ODOC Technical Proposal
WDQI Oklahoma: An Initiative to Develop a Workforce Longitudinal Database System, Connect with Education, and Use Data to Drive Strategic Policymaking

Introduction

Although our nation's economy and jobs now require that 63% of workers possess training and credentials beyond high school (e.g., certificates, apprenticeships, industry recognized credentials, 2- and 4-year degrees,)[1], only 31% of Oklahomans have postsecondary credentials, and educational attainment in over two-thirds of Oklahoma's counties is 10 points or more below the national average. These counties experience lower wages, higher levels of poverty, and lower life quality indicators. Statewide, one in four working Oklahomans live in poverty. In response to these conditions, the Oklahoma Department of Commerce (ODOC), the **Oklahoma Governor's Council for Workforce and Economic Development (GCWED)**, and a statewide network of partners **are targeting increasing postsecondary credential attainment as a major goal**. Oklahoma has identified five critical barriers to increasing the number of credentials that are relevant to employers and that have labor market pay-off for workers: (1) A **skills mismatch** exists in numerous industries in Oklahoma, particularly in the advanced manufacturing, aerospace, construction, energy, and healthcare sectors, with employers unable to find applicants with the right skill sets and credentials due to growing shortages of workers and limited educational attainment among prospective workers. (2) There is a **lack of meaningful, accessible, real-time information** identifying the skill needs of employers, career pathways, and quality training opportunities. This lack of information makes it difficult for workers to know the right skills and credentials that prepare them for family-sustaining wage jobs and give them mobility through career pathways. (3) **Too few employers are deeply engaged in partnerships with education, workforce and economic development** to identify their changing workforce needs. Thus, the current credentialing system doesn't provide adequate evidence that

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[1] http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/hw.pressrelease.pdf

workers actually have the skills needed by employers. (4) **Multiple promising practice initiatives are under way at agency level, but they have not been fully aligned and leveraged for maximum efficiency and outcomes.** Examples of such practices include: the development of a one-stop certification process; regional career pathways initiatives; *Making Place Matter* and other postsecondary education initiatives; sector partnerships; and the introduction of the National Association of Manufacturers (NAM) credentialing framework. (5) More broadly, **the current delivery system for workforce and educational services was designed for a different era and is significantly unresponsive and irrelevant in today's rapidly changing environment that requires "just-in-time, just enough, just for me" services.** Current service delivery systems lack the information, tools and agility required to help students, workers, and transitioning workers to navigate through the complexities of career and labor market information and to help employers easily find enough workers with the right skills and credentials.

ODOC, the GCWED, and its statewide network of partners believe that the development of an integrated Oklahoma workforce data enterprise system (OK-WDES), which includes a longitudinal workforce database, and the use of longitudinal workforce/education data can serve as a foundational tool to help overcome all five barriers, leading to greater credential and degree attainment, job creation, and higher per capita incomes for all Oklahomans. This proposal, submitted by ODOC and the GCWED, details Oklahoma's plan to develop this crucial foundation.

1. Statement of Current Capacity (10 Points)

Oklahoma's workforce longitudinal database is currently in the planning stages and early development. Already, partnerships and data-sharing agreements **(see Attachment C)** are fully developed with key public agencies involved with workforce development and with secondary and post-secondary education. In 2008, the state legislature created Oklahoma's **P-20 Data Coordinating Council** with the *Educational Accountability Reform Act* (SB222). The Council is coordinating the creation of a unified, State Longitudinal

Data System (SLDS)—called the P20 Education Longitudinal Data System (OK-PEDS)—for the efficient and responsible storage, use, sharing, and linking/matching of education/workforce data among the following member agencies, data-sharing/linking partners, and stakeholders: ODOC/GCWED, the statewide workforce agency; Oklahoma Employment Security Commission (OESC); Oklahoma State Regents for Higher Education (OSRHE); Oklahoma Department of Human Services (OKDHS); Oklahoma Department of Rehabilitation Services (OKDRS); Oklahoma Department of Career and Technology Education (CareerTech); Oklahoma State Department of Education; and the K20 Center at the University of Oklahoma. These partners are detailed more fully in *Section 3: Description of Partnership Strategies*. These state agencies recognize that sound data collection, reporting, and analysis are critical to building an effective and efficient workforce system, to guide that system, and to ensure that Oklahoma's students are adequately prepared for college and the global workforce.

Specific examples of existing data linkages and the data sets currently shared/linked between Oklahoma's workforce and education systems include: **(1)** OSRHE provides OESC with a file containing the social security numbers of higher education institution graduates. OESC compares the SSN with wage data in its files. OESC assigns a control number to each SSN for which a match is found and provides a report to OSRHE that appends the control number assigned, wages, and the industry classification to each individual record but doesn't include the SSN. **(2)** OKDHS provides the child's name; SSN; birth month, day, and year; and gender for all children in its custody to OSDE. OSDE provides OKDHS the current grade level; last grade completed, at risk identifier; date last attended/enrolled, IDEA indicator (Special Education); current or last known school name, address, and phone number; exit code; and school performance indicators: behavior-number of suspensions; assessments number of assessments scoring at proficient and number of assessments scoring at not proficient; grades-number of As, Bs, Cs, Ds, and Fs for current school year; and attendance–number of absences for current year. **(3)** OSDE and CareerTech

share student data as secondary students enter the CareerTech system. High school students can simultaneously attend CareerTech classes and career academies while finishing their secondary educations. CareerTech uses the unique personal identifier (called the WAVE identifier) assigned to these students by OSDE. **(4)** CareerTech shares student enrollment, demographic, and program completion data with OSRHE, which then shares that data with OESC to gather wage and industry classification data on former students.

As ODOC/GCWED develops an integrated workforce data enterprise system (OK-WDES), which includes a workforce longitudinal database that can connect with and integrate data from the education State Longitudinal Data System (SLDS) currently in development, it will integrate with the data linkages discussed above and expand data sets to include Registered Apprenticeship programs, vocational rehabilitation, TANF and SNAP, TAA, WIA Title 1 and 2, WIASRD, Wagner-Peyser, Rapid Response, career pathways, industry-recognized and employer-demanded credentials, and the data informing and created by predictive models for college/post-secondary training and career readiness.

Capacity for maintaining secure data storage: As Oklahoma develops OK-WDES, it will include the elements defined by Public Law 110-69 (the America COMPETES Act) and the Data Quality Campaign. In developing OK-WDES and in the use of longitudinal workforce and education data, Oklahoma will establish and/or enhance existing systems and processes that permit only those researchers, who agree to follow all state and federal confidentiality and privacy laws, regulations, and policies, to assist with state evaluation and research functions. To the extent authorized by law and protected by all state and federal confidentiality statutes and policies, **ODOC** currently collects and maintains authoritative data related to the Workforce Investment Act (WIA) Title 1 programs, including dislocated worker and youth program data; **OESC** collects and maintains authoritative wage, employer and unemployment insurance wage record data, demographic information associated with UI benefit payments, data related to the Trade Adjustment

Assistance program, Rapid Response, and the Wagner-Peyser Act; **OKDHS** collects and maintains authoritative data related to its child support programs, SNAP (food stamps), Temporary Assistance to Needy Families (TANF), school nutrition programs, foster care, and child protective services; **OKDRS** collects and maintains authoritative data related to its five program divisions: Vocational Rehabilitation, Visual Services, Disability Determination, the Oklahoma School for the Blind and the Oklahoma School for the Deaf; **CareerTech** collects and maintains student data for all career and technical education instruction offered in 29 technology center districts, 395 comprehensive school districts,16 skills centers for incarcerated adults, and three juvenile facilities; **OSDE** collects and maintains authoritative enrollment, completion, and student characteristic information on early learning and public school (kindergarten through grade 12)students as well as adult education (lifelong learning) participant data within the purview of OSDE; and **OSRHE** maintains a unit-record database containing public and private higher education institutional data submissions, which are used by the State Regents for state and federal reporting, policy analysis, and decision-making. The OSRHE unitary data system contains four files with individual student and professional staff information: student enrollment file, student course enrollment file, class file, and professional staff file. Individual data-sharing and data-linking/matching agreements and data storage security processes are currently in place between and among OESC, OKDHS, OSDE, CareerTech, and OSRHE for protecting individual privacy and confidentiality in accordance with all state and federal PII privacy and confidentiality statutes and regulations, including restrictions on the release of confidential information identified in the Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. 1232g and its implementing regulations found in Title 34 C.F.R. Part 99, which established restrictions and penalties for the improper release of information contained within a student record.

Planned or established partnerships between the SWA (ODOC/GCWED) and the state education agency (OSDE): OSDE and all post-secondary education entities are signatories to the *WDQI Interagency*

Partnership Agreement (Attachment C), which sets foundational parameters for sharing, linking, and matching data. Further, on or before June 1, 2012 to July 30, 2015, subject to the availability of funding through WDQI and the Workforce Innovation Fund, and in accordance with existing data-sharing and data-linking agreements discussed earlier, ODOC/GCWED and the signatories (working through the Joint Application Design team—detailed in the *Description of Database Design* section) will establish procedures and systems to enhance data sharing and existing data linkages. The state workforce agencies and state education agencies will convene stakeholders and create opportunities for input and advice in the areas of data ownership, data use, research priorities, data management, confidentiality, data access, data-matching/linking, and reporting from the OK-WDES and, ultimately, from the fully developed and connected SLDS. Such stakeholders to be involved include, but are not limited to, work training and vocational rehabilitation programs for people with disabilities; Registered Apprenticeship programs; employment service programs for veterans, dislocated workers, TAA-eligible workers, long-term unemployed, formerly incarcerated; youth aging out of foster care, etc.; CareerTech technology centers; public and non-public institutions of higher learning; public school districts; charter schools; non-public elementary and secondary schools; and adult education and early learning programs. Representatives of the state workforce agencies and the state education agencies represented on the JAD team will report to and advise the Oklahoma P-20 Data Coordinating Council on the implementation, operation, and expansion of these data-sharing/data-linking agreements, the development of OK-WDES, and the ultimate connection with an SLDS.

Any state agency, board, authority, or commission may enter into a data sharing/linking arrangement with one or more of the state workforce agencies or state education agencies to share and link data to support the research and evaluation activities detailed within this proposal and promoted by the *WDQI Interagency Partnership Agreement* (Attachment C). These state agencies may also enter into data sharing/linking arrangements with other governmental entities, institutions of higher learning, and research

organizations. Any data sharing/linking arrangement entered into must: (1) Be permissible under and undertaken in accordance with privacy protection laws; (2) Be approved by deputy secretaries, superintendents, chancellors, deans, and/or executive directors or their designees of ODOC/GCWED, OESC, OKDHS, OKDRS, OSDE, CareerTech, OSRHE, and the K20 Center at OU; and (3) Follows the data sharing procedures and processes outlined in the *WDQI Interagency Partnership Agreement* (Attachment C, Page 5), which are guided by the Regents *Data Access and Management Policy* detailed in the *Description of Database Design/Security Measures* section.

Any existing or planned data linkages: As stated earlier, OESC, OKDHS, OSDE, CareerTech, and OSRHE currently share/link and match data. Those data linkages and data sets include: OESC (UI wage record data, UI benefit data including demographic information associated with UI benefit payments); OKDHS (data related to children within OKDHS custody); OSDE (student enrollment, demographic, performance, and graduation data; CareerTech (student data—demographic, performance, and completion—for all career and technical instruction and training; student information is collected and stored as a record for each "enrollment," accounting for more than 500,000 records collected each year.); and OSRHE (unitary database houses student enrollment files, student course enrollment files, class files, and professional staff files for all two- and four-year public higher education institutions and some private institutions.) However, these are the only data linkages and matching now occurring throughout Oklahoma's workforce and education systems, leaving a host of data untapped and representing a significant gap in our ability to create a unified, longitudinal data system for the efficient and responsible storage, use, sharing, and linking/matching of education/workforce data.

As ODOC/GCWED builds out OK-WDES and connects with the developing SLDS, these existing data linkages and data sets will be expanded to include Registered Apprenticeship programs, vocational rehabilitation, TANF and SNAP, TAA, WIA Title 1 and 2, WIASRD, Wagner-Peyser, Rapid Response,

career pathways, industry-recognized and employer-demanded credentials, and the data that informs and is created by predictive models for college/post-secondary training and career readiness.

Statistical analysis and/or reporting on the state workforce system: On the education side, OSRHE regularly releases post-secondary education data and analysis for state and federal reporting, program evaluation, and policy and decision-making. OSDE is moving forward with the development of an educational longitudinal database (as funding allows) and is partnering with the K20 Center at the University of Oklahoma to analyze student performance data, create a predictive model for college and career readiness, and package it in a user-friendly "dashboard" that can be used by students, teachers, and parents to make informed choices about secondary and post-secondary education and future careers. This pilot project is called *The PROMISE Dashboard: A Family Data Utilization Project* and seeks to directly impact 4,646 students' post-secondary educational careers. The workforce system will follow these examples and use longitudinal data to drive process improvement, identify and reward promising practices, conduct strategic planning, and make policies based on performance metrics and return on investment analysis. Oklahoma has taken small steps but needs to go much further and will as it develops OK-WDES as a system that cuts across agencies and programs. This should be done for two major reasons. First, it will allow us to set metrics and performance expectations on a systems basis, tackling questions like "what was the result with person A and how much did that cost when you add up the efforts of multiple programs that were involved?" Second, it will allow agencies to improve their service to employers and clients, if they can share, integrate, and link/match data.

Partnerships with agencies in neighboring states: Currently, one data sharing agreement exists with another state. OESC has a data sharing MOU with the Wyoming Department of Employment, Economic and Administrative Services Division. Wyoming receives wage and occupation data from OESC to determine the number of its former students and/or workers who now are enrolled in education/training

programs and/or employed in Oklahoma. However, OESC doesn't receive similar information from Wyoming. As OK-WDES is developed and connected with Oklahoma's SLDS, ODOC/GCWED and its partners will meet with their counterparts and P-20 Councils in other bordering states and throughout this region of the U.S. to explore opportunities for data sharing.

2.   Plan Outline (15 Points)

Describe the state's objectives: ODOC/GCWED has set the following project goals to be achieved over the three-year grant performance period. <u>Project Goal 1:</u> Develop an integrated workforce data enterprise system (OK-WDES), which includes a workforce longitudinal database and connects a diverse range of tools for common presentation to customers and integrative use of underlying data. <u>Project Goal 2:</u> Connect, through OK-WDES, with education data contained in the developing Statewide Longitudinal Data System (SLDS) databases within Oklahoma and explore opportunities to connect with SLDS and workforce longitudinal systems in bordering states and throughout our region of the U.S. <u>Project Goal 3:</u> Use longitudinally linked data from the SLDS database and the workforce longitudinal database to conduct analyses, implement continuous process improvement in the delivery of workforce and education services, enhance return on investment, and drive strategic policymaking.

OK-WDES consists of three components: **(1)** a common data pool that will serve as the workforce longitudinal database; **(2)** OKJobMatch.com, a labor exchange and real-time labor market data system; and **(3)** OKWorks, which will be the integrating portal for all public workforce agencies and serve as the online resource hub for all workforce information, providing employers, job seekers and students with user friendly access to information and tools that support them in doing career planning, choosing relevant education, and in job matching. OKWorks will also serve as a common program wizard for offerings across all workforce agencies, helping clients and case managers determine program appropriateness and eligibility

and to apply for benefits and services. More detail is provided in the *Description of Database Design* section.

Outcomes include: **(1)** Cross workforce agency processes are redesigned for greater efficiency and effectiveness in the delivery of quality services that are easily accessible, labor market relevant, flexible, and provide speed of delivery for workers and employers. **(2)** The comprehensive portal (OKWorks) will be launched. **(3)** Oklahoma will integrate program information from all public agencies involved with workforce development into a unified data pool that will serve as the state's workforce longitudinal database. **(4)** Oklahoma will conduct analyses; establish performance metrics for its talent supply system; evaluate return on investment for its state and federally supported workforce and education programs and services; and identify and reward promising practices. **(5)** Oklahoma will enter into data sharing agreements with bordering states and states throughout our region, further enhancing our ability to conduct meaningful research into our workforce and education systems and share that research with all stakeholders in ways that help them make informed decisions and address the need for improved consumer choice from Oklahoma's workforce and education system.

Outputs include: **(1)** By the end of year 1, OKJobMatch.com has replaced Oklahoma's existing labor exchange system; the career pathways module has been added to OKWorks; and all workforce partners are using OKWorks as a primary tool; **(2)** By the end of year 2, all planning related to OK-WDES is complete; **(3)** By the end of year 2, ODOC/GCWED and its state education agency partners (secondary and post-secondary) have entered into specific data-sharing/linking agreements that define data sets and linkages between the workforce and education longitudinal databases, have developed and/or agreed upon a common personal identifier, and are beginning to test match rates based on that identifier and other data, such as demographics, driver's license numbers, etc. to track Oklahomans through the education and workforce systems from pre-K to retirement. **(4)** By the end of year 3, Oklahoma has entered into a

workforce data sharing agreement with at least one bordering state. **(5)** By the end of year 3, ODOC/GCWED has worked with OSHRE, OSDE, K20 Center at the University of Oklahoma and other research entities that meet the criteria for data security to conduct analyses and has issued at least two reports, which will be disseminated in user friendly formats through OKWorks. More detail is provided in the *Description of Database/Scope of Longitudinal Data and Planned Reports* sections.

Describe the status of the statewide longitudinal education data system: OSDE has two primary education data systems in place to collect student data. The first system is a daily collection system (called the **Oklahoma Student Information System or OKSIS**), which is based on the Schools Interoperability Framework (SIF) standards. OKSIS pulls student data from local student information systems into a staging database from which schools and districts can run edit reports for correcting errors (although the data need additional validation and quality checks). This school year additional data elements, such as courses and grades, have been added to the OKSIS. Also, student records in OKSIS have been linked to state assessment files to do assessment pre-coding of answer sheets. The second system is the **School District Reporting Site (SDRS)** through which schools and districts submit multiple, redundant aggregate data on web forms. These data have been maintained in separate systems and have undergone neither integration nor cross-checking with the SIF-based daily collection system (OKSIS). These aggregate data collections are still being used for the official reporting in most instances, including ED*Facts.* **Two significant gaps** have been identified: **(1)** OSDE doesn't have longitudinal records and needs to build a data warehouse; **(2)** OSDE doesn't have adequate decision support, which will require three additional resources—a web portal and the analytical tools for users to access the data and training in the interpretation and use of the data.

OSDE has applied for an FY2012 State Longitudinal Data System (SLDS) grant for a K-12 data system that covers all of the students served under the auspices of the OSDE. In addition to students in

Kindergarten through Grade 12, over 70% of the state's 4-year-olds and 25% of the state's 3-year-olds are served in public schools. Thus, OSDE refers to its proposed system as a P-12 SLDS. OSDE needs to take the following steps and develop the following components for its SLDS: calculate required and desired metrics and statistics for state and federal reporting; apply enhanced business rules for the schools and districts to clean their data at an early stage and to improve their local processes; extract current data from existing systems; design and architect operational, longitudinal, and research data stores; recover past data and statistics from existing systems for as many years as possible; create a portal to provide access to all users; and provide training and support programs to ensure proper and high-level usage of the data and sustainability of the system. Further, real-time data maintained in the current system must be extracted and moved to the data warehouse. Validation and verification must occur to ensure that the data are accurate and complete. Comparisons must be made between the counts obtained from the OKSIS and the SDRS so that redundancy can be removed wherever possible. The new SLDS must be able to pull data automatically from the daily collection system when the data are needed for reporting. OSDE is moving ahead on the collection of new data in the OKSIS based on specific recommendations received during a Technical Assistance Site Visit conducted as part of the U.S. Department of Education's State Education Information System Services (SEISS) project. Also, OSDE is planning to revamp some aggregate collections by pre-populating certain information to reduce school and district burdens in completing forms that collect information not logically collected at the individual student level.

Regardless of whether OSDE has a fully or even partially developed SLDS, data sharing/linking and matching (as discussed earlier) occurs between OSDE, CareerTech, OSRHE, and DHS. ODOC/GCWED will follow suit and work with OSDE to integrate student data from the OKSIS and SDRS with its OK-WDES, by the end of year 2 of this grant **(output #3)**. Opportunity also exists in connecting career pathway models and labor market data with student data to be collected and maintained by OSDE as Oklahoma's

school districts transition to the Common Core State Standards (CCSS) by developing their own curricula in line with the new English language arts and mathematics standards anchored in what it takes to be ready for college and careers. Also, Oklahoma has joined the governing board of the Partnership for Assessment of Readiness for College and Careers (PARCC), a state-led collaborative effort developing a common set of assessments for grades K-12 aligned with the CCSS. OSDE is on track for full implementation of the CCSS standards and PARCC assessments by 2014-2015, so by the end of year 3 of the WDQI grant, ODOC/GCWED will have a data sharing/linking agreement and pilot project developed and ready for launch involving career pathways models, labor market data, and CCSS and PARCC assessment data, which will set the foundation for linking and matching longitudinal data from the SLDS by putting the necessary terms of agreement and processes in place and testing match rates as the CCSS and PARCC data is linked with longitudinal workforce data and with longitudinal data at the post-secondary level.

Explain plans for sustainability: ODOC/GCWED view the funds requested with this grant proposal as base capital. Because of long-standing partnerships with the other public agencies involved with workforce development, including the state's community college system, ODOC/GCWED will leverage funds brought into the state by the TAA-CCCT and Workforce Innovation Fund grants also currently being sought. Further, ODOC/GCWED want to offer both excellent information tools and wherever possible the option of online service delivery, such as common intake, advising, applying for financial aid and/or WIA Title 1 and TAA benefits, TANF, SNAP, etc., enrollment into training and education programs, and expanded offerings of online courses. Improving online service delivery is expected to increase the number of job seekers, employers, and other stakeholders using the system and, thus, generating data that can feed into the workforce longitudinal database, making it a much more robust repository of information about our workforce system. This will be the first time we've fully integrated information access cross-agency, and we anticipate being able to move a large volume of customer inquiries and solutions into e-services offered

through OKWorks. The efficiencies achieved through integrated information access and the significant use of e-services is expected to result in cost savings, which can then be applied to the maintenance and enhancement of the workforce data enterprise system. Existing WIA formula funds can also be used at the state and local levels to assist with longitudinal data collection and research projects conducted and/or guided by the P-20 Data Coordinating Council, OSRHE, and the K20 Center at the University of Oklahoma. Planned and existing data sharing/linking agreements will be renewed, updated, and expanded annually. Updates and expansions of planned and existing data sharing/linking agreements will be based on performance metrics, promising practices, new findings, and new questions about how well the workforce and education system functions in Oklahoma developed and discovered with the use of workforce and education longitudinal data.

3. Description of Partnership Strategies (30 Points)

Partners involved with this project and the programs/related data to be integrated and shared/linked with OK-WDES, which are all signatories to Attachment C: *WDQI Interagency Partnership Agreement* are tabled below:

Oklahoma Department of Commerce-ODOC/Governor's Council for Workforce Development-GCWED	ODOC serves as the state's lead economic development and workforce agency, administering all Workforce Investment Act (WIA) Title 1 programs. GCWED serves as the statewide workforce investment board and is comprised of employers, elected officials, and representatives of various public agencies. ODOC and GCWED provide guidance and technical assistance to Oklahoma's local workforce investment boards.
Oklahoma Employment Security Commission-OESC	OESC serves as the administrative entity for all Wagner-Peyser programs, the Trade Adjustment Assistance program, and the state's Unemployment Insurance program, among others.

Oklahoma State Regents for Higher Education-OSRHE	OSRHE serves as the state's governing body for all public two-year and four-year institutions of higher education and maintains and manages a unit-record database containing public and private higher education institutional data submissions, which are used by the Regents for state and federal reporting, policy analysis, and decision-making.
Oklahoma Department of Career and Technology Education- CareerTech	CareerTech provides industry skills training and certifications to youth and adults, customized training for businesses and their incumbent workforce through a statewide network of 54 technology center campuses; and provides technical training and basic skills education for incarcerated individuals at 13 skills centers at correctional facilities.
Oklahoma State Department of Education-OSDE	OSDE serves as the state governing and administrative body for all public K-12 school districts and the Adult Education (Lifelong Learning) system.
Oklahoma Department of Human Services-OKDHS	OKDHS provides programs, services, and resources for the state's most needy residents, including child support, SNAP (food stamps), TANF, school nutrition programs, foster care, and child protective services.
Oklahoma Department of Rehabilitation Services-OKDRS	OKDRS is comprised of five program divisions, Vocational Rehabilitation, Visual Services, Disability Determination, the Oklahoma School for the Blind and the Oklahoma School for the Deaf. These divisions operate dozens of programs that help Oklahomans lead more independent and productive lives.
Oklahoma P-20 Data Coordinating Council	Created in 2009 by Senate Bill 222, the Council advises OSDE, OSRHE, CareerTech, the Office of Accountability, OESC, legislature and governor on coordination of the creation of a unified, longitudinal student data system.
K20 Center, University of Oklahoma	The K20 Center for Educational and Community Renewal is a statewide education research and development center which promotes innovative learning through school-university-community collaboration.

Partnerships within State Workforce Systems: The public workforce agencies represented here have a

history of cooperation through their involvement with the Governor's Council for Workforce and Economic

Development (GCWED) and the Workforce Solutions Staff Team (WSST), a group of representatives from public agencies active in workforce development and charged with carrying out the day-to-day work of the GCWED. These partners also serve on GCWED sub-committees or working groups, including the Data/Portal committee. Involvement with this working group reflects their commitment to implement OK-WDES; to connect that system to longitudinal education databases; to help develop and support state policy designed to identify and remove barriers; to share resources; to adhere to existing policies and procedures governing secure data sharing/linking, storage, and usage; and to expand those policies and procedures to include all workforce and education agencies to create a robust longitudinal data source.

Partnerships with State Education Agencies: The public education agencies represented here have a history of cooperation through their involvement with the Governor's Council for Workforce and Economic Development (GCWED). Further, the Oklahoma Employment Security Commission (OESC), a public workforce agency and key support to ODOC/GCWED; the Oklahoma Department of Career and Technology Education (CareerTech), the Oklahoma State Regents for Higher Education (OSRHE), and the Oklahoma State Department of Education (OSDE) constitute the P20 Data Coordinating Council Governance Committee and are signatories to a memorandum of understanding, which provides a framework for collaboration and defines the roles and responsibilities required to share/link data among participating state agencies in support of the creation of a statewide P20 Education Longitudinal Data System (OK-PEDS) that meets the objectives of Senate Bill 222, codified in Title 70 of the Oklahoma Statutes, sections 3-163 and 3-164. Also, individual data sharing/linking and matching agreements exist between these agencies and others, including the OKDHS, as discussed earlier. ODOC/GCWED, which in 2011 assumed the role of WIA Title 1 administrator for the state from OESC (subsequent to adoption of the aforementioned legislative action), serves in an advisory role to the P-20 Data Coordinating Council, but can't serve on the Governance Committee or on the P-20 Data Coordinating Council without legislative

approval. However, that doesn't limit ODOC/GCWED's influence or access to the Council, as demonstrated by P-20 Council Director Dr. Paul Risser's signature on the *WDQI Interagency Partnership Agreement* and his guidance in the development of this proposal.

Partnerships with Research Universities or Other Research Entities: The Oklahoma State Regents for Higher Education (OSRHE) and the K20 Center at the University of Oklahoma are signatories to the *WDQI Interagency Partnership Agreement* (Attachment C). OSRHE regularly conducts research and issues reports for Oklahoma's post-secondary system and a variety of stakeholders on that system's performance, student outcomes, program evaluation, degree attainment, wages earned by former graduates, and more. OSRHE agrees to act as a research university partner would to process data requests, conduct in-depth workforce and education data analysis in conjunction with the signatories to this agreement and other relevant partners, prepare standard reports, respond to requests for additional papers and reporting on state and local workforce and education issues and trends as requested by external entities and consistent with all applicable federal and state privacy laws. See key provisions of the OSRHE *Data Access and Management Policy* in the *Statement of Current Capacity/Secure Data Storage* section.

The K20 center is a statewide education research and development center. The K20 Center also agrees that, as the signatories start to use longitudinally linked data to accomplish **Project Goal 3**, the Center will provide guidance and input in using this data to conduct and produce the necessary research to conduct analysis, implement continuous process improvement in the delivery of workforce and education services, enhance return on investment, and drive strategic policymaking. Further, the Center can be instrumental in assisting the signatories with the development of predictive models for college/post-secondary training and career readiness and with the development of pilot programs to test these models designed for students (secondary and post-secondary) as well as workforce development system participants (veterans, dislocated workers, TAA, TANF recipients, long-term unemployed).
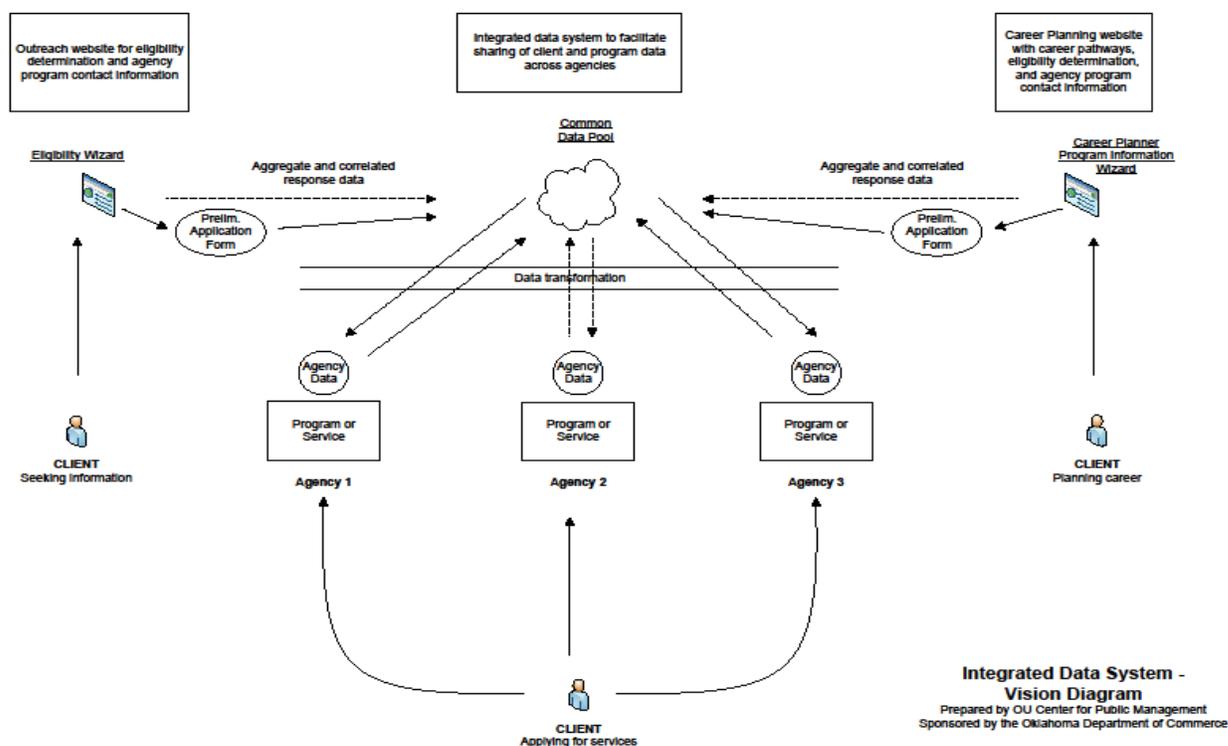
Partnerships with Additional State Agencies: OESC serves as the administrative entity for all Wagner-Peyser programs, the Trade Adjustment Assistance program, and the state's Unemployment Insurance program. It collects and distributes reports using Labor Market Index, Bureau of Labor Statistics, U.S. Census Bureau, Federal Employment Data Exchange system (FEDES) data, and participates in the Local Employment Dynamics (LED) partnership. OESC representatives serve on the Governor's Council for Workforce and Economic Development (GCWED) and the Workforce Solutions Staff Team (WSST) and represent a long-standing partner for ODOC/GCWED. OESC is also a signatory to the *WDQI Interagency Partnership Agreement* and agrees to promote and use OKJobMatch.com as the state's labor exchange and labor market data system; and to support the development and implementation of OK-WDES. OESC also agrees to work with the P-20 Council and other signatories to connect with education data contained in partially and/or fully developed Statewide Longitudinal Data Systems (SLDS) databases within Oklahoma and explore opportunities to connect with SLDS and workforce longitudinal systems in bordering states and throughout our region. And, OESC agrees to work with all signatories and other relevant partners to use longitudinally linked data to conduct analysis, implement continuous process improvement in the delivery of workforce and education services, enhance return on investment, and drive strategic policymaking.

4. Description of Database Design, Quality Assurance and Proposed Uses (35 Points)

The diagram below is intended to provide a visual representation of how OK-WDES will operate and interact with clients and other public agencies. **OK-WDES** consists of three components: **(1)** a common data pool that will serve as the workforce longitudinal database; **(2)** OKJobMatch.com, a labor exchange and real-time labor market data system; and **(3)** OKWorks, which will be the integrating portal for all public workforce agencies and serve as the online resource hub for all workforce information, providing employers, job seekers and students with user friendly access to information and tools that support them in doing career planning, choosing relevant education, and in job matching. OKWorks will also serve as a

common program wizard for offerings across all workforce agencies, helping clients and case managers determine program appropriateness and eligibility and to apply for benefits and services.

Common Data Pool/Workforce Longitudinal Database: This will be a data warehouse storing shareable longitudinal data from multiple agencies relevant to their workforce training and employment programs. Shareable client data will be contributed by agencies, in accordance with all state and federal privacy and confidentiality regulations and laws as stressed throughout this proposal, making them available to other agencies for streamlined intake of existing clients. Combined with proactive eligibility determination, agency referrals can be generated during intake. As a central repository of aggregate or correlated longitudinal data from other wizards, it can provide reports and analysis for improved decision

Integrated Data System - Vision Diagram
Prepared by OU Center for Public Management
Sponsored by the Oklahoma Department of Commerce

support for all participating agencies. This common data pool will collect data from OKJobMatch.com, OKWorks, and all public workforce agency data systems. **OKJobMatch.com:** will serve as the state's primary labor exchange and real-time labor market data system. Real-time labor market data informs and

improves the quality of other data sets to be included in the workforce longitudinal database. **OKWorks—an integrated, Common Program/Eligibility Wizard and Web Portal:** OKWorks will ask qualifying questions that inform prospective clients of eligibility and direct them to program contacts and additional resources. The wizard/portal will act as an outreach mechanism, providing information and proactive eligibility determination for citizens either unaware of available services, or not yet ready to initiate applications with any particular agency. The wizard/portal will report back to the common data pool/workforce longitudinal database correlations of anonymous responses. Having a single point of entry helps eliminate data silos and collects longitudinal workforce data into one common resource. Examples: the percentage of respondents with disabilities that are also interested in completing a higher education degree and the percentage of respondents in a household with dependent children that have an annual household income of less than $30,000. If zip code or county of residence is included, geographic correlations can be made. The wizard/portal can also lead clients to a preliminary application form, if they wish to pursue available programs or services identified by the wizard/portal. OKWorks will combine a variety of online tools, resources, e-services and websites (OKJobMatch.com, OKMilitaryConnection.com, and OKCareerPlanner.com) as well as program information and resources with career pathways models to inform and assist clients in education/training and career planning. OKWorks will provide proactive eligibility determination along with program referrals. Website traffic analysis will be supplied to the common data pool/workforce longitudinal database for trend analysis of career planning and educational interests.

To fully achieve its project goals, outcomes, and outputs detailed in the *Plan Outline* section and to develop the functions and design of its proposed OK-WDES detailed and diagramed above, ODOC/GCWED will assemble a Joint Application Design (JAD) team. The JAD team will consist of the Project/Database Manager (to be hired); ODOC's Chief Administrative Officer in charge of the agency's Information Technology Division; an ODOC-IT data analyst; a representative from each of the *WDQI*

Interagency Partnership Agreement (Attachment C) signatory agencies, including the P-20 Data Coordinating Council; at least one data analyst from OESC, OSRHE, CareerTech, and OSDE; a research analyst from ODOC's Research and Analysis Division; and a research analyst from the University of Oklahoma's K20 Center. The JAD Team will be charged with ensuring the three project goals and related outcomes and outputs (discussed in the *Plan Outline* section) are met within the 36-month grant performance period. The JAD Team will not only ensure that these online tools and services are more efficient, but are designed to serve all populations and remove any barriers to service that might be faced by individuals with disabilities and some of our hard-to-serve populations.

Personal Identifier: Oklahoma's workforce development system doesn't require clients, who receive services through its system of one-stops and at other partner facilities, to provide SSN; they are taken on a voluntary basis. OSDE assigns all students a unique personal identifier called the WAVE identifier, which is now used by CareerTech for high school students coming into its technology center system from the public school system. High school students can attend classes and Career Academies at CareerTech technology centers simultaneously. For its adult students, CareerTech collects SSN. OSDE is starting to collect SSN on a voluntary basis, but as a matter of policy and course, doesn't require an SSN. The state's higher education system does require SSN for all students enrolled in public two- and four-year institutions. Through a combination of comparing demographic data (name and birth date), the WAVE identifier assigned to both secondary students within Oklahoma's public school districts and at CareerTech technology centers, and other identifying data, such as high school attended and year graduated, OSRHE, CareerTech, and OSDE have achieved a record match rate of 87% or higher. Efforts are ongoing to improve match rates; however, this rate is among some of the highest in the nation without the uniform collection of SSN.

Data Quality Measures: The JAD team will create and adopt a comprehensive governance program for OK-WDES and workforce longitudinal database to guide the management and use of data within the system. A well-planned and implemented data governance program will assist ODOC/GCWED and staff in the day-to-day functioning of the system and database and will promote data quality (in accordance with the Data Quality Campaign elements) and reliability, elimination of redundancy in data collections, elimination of data silos, and consideration of data as an agency and system wide asset. Most importantly, this data governance program will help establish data security, protect confidentiality and privacy, and define the protocols and procedures for ODOC/GCWED to ensure that governance is enforced. The governance program will include compilation of agency and state regulations related to data collection, usage and quality, convene governance and data steward subcommittees to the JAD team and GCWED, document team and subcommittee functions, and develop procedures to ensure efficient review and approval of changes and enhancements to the system and requests for access to the data as the needs arise. With the expansion of longitudinal data sets, research interest will increase significantly. ODOC/GCWED will use the governance program to manage access and research requests. ODOC/GCWED will leverage its partnership with OSRHE, the P-20 Council, and the K20 Center to create processes that encourage research usage of the integrated workforce data enterprise system and longitudinal database. The rules established by the governance program will be followed to ensure confidentiality of individual client data.

Scope of the Longitudinal Data: Much of this has been detailed in earlier sections discussing partnerships, the current data sets and data linkages, and the proposed data sets and linkages. The JAD team will work with all stakeholders discussed in this proposal to include and match the following longitudinal data throughout the workforce and public education (secondary and post-secondary) systems: WIA, Title 1; WRIS; WIASRD; Wagner-Peyser Act; Trade Adjustment Assistance and Trade Readjustment

Allowances; Temporary Assistance to Needy Families; Supplemental Nutrition Assistance Program; Vocational Rehabilitation; Registered Apprenticeship; Career and Technical training; secondary (early childhood, K-12); post-secondary (CareerTech and two-year and four-year institutions); adult education; FEDES; UI wage record information from quarter to quarter measuring employment and income earnings gains; UI benefit claims and demographic data; and real-time labor market information gathered through OKJobMatch.com and OKWorks usage data. ODOC/GCWED hopes to use this longitudinally matched data to answer a variety of questions, including: What is the relationship between a student's program of study and the industry in which he or she ends up working and the wages earned? How do their employment experiences reflect the needs of the state's economy and our employers? How can job information about graduates better inform programmatic and budgetary decisions by agencies and entities throughout Oklahoma? What are the effects of vacant or filled positions on economic development? How many education and employment program completers are able to secure family-supporting jobs in high-demand fields? Are these completers sufficient to meet demand? How do individuals get into education and employment programs that enable them to secure career-path employment? Do particular demographic groups have trouble entering and completing these programs? How can access to these programs and completion rates once enrolled be improved? Answering these questions will enable Oklahoma to determine employment outcomes for secondary and post-secondary students to evaluate federally and state supported education programs; analyze the cost effectiveness of federally and state supported training programs in terms of increased earnings for participants; illustrate the cost effectiveness of employment service programs by demonstrating whether a corresponding reduction in UI and TANF benefits exists among those exiting WIA and Wagner-Peyser programs. OESC and ODOC already collect this data, but it is not yet linked within a longitudinal system.

Security Measures: The Regents' *Data Access and Management Policy* serves as an example of the types of processes and procedures in place between OESC, OKDHS, OSDE, CareerTech, and OSRHE to ensure secure data storage, transfer, analysis, and sharing. This policy will be customized to the workforce system and used within the Governance Program created by the JAD team to guide the formation of data-sharing agreements and data storage, transfer, and analysis security processes specific to the development of an integrated workforce enterprise data system that will link to an SLDS. The specific data files, data records, elements, and fields will be developed by the JAD team. However, it's anticipated that these files, records, elements, and fields will include the program data discussed in the *Scope of the Longitudinal Data section*. Key provisions of the Regents *Data Access and Management Policy*: "**Policy:** Data collected and maintained in the State Regents' data system shall be managed in a manner which will promote access to and dissemination of information that improves the education-related decisions of parents, teachers, administrators, policymakers, and educational stakeholders as well as the general public. This policy articulates three privacy and confidentiality protections: (1) **Security** includes the measures in place to ensure that records are not lost, stolen, vandalized, illegally accessed, or otherwise rendered useless. Since the data are stored on computers, it is essential that there be a high level of protection that provides integrity and availability commensurate with the level of risk and magnitude of harm. (2) **Access** to the data is restricted by the State Regents and significantly limits who can view the data and for what purposes. There are five access levels, each of which is consistent with a specific educational purpose as defined in Section 99.2 of the FERPA regulations. (3) **Disclosure** in summary reports is designed to protect individual data. In cases where populations include only a few individuals, no group smaller than six individuals is reported."

"**Access Level:** Access levels are assigned to maximize public usage without risking disclosure of personally identifiable information. *Level 1* allows authorized State Regents' staff to read and write to all

records and fields in the database. This access level is only permitted to a minimum number of authorized staff members who operate or manage the data system or are responsible for maintaining the accuracy and security in the performance of their duties. *Level 2* allows researchers, education groups, and other parties who express legitimate educational interests to read all records and fields in the database to further the understanding of educational practices, methods, or theory that would be expected through acceptable research practice. *Level 3* allows personally identifiable information plus those data that are considered directory information only. *Level 4* allows individual records without personally identifiable information. *Level 5* allows summaries of data only. The State Regents will block any aggregate results when fewer than six students or educational personnel might be disclosed."

"**Disclosure of Data:** Private or confidential data on an individual shall not be created, collected, stored, used, maintained, or disseminated by the State Regents in violation of federal or state law and shall not be used for any purpose other than those stated. If the State Regents enter into a contract with a private person or third party to perform any State Regents' functions, that agreement shall require that the data be protected in the same fashion. Under this policy, no private or confidential data will be released except under the allowable circumstances as stated in Section 99 of the FERPA regulations. If it is determined that personally identifiable information was disclosed in violation of this policy, all parties will not have access to any State Regents' data for five years. In addition, all violations will be reported to the appropriate federal and state enforcement agencies. The Privacy Act of 1974 states that disclosure of individually identifiable information in any manner to any person or agency not entitled to it shall be guilty of a misdemeanor and fined not more than $5,000."

"**Requirements for Security, Privacy, and Confidentiality:** Commercial use of data obtained under such a request is prohibited. Recipients **do not** attain ownership of the data. Such data may not be shared or distributed, and all copies must be destroyed when the researcher completes the analysis or

report. Data, copies of data, and all reports must be maintained in a secure environment to prevent unauthorized access. A secure environment includes any electronic media, personal computer, server, or network on which the data reside. Compliance with these security requirements may be monitored by unannounced, unscheduled inspections of the data user's work site by State Regents' staff or designated representatives."

Planned Reports/Deliverables: The collection and use of longitudinal data will not only answer the questions and create the determinations discussed in the *Scope of the Longitudinal Data* section, but it will be an integral part in helping Oklahoma determine whether it is successfully addressing the barriers to increased credential attainment discussed in the *Introduction* and achieving the radical reinvention of workforce service delivery. Through the development of an integrated workforce data enterprise system and longitudinal database, Oklahoma will establish formalized data collection activities across all of our collaborating agencies, institutions, and partners. Oklahoma intends to use an approach to longitudinal data collection that includes formative and summative elements over the course of the period of performance. This approach is particularly important because Oklahoma currently lacks baseline data sets in a number of areas, so creating baseline longitudinal data for employers and all workforce development system stakeholders represents an essential first step. This baseline data will be used to measure and report on the effectiveness of the project goals, outcomes, and outputs proposed by this WDQI initiative.

Beyond the baseline, Oklahoma can then use longitudinal data to establish and reward best practices, measure the effectiveness of its one-stop centers and their service providers, and measure true return on investment for its training and employment programs, reporting all results to the various stakeholders, including legislators, employers, job seekers, partner agencies and organizations, students, parents, and others. OKWorks will have research information and directions as well as links to all findings. As Oklahoma fully develops its workforce/education longitudinal database systems, it can populate federal

databases with state and local data; produce and distribute industry and occupational employment projections to a larger segment of the population through user-friendly "dashboards"; conduct and publish relevant economic analysis, special workforce information, and/or economic studies determined to be of benefit to the governor, GCWED, local workforce investment boards, and other policymakers. The planned reports/deliverables can: demonstrate correlations between quality education/workforce system performance and student achievement to sustainable economic development; track education/employment program participants over time to see how well they secure jobs in high-demand occupations important to local economies and to identify education exit points that maximize employment and earnings; evaluate the success of instructional materials and teaching strategies on positively affecting the performance of diverse secondary and post-secondary student populations; and follow the flow of various disadvantaged populations, including TANF recipients, at-risk youth, and dislocated workers into the labor force, measuring their employment and earnings, determining whether and when they became unemployed, and identifying the services and benefits received and their impact.

5. Staffing Capacity (10 Points)

The Oklahoma Department of Commerce (ODOC) on behalf of the Governor's Council for Workforce and Economic Development (GCWED) will serve as the lead applicant and fiscal agent and will perform all programmatic and administrative duties related to those functions. ODOC/GCWED will provide on-going project guidance and technical assistance to all signatory partners to *Attachment C: WDQI Interagency Partnership Agreement.*

Database/Project Manager: ODOC will hire a database/project manager to lead development of the OK-WDES, managing system procurement, installation, verification, maintenance, programming and system documentation of solutions and structure as necessary. The Database/Project Manager will work closely with partner vendors to facilitate desired outcomes; design, implement, and ensure the integrity of

enterprise level systems in accordance with policy and guidelines; analyze code for problem resolution and performance optimization; provide agency needs analysis and recommendations; perform hardware and software upgrades to physical and virtualized network servers including operating systems and applications; perform, document, implement, test and maintain proactive security and data quality measures and procedures; produce technical diagrams, design and network structure for analysis and support of system topology; provide proactive system support and resolve system impacting issues; and provide long-range systems planning for OK-WDES technology and infrastructure. **Education and Experience:** Bachelor's Degree in Computer Science, Technology Management, Information Sciences or related area. Two years of professional experience in at least two areas of development, support and design of complex administrative longitudinal databases, MS SQL server, transactional and Windows Server Systems, or an equivalent combination of education and experience, substituting one additional year of experience for each year of the required education, or completion of technical school or vendor training in the area of Database Development Technology, or professional certification such as MCSE. IT Project Management Certification (ITIL) is required.

Data Analyst Duties: Under direction of the Database/Project Manager, the data analyst will be tasked with analyzing, rationalizing and designing data algorithms and function related to OK-WDES. The analyst will design, implement, administer, and ensure the integrity of enterprise level systems in accordance with policy and guidelines. ODOC's current data analyst will be able to: analyze data for problem resolution and optimization; provide agency needs analysis and recommendations; perform data cleansing, analysis, reliability measures and integrity of system architecture, data manipulation and storage; perform, document, implement, test and maintain proactive data security/quality measures and procedures; and produce technical diagrams, design and network structure for analysis and support of system topology.

Education and Experience: ODOC's data analyst has a Bachelor's Degree in Computer Science. Six

years of professional experience in development, support and operations of complex administrative longitudinal databases, and MS SQL server.

Other ODOC staff involved with supporting the proposed goals, outcomes, and outputs: Deputy Secretary of Workforce Development and Director of Workforce Solutions will provide overall project oversight; Chief Administrative Officer will provide oversight for information technology functions; Oklahoma Green and Oklahoma Greenovation Project Director will oversee the OKJobMatch.com component; Marketing Communications Specialist, Workforce Solutions Division, will oversee the development and maintenance of OKWorks and related website; Director of Operations, Workforce Solutions Division, will oversee all fiscal, administrative, monitoring, and reporting activities; and Director of ODOC's Research & Economic Analysis Division, which provides economic, demographic and labor data and analysis to state leadership, develops and advises on economic policy formation, performs business intelligence, and conducts research for the GCWED, will oversee related labor market analysis, research and reporting.

All of ODOC staff that will serve on the JAD team and/or its subcommittees, will be expected to support the project goals and data sharing/linking agreements, including Attachment C, and are bound to protect individual privacy and confidentiality in accordance with all state and federal PII privacy and confidentiality statutes and regulations, including restrictions on the release of confidential information identified in the Family Educational Rights and Privacy Act (FERPA). ODOC will be the employer of all staff.

6. Bonus Points—Other Data Linkages (3 Points)

ODOC's Project/Database Manager, who will lead the JAD team, will establish procedures and systems to enhance data sharing to evaluate the relationship between education programs and outcomes and employment fields, employment locations, and employment outcomes. To do this, the team—representing the state workforce agencies and state education agencies—will convene other stakeholders and create opportunities for input and advice in the areas of data ownership, data use, research priorities, data

management, confidentiality, data access, data-matching, and reporting from the system. Such stakeholders include, but are not limited to, work training and **vocational rehabilitation** programs for people with disabilities; **Registered Apprenticeship** programs; employment service programs for veterans, dislocated workers, TAA-eligible workers, long-term unemployed, formerly incarcerated; youth aging out of foster care, etc.; **CareerTech technology centers**; public and non-public institutions of higher learning; public school districts; charter schools; non-public elementary and secondary schools; and **adult education** and early learning programs. Further, OESC, which administers the UI benefit program for Oklahoma and collects and maintains all **UI wage records** and participates in the Wage Record Interchange System **(WRIS)**, is a signatory to the WDQI Interagency Partnership Agreement. OKDHS **(TANF and SNAP)** is also a signatory and has long supported ODOC/GCWED's efforts to develop an integrated workforce data enterprise system and use longitudinal data to improve Oklahoma's workforce development system for all stakeholders through that agency's involvement with the GCWED, the Workforce Solutions Staff Team (WSST), and the GCWED's Workforce Data Portal subcommittee.