet federal and Department's educational accountability requirements.
- Manages the performance standards of all resources to ensure on time delivery of products and services.

## Marc M. Allen

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### EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

03/07/01 -- Present

Database Specialist Supervisor

- Supervises the definition of databases including defining user requirements, developing data definitions and maintaining the repository of the Department's databases.
- Supervises the development of logical and physical database designs and ensures appropriate modifications to the design models.
- Supervises the installation and implementation of the Department's database management system software and related software tools.
- Supervises the configuration, tuning, restructuring, troubleshooting, database capacity, and available data storage of the Department's Databases.
- Supervises the access security, disaster recovery, backup and recovery for Department's Databases.
- Supervises the transforming and loading of data into Department's Database.
- Performs application and database development functions as to analyze requirements, design, develop, tests, deploy, and maintain Department's applications and databases in a development, test, and production environment.
- Reviews technical literature and attends workshops, seminars and training classes to keep abreast of the latest developments in database management systems and related data processing technology.
- Trains programmers and/or users in data access tools and techniques.
- Develop, support, and maintain Enrollment, Highly Qualified Teachers, In and Out of School Suspensions, and MSA Science data collection applications.

### EDUCATION

- B. S. in Business Information Systems from Villa Julie College in Stevenson, MD in May 1994.
- B. A. in Spanish/Business Management from Lebanon Valley College in Annville, PA in May 1990.

**EXPERIENCE**

**Subject Matter Expert:** September 2006 to Present

Maryland State Department of Education, Division of Accountability and Assessment  
Baltimore, MD

- Develops, reviews, analyses data, and implements editing procedures to enhance quality assurance and timely processing of data for regular and special education populations.
- Identifies problems, analyzes data and develops reports by writing SAS program code.
- Prepares technical specifications for data collection systems.
- Advises technical programmer analysts in the design, development and testing of new and existing application systems.
- Participates in the management of changes to the applications based on input from system users who identify requirements relating to application deficiencies or enhancements.
- Produces publications from analysis.
- Ensures established quality assurance policies and procedures are practiced through user acceptance of new and revised applications.
- Creates, reviews, and updates application documentation.
- Provides ongoing user training and support services to statewide school system staff and MSDE on the requirements and function of these systems.

**EDUCATION**

Masters of Arts in Applied Sociology, May 2010 (expected)

University of Maryland, Baltimore County, Catonsville, MD

Bachelor of Science in Social Science in the Liberal Arts, December 2002, Cum Laude

Towson University, Towson, MD

# CHALLIS BREITHAUPT

## EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)----July 1999 to present

- Direct the development, implementation and administration of the National Assessment for Educational Progress (NAEP) within the state of Maryland in accordance with NAEP requirements.
- Develop and implement the NAEP State dissemination plan.
- Interpret federal policies as they relate to Title I funding and the administration of all NAEP assessments.
- Analyze, report and disseminate NAEP results to MSDE.
- Disseminate information about NAEP as an assessment system.
- Coordinate the administration of NAEP within the state.
- Prepare budget for annual NAEP assessment activities.
- Coordinate the submission of the state participation agreement.
- Recruit schools for the NAEP sample.
- Coordinate state activities with the NAEP data collection contractor.
- Promote understanding about NAEP and its relevance to the state accountability program with LEA's and MSDE personnel.
- Coordinate the analysis and interpretation of NAEP data and the preparation of special state-level reports.
- Provide technical assistance to the state and local education agencies and other target audiences as relates to NAEP frameworks.
- Work with NCES to coordinate the release of state and national results.
- Coordinate communication of NAEP information to state policy makers, local school administrators, classroom teachers, parents and the general public.
- Work with local educational agencies (LEAs) to inform parents and members of the public about access to data.
- Serve as FORUM member to the National Center for Education Statistics.
- Coordinates the preparation of state, county, and local school system templates to report performance data for the annual *Maryland School Performance Report Card*.
- Works with outside contractors to create annual design and maintenance of the *Maryland School Performance Report Card*.
- Works with internal personnel and outside contractors to coordinate the release of annual results.
- Assists in the coordination and dissemination of state assessment data on the web site <http://www.marylandpublicschools.org> and in the written reports to the Local School System Accountability Coordinators.
- Provides quality assurance for all assessment data displayed on the web site.
- Provides user training concerning MSDE web sites to outside agencies, media contact, local school systems, MSDE staff, and the general public.
- Develops and facilitates implementation of Division wide staffing plans to ensure integrated staffing support for Division goals and objectives.

- Identifies, implements, and documents staff training in support of work plans as established by DAA.
- Develops, monitors, and maintains the Division's annual review process and assesses Division performance in relation to attainment of goals and objectives.
- Works in collaboration with operational managers and human resource leadership to define functional needs and to recruit to fill positions within DAA Division.
- Reviews applications of potential recruits and, in collaboration with DAA operations managers, selects candidates for the interview process.
- Provides leadership for Department disciplinary actions/reviews.
- Provides leadership for interview panels and secures panel membership.

### **Educational Background**

- Master of Science Degree in Communications  
Kansas State University  
Manhattan, Kansas
- Bachelor of Arts Degree in Mass Communications  
Rider University  
Lawrenceville, New Jersey

# Matthew W. Dammann

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## EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

March 12, 2007 – Present      Education Program Specialist

- Provides leadership and technical support to Local Accountability Coordinators, Testing vendors and their designated staff on the Maryland School Assessment system for reading and mathematics.
- Develops strategies to improve the processes of the Maryland School Assessment system.
- Assists in development and implementation of the accountability program policies and procedures relating to the No Child Left Behind Act requirements, including specifications and implementation manuals.
- Directs the implementation of activities in the MSDE/Vendor timeline for the development, implementation and reporting of results related to the accountability program.
- Provides technical assistance in the development, implementation and maintenance of the Maryland School Assessment system.
- Provides technical assistance on the Pretest and Posttest system used for schools and school systems to create their testing pool of students and all other web-based systems for the Division.
- Provides assistance to staff in use and implementation of technology employed by the Division.
- Provides assistance to the Project, Branch, and Division staff on technology-related issues that support the development, review, implementation, use and maintenance of the Maryland School Assessment system.
- Provides leadership in the development, tracking, and reporting of the data and related warehouse functions to determine progress toward meeting federal and state goals.
- Identifies, frames and participates in resolution of accountability program issues at the branch chief, project manager, or assistant superintendent level.
- Provides leadership and technical support to education accountability-related projects in the Accountability Branch and the Division of Accountability and Assessment.
- Defines processes that ensure accurate Maryland School Assessment results are provided on all accountability data.

## EDUCATION

<b>Ed.D, Teacher Development &amp; Leadership</b> Johns Hopkins University, Baltimore, Maryland Minor: School Administration Minor: Statistics	2007
<b>M.S. Ed., School Administration</b> Johns Hopkins University, Baltimore, Maryland Minor: Program Evaluation	2003
<b>M.S. Ed, Reading Education</b> Elmira College, Elmira, New York Specialization in Special Education Minor: Psychology	1998
<b>B.S., Elementary Education</b> Elmira College, Elmira, New York Major: Arts & Humanities Minor: Psychology	1996

Sidney Drake

Mr. Drake has worked in the Information Technology profession for more than twenty-five years in the field of education. Over eighteen years has been in a leadership role. He has served as the Executive Director for Information Technology at Brookdale Community College in Lincroft, New Jersey, Director for Information Technology at the University of Maryland Eastern Shore, Jackson State University in Jackson Mississippi and Delaware State University's School of Business in Dover, DE.

Presently, he serves as Chief Information Officer for the Maryland State Department of Education (MSDE). His responsibilities include directing and coordinating information technology resources, providing technical assistance on information technology initiatives, providing leadership and direction in the development of long-range information technology strategic plans, chairs MSDE's Information Technology Steering Committee and directs the development and implementation of information technology policies, procedures and standards at MSDE.

### EDUCATION

2007

Grad Certificate      Project Management  
University of Maryland University College

2001

(ABD)                  Information Systems  
Nova Southeastern University

1991

M.A. Degree      Economics  
Morgan State University

1973

B.S. Degree      Business Administration  
Morgan State University

1989

Graduate  
Certificate      Information Systems Analyst  
Bowie State University

1983

A.A. Degree      Computer Information Systems  
Baltimore City Community College

### Certifications

06/01/02

Certified Quality Improvement Associate  
American Society for Quality

### ADDITIONAL EDUCATION

Graduate credits in Computer Science – 12 (Bowie State University)

Graduate credits in Management Information Systems – 24 (Bowie State University)

ColdFusion programming

American Society for Quality, Quality 101; 1.5 CEU

Geographic Information Systems

# KATHY DONITHAN

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## EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

6/98 – Present      Quality Assurance Specialist

Implement quality assurance and manage the development and revisions of all application systems for the Maryland staff data system in the SAS programming environment. The programs are designed to perform quality assurance edits to ensure data integrity; to produce accurate datasets for data analysis and upper management decision support; and to assist with systems analysis during all phases of the collection process. The duties include:

- Coordinate the design and implement quality assurance systems and procedures that will support the development of the staff and school processing application in the SAS environment with Maryland State Department of Education and local school system staff.
- Design programs in the SAS environment to measure adherence to quality assurance standards and prepare reports of the results of data received from the local education agencies.
  - perform data edits as identified in quality assurance process manuals and technical specifications;
  - validate completeness and accuracy of school system data through SAS programming procedures;
  - summarize the data and prepare reports for publication and decision making;
  - prepare datasets to include all staff and school records for data analysis; and
  - prepare reports of staff data for the Division of Certification for annual State Board of Education report and quality assurance audit processes.
- Design the quality assurance system specifications for local education agencies and Maryland State Department of Education staff and maintain quality assurance and process manuals.
- Consult with the Division of Certification of the Maryland State Department of Education's technical requirements to ensure timeliness, accuracy, and completeness of the data.
- Advise the local education agencies on the implementation of quality assurance standards and procedures.
- Recommend changes to correct deficiencies and enhance the quality of data processing systems and services.
- Review quality assurance manuals and other technical literature and attend workshops, seminars and training classes to keep abreast of the latest developments in quality assurance theory and methods and related data processing technology.

Prepare quality assurance procedures and acceptance testing process for evaluating and debugging system application.

- Resolve problems from acceptance testing processes.
- Resolve and debug the programs as necessary.
- Review and approve application systems for adherence to quality assurance standards related to system design, development, testing, implementation and maintenance and maintain systems documentation libraries.
- Examine computer programs for correctness, efficiency, reliability, ease of maintenance and integrity and approve programs for release to production.

Design and develop the contents of web pages and edit documents into the appropriate format for Internet presentations; and maintain the Division's web site.

Write program code in SAS to run parallel tests between computer program systems to ensure quality assurance.

Prepare reports and data files for federal reporting for the National Center for Education Statistics, Chief State School Offices, United States Department of Education, including Common Core of Data and Education Data Exchange Network.

Complete other related duties, responsibilities and special projects as requested by supervisor.

- Provide technical guidance;
- Train local education agency staff on reporting requirements;
- Maintain and improve technical skills through ongoing training and education.

## James Hedgspeth

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### EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

08/01/05 – Present

Database Specialist II

- Define, implement, maintains, and documents architecture of the Department's databases.
- Backup and restore the Repository.
- Perform physical data modeling and metadata management.
- Manage data integrity constraints, manage indexes and clusters and monitor lock contention.
- Configure, tune, restructure, and troubleshoot the Department's Databases.
- Use interactive SQL to issue DML and DDL Commands to load, transform, and query data.
- Install new software and familiar with ODBC connectivity. Trains programmers and/or users in data access tools and techniques.
- Design, develop, identify execution problems and document applications that meet customer expectations using appropriate resources.

# JANICE L. JOHNSON

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## EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

May 1999 – Present

Chief, Education Accountability

- Provide leadership and technical expertise in developing plans for the Department's education accountability program under the federal No Child Left Behind Act and state COMAR Education Article, 2-205, 2-206, 2-203, 5-201—5-206, 7-202, 7-203, and 7-301, Annotated Code of Maryland, in particular, documented management of education accountability projects and related service contracts. Provide leadership in the Division's conceptual and strategic planning process.
- Define the data based areas and formulas to meet federal and state accountability requirements for the Maryland School Assessment, High School Assessment, Alternative Maryland School Assessment, and Adequate Yearly Progress. Define the systemic process; data based areas, and formulas for the Highly Qualified Teacher requirement of NCLB.
- Translate the data based areas to technical specifications for local school systems and collaborate with local accountability coordinators to meet state and federal requirements for data collection and dissemination.
- Manage all education accountability systems through complete lifecycle development and implementation. Define hardware requirements for all accountability systems.
- Manage the preparation and administration of budgets for the branch.
- Identify, allocate and monitor both fiscal and human resources for each project assigned in order to meet federal and Department's educational accountability requirements.
- Provide leadership and direction to twenty-four Maryland Local Accountability Coordinators in defining data based areas, formulas and comprehensive understanding of how schools meet or not meet Adequate Yearly Progress (AYP) under the federal NCLB requirements.

## EDUCATION

2003

BS, Management Information Systems  
Minor, Computer Studies  
University of Maryland University College (Adelphi, MD)

# Thomas Johnston

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## EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

April 2007 – Present

Education Program Specialist

- Collaborated with contractors and local school systems to develop and implement a state assigned unique student Identifier.
- Managed and oversaw State of Maryland's Unique ID system
  - Managed deliverables and invoices
  - Prepared and presented quarterly reports to the Maryland's Department of Budget Management
  - Updated Chief Information Officers of Maryland's 24 local school systems
  - MD's Unique ID system has successfully assigned over 970,000 unique IDs
- Served as chairperson of evaluation for MD's Web Data Collection System
- Coordinated joint application development meetings with vendors and stakeholders
- Trained staff from local school systems to access and use new data systems
- Conducted a needs analysis that was used to develop a data standardization initiative for all state accountability data collections.

## EDUCATION

- 2003 University of Maryland  
College Park, Maryland  
Bachelor of Science, Psychology with a minor in Behavior Science
- 1998 University of Maryland, Graduate School of Management  
College Park, Maryland  
Master of Science – Management Information Systems

# Brenda Muir

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## EXPERIENCE

Maryland State Department of Education, Baltimore, Maryland  
06/07- Present

- Provides leadership and technical support to Local Accountability Coordinators, Testing vendors and their designated staff on the Maryland School Assessment system for science. Develops strategies to improve the processes of the Maryland School Assessment system. Assists in development and implementation of the accountability program policies and procedures relating to the No Child Left Behind Act requirements, including specifications and implementation manuals.
- Directs the implementation of activities in the MSDE/Vendor timeline for the development, implementation and reporting of results related to the accountability program.
- Provides technical assistance in the development, implementation and maintenance of the Maryland School Assessment Science System.
- Provides technical assistance on the Pretest and Posttest system used for schools and school systems to create their testing pool of science students and all other web-based systems for the Division
- Provides assistance to staff in use and implementation of technology employed by the Division.
- Provides assistance to the Project, Branch, and Division staff on technology-related issues that support the development, review, implementation, use and maintenance of the Maryland School Assessment Science System.
- Provides leadership in the development, tracking, and reporting of the data and related warehouse functions to determine progress toward meeting federal and state goals.
- Identifies, frames, and participates in resolution of science accountability program issues at the branch chief, project manager, or assistant superintendent level.
- Provides leadership and technical support to education accountability-related projects in the Accountability Branch and the Division of Accountability and Assessment.
- Defines processes that ensure accurate Maryland School Assessment science results are provided on all accountability data. Collaborate and collect information; serves as resource to provide timely, accurate information on science education accountability program. Consult on resolution of technical issues related to accountability program development, implementation, and scheduling for science. Participates in regular conference calls and/or meetings

## EXPERIENCE

B.S. major: behavioral science/education University of Maryland  
M. Ed major: education/counseling and theory Salisbury University

# TIMOTHY D. O'QUINN

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## EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

Date – 05/2008 to Present

Title – Education Program Specialist I (Research Associate)

- Acquire education accountability data from local school systems and MSDE databases.
  - Design, create, and manage SAS databases.
  - Extract data from MSDE data warehouse and operational data stores.
  - Design and implement procedures for data collection from LEA's.
  - Extract data from LEA student records.
  - Provide quality assurance and validate required data.
- Analyze and evaluate accountability program data.
  - Write computer programs to organize and clean acquired data in order to create valid analysis datasets.
  - Write computer programs for descriptive, univariate, and multivariate statistical analysis in order to determine program effectiveness.
- Interpret and summarize finds of research studies through written reports.
  - Provide research reports to Branch Chief of Education Accountability.
- Provide research and technical support to MSDE staff, contractors, and local school systems.
  - Acquire, clean, analyze, and report data in response to requests from MSDE, contractors, and local school systems.
  - Develop and maintain SAS databases in support of program initiatives.
  - Acquire and analyze MSDE and LEA database information for federal or state reporting requirements.
  - Consult with Branch Chief of Education Accountability on information and research needs for existing or proposed projects. Consultation to include problem definition, literature review, data acquisition, database creation, data analysis, development of research designs, planning, and reporting.
- Provide accountability program analyses in response to legislator and general public inquiries. Participate in planning meetings.
  - Design, create and manage responses to legislator and general public inquiries utilizing Cognos Reporting and Business Intelligence tools with the Education Data Warehouse.

## EDUCATION

Loyola College, Baltimore, Maryland

Bachelor of Science Degree – 1989

Major – Mathematics

Concentration -- Statistics

# Michael T. Pautz

## EXPERIENCE

### Maryland State Department of Education---July 1994 - Present

- Provides leadership and technical expertise to the Branch Chief and staff in the implementation of the Department's education accountability program; in documented management of education accountability projects, and related service contracts. Resolves operational issues within the Branch in accordance with direction and guidance of the Assistant State Superintendent and Branch Chief.
- Defines, reviews and documents the information areas and formulas in collaboration with the Branch Chief to meet federal and state accountability requirements.
- Translates the information based areas to technical specifications for internal staff and local school systems
- Works in collaboration with Branch Chief to resolve operational issues that impede the delivery of the Department's accountability program.
- Provides day-to-day leadership and establishes program goals, standards, and controls to meet Department's education program objectives. This includes working with the Assistant State Superintendent and Branch Chief to determine personnel and financial resources necessary to meet both short and long-range program objectives.
- Provides leadership in the implementation, tracking, documentation and reporting of DAA's progress toward meeting education accountability requirements.
- Identifies, allocates and monitors both human and financial resources for each project assigned in order to meet the Department's educational accountability requirements.
- Manages the performance standards of all human resources to ensure on time delivery of products and services.
- Oversees the development and training of staff within the education accountability branch.
- Provides technical expertise and leadership to staff in other divisions to ensure delivery of federal and state education accountability requirements.
- Works collaboratively with other divisions to interpret and apply state and federal regulations governing education accountability requirements.
- Represents MSDE and directs local school systems involved in the delivery of education information to meet all state and federal requirements. Performs site visits as necessary to assist local school systems in compliance with state and federal requirements.
- Applies knowledge of federal and state accountability requirements to program management structures and operations as related to technical system's lifecycle development.
- Serves as liaison between MSDE and various publics in carrying out MSDE's program objectives.

## **EDUCATION**

1987 Anne Arundel Community College AACCC. Associates Degree in Management Information Systems

1991 University of Maryland Baltimore County UMBC  
Bachelors of Science in Management Information Systems

# Gayle Scott

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## EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

March 2000 to Present -- DP Programmer Analyst, High School Assessments

The High School Assessment (HSA) and the Modified High School Assessment (ModHSA) are end-of-course test assessments for English, biology, government, and algebra currently administered to the students in Maryland. These assessments and the applications design and implementation impact the statistical reporting on MSDE websites and the Maryland Education Accountability program, and compliance with the reporting requirements of the No Child Left Behind Act (NCLB). This system also impacts on the student level reporting to local school systems, parents, and students after the assessments have been taken.

- Provide leadership and technical expertise for the design, implementation, and management of the high school assessments through programming, data analysis, systems analysis, documentation, and training.
- Manage and implement the development and/or revision of all application systems in order to ensure data integrity; to produce accurate data sets for data analysis and upper management decision-making; and, to assist with systems analysis during all phases of the assessment process.
- Coordinate the design, development, and implementation of the assessments data processing systems with staff within MSDE, the testing vendors, and the local school systems.
- Design programs to compile, validate, and check the data received from the local school systems and testing vendor according to technical specifications, layouts, and/or requirements for each phases—pretest, posttest, participation, and final.
- Define the system specifications for vendors, local accountability coordinators and internal staff and maintain systems documentation.
- Consult with the vendor on MSDE's technical requirements for the four processing phases dealing with the student-level assessment data (pretest, posttest, participation, and final phases) to ensure the timeliness, accuracy and completeness of the flow of data between MSDE and the vendor. Using knowledge of the MSDE systems, assist with defining their systems, reviewing its compatibility with MSDE's systems, and also evaluate their systems' capabilities.
- Oversee the processing and transfer of data deliverables between MSDE and the testing vendors; between MSDE and the local school systems; and within MSDE.
- Establish, review, and maintain a process flow and procedures between MSDE and the testing vendors
- Review and maintain the system resources so that the data flow is kept on schedule and redirect additional resources as necessary.
- Prepare and maintain technical documentation on the data processing aspects of the assessments.

## EDUCATION

Associate of Arts Degree, Anne Arundel Community College, Arnold, Maryland.

## EXPERIENCE

Division of Special Education/Early Intervention Services  
Maryland State Department of Education (Baltimore, Maryland)

September 2000 – Present

Data Processing Staff Specialist

- Coordinates the development, implementation, and maintenance of data systems related to:
  - Special Services Information System (SSIS/MDSSIS.org);
  - LSS data collection for Individual Education Plans (IEPs) MD Online IEP System (MDIEP.org);
  - Early Childhood Assessment System (ECAS);
  - MD State Performance Plans (SPPs) posted to MDIDEAREPORT.org;
  - Federal Data Collection and submission of Special Education Data for ED Facts; and,
  - Special Education and Infant and Toddlers linkage with Unique Student Identification System (USIS) at MSDE.
- Coordinates data submissions, resolutions to data discrepancy problems, system repairs/edits and data tracking with:
  - Federal Data reporting to Office of Special Education Programs (OSEP), Eden (EdFacts), and Westat
  - Outside State and Local Government Agencies;
  - MSDE Office of Information Technology (OIT);
  - Division of Accountability and Assessment (DAA);
  - Higher Education Researchers; and vendors.
- Performs development and problem analysis to provide appropriate action to support the student and school systems for special education populations.
- Develops, reviews, analyzes, and implements quality assurance standards and editing procedures to enhance quality assurance and timely processing of data included in the Special Services Information System (SSIS) and integration with the Maryland Online IEP.
- Identifies problems, analyzes data, and develops reports by writing SAS program code.
- Prepares technical specifications for special services data collection systems.
- Advises technical programmer analysts in the design, development and testing of new and existing application systems.
- Participates in the management of changes to the applications based on input from system users who identify requirements related to application deficiencies or enhancements.
- Produces *Maryland Special Education/Early Intervention Services Census Data & Related Tables* publications from analysis.
- Ensures established quality assurance policies and procedures are practiced through user acceptance of new and revised application.
- Creates, reviews, and updates application documentation including the Online SSIS Manual of Instruction.
- Provides ongoing user training and support services to statewide school system's staff and MSDE on the requirements and functions of these systems.
- Participates as a member of the Maryland Online IEP Team. Attends both leadership and workgroup meetings.
- Recommends changes to correct deficiencies and enhance the quality of data in SSIS and from Maryland Online IEP.
- Provides data for internal audits.
- Conducts record reviews related to data anomalies.
- Develops and reviews report procedures to ensure accurate and timely delivering of department products and services that meet requirements of federal, State, and department for special population groups.

## EDUCATION

- Anne Arundel Community College  
Statistics, 1995
- James Campbell High School  
Ewa Beach, Hawaii  
1974

## Douglas A. Strader

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### EXPERIENCE

#### Maryland State Department of Education (Baltimore, Maryland)

#### 2008 – Present    *Section Chief for the Division of Assessment and Accountability*

- Provides leadership and technical expertise to the Branch Chief and staff in the implementation of the Department's education accountability program; in documented management of education accountability projects, and related service contracts. Resolves operational issues within the Branch in accordance with direction and guidance of the Assistant State Superintendent and Branch Chief.
- Defines, reviews and documents the information areas and formulas in collaboration with the Branch Chief to meet federal and state accountability requirements.
- Translates the information based areas to technical specifications for internal staff and local school systems
- Works in collaboration with Branch Chief to resolve operational issues that impede the delivery of the Department's accountability program.
- Provides day-to-day leadership and establishes program goals, standards, and controls to meet Department's education program objectives. This includes working with the Assistant State Superintendent and Branch Chief to determine personnel and financial resources necessary to meet both short and long-range program objectives.
- Provides leadership in the implementation, tracking, documentation and reporting of DAA's progress toward meeting education accountability requirements.
- Identifies, allocates and monitors both human and financial resources for each project assigned in order to meet the Department's educational accountability requirements.
- Manages the performance standards of all human resources to ensure on time delivery of products and services.
- Oversees the development and training of staff within the education accountability branch.
- Provides technical expertise and leadership to staff in other divisions to ensure delivery of federal and state education accountability requirements.
- Works collaboratively with other divisions to interpret and apply state and federal regulations governing education accountability requirements.
- Represents MSDE and directs local school systems involved in the delivery of education information to meet all state and federal requirements. Performs site visits as necessary to assist local school systems in compliance with state and federal requirements.
- Applies knowledge of federal and state accountability requirements to program management structures and operations as related to technical system's lifecycle development.
- Serves as liaison between MSDE and various publics in carrying out MSDE's program objectives.

## EDUCATION

*Working toward Doctoral Degree in Educational Policy and Leadership with focus on  
Educational Research and Statistics  
Wilmington University, Wilmington, Delaware*

*Master's Degree in Educational Administration and Supervision  
College of Notre Dame, Baltimore, Maryland*

*Bachelor's of Science Degree in Physics and Natural Science  
Towson University, Towson, Maryland*

# Gilbert W. Toth

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## EXPERIENCE

Maryland State Department of Education (Baltimore, Maryland)

2002 - Present

DP Programmer Analyst Lead/Advanced

- Provides computer systems analysis and programming services in developing Oracle applications for processing the Maryland State Testing Assessment Program collections including High School Assessment (HSA), Maryland State Assessment (MSA) and Alternative Maryland State Assessment (ALT-MSA) and other applications in support of the department.
- Develops supporting data collection applications for High School Assessment Status and Completion for collecting end-of-year reporting of Maryland State Assessment results and High School Completion data for Maryland public schools.
- Oversees all aspects of in-house planning, design, development, testing, implementation, modifications and support of Oracle database applications processing the results of Maryland Testing Assessments including complying with new requirements at each phase. Modifications typically include changing file formats, interfaces database table structure and other database objects, program functionality, edit checking, reporting and file exports. Implements effective project management practices to ensure all solutions are viable and meet operational deadlines.
- Interacts with management, vendors and users to perform requirements gathering. Interprets business rules and documents business processes for the Maryland State Testing Assessments. Identifies interfaces, models and maps data flow, develops application architecture, designs database structure and develops program specifications. Researches and uses PC-based productivity tools to assist in application design, coding, testing, implementation and support.
- Trains and mentors others including users, junior programmers and contractors including assigning and reviewing appropriate programming tasks, providing advice and guidance to programmers for complex problems and troubleshooting, discusses design problems to stimulate analytical thinking and new approaches and provide assistance as needed.

## EDUCATION

1996	OCP	Oracle certification training	I-TECH Center	Frederick, MD
1984	BS	Information Systems Management	University of Maryland, University College	College Park, MD
1975	BS	Industrial Education	University of Maryland	College Park, MD

### Biographical Sketch – Leslie Wilson

**Dr. Leslie Wilson** is the Assistant State Superintendent for the Division of Accountability and Assessment at the Maryland State Department of Education. The Division provides accountability at the state, school system and school level to Maryland education stakeholders as well as the federal government. Data are collected on an annual basis with particular emphasis on meeting the requirements of the No Child Left Behind legislation. Dr. Wilson's division also administers the Maryland School Performance Program's assessment program and annual Report Card. Dr. Wilson is responsible for the analysis and interpretation of data to provide the basis for school improvement efforts and policy decisions. The Division maintains the Education Data Warehouse and is responsible for the collection of data from local school systems and other entities; the validation, definition, and maintenance of multi-year data in accordance with Department and Division policies and procedures to assure data quality and accessibility. Beginning in 2007, these responsibilities include the implementation and maintenance of a unique student identifier and future development of a longitudinal data system. Dr. Wilson has over 30 years of experience in data systems, assessment and accountability at the state, local school system and University level, with specific expertise in the collection, reporting, interpretation and use of data for educational decision making. In addition she has authored two books on assessment and school improvement. She received her Ph.D. from the University of Maryland in the area of Education Measurement, Statistics and Evaluation.

# Budget Narrative

## Budget Narrative

Attachment 1:

Title: Pages: Uploaded File: 1235-MLDS Budget Narrative.pdf

**Section A - Request to the U.S. Department of Education  
Year One**

<b>Item</b>	<b>Requested</b>	<b>In-Kind</b>	<b>Total</b>
<b>1. Personnel</b>	\$95,000	\$313,763	\$408,763
<b>Total Personnel</b>	<b>\$95,000</b>	<b>\$313,763</b>	<b>\$408,763</b>
<b>2. Fringe Benefits</b>	\$7,125	\$53,340	\$60,465
<b>Total Fringe Benefits</b>	<b>\$7,125</b>	<b>\$53,340</b>	<b>\$60,465</b>
<b>3. Travel</b>	\$4,500	-0-	\$4,500
<b>Total Travel</b>	<b>\$4,500</b>	<b>-0-</b>	<b>\$4,500</b>
<b>4. Equipment</b>	-0-	\$1,265,000	\$1,265,000
<b>Total Equipment</b>	<b>-0-</b>	<b>\$1,265,000</b>	<b>\$1,265,000</b>
<b>5. Supplies</b>	-0-		-0-
<b>Total Supplies</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>6. Contractual</b>	\$700,000	\$4,936,356	\$5,636,356
<b>Total Contractual</b>	<b>\$700,000</b>	<b>\$4,936,356</b>	<b>\$5,636,356</b>
<b>7. Construction</b>	-0-	-0-	-0-
<b>Total Construction</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>8. Other</b>	-0-	-0-	-0-
<b>Total Other</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>9. Total Direct Costs</b>	<b>\$806,625</b>	<b>\$6,568,459</b>	<b>\$7,375,084</b>
<b>10. Indirect Costs @ 9.7%</b>			
Less Sub-Contracts & Equipment	\$10,343	-0-	\$10,343
<b>11. Total Costs</b>	<b>\$816,968</b>	<b>\$6,568,459</b>	<b>\$7,385,427</b>

**Section A - Request to the U.S. Department of Education  
Year Two**

Item	Requested	In-Kind	Total
<b>1. Personnel</b>	\$96,900	\$407,148	\$504,048
<b>Total Personnel</b>	<b>\$96,900</b>	<b>\$407,148</b>	<b>\$504,048</b>
<b>2. Fringe Benefits</b>	\$7,268	\$69,215	\$76,483
<b>Total Fringe Benefits</b>	<b>\$7,268</b>	<b>\$69,215</b>	<b>\$76,483</b>
<b>3. Travel</b>	\$4,950	-0-	\$4,950
<b>Total Travel</b>	<b>\$4,950</b>	<b>-0-</b>	<b>\$4,950</b>
<b>4. Equipment</b>	\$675,000	\$360,000	\$1,035,000
<b>Total Equipment</b>	<b>\$675,000</b>	<b>\$360,000</b>	<b>\$1,035,000</b>
<b>5. Supplies</b>	-0-	-0-	-0-
<b>Total Supplies</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>6. Contractual</b>	\$1,700,000	\$3,372,992	\$5,072,992
<b>Total Contractual</b>	<b>\$1,700,000</b>	<b>\$3,372,992</b>	<b>\$5,072,992</b>
<b>7. Construction</b>	-0-	-0-	-0-
<b>Total Construction</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>8. Other</b>	-0-	-0-	-0-
<b>Total Other</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>9. Total Direct Costs</b>	<b>\$2,484,118</b>	<b>\$4,209,355</b>	<b>\$6,693,473</b>
<b>10. Indirect Costs @ 9.7%</b>			
Less Sub-Contracts & Equipment	\$10,584	-0-	\$10,584
<b>11. Total Costs</b>	<b>\$2,494,702</b>	<b>\$4,209,355</b>	<b>\$6,704,057</b>

**Section A - Request to the U.S. Department of Education  
Year Three**

<b>Item</b>	<b>Requested</b>	<b>In-Kind</b>	<b>Total</b>
<b>1. Personnel</b>	\$98,838	\$415,294	\$514,132
<b>Total Personnel</b>	<b>\$98,838</b>	<b>\$415,294</b>	<b>\$514,132</b>
<b>2. Fringe Benefits</b>	\$7,413	\$70,600	\$78,013
<b>Total Fringe Benefits</b>	<b>\$7,413</b>	<b>\$70,600</b>	<b>\$78,013</b>
<b>3. Travel</b>	\$5,445	-0-	\$5,445
<b>Total Travel</b>	<b>\$5,445</b>	<b>-0-</b>	<b>\$5,445</b>
<b>4. Equipment</b>	-0-	\$432,000	\$432,000
<b>Total Equipment</b>	<b>-0-</b>	<b>\$432,000</b>	<b>\$432,000</b>
<b>5. Supplies</b>	-0-	-0-	-0-
<b>Total Supplies</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>6. Contractual</b>	\$2,600,000	\$3,438,025	\$6,038,025
<b>Total Contractual</b>	<b>\$2,600,000</b>	<b>\$3,438,025</b>	<b>\$6,038,025</b>
<b>7. Construction</b>	-0-	-0-	-0-
<b>Total Construction</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>8. Other</b>	-0-	-0-	-0-
<b>Total Other</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>9. Total Direct Costs</b>	<b>\$2,711,696</b>	<b>\$4,355,919</b>	<b>\$7,067,615</b>
<b>10. Indirect Costs @ 9.7%</b>			
Less Sub-Contracts & Equipment	\$10,835	-0-	\$10,835
<b>11. Total Costs</b>	<b>\$2,722,531</b>	<b>\$4,355,919</b>	<b>\$7,078,450</b>

**Section A - Request to the U.S. Department of Education  
Year Four**

<b>Item</b>	<b>Requested</b>	<b>In-Kind</b>	<b>Total</b>
<b>1. Personnel</b>	\$100,815	\$423,598	\$524,413
<b>Total Personnel</b>	<b>\$100,815</b>	<b>\$423,598</b>	<b>\$524,413</b>
<b>2. Fringe Benefits</b>	\$7,561	\$72,135	\$79,696
<b>Total Fringe Benefits</b>	<b>\$7,561</b>	<b>\$72,135</b>	<b>\$79,696</b>
<b>3. Travel</b>	\$5,990	-0-	\$5,990
<b>Total Travel</b>	<b>\$5,990</b>	<b>-0-</b>	<b>\$5,990</b>
<b>4. Equipment</b>	-0-	\$432,000	\$432,000
<b>Total Equipment</b>	<b>-0-</b>	<b>\$432,000</b>	<b>\$432,000</b>
<b>5. Supplies</b>	-0-	-0-	-0-
<b>Total Supplies</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>6. Contractual</b>	\$2,000,000	\$3,276,722	\$5,276,722
<b>Total Contractual</b>	<b>\$2,000,000</b>	<b>\$3,276,722</b>	<b>\$5,276,722</b>
<b>7. Construction</b>	-0-	-0-	-0-
<b>Total Construction</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>8. Other</b>	-0-	-0-	-0-
<b>Total Other</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>9. Total Direct Costs</b>	<b>\$2,114,366</b>	<b>\$4,204,455</b>	<b>\$6,318,821</b>
<b>10. Indirect Costs @ 9.7%</b>			
Less Sub-Contracts & Equipment	\$11,094	-0-	\$11,094
<b>11. Total Costs</b>	<b>\$2,125,460</b>	<b>\$4,204,455</b>	<b>\$6,329,915</b>

**Section A - Request to the U.S. Department of Education  
Year Five**

<b>Item</b>	<b>Requested</b>	<b>In-Kind</b>	<b>Total</b>
<b>1. Personnel</b>	\$102,831	\$340,048	\$442,879
<b>Total Personnel</b>	<b>\$102,831</b>	<b>\$340,048</b>	<b>\$442,879</b>
<b>2. Fringe Benefits</b>	\$7,712	\$57,808	\$65,520
<b>Total Fringe Benefits</b>	<b>\$7,712</b>	<b>\$57,808</b>	<b>\$65,520</b>
<b>3. Travel</b>	\$5,762	-0-	\$5,762
<b>Total Travel</b>	<b>\$5,762</b>	<b>-0-</b>	<b>\$5,762</b>
<b>4. Equipment</b>	-0-	\$432,000	\$432,000
<b>Total Equipment</b>	<b>-0-</b>	<b>\$432,000</b>	<b>\$432,000</b>
<b>5. Supplies</b>	-0-	-0-	-0-
<b>Total Supplies</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>6. Contractual</b>	\$712,000	\$3,386,027	\$4,098,027
<b>Total Contractual</b>	<b>\$712,000</b>	<b>\$3,386,027</b>	<b>\$4,098,027</b>
<b>7. Construction</b>	-0-	-0-	-0-
<b>Total Construction</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>8. Other</b>	-0-	-0-	-0-
<b>Total Other</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>
<b>9. Total Direct Costs</b>	<b>\$828,305</b>	<b>\$4,215,883</b>	<b>\$5,044,188</b>
<b>10. Indirect Costs @ 9.7%</b>			
Less Sub-Contracts & Equipment	\$11,282	-0-	\$11,282
<b>11. Total Costs</b>	<b>\$839,587</b>	<b>\$4,215,883</b>	<b>\$5,055,470</b>

**Section – B State Personnel Work Percentages by Year for Grant**

<b>Name</b>	<b>%FTE</b>	<b>Year One</b>	<b>Year Two*</b>	<b>Year Three*</b>	<b>Year Four*</b>	<b>Year Five*</b>
Leslie Wilson	20%	\$22,630	\$23,083	\$23,544	\$24,015	\$24,495
Chalis Breithaupt	15%	\$11,263	\$22,976 (30% FTE)	\$23,436 (30% FTE)	\$23,904 (30% FTE)	\$12,191 (15% FTE)
Marc Allen	15%	\$9,696	\$19,780 (30%FTE)	\$20,176 (30% FTE)	\$20,579 (30% FTE)	\$10,495 (15% FTE)
Mike Pautz	20%	\$17,607	\$35,916 (40% FTE)	\$36,634 (40% FTE)	\$37,367 (40% FTE)	\$19,440 (20% FTE)
Douglas Strader	50%	\$48,404	\$49,372	\$50,360	\$51,367	\$52,394
Janice Johnson	60%	\$57,443	\$58,592	\$59,764	\$60,959	\$62,178
Matthew Dammann	15%	\$12,613	\$25,731 (30% FTE)	\$26,246 (30% FTE)	\$26,771 (30% FTE)	\$13,653 (15% FTE)
Gayle Scott	15%	\$10,187	\$20,781 (30% FTE)	\$21,197 (30% FTE)	\$21,621 (30% FTE)	\$11,027 (15% FTE)
Kathy Donithan	15%	\$8,913	\$18,183 (30% FTE)	\$18,547 (30% FTE)	\$18,918 (30% FTE)	\$9,648 (15% FTE)
Laia Block	15%	\$7,891	\$16,097 (30% FTE)	\$16,419 (30% FTE)	\$16,747 (30% FTE)	\$8,541 (15% FTE)
Brenda Muir	15%	\$7,236	\$14,760 (30% FTE)	\$15,055 (30% FTE)	\$15,356 (30% FTE)	\$7,832 (15% FTE)
Thomas Johnson	80%	\$50,611	\$51,623	\$52,656	\$53,709	\$54,783
Gilbert Toth	10%	\$7,193	\$7,337	\$7,484	\$7,633	\$7,786
James Hedgespeth	10%	\$6,922	\$7,060	\$7,202	\$7,346	\$7,493
Timothy O'Quinn	30%	\$23,836	\$24,313	\$24,799	\$25,295	\$25,801
Carol Ann Baglin Heath	5%	\$5,750	\$5,865	\$5,982	\$6,102	\$6,224
Sally Slade	10%	\$5,568	\$5,679	\$5,793	\$5,909	\$6,027
<b>Total</b>		\$313,763	\$407,148	\$415,294	\$423,598	\$340,008

\* Projections based on an annual 2 percent increase in salaries in Year Two through Year Five

## **Section C Budget Narrative**

Justification for Section A Budget Summary **U.S. Department of Education Request**

### **PROJECT YEAR ONE**

#### **Personnel Budget**

Funding for a **project manager** is requested with the dedication of 100% of their time to manage and coordinate all grant activities, the budget and the timelines. This individual will be hired as a contractual position with the fringe benefits required by law. Hiring the project manager will be accomplished in accordance with federal and state law. Procuring a project manager will be the first activity performed by the Maryland State Department of Education (MSDE) grant team.

#### **Fringe Benefits**

Fringe benefits are requested for the Project Manager at the contractual rate of 7.5% over the five years of the budget period.

#### **Travel**

As required by the grant, there are mandatory meetings that MSDE stakeholders must attend with the U.S. Department of Education (USDE). These meetings are held two times annually for approximately two to three days. Three individuals from the Project Team, including the Grant Sponsor, Project Manager and Functional Requirement Facilitator will attend these meetings. The budget request is based on lodging at \$231 per night; per diem food at \$41.00; mileage to the Washington metro area at 58.5 cents per mile for 80 miles round trip and airfare of \$500 roundtrip to the annual MIS conference where grant monitoring meetings have been conducted by USDE in the past. An increase of 10% each year has been applied in subsequent years to allow for cost increases pertaining to hotel, gasoline, food and airfare. The budget request includes three individuals attending the meetings for three days. It is possible, based on the timing of the grant, and the USDE meeting requirements in the first year, that there would not be a total of three meetings in the first year which would reduce this request.

#### **Contractual**

During the first six months of Year 1, the MSDE grant team will be planning and writing a request for proposal to obtain the services of a highly skilled technology vendor that has a proven track record with other states in designing and developing longitudinal systems. Vendor mandatory requirements will be explicit in requiring the necessary experience and skills technically, in addition to educational Pre-K-20 experience. MSDE plans to design one multi-year procurement that reflects an incremental roll-out of the grant objectives that are defined in the grant application. The procurement will be designed as deliverable based on the full complement of steps performed in the System Development Life Cycle (SDLC). Once the procurement is awarded in months 6-8, work will begin on objective 1 (Re-engineering the Education Data Warehouse [EDW]), with a comprehensive analysis of the impact and relationship of the other objectives to objective 1.

Maryland's EDW was originally designed in 1999, prior to a unique student identifier system, as individual tables that are a snap-shot in time without any student linking. Our current EDW technology is out-dated and unable to provide student linking. We expect this activity to provide

the foundation for our longitudinal data system (LDS). The contractual budget category covers all deliverables provided by the vendor and the work of the vendor's team that includes technology personnel and educational personnel for approximately six months work. The vendor's team would include the following personnel: educational business analysts, project manager, technical writers, data architects, and data base administrators. The budget request covers the consulting services being provided by the vendor's team.

## **PROJECT YEAR TWO**

### **Personnel**

The Grant Project Manager will continue to monitor all activities of the grant with the vendor, all internal grant activities, budget expenditures and reporting to U.S. Department of Education. The budget request reflects a 2% increase in salary for this individual. The increase would only be awarded if the project manager was performing exceptional work. Two percent is the projected salary increase by the State of Maryland for the five year period of the grant.

### **Fringe Benefits**

The contractual fringe benefit rate will continue to be calculated at 7.5% in Year 2.

### **Travel**

As required by the grant, there are mandatory meetings that MSDE stakeholders must attend with the U.S. Department of Education. These meetings are held two times annually for approximately two to three days. Three individuals from the Project Team, including the Grant Sponsor, Project Manager and Functional Requirement facilitator will attend these meetings. The budget request is based on lodging; per diem food ; mileage to the Washington metro area at 80 miles round trip and airfare to the annual MIS conference where grant monitoring meetings have been conducted by USDE in the past. An increase of 10% from the previous year budget has been applied in subsequent years to allow for cost increases of hotel, gasoline, food and airfare. The budget request includes three individuals attending the meetings for three days with their total expenses.

### **Equipment**

MSDE will require replacement of the hardware for the EDW that will require a two-tiered approach. Our current hardware is five years old and out-dated. The current architecture includes a server with 16 CPU's to transform our data to the EDW. In 2003 MSDE updated to the current architecture at cost of \$435,000. New servers are known to have improved efficiency, speed and scalability. We are opening access to individual school buildings, as defined in the grant objectives that will impact our Oracle and Cognos Business Intelligence Reporting tool licensing. There are approximately 1,470 schools in Maryland. The current licensing for both Oracle and Congas, will require upgrading to increase our capacity for the LDS. In State Fiscal Year 2008, MSDE expended \$1 million for a complete production and test environment for our Statewide Unique ID System that included Oracle licensing. Oracle licensing comprised \$465,000 of the \$1 million expended. The production environment includes an Oracle RAC and Oracle Application Server solution. Oracle and Cognos tools are very expensive for licensing. It is most cost efficient for the Oracle licensing to move to unlimited based on the plan for school-wide access. Our budget request includes \$175,000 for hardware;

\$325,000 for Oracle Licensing for unlimited access; and \$175,000 for Cognos' Business Intelligence Reporting Tool licensing expansion. State funds will pay for the out-years and continued maintenance and fees for licensing.

### **Contractual**

During Year 2, the re-engineering of our EDW activities will continue with the design and development work of the EDW that is the foundation for the Maryland Longitudinal Data System. The integration of the Special Education LDS prototype will be a major activity so that Maryland's entire student population is combined within one central repository for the longitudinal system. Data conversion of existing EDW data, back to 1993, will begin during Year 2 inclusive of all associated predefined summaries of data that support the current accountability program and EdFacts reporting. The vendor will provide a deliverable that comprises a complete evaluation of our existing hardware and software and make recommendations in collaboration with MSDE's Office of Information Technology relating to the data architecture. The comprehensive analysis will continue on Objective 3 (Business Intelligence for Analysis and Reporting) and Objective 4 (Student Record Access) in collaboration with all stakeholders. Design and development of two of the four additional modules will begin for Objective 2 that will consolidate and centralize all local reporting through one local submission activity and source to assist MSDE in compliance with EdFacts reporting. These activities will expand our user base and access to school administrators. This is a major change in the current practice of allowing access to local school districts only. The contractual budget category covers the deliverables provided by the vendor and the work of the vendor's team that includes technology personnel and educational personnel for one year. Additional personnel in Year 2 would include technical writers; data architects; and data base administrators; systems analysts; network specialists; and programmer analysts. The budget request covers the contractual services being provided by the vendor's team.

## **PROJECT YEAR THREE**

### **Personnel**

The Project Manager will continue to monitor all activities of the grant with the vendor and internal MSDE staff, all budget expenditures and reporting to USDE. The budget request reflects a 2% increase in salary, as per state guidelines, for this individual. The increase would only be awarded if the project manager was performing exceptional work.

### **Fringe Benefits**

The contractual fringe benefit rate will continue to be calculated at 7.5% in Year 3

### **Travel**

As required by the grant, there are mandatory meetings that MSDE stakeholders must attend with the USDE. These meetings are held two times annually for approximately two to three days. Three individuals from the Project Team, including the Grant Sponsor, Project Manager and Functional Requirement facilitator will attend these meetings. The budget request is based on lodging; per diem food ; mileage to the Washington metro area at 80 miles round trip and airfare to the annual MIS conference where grant monitoring meetings have been conducted by USDE in the past. An increase of 10% from the previous year budget has been applied in

subsequent years to allow for cost increases of hotel, gasoline, food and airfare. The budget request includes three individuals attending the meetings for three days with their total expenses.

### **Contractual**

During Year 3, the re-engineering of the EDW work will be completed with a product fully implemented for in-house use by only MSDE personnel in order to fully validate and ensure there are no anomalies prior to full implementation with the user community. Vendor activities will include design and development activities for Objective 4 (student record access) that includes the course standardization codes across Maryland. Work also continues on the LDS component of the EDW. Design and development activities for additional modules to the Web Data Collection- Centralized Consolidated Reporting (Objective 2) will begin with testing and implementation of two modules designed and developed in the previous year. Design and development of Objective 3 (Business Intelligence for Analysis and Reporting) canned reports and adhoc reports will begin. The complete architectural framework for Cognos must be designed and developed to work seamlessly and transparently with other existing systems, such as the statewide student identifier system and web data collection system. Design and Development of the web interface for Objective 4 (Student Record Access) work begins. A sub grant of \$25,000 each to our 24 local school districts for a total of \$600,000 will be awarded to enable change of their data systems for the standardization of courses in Maryland. This objective must adhere to all FERPA requirements. The contractual budget category covers the deliverables provided by the vendor and the work of the vendor's team that includes technology personnel and educational personnel for one year. The vendor's team would include the following personnel: educational business analysts; project manager; technical writers; one data architect; data base administrators; systems analysts; network specialists; programmer analysts; quality assurance specialists, and graphic artists. The budget request covers the contractual services being provided by the vendor's team.

## **PROJECT YEAR FOUR**

### **Personnel**

The Project Manager will continue to monitor all activities of the grant with the vendor and internal staff, all budget expenditures and reporting to U.S. Department of Education. The budget request reflects a 2% increase in salary as per state guidelines. This increase will only be awarded if the project manager is performing exceptional work.

### **Fringe Benefits**

The contractual fringe benefit rate will continue to be calculated at 7.5% in Year 3

### **Travel**

As required by the grant, there are mandatory meetings that MSDE stakeholders must attend with the U.S. Department of Education. These meetings are held two times annually for approximately two to three days. Three individuals from the Project Team, including the Grant Sponsor, Project Manager and Functional Requirement facilitator will attend these meetings. The budget request is based on lodging; per diem food ; mileage to the Washington metro area at 80 miles round trip and airfare to the annual MIS conference where grant monitoring meetings have been conducted by USDE in the past. An increase of 10% from the previous year budget

has been applied in subsequent years to allow for cost increases of hotel, gasoline, food and airfare. The budget request includes three individuals attending the meetings for three days with their total expenses.

### **Contractual**

During Year 4, training for in-house personnel and a pilot group of 5 local school districts and five schools will be established as defined in Objective 6 (Professional Development). Testing and full implementation of Objective 3 (Business Intelligence for Analysis and Reporting) and Objective 4 (Student Record Access) will be completed. The LDS component of the EDW (Objective 1) will be fully completed and refined based on feedback from stakeholders. Work will continue on the design and development of additional modules within the existing Web Data Collection System (Objective 2) to satisfy EdFacts reporting requirements. The contractual budget category covers the work of the vendor's team that includes technology personnel and educational personnel for one year. The vendor's team would include the following personnel; educational business analysts; project manager; technical writers; data architects; data base administrators; systems analysts; network specialists; programmer analysts; graphic artists; trainers and quality assurance specialists. The budget request covers the contractual services and deliverables being provided by the vendor's team.

## **PROJECT YEAR FIVE**

### **Personnel**

The Project Manager will continue to monitor all activities of the grant with the vendor and internal MSDE personnel, all budget expenditures and reporting to U.S. Department of Education. The Project Manager's salary is included for the full year to complete all evaluations and reporting required by USDE as well as develop state funded maintenance and support vehicles for further out-years. The Project Manager's salary is adjusted 2% as per state guidelines.

### **Fringe Benefits**

The contractual fringe benefit rate will continue to be calculated at 7.5% in Year 3

### **Travel**

As required by the grant, there are mandatory meetings that MSDE stakeholders must attend with the U.S. Department of Education. These meetings are held two times annually for approximately two to three days. Three individuals from the Project Team, including the Grant Sponsor, Project Manager and Functional Requirement facilitator will attend these meetings. The budget request is based on lodging; per diem food; mileage to the Washington metro area at 80 miles round trip and airfare to the annual MIS conference where grant monitoring meetings have been conducted by USDE in the past. The budget request is reduced from the previous year with the expectation that the grant project would be ending and meetings may be reduced in number.

### **Contractual**

During Year 5, additional training would be provided for local school systems and schools as defined in Objective 6 (Professional Development). Refinements and enhancements to

Objective 3 (Business Intelligence for Analysis and Reporting), and Objective 4 (Student Record Access) will be completed. Full implementation of Objective 2 (Web Data Collection Centralized Consolidated Reporting) will also be scheduled during Year 5. Objective 5 (Increase Capacity with the Unique Student Identifier System for Higher Education and Work Force) will begin and be completed in this project year. The contractual budget category covers the work of the vendor's team that includes technology personnel and educational personnel for a partial year. The vendor's team would include the following personnel; educational business analysts; project manager; technical writer; and data architect. The budget request covers the deliverables provided by the vendor and the contractual services being provided by the vendor's team. The budget request is reduced since work performed by the vendor would utilize a smaller team.

## **Voluntary Cost Sharing Section B – Budget Summary Non-Federal Funds**

### **Project Year One through Year Five**

#### **Personnel**

Please note the attached table that designates the percentage of time, salary and fringe benefits for each MSDE team member of the grant project. Fringe benefits are provided by the State for each identified position. The personnel roles for the project are:

- Grant Sponsor - Dr. Leslie Wilson
- Functional Requirements Facilitator Janice Johnson
- Function Requirements Manager Douglas Strader
- Technical Coordinator Thomas Johnston, Mike Pautz
- Technical Support Marc Allen, Gilbert Toth, James Hedgespeth
- Quality Assurance Specialist Timothy O'Quinn, Mike Pautz
- Subject Matter Experts: Gayle Scott, Kathy Donithan, Laia Block, Brenda Muir, Matthew Dammann, Sally Slade
- Special Education Executive Dr. Carol Ann Baglin
- Documentation Specialist Challis Breithaupt

#### **Fringe Benefits**

Fringe benefits for the above identified personnel were computed on the basis of 17%, based on the percentages of time allocated to the project.

#### **Equipment**

Maryland currently expends \$300,000 annually for license renewals and support for the software tools and hardware used. These products include Oracle, Cognos, Informatica (EDW tool), SAS statistical programming language and other add-on tools to enhance our usage of the products identified. MSDE anticipates this expenditure will increase with the purchase of additional licensing within the grant for unlimited Oracle licensing and increased Cognos Business Intelligence tool licensing. The budget category includes an additional 20% increase in Project Year 2 and Project Year 3 for the increased licensing renewals.

#### **Contractual**

Maryland currently has a partially funded Web Data Collection System (WDCS) project to design and develop a comprehensive solution for the collection of data for the Title I, Part A through Part D and Title III Federal programs. MSDE will expend \$1,955,000 for the two federal programs defined in the current contract. This current contract also will create the EdFacts data files for federal reporting as mandated for 2009. The first two modules of the WDCS should be completed by the end of 2009. Maryland's vision is to have one comprehensive central repository for local school system reporting for accountability and all federal programs that will reduce redundancy in requesting the same student information numerous times. Since Maryland does not have in-house expertise to perform sophisticated

design and development work in Oracle utilizing the Cognos Business Intelligence tools, MSDE has several contracts that provide support to maintain and enhance our products. Please see the attached spreadsheet of all Maryland State Vendor contracts that support our federal compliance and accountability programs by project year.

Maryland currently has contracts for the following support services:

- Unique Student Identifier System
- Web Data Collection System Development and Outyear Support
- Education Data Warehouse - Data Architect and Programmer Analyst full time
- Project Management Services /USIS and WDCS one full time project manager
- Oracle Support Systems analyst and Programmer analyst two FTE's
- Website Support for Federal Report Card Compliance and Decision Support for local School Systems vendor team of engineers, graphic artists, web developers, data base administrator and data architect.

**State Vendor Contracts – Non-Federal Contribution**

Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total
USIS Support	\$492,422	\$507,197	\$522,406	\$538,078	\$554,220	\$2,614,323
WDCS Develop/Support	\$1,955,000	\$291,512	\$302,808	\$314,012	\$325,630	\$3,188,962
EDW	\$673,972	\$701,558	\$729,794	\$760,084	\$790,487	\$3,655,895
Project Manager (1)	\$212,160	\$220,480	\$228,800	\$237,120	\$245,440	\$1,144,000
Oracle Support SR Programmer	\$162,240	\$168,480	\$147,840	\$0	\$0	\$478,560
Oracle Support Systems Analyst	\$134,264	\$138,278	\$120,525	\$0	\$0	\$393,067
Website Support	\$1,306,298	\$1,345,487	\$1,385,852	\$1,427,428	\$1,470,250	\$6,935,315
<b>Total</b>	<b>\$4,936,356</b>	<b>\$3,372,992</b>	<b>\$3,438,025</b>	<b>\$3,276,722</b>	<b>\$3,386,027</b>	<b>\$18,410,122</b>

USIS Hardware/Software	\$0	\$0	\$0	\$0	\$0	\$965,000
Software renewals	\$300,000	\$360,000	\$432,000	\$432,000	\$432,000	\$1,956,000
<b>Total</b>	<b>\$1,265,000</b>	<b>\$360,000</b>	<b>\$432,000</b>	<b>\$432,000</b>	<b>\$432,000</b>	<b>\$2,921,000</b>