

# **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 # R384A100054**

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:
12/4/2009	

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

**State Use Only:**

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

**8. APPLICANT INFORMATION:**

\* a. Legal Name: Florida Department of Education

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
593474751	785319963

**d. Address:**

* Street1:	325 West Gaines Street, Suite 844
Street2:	
* City:	Tallahassee
County:	
State:	FL
Province:	
* Country:	USA
* Zip / Postal Code:	32399

**e. Organizational Unit:**

Department Name:	Division Name:
Office of the Commissioner	Acct, Research, Measurement

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

Prefix:	Mr.	* First Name:	Jeff
Middle Name:			

\* Last Name: Sellers

Suffix:

Title: Acting Deputy Commissioner

Organizational Affiliation:

Florida Department of Education

\* Telephone Number:

(850)245-9597

Fax Number:

(850)245-9288

\* Email: JEFF.SELLERS@FLDOE.ORG

**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-0729090001

Title:

Grants for Statewide, Longitudinal Data Systems Under the ARRA of 2009 CFDA

84.384

**13. Competition Identification Number:**

Title:

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

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

Data In...Data Out

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: FL-All

\* b. Program/Project: FL-All

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

**Attachment:**

Title :

File :

**17. Proposed Project:**

\* a. Start Date: 7/1/2010

\* b. End Date: 6/30/2013

**18. Estimated Funding (\$):**

a. Federal	\$
b. Applicant	\$ 347298
c. State	\$ 0
d. Local	\$
e. Other	\$
f. Program	\$
Income	
g. TOTAL	\$ 347298

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

a. This application was made available to the State under the Executive Order 12372 Process for review on .

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

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

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

Yes  No

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

\*\* I AGREE

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

**Authorized Representative:**

Prefix: Mr. \* First Name: Eric

Middle Name:

\* Last Name: Smith

Suffix:

Title: Florida Commissioner of Education

\* Telephone Number: (850)245-0505 Fax Number:

\* Email: ERIC.SMITH@FLDOE.ORG

\* 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:  
Florida Department of Education

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	\$ 2,000	\$ 2,000	\$ 2,000	\$ 0	\$ 0	\$ 6,000
4. Equipment	\$ 2,465,231	\$ 261,775	\$ 236,775	\$ 0	\$ 0	\$ 2,963,781
5. Supplies	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
6. Contractual	\$ 1,193,980	\$ 2,760,075	\$ 1,353,680	\$ 0	\$ 0	\$ 5,307,735
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 50,100	\$ 239,273	\$ 210,868	\$ 0	\$ 0	\$ 500,241
9. Total Direct Costs (lines 1-8)	\$ 3,711,311	\$ 3,263,123	\$ 1,803,323	\$ 0	\$ 0	\$ 8,777,757
10. Indirect Costs*	\$ 358,295	\$ 546,598	\$ 292,638	\$ 0	\$ 0	\$ 1,197,531
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 4,069,606	\$ 3,809,721	\$ 2,095,961	\$ 0	\$ 0	\$ 9,975,288

**\*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: 7/1/2007 To: 6/30/2010 (mm/dd/yyyy)

Approving Federal agency:  ED  Other (please specify): \_\_\_\_\_ The Indirect Cost Rate is 17.7%

(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 17.7%



**U.S. DEPARTMENT OF EDUCATION**

**BUDGET INFORMATION**

**NON-CONSTRUCTION PROGRAMS**

OMB Control Number: 1894-0008

Expiration Date: 02/28/2011

Name of Institution/Organization:  
Florida Department of Education

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	\$ 84,900	\$ 84,900	\$ 84,900	\$ 0	\$ 0	\$ 254,700
2. Fringe Benefits	\$ 28,866	\$ 28,866	\$ 28,866	\$ 0	\$ 0	\$ 86,598
3. Travel	\$ 2,000	\$ 2,000	\$ 2,000	\$ 0	\$ 0	\$ 6,000
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)	\$ 115,766	\$ 115,766	\$ 115,766	\$ 0	\$ 0	\$ 347,298
10. Indirect Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 115,766	\$ 115,766	\$ 115,766	\$ 0	\$ 0	\$ 347,298

## 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:** Eric Smith

**Title:** Florida Commissioner of Education

**Date Submitted:** 12/04/2009

### Disclosure of Lobbying Activities

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

<b>1. Type of Federal Action:</b> <input type="checkbox"/> Contract <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Cooperative Agreement <input type="checkbox"/> Loan <input type="checkbox"/> Loan Guarantee <input type="checkbox"/> Loan Insurance	<b>2. Status of Federal Action:</b> <input checked="" type="checkbox"/> Bid/Offer/Application <input type="checkbox"/> Initial Award <input type="checkbox"/> Post-Award	<b>3. Report Type:</b> <input checked="" type="checkbox"/> Initial Filing <input type="checkbox"/> Material Change <b>For Material Change only:</b> Year: 0 Quarter: 0 Date of Last Report:
<b>4. Name and Address of Reporting Entity:</b> <input checked="" type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier, if known: 0 Name: Florida Department of Education Address: 325 West Gaines Street, Suite 1514 City: Tallahassee State: FL Zip Code + 4: 32399-0400  Congressional District, if known: 02	<b>5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:</b>  Name: Address: City: State: Zip Code + 4: -  Congressional District, if known:	
<b>6. Federal Department/Agency:</b>	<b>7. Federal Program Name/Description:</b>  CFDA Number, if applicable: 84.384	
<b>8. Federal Action Number, if known:</b>	<b>9. Award Amount, if known: \$0</b>	
<b>10. a. Name of Lobbying Registrant</b> (if individual, last name, first name, MI): Address: City: State: Zip Code + 4: -	<b>b. Individuals Performing Services</b> (including address if different from No. 10a) (last name, first name, MI): Address: City: State: Zip Code + 4: -	
<b>11.</b> 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: Eric Smith Title: Florida Commissioner of Education Applicant: Florida Department of Education Date: 12/04/2009	
<b>Federal Use Only:</b>		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)





# Project Narrative

## Project Narrative - Project Abstract

### Attachment 1:

Title: **Florida Abstract Pages: 1** Uploaded File: **C:\Documents and Settings\nancy.copa\Desktop\SLDS  
ARRA\Grant Sections\Project Abstract.doc**

# Data In...Data Out (CFDA Number 84.384)

## Project Abstract

**1. The title of the project:** Data In...Data Out

**2. Project Description:** This grant competition and the America COMPETES Act clearly define the necessary requirements for a statewide longitudinal data system. The four assurances in the American Reinvestment and Recovery Act focus on struggling schools, assessment information for instructional improvement, quality teachers in the classroom, and a statewide longitudinal data system. While the Florida Department of Education (FLDOE) currently meets all of the capabilities and system requirements described, FLDOE is using this grant proposal to deepen its commitment to providing data to stakeholders while maintaining student confidentiality.

In keeping with this goal, FLDOE proposes (1) to upgrade the four major source data systems that are incorporated into Florida's Education Data Warehouse (EDW); (2) to employ a unique identifier system so that social security numbers are no longer the key field for tracking students between the Local Education Agencies and the State; (3) to provide several different reporting capabilities for use by a myriad of stakeholders; and (4) to implement a data mining tool for FLDOE to analyze and evaluate its programs and policies more efficiently and effectively.

The proposed project will provide new analytic dimensions and student confidentiality mechanisms currently unavailable in any state. Not only will there be results reported on periodic, current schedules, but on a longitudinal basis as well. The project will result in processes and tools that may be replicated in other states. It will serve as a national model that can be adapted and improved upon by others.

**3. The expected outcome of the project on the State's education data system:** This project is expected to improve the usability of FLDOE's data by focusing on TIMELINESS, ACCURACY and ACCESSIBILITY while maintaining CONFIDENTIALITY and allowing for program EVALUATION.

The source data systems will make the data more timely by implementing new processing methodologies and implementing more periodic system updates. During the system upgrades, FLDOE will implement a statistical validation process verifying data quality to ensure its accuracy. Accuracy at the source system is important to ensure accuracy within the EDW. The proposed system upgrades will also prepare FLDOE's data system to provide more timely feedback to teachers for instructional improvement purposes.

The reporting capabilities will increase the accessibility of FLDOE's data to a multitude of stakeholders. The various reporting capabilities will be designed to meet the needs of stakeholders with a range of perspectives and expertise.

The unique identifier system will promote confidentiality regarding student information as data is transferred between the LEAs and the State. The identifier will be different than the one currently assigned by the EDW so that when disclosing coded, deidentified unit record data a student's identity cannot be determined.

Finally, the data mining tool will work with data from the EDW to provide evaluation and analysis of Florida's education policies and practices. It will allow FLDOE to determine best practices to highlight with the Local Education Agencies and to identify potential program/policy areas in need of attention before they become an issue.

# Project Narrative

## Project Narrative - Project Narrative

Attachment 1:

Title: **Florida Project Narrative** Pages: **30** Uploaded File: **C:\Documents and Settings\nancy.copa\Desktop\SLDS  
ARRA\Grant Sections\Project Narrative.doc**

Data In...Data Out  
(CFDA Number 84.384)

**Project Narrative**

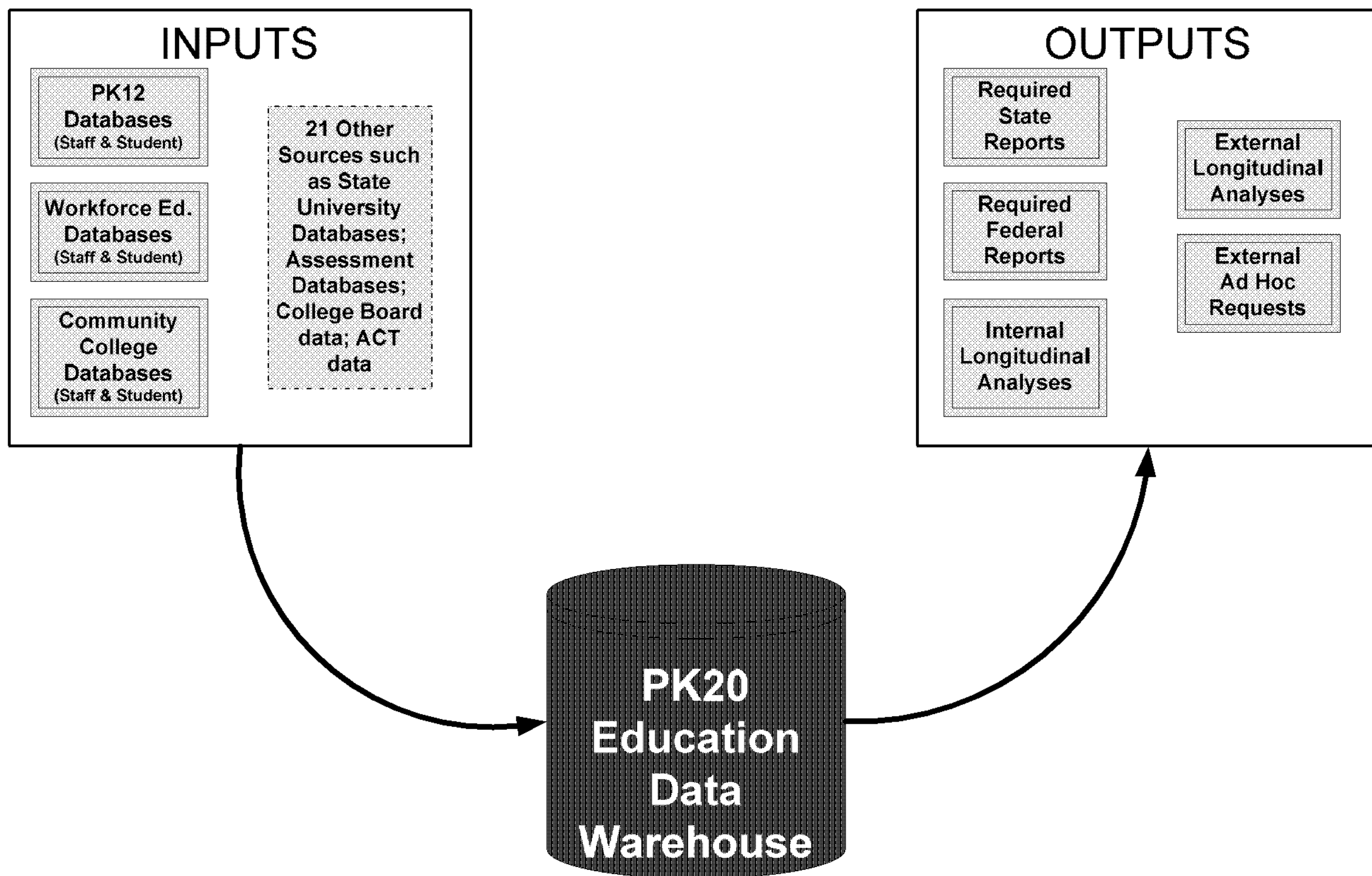
**Need for Project**

**Florida's Statewide Longitudinal Data System**

The Florida Department of Education (FLDOE/we) maintains a nationally recognized statewide longitudinal data system known as the PK20 Education Data Warehouse (EDW) which has the capability to follow students from Prekindergarten through postgraduate school and into the workforce. Since the EDW's creation in 2003, Florida's power to predict and evaluate the effects of educational policy has increased.

As with any longitudinal data system, the functionality of the EDW is dependent on the quality of data being brought in (the Inputs) and the ability to easily access and extract data out (the Outputs). See Figure 1.

**Figure 1. Current Inputs and Outputs of Florida's PK20 Education Data Warehouse**



## Data In...Data Out (CFDA Number 84.384)

Currently, the PK20 Education Data Warehouse (EDW) incorporates 27 different data sources (see Appendix A) into one longitudinal data system. The four largest contributors<sup>1</sup> are the staff and student databases for PK12, career and adult education (or workforce education), community colleges and state universities. In addition to these data sources, the EDW incorporates a multitude of data including student financial aid, student assessment, facilities, special education, English language learners, early childhood programs, human resources, finance, and employment information.

One of the data sets incorporated into the EDW is the Florida Education and Training Placement Information Program (FETPIP). FETPIP is a data collection and consumer reporting system at FLDOE established by Florida Statutes to provide follow-up data on former students and others. The information provided describes civilian and federal employment and earnings, continuing education experiences, military service, and other measures that help answer accountability issues.

The statute which establishes FETPIP grants FLDOE access to records collected by other Florida state agencies including unemployment insurance wage reports maintained by the Agency for Workforce Innovation, records at the Department of Children and Family Services that contain information about the distribution of public assistance, records at the Department of Corrections that contain information about incarcerations, and records at the Department of Business and Professional Regulation that contain the results of licensure examination. Access to these records necessitates that FLDOE's system supports intrastate interoperability to ensure linkage and connectivity among the various data.

The EDW is used as a data resource by a myriad of stakeholders. Researchers use deidentified unit record data from the EDW to fulfill approved research projects that study the effects of education programs and policies across educational sectors. Florida legislators use data from the EDW to drive data-driven decision making. FLDOE leadership uses data from the EDW to evaluate the implementation of education programs and policies and for school and teacher accountability. FLDOE program and policy staff use data from the EDW to provide understandable statistics and reports to the general public, including parents and students. FLDOE uses data from the EDW to fulfill state and federal reporting requirements.

Funding for the EDW was originally a line item in the annual 2003-2008 FLDOE budgets approved by the Legislature. Line items are more susceptible to criticism. During the 2009 Legislative session, the EDW's funds were rolled into the technology portion of FLDOE's budget making sustainability less of an issue. All of the EDW and the source data systems are fully funded by the Legislature. No additional funding will be required to support the upgrades. FLDOE's expectation is that expenses associated with the components of this proposal will decline once fully deployed.

It is important that FLDOE continue to enhance the functionality of the EDW so that it evolves with the increasing demands for data. Using the EDW as a resource for longitudinal data has become a part of Florida's educational culture. It has resulted in data-driven decision making, program evaluation, and accountability.

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<sup>1</sup> There are ten major sources (see Appendix A) that comprise the PK12, workforce education, community college, and state university data systems. These include staff, student, and finance data for each area. For brevity we refer to these separate databases by their collective representative sector: PK12, workforce education, community college, or state university. This proposal will refer to the four major source data systems.

## Data In...Data Out (CFDA Number 84.384)

### **EDW Requirements and Capabilities**

Florida was the first state recognized by the Data Quality Campaign (DQC) as containing the 10 elements recommended by DQC for designing a statewide longitudinal data system. Many of these elements are also listed in the America COMPETES Act as part of the 12 required data system elements. Florida's EDW meets all 12 of the required data system elements referenced in the America COMPETES Act. FLDOE has the ability to link elementary and secondary school data to postsecondary data and to employment information. Students are automatically assigned a unique identifier when first incorporated into the EDW to ensure confidentiality in the longitudinal data system.

FLDOE already meets five of the seven data system capabilities required by this grant competition.

FLDOE has the ability to:

- follow students over time through their educational career and into the workforce (capability 1)
- link student data with teachers, including the ability to link back to a teacher's preparation pathway (capabilities 3 and 4)
- ensure the quality and integrity of data contained in the system (capability 6), and
- meet reporting requirements of the United States Education Department, including those required for the State Fiscal Stabilization Fund and *EdFacts* (capability 7).

FLDOE also has the ability to link student data to data from other state agencies, as evidenced by the use of state agency data in FETPIP (capability 2). Additionally, FLDOE will use funds from Institute of Education Sciences' (IES) Statewide Longitudinal Data System (SLDS), Round 3 grant to enhance the our metadata application and to create a formalized data governance process. This will promote linkage and connectivity among the various levels and types of data such as PK12 data, technical center data, and postsecondary data.

Through this grant proposal, FLDOE will prepare its systems to provide data to stakeholders in a more timely fashion than is currently possible (capability 5). FLDOE will accomplish this by upgrading the source data systems, providing a report building tool, and implementing a data mining tool.

The ability to link teacher and student data via class enrollment is one of the core requirements of the IES' Statewide Longitudinal Data Systems program. As mentioned above, Florida has this capability. However, FLDOE proposes to refine its data processes and policies surrounding the teacher-student link. To accomplish this most important goal, FLDOE and its Local Education Agencies (LEAs) will work together to define teacher-of-record, and secondly draft the policies, processes, and technologies necessary to create and sustain a valid teacher-student data link.

As noted, the concept of a teacher-student data link appears in both the Required Data System Capabilities and Required Data System Element sections of RFA NCE 09-02. FLDOE is uniquely qualified to meet and exceed these aforementioned requirements as a result of FLDOE's participation in the Teacher-Student Data Link Project. The Teacher-Student Data Link Project, funded by the Bill & Melinda Gates Foundation and conducted by the Center for Educational Leadership and Technology (CELT) with guidance and dissemination support from the Data Quality Campaign (DQC), is a five-state effort charged with developing a common, best practice definition for teacher of record and business process for collecting and validating the linked teacher and student data. The project includes the creation of business requirements for a prototype application teachers will use to validate their student rosters. The Teacher-Student Data Link Project will bring multiple states together to leverage their collective

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knowledge and resources to determine a common definition and approach to one of the most critical capacities of their longitudinal data systems. It also incorporates school district and teacher involvement throughout the project, which will help ensure data definitions and processes accurately and appropriately capture the local reality and are not overly burdensome to educators.

In support of the Teacher-Student Data Link Project, CELT will be assisting FLDOE in conducting a comprehensive assessment of FLDOE's data collection, verification, storage, and reporting processes and systems, as each relates to linked teacher-student and summary assessment data. This analysis will include the degree and types of collaboration and communication between the State Education Agencies (SEAs), the school districts, and among the appropriate program areas within the SEA. Together with CELT, FLDOE is also carrying out the analysis at the school district level in order to assess how the schools and school districts collect the data and verify the quality of data.

Refer to Appendix C for more information about FLDOE's ability to meet the 12 data system elements and the 7 data system capabilities.

### **EDW Enhancements**

By leveraging funding from multiple federal sources, FLDOE has the unique opportunity to enhance the Education Data Warehouse to provide several functions that also address requirements of the American Reinvestment and Recovery Act's (ARRA) assurances. These functions include: (1) the ability to collate near real time data for use by the districts to improve instruction; (2) reporting capabilities permitting aggregate-level data to be accessed by a multitude of stakeholders including parents, LEAs, legislators, the general public and the media; (3) a secure portal to allow requestors (including educational researchers) FERPA<sup>2</sup>-compliant restricted access to deidentified unit-record data upon approval; and (4) a data mining tool to be used by FLDOE staff to evaluate existing policies, identify potential program/policy areas of need, and identify best practices.

FLDOE was awarded funds from both Rounds 1 and 3 of the IES' SLDS grant program. Using funds from Round 1, FLDOE incorporated student financial aid data and facilities data into the Education Data Warehouse. Additionally, these funds were used to create data marts from these data. Data marts provide a more expedient way for data questions to be answered. Because FLDOE completed its grant requirements ahead of schedule and under budget, IES permitted FLDOE to use the remaining funds and time to develop multiple data marts to support many different areas including K12, postsecondary, and employment outcomes. However, for easy use by stakeholders, a reporting tool that taps into the data mart is necessary. Funding from Round 3 and funding from the ARRA SLDS grant will address this need.

Funds awarded through Round 3<sup>3</sup> of the IES' SLDS grant will be used to create the Sandbox, a secure portal to deidentified unit record data. FLDOE's proposal for the Round 3 grant was designed to create the Sandbox which will automate the functions necessary to fulfill approved research requests. Because the Sandbox will consist of deidentified data it is the appropriate mechanism on which to develop a report building tool. Funds awarded through the ARRA SLDS grant program will be used to create pre-defined tables available for public consumption and a tool to be used by stakeholders to build exportable user-defined tables.

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<sup>2</sup> Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. 1232g; 34 CFR Part 99.

<sup>3</sup> Round 3 is a five-year grant which runs July 1, 2009 – June 30, 2014.

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The student and staff data collected by the source data systems are validated at the State level and loaded into the EDW. Therefore, it is imperative that the source data systems be rewritten to employ current technological approaches. Many of the source data systems were originally designed in the 1980s and 1990s, with little modification since, resulting in the use of older technology and nearly obsolete processing methodologies. If the source data systems continue to utilize the older technology and methodologies, the ability for data to be collected from the districts and loaded into the EDW will become increasingly difficult.

While updating the source data systems, FLDOE will review the edit report programs used for quality assurance by the LEAs. Where necessary, FLDOE will update or create new edit report programs. FLDOE will also review and modify where necessary the extraction-transformation-load (ETL) programs used to incorporate source data into the EDW.

FLDOE will use the opportunity to update source data systems to instill a new data submission schedule that will allow for near real time updates to the PK12 staff and student databases. The transactional data collection will allow the LEAs to use the information for instructional improvement. These steps will permit researchers to have access to more recent point-in-time data.

The availability of near real time data will also enhance the use of the data mining tool FLDOE will implement with ARRA's SLDS grant funds. The data mining tool will allow FLDOE to analyze data anomalies and discover potential program/policy areas of need that require further examination or to highlight best practices being implemented by the LEAs. FLDOE will be able to more easily find relationships in the data than is currently possible.

FLDOE will also prepare its source data systems to accept student scores from computer-based tests and to provide the LEAs, specifically teachers, with rapid-time assessment reports as required by the ARRA's assurances. FLDOE will use the ARRA's SLDS grant funds to prepare FLDOE's source data systems for this capability and will use Race to the Top<sup>4</sup> grant funds to assist districts in preparing their data systems for this capability.

Many of Florida's technological applications used by teachers and LEAs to access student data are processed through FLDOE's infrastructure known as Sunshine Connections. Currently, Sunshine Connections contains data from various areas of FLDOE. Using funds from Round 3 of IES's SLDS grant, FLDOE is implementing a data governance process. This process standardizes data collection and storage making access into Sunshine Connections more feasible. Using funds from the Race to the Top grant, FLDOE will enhance the authentication process allowing the LEAs to log into FLDOE's data through the Sunshine Connections infrastructure.

Grant funds from all three SLDS grants will be used to provide training and technical assistance for users related to the specific tasks associated with each grant program. See Appendix A for a graphic representation of the timelines and major tasks for each of the federal grants awarded to or sought by FLDOE.

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<sup>44</sup> The references to FLDOE's use of Race to the Top (RTTT) grant funds are as of submission of this grant (12/04/09). FLDOE may modify its intended use of Race to the Top funds prior to its submission of the RTTT grant proposal which is due 01/19/10.

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### **Project Outcomes Related to System Requirements and Implementation**

The components of the proposed project are categorized into two main foci: inputs and outputs. The “inputs” include upgrading the PK12, community college, workforce education, and state university source data systems; and implementing a federated vault model for student confidentiality. The “outputs” include public access reporting capabilities and a data mining tool.

The overall objective is to enhance the current functionality of the EDW by addressing what goes into the EDW and by addressing the best way to retrieve it from the EDW. Enhancing the functionality of the EDW will allow Florida to address the requirements of the State Fiscal Stabilization Fund program. Upgrading the source data system will provide FLDOE with the technological capacity to get the data to the teachers and to establish an accurate and timely link between teachers and students. Increased functionality will provide timely information to teachers allowing them to make instructional adjustments based on student performance. The LEAs will have access to better data to faster evaluate teacher performance and effectiveness.

The public access reporting tool will provide an accessible avenue for legislators to gather data on important issues such as FLDOE progress in supporting and improving the lowest-achieving schools. The data mining tool will equip FLDOE with the ability to analyze vast amounts of data in a short period of time, primarily focusing on the anomalies which potentially flag areas in need of attention.

The four components Florida proposes for the ARRA’s SLDS grant are described in more detail below.

### **INPUTS**

***Proposed Outcome 1: Upgrade Source Data Systems.*** The EDW is a centralized repository for educational data collected from 27 different sources including the PK12 staff and student databases, the university databases, the community college staff and student databases and the workforce education database. Each of these databases receives student and staff data directly from the LEAs; the PK12 database is comprised of data reported by the school districts, the Workforce Education database is comprised of data reported by the technical centers and school districts, the Community College database is comprised of data reported from the public community colleges, and the State University database is comprised of data reported from the public state universities<sup>5</sup>.

The EDW is only as useful and valuable as the data that is loaded into it; both the data’s accuracy and timeliness are significant. This means that the original data collection mechanisms (the source data systems) need to be continually updated to stay current with technology because a breakdown of a source system would result in a breakdown of the EDW. Maintenance and updates of the source systems will allow the longitudinal data system to quickly and accurately load data for easy access to stakeholders.

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<sup>5</sup> The 11 public universities within the State University System report data to Florida’s Board of Governors. The Board of Governors is a separate governing entity from the FLDOE; however, the Board of Governors provides university staff and student data to the PK20 Education Data Warehouse for longitudinal tracking purposes per Section 1008.31(3), Florida Statutes.

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The Florida Board of Governors (FLBOG) recently completed a major overhaul of the university databases updating the system with newer technology from the original system which was built 1972-1975. While FLDOE's EDW was created in 2003, many of the source data systems were created much earlier. The PK12 databases were originally built in 1987 and the community college databases started up in 1989. The workforce education database was built more recently in 1998.

The four major source data systems each have technological issues that will be addressed through this proposal. As mentioned above, the PK12, workforce education, and community college databases have had limited modification since their inception. This means that they are supported by outdated technology and processing methodologies. Utilizing older system designs and methodologies has led to significant challenges such as limited and inefficient accessibility to data, responsiveness to LEAs limited to data that is not current, and duplicative processing.

The EDW and some of the LEAs are supported by current technology. The incompatibility of current technology of some LEAs with the outdated technology of the source systems, if not addressed, will increase the level of manual intervention necessary to maintain the linkage between the LEAs and the state systems. An increase in manual intervention will lead to inefficiencies in the process which will delay responsiveness back to LEAs.

The use of older technology and processing methodologies brings with them limitations on accessibility by stakeholders, particularly the management information systems (MIS) and program offices of the LEAs. Currently, each LEA must develop and maintain their own programs to extract, transform, and submit their data so that it is compatible with the older processing methodologies used by the source data systems.

The PK12 data system is not currently a transactional database resulting in data from the previous school year being used to fulfill research requests. Some PK12 data, such as the electronic Individual Education Plans for students with disabilities, must be transactional so it is collected in a separate application known as the Portal to Exceptional Education Resources (PEER). The PK12 data system and PEER both require student demographic data; therefore, districts are submitting the same demographic data to the PK12 data system and the transactional PEER system. This results in duplicative processing by the districts.

The use of outdated technology and processing methodologies makes it difficult to find human resources with the skills to support the technology. The availability of staff qualified to work with outdated system designs and methodologies is very limited.

It is for these reasons that FLDOE will perform a technical review and subsequent rewrite of four of the major source data systems: PK12, workforce education, community colleges, and state universities. The review and subsequent rewrite will implement new technological approaches for the source data systems making them more compatible with the LEAs and the EDW. This will allow the reporting of more timely data and will increase stakeholders' accessibility to the data. Additionally, staff capable of supporting the technology will be available to FLDOE.

PK12 Data System. The PK12 data system is a comprehensive database system for the collection of student and staff data that was designed beginning in 1984 and gradually phased in from June 1987 to

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December 1991. The database has not undergone a major improvement since its inception in the late 1980s. The purpose of this database system was to streamline and make uniform the data collection processes of FLDOE. It does this by collecting individual staff and student records for PK12 public education and by producing various reports based on collected data. The database was designed to gather data from a series of "snapshot" surveys to capture point in time data. Annual adjustments have been made in response to State and federally mandated data requirements.

In 2007-08, the Florida Legislature allocated funds for FLDOE staff to review the database functionality and identify issues that need to be addressed. During this time, FLDOE received input from district representatives to identify their concerns and to gain feedback on what the districts would want in a redesigned system. Vendors were interviewed to determine their ability to respond to changes in the design of the database and system of reporting. The vendors included both those that currently support the districts and possible future vendors. Finally, FLDOE reviewed other states' database systems and designs to help formulate what will work for FLDOE.

FLDOE proposes using funds from the ARRA's SLDS grant program to design and implement a replacement system that incorporates a relational database design with transactional processes. The new PK12 data system will be a transactional system that captures the information of all staff and students at the beginning of a school year then collects only new or altered data in the subsequent, more frequently scheduled data collections for that school year. This will put in place the appropriate technological design for Florida to utilize Race to the Top funds to set up teacher access to student data, which also satisfies one of the ARRA's assurances.

The new system will include a flexible, extensible district data transfer methodology, a robust Business Intelligence (BI) analysis and reporting capability, and a self-service environment for all data consumers. An extensible district data transfer methodology means that the format of the data transfer files can be changed without damaging the transfer process itself. Instead of using fixed columns, the data will be surrounded by tags using extensible markup language (xml) that the load job can find to place the data in the proper fields. New tags can be added at any time to extend the definition of what data is being collected. The tags will be ignored until and unless the load program adds code to handle that tag.

The system will allow for more periodic uploads on a schedule to be determined by FLDOE. Data will not be moved to permanent storage without authorization. It will allow for both push and pull strategies simultaneously that will be configurable on an organizational basis. Additionally, the system will allow for quality control checks to be performed through a statistical data validation process and reported back to the LEA prior to final approval and movement to permanent storage. Once data is moved to permanent storage and loaded into the EDW, it will not be edited. Any necessary corrections will be in the form of adjusting entries through a subsequent data upload. Finally, the system will provide a secure method of authentication and signing of data upload authorization by an appropriate LEA official.

Community College and Workforce Education Data Systems. The community college staff database was originally deployed in 1989 with additional student databases being phased in over the following eight years. The most recent addition to the community college data system was in 2006 to accommodate

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community college baccalaureate program admissions. In 1998, the workforce education data system<sup>6</sup> began collecting and maintaining information related to workforce education in Florida.

As with the PK12 data system, these data systems have not been updated since their inception with the exception of necessary adjustments to account for new State and Federal reporting requirements. The lack of redesign has led to several issues and potential problems. First, the current system collects data both at the beginning and end of each term. This creates duplicative data since certain data elements, such as demographic elements, do not change within a semester. Second, the current quality controls are labor intensive and the system does not have the capability to perform statistical data validation. While data is currently checked for quality and validity, upgrading the systems will allow this to occur more efficiently and with statistical validation. Third, the user interface is outdated and limits user flexibility.

FLDOE proposes modernizing these two systems by developing and deploying a remote ETL data collection system. The ETL system will be housed on a client/server platform at the State Education Agency (SEA) and provide each LEA with secure access via the internet. This system creates a common data collection mechanism that allows all LEAs to connect directly to the SEA's data systems. This facilitates the collection process and decreases the turnaround time for the data submitted to FLDOE.

Using this platform, FLDOE will develop a new validation process to incorporate statistical analytic tools directly into the collection procedure for each LEA. Data received by FLDOE will be of high quality by removing the burden from the 88 LEAs of maintaining their own extraction systems, using a common collection interface, and incorporating statistical validation into the collection process.

The upgrades proposed to the PK12, community college, and workforce education data systems will be implemented in a test environment in Year 2 of this grant. During Year 3, FLDOE will select a limited number of LEAs to participate in a "pilot" of the upgraded data collection systems. Selected LEAs will conduct parallel processing, which requires submitting data under both the old and new data collection formats. Parallel processing provides FLDOE with the ability to test the success of the implementation prior to a statewide rollout. The "pilot" portion of the project will not determine the completion of the project itself; it will only determine if any modifications to the systems and processes are necessary. FLDOE is committed to deploying the new systems statewide during the data collection periods that occur between July 1, 2013 and June 30, 2014 (a year after the grant expires). Expenditures required for the statewide deployment will be the responsibility of FLDOE.

State University Data System. The State University System of Florida (SUS) is governed by the Florida Board of Governors and has its own source data systems which are incorporated into the EDW. The SUS originally developed its central data collection system over twenty years ago.

In 2006, the Florida Legislature allocated funds for FLBOG to move their system from a mainframe based system to a relational database system with a Web front end. This project was completed and the new State University Data System (SUDS) began operation on July 1, 2008.

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<sup>6</sup> The community college data systems and the workforce education data systems are both operated under the Bureau of Community College and Technical Center MIS, which is housed in the Division of Accountability, Research, and Measurement at FLDOE.

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Due to the nature of the funding received, the project had to be completed and placed into operation in one calendar year. Therefore, there were certain components of a comprehensive data collection system that were excluded or not fully realized.

FLDOE proposes to work with the FLBOG to remediate the SUDS. Fulfilling these system needs will make the quality of the data collected are more reliable, the system is more robust, and the data are more accessible to stakeholders.

FLDOE proposes to collaborate with the FLBOG to make the SUDS as secure, efficient and reliable as possible for all consumers/customers of the data. Utilizing funds from the ARRA's SLDS grant program, FLDOE and FLBOG will conduct a technical review of SUDS which will result in recommendations on how to rebuild or remediate the current system. The technical review will include an analysis of the current infrastructure, backup procedures, and existing software. During the grant's timeframe, the technical review recommendations will be implemented so that SUDS is more accurate, timely and accessible, meeting the improvement and enhancement objectives.

*System Security Audit.* During Year 2 of the grant project, each of the four systems will be audited for software and system security. The audit is necessary to ensure the confidentiality of all data prior to the pilot phase.

*Training for Source System Upgrades.* FLDOE is proposing to rewrite three of its educational source data systems and enhance the fourth. These changes will affect the districts, community/state colleges, technical centers, and state universities. Therefore, it is imperative that FLDOE provide comprehensive training and technical assistance to ensure a seamless transition to the new systems.

FLDOE and FLBOG staff will be trained on the new software to be used in the data collection and statistical validation programs. Preparing staff with the new skills and knowledge will ensure successful implementation for these components.

LEA staff will need training on the new technical requirements for data submission to each of the source systems. This will be accomplished via regional training conferences where FLDOE staff will train the appropriate staff from the LEAs. Trained staff will also require reference documentation. To address this need FLDOE will develop technical assistance guides that will be readily available via FLDOE's Web site.

During the rewrite process, FLDOE will modify existing quality control "edit programs" used by the LEAs to conduct quality assurance on data prior to submission to FLDOE. The edit programs are to be examined by personnel throughout the LEAs, not just staff who submit the data. It is, therefore, important that those submitting the data are adequately trained to utilize the edit programs and to engage others at the LEA.

A "train the trainers" session on how to use the edit programs will be part of the regional training conferences. Webcasts will be created to allow local users to be trained via the Web. The webcasts will be particularly useful when staff turnover occurs, and will allow staff to refresh their knowledge on a regular basis. The webcasts will include user surveys. The survey results will be used to continually

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improve FLDOE's services and to ensure that the applicability of the knowledge transferred remains current.

***Proposed Outcome 2: Assign a Unique Identifier.*** One of the required data system elements prescribed by the America COMPETES Act is a unique statewide student identifier. FLDOE currently collects student social security numbers (SSNs) and uses them to link data in the EDW. During the linking process a unique student identifier known as the K20\_EDW\_ID is assigned. The link between the SSN and K20\_EDW\_ID is stored separately from all other student data so that the risk of a security breach is minimized.

While FLDOE utilizes the unique student identifier for students, the LEAs continue to use social security numbers. Many of the LEAs (particularly postsecondary institutions) have multiple systems in which to store student data. All of these systems are linked by the student identifier (in this case the SSN) leaving a multitude of opportunities for a student's information to be misused or stolen. Given the potential for identity theft and the legally protected privacy of educational records there is a need for the LEAs to assign students unique identifiers other than using SSNs as the key field. Since all student data is currently sent to FLDOE and linked through the EDW, assigning unique identifiers to all Florida students the first time they enter the Florida educational system (at any point along the educational continuum) will increase security and confidentiality, and allow system linkages across the different educational sectors. The unique identifier will follow the student through the system to any educational entity to which the student applies or enrolls.

FLDOE proposes to implement a federated vault model where the master vault located at FLDOE is searched via a secure Web interface in addition to or in lieu of system-to-system communication. The master vault will serve as the master repository of student demographic data and other related personally identifiable information. The identifier assigned to the student in the master vault is different than the K20\_EDW\_ID. The EDW will continue to use the K20\_EDW\_ID which is used to disclose coded, deidentified unit record data. This will ensure that, when deidentified student information is provided to researchers, the information remains confidential and cannot be linked back to the unique identifier used by the LEAs.

When a student enters the Florida educational system, the SSN will be entered into a system at the LEA which will link to the master vault at FLDOE. The master vault is searched to determine if the student already exists in the system. If the student does not exist, a unique identifier is assigned to the student. This number is transferred back to the LEA and used as a unique identifier, in lieu of the student's SSN, as a key field for storing student data at the LEA. When a student changes educational entity (transitioning from school to school or district to district), the student's SSN can be used to match the student within the FLDOE master vault so that at all times the unique identifier is used by the LEAs to store and submit student data.

The use of the master vault will allow for better matching at the state-level for use in the EDW. The unique identifier will follow the student from Kindergarten through postsecondary education regardless of the public institution attended. This will create a faster transfer of student data between schools and institutions. It also creates another layer of security for each student.

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What makes this project unique is that the master vault will provide SSN substitution in one major system for each of the four entities above. Simultaneously, it would provide for a master student demographic repository and the capability of providing a “universal” Florida education identifier that is public and that can be used across systems. The core data collection systems for PK20 at the state level will have the option to use the unique identifier and give FLDOE the ability to provide a secure Web-based demographic lookup function.

The unique identifier system will work in tandem with the upgrades to the source data systems. Therefore, deployment of the unique identifier system will occur in Year 4; however, this grant runs through Year 3. FLDOE is committed to deploying the unique identifier system statewide during the same time period of July 1, 2013 to June 30, 2014, as the source system upgrades. Expenditures required for the statewide deployment will be the responsibility of FLDOE.

*Training for the Unique Identifier System.* FLDOE staff and FLBOG staff will receive training on how to use and maintain the master vault system. Regional trainings will occur to instruct the LEAs on how to use the new system.

All of the changes proposed for the source data systems and the process described in the unique identifier section will necessitate changes to the EDW’s ETL process. As the system changes are determined, funds from the ARRA’s SLDS grant will be used to modify the ETL programs as well.

### OUTPUTS

***Proposed Outcome 3: Public Access Reporting Tool.*** As the amount and quality of data in the EDW increases, so do the need for quick turnaround of data analysis and the demand for reports. Frequently, requests are submitted by the Florida Legislature or Governor’s office for aggregate numbers needed within a very short timeframe. These requests, while fulfilled in a timely fashion, can be difficult and time consuming. Requests from the Legislature and Governor’s office are of the utmost priority, yet must be balanced against requests from the media, education researchers, the general public, and FLDOE staff. The staff fulfilling the ad hoc, short timeframe requests are also the staff responding to the requests from external researchers for restricted access to de-identified unit record data.

One of the requirements for the ARRA assurance for the statewide longitudinal data system is that data is easily available for use by stakeholders. The EDW currently meets the requirements for data collection and maintenance (see Appendix C) so FLDOE’s focus is on providing the data in more useful and timely ways to stakeholders. FLDOE’s stakeholders include parents, teachers, principals, superintendents, postsecondary faculty and administrators, legislators, educational researchers, the general public, and the media. Each of these stakeholders has different needs and capabilities that must be considered when developing reporting mechanisms.

Utilizing funds from several different Federal grant programs, FLDOE proposes providing a tool that encompasses several different reporting capabilities to be used by the various stakeholders. One of the first reporting functions FLDOE made available to stakeholders are data marts. Using funds through the IES’ SLDS, Round 1 grant FLDOE was able to build data marts for financial data, for facilities data, and for FETPIP data which are available on FLDOE’s Web site.

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FLDOE is currently developing the Sandbox using funds through the IES' SLDS, Round 3 grant. The Sandbox will be a vehicle for educational researchers to request and receive FERPA-compliant anonymized unit record data upon approval. FLDOE has a rigorous data request approval process which includes the requestor signing a Security and Access agreement located on FLDOE's Web site, and review and approval by FLDOE's Data Request Workgroup and subject matter experts. Once a request has received approval, the data will be extracted from the Sandbox and located on a secure FTP site for the researcher to download and use. The Sandbox's planning and development began July 1, 2009 and is expected to be fully deployed by June 30, 2014.

With funding from the ARRA's SLDS grant, FLDOE proposes to expand the use of the Sandbox to include a report building tool that will allow many of FLDOE's stakeholders to quickly access aggregate level data. The report building tool will include a Web-based capability that allows the user to build tables using aggregate level Florida education data. The tables will be exportable and will allow the user to choose from a variety of data and years. The most frequently requested tables will also be readily available on an easily accessible Web page. The pre-defined tables will be searchable according to the topic and according to user categories.

FLDOE will conduct focus groups with various stakeholders, including teachers, district superintendents and legislators, to determine potential areas of interest. The focus groups will be used to guide the development of a set of Web surveys. For a focus group to be useful it must remain small; therefore, FLDOE will not be able to ascertain accurate stakeholder interest and feedback from focus groups alone. Information gleaned from the focus groups will be used to create Web surveys that will be distributed electronically to each stakeholder group.

Distributing surveys electronically will allow FLDOE to request feedback from all stakeholders rather than a small subset. Electronic surveys will provide FLDOE a more comprehensive set of feedback while utilizing a cost effective method of delivery. Because each group has a different area of interest separate Web surveys will be created for each group. Analysis of the Web survey results will be used to guide the development of each of the reporting tools.

In addition to these useful reporting functions, FLDOE will provide a searching mechanism. This mechanism will allow the user to search all data and statistics publicly reported on the FLDOE Web site and on the FLBOG Web site, not just the pre-defined tables mentioned previously.

While much of the education data requested is pulled from the EDW, some reports and statistics (such as dropout rate) are the responsibility of the source data systems. FLDOE proposes the implementation of a reporting tool that can be utilized by each of the four main source data systems discussed in this proposal. Input from the focus groups and surveys will be used to determine the functionality of the reporting tool for the source data systems.

*Training for Reporting Tools.* The report building tool will be used by many stakeholders at their own convenience. Therefore, it is essential to provide easily accessible and easily understandable documentation on how to use the various components of the report building tool. A "How To" guide will be posted to the report building tool's Web site. The "How To" guide will include a downloadable document and a webcast.

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For the search function FLDOE proposes establishing a “HELP” section. This section will guide users in the best ways to search the Web sites.

***Proposed Outcome 4: Data Mining Tool.*** The Florida Department of Education currently links vast amounts of education data in the PK20 Education Data Warehouse. Data warehousing (collecting and compiling all data together) is but one aspect to data-driven decision making. Data mining, the ability to analyze vast amounts of data for patterns, is the other.

Data mining utilizes statistical algorithms to quickly evaluate large quantities of data looking for patterns and anomalies in the data. The advantage to data mining is that the user does not have to have a preconceived hypothesis prior to analyzing the data. Data mining looks for patterns and anomalies and points out potential areas of interest to the user. This is beneficial for both planning future education policy and evaluating the implementation of previously enacted policy.

Data mining is an essential tool for use in examining the progress made on three of the ARRA assurances: Great Teachers and Leaders, Standards and Assessments, and Turning Around the Lowest-Achieving Schools. These three assurances will employ bold, new and innovative policies and practices to improve and enhance Florida’s education system. Data mining can be applied using the fourth assurance, a statewide longitudinal data system, to search for patterns in these areas which can highlight (1) if the policies are working, and (2) potential areas previously not considered that might require attention.

FLDOE proposes implementing a data mining tool so that we can more efficiently and effectively recognize education policies and programs that are and are not working as well as identify potential areas of need. Several vendors currently have data mining tools on the market. FLDOE will conduct a review of the available data mining tools to determine the best fit for FLDOE’s and FLBOG’s systems. FLDOE will then procure and implement the data mining tool.

*Training for Data Mining.* Data mining is a relatively new field and while vendors are now marketing data mining tools, experts in the education field are not yet practiced in how to analyze the findings from data mining techniques. Therefore, training on both the technical side (how to use the tool) and programmatic side (how to interpret the results) is essential.

Once the data mining tool is implemented, FLDOE and FLBOG technical staff will require training so that they can appropriately use the tool. Additionally, FLDOE and FLBOG program/policy staff will require training to effectively address the areas identified and to effectively work with the technical staff in identifying areas of need or potential best practices. FLDOE will hold training sessions and provide technical assistance guides for each of these groups.

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**Project Timeline for Project Outcomes**

This section contains timeline charts for each of the proposed outcomes: (1) Upgrade source data systems, (2) Assign a unique identifier, (3) public access reporting tool, and (4) data mining tool. The parties responsible for each of the subtasks and the proposed deliverables are included.

Each of the federal grants pursued by and awarded to FLDOE is tracked individually for monetary purposes and for project status reporting purposes. Coordination among the projected outcomes for the different grant programs will be necessary and is addressed earlier in this proposal (see *EDW Enhancements* under the “Need for the Project” section) and in Appendix A.

**Proposed Outcome 1: UPGRADE SOURCE DATA SYSTEMS**

**a. PK12 Data System**

Task	Person(s) Responsible*	Deliverable(s)	Implementation Dates
Design and develop conceptual and logical data models to support student and staff databases.	PK12 EIAS, FAMIS	Data models for student and staff databases	July 2010 – September 2010
Create architectural plan for transferring logical design into physical database	PK12 EIAS, FAMIS	Data Modeling Plan	July 2010 – September 2010
Develop Data Collection Process Model	PK12 EIAS, FAMIS	Collection System Model	October 2010 – December 2010
Finalize Data Model	TC, PK12 EIAS	Data Model Documentation	January 2011
Begin Statistical Evaluation of System Data for Data Quality process	TC, PK12 EIAS	Statistical Evaluation Report	January 2011 – March 2011

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Task	Person(s) Responsible*	Deliverable(s)	Implementation Dates
Upgrade Collection Application Software by designing the transfer mechanism for moving data from LEA to state system	TC, CS, PK12 EIAS	Collection Application Implementation Plan	January 2011 – March 2011
Develop Hardware Specifications	TC, PK12 EIAS	Hardware Specifications Documentation	March 2011
Procure Hardware	PTL	Necessary equipment available for installation	April 2011 – May 2011
Train PK12 EIAS Staff on Application	CS	Training session agenda	May 2011 – June 2011
Install and Configure Hardware	CS	Successful installation of hardware	June 2011
Test Hardware System	CS	Hardware functionality approved by PK12 EIAS	June 2011
Design and implement statistical validation process	CS, PK12 EIAS	Successful implementation as approved by PK12 EIAS	April 2011 – May 2012
Implement Collection Applications Plan	CS	Successful implementation as approved by PK12 EIAS	July 2011 – June 2012
Implement Data Model in test environment, including all programming and documentation for processes and reports for student and staff databases	CS, PK12 EIAS	Documentation	July 2011 – June 2012

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Task	Person(s) Responsible*	Deliverable(s)	Implementation Dates
Modify ETL process necessary to load data into EDW	EDW	Successful ETL process approved by EDW	January 2012 – June 2012
Hire consultant to perform Software and System Security Analysis and Audit	TC	Signed contract with consultant	April 2012 – May 2012
Create online training components for the LEAs addressing the collection application and the statistical validation process	CS, PK12 EIAS	Online training component	May 2012 – June 2012
Create reference documentation for LEAs	CS, PK12 EIAS	Technical Assistance guides	June 2012 with modifications made as necessary
Perform Software and System Security Analysis and Audit	CS	Final report	July 2012
Conduct testing and revisions to Collection Application	CS, PK12 EIAS, LEAs	Report of issues discovered during testing that need to be addressed	July 2012 – October 2012
Review audit recommendations and implement changes as necessary	TC, PK12 EIAS	Recommendations implemented	August 2012
Test implementation through parallel processes with pilot LEAs	PK12 EIAS, LEAs	Parallel reporting of data for testing purposes	August 2012 – June 2013

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Task	Person(s) Responsible*	Deliverable(s)	Implementation Dates
Receive database administration support from database vendor	CS	Support for systems	July 2012 – June 2013
Conduct regional training conferences for LEAs	PK12 EIAS, LEAs	Conference Agendas, Technical Assistance Guides	May 2013 – June 2013
**Piloting will occur in Year 3 of the grant (through June 30, 2013). After the Year 3 pilot, full deployment will occur beginning July 1, 2014, at which time FLDOE will assume the financial responsibilities in relation to implementing the data collection application and statistical validation model in the production environment. **			

**b. Community College and Workforce Education Data Systems**

Task	Person(s) Responsible*	Deliverable(s)	Implementation Dates
Design and develop conceptual and logical data models to support student and staff databases.	CCTCMIS, MISATFOR, WEDDAC	Data models for student and staff databases	July 2010 – September 2010
Create architectural plan for transferring logical design into physical database	CCTCMIS, MISATFOR, WEDDAC	Data Modeling Plan	July 2010 – September 2010
Develop Data Collection Process Model	CCTCMIS, MISATFOR, WEDDAC	Collection System Model	October 2010 – December 2010
Finalize Data Model	TC, CCTCMIS	Data Model Documentation	January 2011
Begin Statistical Evaluation of System Data for Data Quality process	TC, CCTCMIS	Statistical Evaluation Report	January 2011 – March 2011

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Task	Person(s) Responsible*	Deliverable(s)	Implementation Dates
Upgrade Collection Application Software by designing the transfer mechanism for moving data from LEA to state system	TC, CS, CCTCMIS	Collection Application Implementation Plan	January 2011 – March 2011
Develop Hardware Specifications	TC, CCTCMIS	Hardware Specifications Documentation	March 2011
Procure hardware	PTL	Necessary equipment available for installation	April 2011 – May 2011
Train CCTCMIS Staff on Application	CS	Training session agenda	May 2011 – June 2011
Install and Configure Hardware	CS	Successful installation of hardware	June 2011
Test Hardware System	CS	Hardware functionality approved by CCTCMIS	June 2011
Design and implement statistical validation process	CS, CCTCMIS	Successful implementation as approved by CCTCMIS	April 2011 – May 2012
Implement Collection Applications Plan	CS	Successful implementation as approved by CCTCMIS	July 2011 – June 2012
Implement Data Model in test environment, including all programming and documentation for processes and reports for student and staff databases	CS, CCTCMIS	Documentation	July 2011 – June 2012

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Task	Person(s) Responsible*	Deliverable(s)	Implementation Dates
Modify ETL process necessary to load data into EDW	EDW	Successful ETL process approved by EDW	January 2012 – June 2012
Hire consultant to perform Software and System Security Analysis and Audit	TC	Signed contract with consultant	April 2012 – May 2012
Create online training components for the LEAs addressing the collection application and the statistical validation process	CS, CCTCMIS	Online training component	May 2012 – June 2012
Create reference documentation for LEAs	CS, CCTCMIS	Technical Assistance guides	June 2012 with modifications made as necessary
Conduct Software and System Security Analysis and Audit	CS	Final report	July 2012
Perform testing and revisions to Collection Application	CS, CCTCMIS, LEAs	Report of issues discovered during testing that need to be addressed	July 2012 – October 2012
Review audit recommendations and implement changes as necessary	TC, CCTCMIS	Recommendations implemented	August 2012
Test implementation through parallel processes with pilot LEAs	CCTCMIS, LEAs	Parallel reporting of data for testing purposes	August 2012 – June 2013

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