T3 INNOVATION NETWORK

DEVELOPING AND USING PUBLIC-PRIVATE DATA STANDARDS FOR EMPLOYMENT AND EARNINGS RECORDS

February 2021

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The U.S. Chamber of Commerce Foundation (Chamber Foundation) and the T3 Innovation Network (T3 Network) recently partnered with the HR Open Standards Consortium (HR Open) to develop public-private open data standards for employment and earnings records. Employers use these records in business planning and managing their human resources and report them to federal and state governments, including state Unemployment Insurance (UI) systems. The HR Open standards establish common definitions, clarify data relationships, and provide guidance for employers and their human resources (HR) technology service providers on maintaining and reporting the records, and for government agencies on establishing reporting requirements and data collection systems. This information is provided through a conceptual data model and data dictionary. These standards also provide more technical schema and other documentation to assist in the implementation of the standards. These standards are designed for use in reducing data reporting costs for employers and government and improving labor market information. The Chamber Foundation and T3 Network also partnered with the National Association of State Workforce Agencies (NASWA) to assist in engaging states and other stakeholders in developing and reviewing the standards and exploring their applications for enhancing state UI wage records and improving labor market information.

Working with the T3 Network, HR Open developed the standards for employment and earnings records based on employer and government use cases and a comprehensive review of federal government reporting requirements, as well as selected state reports, including state UI wage record reporting. These standards also address the major data priorities of states considering expanding or enhancing the UI wage records (e.g., occupation, work location, work hours).

These standards offer substantial potential benefits to employers, government, and other stakeholders. The standards have the potential to reduce reporting and data collection costs and improve data quality. They also address some of the most critical data needed for improving the labor market information used by businesses, workers, policy makers, and the general public. However, these potential benefits need to be weighed against potential implementation issues and costs, including the initial changes in employer human resource information systems and reporting systems, government data collection systems, and additional state administrative costs resulting from the additional data requirements for improving labor market information.

Reducing reporting and data collection costs while improving labor market information can best be achieved by reducing the number of government reports and the variability in government reporting requirements. One promising starting point for using these HR Open standards would be a collaborative state approach for enhancing state UI wage records that would reduce variability in state UI reporting requirements and reduce the need for some federal reporting. Taking this approach, interested states would work together with employers and HR technology service providers as well as federal agencies to further develop and use HR Open standards for establishing common state UI wage record reporting requirements. States would also develop and use more efficient systems for collecting and sharing data based on these requirements and other public-private standards, collaborate in developing innovative labor market information products and services for employers and government, and explore data sharing among federal and state agencies to further reduce overall reporting costs for employment and earnings data based on enhanced state UI wage records.

To be successful, this public-private approach will require strong employer leadership in working cooperatively with interested states and other public and private stakeholders. As a result, the next steps should be for the Chamber Foundation to work with employers, HR Open, HR technology service providers, states, federal agencies, and other stakeholders to further explore this approach and implementation strategies.

INTRODUCTION

The U.S. Chamber of Commerce Foundation (Chamber Foundation) launched the T3 Innovation Network (T3 Network)[1] in 2018 to create a public-private data and technology infrastructure that would enable the digital transformation of the talent marketplace. One major focus of this initiative is improving public-private collaboration in the development and use of data standards for a variety of public and private applications. One of several projects the T3 Network established to further these goals is the Employment and Earnings Records Standards Project.

For this project, the T3 Network and the HR Open Standards Consortium[2] (HR Open) formed a working group (HR Open Work Group) to develop data standards for employment and earnings records for use by employers, government, and other stakeholders. These HR Open standards establish common definitions, clarify data relationships, and provide guidance for employers and their human resources (HR) technology service providers[3] on maintaining and reporting the records, and for government agencies in establishing reporting requirements and data collection systems. This information is provided through conceptual and logical data models and a data dictionary. These standards also provide more technical schema and other documentation to assist in the implementation of the standards. The HR Open Work Group focused on developing standards that could be used to improve data quality and reduce costs in federal and state data collection and improve labor market information.

The T3 Network also partnered with the National Association of State Workforce Agencies (NASWA) to assist in engaging states and other stakeholders in developing and reviewing the standards, exploring applications for enhancing state Unemployment Insurance (UI) wage records, and augmenting labor market information.

During the first phase of this project, the T3 Network, in cooperation with HR Open, conducted an initial forum to identify leading stakeholder needs and use cases for employment and earnings records including UI wage records. With this input, the HR Open Work Group developed sample use cases on employer reporting of employment and earnings data to government agencies and how employer-provided data could be used to improve labor market information and government program management. Based on the initial use cases, the HR Open Work Group identified employment and earnings data elements that should be considered for standardization. To do so, the group reviewed existing standards, earlier research on standardization, and 48 federal and state data collection systems that gather employment and earnings data from employers, including state agency data collection systems for UI wage records. The HR Open Work Group then developed a set of draft or "candidate" employment and earnings records standards.

---

1   The T3 Innovation Network, U.S. Chamber of Commerce Foundation, 2021, https://www.uschamberfoundation.org/t3-innovation.

2   The HR Open Standards Consortium, 2021, https://www.hropenstandards.org.

3   HR technology service providers are companies that assist employers by providing technology, web-based applications, and other services to support human resource management and government reporting.

The draft standards include a comprehensive data dictionary with over 200 data elements and definitions crosswalked to one or more federal and state data collection systems along with guidance on their application for government reporting in the United States.

The T3 Network project team then partnered with HR Open and NASWA to conduct additional stakeholder forums with employers, HR technology service providers, and federal and state agencies to review the data dictionary and its potential applications. The stakeholder forums were followed by two deep-dive sessions that provided an opportunity for more detailed discussion of the draft standards and the potential benefits and costs of their adoption. Additionally, the T3 Network project team and HR Open conducted meetings and interviews with leading HR technology service providers and state agencies to explore implementation goals, issues, costs, and benefits. State agency meetings also addressed issues and opportunities in developing a collaborative state approach for using the standards in UI wage record enhancement.

Based on these activities, the T3 Network project team recommended a proposed public-private collaborative approach for enhancing state UI wage records. The project team also proposed next steps for further exploring implementation.

This report contains six sections: Section I summarizes the need for the T3 Network project; Section II provides an overview of the project and its objectives and major work activities; Section III summarizes the work of the HR Open Work Group, including major use cases, data models, and standards developed; Section IV presents an overview of the types of benefits, costs, and challenges discussed in the stakeholder forums, follow-up meetings and interviews, and previous research projects and reports; Section V explores different approaches and options in using the standards to improve data quality and reduce costs in government reporting; and Section VI proposes next steps in further exploring the application of these standards for enhancing state UI wage records and improving overall federal and state data collection systems.

SECTION I: PUBLIC-PRIVATE COLLABORATION IN THE DEVELOPMENT AND USE OF DATA STANDARDS FOR EMPLOYMENT AND EARNINGS RECORDS

The availability of high-quality and trustworthy information is essential to the efficient and equitable functioning of the talent marketplace in the United States and throughout the world. It is critical for sound economic decision making by employers, workers, education and training providers, government, and other intermediaries and service providers. It also supports evidence-based government policy making.

Historically, federal and state government agencies have provided free and open access to critical labor market information including industry and occupational trends and projections as well as occupational wage and salary information. In recent years, government agencies have begun to provide information on the employment and earnings outcomes of education and training programs. Federal and state government agencies have developed a large share of this information from data collected directly from employers through both administrative reporting systems and surveys. To a great extent these reports and surveys have been designed to meet specific needs, and are conducted by agencies independently without considering the cumulative effect on employers doing the reporting and the lack of consistency and comparability in how employer data is used for producing labor market information.

One cornerstone of federal and state labor market information is the data on wage records collected as part of administering state UI programs. The basic UI employer and wage records provide valuable information including the industry of employment and earnings of individual workers. These data are useful for a variety of applications, including the analysis of industry employment trends and dynamics and estimating the labor market outcomes of education and training programs. Some states have augmented the basic UI wage record with additional data requirements (e.g., occupation, hours worked, date of hire) to provide enhanced views of state labor market activity and/or improve program administration. The underlying collection systems and augmentations have been designed and carried out on a state-by-state basis, with little thought given to consistency or comparability across states, resulting in a great deal of variation in report content and format.

In addition to certain data simply not being available in many states, users have questioned the quality, timeliness, and geographic specificity of data that are available. For example, current UI wage record reporting requirements do not provide consistent work location information. Some employers report a centralized work location for all employees within a state (e.g., company headquarters) while others report by separate business establishments where employees actually work (e.g., retail store, manufacturing facility). This inconsistent information prevents consistent analysis of employment by region or local labor market within a state.

Employer survey data cannot easily be used to address the gaps and limitations of employer administrative data collected through state UI systems. Over many years, changing and conflicting government budget priorities have led to reduced funding for labor market statistics. That, in turn, has forced reductions in survey sample sizes, which has lessened the reliability of data, especially at state and substate levels.

Efforts to improve government labor market information have called for more states to expand or enhance employer reporting requirements on UI wage records.[4,5] Users have raised persistent questions about outcomes from education and training programs such as occupational preparedness, work hours, gender equity, and location of work opportunities. At the same, these efforts have raised major concerns among employers about increased costs of providing this additional information across more states. This builds on long-standing concerns regarding the variability in report content and format for which employers, or their HR technology service providers, must customize their reports. Other users have noted the negative effects on data quality and comparability when varying data elements and definitions are used among states and the federal government.

One potential solution is for employers and their HR technology service providers to work with government agencies to take a more coordinated public-private approach to defining and updating data standards and integrating them into HR software for government reporting. This approach could be applied to UI wage record reporting as well as other federal and state government reporting systems and surveys. In addition, employers and their HR technology partners could work with government agencies to establish standards and approaches for more efficient data collection based on leading data sharing practices among HR technology partners.[6]

The United States is unique in having a public-private approach to standards development and use. Federal policy now strongly encourages federal agencies to use public-private voluntary consensus standards wherever available and applicable in addressing their needs. There are no known equivalent policies at the state level and this federal policy to date has seen only limited application to data standards (e.g., electronic health records). In addition, there have been no systematic applications of public-private voluntary consensus data standards for employer-provided workforce data, such as UI wage records, to federal and state agencies.

The T3 Network is working with leading standards organizations and government agencies to determine how this federal policy could provide a starting point in developing a collaborative public-private approach for data standards development and use for improving the talent marketplace.[7] The T3 Network initiative on public-private data standards provides a unique opportunity to pilot test a new public-private approach for developing and using data standards for employment and earnings records that could be applied for enhancing UI wage records as well as other federal and state data collection systems. This new public-private approach has the potential to expand and enhance UI wage records for labor market information applications while at the same time addressing some of the major barriers and issues that have stymied

---

4   "Enhancing Unemployment Insurance Wage Records, Potential Benefits, Barriers, and Opportunities—Final Observations and Recommendations," Workforce Information Council, September 2015, https://www.bls.gov/advisory/bloc/enhancing-unemployment-insurance-wage-records.pdf.

5   "Recommendations to Improve the Nation's Workforce and Labor Market Information System," Workforce Information Advisory Council, January 2018, https://www.dol.gov/sites/dolgov/files/ETA/wioa/pdfs/WIAC_Recommendations_Report_2018-01-25_Final_and_Signed.pdf.

6   For example, leading standards organizations such as HR Open, HR technology service providers, and government agencies could build on leading public and private practices in the use of application programming interfaces (APIs) in data collection. This could build on the work of federal statistical agencies in collecting data from companies. See Ron S. Jarmin, "Evolving Measurement for an Evolving Economy: Thoughts on 21st Century US Economic Statistics," Journal of Economic Perspectives—Volume 33, Number 1—Winter 2019—Pages 165–184.

7   "Public-Private Standards Development and Use by Government for the Talent Marketplace," U.S. Chamber of Commerce Foundation, December 2019, https://www.uschamberfoundation.org/sites/default/files/T3NetworkReport_PublicPrivateStandardsDevelopmentandUse.pdf.

previous efforts. This approach includes engaging employers and HR technology service providers in the process and improving data quality, while reducing costs associated with current state differences in reporting requirements and data collection systems.

SECTION II: T3 NETWORK PROJECT ON EMPLOYMENT AND EARNINGS RECORDS STANDARDS

The Chamber Foundation launched the T3 Network in 2018 as an open innovation network to support the digital transformation of the talent marketplace.[8] This initiative is made up of over 500 organizations, including business, education, government, nonprofits, technology service providers, and others. It is focused on projects that are use case driven, standards based, and vendor neutral. One major focus of this initiative is improving public-private collaboration in the development and use of data standards for a variety of public and private applications.[9]

The T3 Network launched the Employment and Earnings Records Standards project to explore the value of a public-private collaborative approach to data standards development and use, and how that might strengthen a key component of the public data infrastructure that supports the talent marketplace—employment and earnings records. The objectives of the project were to do the following:

- Develop employment and earnings records standards (including data elements, definitions, and formats) for use in the public and private sectors.
- Explore the use of these standards in improving federal and state data collection, including enhancing state UI wage records.

As a first step in the project, the T3 Network partnered with the HR Open to establish an HR Open Work Group. HR Open is the leading global standards organization for human resource information systems and develops standards for a wide variety of use cases and applications involving data sharing among HR information systems that are critical in creating employment and earnings records for government reporting.[10]

The T3 Network also partnered with NASWA to engage states and other stakeholders in developing and reviewing the standards and exploring their applications for enhancing state UI wage records and labor market information. NASWA represents workforce agencies that manage state UI systems, UI wage record reporting, labor market information production, and workforce programs.[11]

---

8   The T3 Innovation Network, U.S. Chamber of Commerce Foundation, 2021 https://www.uschamberfoundation.org/t3-innovation.

9   "Public-Private Standards Development and Use by Government for the Talent Marketplace," U.S. Chamber of Commerce Foundation, December 2019, https://www.uschamberfoundation.org/sites/default/files/T3NetworkReport_ PublicPrivateStandardsDevelopmentandUse.pdf.

10   HR Open Standards, accessed December 2020, https://www.hropenstandards.org/.

11   National Association of Workforce Agencies, accessed December 2020, https://www.naswa.org/.

The T3 Network project team completed the following work tasks between June 2019 and December 2020:

1. **Established HR Open Work Group for Standards Development**
   HR Open formed a work group to develop use cases and draft standards for review by major public and private stakeholders.

2. **Conducted Stakeholder Forums**
   The T3 Network, in cooperation with HR Open and NASWA, conducted stakeholder forums with public and private stakeholders including employers and HR technology service providers, states, and federal agencies.

3. **Analyzed Potential Benefits and Costs**
   The T3 Network project team conducted an analysis of the types of benefits and costs associated with the implementation of expanded or enhanced employment and earnings records, including UI wage records, based on the public-private data standards. The team also explored other implementation issues and challenges.

4. **Explored a Consistent State Approach for Enhancing UI Wage Records**
   The T3 Network project team explored with states and other stakeholders a consistent approach to enhancing UI wage records based on the public-private data standards. The team explored alternative approaches that would provide the highest level of benefit at the lowest cost, including the lowest employer and government data collection costs.

5. **Identified Potential Improvements to Federal and State Data Collection**
   The T3 Network project team explored how to improve overall federal and state data collection systems based on the public-private standards.

6. **Prepared Final Report, Including Next Steps**
   The T3 Network project team developed a final report on the first phase of the project that included a proposed collaborative state approach for using the standards for enhancing state UI wage records and next steps in exploring this approach as part of related efforts to improve federal and state data collection.

The following sections describe in more detail the work that was completed in developing public-private standards, conducting the benefit and cost analysis, developing a proposal for a collaborative state approach for UI wage record enhancement, and improving overall federal and state reporting.

SECTION III: HR OPEN WORK GROUP USE CASES, CONCEPTUAL DATA MODEL, AND DATA DICTIONARY

The T3 Network project was launched through a stakeholder forum in August 2019 to gather input on the project and identify the major use cases and priorities in developing employment and earnings records standards. The T3 Network also conducted outreach forums with the U.S. Bureau of Labor Statistics Labor Market Information Oversight Committee and worked with NASWA to provide project overviews to its Labor Market Information and Unemployment Insurance committees.

The HR Open Work Group began its efforts in December 2019, chaired by a representative from ADP, a major provider of HR management software and services. Their first task was to develop use cases pertinent to employers and government agencies to guide standards development. After reviewing the results from the initial stakeholder forum, the work group identified three major use cases:

- **Government Reporting.** The federal and state reporting requirements for employers in providing employment and earnings information to government agencies
- **Labor Market Information Applications.** The use of employer-provided employment and earnings data in developing labor market information to be used for the analysis of state and local labor market dynamics, outcomes data, and return on investment from public education and training programs
- **Government Program Administration.** How employer-provided employment and earnings data could be used for determining government program eligibility and utilization[12]

In exploring the government reporting use case, the HR Open Work Group identified and analyzed 41 federal reporting systems and seven state/territorial reporting systems that included the collection of employment and earnings data (Appendix A). As part of this effort, the work group analyzed the UI wage record data collection requirements for 48 states, the District of Columbia, and three federal territories (Appendices B and C). Also, as part of this process, the HR Open Work Group partnered with NASWA to review the State Information Data Exchange System (SIDES), which is used by many employers and states to communicate regarding UI claims.

In developing the standards based on the major use cases and the analysis of current federal and state reporting requirements, the HR Open Work Group developed a conceptual data model that captured the major types and relationships of data contained in employment and earnings records. This conceptual data model (Figure 1) was useful in identifying the full range of HR systems (e.g., time and attendance, payroll) that may be involved in sharing data from employment and earnings records containing these major data types.

As shown in Figure 1, this conceptual model includes categories of information that describe the organization and its structure, the person who engages as a worker, the nature of the work relationship, and the outcomes of that relationship. The HR Open Work Group then developed a detailed working model to better understand the connections among the systems that produce data in these categories.

---

12   This use case was outside the scope of the first phase of the project. It explores how employment and earnings records could be used in improving access and use of government programs. This use case provides the potential connection to other T3 Network projects addressing the development and use of learning and employment records (LERs) in accessing education, jobs, and government programs opportunities. For these projects, employment and earnings records can be seen as one major type of LER.

Figure 1: Conceptual Data Model
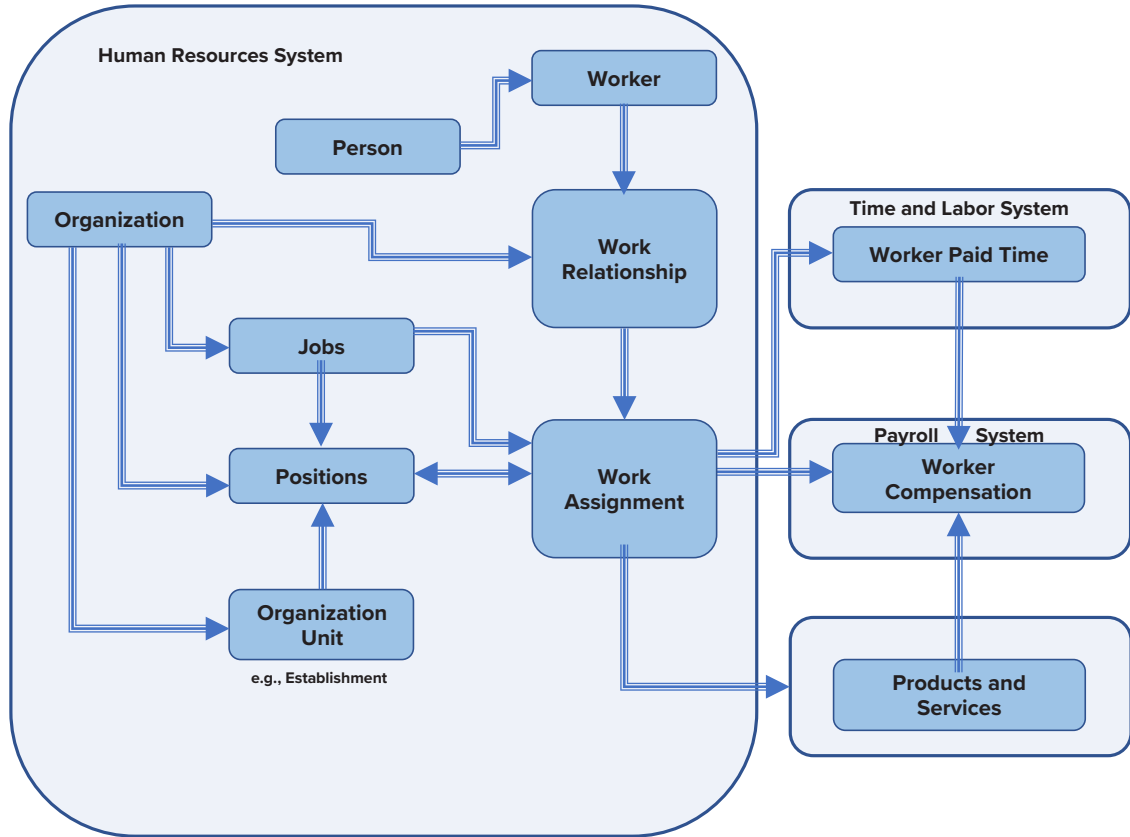
Figure 2 displays the categories that the HR Open Work Group focused on, with a brief explanation of the nature of each category and examples of the types of data in each.

Next, using the data models, previous research reports,[13] and the research into existing federal and state data collection, the HR Open Work Group developed a data dictionary. This dictionary currently contains more than 230 data elements with related definitions and guidance for application within the United States (Appendix B includes a list of the data elements within the above categories).

The T3 Network project team used the data model and dictionary to conduct stakeholder forums and interviews with HR technology service providers and states. The T3 Network partnered with HR Open to conduct a forum with employers, employer organizations, and HR technology service providers. The forum was followed by a second stakeholder forum with states in cooperation with the Workforce Data Quality Initiative (WDQI).[14] A third stakeholder forum was conducted with federal agencies including federal statistical agencies that collect employment and earnings data from employers and those that use the data for labor market statistics and evaluation. The T3 Network then hosted two focused deep-dive forums

---

13 "Enhancing Unemployment Insurance Wage Records, Potential Benefits, Barriers, and Opportunities—Moving to Standardized Titles, Definitions, and Reporting Instructions for Optional Wage Record Data Elements," Workforce Information Council, September 2015, https://www.bls.gov/advisory/bloc/enhancing-unemployment-insurance-wage-records-potential-benefits-barriers-and-opportunities-moving-to-standardized-titles-definitions-and-reporting.pdf.

14 Workforce Data Quality Initiative, U.S. Department of Labor, 2021, https://www.dol.gov/agencies/eta/performance/wdqi.

Figure 2: HR Open Work Group Data Categories and Examples

Data Category	Examples of the Types of Characteristics Included
Employer Organization	Overall employing business—government ID, name, address, business activities, and revenue
Employer Establishments	Individual locations where the business operates—DBA, address, business functions, operating level, principal products and services, and status
Employer Jobs	Type of jobs (e.g., carpenter, engineer)—job title; duties; management level; and skills, knowledge, and experience needed
Employer Positions	Budgeted slots that fund individual workers in a job—position status (i.e., approved, active, filled, frozen, canceled)
Employer Assignments	Business functions to which workers are assigned—functional area where work is performed (e.g., Registered Nurse working in labor and delivery)
Worker Personal Identification Information	Data describing the person who is in the role of worker—SSN, name, address, birthdate, VISA type, gender, ethnicity, race, and disability
Work Relationship	Factors that define the relationship between business and person—job title, work status, owner/officer, hire date, pay frequency, and union status
Worker Paid Time	Amount and type of time for which the worker is compensated—regular and premium hours, paid time off, weeks worked, and paid time period
Worker Compensation	Amounts paid for the worker's efforts—compensation period, cash and non-cash compensation, salary, hourly wages, bonuses, and benefits

to allow interested public and private stakeholders and experts to further explore and provide input on the draft data standards. Following these sessions, HR Open conducted follow-up interviews with HR technology service providers, and other T3 Network team members conducted follow-up interviews with four states to further explore UI wage record enhancement objectives and priorities, implementation costs and challenges, and how interested states could collaborate in a consistent approach to UI wage record enhancement.

In December 2020, the HR Open Standards Consortium published the draft standards as a candidate release for review and comment by their members. After receiving input from its members as well as T3 Network stakeholders, HR Open will release the final standards in 2021.

SECTION IV: BENEFITS, COSTS, AND CHALLENGES IN USING STANDARDS FOR IMPROVING GOVERNMENT REPORTING

The T3 Network project team reviewed previous reports,[15,16,17] analyzed results from the stakeholder forums, and conducted follow-up interviews with HR technology service providers and states to identify the types of benefits and costs that may arise from efforts to improve employment and earnings data. Stakeholders will need to consider these benefits and costs in exploring options for the application of the employment and earnings records standards for federal and state reporting. Conversations and agreement among the stakeholder groups on these topics will be critical in improving employment and earnings reporting through administrative records, such as state UI wage records.

In general, the potential benefits from enhancing and standardizing employment and earnings data fall into two categories:

- Improving the functioning of labor markets, especially at the state and local levels, based on the availability of better information for decision making
- Lowering the costs for businesses and governments associated with reporting and collecting data

These benefits will likely be realized after employers and federal and state government agencies incur initial costs in changing their data reporting and collection systems. The most significant implementation costs for employers and their HR technology service providers will be associated with making initial changes to their systems to conform to the conceptual data model and data elements in the standards. Employers and their HR partners would have to first review and analyze the standards and identify gaps and differences in their current activities compared with the standards. They would then have to invest in training and system changes to manage and report data based on these standards. These initial costs will vary widely by employer and HR technology service provider depending on the degree of differences between their current systems and the conceptual data model and data elements in the standards.

For the most part, state implementation costs will be associated with ensuring technology systems are set up to accommodate data defined by the new standards and assisting staff and other users to be prepared for the changes. These costs would include design considerations, hardware and software purchases, training, and ongoing support. Also, data producers and users would need time to understand and be prepared to address any discontinuity with historical data.

15 "Enhancing Unemployment Insurance Wage Records, Potential Benefits, Barriers, and Opportunities,—Summary of First-Year Study Activities and Findings," Workforce Information Council, September 2014, https://www.bls.gov/advisory/bloc/enhancing-unemployment-insurance-wage-records_fy.pdf.

16 "Enhancing Unemployment Insurance Wage Records, Potential Benefits, Barriers, and Opportunities—Employer Perspectives, Results of Survey in Five States," Workforce Information Council, September 2015, https://www.bls.gov/advisory/bloc/enhancing-unemployment-insurance-wage-records-potential-benefits-barriers-and-opportunities-employer-perspectives.pdf.

17 "Enhancing Unemployment Insurance Wage Records Potential Benefits, Barriers, and Opportunities—Final Observations and Recommendations," Workforce Information Council, September 2015, https://www.bls.gov/advisory/bloc/enhancing-unemployment-insurance-wage-records.pdf.

As a result, the timeline for weighing costs and benefits matters. And the benefits will need to be demonstrated early in implementation and measured according to agreed- upon metrics. Employers and HR technology service providers must see some initial reduction in costs in the first few years of reporting. In addition, employers, HR technology service providers, and government agencies must also see some initial benefits in improved labor market information.

Figure 3 displays some high-level examples of the benefits and costs to major stakeholder groups. More complete listings can be viewed in Appendices E and F.

Figure 3: Stakeholder Benefits and Costs

	Benefits	Costs
Employers and HR Technology Partners	• Improved Talent Supply • Streamlined Reporting • Improved Operations and Planning • New Decision Tools • Reduced Overhead • Assistance for Employees	• Systems Adaptation • Reporting Modifications • Developing New User Tools • Training • New Data Capture Strategies • Reliance on Software Providers to Incorporate Standards
Government	• Improved Labor Market Information • Evidence-Based Policy Making • Program Administration Support • Audit/Evaluation Support • Improved Program Access • Improved Fraud Detection	• Systems Redesign • Hardware/Software • Operations and User Support • Incorporating Employment and Earnings Records Standards • Training • Adapting to Public-Private Collaborative Approach • Developing New Analytical Tools
Other Public and Private Data Users	• Sound Career and Education Guidance • Greater Economic Stability • Access to Better Decision Support Information • Enhanced Research Tools	• Adapting Systems to Incorporate New Data and Sources • Developing New User Tools • Potential Breaks in Historical Series

Ultimately, while stakeholders recognize the value of implementing these standards, without careful and collaborative planning involving all stakeholders, preconceptions about the potential costs may delay implementation, and employers and government agencies will not have the information and tools they need to implement these standards in the most cost-effective way.

Even with careful planning, stakeholders will need adequate time to prepare for this transition, including planning and allocating investment in system changes. Starting with small model efforts and then scaling up will make it easier for all stakeholders to adapt systems to the use of standardized data, and to dedicate sufficient up-front resources to support a successful effort.

SECTION V: EXPLORING WHERE TO START IN IMPROVING FEDERAL AND STATE DATA COLLECTION

In order to achieve the expected benefits of improved federal and state data collection while at the same time lowering costs, many factors must be considered. There are many actors involved in generating employment and earnings data, from the employers who maintain the data for business planning and human resource management, to HR technology service providers who assist employers, to federal and state agencies that collect and use various data for program administration, policy making, and labor market information. All of these parties incur costs to maintain, collect/report, process, and analyze the data.

Focusing just on the federal and state agency collections, the T3 Network project identified roughly 50 different federal and state systems that collect employment and earnings data from employers. Since two of those systems are administered by all states and some territorial governments, the total number of unique reports reaches more than 150. The greater the number and frequency of reports, and content variation in those reports, the greater the amount of time and money employers and their service providers must spend on reporting.

In Figure 4, the volume of the cube represents employers' cost of reporting. Decisions that expand or contract the number and variation of reports can affect those costs exponentially. A driving force behind efforts to improve employment and earnings data collection has been the desire to expand the frequency and types of information available for better decision making by business, government, and the general public, while minimizing the cost of doing so. These seemingly contradictory objectives can best be addressed by consensus decisions among stakeholders on what information is desired and what methods can provide that information at the lowest cost. A single action by any individual entity will not materially change the overall cost/value proposition. However, collective action, rather than many conflicting individual actions, could dramatically lower costs and increase value for all stakeholders. For example, government agencies could increase the frequency of data collection without significantly increasing reporting costs if they consolidated reporting, resulting in fewer reports with less variation in content. This could be done with a more comprehensive employment and earnings record, such as an enhanced state UI wage record.

Figure 4: Significant Cost Factors in Reporting Employment and Earnings Data
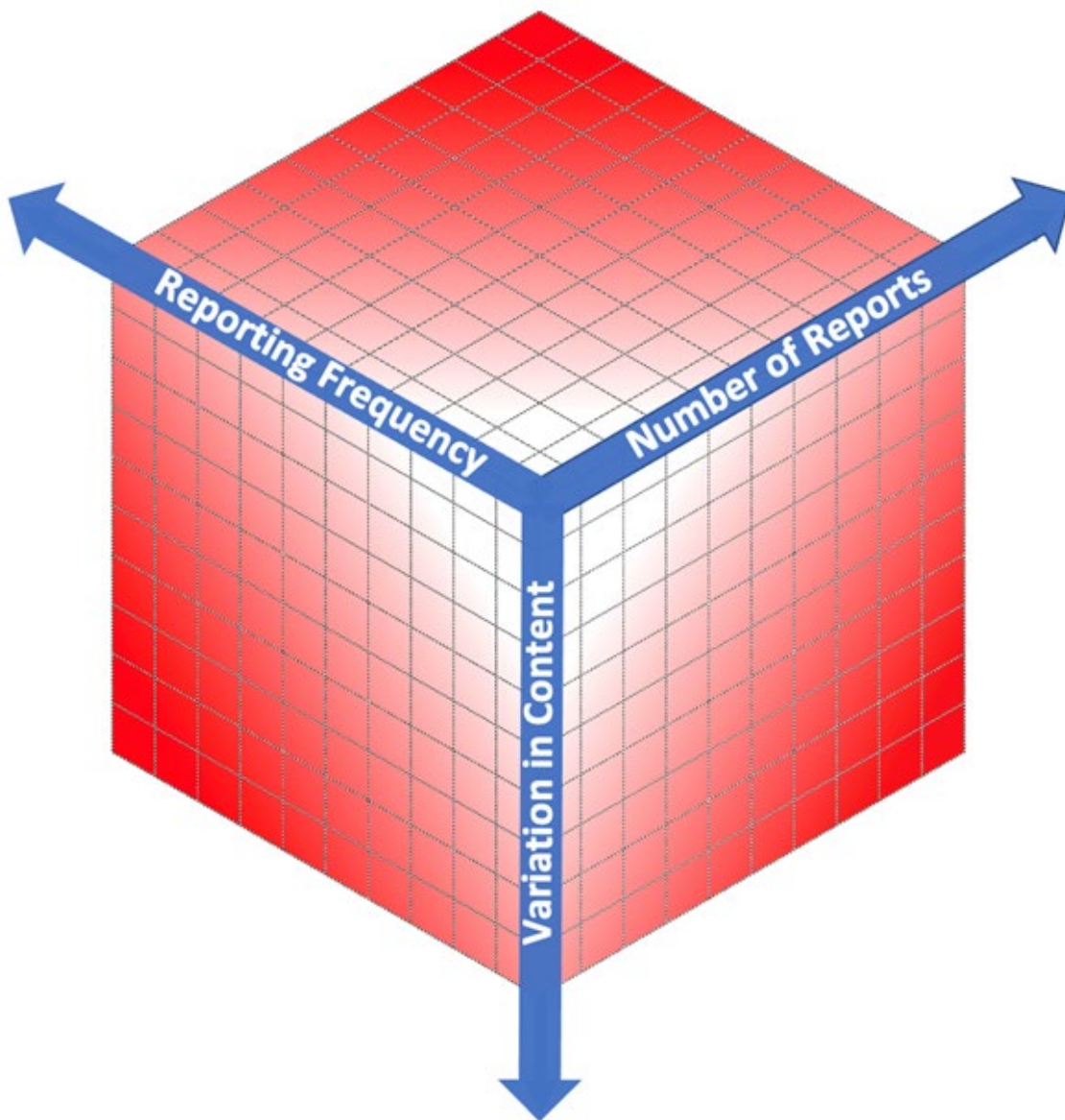
Figure 5 illustrates a continuum of choices/decisions that affect the cost/value proposition when collecting data. Today's employment and earnings data collection/reporting systems reflect past decisions. Moving forward, this T3 Network project presents an opportunity to reconsider these decisions collectively and optimize the results.

Currently, each federal and state government agency designs its own data collection systems, resulting in a large number of unique reports with much duplication and varying data elements, definitions, collection practices, and guidance. The choices that led to the existing situation places data collection and reporting efforts closer to the left side of the continuum in Figure 5. In order to optimize the value proposition—to move toward the right side of the continuum—agencies that collect the data will need to be willing to consider alternative approaches.

Figure 5: Employment and Earnings Data Collection/ Reporting Decision Continuum

High-Cost, Low-Value Data ⟷ **Low-Cost, High-Value Data**

Data Collection Decisions

- Government design... Public-private collaborative design
- Single purpose... Multiple purpose
- Limited sample... Population
- Independent collection .... Coordinated collection
- Dispersed collection... Centralized collection
- Format varies by report ....Uniform reporting format
- Few items per report ....All items in a single report
- Inconsistent data definitions...Standardized data definitions
- No uniform reporting guidance .... Uniform reporting guidance
- Infrequent collection...Frequent collection
- Inconsistent reporting time period .... Consistent reporting time period
- Siloed data management ....Cooperative data management

Below is a summary of where public and private stakeholders are today in data collection and reporting with examples of possible steps and their effects on stakeholders when making choices along the continuum (moving from left to right).

1. <u>Where We Are Now</u>

   Currently, each federal and state government agency designs its own reports, resulting in a large number of unique reports with much duplication and varying data elements, varying definitions, collection practices, and guidance. This starting point can be characterized by the following:

   - Reports are mostly designed by governmental entities.
   - There is minimal standardization in data elements or definitions across reports.
   - A shared wage record file format is used optionally by state UI agencies.
   - Some centralization or coordination in collection exists (e.g., National Directory of New Hires, UI State Information Data Exchange System).
   - Some data collection is based on population counts; most use sample-based surveys or target a specific subgroup population.

- Most data collection is for a single-purpose with unique guidance.
- The update schedule is variable (e.g., monthly, quarterly, annually, over multiple years).

This current situation has the following data quality and ongoing data cost implications for the following stakeholders:

- **Employers and HR Technology Service Providers:** Reporting cost is high due to the number and variability of reports. Limited and less timely government data available for benchmarking and planning leads to reliance on costly third-party surveys. It is difficult for service providers to exchange reliable data.
- **Government:** Independent action leads to relatively high data collection costs. Inconsistencies reduce data comparability. The variable reporting schedule means some data are less timely. The possibility for sampling error is greater for smaller geographical areas.
- **Other Public and Private Data Users:** The data that is available is less accurate and timely for fewer geographic areas below the national and state levels. Critical information for decision making is not available.

2. Moving One Small Step Toward Standardization but No Coordinated Data Collection

State UI agencies could take an initial step toward standardization by selecting data elements from the HR Open Standards Data Dictionary as a menu of possible reporting requirements without coordinating federal and state collection. This would involve the following:

- Public-private collaborative design of standards and a data dictionary with HR Open and federal and state government agencies.
- Separate government reporting with agencies agreeing to choose the data elements they want to include from the dictionary, resulting in variation in data elements collected.
- Agreement among government agencies not to add any additional data elements or change definitions without going through a collaborative process.

This step would have the following data quality and ongoing data cost implications for the following stakeholders:

- **Employers and HR Technology Service Providers:** Standardized definitions slightly reduce reporting customization and cost. Costs associated with the number and variability of reports are not reduced. Somewhat more data are available for benchmarking and planning, but data are inconsistent across states. Costly third-party surveys are still needed. Exchange of data is improved among service providers.
- **Government:** Independent action leads to relatively high data collection costs, and standardized definitions improve comparability.
- **Other Public and Private Data Users:** Standardized definitions improve data comparability across geographic areas where the same data elements are collected, and more critical information for decision making is available in some areas.

3. <u>Moving to Common UI Wage Records but No Coordinated Data Collection</u>

State UI agencies could decide to move further to the right on the continuum by selecting a common set of data elements and definitions from the HR Open Standards Data Dictionary, starting from current reporting requirements (Appendix C) and enhancement priorities, but not coordinate federal and state data collection. This step would involve the following:

- Public-private collaborative design of standards and a data dictionary with HR Open and federal and state government agencies.
- States' UI agencies agreeing to select a common set of data elements and definitions for enhanced UI wage records, including some data elements (e.g., occupation) that allow for cost savings in federal data collection (e.g., Occupational Employment Statistics [OES]).
- Government agencies agreeing not to add any additional data elements or change definitions without going through a collaborative public-private process.
- All state UI agencies as well as other federal reporting remaining separate and keeping the same time frames on when data are collected.

This step would have the following data quality and ongoing data cost implications for the following stakeholders:

- **Employers and HR Technology Service Providers:** Standardized core UI data elements reduce reporting customization and cost. Costs associated with the variability of state reports is reduced but will not address the additional costs associated with multiple federal reports with different combinations and report time frames. More data are available for benchmarking and planning, which are consistent across states. Fewer costly third-party surveys are needed. Exchange of data among service providers is improved.
- **Government:** Independent collection leads to relatively high costs, and standardized definitions improve comparability across states.
- **Other Public and Private Data Users:** Common data elements and standardized definitions improve types and comparability of data across geographical areas, and more critical information for decision making is available for detailed geographical areas.

4. <u>Moving to Common UI Wage Records and Coordinated State Data Collection</u>

In this further step, state UI agencies would select a common set of data elements and definitions from the HR Open Standards Data Dictionary, starting from current reporting requirements (Appendix C) and enhancement priorities and coordinate how they collect UI wage record data, but without further federal and state collection coordination. This further step would involve the following:

- Public-private collaborative design of standards and data dictionary with HR Open and federal and state government agencies.
- States' UI agencies agreeing to select a common set of data elements and definitions for enhanced UI wage records, including some data elements (e.g., occupation) that allow for cost savings in federal data collection (e.g., OES).
- Government agencies agreeing not to add any additional data elements or change definitions without going through a collaborative process.

- All state UI agencies organizing as a consortium for centralized data collection, but federal reporting remaining separate and keeping the same time frames on when data are collected.

  This step would have the following data quality and ongoing data cost implications for the following stakeholders.

- **Employers and HR Technology Service Providers:** Centralized reporting and standardized core UI data elements eliminate reporting customization and dramatically lower state reporting costs. Costs associated with multiple federal reports requesting different elements with multiple report time frames are not addressed. More data are available for benchmarking and planning which are consistent across states. Fewer or no costly third-party surveys are needed. Exchange of data is improved among service providers.
- **Government:** Centralized state collection leads to streamlined costs. Standardized content and definitions across states ensures comparability. Standardized guidance promotes higher-quality reporting. Improved data are available at more granular geographical levels. Program evaluation is significantly improved.
- **Other Public and Private Data Users:** There is great improvement in the types, accuracy, timeliness, and geographic specificity of labor market information. Data-based policy making is enhanced.

5. <u>Comprehensive Employment and Earnings Record Data Collection With Coordinated Collection and Distribution to Federal and State Agencies</u>

   In this final step, federal and state agencies would select a common set of data elements and definitions from the HR Open Standards Data Dictionary, starting from current reporting requirements, and use a centralized and coordinated data collection system with data distributed to federal and state agency partners. This final step would involve the following:

- Public-private collaborative design of standards and a data dictionary with HR Open and federal and state government agencies.
- Federal and state agencies agreeing on a common set of data elements and definitions for a comprehensive employment and earnings record.
- Government agencies agreeing not to add any additional data elements or change definitions without going through a collaborative process.
- All federal and state agencies and other partners organizing as a consortium for centralized data collection and distributing data as needed to federal and state agencies to meet their reporting requirements.

  This final step would have the following data quality and ongoing data cost implications for the following stakeholders:

- **Employers and HR Technology Service Providers:** A single report for covered federal and state programs is submitted to a centralized system. Reporting costs are optimally reduced. Data definitions are standardized for all covered programs. Fewer independent federal reports are needed. All desired data for benchmarking and planning are available and consistent across states and federal information sources. Few, if any, third-party surveys are needed. Exchange of data is improved among service providers.

- **Government:** Centralized state collection leads to streamlined costs. Standardized content and definitions across states ensures comparability. Standardized guidance promotes higher-quality reporting. Improved data are available at more granular geographical levels.
- **Other Public and Private Data Users:** There is dramatic improvement in the types, accuracy, timeliness, and geographic specificity of labor market information. Data-based policy making is enhanced. Program evaluation is significantly improved.

A Collaborative Public-Private Approach for Enhancing State UI Wage Records

Given these options in moving forward, one promising starting point would be for interested states to work together with employers and their HR technology service providers as well as federal agencies in using the HR Open standards for a collaborative public-private approach in enhancing state UI wage records and improving reporting systems. In this approach, these public and private partners would collaborate to do the following:

- **Establish a Common Enhanced State UI Wage Record.** The partners would use the HR Open standards for establishing common enhanced state UI wage record reporting requirements using a common set of data elements and definitions. In developing this common record, they would choose the data elements and definitions based on what they currently require, including shared enhancement priorities, as well as considerations of what high-quality data would provide the most value at the lowest costs to employers and government.
- **Coordinate State Data Collection Systems.** The partners would develop and use more efficient systems for collecting and sharing data based on these common requirements and other public-private standards. At a minimum, states would have access to consistent reporting systems so that employers and their HR technology service providers could more easily report their data to more than one state at a lower cost, and states could save time and money in developing and maintaining their systems. States and their public and private partners also could explore joint investment in a shared data collection system that could further reduce costs.
- **Collaborate in Data Use for Employers and Government and Explore Data Sharing.** The future success of this public-private collaborative approach will depend in part on quickly realizing the potential benefits of enhanced wage record data in meeting employer and government labor market information needs. As a result, the partners would work together to develop a rapid set of prototypes for labor market information products for employers and government. This collaborative effort could learn from and build on current multi-state data collaboratives such as the Coleridge Initiative.[18] The partners should also explore voluntary sharing of enhanced UI wage records with federal and state agencies to increase the usefulness of the data and reduce overall reporting costs. For example, the partners could share data with the U.S. Bureau of Labor Statistics to determine whether enhanced wage records could meet federal reporting requirements for the OES program and improve how OES is used to create labor market information products and services.

---

18   Coleridge Initiative, accessed December 2020, https://coleridgeinitiative.org/.

To be successful, this public-private approach will require strong employer leadership in working cooperatively with states and other public and private stakeholders to make difficult decisions. All of the parties will need to be clear on their desired outcomes and come together to determine the optimum methods for achieving them. The Chamber Foundation and the T3 Network are in a unique position to bring about these conversations.

As a result, the next steps should be for the Chamber Foundation to work with HR Open, interested states, HR technology service providers, federal agencies, and other stakeholders to further explore this approach and possible implementation strategies. The Chamber Foundation should also identify other opportunities to connect efforts in this space, including LERs.[19]

SECTION VI: SUMMARY AND NEXT STEPS

This report has summarized the major work completed and results from the T3 Network Employment and Earnings Records Standards project. The T3 Network partnered with the HR Open to develop employment and earnings records standards, including a conceptual data model and data dictionary that could be used to improve federal and state reporting and labor market information applications.

The T3 Network project then explored the benefits and costs of using these standards for improving federal and state reporting, including UI wage record data collection. This analysis was used to recommend a public-private collaborative approach to enhance UI wage records and reporting that would have major implications for overall federal and state data collection.

The report also emphasized the need for employer leadership in further exploring and implementing this approach. Consequently, the report recommends that the U.S. Chamber of Commerce Foundation convene and work with interested states and other partners in the coming months to produce a report that further develops the collaborative approach, identifies partners for the next phase of work, and recommends a detailed implementation strategy.

---

19   To learn more about LERs, view the LER Resource Hub at https://lerhub.org/s/curators/ilr-utilities/GPRNsnPxFn3XE7Qbs.

ACKNOWLEDGEMENTS

APPENDIX A:
KNOWN FEDERAL AND STATE SYSTEMS IN THE UNITED STATES REQUIRING EMPLOYERS TO MAINTAIN RECORDS ON EMPLOYMENT, HOURS, AND EARNINGS

DEPARTMENT OF AGRICULTURE—NATIONAL AGRICULTURAL STATISTICS SERVICE

- Farm Labor Survey

DEPARTMENT OF COMMERCE—CENSUS BUREAU

- Annual Business Survey (ABS)
- Annual Survey of Manufactures (ASM)
- Annual Survey of Public Employment and Payroll (ASPEP)
- Business Research and Development Survey (conducted jointly with the National Science Foundation)
- Economic Census
- Report of Organization (ROO)
- Service Annual Survey (SAS)

DEPARTMENT OF EDUCATION—NATIONAL CENTER FOR EDUCATION STATISTICS

- National Principal and Teacher Survey—School Questionnaire
- National Principal and Teacher Survey—Private School Questionnaire

DEPARTMENT OF HEALTH AND HUMAN SERVICES—ADMINISTRATION FOR CHILDREN AND FAMILIES

- National Directory of New Hires (NDNH)

DEPARTMENT OF HEALTH AND HUMAN SERVICES—CENTER FOR MEDICARE AND MEDIC-AID SERVICES

- Hospital Wage Index Occupational Mix Survey

DEPARTMENT OF LABOR—BUREAU OF LABOR STATISTICS

- Annual Refiling Survey (ARS)
- Current Employment Statistics (CES) Survey
- Job Openings and Labor Turnover Survey (JOLTS)
- Multiple Worksite Report (MWR)
- National Compensation Survey (NCS)
- Occupational Employment Survey (OES)
- Occupational Requirements Survey (ORS)

DEPARTMENT OF LABOR—EMPLOYMENT AND TRAINING ADMINISTRATION

- O*NET Questionnaires
- DOL-only Participant Individual Report Layout (PIRL)—Form ETA-9172
- WIOA Participant Individual Report Layout (PIRL)—Form ETA-9170

DEPARTMENT OF LABOR—WAGE AND HOUR DIVISION

- Davis-Bacon Wage Surveys—Form WD-10
- Fair Labor Standards Act (FLSA) Requirements
- Family Medical Leave Act (FMLA) Requirements

DEPARTMENT OF TRANSPORTATION—FEDERAL HIGHWAY ADMINISTRATION

- Federal-Aid Highway Construction Contractors Annual Equal Employment Opportunity (EEO) Report

DEPARTMENT OF THE TREASURY—INTERNAL REVENUE SERVICE

- Employer's Quarterly Federal Tax Return—Form 941
- Employer's Annual Federal Tax Return for Agricultural Employees—Form 943
- Annual Return of Withheld Federal Income Tax—Form 945

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

- Age Discrimination in Employment Act (ADEA) Requirements
- Employer Information Reports, EEO-1, EEO-3, EEO-4, and EEO-5
- Equal Pay Act Requirements

FEDERAL COMMUNICATIONS COMMISSION

- Broadcast Station Annual Employment Report—Form 395-B

FEDERAL DEPOSIT INSURANCE CORPORATION—OFFICE OF MINORITY AND WOMEN INCLUSION

- Contractor Workforce Inclusion Good Faith Efforts

FEDERAL HOUSING FINANCE AGENCY—OFFICE OF MINORITY AND WOMEN INCLUSION

- Contractor Workforce Inclusion Good Faith Efforts

FEDERAL RESERVE SYSTEM

- Compensation and Salary Surveys—Forms FR 29a and FR 29b

NATIONAL ASSOCIATION FOR STATE WORKFORCE AGENCIES

- State Information Data Exchange System (SIDES)

SECURITIES AND EXCHANGE COMMISSION—OFFICE OF MINORITY AND WOMEN INCLUSION

- Contractor Workforce Inclusion Good Faith Efforts

SOCIAL SECURITY ADMINISTRATION

- Annual Employee Wage and Tax Statement—Forms W-2 and W-3
- Sheltered Workshop Wage Reporting

STATE AGENCIES

- Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) Monthly Pay and Work Verification
- Unemployment Insurance Monthly/Quarterly Reports
- State Directory of New Hires (SDNH)
- Minnesota Equal Pay Audit Report
- Ohio Monthly Work Hour Utilization Report—Form 29
- Oregon Monthly Employment Utilization Report—Form I

APPENDIX B:
EMPLOYMENT AND EARNINGS DATA CURRENTLY COLLECTED ON UNEMPLOYMENT INSURANCE WAGE RECORDS

Employment and Earnings Data Elements Currently Collected on Unemployment Insurance Wage Records	Percentage of 48 States, D.C., and 3 Territories Collecting Data Element				
	75% +	50% +	25% +	10% +	1-9%
Organization					
State Employer Identification Number (SEIN)			■	■	■
NAICS/class code					■
Establishment					
State Employer Identification Number (SEIN)			■	■	■
NAICS/class code					■
Job					
Occupation—SOC code/job title					■
Person					
SSN	■	■	■	■	■
Name—(no instructions on content)					■
Name—first name	■	■	■		■
Name—first initial				■	■
Name—middle name					■
Name—middle initial		■	■	■	■
Name—last name	■	■	■		■
Name—last name, second last name					■
Address—street					■
Address—city					■
Address—state					■
Address—ZIP					■
Age					■
Age—minor indicator (under 18 years of age)					■
Citizenship					■
Date of birth					■
Gender/sex					■
VISA type					■

Appendix B (continued)

Employment and Earnings Data Elements Currently Collected on Unemployment Insurance Wage Records	Percentage of 48 States, D.C., and 3 Territories Collecting Data Element				
	75% +	50% +	25% +	10% +	1-9%
Work Relationship (Including Position and Assignment)					
Date of first employment					■
Date of hire					■
Date of resignation/separation/termination					■
Date probationary status started/ended					■
Employment status (active, terminated)					■
Employment status (full time, part time, seasonal)					■
Employment status (probationary employee)					■
Owner/officer relationship				■	
Pay frequency					■
Pay type (hourly, salaried)					■
Seasonality—seasonal indicator					■
Time base					■
Work location—address					■
Work location—geographic code					■
Work location—unit/division/plant code					■
Work location—ZIP code					■
Work location—site code					■

Appendix B (continued)

Employment and Earnings Data Elements Currently Collected on Unemployment Insurance Wage Records	Percentage of 48 States, D.C., and 3 Territories Collecting Data Element				
	75% +	50% +	25% +	10% +	1-9%
Worker Paid Time					
Pay rate—hourly					■
Pay rate—hourly regular					■
Employed in payroll period including 12th, each month					■
Hours paid					■
Hours paid, including leave except sick					■
Hours worked					■
Hours worked—excluding leave					■
Hours worked—including payment in lieu hours that would have been worked					■
Weeks worked—base					■
Weeks worked—paid					■
Weeks worked					■
Worker Compensation					
Reporting period					■
Wages—total	■				
Wages—total, excluding severance					■
Wages—total excluding tips					■
Wages—total paid in season (for seasonal employees)					■
Wages—total paid out of season (for seasonal employees)					■
Wages—out-of-state					■
Wages—tips					■
Wages—taxable				■	
Wages—excess				■	
Wages—PIT					■
Wages—UI					■
Wages—VISA					■
Withholding—total withheld					■
Withholding—PIT					■
Withholding—state taxes					■
Withholding—local taxes					■
Withholding—UI					■
Withholding—workers' compensation fees					■

APPENDIX C:
EMPLOYMENT AND EARNINGS DATA CURRENTLY COLLECTED BY UNEMPLOYMENT INSURANCE OTHER THAN WAGE RECORDS

Employment and Earnings Data Elements Currently Collected by Unemployment Insurance Other Than Wage Records	Percentage of 48 States, D.C., and 3 Territories Collecting Data Element				
	75% +	**50% +**	**25% +**	**10% +**	**1-9%**
Organization					
FEIN	■	■	■	■	■
Additional FEINs					■
State Employer Identification Number (SEIN)	■	■	■	■	■
Legal entity type					■
Reporting period	■	■	■	■	■
State code				■	■
Name—Legal		■	■	■	■
Name—DBA				■	■
FIPS code				■	■
Mailing address			■	■	■
Mailing city			■	■	■
Mailing state			■	■	■
Mailing ZIP			■	■	■
Location address			■	■	■
Location city			■	■	■
Location state			■	■	■
Location ZIP			■	■	■
Phone				■	■
Email					■
Employee count—during pay period including the 12th of each month			■	■	■
Employee count—covered workers during pay period including the 12th of each month			■	■	■
Employee count—during week that includes the 12th of each month					■

Appendix C (continued)

Employment and Earnings Data Elements Currently Collected by Unemployment Insurance Other Than Wage Records	Percentage of 48 States, D.C., and 3 Territories Collecting Data Element				
	75% +	50% +	25% +	10% +	1-9%
Employee count				■	■
Employment count—female worker count by month				■	■
Employee count—by NAICS for Workers' Compensation					■
Employee count—corporate officers exempt from UI					■
Date operations began					■
Date operations ceased					■
Location—county where most employees worked					■
Location—number of employees working outside primary county					■
Location—multiple worksites					■
Total exercised stock options					■
Seasonality—seasonal indicator					■
Seasonality—separate seasonal businesses report					■
Sole proprietor flag					■
Status—current					■
Status—business sold or employment ceased					■
Status—change in business operation or ownership				■	■
Status—out-of-business/sold date				■	■
Status—change of address or name					■
Status—workforce changes--reasons					■
Employment type (agriculture, federal government, household, military, railroad, regular)				■	■

Appendix C (continued)

Employment and Earnings Data Elements Currently Collected by Unemployment Insurance Other Than Wage Records	Percentage of 48 States, D.C., and 3 Territories Collecting Data Element				
	75% +	50% +	25% +	10% +	1-9%
Total Worker Compensation					
Wages—gross paid	■	■	■	■	■
Wages—taxable paid	■	■	■	■	■
Wages—excess paid	■	■	■	■	■
Wages—out-of-state paid					■
Wages—commissions					■
Wages—allowances					■
Wages—tips					■
Wages—reimbursed expenses and fringe benefits					■
Wages—by work site					■
Wages—exempt salaries					■
Wages—exempt corporate officers					■
Workers' compensation tax due					■
Withholding—total withheld					■
Withholding—total PIT					■
Withholding—state taxes					■
Withholding—local taxes					■
Withholding—governmental retirement fund					■
Withholding—contributions to qualified plans					■
Withholding—employees' UI contribution					■
Other Data Collected					
Interest due			■	■	■
Penalties due		■	■	■	■
Surcharge rate					■
Surcharge due				■	■
Administrative fee					■
Previous over/under payment				■	■
Debit or credit from previous quarters			■	■	■
Hours—workers' benefit fund hours worked					■
Tax Rate—UI	■	■	■	■	■
Tax Rate—state disability insurance				■	■
Tax Rate—training/administrative fund			■	■	■
Tax Due—training/administrative fund		■	■	■	■
Tax Due—UI		■	■	■	■
Tax Due—state disability insurance				■	■
Tax Due—workers' benefit fund assessment				■	■
Tax Due—total	■	■	■	■	■

APPENDIX D:
EMPLOYMENT AND EARNINGS DATA DICTIONARY
TABLE OF CONTENTS EMPLOYER DATA

U.S. Data Element ID	U.S. Data Element	U.S. Data Element ID	U.S. Data Element
Sheet I. Employer Organization Table		**Sheet II. Employer Establishments Table**	
I.A	Organization Identification	II.A	Establishment ID Number
I.B	Legal Name	II.B	Establishment Name
I.C	Federal Employer Identification Number	II.D	Federal Employer Identification Number
I.D	Previous Federal Employer Identification Number	II.E	State Unemployment Tax Account Number
I.E	State Unemployment Tax Account Number	II.F	Establishment Status
I.F	Business Structure Type	II.G	Establishment Status Date
I.G	Business Revenue	II.C	Establishment Operating Level
I.H	Operating Status	II.H	Establishment Business Functions
I.I	Operating Status Date	II.I	Establishment Principal Products and Services
I.J	Trade Names	II.J	Establishment Industry Code
I.K	Street Address	II.K	Establishment Street Address
I.L	City	II.L	Establishment City
I.M	State	II.M	Establishment State
I.N	ZIP Code	II.N	Establishment ZIP Code
I.O	Country		
I.P	Industry Code		
I.Q	Principal Products and Services		
I.R	Parent Company Tax ID		
I.S	Parent Company Name		

Appendix D - Employer Data (continued)

U.S. Data Element ID	U.S. Data Element	U.S. Data Element ID	U.S. Data Element
Sheet III. Employer Jobs Table		**Sheet IV. Employer Positions Table**	
III.A	Employer Job Code	IV.A	Position ID Number
III.B	Employer Job Title	IV.B	Position Job Title
III.C	Job Category Code	IV.C	Position Remuneration Basis
III.D	Business Support Role	IV.D	Position Schedule Type
III.E	Employer Job Duties	IV.E	Position Type
III.F	Employer Job-Required Skills	IV.F	Position Term
III.G	Employer Job-Required Education and Experience	IV.G	Position Status
III.H	Standard Occupation Code	IV.H	Position Status Data
III.I	Management Role Indicator	IV.I	Job Identification
III.J	Manager Level		
III.K	Wage Hour Law Coverage Indicator	**Sheet V. Work Assignments Table**	
III.L	Standard Hours	V.A	Worker Identification
III.M	Wage Plan Code	V.B	Assignment Description
III.N	Wage Grade Code	V.C	Assignment Type
III.O	Wage Step Code	V.D	Assignment Term
		V.E	Establishment Identification
		V. F	Pay Frequency
		V.G	Date of Hire
		V. H	First Work Date
		V.I	Probationary Status Beginning Date
		V.J	Probationary Status Ending Date
		V.K	Seasonal Work Ending Date
		V.L	Assigned Job Code
		V.M	Position ID

Appendix D (continued) - Worker Data

U.S. Data Element ID	U.S. Data Element	U.S. Data Element ID	U.S. Data Element
Sheet VI. Worker Personal Identification Information		**Sheet VII. Work Relationship Table**	
VI.A	Social Security Number	VII.A	Worker Identification
VI.B	Previous Social Security Number	VII.B	Social Security Number
VI.C	First Name	VII.C	Assigned Employer Establishment ID #
VI.D	Middle Name	VII.D	Assigned Job Title
VI.E	Last Name	VII.E	Primary Work Location
VI.F	Previous Last Name	VII. F	Worker Type
VI.G	Name Suffix	VII.G	Work Status Date
VI.H	Birth Date	VII. H	Work status
VI.I	Residence Street Address	VII.I	Work Status Reason
VI.J	Residence City	VII.J	Officer Indicator
VI.K	Residence State	VII.K	Stock Owner Indicator
VI.L	Residence ZIP Code	VII.L	Stock Owner Percentage
VI.M	Phone Number	VII.M	Pay Frequency
VI.N	Mother's Maiden Name	VII.N	Date of Hire
VI.O	Driver's License	VII.O	First Work Date
VI.P	VISA Type	VII.P	Contract Beginning Date
VI.Q	Citizenship	VII.Q	Contract Ending Date
VI.R	Military Status	VII.R	Probationary Status Beginning Date
VI.S	Gender	VII.S	Probationary Status Ending Date
VI.T	Ethnicity	VII.T	Seasonal Work Beginning Date
VI.U	Race	VII.U	Seasonal Work Ending Date
VI.V	Disability	VII.VII	Return-to-Work Date
		VII.W	Last Work Date
		VII.X	Date of Termination
		VII.Y	FLSA Indicator
		VII.Z	Union Status
		VII.AA	Unemployment Compensation Coverage Flag
		VII.AB	Worker Compensation Coverage Indicator Flag

Appendix D (continued) - Worker Data (continued)

U.S. Data Element ID	U.S. Data Element	U.S. Data Element ID	U.S. Data Element
Sheet VIII. Worker Paid Time Report		**Sheet IX. Worker Compensation Report**	
VIII.A	Worker Identification	IX.A	Worker Identification
VIII.B	Paid Time Period	IX.B	Compensation Time Period
VIII.C	Weeks Worked	IX.C	Total Compensation
VIII.D	Worked in Payroll Period Including 12th of the	IX.C.1.	Total Cash (Direct) Compensation (Gross Pay)
VIII.E	Total Hours Paid	IX.C.1.a	Salary Paid
VIII.E.1	Total Hours Worked	IX.C.1.b	Total Hourly Wages Paid
VIII.E.1.a	Regular Hours Worked	IX.C.1.b.(1)	Regular Hourly Wages Paid
VIII.E.1.b	Total Premium Hours Worked	IX.C.1.b.(2)	Total Premium Hourly Wages Paid
VIII.E.1.b.(1)	Overtime Hours Worked	IX.C.1.b.(2)(a)	Overtime Hourly Wages Paid
VIII.E.1.b.(2	Shift Differential Hours Worked	IX.C.1.b.(2)(b)	Shift Differential Hourly Wages Paid
VIII.E.1.b.(3	Call-Back Hours Worked	IX.C.1.b.(2)(c)	Call-Back Hourly Wages Paid
VIII.E.1.b.(4	Holiday Hours Worked	IX.C.1.b.(2)(d)	Holiday Hourly Wages Paid
VIII.E.1.b.(5	Hazardous Duty Hours Worked	IX.C.1.b.(2)(e)	Hazardous Duty Hourly Wages Paid
VIII.E.1.b.(6	Other Premium Hours Worked	IX.C.1.b.(2)(f)	Other Premium Hourly Wages Paid
VIII.E.2	Total Hours of Paid Leave (Paid Time Off)	IX.C.1.c	Total Leave Paid
VIII.E.2.a	Administrative Leave Hours Used	IX.C.1.c.(1)	Administrative Leave Paid
VIII.E.2.b	Bereavement Leave Hours Used	IX.C.1.c.(2)	Bereavement Leave Paid
VIII.E.2.c	Compensatory Time Off (CTO) Hours Used	IX.C.1.c.(3)	Compensatory Time Off (CTO) Paid
VIII.E.2.d	Consolidated Paid Time Off (PTO) Hours	IX.C.1.c.(4)	Consolidated Paid Time Off (PTO) Leave
VIII.E.2.e	Education Leave Hours Used	IX.C.1.c.(5)	Education Leave Paid
VIII.E.2.f	Family Leave Hours Used	IX.C.1.c.(6)	Family Leave Paid
VIII.E.2.g	Total Holiday Leave Hours Used	IX.C.1.c.(7)	Total Holiday Leave Paid
VIII.E.2.g.(1	Public Holiday Leave Hours Used	IX.C.1.c.(7)(a)	Public Holiday Leave Paid
VIII.E.2.g.(2	Floating Holiday Leave Hours Used	IX.C.1.c.(7)(b)	Floating Holiday Leave Paid
Continued on Next Page		**Continued on Next Page**	

Appendix D (continued) - Worker Data (continued)

U.S. Data Element ID	U.S. Data Element	U.S. Data Element ID	U.S. Data Element
Sheet VIII. Worker Paid Time Report (cont'd)		**Sheet IX. Worker Compensation Report (cont'd)**	
VIII.E.2	Total Hours of Paid Leave (Paid Time Off) (cont'd)	IX.C.1.c.(8)	In-Lieu-of-Notice Leave Paid
VIII.E.2.h	In-Lieu-of-Notice Leave Hours Used	IX.C.1.c.(9)	Jury Duty Leave Paid
VIII.E.2.i	Jury Duty Leave Hours Used	IX.C.1.c.(10)	Military Duty Leave Paid
VIII.E.2.j	Military Duty Leave Hours Used	IX.C.1.c.(11)	Sick Leave Paid
VIII.E.2.k	Sick Leave Hours Used	IX.C.1.c.(11)	Vacation Leave Paid
VIII.E.2.l	Vacation Leave Hours Used	IX.C.1.c.(12)	Other Personal Leave Paid
VIII.E.2.m	Other Paid Personal Leave Hours Used	IX.C.1.d	Total Other Cash Compensation Paid
		IX.C.1.d.(1)	Back Wages Paid
		IX.C.1.d.(2)	Bonuses Paid
		IX.C.1.d.(3)	Commissions Paid
		IX.C.1.d.(4)	Piecework, Performance-Based, or Contract Work Paid
		IX.C.1.d.(5)	Residuals Paid
		IX.C.1.d.(6)	Severance Paid
		IX.C.1.d.(7)	Tips Paid
		IX.C.1.d.(8)	All Other Cash Compensation Paid
		IX.C.2	Total Non-Cash (Indirect) Compensation
		IX.C.2.a	Total Legally Required Benefits Paid
		IX.C.2.a.(1)	Social Security Contributions Paid
		IX.C.2.a.(2)	Medicare Contributions Paid
		IX.C.2.a.(3)	Federal Unemployment Insurance Contributions Paid
		IX.C.2.a.(4)	State Unemployment Insurance Contributions Paid
		IX.C.2.a.(5)	Workers' Compensation Contributions Paid
		IX.C.2.a.(6)	Other Legally Required Contributions Paid
		IX.C.2.b	Total Discretionary Benefits Paid
		IX.C.2.b.(1)	Total Discretionary Insurance Benefits Paid
		IX.C.2.b.(2)	Total Discretionary Retirement and Savings Benefits Paid
		IX.C.2.b.(3)	Total Other Discretionary Benefits Paid
		Continued on Next Page	

Appendix D (continued) - Worker Data (continued)

U.S. Data Element ID	U.S. Data Element	U.S. Data Element ID	U.S. Data Element
Sheet IX. Worker Compensation Report (cont'd)		
IX.D	Taxable Compensation	IX.E	Total Compensation Withheld
IX.D.1	W-2 Wages, Tips, and Other Compensation	IX.E.1	Total Taxes Withheld
IX.D.2	W-2 Social Security Wages	IX.E.1.a	Federal Income Tax Withheld
IX.D.3	W-2 Medicare Wages and Tips	IX.E.1.b	Federal Medicare Tax Withheld
IX.D.4	W-2 Social Security Tips	IX.E.1.c	Federal Social Security Tax Withheld
IX.D.5	W-2 State Wages, Tips, Etc.	IX.E.1.d	Local Taxes Withheld
IX.D.6	State Unemployment Insurance Wages	IX.E.1.e	State Income Tax Withheld
IX.D.7	State Disability Insurance Wages	IX.E.1.f	Unemployment Insurance Tax Withheld
IX.D.8	W-2 Local Wages, Tips, Etc.	IX.E.1.g	Workers' Compensation Fees and Taxes Withheld
IX.D.9	Other Programs Taxable Compensation	IX.E.1.h	Other Taxes Withheld
IX.D.10	Total Wages Paid Out of State	IX.E.2	Total Insurance Premiums Withheld
		IX.E.2.a	Health, Dental, Vision Insurance Premiums Withheld
		IX.E.2.b	Life Insurance Premiums Withheld
		IX.E.2.c	Other Insurance Premiums Withheld
		IX.E.3	Total Retirement Contributions Withheld
		IX.E.3.a	Defined Benefit Pension Plan Contributions Withheld
		IX.E.3.b	Other Retirement Plan Contributions Withheld
		IX.E.4	Total Other Withholding
		IX.E.4.a	Flexible Spending Account Withheld
		IX.E.4.b	Job-related Expenses Withheld
		IX.E.4.c	Wage Garnishments Withheld
		IX.E.4.d	All Other Withholding

APPENDIX E:
POTENTIAL BENEFITS AND USES OF ENHANCED UNEMPLOYMENT INSURANCE WAGE RECORDS

POTENTIAL BENEFITS FOR EMPLOYERS

Improved Talent Supply

- Enables better alignment of education programs with employer needs
- Promotes a properly prepared labor supply for critical needs
- Helps employers locate the talent they need, resulting in better alignment between workers and jobs
- Facilitates holding education and training providers accountable for their performance in measures such as the relatedness of program of study to employment outcomes
- Assists in identifying the best new job candidates based on the education and training programs, industry certifications, and other credentials that have demonstrated the greatest effects on individuals' career paths, employment status, and earnings

Streamlined Reporting

- Reduces/consolidates employer reporting requirements
- Lessens employer survey burden through better use of administrative data
- Makes for more efficient processing and reporting of wage records

Improved Business Operations and Planning

- Informs labor utilization practices
- Assists in benchmarking business practices with industry staffing patterns and the compensation rates among similar employers in national, state, regional, and local labor markets
- Enables access to more complete and timely data
- Supports effective employment and hiring decisions
- Enhances economic development efforts to recruit and retain businesses
- Supports improved decision making related to location, education and training, production and distribution, and business investment

New Decision Tools

- Enables third-party service providers to develop tools for using more specific data for aiding business decisions

Reduced Overhead Costs

- Reduces unemployment costs by facilitating more timely matching of displaced workers with available job openings

- Enables better management of UI benefits by the number of hours worked
- Improves compliance with federal and state employment and tax laws
- Lower fees for customized reporting services through HR technology service providers
- Enables easier portability of company data among HR technology service providers

Assistance for Employees

- Identifies employees' eligibility and eases application for employer and government aid programs and benefits (e.g., UI compensation, SNAP, EITC, student grants and loans) and assists in completing applications
- Allows employees to use their individual-level data maintained by the employer to determine government program eligibility and provide and verify information necessary to complete a program application

POTENTIAL BENEFITS FOR HR TECHNOLOGY SERVICE PROVIDERS

Efficiency/Lower Costs

- Saves time due to easier data extraction
- Leads to less time spent translating or mapping data elements due to reduced data transformation required
- Allows for more out-of-the box standard reports, which results in fewer custom reports

Improved Products/Services

- Causes data to likely be more accurate
- Enables clients to have more complete, accessible, and timely data
- Supports better-quality benchmarks and better labor market data, providing opportunities to build products on top of public data sources
- Creates a competitive advantage if certified compliant with standards

POTENTIAL BENEFITS FOR GOVERNMENT

Labor Market Information

- Enables government statistical agencies to more accurately and timely describe working conditions in national, state, and local labor markets
- Increases understanding of employment trends in nontraditional occupations and gender equity
- Provides timely and accurate labor market trend information for program planning and administration
- Supports more accurate forecasts of the effects of policy changes and economic events
- Facilitates research on a wide range of economic topics, such as worker mobility by occupation, job-to-job flows for displaced workers, growth in part-time work, commute patterns, longitudinal employment retention, wage gains, and career ladder/progressions

- Provides accurate information on employment opportunities available to job seekers
- Supports economic development efforts
- Enables timely monitoring of local, regional, and statewide economic trends and the effects from economic disruptions (e.g., recession, natural disaster)
- Improves understanding of labor market dynamics and structure

Evidence-Based Policy Making

- Helps measure the effects of policy change on labor market participants
- Helps identify communities that are prospering and those that are falling behind
- Supports efforts to improve labor market equity
- Informs investment of public and private resources
- Improves local decision making with more geographically specific data

Audit and Evaluation

- Correctly determines if employers are compliant with federal and state employment
- Enables federal and state government officials to more easily determine if employers are complying with employment and tax laws
- Assists decision makers in judging cost effectiveness of education and workforce training programs, including student loan risk assessment and potential return on investment

Program Administration

- Facilitates better allocation of resources to help programs serve target populations, designated industry clusters, and related economic development goals
- Improves efficiency in determining the critical factors in the labor supply/demand equation
- Provides for timely matching of displaced workers to available job openings
- Makes collecting and processing of wage records more efficient
- Helps determine the effects of education and training programs, industry certifications and other credentials, and government programs at the national, state, and local/regional levels
- Facilitates determination of individuals' eligibility for government aid programs and benefits (e.g., UI compensation, SNAP, EITC, student grants and loans) and verifies the information necessary to complete a program application
- Assists employment and training program operators in determining whether programs they offer lead to positive outcomes in the labor market
- Helps government aid program operators streamline the application process for their programs (e.g., UI compensation, SNAP, EITC, student grants and loans)
- Improves commute pattern data for transportation planning

Access to Government Programs

- Improves a person's use of their own individual-level data maintained by employers to determine government program eligibility and provide and verify information necessary to complete a program application

Improved Fraud Detection

- Supports quicker determinations of fraudulent applications and receipt of benefits from public assistance programs with more timely data on earnings and employment

POTENTIAL BENEFITS FOR OTHER PRIVATE AND PUBLIC DATA USERS

Career and Education Guidance

- Provides consumer information to individuals seeking different education and training pathways
- Supports career counselors in guiding individuals in making informed education and career decisions and increases the talent pool of workers for high-growth and high-wage occupations
- Enables individuals to understand the relative labor market benefits among alternative employment and training options
- Helps students and their families better decide what programs to study and how much to spend and/or borrow to achieve a degree by showing them what degrees will give them the best chance to get a job and earn a strong wage upon graduation
- Provides the public with clear, understandable information on the net return on higher education investment by degree, by major, and by institution
- Illuminates the supply and demand of labor in a field of study, in both local and state labor markets

Economic Stability

- Facilitates faster matching of unemployed workers to available job opportunities

Access to Better Decision Support Information

- Enables third-party service providers to develop tools for using more specific data for aiding business decisions

Enhanced Research Tools

- Provides access to more data elements with finer detail and geographic specificity that supports research into public issues

APPENDIX F:
POTENTIAL CHALLENGES AND COSTS OF ENHANCED UNEMPLOYMENT INSURANCE WAGE RECORDS

POTENTIAL CHALLENGES AND COSTS FOR EMPLOYERS

Challenges

- Identifying financial resources for re-design of in-house systems
- Reliance on HR technology service providers to incorporate standards
- Effects of inconsistent adoption of standards across government agencies
- Promoting consistent systems across government agencies
- Perception that cost savings will not materialize
- Perception that benefits will not be achieved
- Adequate time to make changes
- Conflicts in staffing priorities

Costs

- Systems Adaptation and Maintenance
  » Custom system upgrades from HR technology service providers
  » Assessing current internally developed systems and identifying change needs
  » Re-engineering current internally developed systems
  » Technical support and maintenance
  » Ensuring that security measures adequately address any new requirements
  » Added data storage
  » Developing new error-checking systems

- Reporting Modifications
  » Adapting systems to prepare revised reports

- New Data Capture Strategies
  » Modifying systems to capture the necessary information

- Developing New User Tools and Training
  » Training staff on processes to request such data
  » Training staff on proper data assignment and validation

POTENTIAL CHALLENGES AND COSTS FOR HR TECHNOLOGY SERVICE PROVIDERS

Challenges

- Customer resistance to implementing standards
- Identifying incentives to encourage customer adoption
- Effects of inconsistent adoption of standards across government agencies
- Promoting consistent systems across government agencies
- Conflicting staffing priorities
- Perception that cost savings will not materialize
- Perception that benefits will not be achieved
- Reducing incomplete, untimely reporting
- Addressing global inconsistencies

Costs

- Development
  - » Assessing current systems to identify changes needed
  - » Identifying financial resources for re-design
  - » Re-engineering current systems
  - » Identifying and resolving mapping conflicts between historical and future data
  - » Ensuring security measures adequately address any new requirements
  - » Adding necessary data storage
  - » Developing new user tools
  - » Developing new error-checking systems
  - » Developing new analytical tools

- Operations and Maintenance
  - » Maintaining hardware and software
  - » Training staff
  - » Developing material for customer education/marketing
  - » Training customers
  - » Providing customer support

POTENTIAL CHALLENGES AND COSTS FOR GOVERNMENT

Challenges

- Antiquated systems
- Employer resistance
- Adapting to a public-private collaborative approach
- Perception that cost savings will not materialize
- Perception that benefits will not be achieved
- Reducing incomplete, untimely reporting
- Financial resources for re-design
- Law/rule changes required

- Incentives to encourage employer and vendor adoption and adherence
- Conflicting staffing priorities

Costs

- Systems Redesign
  » Assessing current systems and identifying change needs
  » Re-engineering current systems
  » Ensuring that security measures adequately address any new requirements
  » New error-checking systems
  » Hardware/software
  » Added data storage

- Operations and User Support
  » Technical support, maintenance, and labor costs
  » Indirect costs (end-user support and downtime)
  » User education/marketing/notification
  » User tools
  » Systems for data compilation and analysis
  » Customer support

- Incorporating Employment and Earnings Standards Into Existing Data

- Training
  » Staff training
  » User training

- Developing New Analytical Tools

POTENTIAL CHALLENGES AND COSTS FOR OTHER PRIVATE AND PUBLIC DATA USERS

Challenges

- Developing new analytical tools
- Incorporating new data definitions
- Potential breaks in historical series

Costs

- Adapting systems to incorporate new data and sources
- Developing user tools
- Internal-user guidance and support
- End-user guidance and support