

PART II. THE TECHNICAL PROPOSAL

STATEMENT OF CURRENT CAPACITY

Established Partnerships and Capacity for Maintaining Secure Data Storage

Since the fall of 2008 the University of Hawaii system (“UH”), the state’s only statewide public post-secondary educational institution, the state Department of Education (“DOE”), the state Department of Labor and Industrial Relations (“DLIR”), the state workforce agency, and the Hawaii Workforce Development Council (“WDC”), the state’s Workforce Investment Board that is housed within DLIR, have been collaborating and developing the P-20 Statewide Longitudinal Data System (“P20 SLDS”) to track and evaluate individuals’ participation and progress in state administered programs in order to inform decision making.

However, the current P-20 SLDS system does not yet incorporate the state’s workforce development programs due to funding constraints. This grant proposal seeks to expand the current P-20 SLDS by creating a workforce SLDS that would include the workforce development programs operated by the state.

To build upon Hawaii’s current longitudinal data system to meet the national standards prescribed by this proposal, Hawaii has a critical need to address two general limitations:

Limited Interoperability: educational and workforce data from different agencies serving the same populations are stored in separate files and physical environments. This separation makes it difficult for data and information to be easily exchanged across system partners. Additionally, the data collection and management infrastructure for state system partners needs to be aligned with private and nonprofit partners that are being recommended for inclusion into the Hawaii workforce data quality system.

Data gaps in fields and quality assurance: a statewide comprehensive standard for data quality has not been developed or adopted. Although the state currently operates P20 SLDS, focused on education, a fully integrated statewide system has not yet been developed that includes the workforce component (both state government information as well as employer/nonprofit information).

As noted above, Hawaii has been active in trying to accelerate the development of its own SLDS. The P-20 SLDS Executive Committee contracted with Cal-PASS to develop its Hawaii equivalent – HIPASS. HIPASS created the link between the information systems of the State of Hawaii Department of Education and the University of Hawaii eventually starting the state’s first true longitudinal data analysis system for education participants from Kindergarten through college graduation. These agencies have jointly established, and are funding, an office within UH to house and administer the P20 SLDS and HI-PASS.

Capacity for secure data storage of all information is currently provided for in the HIPASS data system through the aforementioned MOU and its addendums, in which strict protocols are listed regarding the gathering, use and distribution of data collected.

From this launching point, the state has worked to build commitments among constituent groups for education and workforce centered SLDS development, which included negotiating a memorandum of understanding (“MOU”) (see attachment) between the three principal agencies (Department of Education, Department of Labor and the University of Hawaii) to share individual-level data. This document identifies data sets such as Unemployment Insurance (“UI”) claims data and wage records, etc, to be shared. But the agreement also allows other forms of data-sharing to take place covering a wide array of potential analytical uses rather than restricting sharing to specific, narrowly focused research questions.

Other efforts to create a foundation in which a data-exchange culture can bloom in Hawaii have been bolstered by the Hawaii State Legislature. In 2010, the state enacted Act 41, which requires all state agencies to “share data to support research that will improve educational and workforce outcomes and meet longitudinal data requirements”. This legislation, in which Hawaii was one of the first states to implement, is an important building block on which to construct a longitudinal data system. With this evidence of the Administration’s strong support, Hawaii has had no better time to develop and implement a SLDS integrating both education and workforce data. Furthermore, this shows the supports that have been put into place to streamline implementation of this proposal once funds become available.

During this time of economic hardship, these efforts are designed to help state government leaders, education officials and private/nonprofit partners identify root causes of major issues and develop promising practices to address four questions of interest to all partners:

- Are Hawaii residents able to secure employment after receiving training or completing postsecondary degrees?
- Are Hawaii residents engaging in education and skill development better able to retain employment over time?
- Do Hawaii residents get better pay after receiving training or completing and attaining postsecondary degrees?
- Do Hawaii residents who receive training and degrees meet the education and job skill demands of business and industry?

Objectives:

- The State of Hawaii is committed to complete and institutionalize a statewide, integrated education and workforce longitudinal data system, as set forth in this

proposal. The state is committed to accomplishing this and has strong political leadership, a common vision and mission, sustainable partnerships and an inclusive governance and management plan for sharing.

- Most importantly, state education and workforce leaders have recognized the importance and the value of such a integrated SLDS system. It is envisioned that such an integrated system will be used to generate information to inform policymakers and stakeholders on student achievement and workforce outcomes.
- The State of Hawaii, through integration of information from workforce, education and other government and non-government sources, intends to add depth and breadth to information already available to provide as full a view as possible the effectiveness of education, training and workforce development programs for the state.

PLAN OUTLINE

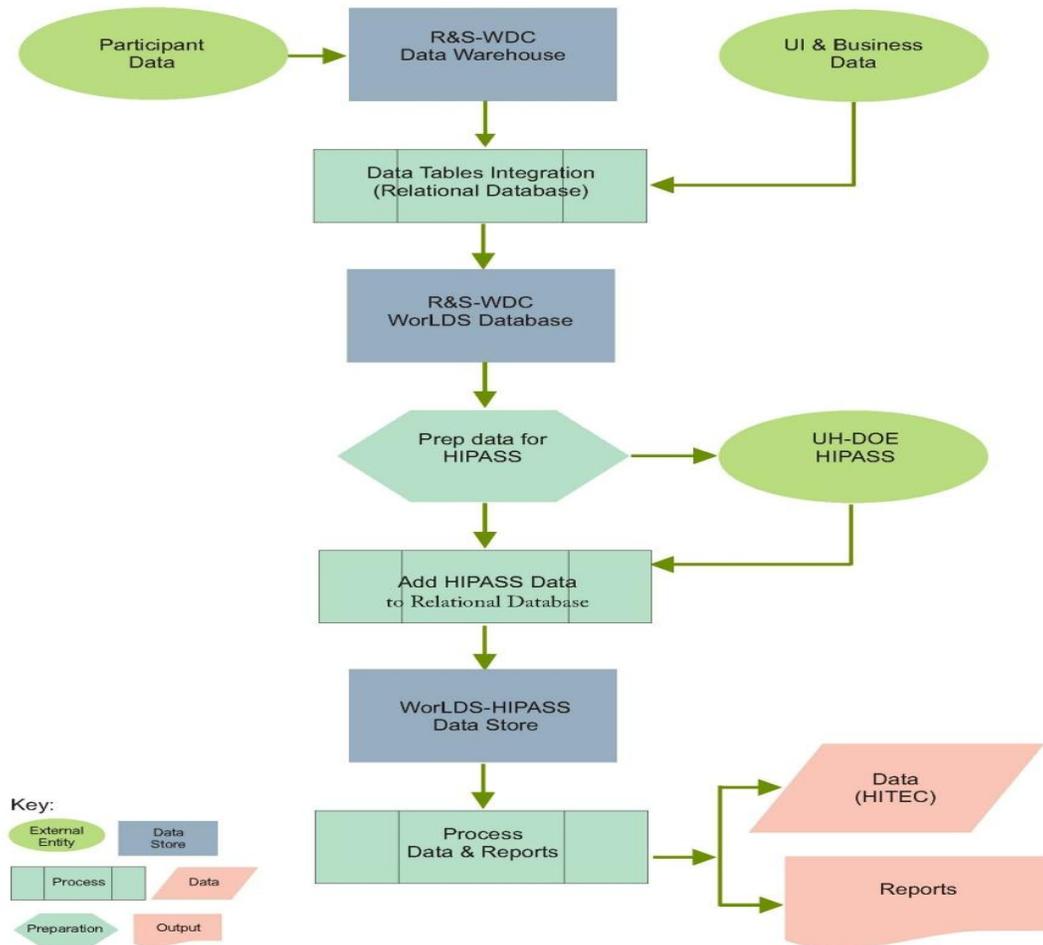
Over the course of the proposed project, the DLIR's main objective will be to upgrade the current SLDS to include workforce data and address deficiencies to create an efficient and reliable interoperability that will improve the overall utility, accuracy, reliability and timeliness of the data. This interoperability will include:

- A reliable data-link between WorLDS with the P-20 SLDS system (HIPASS).
- Develop an online one-stop portal that will provide access to the relational database and make the system universally interoperable.
- Develop the hardware and software capacity for building and hosting WorLDS.
- Develop and adopt a statewide, comprehensive policy on data quality assurance.

- Train state and local governmental personnel, as well as staff at private entities and non-profits that will partner with the WorLDS to facility full adoption and effective use of the system.

The DLIR seeks to build an SLDS focused on workforce development programs and then integrate that system with the existing P20 SLDS. As the data flow chart below shows, the overall plan is to create a new workforce database by initially utilizing internal data – participant data from existing workforce programs housed within the DLIR and a couple outside of the agency and information provided to the system by unemployment insurance (information on exact data sets is found later in this narrative).

Data Flow: Hawai'i's Workforce Longitudinal Data System (WorLDS)



Data quality in this proposed model is ensured through various agreed-upon protocol measures that have been implemented between the USDOL Bureau of Labor Statistics and the States DLIR Research and Statistics office. These protocols will be put into effect for WorLDS.

Initial input information into the WorLDS will include demographic, performance, and outcomes data from the following programs administered by the DLIR: (1) Workforce Investment Act-Title 1B programs (WIA); (2) Wagner-Peyser; (3) Registered Apprenticeship; (4) Trade Adjustment Assistance program; (5) Senior Community Services Employment program; (6) Veterans Employment and Training Services; (7) Disabled Veterans Outreach Program; (8) Local Veterans Employment Representative; as well as (9) Rapid Response employment training and job services programs. Additionally, this will include the Office of Community Services (OCS) housed within DLIR which maintains information on programs that service low-income, immigrant, and refugee populations.

Initially, WorLDS will process data from the programs housed within the DLIR and from one separate program administered by a separate state agency (VR). As many jurisdictions are aware, there is great resistance to sharing data due to concerns regarding confidentiality and information security. As such, WorLDS, once operational, will make itself available to other workforce programs operated by state and county agencies and non-profits for data validation. The “**carrot**” will be to provide performance data to these entities for their required reports to federal and state entities that require or encourage the use of UI data to validate that the participant found a job, wages, and industry employed in. As a trade off, the DLIR will request the participant files that contain social security numbers, demographics, and program information (where allowed under federal and state law). This information will be captured by

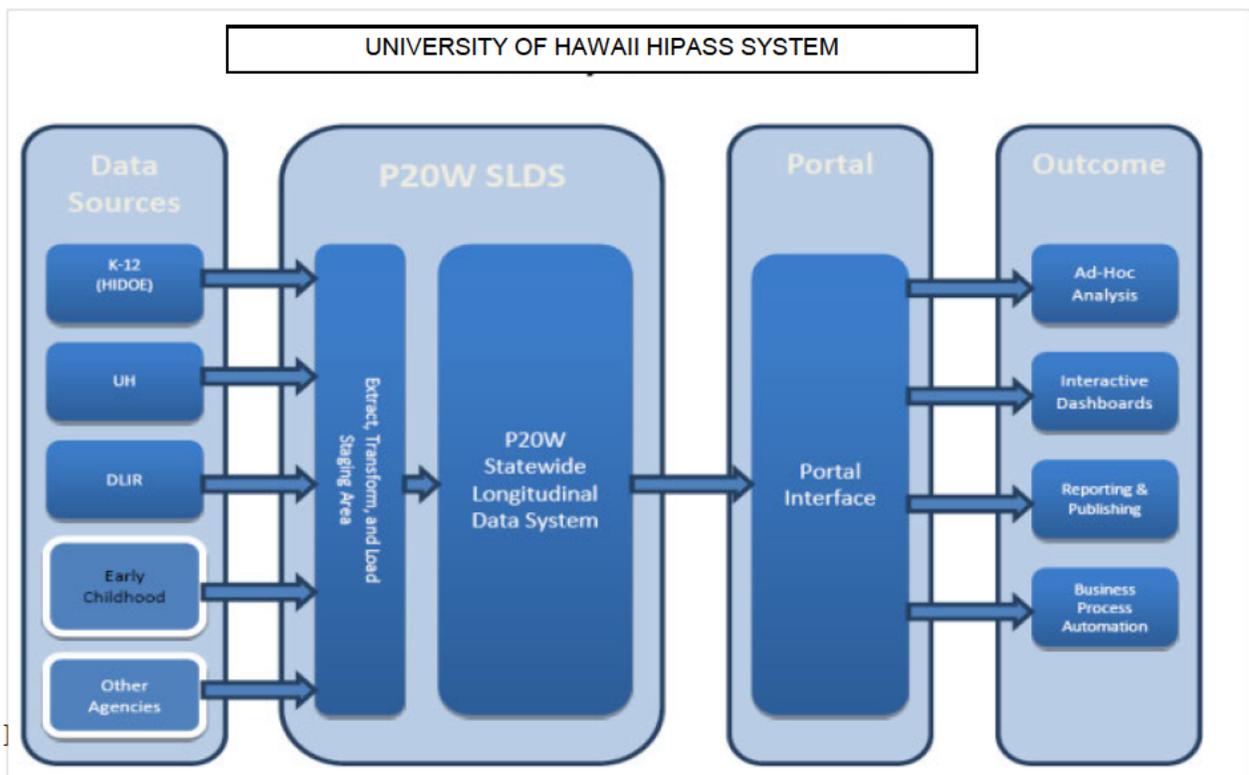
the WorLDS system to be incorporated with the other captured workforce and UI data and then linked to the P20 SLDS.

The UI division currently maintains information for all individuals applying for and receiving unemployment insurance benefits. To improve on the quality of the data from this source, the DLIR will explore the ability to collect additional data through UI's quarterly wage reporting system to include data on occupations, hours worked, and earnings.

In the initial set-up, through an MOU with the HIPASS office, information from WorLDS will be prepared and data linked with the HIPASS office and servers to create a new relational database, allowing for information already in HIPASS to be matched and included. This link will develop the capacity to match workforce and education data in the State of Hawaii at a new, higher level than current capacity allows.

Current statewide longitudinal education data system

An overview of the current data systems for UH, HIDOE and DLIR is presented here in a graphical form:



The above diagram is a simplified representation of the P20W SLDS. The initial P20W SLDS includes the HIDOE, UH and DLIR data sources. Portal interface is to serve as the user entry point for the majority of the reports.

Hawaii Department of Education SLDS: The HIDOE K12 Longitudinal Data System (K12 LDS) is currently on a Microsoft SQL Server 2008 (64-bit) platform. The K12 LDS dimensional model implements star schemas linking fact tables to dimension tables with student level granularity.

The K12 LDS pulls data from the Electronic Human Resources system, Electronic Student Information System, School Food Services system, the Database of English Language Learners, Electronic Comprehensive Student Support System, Hawaii Standard Assessments data, the HIDOE Financial Management System, School Bus Transportation database, Statewide Student Enrollment System, Data for School Improvement and other academic databases that track student development through testing. The DOE has hired a vendor to develop and implement a data model using Microsoft SQL Server, SSRS, SSAS, SharePoint, and Performance Point Business Intelligent (“BI”) Stack. Security for the BI dashboard uses Lotus Notes LDAP for authentication and extracting attributes like occupation (principals, teachers, superintendent, etc.), and location (school, district, State, office, etc.)

The University of Hawaii SLDS The University of Hawaii has implemented the Sungard Higher Education Banner Student and Financial Aid software as the university's integrated online student information system. The Banner Student Information System (“Banner”) integrates services across different academic and student support functions for all 10 UH

campuses. The transactional database supporting the Banner system is using Oracle RDBMS 10g. The Banner system security is a role-based implementation. The Banner ID Management team has responsibility over defining and approving group privileges and roles.

The University of Hawaii's Sungard Higher Education Banner Operational Data Store ("ODS") is a relational Oracle 10g database that houses unit-level student data. The ODS provides enterprise-wide operational and ad hoc reporting for a consistent view of institutional data. The ODS uses the Extract, Transform, and Load ("ETL") process. It extracts data from the source banner and loads it into the ODS. All ETL activities are performed from within Oracle PL/SQL packages and deployed into the ODS database schema using Oracle Warehouse Builder ("OWB"). The ETL packages, or "mappings", execute the procedures that delete, update and load data in ODS on a daily basis according to transactions that transpired in Banner. The ODS system security is a role based implementation. The UH System's Institutional Research and Analysis Office ("IRAO") controls the approval and definition of group privileges and roles.

Currently, UH student and course data needed for the P20W SLDS is collected in Banner, managed by the Banner Central office under the Vice President for Information Technology and Chief Information Officer. The data from Banner flows to the ODS, co-managed by the IRAO under the Executive Vice President for Academic Affairs/Provost, and Information Technology Services ("ITS") under the Vice President for Information Technology and Chief Information Officer. Both Banner and ODS are used as sources for reporting. Generally, Banner is used for operational reports and ODS for managerial reports. The baseline ODS product is from SunGard (as is Banner) and is refreshed nightly. However, IRAO has developed custom student demographic and course tables which contain frozen or slice-in-time data akin to that found in a data mart. These tables are also a part of ODS and are used system-wide to provide management

information used in planning, decision-making, assessment and policy formation. Management reporting for the student system is handled at the system level by IRAO, and each campus has its own institutional research support to address campus specific requirements and issues. IRAO produces over 90 Management and Planning Support (“MAPS”) reports in areas that include student demographics, grades, high school going rates, course measures, curricula offered, price of attendance, degrees offered, student/course crossover, and graduation and persistence. IRAO has more recently shifted its reports on-line to provide users more flexibility.

Department of Labor and Industrial Relations The Unemployment Insurance Tax System and Quarterly Wage Reporting System contain the employee and wage information associated with each employer. The data sources utilize ADABAS as the database, programmed using Natural and COBOL. DLIR, through Department of Accounting and General Services, Information and Communication Services Division (DAGS/ICSD), currently provides UH with UI quarterly wage data in accordance with a quarterly wage data agreement. UH stores the UI data received under this agreement and is currently in the process of profiling and matching UH student records with labor records. The matching process is to be incorporated into the P20W SLDS.

The WorLDS (R&S, WDC staff and contractors) team will develop and adopt a statewide, comprehensive policy on data quality assurance and security. Staff will be trained on data collection and management and users and stakeholders will be trained for effective use of the system. The WorLDS team will be responsible for the design, integration and security of the system. They will be responsible for database loading from the disparate sources, creating and scheduling new load packages, monitoring scheduled jobs, maintaining logs of all data sets, and monitoring database performance. They will also create standardized reports for research projects and requests sent to management, staff, and various customers.

The WorLDS team will develop the incorporated data sets, establish processes, develop staging areas, and establish the overall integration and warehouse design. The WorLDS will also integrate data from the HIPASS data system. Data will include student enrolment and graduation records and other training-related data. To further improve on this data set, we will seek to include data from the State of Hawaii's Business Express portal for employer data sets that can be matched and compared to UI data.

A relational database linking all of the data sets listed above will be developed. At the onset, the WorLDS system has developed data-sharing agreements to collect data from the Department of Human Services' Benefit, Employment and Support Services, Vocational Rehabilitation divisions; the University of Hawaii P-20 Council and the HIPASS office located at the University of Hawaii.

A technical advisory committee with representation from the major user groups will be formed to determine which records should be integrated and to provide advice for expansion and ongoing maintenance of the WorLDS. The WorLDS will use current technology to enable warehousing, mining, and integrating large and complex data sets in a multitude of ways. MS SQL Server will be the database engine and a variety of tools will be used to create the integrations and data required for specific questions.

Sustainability

Sustainability of this program will come from existing WIA and BLS formula funded programs. However, the bulk of the funding will be derived from fees charged outside public and non-profit agencies for data validation for agencies quarterly or annual reporting. Several entities, including the agency that houses the VR program, have indicated a willingness to pay to have UI wage records matched against their participant files. However, no infrastructure currently exists

to facilitate that request. As mentioned prior, the “Carrot” approach through providing UI data for outside entities to acquire performance outcomes will drive entities to the system, and subsequent nominal fee-for-service model will allow the system to sustain itself beyond the life of the grant.

DESCRIPTION OF PARTNERSHIP STRATEGIES

The DLIR has a current MOU with the UH and the DOE. The purpose of the MOU, initiated in October of 2009, is to enable the sharing of data to support research that will improve the educational and workforce outcomes of residents. This wide-ranging MOU with the partners UH, DOE and DLIR created a data governance committee that determines protocols as well as to approve requests for access to data provided by the partners. The MOU addresses the mutual needs of individual privacy interest and confidentiality rights to whom the data applies. The partnership agreed in the MOU to use the information for educational research and the information would be presented in an aggregate form, rather than at an individual student/participant level.

At each level, the individual partners provide the following:

- **The Department of Education:** Student course taking (including grades, credits attempted and earned), diploma award information and student demographics.
- **The University of Hawaii:** Student course enrollment, including grades, credits attempted and earned, program and major degree award information, test placement/scores and student demographics
- **Department of Labor and Industrial Relations:** Unemployment Insurance data that includes the employee’s first and last name, social security number, wages and employer account number.

This MOU has been amended three times to include details on information transfer from the Department of Labor to the University of Hawaii, addition of authorized names for directly identified unemployment insurance data and fees associated with the transfer of information between DLIR and the University of Hawaii system.

To help expand the scope of information for WorLDS, the WDC has initiated outreach to other departments and entities regarding obtaining information to add depth and definition to the information to create a world class workforce longitudinal data system. The Department of Labor's Workforce Development Council has initiated agreements of support from the state Department of Health's Vocational Rehabilitation Division, the University of Hawaii's Career and Technical Education division and the City and County of Honolulu's Oahu WorkLinks to obtain their support in the development of WorLDS. These letters of intent are in the attachments of this grant application.

Moving forward, should the grant be awarded, the State of Hawaii Department of Labor is prepared to initiate a number of Memorandums of Understanding with other state and non-state entities to expand the scope of information for WorLDS. It is the intention that WorLDS becomes a one stop information area for state entities to facilitate the sharing of aggregate information for performance purposes. The applicant is aware that both state entities and non-state nonprofit entities, through federal program regulations, must report on participant information on a quarterly and annual basis.

DESCRIPTION OF DATABASE DESIGN, DATA QUALITY ASSURANCE AND PROPOSED USES

As a security precaution, this type of database will link education and workforce data through a unique common identifier that does not permit an individual to be identified by users

of the system that will be created. Contractual services will be utilized to develop the technology and methods to integrate administrative records across the agencies and to develop the hardware and software capacity for building and hosting the relational database. This will include developing the architecture, design and deployment of the record-matching system and resulting databases.

The WorLDS system will be housed at the DLIR's Research and Statistics Office. Due to on-going concerns regarding the security of UI data, the approach that would bear the most success to building the workforce component of an SLDS system, would be to build it at the DLIR. This provides the best possible assurance to the DLIR's UI division on the security of that data, and allows the workforce SLDS to operate independently for workforce programs while integrating with the state's P20 SLDS.

WorLDS plans to use a relational database model that will enhance the process of normalizing data from disparate systems with functions, unique to relational database design, that support select project, relational join, and division operations. A relational database supports access permissions, which will allow the database administrator to implement need-based permissions to the access of the data in database tables. Relational databases support the concept of users and user rights, thus meeting the security needs of the proposed workforce longitudinal database system. Relations are associated with privileges like create, grant, select, insert and delete privileges, which authorize different users for corresponding operations on the database. The use of a relational database for this proposed system will offer advantages including performance, power and support of new hardware technologies, provides support for the implementation of distributed systems and is scalable.

The State of Hawaii proposes the following structure in relation to hardware, software and security for the proposed database design and implementation:

<u>HARDWARE:</u> Data Server Application Server Tape Backup UPS	<u>MODEL</u> PowerEdge M610 Blade Server - Dell PV114X, LTO5-140 - Dell APC Smart UPS 3000VA - APC
<u>SOFTWARE</u> Applications Reporting Database Encryption	<u>PROGRAM NAME</u> PHPMaker 8.0 – hkvstore.com PHP Report Maker 5.0 – hkvstore.com PHP XML Maker 1.0 – hkvstore.com Smart Report Maker - StarSoft Inc. My SQL Enterprise Edition – Oracle PGP Whole Disk Encryption Level D

The physical plant that will house WorLDS will be housed at DLIR R&S is as follows.

Computer room	The current R&S computer room will be modified to accommodate WorLDS database servers and storage devices. The storage devices will house data over time and will have the capability to restore and generate data as needed.
Consultation	The DLIR EDP services office will consult with the R&S-WDC within the DLIR and with the statewide Integrated Computer Services Department and a vendor – Hawaii Information Consortium for networking issues.
	Discussion with DLIR EDP services office and the state Department of Accounting and General Services to determine electrical/power consumption for WorLDS.
	Discussions with EDP services office to install and manage a dependable back-up system for all data .

The WorLDS will use this type of software and media:

Type of Database design	Relational database software will be acquired that can import and manage data from a variety of data sources and that can be easily managed by project staff.
Linking abilities	The database will be able to link all participant, workforce, and education information through a unique common identifier.
Interface	The interface will have automated triggers for updates as determined by project staff with input from partners and stakeholders.
Migration of data from disparate databases	Migration toolkits will be used to import data from various databases and systems.

WorLDS will be designed to provide reporting for partners that choose to utilize it in order to produce a variety of federal and other reporting requirements. This reporting tool will allow participants in WorLDS:

- Capability to conduct statistical analyses based on criteria identified by users and stakeholders;
- Capability to track individuals over time;
- Capability to conduct historical analyses;
- Capability to export data in a variety of formats (spreadsheets, web pages, graphical charts, data dashboards, mobile apps);
- Capability for cloud computing. DLIR will develop data sharing agreements to provide data to partners and stakeholders.

The system will be scalable by allowing it the ability to grow over time. Storage and operations must be optimized from the start in order to add individuals over time. The database will also track these workers, their occupations, wages, and other data over time.

Personal identifier: Per the MOU establishing the linkage between DOE, UH and DLIR, and in line with FERPA regulations, the WorLDS system will be developed using the Social Security number as the unique personal identifier. This identifier is used throughout the workforce system in the state of Hawaii and will be utilized to gather all data on participants longitudinally in order to accurately track movement into and out of workforce and education systems. This will work in line with the HIPASS system that WorLDS will interact with. This personal identifier is consistent with FERPA as spelled out in the MOU in the appendix (See Attachment A)

Data quality measures: The Department of Labor Research and Statistics office will be the overseeing authority regarding quality of data. R&S will be ensuring the integrity, security and

quality of the data. Along with training that continues to be provided to all staff overseeing this and other data gathering programs. Along with this, R&S has very specific requirements that it must meet in order to report data to the Bureau of Labor Statistics, which it uses as the set protocol in order to ensure data quality measures. Those steps are outlined below and encompass the data quality protocol that will be utilized for WorLDS.

General agreement between DLIR R&S and USDOL Bureau of Labor Statistics

- R&S will collect data from agencies on a regular basis using standardized forms, or approved and secure electronic formats.
- These data will be reviewed and edited in accordance with the WorLDS database requirements (e.g., checking for missing data in required fields).
- Follow-up with participating agencies will be conducted for missing or questionable data.
- The edited data will be inputted and reviewed.
- Any errors detected in the data will be corrected.
- R&S will maintain appropriate methods for implementing changes in the input data.
- R&S will provide corrections and explanations when data are questioned. The questions will be addressed before final master files are submitted.
- Tests utilizing microdata will be used to produce sample reports.
- R&S will review and resolve any issues with reports and outcomes.

Scope of Longitudinal Data: The WorLDS system will initially pull information from these workforce and labor programs:

- **DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS**
 - From the Workforce Development Division and Local Workforce Investment Areas):
 - Workforce Investment Act (WIA) Title I-B Youth Program
 - WIA Title I-B Dislocated Worker Program
 - WIA Title I-B Adult Program
 - WIA Dislocated Worker Rapid Response

- Senior Community Service Employment Program (SCSEP) aka Older Americans Community Service Employment Program (OACSEP)
- Volunteer Internship Program (VIP)
- Registered Apprenticeship Program
- Veterans Employment and Training Services
- Disabled Veterans Outreach Program
- Local Veterans Employment Representative
- From the Office of Community Services (OCS)
 - Youth Service Centers (YSC)
 - Employment Core Services for Immigrants
 - Employment Core Services for Low-Income Persons
 - Employment Core Services for Refugees
 - Community Service Block Grant
- Information from the Unemployment Insurance Division (Worker/Benefits)
- **DEPARTMENT HUMAN SERVICES**
 - Vocational Rehabilitation

Data elements that will be utilized in the production of the data set can be found in this chart below. This is for an initial set up of the system, as it is anticipated that the WorLDS will include more information from more sources as the system ramps up and further data sharing agreements are made with key partners (see Other Data Linkages).

Participant Information (Fields)	Sources – both initial start up (Bolded) and proposed
Last Name First Name Middle Initial SSN	<ul style="list-style-type: none"> ● Department of Labor and Industrial Relations (DLIR) <ul style="list-style-type: none"> ○ Workforce Development Division (WDD)

<p>Date of Birth Address1 Address2 City County State Zip Code Phone (primary) Phone (alternate) Email Address Licenses/certifications Programs Enrolled In Services Provided Activities Benefits Service Dates</p> <p>Demographics (Optional): Age Gender Race/ethnicity</p>	<ul style="list-style-type: none"> ▪ On-The-Job Training (OJT) Program ▪ Workforce Investment Act (WIA) Title I-B Youth Program ▪ WIA Title I-B Dislocated Worker Program ▪ WIA Title I-B Adult Program ▪ WIA Dislocated Worker Rapid Response ▪ Senior Community Service Employment Program (SCSEP) aka Older Americans Community Service Employment Program (OACSEP) ▪ Volunteer Internship Program (VIP) ▪ Apprenticeship ○ Office of Community Services (OCS) <ul style="list-style-type: none"> ▪ Youth Service Centers (YSC) ○ Unemployment Insurance Division (Worker/Benefits) • Department of Human Services (DHS) <ul style="list-style-type: none"> ○ Benefit, Employment and Support Services Division (BESSD) <ul style="list-style-type: none"> ▪ Temporary Assistance to Needy Families (TANF) ▪ Temporary Assistance to Other Needy Families (TAONF) ▪ Employment and Training (E&T) ▪ Child Care Connection Hawaii (CCCH) ▪ Head Start Collaboration Project ▪ General Assistance (GA) ▪ Aid to the Aged, Blind and Disabled (AABD) ▪ SNAP - Nutrition Program (old Food Stamp Program) ○ Office of Youth Services (OYS) Programs and Services <ul style="list-style-type: none"> ▪ Youth Service Centers (YSC) ○ Vocational Rehabilitation for the Blind and Disabled ○ Hawaii Public Housing Authority (HPHA) • Department of Health (DOH) <ul style="list-style-type: none"> ○ Behavior Health Administration
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	<ul style="list-style-type: none"> ▪ Developmental Disabilities Division • Department of Public Safety (DPS) <ul style="list-style-type: none"> ○ Corrections Division <ul style="list-style-type: none"> ▪ Correctional Industries Division ▪ Corrections Programs Services • City and County of Honolulu <ul style="list-style-type: none"> ○ Office of Community Services <ul style="list-style-type: none"> ▪ WIA • County of Hawaii <ul style="list-style-type: none"> ○ Office of Housing and Community Development <ul style="list-style-type: none"> ▪ WIA • County of Kauai <ul style="list-style-type: none"> ○ Office of Economic Development <ul style="list-style-type: none"> ▪ WIA • County of Maui <ul style="list-style-type: none"> ○ Office of Economic Development <ul style="list-style-type: none"> ▪ WIA • Alu Like • Community Schools for Adults • Hawaii County Economic Opportunity Council • Maui Economic Opportunity (MEO) • Hawaii Job Corps • Kauai Economic Opportunity (KEO) • Department of Veterans Affairs • Department of Defense <ul style="list-style-type: none"> ○ Transition Assistance Program (TAP) ○ Spouse Employment Program ○ Family Support Centers • Selected private vocational schools, colleges and universities
Employment Information (Fields)	Sources
Occupation Experience 1 Occupation Experience 2 Occupation Experience 3 Occupation Experience 4 Occupation Experience 5 Employment Status (current) Employer UI Number Employer Reporting Unit Number Employer Identification Number Reference Year Reference Quarter Quarterly Wages	Employers UI Data Systems WDD (HireNetHawaii) HUI Business Express R&S Data Systems

Hours Worked/Week Weeks Worked in Quarter Occupation Title Occupation SOC	
Education/Training Information (Fields)	Sources
Education Level (highest level attained) Degree/Certificate Earned 1 Degree/Certificate Earned 2 Degree/Certificate Earned 3 Courses School Attended 1 School Attended 2 School Attended 3	Schools Training Providers HIPASS (DOE, UH System)

As proposed, it is the intention of the State of Hawaii to link up individual demographic information, transcripts from education and college level, quarterly UI wage data and workforce services data. Uses of this data will span the gauntlet between informing policy makers on placement of education and workforce development resources to providing information to government and non-government entities. For non-government sources, information like this is desperately needed as they work to tackle serious social issues in Hawaii – from identifying and resolving the issues related to the working poor to focusing attention on the needs of out of school youth. Information gathered from the WorLDS, with its link to the HIPASS database will provide all residents in-depth analysis of how our state currently develops its residents and how that can be improved into the future.

Security Measures: An overview of the proposed WorLDS network infrastructure is presented here in graphical form.

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Focusing on the middle “Secured Computer Access Nodes” for purposes of discussing security, design of the WorLDS system will incorporate the following features, some required as part of the operation of a SLDS. The structure security measures that would be implemented for WorLDS, contractual services and consultation with EDPSO, ICSD will be utilized to develop security measures for the WorLDS. In addition to securing the physical location of database servers, the following will be incorporated:

System backups will be conducted on a regular basis and often

The WorLDS team will back up the databases and system on a regular basis. Utilities will be built into the system to perform backups automatically. A copy of the backup offsite in case of fire, hurricane, or other natural disaster that can destroy the backup tapes or discs along with the original data will be considered.

Use file-level and share-level security: To keep unauthorized access to the data, permissions will be set on the database files and folders. Data in network shares will have set share permissions to control which user accounts can and cannot access the files across the network. Permissions will be set for either user accounts or groups, and allow or deny various levels of access from read-only to full control.

Password Protect Documents: Passwords will be utilized on databases and individual documents. Documents will also be compressed and encrypted.

Encryption: A certificate-based encryption method to protect individual files and folders will be used. Files can be opened by the user whose account encrypted them or by a designated recovery agent. Encryption programs will also be utilized for whole disk encryption whenever data is written to the hard disk. Disk encryption will be used to encrypt removable USB drives, flash drives, etc.

Public Key Infrastructure: A public key infrastructure will be incorporated to manage public/private key pairs and digital certificates. This will protect data that needs to be shared with the involved agencies by encrypting it. The only person who will be able to decrypt it is the holder of the private key.

Protection of data in transit with IP security: To prevent data from being captured while it's travelling over a network, a security policy and authentication method and filters will be used

Deliverables and reports: Along with adding efficiency and depth to current reports produced by R&S, the WorLDS will be used to provide a wide variety of reports and information that are currently not available. These reports will be part of the series of reports that are disseminated from DLIR R&S.

The WorLDS will be able to provide contextual information on several topics that span education and workforce sectors. Furthermore, information on social issues are to be published and disseminated through the Collective Impact project sponsored by the Office of the Governor of the State of Hawaii, in which issues such as the working poor, out of school and out of work youth and healthcare issues will be discussed and resolutions sought. These are some of the many reports that the state is anticipating to obtain from the full operation of WorLDS.

STAFFING CAPACITY

The WorLDS project will be overseen by members of the P20 SLDS Executive Committee, with direct supervision, coordination and guidance from a non-grant funded senior management and advisory members consisting of the following:

Mr. Francisco Corpuz, Administrator, DLIR Research and Statistics Office. Mr. Corpuz has a Masters in Public Administration and 32 years of experience in managing labor market research and analysis, through federal-state cooperative statistical programs, and localized career information delivery systems. Mr. Corpuz oversees the data exchange and matching of the current UI wage data to the educational data provided by the P20 SLDS. Mr. Corpuz is member of the P20 SLDS Data Governance and Access Committee. Mr. Corpuz will be directly responsible for overseeing the build process of the WorLDS system at the DLIR.

Mr. James P. Hardway, Executive Director, DLIR Workforce Development Council. Mr. Hardway is the Executive Director of the State Workforce Investment Board and serves on the P20 SLDS Executive Committee. The WDC is the state's coordinating entity for all of the state's workforce, economic development, and educational entities. Mr. Hardway is the primary advisor to the Governor regarding workforce development and has over ten (10) years of experience in administration and coordination of workforce development programs, grant

management, policy development, and labor economics. Mr. Hardway will be responsible for ensuring fiscal and program monitoring of the grant, as well as providing coordination and outreach to additional public agencies and non-profits to gain additional linkages.

Mr. Todd Ikenaga, Program Manager, P20 Statewide Longitudinal Data System Mr. Ikenaga is responsible for managing all aspects of the Hi-PASS office creating the P20 SLDS. He is responsible for mitigating risk and working with leadership to resolve changes to the P20 SLDS project plan or issues. Mr. Ikenaga works with staff on all activities related to reporting project progress as well as coordinating Phase 1 activities (P20W data warehouse build) with Phase 2 activities to ensure integration. Mr. Ikenaga is also responsible for the ongoing implementation of the P20W SLDS data governance sub-committees; He works with stakeholders to understand the structure, policies, and operations of the P20W SLDS project; support the development of training and implementation materials; and participate in the implementation of data literacy training.

Mr. Ikenaga has a Bachelor of Science Degree in Computer Science. Prior to serving as the P20 SLDS Program manager, he served as Information Technology Director and Senior Manager for Data Applications for Hawaiian Airlines. Prior to that position he has also served as the IT Director of Systems Development for Hawaiian Airlines overseeing the airline's growing Information Technology program. Mr Ikenaga is housed at the University of Hawaii-Manoa and is employed by UH's P20 Partnerships for Education. His office is jointly funded by the DOE, UH, and the DLIR-WDC.

Project Staff to be Hired

The DLIR will employ 2.75 Full Time Equivalents. All employees hired will be expected to be aware of, and comply, with state and federal confidentiality laws related to

education and workforce data. The grant funded positions are as follows:

1. WorLDS Project Manager (PM). A full time 1.0 FTE PM will be hired and assigned to effectuating the grant under the guidance of Mr. Ikenaga, Mr. Corpuz, and Mr. Hardway. The position will be housed in the DLIR's Research and Statistics office. Prior experience must include knowledge and familiarity of advanced database management, prior experience in project management with a data processing and software solutions. Candidate must possess familiarity with federal data access regulations such as FERPA. The position's duties will include but not be limited to the following:
 - a. Manage the day-to-day tasks of the project
 - b. Support development of the management and work plans
 - c. Ensure that all team members understand their roles and responsibilities and are fulfilling those duties satisfactorily
 - d. Manage project's scope and schedule
 - e. Manage issue documentation and resolution
 - f. Identify issues and risks and implement mitigation strategies
 - g. Escalate high-level issues to the management and advisory group
 - h. Manage the deliverable review process to ensure that deliverables meet organizational goals and objectives
 - i. Facilitate and promote stakeholder communication
 - j. Monitor and report the overall project status
 - k. Determine project resource requirements, and
 - l. Ensure contractor compliance

- m. Manage contractor budget
 - n. Oversees budgets
 - o. Plan and lead team meetings
2. WorLDS Research Data Specialist – Data Analyst This 1.0 FTE will be housed in the DLIR’s research and Statistics office and will report to the Project Manager. The position must possess knowledge of research methods and techniques in the collection of surveys or electronic data; sources of information, computer and database processes and capabilities; and familiarity with employment and educational data sources. Duties include but are not limited to the following – The analyst will function as a resource to stakeholders to determine data reporting needs, produce data specifications for the development of automated reports, function as the liaison among stakeholders to troubleshoot tion and definitions. This position will maintain changes conjunction with WorLDS, will participate in the planning of ad hoc reports, report formats and layouts, data elements and presentation. The Analyst will also participate in the planning and implementation of data literacy training.
 3. Accountant – WIA Fiscal Grants Specialist. This 0.25 FTE will be housed in the DLIR WDC office and will report to the project manager and Executive Director of the WDC. Key responsibilities of the position include providing fiscal oversight of the project, reviewing expenditures and budgets and preparing fiscal reports as required under the grant and state fiscal rules. The Accountant will also monitor expenditures and adjust as necessary the level of expenditure on the grant.
 4. Program Specialist. This 0.50 FTE will be housed in the DLIR WDC. Key responsibilities are to provide support to the Project Director including the execution

of contracts with sub recipients, and the tracking of expenditures to ensure a timely execution of grant and project goals.

BONUS POINTS – OTHER DATA LINKAGES: The State of Hawaii Department of Labor is prepared to initiate a number of Memorandums of Understanding with other state and non-state entities to expand the scope of information for WorLDS. It is the intention that WorLDS becomes a one stop information area for state entities to facilitate the sharing of aggregate information for performance purposes. Those other entities include the State Department of Human Services, Department of Health, and Department of Public Safety. Federal entities include the Department of Defense and Department of Veterans Affairs. Nonprofit providers will also be approached about participating in WorLDS for their reporting requirements to the federal government. Those that will be initially targeted will be: Alu Like, The Community School for Adults, Hawaii County Economic Opportunity Council, Maui Economic Opportunity, Hawaii Job Corps and Kauai Economic Opportunity.

The applicant is aware that both state entities and non-state nonprofit entities, through federal program regulations, are required or encouraged to report on participant information on a quarterly and annual basis. These sources of information will become the sustainability backbone of this project as it is envisioned that a fee-for-service model will be produced in order to provide the necessary financial resources to both maintain and continually expand the WorLDS system past the initial three-year grant period.