

U.S. Department of Education

Washington, D.C. 20202-5335



APPLICATION FOR GRANTS UNDER THE

**STATEWIDE LONGITUDINAL DATA SYSTEM RECOVERY ACT GRANTS
CFDA # 84.384A
PR/Award # R384A100007**

Closing Date: NOV 19, 2009

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Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission	* 2. Type of Application: * If Revision, select appropriate letter(s):	
<input type="checkbox"/> Preapplication	<input checked="" type="checkbox"/> New	
<input checked="" type="checkbox"/> Application	<input type="checkbox"/> Continuation	* Other (Specify)
<input type="checkbox"/> Changed/Corrected Application	<input type="checkbox"/> Revision	

* 3. Date Received:	4. Applicant Identifier:
11/19/2009	

5a. Federal Entity Identifier:	* 5b. Federal Award Identifier:
	N/A

State Use Only:

6. Date Received by State:	8/10/2009	7. State Application Identifier:
----------------------------	-----------	----------------------------------

8. APPLICANT INFORMATION:

* a. Legal Name: Maryland State Department of Education

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
526002033	183071471

d. Address:

* Street1:	200 W. Baltimore Street
Street2:	
* City:	Baltimore
County:	Baltimore City
State:	MD
Province:	
* Country:	USA
* Zip / Postal Code:	21201

e. Organizational Unit:

Department Name:	Division Name:
MD State Department of Education	Accountability & Assessment

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

Prefix:	Dr.	* First Name:	Leslie
Middle Name:			

* Last Name: Wilson

Suffix:

Title: Assistant State Superintendent

Organizational Affiliation:

* 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:

84.384A

CFDA Title:

Statewide Longitudinal Data System Recovery Act Grants

*** 12. Funding Opportunity Number:**

ED-Grants-072909-001

Title:

Statewide Longitudinal Data Systems Grants under the American Recovery and Reinvestment Act of 2009

13. Competition Identification Number:

Title:

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

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

Development of Maryland's P-20/Workforce Longitudinal Data System.

Attach supporting documents as specified in agency instructions.

Attachment:

Title :

File :

Attachment:

Title :

File :

Attachment:

Title :

File :

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant: 7

* b. Program/Project: 1-8

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

Attachment:

Title :

File :

17. Proposed Project:

* a. Start Date: 5/1/2010

* b. End Date: 4/30/2013

18. Estimated Funding (\$):

a. Federal	\$ 13056853
b. Applicant	\$ 0
c. State	\$ 1881792
d. Local	\$ 0
e. Other	\$ 0
f. Program Income	\$ 0
g. TOTAL	\$ 14938645

*** 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 11/19/2009.

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

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

Yes No

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

** I AGREE

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

Authorized Representative:

Prefix: 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: * Date Signed:

Application for Federal Assistance SF-424

Version 02

*** Applicant Federal Debt Delinquency Explanation**

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



U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1894-0008

Expiration Date: 02/28/2011

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	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2. Fringe Benefits	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3. Travel	\$ 1,260	\$ 1,386	\$ 1,525	\$ 0	\$ 0	\$ 4,171
4. Equipment	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
5. Supplies	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
6. Contractual	\$ 1,225,674	\$ 1,325,674	\$ 766,857	\$ 0	\$ 0	\$ 3,318,205
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 1,009,918	\$ 6,049,045	\$ 2,263,540	\$ 0	\$ 0	\$ 9,322,503
9. Total Direct Costs (lines 1-8)	\$ 2,236,852	\$ 7,376,105	\$ 3,031,922	\$ 0	\$ 0	\$ 12,644,879
10. Indirect Costs*	\$ 152,140	\$ 164,555	\$ 95,279	\$ 0	\$ 0	\$ 411,974
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 2,388,992	\$ 7,540,660	\$ 3,127,201	\$ 0	\$ 0	\$ 13,056,853

***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: 7/1/2009 To: 6/30/2010 (mm/dd/yyyy)

Approving Federal agency: ED Other (please specify): _____ The Indirect Cost Rate is 12.4%

(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(c)(2)? The Restricted Indirect Cost Rate is 0%



U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1894-0008

Expiration Date: 02/28/2011

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	\$ 663,704	\$ 634,331	\$ 583,757	\$ 0	\$ 0	\$ 1,881,792
2. Fringe Benefits	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3. Travel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
4. Equipment	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
5. Supplies	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
6. Contractual	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
9. Total Direct Costs (lines 1-8)	\$ 663,704	\$ 634,331	\$ 583,757	\$ 0	\$ 0	\$ 1,881,792
10. Indirect Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 663,704	\$ 634,331	\$ 583,757	\$ 0	\$ 0	\$ 1,881,792

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Standard Form 424B (Rev.7-97)

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
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 sub-agreements.
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 (Clear Air) Implementation Plans under Section 176(c) of the Clear 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. "1721 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

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 the 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.

with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. '470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. "469a-1 et seq.).

14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. "2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. "4801 et seq.) which prohibits the use of lead- based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

Signature of Authorized Certifying Representative:

Name of Authorized Certifying Representative: Dr. Nancy S. Grasmick

Title: State Superintendent of Schools

Date Submitted: 09/19/2009

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

1. Type of Federal Action: <input type="checkbox"/> Contract <input type="checkbox"/> Grant <input type="checkbox"/> Cooperative Agreement <input type="checkbox"/> Loan <input type="checkbox"/> Loan Guarantee <input type="checkbox"/> Loan Insurance	2. Status of Federal Action: <input type="checkbox"/> Bid/Offer/Application <input type="checkbox"/> Initial Award <input type="checkbox"/> Post-Award	3. Report Type: <input type="checkbox"/> Initial Filing <input type="checkbox"/> Material Change For Material Change only: Year: 0 Quarter: 0 Date of Last Report:
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier, if known: 0 Name: Address: City: State: Zip Code + 4: - Congressional District, if known:	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Name: Address: City: State: Zip Code + 4: - Congressional District, if known:	
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable:	
8. Federal Action Number, if known:	9. Award Amount, if known: \$0	
10. a. Name of Lobbying Registrant (if individual, last name, first name, MI): Address: City: State: Zip Code + 4: -	b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): Address: City: State: Zip Code + 4: -	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Name: Dr. Nancy S. Grasmick Title: State Superintendent of Schools Applicant: Maryland State Department of Education Date: 09/19/2009	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

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 any 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 or 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.

APPLICANT'S ORGANIZATION

Maryland State Department of Education

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: Dr. First Name: Nancy Middle Name: S

Last Name: Grasmick Suffix:

Title: State Superintendent of Schools

Signature: _____

Date:

09/19/2009

Project Narrative

Project Narrative - Project Abstract

Attachment 1:

Title: MLDS Project Abstract Pages: 1 Uploaded File: C:\Documents and Settings\mszczepaniak\Desktop\MLDS Grant 2010\MLDS Project Abstract.doc

Project Abstract Maryland's P-20/Workforce Longitudinal Data System

Description of Project

With Maryland's P-12 Longitudinal Data System underway, the state's education leaders are turning their attention to the development and implementation of the extension of that system into postsecondary education and the workforce. In the summer of 2009, at the request of the Governor, a workgroup with broad representation from higher education, including the Maryland State Department of Education (MSDE) University System of Maryland (USM), the Maryland Higher Education Commission (MHEC) and others representing private universities and community colleges was charged with creating a proposal for a P-20 system design. The workgroup identified key policy questions and set about defining the data and system requirements to respond them along with a governance structure.

Since that time, the state's workforce system has been included in the P-20 system design and a detailed evaluation of each contributing data system has been completed. This proposal is a result of the collaborative effort of these groups and requests support for the development required to address these identified needs to meet requirements of a P-20/Workforce Longitudinal Data System.

The project goals are first and foremost to establish a P-20/Workforce Longitudinal Data Center warehouse, meeting the specifications set out in federal and state guidelines that will answer Maryland's identified policy questions. To that end, the three components contributing data to the system require some further development to their data collections and data systems in order to realize this overall goal. The work is mainly focused on the postsecondary and workforce components.

Expected Outcomes

As a result of this project Maryland expects to:

- Develop and establish a data warehouse to house P-20 and link to workforce LDS data sets, including implementation of a set of procedures and policies to oversee, safeguard, and maintain the P-20 and workforce warehouse
- Create high quality, responsive data products to educators of all levels, government agencies, parents, students and others
- Develop a data submission system and institution web portal for higher education institutions as well as a postsecondary system that supports the linkage and interoperability to the P-12 and workforce data systems
- Upload or link workforce data into the P-20 LDS data warehouse and establish with workforce agencies in other states and with the federal government MOUs for data sharing from those agencies to Maryland data systems
- Plan and implement P-12 teacher effectiveness data collection and reporting capabilities, and link databases for student-level data for special education, early childhood and career/technology to the P-12 LDS

Full funding and successful completion of the proposed project will provide Maryland with a P-20/Workforce Longitudinal Data System that meets the system elements and capabilities listed in the RFA and specifically addressed in Appendix C of this proposal.

Project Narrative

Project Narrative - Project Narrative

Attachment 1:

Title: **MLDS Project Narrative** Pages: **23** Uploaded File: **C:\Documents and Settings\mszczepaniak\Desktop\MLDS Grant 2010\MLDS Project Narrative.doc**

Project Narrative

(a) Need for Project

The Maryland State Department of Education, in collaboration with the University System of Maryland, Maryland Higher Education Commission, and The Jacob France Institute (JFI) of the University of Baltimore request a total of **\$13,056,853** to complete the design, development, and implementation of a P-20/Workforce statewide longitudinal data system inclusive of all required capabilities and elements defined by the Data Quality Campaign and the America Competes Act.

For many years, pre-dating the No Child Left Behind Act, the Maryland State Department of Education (MSDE) has had an accountability and assessment system and a culture of using data to inform decision-making; at the classroom level, system level, Board of Education level, and legislative-policy level. This culture required Maryland to assume a progressive stance in the collection, validation, and reporting of individual student data, prior to the establishment of methodologies to develop longitudinal data systems.

Maryland established its first P-12 Educational Data Warehouse (EDW) in 1999 and that warehouse has been the source of most of Maryland's EDEN/EdFacts files. The Maryland Higher Education Commission (MHEC) established its first postsecondary system for students attending Maryland Institutions of Higher Education in 1977. The Jacob France Institute (JFI), partnered with the Maryland Department of Labor, Licensing, and Regulation (DLLR), to maintain and use a multi-faceted longitudinal database of confidential workforce administrative records in 1991, which led to a multi-state Administrative Data Research and Evaluation (ADARE) initiative. Today, Maryland continues to strive to achieve the seventeen capabilities and elements for state data systems defined in the Request for Applications (RFA) for this grant program that represent the ten state actions to ensure data use established by the Data Quality Campaign, and the twelve components of the America Competes Act. **Appendix A** contains a schematic description of MSDE's P-12 longitudinal data system.

The requirements for states to establish eligibility to receive State Fiscal Stabilization Funds (SFSF) and to apply for Race to the Top funds (RTTT) underscore more than ever the commitment on the part of the Department of Education to support states' efforts to develop efficient longitudinal data systems. These systems are needed to supply schools with linked historical data on student performance and to provide schools and teachers with data to improve student achievement and student preparation for postsecondary education and the workforce. The systems will also supply states and policy makers with data to use when making key decisions and defining new policies. In addition, states require state-of-the-art data warehouses and reporting mechanisms to meet the reporting challenges of EdFacts and SFSF requirements.

Maryland's P-20 Longitudinal Data System (LDS) has been designed specifically to inform decision-making at a variety of levels (state, school system, individual schools, and institutions of higher education) in order to ensure student success. The State Superintendent of Schools has collaborated with a variety of stakeholders (State Board of Education, Governor's Commission, Maryland General Assembly, Maryland Higher Education Commission, the Chancellor of the University System of Maryland, and the Department of Labor and Licensing and

Regulation/Jacob France Institute (with partnerships with the District of Columbia and New Jersey), and is highlighting the increased capacity Maryland will have to improve P-20 student achievement, make data-driven decisions, and monitor the success of policies and programs. There is keen interest in data that will inform Maryland policies to address challenges such as dropouts, truancy, the achievement gap, predictors of success in high school, postsecondary school and the workforce, identification of successful interventions, class size, middle school course requirements, teacher training, certification and retention. Maryland stakeholders have drafted a document outlining the major P-20 policy questions of interest and the data elements that are required to respond to those questions. These questions are driving the design of the P-20 data system. This document is located in **Appendix A**.

The stakeholders have also developed a plan for a Maryland P-20 and workforce model that includes a longitudinal warehouse that will house student data required to address these questions. The model is presented graphically in **Appendix A**. It is the implementation of this plan that serves as the backbone of the current proposal and defines the work that also must be completed by the agencies identified in the model. **Appendix A** also includes a collaborative opinion on FERPA and the confidentiality of student data in the proposed model by the Attorneys General who represent the agencies. Finally, Maryland's State Superintendent of Schools is working with the institutions of Higher Education to develop rigorous and clear definitions of college and work-ready criteria which will be reflected in all future work and research. The final documents related to this effort will be available in the first quarter of 2010.

Maryland is using a combination of state and federal funding to modernize its current P-12 educational data infrastructure (people, processes and technologies). Additionally, P-12 in Maryland has recently increased 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 to inform their decision-making process. Current funding will also be utilized to accelerate the ability to meet the demands of stakeholders for timelier 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 (both P-12 as well as institutions of higher education.) The current proposal, if funded, will round out the P-12 system to include the linking of teacher and student data and integration of key program data into the LDS.

The Maryland Higher Education Commission (MHEC) is proposing to expand and upgrade its postsecondary longitudinal data system and the acquisition of postsecondary longitudinal data. It will provide a system that is viable for the future, extensible for growth, meet foreseeable future state longitudinal data needs and provide data for federal reporting. The need to upgrade the postsecondary system is a vital part of the proposed Maryland P-20/Workforce Longitudinal Data System to provide the postsecondary-level student information for a statewide system. The expansion will directly support the capability to develop a system that includes student-level data from pre-school through postsecondary and into the workforce. This will be accomplished by providing the linking ability from the P-12 unique student identifier to the social security number identifier used by the Maryland postsecondary system.

The current postsecondary system is based on legacy 1980s technology which runs on a mid-range platform that is obsolete and is becoming difficult to maintain and expand to support the

proposed P-20 system and anticipated future data requirements. MHEC, in conjunction with postsecondary system segments, developed their system in 1977; the system currently has over 30 years of student-level data. The current system has limited access tools, is difficult for researchers to use, and extract data for either postsecondary analysis or for transition to the proposed P-20 system. The system will be expanded to meet the educational metrics requiring postsecondary data for State Fiscal Stabilization Fund Assurances. Under the State's P-20/Workforce plan, the expanded system will provide the key for linkage between the P-12 unique student identifier and SSN, providing the bridge into postsecondary and workforce data.

Current SLDS System

P-12 Requirements. Maryland's current P-12 system consists of many of the required individual student data collections required of P-12 systems by the America Competes Act. The data have been collected with the state unique student ID since the 2007-2008 school year. Maryland's most recent IES grant funds the re-engineering of the data warehouse to store linked individual student longitudinal data records. The RFQ for this work is pending release by the end of 2009.

The system has the following data requirements completed (data collected with unique ID):

- Yearly test records of individual students with respect to assessments under section 1111 (b) of the Elementary and Secondary Education Act of 1965;
- Information on students not tested, by grade and subject, as well as the reason for students not tested;
- Student-level college readiness test scores.

Currently, all data linking using the unique ID is done manually until the data warehouse is re-engineered to link and store student data across years and data collections. An RFQ, made possible through funding by the Institute of Education Sciences (IES), will soon be issued for a vendor to complete the re-engineering. Maryland expects this phase to be completed in early 2011, depending on when the contract is awarded.

- *Student level transcript information, including information on courses completed and grades earned.*

The same IES funding supports a second RFQ for development of a state-wide course coding system for Maryland based on the SCED classification. Maryland's 24 school systems will participate in an alignment of course content resulting in this system. The initial vendor will use that system to develop a data collection that will include courses completed and grades earned for all students, elementary through high school. It is expected that the state will have the necessary enhancements to its data warehouse completed and be able to begin that data collection from local school systems in the fall of 2011. This will address the system requirement and provide Maryland with four of the five P-12 requirements as listed in the RFA.

- *A teacher identifier system with the ability to match teachers to students.*
This application requests funding to accelerate the completion of this phase of requirements by developing a data collection process that will match teachers to students

using the teacher and student ID. The teacher ID system is being implemented by summer 2010, funded by state resources.

P-12 and Postsecondary Requirements. Maryland's current P-12 and postsecondary systems meet four of the five listed criteria, and include the following *individual student* data (requirement completed, data collected):

- Unique statewide ID that does not allow a student to be identified by users of the system (except as allowed by Federal and State law) – assigned to all P-12 students as of the 2007-2008 school year;
- Enrollment, demographic, and program participation information;
- Information about the points at which students exit, transfer in, transfer out, or complete P-16 education programs. The P-12 system includes cohorts to report the new four-year cohort graduation rate beginning in the 2011 school year;
- A State data audit system assessing data quality, validity, and reliability;
- The capacity to communicate with higher education data systems. This application requests funding to accelerate the completion of this section of requirements by adding the fifth and final requirement, the capacity to communicate with higher education data systems through implementation of the Maryland P-20 Model developed in collaboration with P-12, higher education, and workforce agencies.

Postsecondary Requirements. Maryland's current postsecondary system includes:

- Data that provide information regarding the extent to which students transition successfully from secondary school to postsecondary institutions, including whether students enroll in remedial coursework
- Data that provide other information determined necessary to address alignment and adequate preparation for success in postsecondary education

The system includes individual student data on enrollment, drop-outs and transfers, credits registered for full or part-time status, remedial courses taken, degrees awarded, cumulative GPA, etc. As outlined later in this proposal, additional elements will be added, when needed, to address the policy questions identified.

A further illustration of Maryland's status on each of the 12 elements can be found in **Appendix C**. **Appendix A** contains a detailed schematic of the P-12 system which is coded by components that are funded and underway and those that are not.

Maryland is seeking funding to accelerate the development of the remaining components of its longitudinal data system, the most important of which is the extension and interoperability of the P-12 system to P-20 and the workforce. To round out the system, additional data collections and alignment will be added, and the P-12 system will be further integrated with program data. This funding will augment other state and federal resources being allocated for other components of the system. As a state with a history of using data to make important policy decisions, from the classroom level to the legislature, Maryland requests these resources to provide educators and policy-makers with additional meaningful data with which to continually improve the education of Maryland's students and to meet federal compliance requirements. Maryland educators look forward to using the upgraded data system to supply additional information concerning the

success of the alignment efforts taking place between the P-12, postsecondary, and workforce levels, and the success of initiatives intended to ensure student success at every level of their education career and into the workforce. At the same time, the new system capabilities will enable Maryland to meet the Assurances of the State Fiscal Stabilization Fund.

(b) Project Outcomes Related to System Requirements and Implementation

This grant request will accelerate and 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 to ensure our citizens are well prepared for college and a career. 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 and its partners seek to engage researchers, policy-makers, program managers, superintendents, administrators, teachers, teacher educators, and the public in the improvement efforts.

The Maryland P-20 LDS Center will be created to warehouse the P-20 LDS data that will be “rolled-up” from state agencies’ existing and planned data collections. Legislation will be introduced during the next session of the Maryland General Assembly in January 2010 which will authorize the creation of the Center for the purpose of sharing data for research on educational program improvement and evaluation of educational programs through this Center. This legislative mandate will also establish a governance structure for the Center. A governing board, led by the Secretary of Higher Education, State Superintendent of Schools, and the Secretary of the Department of Labor, Licensing and Regulation will include additional State leaders and research professionals. An RFQ process will be implemented to determine the specific location of this Center in Maryland, as well as funding to sustain it once implemented. The P-20 LDS Center architecture will be scalable and flexible. Additional data components such as Health and Human Services, Corrections, etc. will be added as needed.

This Center will be the capstone for a system that will establish data flows from the State Education Agency (MSDE), the State Higher Education Commission (MHEC) and the State Labor, Licensing, and Regulation Agency (DLLR). The Center will serve as a central repository of the data in the LDS. The establishment of the Center will accomplish two key outcomes:

Outcome 1: Develop and establish a data warehouse and reporting system to house the P-20 data sets and link to workforce LDS data sets, as well as procedures and policies to oversee, safeguard, and maintain the warehouse

In order to specifically address the first two required data system capabilities discussed in the RFA, an independent data warehouse will be created that receives and stores the necessary LDS data from each of the agency data systems. This new data warehouse and an efficient upload system to transmit data to the warehouse will be developed and managed in cooperation with the participating state agencies. In addition, supplementary systems will be developed. These will include: data architecture including a data model and a data dictionary, a system of quality

assurance processes, a system to link to existing statewide workforce data systems, a system to de-identify data and to manage access, a multi-tiered data analysis and reporting system, and a formal governance plan.

When completed, these systems will form a Maryland Longitudinal Data System (MLDS) Center with a data warehouse and governance structure that will include a longitudinal data repository containing de-identified data for longitudinal data analysis. This data will be retained in multiple forms for analytical purposes.

The warehouse will be populated by and will feed data back to the state agencies. The upload system will include the creation of a view that sits on top of the P-12 LDS at MSDE. This view facilitates the transfer of data from MSDE to the P-20 LDS Center database and back, allowing control of the data points to be included within the MLDS. Design and development of each separate view for the P-12 LDS database at MSDE and the P-20 LDS Center database will take place during this process. Processes for managing data quality and reconciliation issues will be established and the system will include a control table to allow the release of the data to the MLDS upon completion of the operational and quality assurance processes within and between each database.

Individual unit records of students held in this data system will be de-identified in a manner that ensures student privacy but allows the linkage of individual student data from each agency data system. These processes will include creating a separate identifier for each student (an internal one that will only be used within the MLDS data center), provide data security including maintaining identifier/de-identifier files, and establishing guidelines and policies that prevent reporting of potentially identifying data not associated with IDs.

Specifically the warehouse will incorporate a system to insure privacy of data that will:

- De-identify inbound data with an alternate ID unique to individuals to drive the longitudinal analysis.
- Store personally identifiable information that is both secure and has restricted access.
- Manage identities in the secure area, e.g., merging duplicate identities.

A key product of the Data Center will be the creation of high quality, responsive data products to educators at all levels, government agencies, parents, students and others. The MLDS Data Center will provide data to stakeholders at all levels in Maryland. The initial data products flowing back to K-12 and postsecondary agencies and institutions (both 2-year and 4-year) will begin with a series of established reports. These “defined” products will represent the first stage of feedback. The data products will be tailored by Center staff to match the specific needs of target stakeholders driven by the original and subsequent policy questions.

The system for reporting will be two-tiered with a business intelligence system providing access to standard reports, ad hoc data reports and research data extracts. A separate business intelligence tool will be included for more complex multi-dimensional data analysis and reporting. Secure web access for users will be provided through both tools to allow maximum dissemination of data and reports and ensure wide access. A system for rapid development of

new reports will be established. The data available in the data repository will also be available for ad hoc data requests; rules for governing and prioritizing these requests will be developed as part of Outcome 1.

The Grant Project Team, in collaboration with the Governing Board will develop oversight policies and procedures to determine the overall governance of the Center. These policies and procedures will:

- Control data access, priority and approval of data analyses/research;
- Define the process for establishing new policy questions;
- Outline procedures to be used in requesting and implementing changes or additions to the data dictionary and/or data collection.

Procedures and policies to be developed will ensure routine, ongoing safeguards in compliance with FERPA under the direct supervision of the LDS Center Governing Board. Some of these technical safeguards have been described earlier.

The participating agencies of MSDE, MHEC, USM, and DLLR will work to build the capacity of key stakeholders to effectively use data or improve educational outcomes. Specifically, stakeholders will receive training and on-going support to ensure they have the capability to connect with the MLDS Center for easy access to the data and data reports to make effective use of them for planning and management. This will be accomplished through the development and execution of an appropriate plan which combines web-based and face-to-face training and tutorials for key stakeholders.

Finally, the Governing Board will determine the location and maintenance for the system through the development of an RFP and a formal competitive bid process. The successful bidder will have the resources to maintain the Center, under the direction of the Governing Board, and in accordance with the legislative mandate of the State of Maryland.

Outcomes 2 and 3 relate to the postsecondary system. The relationships of these outcomes support the capabilities and elements in the RFA. The Data Submission and Institution Web Portal will support three capabilities by providing data to enable interoperability through establishing the P-12 to postsecondary linkages. It will also establish validation of institution submissions to ensure data integrity. The postsecondary system outcome continues the ability to support interoperability and the linkages through the data provided to the P-20/workforce system. The system will also support federal reporting requirements, maintain student level data, contain transfer and completion data, and monitor data on the transition of students to postsecondary.

Outcome 2: Develop a data submission system that supports the linkage and interoperability to the P-12 and workforce data systems.

The Data Submission System and Institution Web Portal will provide the tools necessary to gather student data in a secure manner from the higher education institutions. It will allow validation of this data when it is initially submitted. The most important component of this system is the addition to the postsecondary collection of the Maryland P-12 unique identifier,

State Assigned Student Identification (SASID), and other directory data for student identification. The linkage of the State's P-12 unique identifier to postsecondary is planned to be completed by the capture of the P-12 identifier via electronic transcripts throughout the P-20 education system. The additional directory data will be necessary to address matching needs of P-12 graduates until the ability for SASID transcript can replace this with a more accurate methodology. As a part of this outcome, a review will be undertaken of the future needs of the postsecondary system and resulting recommendations will provide a strategic plan for future development. A grant program will provide funding for institutions of higher education to make changes to their systems and to report new data to the MHEC to support the P-20 LDS.

Outcome 3: Develop a postsecondary system that supports the linkage and interoperability to the P-12 and workforce data systems.

This outcome supports both linkage and interoperability by providing postsecondary progression and outcomes for individual students that can be linked to P-12 and workforce data. This component of the project will support four of the elements that involve postsecondary institutions. The current postsecondary system will be able to provide enrollment, demographic, academic program, and completion information to the P-20/workforce system. Also current data will be provided that relates to the success of high school graduates and includes remediation status, performance in both the ACT and SAT testing programs, postsecondary grades, and identification of initial credit English and math courses, and the first year grade point average of students. The outcome will also support some of the IPEDS reporting requirements. This will allow the postsecondary system to provide current community college transfer performance information to the P-20/Workforce system. Expansion of the data collected for the postsecondary system in Outcome 2 will allow the system to pass this data to the statewide P-20/Workforce system being developed.

Outcome 4: Plan and implement student/teacher data linking and teacher effectiveness data capture/reporting within the MLDS.

Complete the linking of student/teacher data linking within the MLDS and the implementation of a newly defined data collection to capture teachers, courses, sections and the student population information related to each teacher. Planning and implementation of teacher effectiveness data within the MLDS will be completed.

Outcome 5: Link databases for student-level data for special education, early childhood and career/technology to the MLDS

Plan, design, develop and implement the linking of the special education, early childhood and career/technology student level data to the MLDS ensuring quality control procedures prior to the release of the data. The linkages to all three databases will be completed along with modified reports and new reports to answer policy questions related to these data. Training will be provided to all stakeholders for the new components of the MLDS.

Outcome 6: Upload or Link Workforce data into the P-20 LDS Data Warehouse at the individual student level

The workforce data system is maintained on behalf of the Department of Labor, Licensing, and Regulation (DLLR) by the Jacob France Institute. The system maintains confidential data on employment and earnings, by employer, which has been collected quarterly from April 1985 through June 2009. The Jacob France Institute (JFI) has partnered with the Maryland Department of DLLR to maintain and use a multi-faceted longitudinal database of confidential workforce administrative records since 1991. JFI's performance in the early and mid 1990s led, in 1998 and subsequent years, to the U.S. Department of Labor's award of funds for JFI leadership to develop a national multi-state Administrative Data Research and Evaluation (ADARE) initiative. This track record of intrastate and interstate performance to date offers a solid foundation on which to build new SLDS products and features.

This existing system will serve as the third agency component system which will either upload data to or directly link its data with the data warehouse in the P-20 LDS Center. This system will be used to provide tracking of students from graduation into the workforce and to begin efforts to extend Maryland longitudinal tracking into an interstate setting. The JFI and its workforce system will serve as a key partner to achieve the following goals:

- Link Workforce data to the P-20 LDS Data Warehouse at the individual student level;
- Establish, with workforce agencies in other states and with the federal government, MOU's for data sharing and create regular data flows from those agencies to Maryland data systems.

The Jacob France Institute has served as the higher-than-agency-level aggregator of workforce and related data. It will continue in this role providing analysis of data for workforce issues and will maintain the workforce data base. It will provide a direct linkage for the Maryland P-20 LDS Center to that data for the analysis by the P-20 LDS center of multi-segmental issues and educational outcomes of students from Maryland's P-20 institutions. Alternately, a routine data upload from JFI to the center could be substituted for direct access. The linking element for these data will be the social security number provided in wage and other employment records and used as a linking data element in most P-20 data records.

Outcome 7: Establish, with workforce agencies in other states and with the federal government, MOU's for data sharing and create regular data flows from those agencies to Maryland data systems.

JFI will facilitate and enable the exchange of workforce data among agencies and institutions between States. They will seek amendment of currently active MOUs among the State Employment Security Agencies in DC, MD, NJ, OH, PA, VA and WV to enable authorized collection of workforce data for defined-use purposes related to student outcomes. They will review, and amend if necessary, the active MOU DLLR has with the Federal Office of Personnel Management to authorize defined-use delivery of Federal civilian employee status information. They will continue to interact with current and proposed new ADARE initiative partners in other states to optimize the pace and scope of progress toward inclusion of a robust interstate workforce component in Maryland's SLDS. Through these activities, JFI will establish routine data flows regarding the activities and success of Maryland students in the workforce in those jurisdictions and additional ancillary flows of data to support JFI's activities.

(c) Timelines for Project Outcomes

To maximize the efficiency of the project and ensure timely completion, many of the outcomes will have concurrent timelines. This will be facilitated by the separate partner project staff members and vendors working on each of the partner components. The Project Manager will ensure collaboration during the component development phase.

Outcome 1: Develop and establish a data warehouse and reporting system to house P-20 data sets and link to workforce LDS data sets, as well as procedures and policies to oversee, safeguard, and maintain the warehouse.

(June – December 2010)

The specific institutional and physical location of the data warehouse will be determined within the first six months of the grant award.

(June 2010 – June 2011)

The final architecting and creation of the systems associated with and housed by the Center will be completed by the end of Year I of the grant. The upload systems and views housed in MSDE systems will be completed during that time period. The P-20 LDS Center architecture will be scalable and flexible. Additional data components such as Health and Human Services, Corrections, etc. can be added as needed.

All procedures and policies will be developed during the first grant year in concert with the development of the system architecture discussed above. These procedures will be in use at the LDS Data Center as soon as that system becomes operational.

The key reports will be developed during the course of Year I (2010-2011). Rules and procedures for ad hoc data requests will also be established during this period.

(June 2011 – June 2012)

During Year II, the system will be constructed and testing of systems and data quality will take place. “Defined reports” will be produced and reviewed in Year II of the grant during the system development phase and will be widely available when the system becomes operational. The system for report development will be established during Year II of the grant.

The plan to build the capacity of key stakeholders to effectively use data or improve educational outcomes will be implemented during the three-year grant period. The plans for capacity building will be completed in Year I (2010-2011) and the training will begin during Year II in order to prepare the stakeholders to use the system effectively as soon as it is operational.

(June 2011 – June 2013)

Appropriate system integration of MSDE, MHEC, DLLR and the P-20 LDS Center will be completed in Years II and III. The data warehouse, including all ancillary systems within the center and at the agencies, will be fully operational in Year III of the grant.

Outcome 2: Develop a data submission system that supports the linkage and interoperability to the P-12 and workforce data systems. This outcome will be accomplished

with a series of milestones to provide the contractual services necessary to supply the resources to accomplish both postsecondary outcomes.

(June-October 2010)

The first milestone of two anticipated contractual needs is to obtain a full-time site project manager for the duration of the contract. This is necessary to insure success of the postsecondary developer's contract and to provide State required oversight.

(October 2010-May 2011)

The second milestone will be to secure a second contract for a developer of an expanded postsecondary system. Both of these contracts must follow State procurement standards and State requirements for oversight for Major Information Technology Development Projects.

(May – September 2011)

The third milestone will be the first deliverable from the developer. The State will require the developer to examine the systems used in selected and comparable states to Maryland. This is an important part of the process as there is a lack of national guidance on what constitutes a model State postsecondary system, especially at a detailed system level. Since most State postsecondary systems were developed over long periods, each has unique requirements that were established to meet specific State needs. This environment is considerably different from the P-12 initiatives more recently undertaken and postsecondary does not have national guidance or standards available as does the P-12 system. The federal reporting requirements also reflect the differences in the types of data collected and the methodologies used. Postsecondary uses the IPEDS graduation rate survey methodology and does not have the same data for student exit points used in the P-12 system. Since Maryland's postsecondary system has been in operation for over 30 years, this review, in conjunction with the data needs prescribed by the P-20 system, is vital to guiding the future direction of the system. The review will include discussions with the various postsecondary segments to provide perspectives on both how and what data needs should be expanded. The deliverable will be a report to the Maryland Higher Education Commission which will include recommendations on how the Maryland postsecondary system should be modified to meet the future demands for P-20 data while reducing the overall cost to collect and maintain it.

(September 2011 – June 2012)

The fourth milestone is to provide an institutional Web Portal that will securely transfer the information and perform data validation. The basic design of the system is expected to follow the methodology used in USDOE IPEDS to allow minimal retraining of institutional providers. The contract will include training of the institutional personnel regarding data requirements and the submission process as well. The new submission tool will provide submission of data in multiple formats including extensible markup language (XML). The process will include tools for the MHEC staff to monitor, validate, and hold data in the collection system until data is released to the postsecondary warehouse for retention and use.

(March 2011 – March 2012)

The fifth milestone will provide a grant funding stream to postsecondary institutions. The grant program to institutions will be developed and administered by MHEC directly and not by the

development contractor. Its main function will be to provide institutions funds to expand their system to collect, maintain, and report to MHEC the data required in the expanded postsecondary system. The most important component is the collection of the P-12 unique identifier from transcripts. This is the key to establish the linkage from social security numbers used as identifiers in the current higher education data system to the P-12 student identifier necessary for the development of the P-20/Workforce system. Postsecondary institutions will also be required to produce additional data submissions to provide data needed for federal reporting. The reporting of the postsecondary enrollment and success data (new two-year federal period) are two of the expanded data submissions and are required by the State Fiscal Stabilization Fund Assurances.

Outcome 3: Develop a postsecondary system that supports the linkage and interoperability to the P-12 and workforce data systems. This outcome results in the complete development of a postsecondary system moving data from the institutional data collection system into a postsecondary warehouse system and then subsequent delivery and integration of selected postsecondary data to the P-20/Workforce system. It will contain two major milestones or deliverables:

1. MHEC Data Warehouse for postsecondary education
2. Data Submission capabilities to P-20/Workforce system

Each of the last two deliverables by the development contractor will include design, development, and implementation phases. It is expected that a large part of the design for deliverable 2 will occur in the development of deliverable 1 to insure data integrity through process.

(July 2012 – June 2013)

The first deliverable is the MHEC Data Warehouse for postsecondary education. This will function as an analysis, secondary verification level, and staging area for data for the P-20/Workforce system. This deliverable will need to consist of a main longitudinal data base, an internal web portal for processing control and analysis, and reporting tools for MHEC postsecondary research requirements. These needs are for policy research, planning, accountability, educational improvement studies, and review of state programs including financial aid. The data is retained within this system until the selected data, as determined by the P-20/Workforce system, is submitted to it. One of the tasks will be to have a legacy data conversion tool to bring forward the 30 year investment in higher education data for postsecondary needs in addition to P-20 needs.

(July 2012 – June 2013)

The second deliverable is the ability to provide the interface to the P-20/Workforce system. This may be evolving in parallel to the P-20/Workforce system and therefore their development is deferred until the end of development (and contract period). Consideration will need to be given to the data verification process of the P-20/Workforce system and how this will be integrated between the two systems.

Outcome 4: Plan and implement student/teacher data linking and teacher effectiveness data capture/reporting within the MLDS.

Plan and implement student teacher data linking:

MSDE will have a contract in place from our previous grant award to be able to proceed with this work immediately. Currently, this outcome is an unfunded component of the existing contract and was planned in this manner due to the lengthy state procurement process. The selected contractor will be working on the components that are funded with our previous grant award that was defined in a modular approach to prevent any redundancy of effort and cost. The contract being in place will allow MSDE to move forward quickly in completing this component. A new data collection will be designed, developed, and implemented within the existing data collection framework of MSDE's Web Data Collection System (WDCS). The MLDS Project team will be completing this work along with approximately four local school systems who will serve as pilot sites.

Teacher effectiveness data capture and reporting: This work entails the enhancement of the teacher certification data collection process to include key data elements that will result in meaningful analyses of teacher preparation programs and teacher effectiveness in public school systems in Maryland. These new elements, not currently captured, would be used to support a direct connection from teacher preparation and experience in high and low poverty schools with student achievement (Outcome #4) and to assure that all teachers of record are highly qualified. This system modification, with newly defined elements, would allow Maryland to analyze data to measure improvement in teacher preparation and student achievement as well as present a historical view of teacher recruitment, retention, and certification. The MLDS Project Team and the data owners, as well as subject matter experts of the Educator Information System, will be completing this work.

(June – December 2010)

A new data collection will be defined to include the unique teacher identifier, standardized course codes, sections, and classes along with the student population enrolled in that course, section, and class utilizing the Secondary School Course Classification (SCED) model for secondary schools. This grant request will capture the teacher identified by course, section and class and all student members of that unique unit. During this time period, Joint Application Design sessions will occur to define the specific requirements for capturing these data with our contractor and subject matter experts that are part of the MLDS Project Team. The new collection will be designed and developed within the existing data collection framework of MSDE's Web Data Collection System (WDCS). A procurement RFQ will be drafted to obtain the technology services for the teacher effective web portal and reporting for the MLDS.

(January - March 2011)

Testing of the new student/teacher data collection will occur during this time period. Training of internal stakeholders will begin prior to the beta testing of the product. A train-the-trainer approach, utilizing webinars, will occur to train a sampling of local school system personnel (four local school systems) to test the product for the collection of the new data.

The procurement process for the teacher effectiveness web portal and MLDS component will be completed. New standard reporting processes to provide data for internal and external

stakeholders will be designed as well as a public web portal for stakeholders to access teacher preparation and effectiveness information within the existing Educator Information System web portal.

(April – June 2011)

During this time period, the data capture product will be finalized. External stakeholders will be trained to access and use reports within the MLDS. Four local school systems (LSS) and a total of 16 schools will be trained on the MLDS reports in the training center at MSDE. LSSs will provide feedback during the training session.

The public portal for stakeholders to access teacher preparation and effectiveness information will be developed. Standard reports to support compliance with Title I and Title IIA will also be developed as well as new reports that provide data on teacher preparation and effectiveness.

(July – August 2011)

During July and August, 2011, training for all local school systems and school-level personnel utilizing webinars will be provided. The final implementation and rollout of the student/teacher linking outcome within the MLDS will be scheduled. The public portal for stakeholders to access teacher preparation and effectiveness information will be tested as will the standard reports to support compliance with Title I and Title IIA. New reports that provide data on teacher preparation and effectiveness will be tested. The public access web portal for the teacher certification and teacher effectiveness component of the MLDS that provides transparency to the public will also be tested. Reports that provide data on teacher preparation and effectiveness will be implemented.

Outcome 5: Link databases for student-level data for special education, early childhood, and career/technology to the MLDS. State programs for special education, early childhood and career/technology education will be linked. MSDE will have a contract in place from our previous grant award that will allow us to proceed with this work immediately. Currently, this outcome is an unfunded component of the existing contract and was planned in this manner due to the lengthy state procurement process. The contractor will be working on the components that are funded with our current grant award defined in a modular approach to prevent any redundancy of effort and cost. This work will be completed by the MLDS Project Team and data owners, subject matter experts for each of the databases and approximately four local school system personnel. The work entails the creation of a view that sits on top of each of the databases to be linked to the MLDS. The view allows column and row control of the data points to be included within the MLDS. A control table will have to be created within each database to allow the release of the data to the MLDS upon completion of the operational and quality assurance processes within each database. The control table allows the necessary version control and release of the final data to the MLDS. Full vetting of the data within the early childhood, special education and career/technology databases must occur prior to the release of the data to the MLDS. The linkages would not be real time but occur on a periodic timetable that concurs with the completion of the operational and quality assurance processes.

(June 2011 - September 2011)

During this time period, the elements to be included in a view that sits on top of the early childhood, special education and career/technology databases that facilitates the linking to the MLDS via the unique student identifier will be defined. Policy questions will be defined that will be answered by incorporating these data into the MLDS.

(October 2011 –January 2012)

Each separate view for the early childhood, special education and career/technology databases will be defined and developed. New reports that present these data and answer policy questions will be developed. Existing reports will be modified to include program participation and additional pertinent information relevant to each program.

(February– April 2012)

The linkages to all three databases and the new components of the MLDS, along with the reports, will be tested. Efforts will be made to ensure that policy questions have been answered appropriately and presented in a clear, articulate manner. Training will be provided to all stakeholders for the new components of the MLDS. The new components of the MLDS for early childhood, special education, and career/technology education will be implemented.

Outcome 6: Upload or Link Workforce data into the P-20 MLDS Data Warehouse at the individual student level

(June 2010 – May 2011)

All policies and procedures for the linking (or uploading) of workforce data to the MLDS Center will be established during Year I.

(June 2011 – May 2012)

Starting in Year 2, JFI will participate in the testing and data assurance activities with the MLDS Center.

(June 2012 – May 2013)

Beginning in Year 3, the data linkage to JFI will be fully operational and will feed data into the Center.

Outcome 7: Establish, with workforce agencies in other states and with the federal government, MOU's for data sharing and create regular data flows from those agencies into Maryland data systems.

(June 2010 – May 2011)

All MOU's will be in place and discussions of specific data flows will be ongoing by the end of Year 1 of the grant.

(June 2011 – May 2012)

Pilot data downloads will be collected during Year 2, and data exchange specifications will be finalized.

(June 2012 – May 2013)

All data flows will be routinely made beginning in Year 3.

(d) Project Management and Governance Plan

As the entity responsible for the submission and execution of the project, MSDE will assume responsibility for the approval and oversight of project activities. The State Superintendent of Schools, Dr. Nancy S. Grasmick, assisted by the heads of the three other partner agencies, will be briefed on project progress and will take all necessary steps to ensure that the project is kept on track and within budget. Governor Martin O'Malley fully supports this project. **Appendix D** presents the letters of support from the Governor and all involved agencies.

There are seven outcomes for this project based on the work projected by the four collaborating partners who have committed to a plan to complete development of a Maryland Model for a P-20/Workforce longitudinal data system. The four entities participating in the proposed project are:

1. **The Maryland State Department of Education (MSDE)** whose outcomes are focused on the completion of the DQC and America Competes components for the P-12 data system;
2. **The Maryland Higher Education Commission (MHEC)** whose outcomes are to upgrade its legacy-based platform collection system to meet the requirements of postsecondary systems;
3. **The Jacob France Institute (JFI) of the University of Baltimore**, acting in partnership with the **Department of Labor, Licensing, and Regulation (DLLR)** whose outcomes are to develop the workforce linkage and update data collections as required and;
4. **The University System of Maryland (USM)** that will facilitate linking the above systems to build the P-20/Workforce longitudinal data system and implement the Maryland Model.

These partners have been discussing this work for many months, and formed a cohesive group in the summer of 2009 to draft a plan which was submitted to the Governor in September. The funding for this initial work was and continues to be in-kind contributions of existing staff. While the partners in this application represent four agencies, the workgroup that conceived of the plan included diverse representation from the four listed previously as well as the Maryland Association of Community Colleges (MACC), Maryland Independent Colleges and University Association (MICUA), St. Mary's College, Morgan State University, and others. Their involvement is crucial to the success of the project.

The project will be overseen and managed at four key sites by LDS Teams with overlapping members and diverse representation, known collectively as the Grant Project Team. These team members have expertise in the specific areas germane to the project and include staff at the Secretary, Chancellor, Deputy Superintendent and Assistant State Superintendent level. The team will be called on 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. Maryland's on-going collaborative relationship with staff in various roles in the school systems and a variety of other stakeholders is independent of the proposed project, but continues to serve well as a key vehicle to enhance stakeholder involvement and input.

The contractual Grant Project Manager will be assigned to the Division of Accountability and Assessment within MSDE, and will coordinate the activities of the Grant Project Team. The

Grant Project Manager will maintain the complete master project plan and provide a schedule of required reports, conference calls and meetings with MHEC, JFI/DLLR and MLDS Center site Project Managers to ensure each component of the project remains on time, within budget, and results in a high quality and functional component. The Grant Project Manager will facilitate task completion, schedule adherence, daily status, and effective communication. Detailed task planning and management for each outcome will include defined deliverables, resource assignments, task estimates, schedules, dependencies, and project milestones. The Site Project Managers will track weekly progress against the plan, reporting status, and variance to the Grant Project Manager. Addressing any variances early is critical to the success of the project in order to avoid major impact on project schedule and cost.

The Grant Project Team will meet monthly, (more often when needed) to be apprised of progress, risks, and to propose solutions to any issues that have developed. Monthly project status reports will be submitted by Site Project Managers prior to these meetings to include: project schedule, accomplishments, milestones completed, issues requiring attention, recommendations to resolve issues, plans for the next reporting period, and project change control summary. Finally, a quarterly newsletter on project status will be generated collaboratively by the site Project Managers and the Grant Project Manager and posted on MSDE's website.

The Grant Project Manager will work closely with the project manager of the current P-12 grant and require regular reports to ensure non-duplication and coordination of the two grants.

Under SFSF, the MSDE Project Manager will coordinate the required quarterly reporting for ARRA and also post updates and progress reports on the projects on MSDE's website (www.marylandpublicschools.org/msde).

The overall design of this project follows a logical, top-down sequence of activities and tasks structured to finish the construction of the Maryland LDS and to articulate and implement the processes needed to maximize the utility of the system. The project began with a comprehensive review of the state's policy questions and a re-alignment of data requirements to ensure that the Maryland LDS can be used to improve teaching and learning. Based on the plans and requirements developed through the strategic plan, the grant team will plan and write requests for proposals (quotations) to obtain the services of highly skilled technology vendors that have a proven track record with other states in designing and developing state longitudinal systems. Vendor mandatory requirements will be explicit in requiring the necessary experience and skills technically, in addition to educational PreK-20 experience. The procurements will be designed as deliverables based on the full complement of steps performed in the System Development Life Cycle (SDLC). This methodology has been very successful with other projects where the state has procured the services of a vendor 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 1 and Phase 2 above have been completed by the Grant Project Team through the vision definition that Maryland has developed. Each step of the SDLC must be followed by the vendors for each outcome defined, beginning with the Planning Phase through the Disposition Phase. These efforts are collaborative with staff personnel, the Grant Project Team and local school systems and institutions of higher education. The vendor will be required to deliver documented requirements resulting from the requirements gathering and collaboration efforts with all stakeholders. 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 the relevant agency as well as MSDE prior to any development work beginning. Once a beta version of the product has been delivered to the Grant Project Team, testing of the product by site in-house staff will begin. Upon successful completion of in-house testing, a sampling of stakeholders from our local school districts, schools, institutions of higher education and researchers will be asked to test the product with oversight by the vendor and Grant Team personnel.

Once the system is operational, the Grant Project Team will cede responsibility for governance of the Maryland P-20 LDS Center to the P-20 Center Governing Board. This Board will be led by the State Superintendent of Schools, Secretary of Higher Education, and the Secretary of the Department of Labor, Licensing and Regulation. Its membership may also include additional State leaders and research professionals as determined by the Governor or Legislature. The Board's key functions will include: general oversight, overseeing the existing policy agenda and developing new policy questions, reviewing research requests and setting policies for ad hoc data requests, and ensuring policies for FERPA compliance are appropriate, in place and followed. Additionally the board will work in conjunction with State-level agencies to ensure ongoing articulation of systems at the agency level with those at the MLDS Center level.

(e) Staffing

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 and provide 20% of her time in each year of the project. **Grant Project Team member**

Functional Requirements Facilitator P-12. 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 of the project and writing the RFQ 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. Ms. Johnson will provide 40% of her time each year of the project.

Grant Project Team member

Functional Requirements Manager P-12. **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. Mr. Strader will provide 20% of his time each year of the project.

Technical Coordinators P-12 (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 **Timothy O'Quinn**, Education Program Specialist, both in the Division of Accountability and Assessment, will serve as Technical Coordinators for the project. Mr. Pautz will provide 20% and Mr. O'Quinn will provide 10% of his time for each year of the project.

Technical Support P-12. **Marc Allen**, Data Base Administrator Supervisor will provide additional technical support as required for specific data collections and applications. Mr. Allen will provide 15% of his time each year of the project.

Quality Assurance Specialists P12 (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 final linking of the data to the MLDS. Mr. Pautz will provide 20% and Mr. O'Quinn will provide 10% of his time each year of the project.

Subject Matter Experts P-12 (5). 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. The following five subject matter experts each year of the project are listed: **Sally Slade 10%; Brenda Muir 15%; Laia Block 15%; Kathy Donithan 15%; Elizabeth Mangano 15%.**

Special Education Executive. Dr. Carol Ann Heath is the Assistant Superintendent Special Education and Early Intervention. She will continue to serve on the LDS Leadership Team. Dr. Heath will also serve as the executive responsible for the integration of the Special Education Data warehouse into the LDS and inform additional project activities. Dr. Heath-Baglin will provide 5% of her time each year of the project.

Early Childhood Executive. Dr. Rolf Grafwallner is the Assistant Superintendent for the Division of Early Childhood Development. He will serve on the LDS Leadership Team as the executive responsible for the integration of the early childhood data within the MLDS. Dr. Grafwallner will provide 5% of his time each year of the project.

Functional Requirements Facilitator –Early Childhood. The Functional Requirements Facilitator for early childhood is **Phil Koshkin**, Program Manager. He will be responsible for defining the requirements to build the view, link to the early childhood data, and report from the MLDS. Mr. Koshkin will provide 5% of his time each year of the project.

Career and College Readiness Executive. Katharine Oliver is the Assistant Superintendent for the Division of Career and College Readiness. She will serve on the LDS Leadership Team as the executive responsible for the integration of the career and college readiness data within the MLDS. Ms. Oliver will provide 5% of her time each year of the project.

Functional Requirements Facilitator –Career and College Readiness. The Functional Requirements Facilitator for career and college readiness is **Patricia Mikos**, Program Manager. She will be responsible for defining the requirements to build the view, link the career and technology education student data and report from the MLDS. Ms. Mikos will provide 10% of her time each year of the project.

Teacher Certification Executive. Jean Satterfield is the Assistant Superintendent for the Division of Certification and Accreditation. She will serve on the LDS Leadership Team as the executive responsible for the integration of the teacher program preparation and effectiveness data within the MLDS. Ms. Satterfield will provide 5% of her time each year of the project.

Functional Requirements Facilitator –Teacher Effectiveness. The Functional Requirements Facilitator for teacher effectiveness is **Joann Ericson**, Certification Branch Chief within the Division of Certification and Accreditation. She will be responsible for defining the requirements to build the view, link the teacher effectiveness data, and report from the MLDS. Ms. Ericson will provide 10% of her time each year of the project.

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. Ms. Breithaupt will provide 15% of her time each year of the project.

