

U.S. Department of Education

Washington, D.C. 20202-5335



**APPLICATION FOR GRANTS
UNDER THE**

Statewide, Longitudinal Data Systems

CFDA # 84.372A

PR/Award # R372A120028

Grants.gov Tracking#: GRANT11026368

OMB No. , Expiration Date:

Closing Date: Dec 15, 2011

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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

* 1. Type of Submission:

- Preapplication
- Application
- Changed/Corrected Application

* 2. Type of Application:

- New
- Continuation
- Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

12/15/2011

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

09/26/2011

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Kentucky Department of Education

* b. Employer/Taxpayer Identification Number (EIN/TIN):

61-0600439

* c. Organizational DUNS:

1025944260000

d. Address:

* Street1:

500 Mero Street

Street2:

* City:

Frankfort

County/Parish:

Franklin

* State:

KY: Kentucky

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

40601-0000

e. Organizational Unit:

Department Name:

Kentucky Dept of Education

Division Name:

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

Prefix:

Mr.

* First Name:

Charles

Middle Name:

* Last Name:

McGrew

Suffix:

Title:

P-20 Executive Director

Organizational Affiliation:

Kentucky Department of Education

* Telephone Number:

(502) 564-2651

Fax Number:

502-564-9504

* Email:

Charles.McGrew@ky.gov

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

U.S. Department of Education

11. Catalog of Federal Domestic Assistance Number:

84.372

CFDA Title:

Statewide Data Systems

*** 12. Funding Opportunity Number:**

ED-GRANTS-092011-001

* Title:

Institute of Education Sciences (IES): Statewide, Longitudinal Data Systems Program CFDA Number 84.372A

13. Competition Identification Number:

84-372A2012

Title:

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

 Add Attachment

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

The Future of Kentucky's P-20 Collaborative: Improving Connections to Postsecondary Education, Educator Preparation Programs, and the Workforce

Attach supporting documents as specified in agency instructions.

Add Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant

b. Program/Project

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

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal	3,633,928.00
* b. Applicant	(b)(4)
* c. State	(b)(4)
* d. Local	(b)(4)
* e. Other	(b)(4)
* f. Program Income	(b)(4)
* g. TOTAL	(b)(4)

*** 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 in attachment.)**

Yes No

If "Yes", provide explanation and attach

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: * First Name:
Middle Name:
* Last Name:
Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative: * Date Signed:

ASSURANCES - NON-CONSTRUCTION PROGRAMS

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

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

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

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

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

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

<p>* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</p> <p>Dede Conner</p>	<p>* TITLE</p> <p>Commisioner, Kentucky Department of Education</p>
<p>* APPLICANT ORGANIZATION</p> <p>Kentucky Department of Education</p>	<p>* DATE SUBMITTED</p> <p>12/15/2011</p>

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

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

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

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

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

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

Statement for Loan Guarantees and Loan Insurance

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

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

* APPLICANT'S ORGANIZATION	
<input style="width: 90%;" type="text" value="Kentucky Department of Education"/>	
* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE	
Prefix: <input style="width: 50px;" type="text" value="Mr."/>	* First Name: <input style="width: 200px;" type="text" value="Terry"/> Middle Name: <input style="width: 150px;" type="text"/>
* Last Name: <input style="width: 300px;" type="text" value="Holliday"/>	Suffix: <input style="width: 80px;" type="text" value="Ph.D"/>
* Title: <input style="width: 300px;" type="text" value="Commissioner, Kentucky Department of Education"/>	
* SIGNATURE: <input style="width: 300px;" type="text" value="Dede Conner"/>	* DATE: <input style="width: 150px;" type="text" value="12/15/2011"/>

SUPPLEMENTAL INFORMATION
REQUIRED FOR
DEPARTMENT OF EDUCATION GRANTS

1. Project Director:

Prefix: * First Name: Middle Name: * Last Name: Suffix:

Mr. Charles McGrew

Address:

* Street1: 500 Mero Street

Street2:

* City: Frankfort

County: Franklin

* State: KY: Kentucky

* Zip Code: 40610-0000

* Country: USA: UNITED STATES

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

502-564-2651 502-564-9504

Email Address:

Charles.McGrew@ky.gov

2. Applicant Experience:

Novice Applicant Yes No Not applicable to this program

3. Human Subjects Research

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

Yes No

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

Yes Provide Exemption(s) #:

No Provide Assurance #, if available:

Please attach an explanation Narrative:

Abstract

The abstract narrative must not exceed one page and should use language that will be understood by a range of audiences. For all projects, include the project title (if applicable), goals, expected outcomes and contributions for research, policy, practice, etc. Include population to be served, as appropriate. For research applications, also include the following:

- Theoretical and conceptual background of the study (i.e., prior research that this investigation builds upon and that provides a compelling rationale for this study)
- Research issues, hypotheses and questions being addressed
- Study design including a brief description of the sample including sample size, methods, principals dependent, independent, and control variables, and the approach to data analysis.

[Note: For a non-electronic submission, include the name and address of your organization and the name, phone number and e-mail address of the contact person for this project.]

You may now Close the Form

You have attached 1 file to this page, no more files may be added. To add a different file, you must first delete the existing file.

* Attachment:

The Future of Kentucky's P-20 Collaborative: Improving Connections to Postsecondary Education, Educator Preparation Programs, and the Workforce

PROJECT ABSTRACT

On behalf of the Commonwealth of Kentucky, the Kentucky Department of Education is requesting \$3.63 million over a three-year period from the Statewide Longitudinal Data Systems (SLDS) Grant Program to expand and enhance the postsecondary, educator preparation, and workforce data linked to the state's existing P-20 data system—which is maintained by the P-20 Data Collaborative (hereafter referred to as the “Collaborative”). This proposal addresses **Priority 3** in the Request for Applications: Postsecondary and/or Workforce Data. The Kentucky Department of Education (KDE) will serve as the key partner and fiscal agent for the grant, but the majority of funding will support the Collaborative, a separate entity which is administratively housed within the Kentucky Education and Workforce Development Cabinet. Significant portions of proposed activities will occur at and be directed by the Council on Postsecondary Education (CPE) and the Education Professional Standards Board (EPSB).

This project has three primary goals: 1) to incorporate a variety of workforce and employment data sources into the Collaborative's existing P-20 repository of linked, unit-level K-12, postsecondary, and educator preparation and certification data; 2) to expand the scope and quality of the state's postsecondary data system which provides college and university data to the Collaborative; and 3) to expand the scope and quality of the state's data on educator preparation and certification and make this data available to the Collaborative.

With the inclusion of workforce and expanded postsecondary and educator data the Collaborative will be able to answer a much wider range policy questions of interest to policy makers including workforce outcomes. An enterprise BI tool is also requested, which will enable authorized stakeholders at many levels across the state to have secure access to actionable information.

Kentucky's experience linking K-12, postsecondary and educator data while building the current P-20 repository highlights the need for deeper, more systematic data validation at all stages of data collection. Particular problems were discovered with data from the agency source systems for postsecondary and educator data, which are housed at the CPE and the EPSB respectively. Funds are requested for a number of system expansions in these systems to improve data quality standards during the data collection process.

Teachers, principals and other K-12 educators are an area of the workforce that is of particular interest to education leaders and policymakers at all levels. Expansion and improvement of the educator data collected by the EPSB will permit a deeper examination the teacher pipeline, and the addition of workforce data to the Collaborative will enable the flow of teachers in and out of the profession to be understood and tracked. Improved public reporting on Kentucky's educators will help stakeholders within the education system and without, including parents and students, make better decisions at the state level and locally (deliverables 3.1 and 3.2).

Project Narrative File(s)

* Mandatory Project Narrative File Filename:

To add more Project Narrative File attachments, please use the attachment buttons below.

The Future of Kentucky's P-20 Collaborative: Improving Connections to Postsecondary Education, Educator Preparation Programs, and the Workforce

INTRODUCTION

On behalf of the Commonwealth of Kentucky, the Kentucky Department of Education (KDE) is requesting \$3.63 million over a three-year period from the Statewide Longitudinal Data Systems (SLDS) Grant Program to expand and enhance postsecondary, educator preparation, and workforce data linked to the state's existing P-20 data system, which addresses Priority 3 in the Request for Applications. KDE will serve as a key partner and fiscal agent for the grant, but the majority of funding will support the P-20 Data Collaborative (the Collaborative), which manages the P-20 data system and is administratively attached to the Kentucky Education and Workforce Development Cabinet. Staff from the Council on Postsecondary Education (CPE), the Education Professional Standards Board (EPSB), and the Education and Workforce Development Cabinet (EWDC) will work closely with KDE and the Collaborative to develop and implement all project deliverables.

PROJECT NEED

History of Education Reform in Kentucky

Twenty years ago, Kentucky ranked at or near the bottom of states on key measures of educational attainment and economic competitiveness. Too few Kentuckians had a high school diploma or GED, much less a postsecondary credential—both the cause and result of historically high rates of poverty and low levels of economic growth. With the agricultural and manufacturing sectors of the economy in decline, Kentucky's leaders realized that bold, decisive measures were needed to improve the education levels of its citizens. Without these measures, the Commonwealth would be unable to compete in the knowledge-based economy of the 21st century and unlikely to attract the high-wage, high skill jobs of the future.

Subsequently, the legislature enacted the *Kentucky Education Reform Act* (KERA) in 1990, which completely overhauled existing P-12 standards and assessments, followed by the *Postsecondary Education Improvement Act* of 1997 (HB 1), which mandated that Kentucky reach the national average in the percentage of working-age adults with a postsecondary degree or credential by the year 2020. These sweeping, ambitious reforms were instrumental in creating a new culture of accountability and transparency in the Commonwealth, one where education policy and practice is informed by student performance data. Aggressive performance measures and targets were established to accelerate improvement, but this was not just education for education's sake. The General Assembly pursued education reform as a means of improving Kentucky's standard of living and quality of life.

While current educational levels remain below the national average, impressive gains in educational achievement in a relatively short period of time have earned Kentucky a national reputation for P-12 and postsecondary accountability efforts. Most notably:

- Kentucky's fourth- and eighth-grade scale scores in reading on the 2011 National Assessment of Educational Progress (NAEP) exceeded the national average for the first time, each increasing 7 points over 1998 scores.
- Six-year graduation rates at four-year institutions (public and private) improved nearly nine percentage points from 2000-2009. This is the largest percentage change of any state in the U.S., and Kentucky moved nine positions among the states—from 44th to 35th.
- During the same time period, three-year graduation rates at two-year institutions increased by roughly the same amount. Kentucky enjoyed the third highest percentage point change in the U.S., moving from 38th to 16th.
- Kentucky had the 5th highest percentage point change in total undergraduate credential and degree production (one year or more in length) of any state in the U.S.
- The percentage change in the number of undergraduate credentials awarded per 1,000 adults with no college degree was the largest in the U.S. This is a measure of how well states are awarding college credentials relative to the population in need. On this metric, Kentucky jumped nine positions, from 45th among states in 2000 to 36th in 2009.

Due in large part to these achievements, Education Sector recognized Kentucky as a top-10 best practice state in higher education accountability in 2009. In its report, "Ready to Assemble: A Model State Higher Education Accountability System," Kentucky was commended for "gathering information on a wide breadth of performance measures" and "aligning state priorities with concrete goals for achievement." More recently, *Education Week* praised Kentucky in a November 2011 feature story, "Data Driving College Preparation: College-Going Rates Rising, Remediation Rates Falling" (Appendix A).

But while KDE and CPE had individually developed comprehensive data and accountability systems, each system addressed just one segment of the education pipeline. Neither system was built to seamlessly capture successful student transitions from high school to college and from college into the workforce. These systems too often operated in silos, unable to communicate with each other to produce timely, reliable student outcome reports for legislators, educators, and the public. While the state initiated steps to build a P-20 longitudinal data system that could produce customized reports for authorized users, early efforts suffered from a lack of engagement from key education leaders and disagreements about data access, warehousing, and control.

Kentucky's education landscape shifted dramatically with the passage of *Senate Bill of 2009*, which created a renewed sense of urgency around strengthening P-20 partnerships, resolving turf battles, and overcoming impasses hindering progress toward a single data repository and

reporting infrastructure. SB 1 required unprecedented levels of collaboration among CPE, KDE, and the Education Professional Standards Board (EPSB) to improve college and career readiness and achieve the following imperatives by 2014: a 50 percent reduction in postsecondary remediation rates and a 3 percent increase in the college completion rates of remedial students. These targets are ambitious but achievable, but high-quality data on educational and employment outcomes is needed to guide policy and practice and improve performance.

The Need for an Enhanced P-20 Data Collaborative

With strong support from Governor Beshear and the state's legislative leadership—as well as unprecedented collaboration and rapport between the Commissioner of Education (Terry Holliday), the President of the Council on Postsecondary Education (Robert L. King), and the President of the Education Professional Standards Board (Phil Rogers)—the state's ability and commitment to fully implement and sustain a high-quality, P-20 longitudinal data system has never been greater. After several years of collaborative, foundational work, Kentucky is poised for success; funding from the SLDSSLDS grant will provide the final push needed to successfully complete the project.

The Commonwealth first received funding from the SLDS grant program in 2009 to establish a data warehouse and build a reporting interface for authorized users in partner agencies. With these startup funds, Kentucky created a governance structure and project charter, hired project directors, and established advisory groups to represent the key project partners. The decision to house data at a neutral site—at the Education and Workforce Development Cabinet—facilitated key infrastructure and technology decisions and accelerated project implementation. At present, Kentucky has satisfied about 75 percent of the America COMPETES Act postsecondary technical elements that must be linked to the P-20 SLDS system. A chart detailing Kentucky's progress and needs in meeting these Federal requirements is included in Appendix A.

At least two years of K-12 student and teacher; postsecondary; adult; and teacher preparation data have been incorporated into the P-20 SLDS system. Some of the source elements go back farther than two years. The K-12 data largely comes directly from the operational student information systems and the collaborative works closely with the Kentucky Department of Education on data quality issues. Postsecondary and teacher preparation data are collected by the Council on Postsecondary Education and the Education Professional Standards Board. The collaborative must rely heavily upon these two agencies and their systems to define, collect and clean the unit level data they collect from the institutions for inclusion into the P-20 SLDS.

The quality and scope of the Collaborative's reporting capabilities for partner agencies, policy makers, and the public are critical to their effectiveness in driving change. Considerable improvements are still needed in these source data systems to ensure data are reliable, valid, and comprehensive.

Policy Questions to be Addressed

With input from the partner agencies, the P-20 Data Collaborative has identified the final expansions and enhancements needed to complete work on the system. These decisions were guided by a set of policy questions that cannot currently be answered to the satisfaction of project partners and other key constituencies:

1. How effective are the various workforce improvement programs in terms of successfully placing people into education where they complete a credential or into the workforce at an appropriate wage?
2. What are the employment rates and earning levels of Kentucky's high school and college completers by credential level and area?
3. To what degree is Kentucky able to retain its college graduates in different professions for entry into the employment sector in the state?
4. What gaps exist between degree production and workforce needs, by degree level, industry/area of study, and region?
5. What are the work experiences of college students while they are enrolled in college?
 - For traditional-age students, are they working on or off campus, and what is the balance of work and hours of enrollment for various sub-populations (demographics, majors, etc.).
 - For adult students, what proportion is working full-time while in school, and how does this work effort impact student success and completion?
6. What is the regional distribution of graduates of individual postsecondary institutions and programs?
7. What is the students' return on investment in short-term occupational and technical credentials from the Kentucky Community and Technical College System and Kentucky Adult Education?
8. What are the "push" factors of employment on enrollment for adult students, such as losing a job, lack of advancement, etc.
9. What is the success of targeted opportunity programs such as contract spaces for veterinary students that are intended to keep graduates in-state after graduation?
10. What proportion of graduates/drop-outs of Kentucky's colleges and universities is successfully employed in-state after graduation/drop-out?
 - Impact of institution and major/program of enrollment/completion
 - Status at various times from degree/dropout
 - Are some dropping out for high wage jobs (perceived low ROI of degree completion)?
 - Address underemployment/successful employment
11. What are the employment rates of Kentucky's teacher education graduates in public and private schools in Kentucky and where do they end up working?
12. Are certain measurable personal characteristics (gender, age, ACT/SAT, etc.) predictors of teachers' future success in helping P-12 students (at the whole group and subgroup

level) make measurable learning gains? If so, what characteristics are better predictors than others?

13. Are graduates from different teacher preparation programs equally able to help P-12 students make measurable learning progress?
14. Is there a difference between the teacher candidates prepared in a traditional preparation program and candidates who enter the teaching professional through an alternative certification route?

PROPOSED PROJECT DELIVERABLES

To answer these policy questions, Kentucky will complete three discrete sets of project deliverables, each attached to a separate but related initiative. Each of the initiatives will be coordinated by staff at the P-20 Data Collaborative, the CPE, and the EPSB. All three of the initiatives will enhance Kentucky's ability to link longitudinal data to expand the capabilities of the P-20 SLDSSLDS, including customizable reporting functions. The first initiative adds additional workforce and labor data elements to the system, while the second and third initiatives provide much-needed enhancements to the quality and breadth of existing postsecondary and teacher preparation and certification data systems.

P-20 Data Collaborative and Education and Workforce Development Cabinet Deliverables

Deliverable 1.1. Integrate employment, earnings, and unemployment data into the Kentucky P-20 SLDS.

Kentucky will expand the P-20 SLDS to include employment records collected through the Unemployment Insurance (UI) program in Kentucky. This expansion will include employer records, earnings records for individuals submitted by employers, and UI claims data that are collected when individuals file for unemployment.

Deliverable 1.2. Integrate data from the Employ Kentucky Operating System (EKOS) into the Kentucky P-20 SLDS.

Kentucky will expand the P-20 SLDS to include data collected within the EKOS system including data for administering WIA Title 1, Wagner-Peyser Act services, and the Trade Adjustment Assistance program in Kentucky which includes data collected when people receive various types of employment services including support for job seekers and those seeking re-employment and assistance with job training, among other services.

Deliverable 1.3. Deploy a statewide enterprise business intelligence tool that will expand access to authorized users across education and workforce programs.

Kentucky will provide the ability to access appropriate data from the P-20 SLDS to an expanded list of authorized users by deploying an enterprise business intelligence platform with a point-and-click interface for developing ad hoc analyses and reports to schools, postsecondary

institutions, and workforce offices across the state. The Collaborative will explore a partnership with the CPE and the Kentucky Virtual University to develop and implement online professional development and training modules that will help identified users navigate the enhanced reporting capabilities.

Deliverable 1.4. Expand the P-20 Data Portal to include reports and other information products about workforce outcomes.

Kentucky will develop reports and analyses utilizing the new workforce data which are integrated into the P-20 SLDS to provide policy makers and others access to information about employment, unemployment, career placement, and education and training outcomes for high school and college graduates. Specific, actionable reports will be developed for different audiences including the following:

- **Employment Outcomes** – The Kentucky Employment Outcomes Report will provide information about graduates’ employment rates, earnings, length of time to find employment, industries of employment, and other measures by degree or credential level completed, academic program, and institution.
- **Employment Growth Areas** – The Kentucky Employment Growth Areas Report is designed to provide current information to guidance counselors and employment and career counselors about the state’s current industry and hiring trends, including the most popular industries for recent graduates by region and information about the number of students who are “pipeline” to fill future positions. The report will provide this information in a format that can be used by students or parents evaluating their educational options.
- **Additional Reports** – Additional reports will be created as needed.

Deliverable 1.5. Complete a feasibility study to determine ways to incorporate employment data on federal employees, military personnel, and Kentuckians working out-of-state into the P-20 SLDS.

Kentucky will investigate the feasibility of incorporating data about Kentucky residents who work for the government, military and out-of-state into the P-20 SLDS, as well as alternative methods for supplementing available employment and workforce outcomes data collected through the state UI program and other federal or regional data sources.

Council on Postsecondary Education Deliverables

Deliverable 2.1. Create a KPEDS online data dictionary with data collection guidelines.

This deliverable will result in a publically-available data dictionary that fully incorporates the Common Education Data Standards, and a live, online, interface for college and university staff who submit unit-level or summary-level data to CPE with all data definitions and submission rules. A metadata database will be constructed to centrally manage field characteristics, definitions, deadlines, file formats, cohort definitions, and other aspects of CPE’s data collection. The system will include integrated communication with data submitters, alerts

about upcoming deadlines, comments on data edits for data auditing purposes, and the ability for users to view the current status of all collections at their institution or select just those for which they are responsible.

Deliverable 2.2. Create an administrative tracking system.

This system will track each data file submitted by the colleges and universities to CPE through all stages of the collection process—from initial submission, running edits to clean the data, sign-off on data submissions, and the loading and testing of data as it moves to the KPEDS database and reporting warehouse. The system will provide real-time reports on the progress of data files as they move from submission to production and will notify CPE management if institutions are not meeting deadlines. Additionally, business-side staff will be able to manage KPEDS users and permissions rather than IT staff changing user tables directly.

Deliverable 2.3. Create a KPEDS Business Objects universe.

This universe will be constructed to test data loaded into the KPEDS database and reporting warehouse. The deliverable will encompass the testing of business requirements, as well as universe design and construction.

Deliverable 2.4. Incorporate additional CPE data sources into KPEDS, including financial data.

This deliverable will create KPEDS tables for CPE data, format and load legacy data, and develop online data submission forms and edits for electronic submission of these data moving forward. Gathering the business requirements and designing the online forms will comprise the bulk of the project. Other forms currently planned for inclusion are faculty and staff information, estimated annual degrees (submitted three months before the student level degree files are submitted), and information about licensure and certification exams taken by college graduates.

Education Professional Standards Board Deliverables

Deliverable 3.1. Expand and enhance the functionality, accuracy, and compatibility of EPSB's three discrete operational systems that feed the P-20 SLDSSLDS—the Admission and Exit Program system, the Assessment system, and the Cooperating Teacher system.

The Admission and Exit system will be modified and expanded to include students in graduate-level educator programs. Praxis II subject level scores will be added to the Assessment System, and up to 15 years of legacy data will be loaded. Lastly, the Cooperating Teacher System will be expanded to track the experiences of pre-service teachers who go out-of-state for their student teaching, accounting for 30 percent of all student teachers in Kentucky.

Deliverable 3.2. Expand EPSB's reporting dashboard to provide existing and new teacher certification and workforce data that can help researchers, parents, local school districts, and state policy-makers better understand the composition and quality of Kentucky's educator workforce, as well as the impact of educator preparation programs on student outcomes.

The EPSB used a portion of funds received from the 2009 SLDSSLDS grant award to create reporting dashboards housed on its data portal. To date, EPSB has completed two of the four proposed dashboards. Funding from this SLDSSLDS grant will enable EPSB to complete the certification and workforce dashboards, which will provide information about teachers who are national board certified, and enable teacher data to be extracted by subject area.

RATIONALE FOR PROJECT DELIVERABLES

Rationale for P-20 Data Collaborative and EWDC Deliverables

Kentucky's workforce development programs are housed within and supported by the Education and Workforce Development Cabinet, the group that also provides support for the P-20 SLDS for Kentucky's education agencies. The P-20 SLDS is physically housed in the same location as many of the data systems that administer Unemployment Insurance, WIA Title 1, Wagner-Peyser Act services, and the Trade Adjustment Assistance program.

Data are collected through these programs for operational purposes, but they are not currently housed in data warehouses. Data are only available for a brief retention period for the sole purpose of administering the systems and responding to required federal reports. The data are stored primarily in two systems: some of the core functionality is still provided through mainframes. While it is possible to extract data for analysis purposes, it is a very slow, difficult and often expensive process if changes must be made to the mainframe. These systems have been primarily designed for operational purposes and not to serve as a foundation for performing longitudinal analyses.

The Kentucky Cabinet for Education and Workforce Development's (EWD) Office of Employment and Training (OET) operates the Employ Kentucky Operating System (EKOS), which captures data on individuals participating in WIA Title 1, Wagner-Peyser Act services, and the Trade Adjustment Assistance program. The data in EKOS includes social security numbers for WIA Title 1, the Trade Adjustment Assistance program, and FEDES participants. SSNs are collected for all but a few individuals receiving services through the Wagner-Peyser Act.

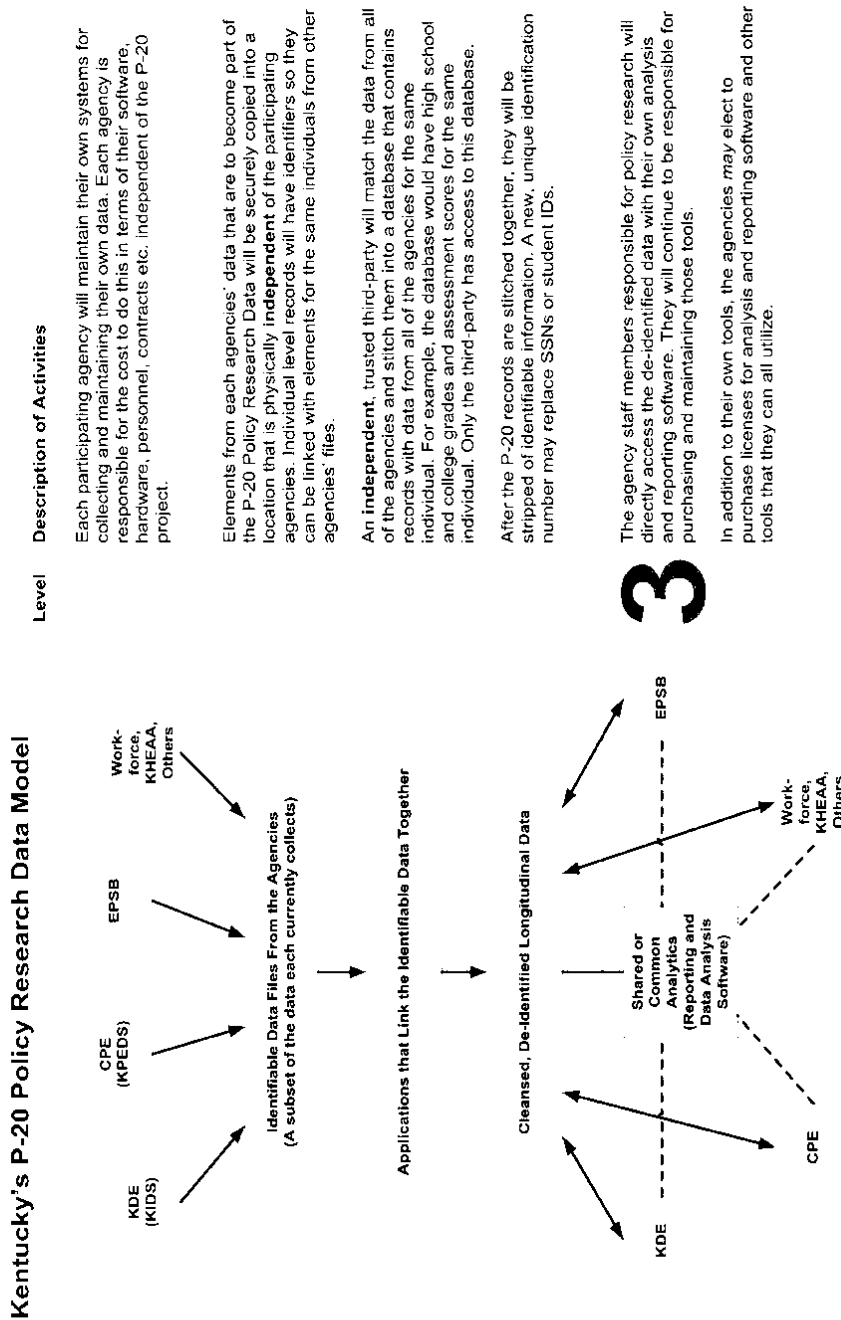
OET also operates the state's UI program and maintains systems that collect and maintain employer and individual wage data stored by SSN. Employer information includes location and industry data, wage for individuals by SSN, and individuals who become unemployed and receive benefits. Many of the analyses that have been conducted so far using employment data primarily incorporate data from the UI information systems; however, UI data are only retained for five years. This shortcoming will be addressed by deliverables 1.1 and 1.2.

The Kentucky P-20 Data Collaborative houses the state's P-20 SLDS, which includes snapshot data integrated on a regular cycle in a point-in-time data warehouse. The Kentucky P-20 SLDSSLDS architecture includes:

- staging areas for each of the participating agencies;

- a Master Person Index process that allows data to be linked from different sources;
- a shared data warehouse environment where de-identified data can be linked to create reports and analyses;
- and a reporting system of fixed reports as well as a point-and-click business intelligence solution for a limited number of users.

The following graphic illustrates the research data model upon which the system is built:



The model was designed to facilitate the linking of data while protecting individual identifiable information within the reporting warehouse. While personally identifiable information (PII) is necessary for the computer algorithms to match records together, the data in the reporting data warehouse have had all identifiers removed as a first level of protection. Users can only access data for which they have been authorized, as data owners control their own data even within the shared repository. This process ensures compliance with the Family Education Rights and Privacy Act (FERPA), IDEA, and other laws regarding data access and confidentiality.

Staging areas provide protected environments for data sent to the P-20 SLDS. Where possible, the data are organized into table structures that mirror the original format, and the tables are linked with identifiers provided by the source system. Each of the data owners and P-20 SLDS data developers can access to their own staging area. As these data are still in an identifiable format, they are not part of the general warehouse and access is heavily restricted. From within staging, agencies can access the data with Business Objects Web Intelligence (Webi) to develop queries and run reports for editing and auditing the data. The staging environment and Webi can essentially function as an agency's data warehouse if it does not have this capability within its own systems. Data do not move from staging to the shared data warehouse until they have been audited for data quality purposes and determined to be ready for incorporation.

Once approved, these data are processed through a series of iterative steps where identifiable characteristics from the records are compared to identifiable characteristics from previously received records. From there, one can determine if a record belongs to a person who is already represented within the system. The comparison includes common identifiable fields including names, birthdates, social security numbers, agency identifiers, demographic characteristics, and other information in existing records. Each data source has different elements to check so algorithms are customized to their data elements and weighted based on an understanding of data quality. If an individual already exists in the system, that person's unique P-20 ID is attached to the incoming records, the identifiable elements are removed, and it moves into the shared data system. If the record appears to belong to a new person, a Master Person Index record is created and a P-20 ID is assigned and integrated into the system, minus the identifiable elements.

Data are stored in the shared data warehouse in table structures customized for each of the data sources, making it fairly modular and easy to expand. As data moves from staging to the shared data warehouse, common fields that exist in multiple systems are translated to a common format. In other words, instead of one system seeing gender as "M" and "F" and another as "1" and "0", they now have the same values. The P-20 ID can be used to link data about the same people across any of the data sources. If a person graduated from high school, went to college, and then took a job, he or she would have records in tables from K12, postsecondary, and employment and would have the same P-20 ID. The primary impact of including a new data source in the system is the creation of new tables.

The P-20 SLDS reporting system uses the SAP Business Objects platform's reporting tools. The current system includes named user-level licensing for both Crystal Reports for data manipulation and Web Intelligence (Webi) tools for creating analyses, reports, and ad hoc reports. The security login process limits the tools to authorized users, and each user has access only to data that the agencies have approved. Webi can only see and provide access to data which have been identified in a universe created specifically to provide and limit access down to the data-element level. As new data are incorporated into the system, a BO developer has to create a universe specific to the data. Once that happens, users can begin creating reports and analyses. The use of these custom views will enable data access to a wide variety of secured users, including analysts within the stakeholder communities; researchers; and education, training and employment service practitioners. These objectives will be accomplished by deliverables 1.3 and 1.4.

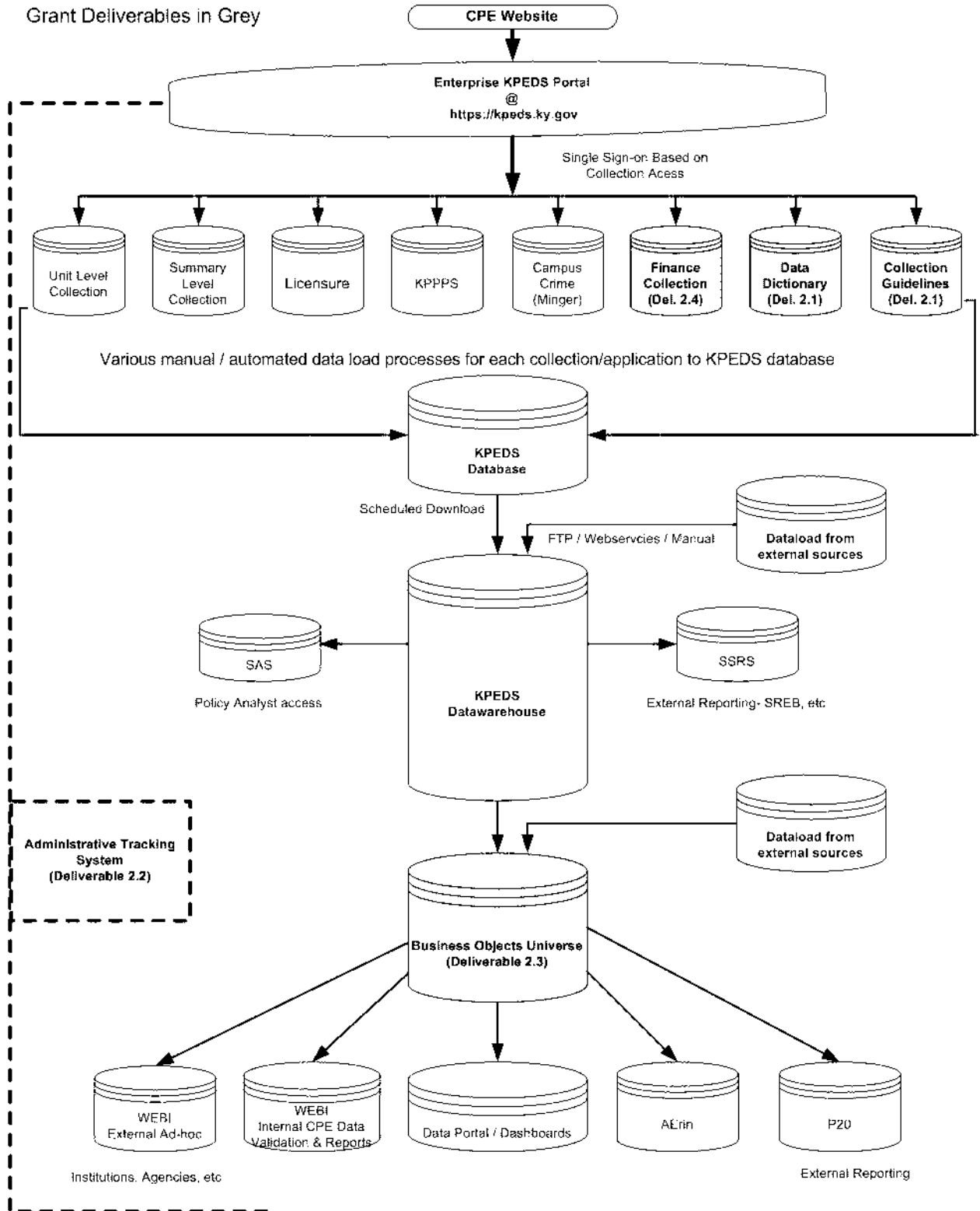
Rationale for CPE Deliverables

The Council on Postsecondary Education maintains the Kentucky Postsecondary Education Data System (KPEDS). KPEDS collects, cleans and houses longitudinal student-level data from Kentucky's 24 public and 20 non-profit colleges and universities and provides all the postsecondary education data in the P-20 repository. Despite the fact that the Council has been collecting student-level data for over 30 years, there are significant gaps in KPEDS' scope and capabilities that will be closed by deliverables 2.1 through 2.4.

The impact of KPEDS' data quality challenges on the P-20 SLDS is best illustrated by a problem that recently arose with data the Collaborative provided to legislative staff for a college readiness study. Despite rigorous, cross-sectional data edits, one university appeared to have 90 percent of first-time enrollees ready for college, compared to 40 percent in the previous year. Legislative staff asked the obvious question, and after some digging, it was determined that the error in the KPEDS load program was caused by the university's failure to assign values in a key field correctly. This university's data are currently useless, and was removed from the legislative report. Now data must be re-submitted by the institution, re-loaded into KPEDS, and then re-loaded into the P-20 SLDS.

Many of KPEDS' difficulties are due to a lack of resources to complete the warehousing project that began in 2007; a budget cut of over 25% in intervening years has slowed the project's momentum. Before 2007, the data were organized in flat files that required custom datasets for any longitudinal analysis. Approximately \$200,000 in agency funds was allocated for the development of a data warehouse that evolved into the current KPEDS system. To date, a robust online data submission tool is up and running, a relational database with consistent student identifiers has been constructed, and a data warehouse designed around CPE reporting needs is under construction. The following graphic illustrates the current status of the project and the KPEDS components the will be funded by the grant.

Kentucky Postsecondary Education Data System (KPEDS)



KPEDS has a robust online data submission tool which streamlines institutional reporting to CPE by providing a single, online portal where data and documents can be uploaded by postsecondary institutions. Data submitters use a password to securely enter the KPEDS portal and upload files or enter data on web forms, run edit reports to check data quality, and officially submit information for CPE staff review. First implemented in 2008-09 to upload student data files, the portal was expanded in 2011 to include summary-level data entry forms for non-public institutions licensed to operate in Kentucky. Current traffic includes 405 student-level data files uploaded and cleaned each year (25 individual files from 9 public institutions and 9 files from 20 AIKCU institutions) and over 500 summary-level reports from the 70+ non-public licensed in Kentucky (7 reports annually from each).

As a next step, an online data submission guidelines/data dictionary is needed to better communicate data definitions and data submission requirements to the colleges that provide the state's postsecondary data, as well as to ensure changes are reflected consistently across all system components. Right now, data submission rules and data definitions are in a large PDF booklet published online. The booklet provides a bare minimum of information; it is difficult to search for desired information, and the annual revision of this document requires significant staff time. A user needs analysis for this project was completed in 2010 (funded by Kentucky's 2009 SLDS grant), which enabled some progress toward the development of a metadata database to centrally manage definitions, descriptors, and submission rules. CPE lacks the resources needed to dedicate the business analyst and developer time for this substantial project, included here as deliverable 2.1.

Given the high volume of discrete data files collected at different times of the year from over a hundred colleges and universities with 200+ users, an administrative tracking system is needed in KPEDS to effectively manage all collections and users, and to improve the timeliness of the data CPE reports to the P-20 SLDSSLDS. Currently, there is no system in place to track whether institutions meet collection deadlines, when data files are ready to report, or which institutions' missing or delayed data submissions are holding up reports and P-20 data linkages. All this tracking is currently done by hand, and user communication is also a challenge. Data submitters with questions ask them via e-mail, and comments and questions during the submission process about data edits and anomalies are made over e-mail as well. While basic communication needs are met, communications are one-to-one, so CPE staff responses to common questions are not shared or organized in such a way to facilitate data auditing. This enhancement will provide the documentation of file edits and user communication needed for data quality assurance and auditing, as described by deliverable 2.2.

Another undeveloped component of KPEDS with significant implications for data quality is the lack of a BI tool to allow for flexible and extensive data quality checks after data have moved to the reporting warehouse. As things currently stand, minimal data quality checks are performed as data enter KPEDS, and significant errors or missing data are not found until analytical staff run reports. It is not uncommon to receive an information request, and in the process of fulfilling it, find significant problems on a custom report which requires data to be re-submitted by an institution and moved quickly to the reporting database. As well as being burdensome for

CPE's reporting and analysis, there are many "unknown" errors or missing chunks of data that are not detected because a consistent set of internal validation reports are not run prior to the data becoming accessible to analytical staff.

Ironically, CPE invested a considerable sum of money into the purchase of SAP Business Objects in 2010 but has been unable to find the resources necessary to dedicate business analyst and Business Objects developer time to the design and construction of a KPEDS "universe" to perform this vital data validation role. Business and analytical staff currently use SAS or SQL Reporting Services to review data and complete reports, often requiring the construction of flat files and increasing the likelihood of programmer error. A BO universe for KPEDS will greatly enhance data quality by providing a tool to securely run and modify pre-defined reports for data testing, as well as a simple drag-and-drop interface to create new reports and analyses as needed. Being able to collaborate with other agencies and share an Enterprise license for BO will be a great advantage as well. These needs are addressed by deliverables 1.3 and 2.3.

Finally, the lack of data about college and university finance in KPEDS prevents these data from being passed onto the Collaborative. CPE relies heavily on IPEDS data to report institutions' revenues and expenditures, but IPEDS data does not provide the full scope and detail state policy makers require for fiscal accountability. In the interim, CPE has developed a set of finance forms that provide more detailed revenue and expenditures information to supplement IPEDS, which address topics such as presidential compensation, use of state-mandated tuition waivers, and state research endowment investments. While these data are collected annually, they are captured in Excel spreadsheets that are not incorporated into KPEDS or the P-20 SLDS.

The P-20 SLDS is also missing some other useful data on postsecondary students and institutions that are currently collected by CPE on paper, in spreadsheets and through other formats not incorporated into KPEDS. These data include faculty and staff information, estimated annual degrees by institution, and information about licensure and certification exam pass rates. These data sources will be included in the proposed KPEDS expansion, addressed by deliverable 2.4.

Rationale for EPSB Deliverables

Strengthening the quality and attractiveness of the teaching profession is one of Kentucky's highest education priorities. Without enhancing the current data system to electronically collect and store essential data elements for the Collaborative, we cannot know what we need to do, how to improve what we are doing, or whether we have succeeded. This is why the EPSB is requesting funding to significantly expand the scope and quality of its data collections and reporting.

The Education Professional Standards Board (EPSB) was established as part of the 1990 Kentucky Education Reform Act to oversee the education profession. The board is charged with establishing standards of performance both for preparation programs and practitioners; accrediting educator preparation programs at colleges, universities, local school districts, and with private contractors; selecting assessments for teachers and administrators; overseeing

internship programs for new teachers and new principals; operating the Continuing Education Option for certification renewal and rank change; administering an incentive program for National Board for Professional Teaching Standards certification; and issuing, renewing, suspending, and revoking Kentucky certificates for professional school personnel.

In late 2000, the EPSB began the development of a transactional data system. This system is still in use to collect and manage the data required to meet the agency's mission/goals and to satisfy state and federal regulations. The EPSB has established over 17 applications to manage and report data pertaining to its mission. As evidenced by the development of new applications, the EPSB is committed to executing and sustaining technology initiatives. Historically, the development and maintenance of the EPSB IT infrastructure comprises 5% of the agency's budget. But due to recent economic restraints, EPSB has reduced full-time staffing by sixty percent over the past five years; current staff does not have the capacity to undertake projects of the size proposed here without outside funding.

Three of EPSB's collection systems lack the scope they need to answer key policy questions about the impact of educator training on educator efficacy and student outcomes. The first is the Admission and Exit system, which currently collects data on students entering and progressing through Bachelor's-level teacher preparation programs. With the growth and expansion of specialized educator programs at the masters, specialist and doctoral levels, the system needs to be expanded to capture this data as well in order to understand the impact of specific preparation programs. If a current teacher received a bachelor's degree in 2008 and a master's degree in special education in 2010, any student outcomes tracked in the 2011-12 school year will be "credited" toward his or her bachelor's program, as much of the information about the teacher's Master's program will not be available to the Collaborative. Also, administrators and specialists with graduate-level training cannot currently be tracked beyond the simple fact of receiving a degree as indicated by CPE's postsecondary data. Expanded data on these higher-level positions will also be useful to leaders and policy makers in understanding the pipeline for these positions.

An example of the value of this data in policy development and implementation is the work of EPSB's Master's Redesign Committee, which recommended the redesign of graduate-level programs and their approval process to integrate job-embedded content through collaboration with P-12 school districts and arts and science faculty. Despite this substantial change, the data needed to measure the success of these new programs are not currently being collected in a systematic way.

Another needed expansion of the Admission and Exit system is information about the specific educator preparation programs teachers have completed and the certifications for which they are eligible. Each college or university with a teacher preparation program is required to certify that a graduate from their program has completed the correct program for the type of certification sought. These "college recommendations" are currently submitted on paper and are not directly linked to the certification records or accessible electronically.

The second system for which expansion is requested is the Assessment system, which contains assessment data from Education Testing Service (ETS), such as Praxis II exam scores. This system currently collects only the cumulative score of each test taker. What is missing is the subject area sub scores that would enable analysts to access the Praxis II math scores for elementary teachers teaching middle school mathematics, for instance. In addition to changes to the system and data model needed to collect and store this new data, loading the legacy data will be a particular challenge. The sub-scores are available for the past 15 years or more on a variety of electronic media, but frequent changes in file formats over time will require multiple changes in the loading process. This legacy data is very important in understanding current teachers, however, because some will have taken the test a decade or more ago.

The third system for which expansion is requested is the Cooperating Teacher System, which tracks the admission, placement, and supervision of student teachers. However, not all student teachers are being reported to the EPSB because this transactional system is tied to in-state cooperating teachers who apply for payment. Since starting this program, EPSP has found that only 70 percent of students at Kentucky colleges and universities who completed their student teaching are included in the Cooperating Teacher System. The remaining 30 percent are doing their student teaching out-of-state or have cooperating teachers who do not apply for payment from the state.

As a crucial step in teacher preparation, the Collaborative's research on teacher preparation and student outcomes is incomplete with substantial missing data about Kentucky's student teachers. Not only will the current data collection need to be expanded to cover all cooperating teachers, but more information on the placements will provide invaluable information, such as whether or not the placement was in the teacher's content area. These needs will be addressed by deliverable 3.1.

Reporting is another area in which the EPSB faces significant challenges. A data dashboard was designed and partially developed using funds received from the 2009 SLDS grant. Two of the four proposed sub-dashboards have been completed; the two remaining sections are on educator certification and workforce.

These sub-dashboards are designed to display data and reports that are currently gathered for federal and other reporting in a format that is easy for policymakers, school boards, parents, and other "lay" education leadership to understand. Examples are an interactive tool for users to look up individual schools or teachers and see information about the teachers' state board certifications, national board certification, highly qualified teacher status, etc. This type of dashboard will also provide data extracts for education researchers to download this information for analysis. These needs will be addressed by deliverable 3.2.

TIMELINE FOR PROJECT DELIVERABLES

The following chart details how the deliverables of the project will be achieved, including supporting events or tasks for each deliverable, the party or parties responsible for these events or tasks, and estimated dates for their initiation and completion.

Project Deliverables	Responsible Party	Start Date	End Date
Deliverable 1.1. Integrate employment, earnings, and unemployment data into the Kentucky P-20 SLDS.			
Expand P-20 SLDS to include employment records collected through the UI program, including employer records, earnings records for individuals submitted by employers, and UI claims data collected when individuals file for unemployment.			
Task 1.1.1. Complete necessary agreements to provide access to UI data for P-20 staff.	Charles McGrew	5/12	6/12
Task 1.1.2. Create documentation for data elements, structure, and other metadata information on the UI system needed to integrate data into the P-20 SLDS.	Linda Borkosky	5/12	6/12
Task 1.1.3. Create staging environments for UI data.	Chuck Murphy	7/12	7/12
Task 1.1.4. Collect sample UI system data for evaluation and testing purposes.	Chuck Murphy	7/12	8/12
Task 1.1.5. Create business rules for matching and integrating UI data.	Deepsi Sigdel	8/12	9/12
Task 1.1.6. Modify the Master Person Index system by creating custom matching processes for UI data.	Tom Hogg	9/12	10/12
Task 1.1.7. Expand the P-20 SLDS data model to include UI employer, earnings, and unemployment data.	Tom Hogg	10/12	12/12
Task 1.1.8. Integrate 5 years of UI data into the P-20 SLDS.	Chuck Murphy	1/13	4/13
Deliverable 1.2. Integrate data from the Employ Kentucky Operating System (EKOS) into the Kentucky P-20 SLDS.			
Kentucky will expand the P-20 SLDS to include data collected within the EKOS system, including data for administering WIA Title 1, Wagner-Peyser Act services, and the Trade Adjustment Assistance program in Kentucky.			
Task 1.2.1. Complete necessary agreements to provide access to data in the EKOS system for the P-20 staff.	Charles McGrew	5/13	6/13
Task 1.2.2. Create documentation about the data elements, structure, and other metadata information available on the EKOS system needed to integrate data into the system.	Linda Borkosky	5/13	6/13

Task 1.2.3. Create staging environments for each of the program data sources from EKOS.	Chuck Murphy	7/13	7/13
Task 1.2.4. Collect sample EKOS system data from each of the primary sources for evaluation and testing purposes.	Chuck Murphy	7/13	8/13
Task 1.2.5. Create business rules for matching and integrating EKOS data into the system.	Linda Borkosky	8/13	9/13
Task 1.2.6. Modify the Master Person Index system by creating custom matching processes for EKOS data.	Chuck Murphy	9/13	10/13
Task 1.2.7. Expand the P-20 SLDS data model to include EKOS employer, earnings, and unemployment data.	Tom Hogg	10/13	12/13
Task 1.2.8. Integrate available EKOS data into the P-20 SLDS.	Tom Hogg	1/14	4/14
Deliverable 1.3. Deploy a statewide enterprise business intelligence tool that will expand access to authorized users across education and workforce programs.			
Provide the ability to access appropriate data from the P-20 SLDS to an expanded list of authorized users by deploying an enterprise business intelligence platform with a point-and-click interface to allow for ad hoc analyses and reports to schools, postsecondary institutions, and workforce offices across the state.			
Task 1.3.1. Identify critical business and technical requirements needed to meet the reporting needs of the users.	Linda Borkosky	5/12	7/12
Task 1.3.2. Expand hardware infrastructure as needed to accommodate the new enterprise software platform and new users.	Chris Brewer	8/12	9/12
Task 1.3.3. Deploy enterprise license software reporting platform.	Chuck Murphy	9/12	10/12
Task 1.3.4. Create universes or limited views of the data to meet the needs of the users identified in 1.3.1	Chuck Murphy	11/12	3/13
Task 1.3.5. Provide customized training to new business intelligence tool users.	Deepsi Sigdel	4/13	4/15
Deliverable 1.4. Expand the P-20 Data Portal to include reports and other information products about workforce outcomes.			
Develop reports and analyses utilizing the new workforce data integrated into the P-20 SLDS to provide policy makers and others access to information about employment, unemployment, career placement, and education and training outcomes for high school and college graduates as they related to workforce outcomes.			
Task 1.4.1. Conduct stakeholder analysis to develop a vetted list of critical policy questions about workforce program outcomes and employment.	Linda Borkosky	8/12	9/12
Task 1.4.2. Create and deploy at least 10 reports	Ron Crouch	11/12	7/14

utilizing these data to answer the questions identified in 1.4.2.			
Deliverable 1.5. Complete a feasibility study to determine ways to incorporate employment data on federal employees, military personnel, and Kentuckians working out-of-state into the P-20 SLDS.			
Evaluate processes for incorporating data about Kentuckians who work for the government, military, and out-of-state employers into the P-20 SLDS, as well as alternative methods for supplementing available employment and workforce outcomes data collected through the state Unemployment Insurance program and other federal, regional, and local sources.			
Task 1.5.1. Analysis of other potential sources of workforce and employment data.	Linda Borkosky	6/12	9/12
Task 1.5.2 Collect business, technical, and legal rules for accessing each additional system.	Linda Borkosky	8/12	11/12
Task 1.5.3. Produce a report recommending best processes for incorporating these additional employment data into reports and studies.	Deepsi Sigdel	11/12	2/13
Deliverable 2.1. Create a KPEDS online data dictionary with data collection guidelines.		6/12	5/13
Metadata database to centrally manage definitions, descriptors, submission rules, etc. and integrated user interface and user help system for college and university staff who submit student data to CPE. Will include communication with data submitters, including alerts about upcoming deadlines, comments on data edits for data auditing purposes, and the ability for users to view the current status of all collections at their institution or just those for which they are responsible.			
Task 2.1.1. Finalize project plan.	Heidi Hiemstra; Deepa Dubal	5/12	5/12
Task 2.1.2 Requirements gathering			
Task 2.1.2.1. Review existing needs analysis internally and with campus stakeholders.	Mary Korfhage	6/12	9/12
Task 2.1.2.2. Complete detailed software requirement specifications.	Elaine Maher; Mary Korfhage	6/12	7/12
Task 2.1.2.3. Define user interface.	Elaine Maher; Mary Korfhage	6/12	7/12
Task 2.1.2.4. Complete requirements for metadata data model.	Elaine Maher; Mary Korfhage	6/12	9/12
Task 2.1.3 Develop metadata content			
Task 2.1.3.1. Populate draft metadata tables with existing content.	Mary Korfhage	7/12	8/12
Task 2.1.3.2. Perform gap analysis to identify	Mary	8/12	9/12

additional metadata needed, gather additional metadata, and populate tables.	Korfhage		
Task 2.1.3.3. Extensively test metadata content.	Mary Korfhage	9/12	10/12
Task 2.1.4. Create metadata database and load data.	Contract Developer 1 (TBA)	10/12	11/12
Task 2.1.5 System development			
Task 2.1.5.1. Develop online data dictionary and data collection guidelines.	Contract Developer 1 & 2 (TBA)	11/12	1/13
Task 2.1.5.2. Develop quality analysis unit testing.	Elaine Maher	2/13	3/13
Task 2.1.5.3. Develop user acceptance testing.	Mary Korfhage	3/13	3/13
Task 2.1.5.4. Prepare help tutorials and videos.	Mary Korfhage	4/13	4/13
Task 2.1.5.5. Develop user training.	Elaine Maher; Mary Korfhage	4/13	4/13
Task 2.1.6. Complete production move.	Contract Developer 1 & 2 (TBA); Elaine Maher; Deepa Dubal	5/13	5/13
Deliverable 2.2. Create an administrative tracking system in KPEDS.		11/12	2/14
<p>An administrative tracking system is needed to effectively manage the system's collections and users, enhance data quality, and improve the timeliness of data needed by the P-20 SLDS. Currently, there is no system in place to track collection deadlines, the timing of data availability, and which institutions' missing or delayed data submissions are holding up various processes. The system would track each file through all stages of the collection process, permit CPE data collection staff to manage user permissions and communications directly, and provide much-needed documentation of file edits for data quality assurance and auditing.</p>			
Outcome 2.2.1. Finalize project plan.	Heidi Hiemstra; Deepa Dubal	11/12	12/12
Outcome 2.2.2. Gather requirements.			
Task 2.2.2.1. Review existing needs analysis internally and with campus stakeholders.	Mary Korfhage	12/12	1/13
Task 2.2.2.2. Complete detailed software requirement specifications.	Elaine Maher; Mary Korfhage	2/13	4/13
Outcome 2.2.3. Develop database.			

Task 2.2.3.1. Prepare data model.	Contract Developer 1 (TBA)	5/13	5/13
Task 2.2.3.2. Create database.	Contract Developer 1 (TBA)	6/13	6/13
Outcome 2.2.4. Develop system.			
Task 2.2.4.1. Develop online data dictionary and data collection guidelines.	Contract Developers 1 & 2 (TBA)	7/13	10/13
Task 2.2.4.2. Develop quality analysis unit testing.	Elaine Maher	11/13	12/13
Task 2.2.4.3. Develop user acceptance testing.	Mary Korfhage	12/13	12/13
Task 2.2.4.4. Prepare help tutorials and videos.	Mary Korfhage	1/14	1/14
Task 2.2.4.5. Develop user training.	Mary Korfhage, Elaine Maher	1/14	1/14
Outcome 2.2.5. Complete production move.	Contract Developers 1 & 2 (TBA); Elaine Maher; Deepa Dubal	2/14	2/14
Deliverable 2.3. Create a KPEDS Business Objects universe.		7/12	6/13
CPE data quality and analytical staff currently use SAS to review data and complete reports, requiring the construction of flat files and continually risking user error. A business objects universe for KPEDS will greatly enhance data quality by providing a tool to securely run and modify pre-defined reports for data testing, as well as providing a simple drag-and-drop interface to customize reports and analyses.			
Outcome 2.3.1. Develop project plan.	Mary Korfhage		
Outcome 2.3.2. Requirements gathering	Mary Korfhage	7/12	8/12
Task 2.3.2.1. Review existing needs analysis internally and with campus stakeholders.	Mary Korfhage, Elaine Maher	9/12	9/12
Task 2.3.2.2. Review multiple internal and external data sources.	Mary Korfhage, Elaine Maher	10/12	11/12
Task 2.3.2.3. Complete detailed requirement specifications	Mary Korfhage, Elaine Maher	12/12	1/13

