

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 # R384A100018**

Closing Date: DEC 04, 2009

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This application was generated using the PDF functionality. The PDF functionality automatically numbers the pages in this application. Some pages/sections of this application may contain 2 sets of page numbers, one set created by the applicant and the other set created by e-Application's PDF functionality. Page numbers created by the e-Application PDF functionality will be preceded by the letter e (for example, e1, e2, e3, etc.).

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:
12/3/2009	8093996940000

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

State Use Only:

6. Date Received by State:	7. State Application Identifier:	State SLDS Grant
----------------------------	----------------------------------	------------------

8. APPLICANT INFORMATION:

* a. Legal Name: Mississippi Department of Education	
* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
646000758	809399694

d. Address:

* Street1:	359 North West Street
Street2:	Post Office Box 771
* City:	Jackson
County:	Hinds
State:	MS
Province:	
* Country:	USA
* Zip / Postal Code:	39205

e. Organizational Unit:

Department Name:	Division Name:
MS Department of Education	Office of Research and Statistics

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

Prefix:	Mr.	* First Name:	John
Middle Name:	O		

* Last Name: Gilbert

Suffix:

Title: Director, Office of Educational Accountability

Organizational Affiliation:

MS Department of Education

* Telephone Number: (601)359-5254 Fax Number: (601)359-1748

* Email: JGILBERT@MDE.K12.MS.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:

Institute of Education Sciences;(IES) Grant Program for Statewide Longitudinal Data Systems Recovery Act Program (ARRA) CFDA 84.384A

13. Competition Identification Number:

Title:

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

All 82 counties within the state of Mississippi

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

Mississippi Integrated Education and Workforce Longitudinal Data System:
A Management Tool to Improve Student Achievement and Economic Competitiveness

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: MS-002

* b. Program/Project: MS-ALL

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

Attachment:

Title :

File :

17. Proposed Project:

* a. Start Date: 10/10/2010

* b. End Date: 9/30/2013

18. Estimated Funding (\$):

a. Federal	\$ 10004006
b. Applicant	\$ 0
c. State	\$ 92061
d. Local	\$ 0
e. Other	\$ 0
f. Program Income	\$ 0
g. TOTAL	\$ 10096067

*** 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 12/4/2009.

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: Mr. * First Name: John
Middle Name: O
* Last Name: Gilbert
Suffix:

Title: Director, Office of Educational Accountability

* Telephone Number: (601)359-5254 Fax Number: (601)359-1748

* Email: JGILBERT@MDE.K12.MS.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:
Mississippi 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	\$ 104,528	\$ 98,044	\$ 98,044	\$ 0	\$ 0	\$ 300,616
2. Fringe Benefits	\$ 27,132	\$ 25,332	\$ 25,332	\$ 0	\$ 0	\$ 77,796
3. Travel	\$ 10,000	\$ 10,000	\$ 10,000	\$ 0	\$ 0	\$ 30,000
4. Equipment	\$ 10,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,000
5. Supplies	\$ 2,000	\$ 2,000	\$ 2,000	\$ 0	\$ 0	\$ 6,000
6. Contractual	\$ 4,708,588	\$ 1,848,917	\$ 2,163,372	\$ 0	\$ 0	\$ 8,720,877
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
9. Total Direct Costs (lines 1-8)	\$ 4,862,248	\$ 1,984,293	\$ 2,298,748	\$ 0	\$ 0	\$ 9,145,289
10. Indirect Costs*	\$ 456,111	\$ 186,524	\$ 216,082	\$ 0	\$ 0	\$ 858,717
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 5,318,359	\$ 2,170,817	\$ 2,514,830	\$ 0	\$ 0	\$ 10,004,006

***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 9.4%

(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:
Mississippi 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	\$ 39,983	\$ 13,459	\$ 13,459	\$ 0	\$ 0	\$ 66,901
2. Fringe Benefits	\$ 10,318	\$ 3,466	\$ 3,466	\$ 0	\$ 0	\$ 17,250
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)	\$ 50,301	\$ 16,925	\$ 16,925	\$ 0	\$ 0	\$ 84,151
10. Indirect Costs	\$ 4,728	\$ 1,591	\$ 1,591	\$ 0	\$ 0	\$ 7,910
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 55,029	\$ 18,516	\$ 18,516	\$ 0	\$ 0	\$ 92,061

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: John O. Gilbert

Title: Director of Educational Accountability

Date Submitted: 12/03/2009

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: John O. Gilbert Title: Director of Educational Accountability Applicant: Mississippi Department of Education Date: 12/03/2009	
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

Mississippi Department of Education

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: First Name: John Middle Name: O

Last Name: Gilbert Suffix:

Title: Director of Educational Accountability

Signature: _____ Date: 12/03/2009

**SUPPLEMENTAL INFORMATION
REQUIRED FOR
DEPARTMENT OF EDUCATION GRANTS**

1. Project Director:

Prefix: * First Name: Middle Name: * Last Name: Suffix:
Mr. John O Gilbert

Address:

* Street1: 359 North West Street
Street2:
* City: Jackson
County: Hinds
* State: MS* Zip / Postal Code: 39205 * Country: USA

* Phone Number (give area Fax Number (give area
code) code)
(601)359-5540 (601)359-1748

Email Address:

JGILBERT@MDE.K12.MS.US

2. Applicant Experience

Novice Applicant Yes No Not applicable

3. Human Subjects Research

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

Yes No

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

Yes Provide Exemption(s) #:

No Provide Assurance #, if available:

Please attach an explanation Narrative:

Attachment:

Title :
File :

Project Narrative

Project Narrative - Project Abstract

Attachment 1:

Title: **MS-SLDS Project Abstract** Pages: **1** Uploaded File: **MS-SLDS Project Abstract.pdf**

Project Abstract

Mississippi Integrated Education and Workforce Longitudinal Data System: A Management Tool to Improve Student Achievement and Economic Competitiveness

Since 2004, Mississippi has made considerable progress toward the development and establishment of a statewide integrated education and workforce longitudinal data system. Today, the system relies on strong political leadership, common vision and mission, sustainable partnerships, and inclusive governance and management plan for data sharing. It also relies on a data clearing house containing education and workforce data back to 2001 that is managed by a group with the expertise in data management and analysis, technology, and software development necessary to produce useful, accurate, reliable, and timely information. The data come from systems managed by the Mississippi Department of Education, State Board of Community and Junior Colleges (and its fifteen member institutions), Institutions of Higher Learning (and its eight member institutions), Mississippi Department of Employment Security, Mississippi Department of Human Services, Mississippi Department of Rehabilitation Services, and Mississippi Department of Corrections. Many education and workforce leaders have recognized the importance and the value of such a system as it has been used to generate information to inform policymakers and stakeholders on student achievement and workforce outcomes.

While the current model has served the state well over the last five years, it is not without limitations in regard to the latest national standards. The system has limited interoperability; that is, data can be made available on request from the data warehouse upon receiving written permission from the owner of the data. Reports can be generated on outcomes with the current system, but they are quite time-consuming. There is no statewide mechanism that facilitates easy, timely, efficient and reliable interoperability between state and local data systems. While each entity has its own internal quality control for data integrity, there is no statewide policy for data quality assurance. Several system partners need infrastructure upgrades for data collection, exchange, and reporting. Some data elements specific to the America COMPETES Act are not readily available in distinct fields despite the availability of the data within the system. Finally, the system lacks the necessary data to link PK with P-20.

With the help of additional funds, the state is committed to completing and institutionalizing a statewide, integrated education and workforce longitudinal data system, as set forth by the RFA. It is the intent of Mississippi to achieve the following outcomes: (1) Include all missing data elements as prescribed by the America COMPETES Act; (2) Create a relational database linking all education (K-20) and workforce data through a unique common identifier that does not permit an individual to be identified by users of the system; (3) Develop an online one-stop portal that will provide access to the relational database and make the system universally interoperable; (4) Develop the hardware and software capacity for building and hosting the relational database and the one-stop portal; (5) Upgrade each partner with the appropriate infrastructure and technology for data collection, storage, and use; (6) Develop and adopt a statewide, comprehensive policy on data quality assurance; (7) Train state and local personnel on data entry and use to facilitate full adoption and effective use of the system; and (8) Include all the necessary data to link PK with K-20.

The State Workforce Investment Board (SWIB) will have oversight of data ownership and stewardship over the course of the project. It will also coordinate activities with a project director, two project managers (IT project manager and project system development manager), and a data council. The council will provide subject matter expertise at all levels and appropriate research knowledge.

Project Narrative

Project Narrative - Project Narrative

Attachment 1:

Title: **MS-SLDS Project Narrative** Pages: **30** Uploaded File: **MS-SLDS Project Narrative.pdf**

GRANTS FOR STATEWIDE, LONGITUDINAL DATA SYSTEMS UNDER THE
AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

CFDA NUMBER: 84.384

**Mississippi Integrated Education and Workforce Longitudinal Data System:
A Management Tool to Improve Student Achievement and Economic Competitiveness**

Project Narrative Summary

Since 2004, Mississippi has made considerable progress toward the development and establishment of a statewide integrated education and workforce longitudinal data system. Today, the system relies on strong political leadership, common vision and mission, sustainable partnerships, and inclusive governance and management plan for data sharing. It also relies on a data clearing house containing education and workforce data back to 2001 that is managed by a group with the expertise in data management and analysis, technology, and software development necessary to produce useful, accurate, reliable, and timely information. The data come from systems managed by the Mississippi Department of Education, State Board of Community and Junior Colleges (and its fifteen member institutions), Institutions of Higher Learning (and its eight member institutions), Mississippi Department of Employment Security, Mississippi Department of Human Services, Mississippi Department of Rehabilitation Services, and Mississippi Department of Corrections. Many education and workforce leaders have recognized the importance and the value of such a system as it has been used to generate information to inform policymakers and stakeholders on student achievement and workforce outcomes.

While the current model has served the state well over the last five years, it is not without limitations in regard to the latest national standards. The system has limited interoperability; that is, data can be made available on request from the data warehouse upon receiving written permission from the owner of the data. Reports can be generated on outcomes with the current system, but they are quite time-consuming. There is no statewide mechanism that facilitates easy, timely, efficient and reliable interoperability between state and local data systems. While each entity has its own internal quality control for data integrity, there is no statewide policy for data quality assurance. Several system partners need infrastructure upgrades for data collection, exchange, and reporting. Some data elements specific to the America COMPETES Act are not readily available in distinct fields despite the availability of the data within the system. Finally, the system lacks the necessary data to link PK with P-20.

With the help of additional funds, the state is committed to completing and institutionalizing a statewide, integrated education and workforce longitudinal data system, as set forth by the RFA. It is the intent of Mississippi to achieve the following outcomes: (1) Include all missing data elements as prescribed by the America COMPETES Act; (2) Create a relational database linking all education (K-20) and workforce data through a unique common identifier that does not permit an individual to be identified by users of the system; (3) Develop an online one-stop portal that will provide access to the relational database and make the system universally interoperable; (4) Develop the hardware and software capacity for building and hosting the relational database and the one-stop portal; (5) Upgrade each partner with the appropriate infrastructure and technology for data collection, storage, and use; (6) Develop and adopt a statewide, comprehensive policy on data quality assurance; (7) Train state and local personnel on data entry and use to facilitate full adoption and effective use of the system; and (8) Include all the necessary data to link PK with K-20.

The State Workforce Investment Board (SWIB) will have oversight of data ownership and stewardship over the course of the project. It will also coordinate activities with a project director, two project managers (IT project manager and project system development manager), and a data council. The council will provide subject matter expertise at all levels and appropriate research knowledge.

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Mississippi Integrated Education and Workforce Longitudinal Data System: A Management Tool to Improve Student Achievement and Economic Competitiveness

A. Need for Project

Introduction

An individual's education level is most often the primary determinant of his or her quality of life. The relatively low level of education in Mississippi is the primary reason for the state's low average income, high rates of obesity, teenage pregnancies, infant mortality, and an array of other problems. We know education is the key to ameliorating many of these problems. Mississippi's education needs are greater and resources are less than in any other state. This dictates that we become more efficient and effective with our limited resources. To be sure, a well-designed, integrated education and workforce longitudinal data system will help Mississippi allocate education and workforce resources in a more efficient and effective way with an eye toward improving educational achievement and economic competitiveness.

In the effort to better serve the needs of the public and to meet state and federal reporting requirements, education and workforce entities, more than ever, have a need for efficiently exchanging information and large amounts of raw data. Integrated information and data is one of the most crucial business functions in and across organizations, for it provides a comprehensive mechanism to track progress of and identify best practices in education and workforce initiatives.

To complete and institutionalize Mississippi's current integrated longitudinal data system along the national standards prescribed by this RFA, the state has a critical need to address two general limitations:

- **Limited Interoperability**
 - Data in the current system are stored in separate files and physical environments.
 - Data and information cannot be easily exchanged across system partners.
 - Data collection and management infrastructure needs to be upgraded for several system partners.

- **Data Gaps in Fields and Quality Assurance**
 - Some data elements specific to the America COMPETES Act are not readily available in distinct fields despite the availability of the data within the system.
 - Lack of data to link PK with P-20
 - A statewide comprehensive standard for data quality has not been developed or adopted.

- Training for data quality assurance is needed across system partners.

Over the course of this project, these two general limitations will be overcome by achieving eight objectives aimed at meeting all the required data elements and establishing efficient and reliable interoperability that will improve the overall utility, accuracy, reliability, and timeliness of the data.

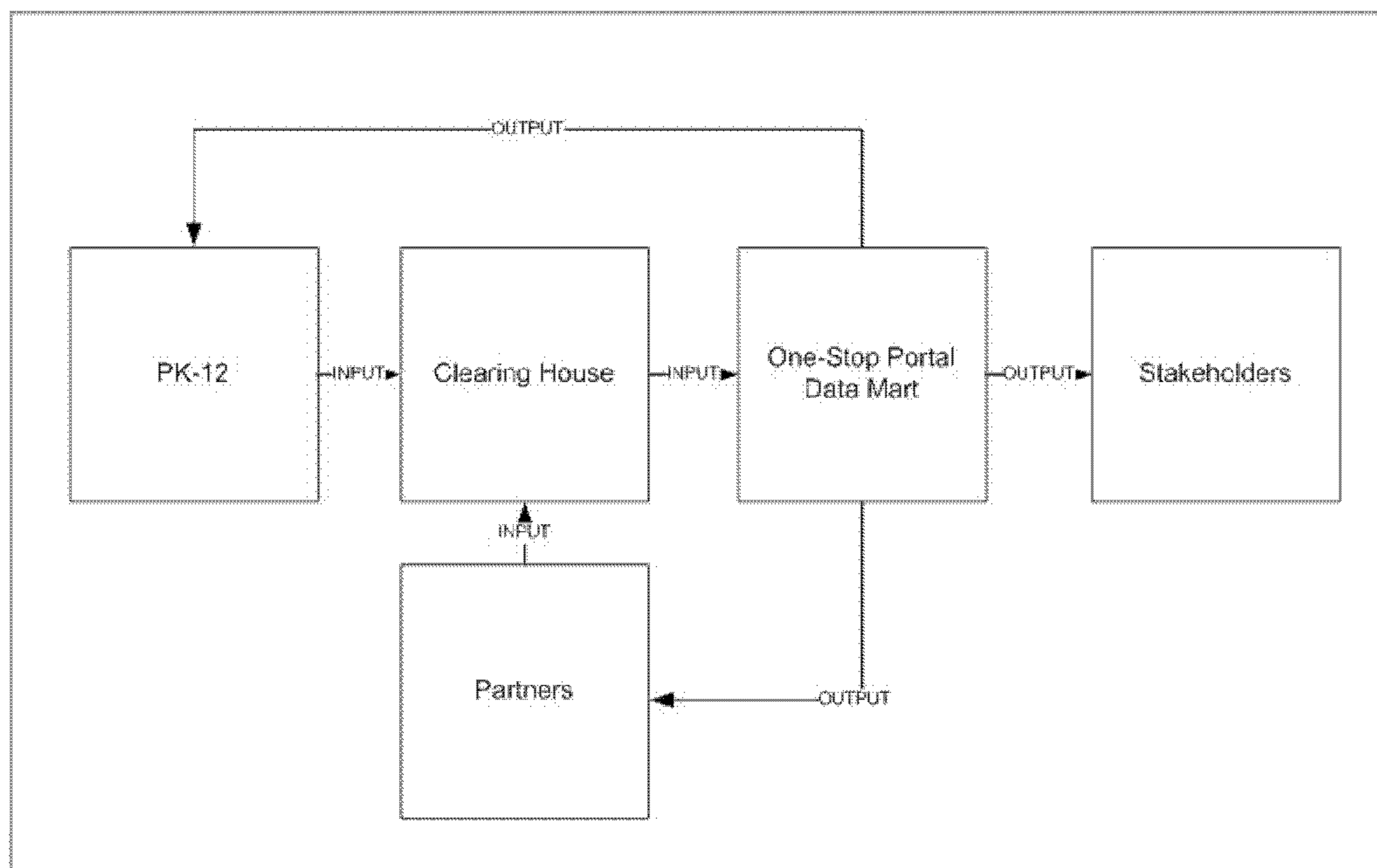
- Include all missing data elements as prescribed by the America COMPETES Act.
- Include all the necessary data to link PK with P-20
- Create a relational database linking all education and workforce data through a unique common identifier that does not permit an individual to be identified by users of the system.
- Develop an online one-stop portal that will provide access to the relational database and make the system universally interoperable.
- Develop the hardware and software capacity for building and hosting the relational database and one-stop portal.
- Upgrade each partner with the appropriate infrastructure and technology for data collection, storage, and use.
- Develop and adopt a statewide, comprehensive policy on data quality assurance.
- Train state and local personnel on data entry and use to facilitate full adoption and effective use of the system.

Mississippi is in an excellent position to complete and institutionalize a statewide, integrated education and workforce longitudinal data system, as set forth by the RFA. The state is committed to accomplishing this and has strong political leadership, a common vision and mission, sustainable partnerships, and an inclusive governance and management plan for data sharing. The state has also developed and implemented a data clearing house containing education and workforce data back to 2001 managed by a group with the expertise in data management and analysis, technology, and software development necessary to produce useful, accurate, reliable, and timely information. Most importantly, in the last few years, many education and workforce leaders have recognized the importance and the value of such a system, as it has been used to generate information to inform policymakers and stakeholders on student achievement and workforce outcomes.

The general blueprint for the system envisioned by Mississippi in this application is illustrated in Figure 1 (see page 3). First, this model illustrates how data from all system partners—education and workforce entities—will be transferred to the clearing house. Data will continue to come to the clearing house from systems managed by the Mississippi Department of Education, State

Board of Community and Junior Colleges (and its fifteen member institutions), Institutions of Higher Learning (and its eight member institutions), Mississippi Department of Employment Security, Mississippi Department of Human Services, Mississippi Department of Rehabilitation Services, Mississippi Department of Corrections, Mississippi Department of Health, and Mississippi Department of Mental Health. PK-12 data will be augmented with data from all education and workforce entities in the state. Second, in this process, unique individual-level identifiers will be created to replace Social Security Numbers and other personal identifiers. These data will then be inventoried, mapped, and used to create a relational database, which will be updated as new data are made available. Third, a Web-based interface will be developed through which the relational database can be accessed, queried, and analyzed by system partners and other stakeholders. A security protocol based on user permission that will clearly articulate what data will be accessible to which user and for what purposes will be instituted.

Figure 1: Mississippi Model



The full implementation of this model will allow Mississippi to:

- Generate and make available accurate, reliable, and timely data.
- Support informed decision making at all levels of the education and workforce system.
- Increase the efficiency and effectiveness with which data will be analyzed to support the continuous improvement of education and workforce services and outcomes.
- Promote a clear research agenda to examine factors that will help improve student achievement, close achievement gaps, improve quality of instruction, and promote economic competitiveness.
- Support state and federal accountability systems and public reporting.

Background

Since 2004, Mississippi has made considerable progress toward the development and establishment of a statewide integrated education and workforce longitudinal data system. The National Governors Association recognized Mississippi's model as one of the most innovative and effective data systems in the country. That is, from the outset, Mississippi recognized that establishing links between data systems is not enough to create a coherent, effective, and sustainable state longitudinal data system. A successful model relies on: (1) strong political leadership, (2) a common vision and mission, (3) sustainable partnerships, and (4) an inclusive governance and management plan for data sharing.

Strong political leadership. When Haley Barbour became governor of Mississippi in 2004, he worked with the State Legislature to pass the Mississippi Comprehensive Workforce Training and Education Act of 2004. The act created an environment conducive to forging and supporting a unified, performance-based education and workforce system. The adoption of common goals and performance measures by all education and workforce partners and the establishment of the Integrated Longitudinal Education and Workforce Performance Management System are two of the most significant outcomes of the act. More recently, the State Legislature passed the Children First Act of 2009, with the goal of providing a quality education to every student through an accountable, transparent, and data-driven system.

A common vision and mission. The state's political environment and cooperation between multiple stakeholders have led to the development of a common vision and mission.

Vision: To create a world-class education system that gives students the knowledge and skills to be successful in college and the workforce and flourish as parents and citizens.

Mission: To provide leadership through the development of policy and accountability systems so that all students are prepared to compete in the global community and to integrate education, training, and workforce services into a data-driven system that is flexible and dynamic enough to rapidly adapt to changes in social and economic conditions to prepare Mississippians with the education and skills necessary to maintain and increase economic competitiveness in the state.

Sustainable partnerships. Like the rest of the nation, Mississippi's education sectors have traditionally operated independently. But in the last few years, there has been a realization that these systems must be interconnected to provide for seamless transitioning if the state wants to improve student achievement and increase economic competitiveness. Indeed, the jobs of the future will require some form of college credential along with specialized skills. As a result, the state's education and workforce entities have built partnerships ultimately resulting in Mississippi joining the NGA's consortium of states agreeing to jointly develop and adopt, by September 2010, a common set of internationally benchmarked PK-12 standards that align high school curricula and assessments to make sure that students are on track to achieve ACT College Readiness Benchmarks and work-ready expectations. Among education sectors, these partnerships are currently used to address the following common issues: (1) increasing high school and college graduation rates; (2) reducing the average number of years to complete a

college degree; (3) facilitating successful transitions from two-year to four-year colleges; (4) improving teacher quality, (5) offering a rigorous course of study in sciences, technology, engineering, and mathematics (STEM); (6) cooperating with industry experts, museums, universities, or other STEM-capable community partners to prepare and assist teachers in integrating STEM across grades and disciplines; and (7) preparing more students for advanced study and careers in STEM fields. These institutions are also partnered with the workforce system to ensure that our students are workforce-ready.

An inclusive governance and management plan for data sharing. A successful data system rests upon a governance structure that involves both state and local stakeholders in the system's design and implementation. Therefore, the governance goal in Mississippi was to identify the entities responsible for the operations of the statewide longitudinal data system and to include a common understanding of data ownership, management, confidentiality, and access. In this respect, the State Workforce Investment Board, along with its partners, functions as the main body for the governance and oversight of data usage across multiple systems. As part of the state's commitment to establishing a longitudinal data system, the governor issued an executive order to ensure compliance with state and federal regulations and lay the groundwork for institutionalization of the system. Education and workforce entities have also shown their commitment to establishing the system by sharing their data as prescribed by memorandums of understanding (MOUs). These MOUs allow each partner to retain ownership and oversight of its shared data. To date, MOUs for data sharing are in place for the Mississippi Department of Education, State Board of Community and Junior Colleges (and its fifteen members), Institutions of Higher Learning (and its eight members), Mississippi Department of Employment Security, Mississippi Department of Human Services, Mississippi Department of Rehabilitation Services, and Mississippi Department of Corrections.

In collaboration with education and workforce partners, the State Workforce Investment Board developed a management plan to overcome technical differences and ensure data security. The general strategy was to adopt the data warehouse model to accommodate differences in management information systems. This model was also used to facilitate development of common standards, data structure, and data format. Because the system is cooperative, it belongs to all partners and resides in a neutral location managed by the National Strategic Planning & Analysis Research Center (nSPARC) at Mississippi State University. nSPARC's infrastructure and technical expertise in data management and analysis, technology, and software development ensures data security and integrity of the system.

Current Systems and Limitations

Each education and workforce entity involved in the establishment of the longitudinal data system has its own distinct management information system. These systems were originally designed to meet annual reporting requirements, not to track progress over time. However, they all collect relevant data that can be linked to build a longitudinal data system that examines student progress and outcomes over time and determines if students are college- and workforce-ready.

Student-level data can be linked to teachers, and teachers can be linked to information on certification and preparation programs. PK-12 student data can also be linked to examine transitions from high school to post-secondary education. PK-20 data, in turn, can be linked to examine participation in workforce programs and transitions into the labor market. Finally, the state has the data necessary to produce reporting progress on the metrics established by the State Fiscal Stabilization Fund and reporting requirements included in the ED Facts data collection reporting system.

While the current model has served the state well over the last five years, it is not without limitations in regard to the latest national standards. The system has limited interoperability; that is, data can be made available on request from the data warehouse upon receiving written permission from the owner of the data. Reports can be generated on outcomes with the current system, but they are quite time-consuming. There is no statewide mechanism that facilitates easy, timely, efficient and reliable interoperability between state and local data systems. While each entity has its own internal quality control for data integrity, there is no statewide policy for data quality assurance. Several system partners need infrastructure upgrades for data collection, exchange, and reporting. Some data elements specific to the America COMPETES Act are not readily available in distinct fields despite the availability of the data within system partners. Finally, there is a lack of data to link PK with P-20.

The current data warehouse includes data from systems maintained by:

Mississippi Department of Education (MDE). MDE currently maintains and facilitates several statewide databases that collect information at the student, teacher, administrator, school, district, and state levels. The backbone of this system is referred to as MSIS (Mississippi Student Information System). Other databases maintained by MDE include those for Teacher Licensure, Mississippi Online Technology Evaluation, Migrant Information System, special education, English language learners, homeless, and student assessment.

In 2009, MDE was awarded a longitudinal data grant. The overall objective of this grant is to inventory and map MDE data for integration with MSIS. Accomplishing this objective will improve overall data quality within MSIS and facilitate the link of MSIS with postsecondary and workforce data, which is the focus of this proposed project.

As the backbone of the MDE data system, MSIS provides for the electronic collection and storage of comprehensive data on public school teachers, administrators, students (PK-12), and school board members, going back as far as the 2001-2002 academic year. MSIS also allows for the electronic transfer of student records from one school district to another. Data are collected on a daily and monthly basis. MSIS is designed to accept an XML file submission of specific student and personnel data elements from a district. On a monthly basis, each district builds an XML file that is submitted to a holding area where MSIS runs a series of checks. Upon completion of all checks, a report is produced for each district to review and approve. When the report is approved, MSIS automatically moves the data from the virtual holding area to the MSIS final database.

One of the major limitations of MSIS is that its originally intended purpose was to collect data from local school districts to meet reporting requirements at the state and federal levels. MSIS was never envisioned as a longitudinal data system, but it will be a great feeder system for a longitudinal system that is interoperable and capable of tracking progress and outcomes over time.

Institutions of Higher Learning (IHL). In Mississippi, there are eight public universities, and each university collects its own data. The data files within the IHL system originate with the individual institutions. Institutions generate these files according to mutually agreed-upon data definitions and submit them according to predetermined file layouts and reporting deadlines. The IHL office edits these data files, ensuring the data are both accurate and historically consistent. Any data file found to be unsatisfactory is returned to the reporting institution for revision. In some cases this back-and-forth process can occur several times, which is both burdensome and inefficient. Institutions typically have twenty (20) working days to finalize their data. Data are considered to be preliminary during this cycle and become final once the institution and IHL deem the data to be acceptable. The IHL database includes files on students, enrollment, courses, outcomes, remedial education, and degrees. IHL also has a database on faculty and staff of every university and data on the GEAR UP Mississippi program, which is designed to address alignment and adequate preparation of high school students for success in postsecondary education. Over the last five years, data have been inventoried and mapped, and data dictionaries have been created for each database of this agency.

State Board of Community and Junior Colleges (SBCJC). SBCJC is the coordinating agency for the 15 community and junior colleges of Mississippi. Each college has its own management information system and collects its own data. Colleges submit the following files to the SBCJC at the end of each semester (summer, fall, and spring): (1) student, (2) course, (3) student schedule, and (4) instructor. Each college also submits an annual graduation file. In addition to the files reported to the SBCJC, the community colleges report quarterly workforce training data to the Workforce Performance Management System mandated by the State Workforce Investment Board. They also submit annual reports on career and technical students to the Mississippi Department of Education, as required by the federal Perkins Act. Finally, SBCJC administers the Adult Basic Education program. Over the past five years, data have been inventoried and mapped, and data dictionaries have been created for each database of this agency. Additional data elements will be required to inform a statewide longitudinal data system. Those elements will have to be added to the college and agency systems.

SBCJC's current system for data collection is outdated and relies on a third-party vendor to convert college file uploads into database files that are then downloaded for access by SBCJC staff charged with enrollment verification and research. The system does not have a sufficient means of pre-submission error validation and no cross-file validations (e.g., course and instructor). As a result, the process is cumbersome and routinely results in lengthy delays in the verification of student admission and attendance records required to certify college records as official. A complete system upgrade, including hardware, software, and programming, is needed to create a more efficient and manageable in-house data collection mechanism that would ensure valid, reliable, and timely data collection required for a longitudinal data system.

Mississippi Department of Employment Security (MDES). MDES is the primary agency for the delivery of employment and workforce services in the state. The agency provides eight databases containing more than 100 files for all the employment training and service programs it administers. The backbone of this system is the Wage Records Database, which contains quarterly wage and employment information on all covered employees in Mississippi, and the Business Tax Database, which contains information on industry classifications, number of employees, geographic location, and taxes for all businesses in the Mississippi Covered Employment System. An additional six databases provide detailed demographic, economic, geographic, and payment information for all individuals applying for and receiving unemployment insurance benefits, as well as for individuals receiving employment training and job services through the Wagner-Peyser, Workforce Investment Act, Summer Youth, Trade, and Rapid Response programs. Over the last five years, data have been inventoried and mapped, and data dictionaries have been created for each database of this agency.

Mississippi Department of Human Services (MDHS). MDHS provides data from its public assistance database, which contains information on all individuals participating in the agency's TANF and SNAP programs. The database is comprised of seven files, which contain detailed information on the demographic, economic, and geographic characteristics of clients and cases, level of benefits received, and reasons for case closures. This agency will also coordinate the collection of data from the Child Care Information System (CCIS processes child care certificates) and early childhood development.

Mississippi Department of Rehabilitation Services (MDRS). MDRS provides information on training and education services for disabled individuals. One individual-level file comprises the MDRS training database and includes demographic, economic, geographic, and disability characteristics of individuals, as well as type of training, education, and technology assistance provided.

Mississippi Department of Corrections (MDOC). MDOC provides information on all offenders housed in state, regional, county, and private prisons in Mississippi and on paroled and probated offenders. Five offender-level files comprise the MDOC database: (1) offender demographics, occupational characteristics, and location of conviction; (2) type of offense committed and sentencing; (3) location of incarceration; (4) expected time of release and release status; and (5) training and education programs in which offenders enroll.

Current data warehouse model. Data from each entity are transferred to the clearing house at nSPARC. Each file is independently managed and stored. nSPARC protects information in all forms, for which it is the custodian, and maintains a robust, proactive, and evolving information security program. This program protects information from a variety of threats and stresses the importance of multi-layer protection. Through staff orientation, Institutional Review Board for the Protection of Human Subjects (IRB) certification, university information security certification, and regular staff meetings, each nSPARC staff member is aware of, committed to, and accountable for his or her role in the overall protection of critical and sensitive information.

In addition to personal accountability, nSPARC identifies best practices to ensure ongoing protection of information and timely and appropriate responses in the event of an information

security breach. In the interest of ongoing security, specific details regarding steps taken to ensure data and system integrity are not disclosed. nSPARC does, however, operate in a restricted access environment and maintains a “clean room” for all management and analysis of sensitive data. Random security audits are conducted to maintain data and system integrity.

All data transferred to nSPARC for management and analysis are governed by MOUs that establish specific terms, conditions, and limitations on the use of custodial data. Furthermore, all sensitive data for which nSPARC is the custodian are transferred via a secure Web server that relies on HTTPS Protocol. Uploaded data are encrypted using SSL/TLS with a 128-bit key. Once received, all files are automatically encrypted using an RSA 4096-bit key and moved to a secure offline location for storage. All primary identifiers (e.g., names, street addresses, telephone numbers, and identification numbers) are stripped from datasets once unique alternate identification codes have been assigned. Information security policies and procedures are continually reviewed and evolve in response to changing information security technologies, requirements, and threats.

Under the auspices of the Governor’s Office and the State Workforce Investment Board, the current integrated system has been used to address four questions of interest to all education and workforce partners:

1. Are Mississippians able to secure employment after receiving training or completing postsecondary degrees?
2. Are Mississippians engaging in education and skill development better able to retain employment over time?
3. Do Mississippians get better pay after receiving training or completely postsecondary degrees?
4. Do Mississippians who receive training and degrees meet the education and job skill demands of business and industry?

By linking college data with employment data, we are able to determine workforce outcomes for four-year college graduates by university, college, discipline, and/or other variables. Our data show that approximately 80 percent of college graduates are able to obtain employment within one year of graduation and that those with business and marketing degrees are in high demand in the state. We also know that our graduates’ first jobs are predominantly entry-level and pay an average of \$30,000 a year. Because we are able to track graduates over time, we know our graduates’ wages increase, on average, by 60 percent within five years as a result of gaining necessary skills while on the job. After five years, their wages increase, on average, three to five percent each subsequent year. The data also show that 10 percent of four-year college graduates, upon receiving degrees, seek job skill development through community colleges or career technical programs.

The system has also been successfully used to track two-year college enrollees by college and degree as they transfer to four-year colleges or enter the workforce. By linking high school data

with college and employment data, we are beginning to examine how preparation in high school affects success in postsecondary education and the workforce. A special focus will be placed on students who need remedial education and job skill development and on linking student assessment data, IHL data, and teacher licensure data in regard to the state's IHL and alternate route teacher and administrator preparation programs. Data from other education and workforce entities can also be managed and analyzed to track participants and measure progress and outcomes by program (WIA, TANF, Corrections, etc.), type of training (on-the-job training, career readiness, etc.), location, funding source, and/or other variables.

Current data warehouse limitations. Data are stored in independent silos maintained in physically distinct environments. While the various databases contain individual-level data that can be linked by common identifiers, storing data in this way increases the effort required to design and conduct cross-system analyses because files have to be managed and linked one by one. Another limitation is that data stored in the warehouse cannot be readily accessed by or exchanged between education and workforce entities.

Plan of action to address limitations. A relational database that can be accessed through an online one-stop portal will eliminate the inefficiencies and limitations of the current data warehouse model and allow partners to access more robust and timely information on their programs and the system as a whole.

Over the course of this project, the relational database will be developed based on specific requirements for data quality, reporting, and analysis. In order to create a unified, enterprise/statewide data architecture to fulfill partner, agency, federal reporting, and research needs, several components will require specification, including the data model, data dictionary, data integrity and business rules, quality assurance procedures, and OLAP data structures. The data architecture will be implemented using an enterprise-level relational database system (e.g., Oracle or DB2) to provide the full range of features and functionality required for the backend of the Web portal system.

As part of the development of the data architecture, nSPARC will create an inventory of data collected by all partners and perform an analysis to identify the requirements for the development of the relational database. Based on the results of this analysis, nSPARC will identify where data collection programs and procedures require revision and upgrading, make recommendations, identify solutions, and implement upgrades as required.

A key feature of the integrated system will be a one-stop, FERPA-compliant, Web-based business intelligence portal, which will feature customized J2EE applications, developed by nSPARC, to allow for easy automated analysis as well as complex ad hoc reporting. Programmers will design methods for data reporting and presentation using SAS Business Intelligence software, which will offer a wide variety of reports, tables, charts, graphs, and other products to meet the information needs of one-stop portal users and facilitate the development of transparent reporting mechanisms to meet reporting requirements of federal ARRA programs. SAS Business Intelligence software also allows the user to conduct various types of statistical analysis. Data extraction and exporting will be based on standardized XML formatting to ensure the highest level of interoperability and sharing with system partners.

Security will be provided on multiple levels, including SSL encryption, user-specific data access controlled via user accounts, and access control lists (ACLs) for all data. System security features will be designed and implemented to ensure secure access by authorized personnel only, with all reporting features in compliance with FERPA and other state and federal law. This directory and role-based approach to security will allow nSPARC to accommodate future growth of the integrated system and ensure interoperability with all partners.

The hardware platform of the integrated system will be built around the x86 architecture for easy accessibility, portability, and scalability to meet user demands. Servers will operate on the Linux platform to further maximize the reliability and operability of the integrated system. Moreover, we will optimize our operational capacity and efficiency by incorporating virtualization and cloud computing as part of the system's implementation.

The State Data Center, operated by the Mississippi Department of Information Technology Services (ITS), will provide application hosting services for the proposed longitudinal data system.

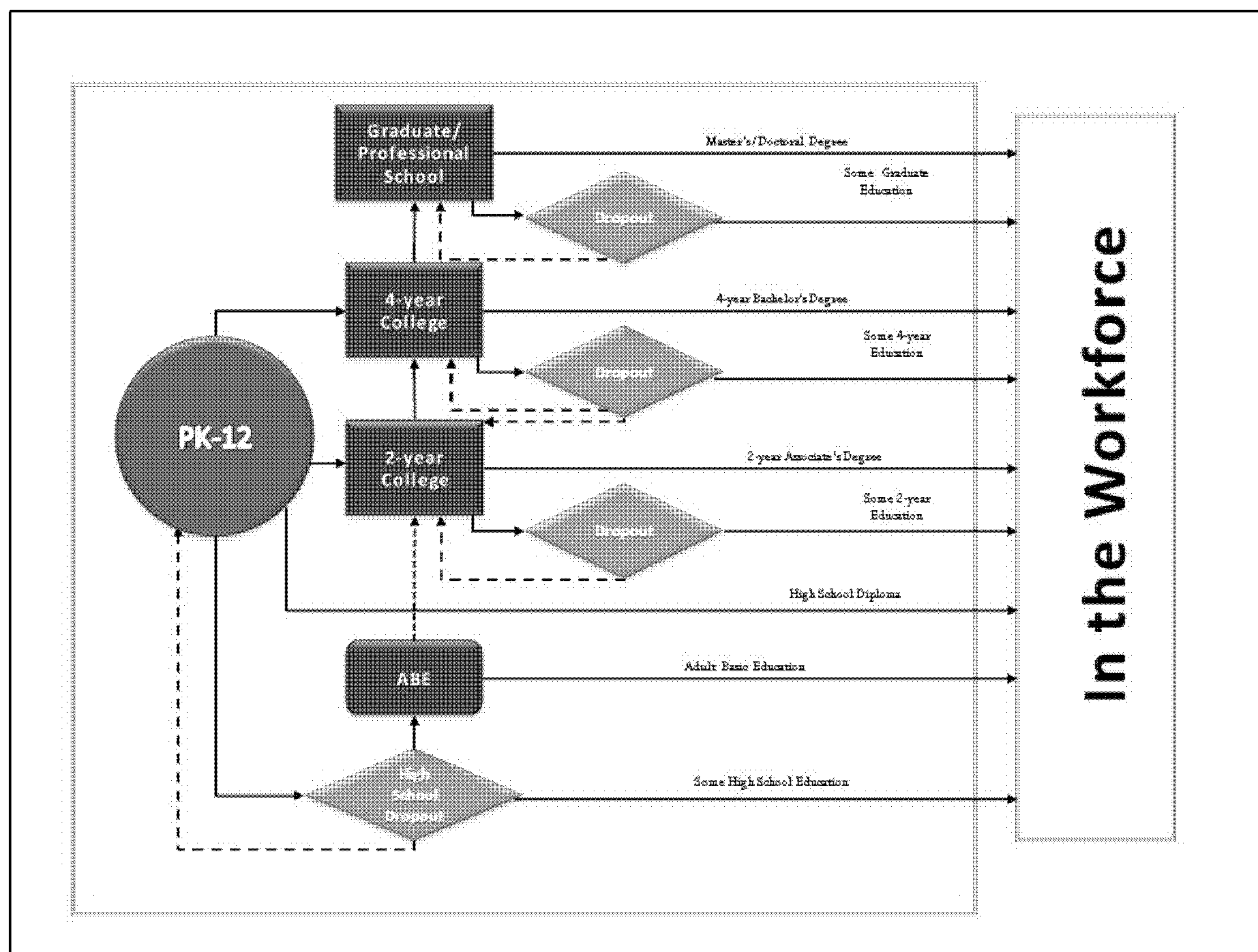
Data Elements and Gaps

A unique statewide student identifier. Currently, there is not a unique student identifier, other than the Social Security Number, common across all education and workforce entity data. While each system might have its own unique non-identifiable ID, these IDs are not common across the system. To overcome this limitation, nSPARC has developed an algorithm that uses the SSN as the base for creating a 10-digit unique identifier. This procedure is being used successfully in the current data warehouse system and will be the method to create a statewide unique identifier that enables tracking individuals over time and across programs.

Student-level enrollment, demographic, and program participation information. These data elements are currently present in individual education and workforce entity data.

Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs. These data elements are not directly captured in the current data system; however, with cross-program analysis through the current data warehouse system, those transitions can be identified, and the appropriate fields can be created, as illustrated in Figure 2.

Figure 2: Education Transitions

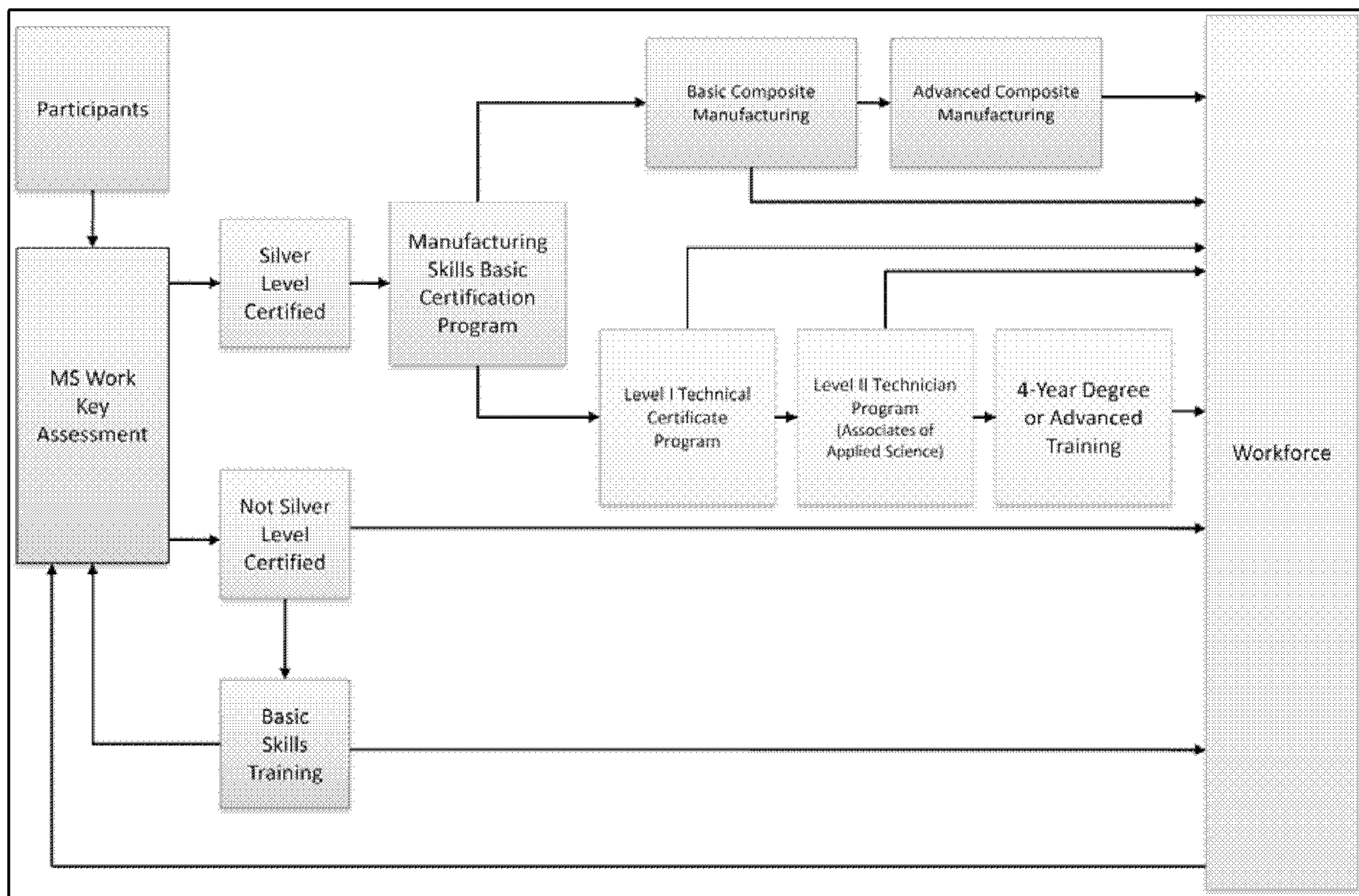


Current data also allow for tracking transitions from the workforce to education and workforce programs. For those in the workforce, the state has adopted a sector-based strategy where participants are directed to the appropriate education and job skill development pathway. This model is illustrated in Figure 3 on page 13. Following this general model, individuals in the workforce are first screened to see if they meet minimum education requirements.

The capacity to communicate with higher education data systems. This capacity technically exists in the current system via cross-program analysis and will be fully automated with the establishment of the statewide unique identifier and the implementation of the relational database.

A State data audit system assessing data quality, validity, and reliability. Currently, each system has its own audit process. With the establishment of the enterprise-wide data architecture, a statewide data audit system will be developed and adopted. This will include a campaign to ensure statewide understanding of what constitutes “data quality” under the longitudinal data system envisioned in this application. Training will be provided to ensure the use of standardized procedures for data entry and data transfer.

Figure 3: Workforce to Education and Job Skill Pathways



Yearly test records of individual students with respect to amendments under section 1111(b) of the Elementary and Secondary Education Act of 1965. These data elements are currently present in all education and workforce entity data.

Information on students not tested, by grade and subject. Technically, this information can be determined in the system, but there is no data element that directly captures this information. This element will be developed as part of the proposed project.

A teacher identifier system with the ability to match teachers to students. The system currently has this capacity throughout K-20.

Student-level transcript information, including information on courses completed and grades earned. Technically, all the data elements necessary to generate an e-transcript in the state are collected at the district level but are not currently included in MSIS. The information is in the process of being included. Course and credit information for courses taken while enrolled as a student in Mississippi is captured; elements of transfer credits received are captured at the district level.

Student-level college readiness test scores. This element is in the process of being included. The MDE has requested student-level data from ACT (taken by more than 90 percent of a graduation cohort) for 2009.

