A Research Study for the Improving Federal and State Reporting Project in New Jersey: Final Report

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Introduction

The New Jersey Department of Labor and Workforce Development's (NJDOL) Office of Research and Information contracted with the John J. Heldrich Center for Workforce Development at Rutgers, The State University of New Jersey, to provide research support to explore employer attitudes and perspectives toward enhancing current wage and employment data collection and improving federal and state reporting in New Jersey. This research study is part of a broader three-year agreement between NJDOL and the Heldrich Center under the U.S. Department of Labor's Workforce Data Quality Initiative and has been implemented in accordance with the U.S. Chamber of Commerce Foundation's Jobs and Employment Data Exchange (JEDx) initiative. JEDx was launched by the U.S. Chamber of Commerce Foundation to explore a public-private approach for streamlined employer reporting to state and federal agencies. More specifically, the JEDx mission is to develop a public-private approach for collecting and using standards-based jobs and employment data that will enhance government reporting and workforce analytics, and empower people to use their own records to pursue opportunities and advancement.[1] Broadly, the Heldrich Center has been tasked with understanding the underlying employer concerns and attitudes around a potential pilot to improve federal and state wage reporting and operationalizing the JEDx project in New Jersey.

In this study, the Heldrich Center has supported NJDOL in its role as a state leader and innovator under the national JEDx initiative. The New Jersey JEDx study has been titled "Improving Federal and State Reporting in New Jersey." More specifically, this study aims to garner New Jersey employer attitudes and feedback in streamlining and standardizing data collection processes for wage record collection with the goal of more accurately measuring employment and wages. It is proposed that the uniformity of a merged collection in a national database or standardized reporting structure would ease employer reporting burden, while also offering additional benefits to other stakeholder groups. Improved federal and state reporting could enable researchers to evaluate the existing mismatch between education skills and the skills required in the continuously evolving labor market. This expanded data collection would also enable policymakers to develop evidence-based policies related to education, labor, and employment (e.g., funding, regulations).

Streamlined and standardized data collection presents an opportunity for the state to collect additional data elements within the existing collection to ensure that the data collected are robust, usable, and informative for relevant stakeholders, such as state agencies, employers, researchers, and more. As such, the purpose of the Heldrich Center's research is to explore adding specific data points to the information currently reported from all employers. Additional data elements include, but are not limited to:

▶ Job title,

▶ Occupation,

▶ Gender,

▶ Race,

▶ Ethnicity,

▶ Date of birth,

▶ Hours worked,

▶ Geography of work location, and

▶ Additional elements from other data collections referenced in the U.S. Chamber of Commerce's JEDx initiative.

It is proposed that adding more elements to the wage record collection would reduce burden by streamlining and standardizing reporting into one central collection. Additional data elements would allow data users to better understand labor market dynamics at a more local level, as well as potentially better assess labor market

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[1] https://www.uschamberfoundation.org/JEDx

demands and wages, and examine the effectiveness of workforce training programs and secondary/postsecondary education outcomes. Moreover, it could allow the state to better examine policy implementation in the Unemployment Insurance (UI) program by assessing equity issues, alignment in the workforce system using occupation rather than industry, and the

impact of economic downturns in specific geographies or municipalities within the state. To this end, researchers explored these hypotheses, specific data elements, and more with enhanced wage record collection with relevant stakeholder employers and employer groups in New Jersey.

Background

History of JEDx

The JEDx initiative is led by the U.S. Chamber of Commerce Foundation and the T3 Innovation Network. JEDx is an expansion of previous work of the U.S. Chamber of Commerce Foundation, specifically building upon the Foundation's 2017 report titled *Clearer Signals: Building an Employer-led Job Registry for Talent Pipeline Management*.[2] From there, the U.S. Chamber of Commerce Foundation created the Job Data Exchange initiative that aimed to help employers and their human resources (HR) partners break down job descriptions into specific skill and hiring requirements.[3] The Job Data Exchange project resulted in the production of a data dictionary that was released in conjunction with the HR Open Standards Consortium. These projects laid the foundation for the development of the JEDx initiative.

JEDx

JEDx aims to develop a vision of the future and an accompanying roadmap for how to get there in the creation of a public-private data collaborative. This collaborative has the potential to improve the collection and use of standards-based jobs and employment data for public and private applications including:

- ▶ Employer reporting to federal and state governments,

- ▶ Public and private workforce analytics, and

- ▶ Learner/worker empowerment and trusted records.[4]

In 2021, JEDx formed an Advisory Committee that convened three times in the spring of 2021. Advisory Committee members were comprised of a variety of stakeholders, including state and federal agencies, employers, HR technology service providers, and others (see Appendix A.1 for the full list of participating organizations). The JEDx Advisory Committee was national in scope and wide-ranging in terms of the entities engaged in this effort. Advisory Commitee members contributed to the JEDx overall vision, developing a roadmap for operationalizing the effort and the implementation plan. From this, the JEDx plan was socialized with state entities for possible collaboration and adoption.

In February 2021, the U.S. Chamber of Commerce Foundation and the T3 Innovation Network released a report, *Developing and Using Public-Private Data Standards for Employment and Earnings Records*, that laid the foundation for developing public-private open data standards for employment and earnings records.[5] The report summarized the work that has already been completed and the results from the T3 Innovation

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[2] https://www.uschamberfoundation.org/reports/clearer-signals-building-employer-led-job-registry-talent-pipeline-management
[3] https://www.uschamberfoundation.org/workforce-development/JDX
[4] https://www.uschamberfoundation.org/JEDx
[5] https://www.uschamberfoundation.org/sites/default/files/media-uploads/T3%20Report_Employment%20and%20Earnings%20Records_Feb2021_FINAL%20%281%29.pdf

Network Employment and Earnings Records Standards project. The T3 Innovation Network partnered with the HR Open Standards Consortium to develop employment and earnings records standards, including a conceptual data model and data dictionary that has the potential to improve federal and state reporting and labor market information applications. The report also outlined the T3 Innovation Network's analysis of the benefits and costs of using the standards it recommends for a starting point 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, 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:

▶ Establish a common enhanced state UI wage record,

▶ Coordinate state data collection systems, and

▶ Collaborate in data use for employers and government, and explore data sharing.

The report emphasized that in order for this approach to be successful, it will require strong employer leadership and engagement in working cooperatively with states and other public-private stakeholders to make difficult decisions. Building on these efforts, in June 2021, the next JEDx publication, *Modernizing America's Workforce Data through a Public-Private Approach*, outlined the JEDx planning process and resulting plans for creating a public-private approach for reimagining wage record data collection, among other priorities. The report serves to provide a brief summary of planning efforts and engage key public-private stakeholders and potential funders to determine interest and commitment in moving forward with the design and test phase of the initiative. JEDx has four demonstration projects, with Improving Federal and State Reporting as the first project. The project summary reads as follows:

"States, federal agencies, employers, HR technology service providers, workforce analytics providers, and other public and private partners will collaborate to reduce costs and create greater value for employer

reporting to federal and state agencies. This project will start with the enhancement of state UI records, including wage records."[6]

The JEDx Project One became the impetus and focus of New Jersey's research project of which the summary and findings are detailed in this report. New Jersey is one of seven states participating in JEDx Project One. The seven states engaged with the JEDx effort and considering participation in the JEDx Project One pilot program are Arkansas, California, Colorado, Florida, Kentucky, New Jersey, and Texas. The scope of JEDx Project One is expansive and entails buy-in from numerous entities within each participating state. Under JEDx leadership, two Technical Workgroups were convened to advance Project One goals, with the seven participating states engaging in a dialogue with JEDx as well as within their own state coalitions. These state coalitions engaged a variety of stakeholders, as the complexity of enhancing state UI records affects and requires the involvement of a variety of entities at the local, state, and federal levels. Specifically, JEDx initiative materials point to the relevant group of stakeholders, including businesses, economic development organizations, employment and workforce agencies, organized labor, government agencies, education and training providers, and the general public.

In late 2021, the advancement of the JEDx initiative began its development phase, convening states and their coalitions to engage and collaborate with JEDx teams focused on data and application priorities, as well as system architecture. It is in this phase of development that New Jersey's coalition, including the Heldrich Center research team, engaged with the JEDx initiative to work in parallel streams to assist the JEDx Project One advancement in New Jersey and conduct a research study focused on employer considerations that lays the foundation for the state to launch an enhanced wage record pilot program.

Heldrich Center Research Study

While the JEDx goals are robust and inclusive of diverse stakeholder groups, in project planning discussions with NJDOL leadership, the scope of the Heldrich Center's research study was narrowed to focus on New Jersey

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[6] https://www.uschamberfoundation.org/sites/default/files/JEDx%20Report_June2021.pdf

employers as the primary stakeholder group of interest. Specifically, the research aimed to gather employer feedback on current state and federal reporting requirements, challenges to the current reporting structure, and employer priorities in improving state and federal reporting overall. Researchers focused on New Jersey employers for the entirety of the study.

From the Administrative Wage Record Enhancement Study Group report *Enhancing Unemployment Insurance Wage Records: Potential Benefits, Barriers, and Opportunities, A Summary of First-year Study Activities and Findings*,[7] researchers examined the policies in the 12 other states that have enhanced wage record data element collections, closely looking at Alaska, Iowa, Louisiana, Minnesota, Ohio, Oregon, Pennsylvania, Rhode Island, U.S. Virgin Islands, Vermont, Washington, and Wyoming (see Appendix A.2 for more detail). While New Jersey does require employers to report base weeks (the number of weeks in a quarter an individual has earned over $140) in addition to the standard elements of wage record reporting (social security number [SSN], the reference employer's state UI tax account number, and the amount of earnings paid to the employee by that employer), it was apparent that there were a variety of data elements already being collected by other states that could provide value to understanding the workforce and labor market in greater depth. From the literature and policy documentation, researchers drafted potential use cases and their associated benefits for a broad coalition of stakeholders. These broad use cases were narrowed to focus on New Jersey employer use cases and benefits.

Based upon researchers' review of relevant literature, including but not limited to materials from the JEDx initiative, the Heldrich Center team identified a core stakeholder value proposition and the potential associated benefits for adopting measures to streamline federal and state reporting in New Jersey. The value proposition is as follows:

▶ Employers will have access to real-time feedback of local market trends and characteristics of the workforce. This information could help employers:

  ▶ Make informed decisions on where to locate or expand their business;

  ▶ Understand the average pay for positions they employ within their company and compete effectively and inclusively;

  ▶ Get a better sense of the available job seekers and their skills in their area;

  ▶ Project employment growth and monitor local, regional, and statewide economic and industry trends;

  ▶ Improve HR practices, articulating skills in demand, and crafting more accurate job descriptions that reflect job positions;

  ▶ Improve employee recruitment and retention; and

  ▶ Incorporate more inclusive hiring practices.

In addition to having access to all of this valuable information, there is potential for a smoother, standardized, and streamlined reporting process to save employers time and lower their costs. This primary value proposition and associated benefits were used as a driving discussion point in the exploratory analysis conducted with key New Jersey employers.

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[7] https://www.nprc-inc.org/d_index/Wage_Record_Study_Year1_Report-Final.pdf

Research Questions and Methodology

To conduct this research study, researchers crafted a series of research questions to inform data collection and other study efforts. The Heldrich Center research team communicated on a weekly basis to discuss project needs, preliminary findings, and overall project progress. The guiding research questions for this study are as follows:

▶ What are the current views of key New Jersey stakeholder groups (state agencies, employers/ employer organizations/HR technology service providers, workforce analytics providers) regarding implementation of enhanced wage record collection and use, with a targeted emphasis on employer attitudes and concerns?

▶ What are the key data collection priorities in New Jersey and how could they be used? To what benefit and/or opportunity would these data present?

▶ What are the challenges to enhancing wage record data collection in New Jersey and how can the state overcome those challenges? What is the case to be made to overcoming these challenges?

▶ To what extent do enhanced wage records affect reporting burden (i.e., streamlining data collections into one collection versus additional time to report data)?

Engagement with JEDx

Between April and September 2022, Heldrich Center researchers participated in a series of Technical Workgroup discussions hosted by JEDx and the U.S. Chamber of Commerce Foundation. The Technical Workgroups focused on promoting the development and use of data and technology standards to address the following topics: **Data and Applications Priorities** and **System Architecture**. The Technical Workgroups' objectives and meeting schedules were as follows:

Data and Application Priorities	System Architecture
Objectives:	*Objectives:*
▶ Establish initial priorities for data collection based on stakeholder needs	To develop and explore various architectural options for standards-based data collection and exchange that:
▶ Identify necessary refinements to the data model and dictionary based on those priorities	▶ Improve efficiency of data collections
▶ Explore options for data collection to be consolidated with UI reporting	▶ Support collections that are available directly from employers and via service providers
▶ Recommend potential, high-priority applications that demonstrate value	▶ Consider how the data may be used for high-profile use cases/applications
Wednesday, April 27, 1:00 to 2:30 p.m. ET	Wednesday, May 4, 1:00 to 2:30 p.m. ET
Wednesday, May 25, 1:00 to 2:30 p.m. ET	Wednesday, June 1, 1:00 to 2:30 p.m. ET
Wednesday, June 22, 1:00 to 2:30 p.m. ET	Wednesday, July 20, 1:00 to 2:30 p.m. ET

The JEDx and U.S. Chamber of Commerce Foundation also held JEDx Steering Committee meetings to discuss high-level summaries from the Technical Workgroups and other topics related to the ongoing implementation. Researchers participated in these Technical Workgroups and the Steering Committee meetings to inform the convening of a state leadership team for New Jersey. These discussions provided researchers with foundational knowledge to be able to conduct outreach and perform research tasks with key New Jersey employers to examine their views on streamlined and standardized wage record data collection.

JEDx System Architecture Deep Dive in New Jersey

Additionally, researchers participated in a deep dive into New Jersey's system architecture for the current reporting of wage records. For foundational understanding of how the wage record data collection system currently operates, Heldrich Center researchers engaged with various agencies within NJDOL and the New Jersey Department of the Treasury, as well as the JEDx team to get an orientation to New Jersey's reporting system at present. The purpose of this deep dive exercise was to get a detailed overview of the existing reporting system to understand the intricacies and complexities of New Jersey's legacy systems and the systems' architecture, and to identify areas for streamlining and improvements.

The understanding stemming from that overview is that the existing wage record data collection passes through multiple systems, as well as multiple agencies and sub-departments within agencies, in its current state. Through the deep dive exercise with JEDx, it was highlighted that employers complete the WR-30 (Employer Report of Wages Paid) form and submit it via a virtual drop box website managed by Axway, a third-party vendor. Once these data are collected by the New Jersey Department of the Treasury, they are sent to NJDOL and are loaded into an Oracle database on the

NJDOL server. For the wage reports specifically, the data are transferred to the Local Office Online Payment System (LOOPS), which is used by the local workforce development area offices for UI administration. There are multiple layers of data transformation and validation that take place within this data flow; however, for the purposes of this report, researchers wanted to highlight the many stakeholder systems and entities that are involved in the current system operations. The more in-depth results of the JEDx architecture deep dive session can be found in Appendices B.1 and B.2.

To streamline such a system, and/or change its operation in any way, would be a significant undertaking that would require buy-in from multiple stakeholder entities. The complexities of the existing system structure were noted by all teams during the JEDx system architecture deep dive session. Teams from the New Jersey Department of the Treasury and NJDOL worked with JEDx in the production of the JEDx Landscape Analysis Data/New Jersey UI and JEDx Landscape Analysis Data/New Jersey New Hire Reporting results documents.

Improving Federal and State Reporting State Advisory Panel Convening

In collaboration with NJDOL leadership in the Office of Research and Information, Heldrich Center researchers identified a list of 46 key stakeholders comprised of state and national experts representing state agencies, employers, employer organizations, HR technology service providers, analytics providers, and other relevant groups. The Heldrich Center team conducted a multi-method outreach effort that started on May 31, 2022. Outreach was conducted via LinkedIn, email, and phone to all 46 key stakeholders in New Jersey. A formal invitation from NJDOL Commissioner Robert Asaro-Angelo was sent to all stakeholders inviting them to participate in the convening. The invitation to the convening can be found in Appendix C.

The primary objectives of the convening were as follows:

▶ Identify benefits to employers of streamlining and standardizing the reports required by government agencies;

▶ Identify any challenges in changing employer reporting practices, including privacy concerns; and

▶ Chart a path forward for a New Jersey pilot in conjunction with the JEDx initiative.

The Heldrich Center facilitated a stakeholder convening session on June 16, 2022 with Dr. Carl Van Horn of the Heldrich Center presenting opening remarks and Commissioner Asaro-Angelo participating in the discussion about streamlining reporting with stakeholders, including state agency representatives, employers, professional employer organizations, HR technology service providers, and other key stakeholders. Attendees included representatives from the U.S. Chamber of Commerce Foundation, NJDOL, National Association of State Workforce Agencies, New Jersey Chamber of Commerce, African American Chamber of Commerce of New Jersey, Employers Association of New Jersey, Associated Construction Contractors of New Jersey, Verizon, Comfort Keepers, Sansone Auto Group, and New Jersey Small Business Development Centers (see Appendix D for the convening PowerPoint presentation).

At the start of the convening, Dr. Robert Sheets and Jason Tyszko from the U.S. Chamber of Commerce Foundation provided an overview of the JEDx initiative to New Jersey stakeholders. This overview included a walkthrough of the JEDx approach, primary project objectives, participating states, and an overview of the current reporting landscape complexities. The team from the U.S. Chamber of Commerce Foundation offered a vision of the future with greater ability to serve stakeholder objectives at a lower cost, noting that a variety of stakeholder groups are invested in this issue and could be positively affected with streamlined and standardized change.

The discussion continued to engage New Jersey employers and stakeholders around two major topic areas: (1) motivations and benefits, and (2) data collection issues. A series of questions were posed to participants within each topic area to gauge how New Jersey stakeholders might respond to the adoption of an initiative to improve federal and state reporting within the business community (see Appendices E and F for a full list of the questions and a summary of the convening). Consequently, the discussion with New Jersey employers and other stakeholders identified several nuances and themes that informed the development of supplemental questions for the individual interviews conducted for the Heldrich Center's research study.

In-depth Employer Interviews

Building off of the input garnered from the June 2022 convening, researchers conducted five interviews with relevant employer stakeholders in New Jersey between August and September 2022. See Appendix G for the interview protocol. Researchers followed up with convening participants via email in addition to new employers and employer groups that were suggested to be of assistance by the participants and NJDOL leadership. Representatives from the following agencies were contacted for a more in-depth discussion:

▶ Employers Association of New Jersey,

▶ New Jersey Chamber of Commerce,

▶ ADP,

▶ Precision Payroll Services Inc.,

▶ Associated Construction Contractors of New Jersey,

▶ New Jersey Coalition of Automotive Retailers,

▶ New Jersey Small Business Development Centers, and

▶ African American Chamber of Commerce of New Jersey.

From the agencies contacted, researchers successfully completed individual interviews with the following five agencies:

▶ Employers Association of New Jersey,

▶ New Jersey Chamber of Commerce,

▶ National Payroll Company,

▶ New Jersey Coalition of Automotive Retailers, and

▶ New Jersey Small Business Development Centers.

During these interviews, the Heldrich Center research team used data collection materials from multiple sources, including findings and summary materials from the June 2022 convening, JEDx materials from its two Technical Workgroups (see Appendices H and I), and the original protocols developed from the primary research questions. In this way, researchers were able to address multiple stakeholder interests within these interviews and focus group sessions.

Findings

The research study for the Improving Federal and State Reporting Project in New Jersey has evolved since its original iteration in November 2021 to be more focused on supporting New Jersey's participation in the JEDx initiative and obtaining a comprehensive understanding of the concerns and attitudes of New Jersey employers on changes to the current process of employment and wage data reporting and of a potential pilot in New Jersey. While the research questions stated above have driven the study, additional questions, concerns, and aims for the data collection have emerged. The findings in this section of the report address the primary questions of interest from NJDOL that came to light as the JEDx project engagement advanced throughout 2022. Researchers have addressed all four primary research questions through the data collection process, as well as the additional questions around recommendations for New Jersey's execution of, or participation in, a pilot program to improve federal and state reporting.

The analysis of the notes from the convening and interview transcripts resulted in the development of five core buckets of findings. These findings are reflective of the feedback researchers collected from New Jersey employers and fell into the following five categories:

▶ Impact on large versus small businesses,

▶ Motivations and use cases,

▶ Privacy and regulation concerns,

▶ Logistical concerns, and

▶ Recommendations from New Jersey employers.

Overall, these findings encompass the current views of key New Jersey employers regarding the implementation of an enhanced wage record collection and potential use. These findings also speak to New Jersey employers' views on challenges to enhancing wage record data collection and the current and forecasted reporting burden should wage record data collection be amended in the future. Lastly, employers commented on their priorities for an enhanced wage record data collection, and the data points and use cases of interest to the employer community.

Impact on Large versus Small Businesses

New Jersey ranks 47th in the nation in terms of its size; however, it ranks 11th in the United States for its number of small businesses. As of September 2021, New Jersey had 243,867 small businesses that made up 96.4% of

all the businesses in the state,[8] a fact emphasized by an employer participant who attended the June 2022 convening and was interviewed for this study. The convening and interviews revealed that large employers are more suited to opt into a pilot effort. Panelists suggested that the auto dealer state organization would be a great partner for the pilot as it represents different types of employers that range from small to medium- and large-sized businesses, and are located all over the state. Another suggestion was to build partnerships with local employer associations such as the African American Chamber of Commerce of New Jersey or the New Jersey Small Business Development Centers. These connections could provide direct access to employers and other stakeholders that can potentially provide beneficial input in developing and engaging in a pilot program. However, being that New Jersey is a primarily small business state, this potentially can create tension in the nature of the New Jersey employer landscape and what would be optimal for a New Jersey pilot program. One employer indicated:

"Large employers could allocate someone's time to participate in a pilot since it would be more work with double reporting — but I am doubtful that a small employer could do it. New Jersey is mostly small employers…so there is obviously a tension with what this pilot would require and the kind of employers that are located in the state."

This statement was further supported by another employer commenting on the capacity of small businesses to engage in additional reporting:

"[We] must keep in mind that smaller employers might have paper files or use Excel spreadsheets so it might be harder for them to just pull a new report."

The disparity in the capacity of large and small businesses to comply with changes to the current reporting structures was mentioned by all New Jersey employers interviewed. It was also noted that it is most common for large employers to contract out their reporting with third-party HR and payroll service companies such as ADP or Paychex. One employer

remarked how large businesses pay third-party HR and payroll services to absorb the difficulties and worries of overreporting, noting:

"It is people's full-time jobs to maintain wage records and ensure their employer or client stays in compliance."

Additionally, it was further indicated that the reporting process can get so complicated that depending on the size and business type:

"[Businesses] may incur different taxes, are [subject] to local and municipality laws that may require different sets of reporting, and have varying reporting [submission] schedules…"

Third-party HR and payroll services alleviate businesses (that are able to afford them) of the stress of having to keep up to date with state and federal mandates. For this reason, it was difficult to gauge from the New Jersey employers interviewed the extent to which enhancing the wage record collection would affect reporting burden in practical terms, as many contracted these services outside the business. It was noted that any change in practice would be perceived as a negative impact reporting burden, as change suggests disruption from what is known and familiar at the present. On a similar note, employers reported that changes to reporting can create disruptions and potentially cause more burdens to small businesses. As an example, several employers mentioned that most small businesses handle reporting in-house and expressed concern over the burden that would be placed on small businesses to report more data and/or change the way data are currently reported. As one employer shared:

"Unlike larger employers, [in] small businesses or your mom-and-pop shops, the person that handles the day-to-day operations will also be the person that will be handling the finances, the taxes, the reporting, etc…"

Employers shared that most small businesses are "filled to the brim with day-to-day business operations" and would rather focus on the "cores" of their business. Given

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[8]   "Small business" is defined as firms that have less than 50 employees. Data and percentage are retrieved from NJDOL's September 30, 2021 Quarterly Census of Employment and Wages, which includes size class totals (by employment) for New Jersey employers covered by Unemployment Insurance.

the complexity of the current reporting structure, it was noted by the employer interviewees that changes to any part of the current reporting systems and structures could potentially be viewed negatively by the small business community. Consequently, one employer described that there is a need to tactfully communicate any reporting changes to employers and ensure that the state leaders ask themselves:

> "How can this be advertised to small businesses to feel like this isn't one more thing they have to do?"

Findings reveal that employers in New Jersey value simplicity, ease of use, and minimal disruptions to the current processes. The concerns about an altered or enhanced wage record data collection ring true for all businesses and are particularly notable for small businesses in the state. Reporting burden echoed throughout the interviews as a concern for small businesses, and any change to reporting systems and structures were met (and projected to be met) with skepticism about how streamlined and standardized systems would operate in practice.

Additional feedback from relevant New Jersey employers included concern over changing current reporting structures and the way in which any changes would incur more work for businesses — particularly smaller businesses — that are focused on their day-to-day business operations and bottom line. Specifically, one interviewee noted:

> "Most employers don't care about this. Employers are concerned about their businesses and their bottom line and paying the third-party services to deal with it instead. It would be great to see employers invested in creating a better world and structure, but the average employer won't buy into this."

To this end, there were additional concerns noted about employers' capacity to engage in an effort to improve federal and state reporting due to the ongoing difficulties with recruitment and retention of employees that are a result of the COVID-19 pandemic. Some employers interviewed for this study referenced the difficulties of the past two-and-a-half years in the COVID-19 pandemic, specifically the struggles to stay afloat and find employees, and how all these factors hinder day-to-

day operations. While many employers agreed that the motivations to incentivize employers were correct (see Appendix H), there was a strong belief that in practice, the uptake on this kind of initiative or pilot program would be difficult and unlikely to take off, without mandatory participation requirements. As one employer stated:

> "The hassle of current reporting isn't so great to have employers go through all this pilot effort."

Motivations and Use Cases

The list of benefits, potential use cases, and employer value propositions shared by JEDx and the Heldrich Center research team overwhelmingly received positive feedback from New Jersey employers. New Jersey employers believed that benefits such as improved state and regional benchmarking, HR analytics, data for projecting workforce needs, and more, are the right motivations to get employers engaged. One employer commented:

> "Certain businesses will definitely benefit from something like this...smaller businesses and competitive businesses can use this information to inform themselves to [improve] their operations."

This comment alludes to the current state of the labor market where many employers are struggling to fill positions. Employers noted that having this type of information available could help businesses stay competitive and understand what others in the same field are able to offer to keep up with the demand of labor shortages. The same employer also noted that enhanced wage records and access to this information could highlight the stark regional differences in wages:

> "The market north of [Interstate] 195 is a completely different world to south of [Interstate] 195. Wages are substantially less in the south, even for the same type of jobs that are just 45 minutes north. This is really good information to pinpoint on...and can be very helpful and valuable to all different types of businesses."

One employer indicated that this type of information is key to understanding regional differences and can be beneficial to businesses that would like to "open

a new location and/or relocate to a different region" within New Jersey. For occupations that require specific skills, access to data that can project workforce needs and analyze labor supply were also seen as "great valuable information" and a good incentive for employer engagement in a New Jersey pilot initiative. Another employer shared that this type of information would benefit companies like auto dealerships or any other industry that requires "specific skills" (particularly trade companies) to allow them to locate and identify sources of the supply of skilled workers.

Overall, the JEDx "high-priority use cases" and the list of employer value proposition resonated well with all of the New Jersey employers interviewed for this study. They were all receptive and agreed that the broad goals of the initiative could potentially be beneficial for not only businesses but also the job seekers in the state. An employer remarked:

> "I'd like to think the state has the best intentions to educate the job seeker and support the employer — that has to be the end goal, so you are supporting employers by giving this information and doing this research, but at the same time you are educating the job seeker so he/she or them/they can make the best decision they can as they enter the workforce."

Privacy and Regulation Concerns

Findings revealed that while the potential benefits and future use cases are "great justifications" to possibly motivate employer engagement, the practicality and logistics of change present challenges for the New Jersey employer community and create hesitation around participation in a pilot program to improve federal and state reporting. Overall, it was observed that employers are hesitant about sharing additional wage record data elements with the state, beyond what is required. Sensitive data points of note were employee demographics such as race, gender, age, and military status, among others. Employers voiced concern over the ways in which reporting additional wage record data elements could ultimately "backfire" and "be used against

them" by government entities. When discussing the new data elements under consideration for adoption by JEDx and the New Jersey initiative, one employer remarked:

> "The first thing that comes to mind when people want more information is — what comes from this and what are the consequences of this information? The more information you share, the more it can be used against you."

Similarly, other employers interviewed for this study were concerned about the penalties that could be imposed on them if the additional wage record information revealed wage disparities among employees with the same job titles. One employer noted this concern and as a possible solution proposed reporting these data elements, if at all, on an occupation basis, not a person basis:

> "If you do it on an occupation basis rather than on a person basis — and then it's less personal and targeted with knowing who they are and where they work, and that they'll come after me (the employer) cause I paid someone $20 less than someone else."

These hesitations and concerns, as reported by some employers, speak to a foundational mistrust between employers and government entities that makes it difficult to set a shared understanding and vision for what a project about improving federal and state reporting hopes to attain in the future. These concerns were echoed throughout the data collection, obscuring the longer-term objectives set by JEDx and the vision for New Jersey's own pilot program initiative. Employers reiterated the importance of "providing clear communication of implementation of the initiative" if it were to occur and request "full transparency" of the process. Much more conversation would need to be had to assuage employers' hesitations in engaging with an effort such as JEDx, or a New Jersey pilot program.

Privacy concerns and trust issues came up in all of the conversations with New Jersey employers interviewed for this study. When researchers presented employers with a document that listed all of the data collection

priorities for consideration from the JEDx initiative (see Appendix I), several items were designated as "red flags" and/or "off limits". An employer shared:

> "Once you get past items that are [required for reporting], I would say the worker's personal descriptors...residence would be a huge red flag."

In addition, one interviewee noted that many employers' concerns over privacy and trust are rooted in general skepticism about the level of intervention, punishment, or retribution they would receive if they did offer more data to government collections. One employer remarked:

> "We are all conspiracy theorists thinking, oh my god, the government wants to see what we are paying everybody so they can come in here and tell us oh we are paying too much, too little — I can tell you that is the first thing businesses will think."

Other concerns mentioned indicate a strong hesitation to provide anything beyond what is required by law to stay in compliance. The issues around employer and employee privacy as well as trust issues with government entities have the potential to be a significant challenge in the rollout of an initiative that aims to add data elements to the current wage record data collection.

Logistical Concerns

New Jersey employers believe that a New Jersey pilot program, or longer-term adoption of standardized and streamlined wage record data collection, would have to require mandatory participation for employers to engage in such activities. On their own, it was suggested that employers would not opt in or volunteer to change their current reporting data elements or systems. To this end, one employer interviewee noted:

> "If it was mandated, then employers would share the information to remain in compliance — if it's based on voluntary self-identification, then it's doubtful."

Findings revealed that HR and payroll companies would not be able to navigate some employers opting into and others not opting into a pilot initiative for reporting purposes. Employers using third-party HR and payroll services indicated that they would not be able to opt into

a voluntary pilot program and make any changes to their current reporting systems, data elements, or structure, since that service resides with a separate entity that handles reporting for that employer among thousands of others. As stated previously, a majority of large employers use third-party services for their reporting, restricting their ability to participate in a voluntary pilot program; additionally, there were concerns voiced about the burden placed on small businesses in amending their reporting. This logistical challenge necessitates the state to reconsider the idea of a voluntary rather than a mandatory pilot program structure. One employer specifically noted:

> "(National payroll companies) have hundreds of thousands of clients — so if this pilot takes place, and it's voluntary, it would be really difficult to have Company B participate and Company C not participate. That means that this would have to be required."

From the interviews with New Jersey employers, it became clear that there is a necessity for making any additional reporting mandatory for all employers. An all-in approach will allow third-party HR or payroll service providers to make across-the-board changes for all of their clients to stay in compliance with the law and report additional wage record data elements of value and interest to the state.

Recommendations from New Jersey Employers

Despite the concerns noted above, all employers interviewed for this study felt that New Jersey should participate in a pilot program to streamline and standardize reporting systems and improve federal and state reporting with added data elements. New Jersey employers' views suggest the endeavor would be worthwhile in theory, and could reap many benefits for the New Jersey business community. However, employers made several key stipulations to their support as conditions that would be necessary to obtain employer buy-in for a pilot program or mandated change. Specifically, employers mentioned that any pilot program would need to be tested and proven to be simpler, streamlined, and add value. Specifically, one employer noted:

"*(A new system) needs to be easy, accessible, and not require a whole lot of time for employers.*"

Once again hinting at the lack of trust and strained relationship between employers and government entities, another employer commented:

"*To do a pilot, you would need a tested system. Membership would ask if the (new) system had been beta tested and if it is ready to go. There is still trauma from the breakdown of UI in 2020.*"

In terms of additional hurdles that would need to be addressed to run a successful pilot program, an employer stated the following:

"*(To run a pilot), you would need to identify who within every organization is responsible for that piece of work (reporting) — and it won't be the same role in every organization.*"

Relatedly, there was a strong sentiment conveyed by employers that the rollout of a pilot program or broader mandated change would necessitate a strategic marketing plan that contains clear and concise communication about the value of this change in order to establish employer buy-in. Some New Jersey employers felt that while a mandate would be necessary, it was their recommendation that the word "mandate" not be used in any context. It was noted that employers do not

like mandates and feel that any mandate is government imposition on their business operations, and therefore would not be well received.

While the employer community does support a project to streamline and standardize reporting and the addition of data elements into the wage record data collection, there remains hesitation and skepticism about the practical rollout of any changes. Specifically, the challenges to enhancing wage record data collection include, but are not limited to: (1) logistical concerns for small businesses, (2) difficulties in changing reporting for businesses that use third-party HR and payroll services, (3) employer and employee privacy concerns, (4) the need for mandated change versus a voluntary program, and (5) mistrust with government entities as a hindrance to businesses' support and buy-in for change.

For these reasons, the state needs to carefully consider how to proceed with rollout of this initiative and how to package it to the New Jersey business community for buy-in and support from relevant employers and other stakeholders in the state. The case can be made to overcome these challenges by highlighting in practical terms the way the benefits of change will outweigh the logistical concerns. Additionally, a demonstration of the streamlined, standardized, and simplified system would likely assuage employer concerns as well. Much can be done to garner buy-in with the employer community, because at the core, there is support for the broad goals and vision of the project and agreement around the motivations that would in theory incentivize businesses.

Recommendations

The New Jersey employers that participated in this study were forthcoming with their feedback on the current wage record reporting process as well as whether they would recommend New Jersey participate in a pilot program of streamlined and standardized reporting systems for wage record collection. From the New Jersey Improving Federal and State Reporting State Advisory

panel convening, JEDx technical workgroup discussions, and in-depth interviews with relevant stakeholders, including but not limited to employers and employer representative groups in New Jersey, Heldrich Center researchers developed the following recommendations for improving federal and state reporting of wage records.

1. **If voluntary, an effort to improve federal and state reporting in New Jersey should focus on larger employers in the state.**

As reported by all New Jersey employers interviewed, small businesses most likely do not have the capacity to engage in a voluntary pilot program and simultaneously remain in compliance with current reporting requirements. Personnel and resource constraints stemming from the COVID-19 pandemic further complicate the current landscape for small businesses in the state. As employers are currently focused on rebuilding and recovering from the pandemic's effects, it may not be feasible to conduct a pilot until employers have fully recovered and business is "back to normal." The composition of New Jersey's business community is predominantly small businesses, so there may be some difficulty in incentivizing and recruiting employers in the state to participate in a voluntary effort that could detract from their day-to-day operations and bottom line. While the motivations of the JEDx initiative and any parallel project in the state do ring true for employers, the logistical and practical challenges of implementing change could present barriers to adoption and implementation of an effort to improve federal and state reporting.

Based on capacity and reporting mechanism limitations with the use of third-party HR and payroll providers, the ideal employer profile to participate in a New Jersey pilot program is a large, single-state employer in New Jersey that does not use third-party HR or payroll services. This recommendation comes from the many noted challenges with small businesses' capacity to engage in a voluntary program in addition to the cited complexities of changing reporting for an employer that uses a third-party service for reporting. Additionally, it was noted that a single-state employer would be optimal for a voluntary pilot program because this allows for any changes to reporting of wage record data to be confined to New Jersey and will not affect other states' reporting processes. Researchers acknowledge that these present significant limitations to the pool of employers that would be optimal participants for a voluntary pilot program.

In addition, the state could consider other potential avenues to run a program to enhance wage record data collection and improve federal state reporting. Other avenues include, but are not limited to: making the additional wage record data points mandatory for all employers in the state, or engaging in a multi-state pilot program to expand the pool of potential employer participants that also have business operations in the collaborating pilot program states. If New Jersey were to engage with a multi-state pilot effort, it is possible that the benefits employers with multi-state operations accrue could alleviate the perceived challenges for reporting changes. In this way, it is in this multi-state pilot initiative where the most potential for employer cooperation could be found. This potential avenue for advancing the project to improve federal and state reporting should be further explored.

2. **The state must ensure that a vetted system is rolled out with devoted resources to support the effort if employers are to engage with it and derive value.**

While the employer value proposition resonates with the New Jersey employer community, practical and logistical challenges, and their associated costs, are at the forefront of the employer community's concerns. Employers strongly suggested that a vetted system proven and clearly demonstrated to be simpler, streamlined, and easier to use would be required for employers to engage with a voluntary initiative in this space. Employers drew a distinction between the theoretical benefits of this initiative and "how" it would work in practice as being starkly different, the latter of which would require significant attention from the state in advertisement and rollout of any changes to federal and state reporting systems. The emphasis on practical application and the logistics of change were underscored by a tension that appears to exist between the business community and government entities. Specifically, some employers referenced a general apprehension and distrust between the New Jersey business community and the state after the fallout from the COVID-19 pandemic's UI crisis[9] and voiced concerns about the possibility of additional government oversight and intervention. These noted challenges necessitate that the path forward for a pilot program or broader initiative to

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9   https://www.nj.com/coronavirus/2021/12/after-unemployment-woes-slammed-residents-during-covid-crisis-nj-and-feds-move-to-fix-system.html

improve federal and state reporting with streamlined and standardized reporting structures would require careful consideration, thorough vetting, and demonstrated capabilities to assuage employer concerns.

Moreover, employers noted that efforts to change reporting will likely be met with hesitation and skepticism unless the state provides clear directions and a timeline, and communicates success stories from other states engaged in similar initiatives. A strategic marketing and rollout strategy should also consider reporting timeline requirements (I.e., annual/quarterly submissions) and varying municipalities' reporting requirements, among other things, to ensure that any change instituted lessens reporting burden and streamlines current reporting operations. It was suggested by employers that this would be the evidence needed for employers to engage in a pilot program and feel more confident that they would derive value.

To ensure success for a pilot program or broader initiative to enhance wage record data elements and streamline reporting systems, significant state resources would need to be devoted to this initiative to engage with the business community, develop and vet a new reporting system, and roll out a voluntary program and/or operationalize a mandated change. This would require significant fiscal resources and would likely need champions within NJDOL, the New Jersey Department of the Treasury, and local New Jersey municipalities, to work collaboratively and ensure that all the necessary systems and relevant users are engaged in the process of change.

3. Reporting requirement changes will have to be made mandatory for all employers in the state.

Employers interviewed for this study were ambivalent about the possibility of a mandated participation for all employers, but agreed that it is necessary if the state decides to roll out efforts to change reporting. It was made clear that a voluntary or an opt-in engagement approach will not work for employers for numerous reasons, including but not limited to capacity constraints, businesses' priorities being their bottom line, lingering COVID-19-related retention issues, and limitations of altering reporting for businesses that use third-party HR

and payroll services. As previously noted, interviewees expressed that employers are "filled to the brim" with day-to-day business operations and would rather focus on the "cores" of their business. This is particularly relevant for small businesses that do not employ or use third-party HR/payroll services. For these reasons, mandating or requiring additional wage record data elements be reported via the passage of new legislation or regulation would potentially be a fruitful avenue for the state to explore.

In terms of packaging, given that a mandate could be perceived negatively by the employer community, more consideration is needed on how to sell these changes to employers and minimize the sentiments that this is more government intervention and oversight, and "one more thing that they (businesses) need to do." The careful rollout of any reporting changes was mentioned by multiple New Jersey employers, as there is a sensitivity to government-imposed change, which is perhaps more heightened after the struggles of the past few years with the COVID-19 pandemic and changes in the labor market. All relevant actors must be clear and on board in advertising and socializing change to the business community to ensure that the business community understands the vision of this undertaking and how there are tangible benefits for participating, beyond remaining in compliance with the law. It is evident that an initiative to improve federal and state reporting through streamlined, standardized, and enhanced wage record reporting could incur numerous benefits for job seekers, employers, and New Jersey as a whole. The logistical challenges should be carefully considered by the state as next steps are evaluated in the linkage to the JEDx initiative and New Jersey's own parallel project efforts.

4. If New Jersey participates in a pilot program (single-state or multi-state), multi-stakeholder (employers, state government agencies) buy-in and resource support would be required to make the pilot program investment worthwhile.

It must be acknowledged that changing existing legacy systems is no small task and modernization of any kind will be complex. The complexity derives from the technology that needs to be amended, but also ensuring

buy-in of various stakeholder entities that need to collaborate. The JEDx Systems Architecture Technical Workgroup draft report specifically states:[10]

> "The path to modernization must recognize that this is more than a technology problem. Achieving the JEDx vision also involves complex systems of organizational processes, legislative and governance considerations, and articulation of value propositions that incentivize change."

Organizational design, governance structures, and clear communication among all relevant stakeholder groups cannot be overlooked as critical factors in the path toward improving federal and state reporting in New Jersey.

Designing a new system with greater streamlined and standardized reporting mechanisms will need to offer simpler, easier, proven, and perhaps flexible ways to allow for modernization to fully take place within the many entities and systems that need to be involved in operationalizing change. The value derived from any modernization effort would likely be significant; however, such efforts would need to be prioritized, staffed, and funded accordingly, as to reap the most benefits for all relevant stakeholders in the state. As previously noted, many stakeholder groups will need to be invested in multi-system change to expand data collection priorities and/or update data collection systems. Relevant New Jersey stakeholders include, but are not limited to:

▶ Department of the Treasury, Division of Revenue and Enterprise Services;

▶ Department of the Treasury, Division of Taxation;

▶ New Jersey Motor Vehicle Commission;

▶ NJDOL, Office of Research and Information;

▶ NJDOL, Division of Unemployment Insurance;

▶ NJDOL, Division of Employer Accounts; and

▶ Local New Jersey municipalities and other downstream users.

Moreover, relevant systems include, but are not limited to:

▶ Axway (the current service provider for filling withholding returns and wage reporting in New Jersey),[11]

▶ LOOPS (Local Office Online Payment System), and

▶ DABS (Disability Automated Benefits System).[12]

Additionally, as previously noted, the choice to engage with the JEDx initiative as a single-state or a multi-state pilot program could expand the list of necessary collaborators. Through New Jersey employer interviews, engagement with the JEDx initiative Technical Workgroups and Steering Committee, and close partnership with NJDOL, researchers found that the path forward to streamline, standardize, and enhance wage record data collection and improve federal and state reporting will require extensive employer and other stakeholder buy-in and collaboration to reap the numerous potential benefits of enacting such change.

Topics for Further Research and Next Steps

As part of its ongoing support toward a pilot implementation, the Heldrich Center research team continues to provide research support to New Jersey in its role as a JEDx collaborator and state leader. To that end, Heldrich Center researchers have attended all JEDx Technical Workgroup and Steering Committee meetings and have conducted a review of all JEDx materials that have been produced to support pilot states. These materials include, but are not limited to, the following:

▶ JEDx Draft High-priority Use Cases with Related Activities, Preliminary Worker-specific Data Requirements, and Potential Product Examples;

▶ JEDx Proposed Data Priorities for Addressing High-priority Use Cases and Consolidation and Standardization Opportunities;

▶ JEDx Data Options Discussion Tool;

▶ Evaluation Criteria for Workgroup Data Recommendations and Pilot Project Designs;

▶ Data and Applications Technical Workgroup Report;

▶ JEDx System Architecture Workgroup Report;

▶ JEDx Landscape Analysis Data - New Jersey New Hire Reporting; and

▶ JEDx Landscape Analysis Data - New Jersey Unemployment Insurance.

These materials lay out the JEDx vision and aim to clarify the path forward for states considering participation in a pilot program, using the application programming interface developed by the JEDx team. The JEDx team has plans to move forward with the pilot program rollout for seven possible participating states in fall/winter 2022. As such, New Jersey is currently weighing the decision to launch a state pilot in partnership with the U.S. Chamber of Commerce Foundation's JEDx team to improve and streamline how New Jersey businesses report their wage records to the federal and state government.

To help prepare New Jersey for the launch and implementation of the pilot, and to pave the path forward for a smooth and inclusive rollout, the Heldrich Center offers the following areas of further research for the state to consider to ensure it is prepared and informed about the challenges, concerns, and lessons to derive from a statewide pilot:

▶ Garner employer feedback on streamlining multiple collections,

▶ Continue engagement with employers about potential incentives and motivators,

▶ Investigate interstate and intrastate employer participation in a pilot,

▶ Explore and monitor other pilot state activities and program rollout plans,

▶ Identify a tiered model rollout approach for a pilot program, and

▶ Explore data definitions standardization.

Conclusion

The Heldrich Center's research study, Improving Federal and State Reporting in New Jersey, examined the New Jersey employer perspective for undertaking efforts to streamline and standardize wage record data collection, in alignment with the goals of the U.S. Chamber of Commerce Foundation's JEDx initiative. Researchers were able to coalesce a large group of employers and other stakeholders for a virtual Improving Federal and State Reporting State Advisory Panel convening, participate in JEDx-hosted Technical Workgroups, and conduct five in-depth follow-up interviews with relevant New Jersey employers. Through these efforts, researchers were able to assess the New Jersey employer community's willingness in the adoption of a JEDx pilot program in the state, as well as explore their general feelings and concerns about streamlining and standardizing wage record reporting on a broader scale. Moreover, researchers examined New Jersey employers' views on the potential challenges and reporting burden changes to enhancing wage record data collection and streamlining and standardizing reporting in New Jersey. Researchers collected the New Jersey employer community's priorities for an enhanced wage record data collection, and the data points and use cases of most interest.

The goal of the study more broadly was to evaluate and understand the viability of potential new approaches to leverage emerging technologies and data standards to better align education, workforce, and credentialing data with the needs of the post-pandemic economy. The potential application of standardized and streamlined wage record data collection for better labor market information are tremendous, as they could provide a strong empirical basis for identifying career pathways, wage trends (potential for income growth), and emerging or shrinking employment opportunities across industries. Moreover, the potential benefits for employers directly could incentivize participation and

adoption in changes to current wage record reporting if the state is able to alleviate employer concerns and overcome the logistical challenges previously noted. Mandating change may become necessary to more effectively operationalize the adoption of a new, streamlined, and expanded wage record collection system, and for employers to reap the benefits of change in the short and long term.

As previously noted, the JEDx initiative operationalization of a pilot program is slated to take place in the fall and winter of 2022/2023. The Heldrich Center team will continue to be involved in the JEDx initiative to help inform NJDOL in its decision to engage in a pilot program. The Heldrich Center will continue to support NJDOL in its efforts to streamline and standardize wage record data collection to improve federal and state reporting for employers in New Jersey.

Appendix A.1: 2021 Jobs and Employment Data Exchange (JEDx) Advisory Committee Participants

- ADP
- Advanced Distributed Learning (ADL) Initiative
- America Achieves
- Burning Glass Technologies
- CalChamber
- California Employment Development Department
- Canadian Chamber of Commerce
- Coleridge Initiative
- Cornell University-ILR
- Data Foundation
- DirectEmployers Association
- Emsi
- Florida Department of Economic Opportunity
- Greater Houston Partnership
- HR Open Standards Consortium (HR Open)
- IBM
- IMS Global Learning Consortium
- Indeed
- Jobvite Inc.
- Jobs for the Future Labs (JFF Labs)
- Kentucky Chamber of Commerce
- LinkedIn
- Lumina Foundation
- McCourt School of Public Policy, Georgetown University

- Michigan Department of Technology, Management, and Budget
- Midwest Urban Strategies
- National Association of State Workforce Agencies (NASWA)
- National Student Clearinghouse
- New Jersey Department of Labor and Workforce Development
- New York University (NYU)
- North Dakota Information Technology Department
- One Stop Workforce Solutions
- Research Improving People's Lives (RIPL)
- SOLID, LLC
- South Carolina Department of Commerce
- Texas Workforce Commission
- U.S. Bureau of Labor Statistics
- U.S. Census Bureau
- U.S. Chamber of Commerce
- U.S. Department of Commerce
- U.S. Department of Defense
- U.S. Department of Education
- U.S. Department of Labor
- Washington State Employment Security Department
- Workday

Appendix A.2: Enhanced Wage Record Data Elements by State

State/U.S. Territories	Year Initiated	Enhanced Data Elements Collected
Alaska	Late 1980s	▶ SOC Code ▶ Geographic Code
Iowa	2000/2010	▶ Bonuses ▶ Reporting unit (employee's principal workplace)
Louisiana	2015	▶ Hourly pay rate ▶ SOC code/job title
Minnesota	1995	▶ Hours worked ▶ Principal worksite number
New Jersey	1984	▶ Base weeks (number of weeks in quarter the individual earned over $140)
Ohio	1987	▶ Hours worked
Oregon	1995	▶ Hours worked
Pennsylvania	1983	▶ Weeks worked
Rhode Island	2008	▶ Hours worked ▶ Weeks worked
Vermont	2001	▶ Pay type (salary/hourly) ▶ Hourly pay rate ▶ Gender
Virgin Islands	2005	▶ Job title ▶ Rate of pay ▶ Hours worked ▶ Worksite street address, ZIP, county ▶ Gender ▶ Age
Washington	1977	▶ Total hours worked in quarter
Wyoming	New secure cloud-based UI Tax system initiated by TCS in 2019**	▶ Hours worked ▶ Tips ▶ Date of hire (collected as part of joint efforts with Worker's Compensation program)

Source: Extracted from Administrative Wage Record Enhancement Study Group Report, 2015

**Source: Tax Consultancy Services

Appendix B.1: New Jersey Department of Human Services Landscape Analysis – New Jersey New Hire Reporting

(in Addition to Collected Data Elements)

Data	Example
Name of Federal or State Agency	Department of Human Services
Name of Agency Department/Division	Department of Human Services / New Jersey Child Support
Name of Data Collection Program	Department of Human Services / New Jersey Child Support / New Jersey Child Support Employer Services (NJCSESP)
Data Collection Program Description	Federal and State law requires employers to report newly hired and re-hired employees in New Jersey to the New Jersey Child Support Employer Services Portal. Employers must report re-hires, or employees who return to work after 60 days of being laid off, furloughed, separated, granted a leave without pay or terminated from employment. Employers must also report re-called employees, anyone who remains on the payroll during a break in service or gap in pay and then returns to work. This includes teachers, substitutes, seasonal workers, etc.

Under New Jersey Statutes Annotated 2A:17-56.61 and the Federal Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) all public, private, non-profit, and government employers are required to report the following individuals:

▶ **New employees:** Employers must report all employees who reside or work in the State of New Jersey to whom the employer anticipates paying earnings. Employees must be reported even if they work only one day and are terminated (prior to the employer fulfilling the new hire reporting requirement).

▶ **Re-hires or re-called employees:** Employers must report re-hires, or employees who return to work after being laid off, furloughed, separated, granted a leave without pay, or terminated from employment. Employers must also report any employee who remains on the payroll during a break in service or gap in pay, and then returns to work. This includes teachers, substitutes, seasonal workers, etc.

▶ **Temporary employees:** Temporary agencies are responsible for reporting any employee who they hire to report for an assignment. Employees need to be reported only once; they do not need to be re-reported each time they report to a new client. They do need to be reported as a re-hire if the worker has a break in service or gap in wages from your company.

▶ **Contracted entities:** State law requires that an independent contractor transacting business in New Jersey be reported as a new hire.

Payroll companies who contract with employers to report New Hire information will be held to the same standards as individual employers.

Data	Example
Collection Method	Employers can use the New Jersey Child Support Employer Services Portal to report new hires online or to securely transfer files. Employers can also utilize third party providers to report new hires.

Electronic

- ▶ Interactive Internet Reporting
- ▶ Secure File Upload
- ▶ Electronic File Transfer Protocol (FTP)
- ▶ Secure Account and Confirmation Receipt

Non-Electronic

- ▶ New Hire Reporting Form
- ▶ Printed List
- ▶ W-4 Form (add business name, business address, FEIN, employee's date of birth and employee's date of hire)

Collection Frequency	Newly hired and/or rehired employees must be reported within 20 days of their hire date, whether they are considered full-time, part-time, or temporary employees.
Collection Reporting Options/Format(s)	Employers can report new hires online through interactive internet reporting or by securely transferring files. Additionally, new hire information can be added to the W-4 form. Employers can also utilize third party providers to report new hires.

Multistate Employers

Multistate employers have the option of designating one state to which they will report all new hires. Employers who choose this option must provide written notification to the Secretary of the U.S. Department of Health and Human Services (DHHS) of their intention to do so. Employers may contact the Federal Office of Child Support Enforcement (OCSE) at 410-277-9470 to request a form or download a form online at www.acf.hhs.gov.

Forms for New Hire Reporting

- ▶ New Hire Form (PDF)
- ▶ W-4 Form (IRS)
- ▶ Multistate Employer Registration

File Transfer Options

File Formats

- ▶ Fixed-Width Text Format (Recommended)
- ▶ Delimited Text File
- ▶ Excel File

Encryption and Compression

- ▶ Encrypted Files
  - ▶ Encryption is usually unnecessary when transferring files using a secure method
  - ▶ Files can be encrypted with PGP or GnuPG. (NJCSESP public key)

- ▶ Compressed Files
  - ▶ Compression is usually unnecessary for all but the largest of files.
  - ▶ Only non-encrypted ZIP files are accepted.

Data	Example
Collection Reporting Options/Format(s)	**File Transfer Methods**

File Transfer Methods

- ▶ **Secure Web Upload** – simplest option, requires no special software (login)

- ▶ **SSH File Transfer Protocol (SFTP)** – best for uploading many files, very large files, or automating file transfer
  - ▶ Requires special client software, including free programs (configuration settings provided here):
    - ▶ FileZilla (Mac, Windows, Linux)
    - ▶ WinSCP (Windows)
    - ▶ PuTTY (Windows)
    - ▶ Cyberduck (Mac)
    - ▶ OpenSSH (UNIX, Mac, Windows, etc.)

- ▶ Public Key Authentication – available for advanced users wishing to automate an SFTP-based transfer in an environment where supplying a password interactively is impractical

- ▶ The key may be either RSA or DSA, but must be in one of the following formats: OpenSSH, PEM, PKCS8 or RFC4716.

Information that has to be reported

Employer Information

- ▶ Business Name
- ▶ Business Address
- ▶ Federal Employer Identification Number (FEIN)

Employee Information

- ▶ First and Last Name
- ▶ Mailing Address
- ▶ Social Security Number
- ▶ Date of Birth
- ▶ Date of Hire

Third Party Service Provider

If an employer utilizes a Third Party Provider, the Account Administrator (Primary User) can designate access for the Third Party Provider to perform appropriate functions. When an Employer requests a Third-Party work on their behalf, email notifications will be sent to the identified third party representative providing notification and instruction. Employers who use a third-party vendor to report new hires, are asked to verify that the vendor is reporting accurate information on their behalf.

Estimated Number of Employers Reporting	250,000 (United States Census Bureau: Total employer establishments, 2020)
Data access/sharing	n/a
System Developer and Vendor (if applicable)	None.

Data	Example
Announced Changes	None.
Website Link	Department of Human Services / New Jersey Child Support / New Jersey Child Support Employer Services
Contact Information	**New Jersey New Hire Directory** P.O. Box 4654 Trenton, NJ 08650-4654 Tel. 877-654-4737 Fax 800-304-4901 **New Jersey Child Support Employer Services Portal** P.O. Box 4655 Trenton, NJ 08650 Tel. (877) 654-4737 Fax (609) 631-0336

Appendix B.2: New Jersey Department of the Treasury and New Jersey Department of Labor and Workforce Development Landscape Analysis - New Jersey Unemployment Insurance

(in Addition to Collected Data Elements)

Data	Example
Name of Federal or State Agency	▶ Department of Treasury ▶ Department of Labor & Workforce Development
Name of Agency Department/Division	Department of Treasury (handles processing of electronically submitted quarterly wage reports) ▶ Division of Revenue and Enterprise Services ▶ Division of Taxation Department of Labor & Workforce Development (handles UI claims, assists employers with wage reporting) ▶ Division of Unemployment Insurance ▶ Division of Employer Accounts
Name of Data Collection Program	Department of Treasury / Division of Taxation / Employer Withholding Tax - Reporting and Remitting
Data Collection Program Description	Unemployment Insurance (UI) is a program that gives financial support to people who lose their jobs through no fault of their own. To qualify for Unemployment Insurance benefits, one must meet all of the eligibility requirements of the New Jersey Unemployment Compensation Law. Those who meet the requirements may receive benefits for up to 26 weeks during a one-year period. The money to pay these benefits comes from a payroll tax paid by employers and workers. The benefits partially replace wages to help unemployed workers meet their financial obligations while looking for work. The Department of Treasury's (DOT) Division of Revenue and Enterprise Services (DORES) collects the data for the Department of Labor & Workforce Development (DOL)

Data	Example
Collection Method	**UI Wage Reporting Data Flow – Collection**

▸ Employers complete the WR-30 (Employer Report of Wages Paid) form and submit it through a website managed by a third-party vendor (Axway)

  ▸ Secure transport allows DOT to give the payroll companies user IDs and mailboxes, where they drop the files in

    ▸ Some submissions are automated and some are manual

    ▸ Bulk filing option is available for larger employers with 100+ employees

    ▸ Web filing option is available for smaller employers

      ▸ The DORES maintains fillable NJ-927 (Employer's Combined Withholding and Insurance Contribution returns) and WR-30 forms on its website. Once the employer provides their credentials, they're able to access the forms, input the information and submit it that way.

    ▸ WR-30 form has been a text file for over 20 yrs (not XML)

    ▸ Stopped accepting paper forms in 2009

  ▸ DOT doesn't perform any transformations of the submitted data

▸ For the corresponding payment file, the process is the same except the payments go two separate ways because that form is combined with a form for the Division of Taxation for gross income tax and the DOL for UI/DI (unemployment insurance/disability insurance)

  ▸ WR-30 is the wage report, which comes only to the DOL

    ▸ Form WR-30 (Employer Report of Wages Paid) is used to report contributions for unemployment insurance, healthcare subsidy, workforce development, disability insurance, and family leave

  ▸ NJ-927 is the quarterly contributions report that's used by both the DOL and by the DOT

Data	Example
Collection Method	**UI Wage Reporting Data Flow – Transfer / Storage**

- Once the data are collected by the DOT, they are sent to the DOL
- Data are loaded into an Oracle database on the DOL server
- For the wage reports, there's another transfer of the data, which go into the Local Office Online Payment System (LOOPS) a system used by the local offices for unemployment insurance
    - LOOPS is a mainframe UI payment system
    - From the time the data reaches the DOL system, there is another 1-2 day lag before the data reach end users

- Besides the UI, New Jersey also has temporary disability insurance and family leave insurance
    - There is a separate temporary disability database which supports an automated claims processing system, the Disability Automated Benefits System (DABS)

Note: System environment description [as of 2004], including LOOPS and DABS, can be found in this RFP document ("Design, Development, and Implementation of NJ SUCCESS for Labor and Workforce Development")

UI Wage Reporting Data Transformation/Validation

- Transmitted UI data include a name, SSN, the quarterly wages, and a number of base weeks that were earned in a quarter
- DOL system checks the data when they are received from the DOT and the DOL server attempts to upload them into the Employee Tax system
- On the DOT side, at the file submission step, a file can be rejected as a whole or individual records may fail On the DOL side, additional checks are performed against the actual database
- On the DOL side, additional checks are performed against the actual database
- Another process DOT has is called the rate exchange where payroll companies have to send the DOT information on their employers and employees

Data	Example
Collection Method	▶ The DOT-DORES provides this information to the DOL who runs a process on their end that provides the [UI tax] rates [for associated clients], sends it back to DORES, and then DORES provides it to the payroll companies
Collection Frequency	Quarterly Employer Report of Wages Paid (WR-30).
Collection Reporting Options/Format(s)	Both Treasury divisions, Taxation and Revenue and Enterprise Services, have separate pages that describe the two main filing options for WR-30.

Division of Revenue and Enterprise Services – E-filing Services for Tax Professionals, Payroll Companies and Software Firms

The Division of Revenue and Enterprise Services offers various filing Services for professionals and practitioners, including software developers, tax service firms, tax preparers and payroll companies. The services include Federal-State Modernized e-File (MeF) for personal and business taxes and secure bulk filing for: withholding and wage reporting returns; withholding returns and wage reporting; informational returns NJ-W3/NJ-W3-G/NJ-W3-UNC (Income Tax Reconciliation forms), W2/W2G, and 1099 forms; and healthcare-related forms 1095-A, 1094-B, 1094-C, 1095-B and 1095-C.

The Division processes electronically-submitted forms WR-30 (Employer Report of Wages Paid) and NJ-927/NJ-927W/NJ-927H (Employer's Combined Withholding and Insurance Contribution returns). To request the specifications for filing forms electronically, contact the Division by e-mail, or write to to: NJ Division of Revenue and Enterprise Services, E-File/E-Pay Unit, PO Box 191, Trenton, NJ 08646-0191.

▶ All businesses must file WR-30 reports electronically.
▶ Both Internet and Secure Electronic Bulk Filing options are available for employers and professionals.

Division of Taxation – Employer Payroll Tax Filing and Reporting Options

Businesses can file WR-30 reports via

▶ File or Pay online
▶ Bulk E-Filing Service for Tax Professionals, Payroll Companies and Software Firms (Axway)
▶ [Businesses] must register for the bulk filing option and submit files in accordance with the State's file layout format (registration form; layout).
   ▶ The form and layout can also be obtained by writing to the State's current service provider, Axway, at AxWay.Admin@treas.nj.gov.
   ▶ After registering for the Secure Electronic Bulk Filing option, businesses send a test file using the required file format layout to Axway. After receiving approval of the test file, businesses can send live files through the secure bulk filing service.

Data	Example
Estimated Number of Employers Reporting	About 9,000 active employers file WR-30 reports on a quarterly basis

▶ Most of the employers use the bulk filing option because they use payroll companies like ADP which file in bulk
  - ▶ One bulk file contains data for multiple employers
  - ▶ Some of the payroll companies file over 50,000 returns in one file

▶ Users of the bulk file system are authenticated to get into the system to upload a file through a vetted process
  - ▶ It's a simple application for getting the file to the DOT and it's certified to comply with IRS requirements for Safeguards for Protecting Federal Tax Returns and Return Information outlined in Publication 1075 (Tax Information Security Guidelines For Federal, State and Local Agencies)

Data access/sharing

UI data access restrictions

▶ The only copies of the wage data are in the Employer Accounts Tax System and the Local Office Online Payment System (LOOPS) system
▶ Data access is strictly protected
  - ▶ Only designated DOL staff have access to WR-30 information as it contains SSNs
  - ▶ DOL also handles data requests in response to official inquiries, such as requests from employers or FOIA requests
    - ▶ DOL follows established privacy protection rules when responding to such inquiries

UI data uses include: Internal (policy and program administration), analytics, and research

▶ DOL uses wage data for DOL programs in cooperation with the U.S. Bureau of Labor Statistics
▶ DOL also uses wage records for internal purposes (e.g., for projecting future trends and building UI trust fund model)
▶ On the research and analytics side, DOL fulfills research requests that come directly to DOL
  - ▶ DOL uses data sharing agreements as an ad hoc when researchers make a request
    - ▶ For example US DOL re-entry program: US DOL would send NJ DOL a file to match, but they never gain access to the NJ DOL system

Data	Example
Data access/sharing	DOL designees are also on a steering committee of the New Jersey Education to Earnings Data System (NJEEDS), which is a centralized longitudinal data system developed to improve governance efforts, policymaking, and the performance of education and workforce initiatives.

- DOL also has a longstanding research agreement with partners at Rutgers University's Heldrich Center to access quarterly wage records
  - The University's has two data systems for wage data (de-identified and identified)
    - Both comply with Federal Information Security Modernization Act (FISMA)'s requirements for moderate-risk systems
    - DOL owns all the data in these systems
  - Rutgers University's initiative uses UI data from NJ DOL and pours the data into an interagency system
    - The University gets copies of data six months after the data have been processed
    - Data used for research include more than just UI, for example, vocational rehabilitation, job locations, and other related info
    - In the de-identified system, data are stripped of identifiers like SSNs
      - Researchers are only allowed to access de-identified data
    - The identified data system uses hashed IDs and is encrypted for safety and security
      - Identified data are retained for crosswalk purposes where there is a need to link SSNs to other data
  - Rutgers and the state of NJ participate in a multi-state initiative called https://coleridgeinitiative.org/ that seeks to improve the effective use of combined education and labor data, which are matched across the state lines.

Data	Example
System Developer and Vendor (if applicable)	Axway services are used for bulk e-filing.
Announced Changes	**UI System – Modernization plans**

- The unemployment system is 40 plus years old
- Currently looking at UI and employer accounts modernization
  - Would like to eliminate the step involved with transferring the data from the Employer Accounts Tax System over to the Local Office Online Payment System (LOOPS) system
- DOL is also building a data lake on Amazon workspace

Data	Example
Website Link	Department of Treasury / Division of Taxation / Employer Withholding Tax – Reporting and Remitting
Contact Information	**CONTACT—DEPARTMENT OF THE TREASURY**

CONTACT—DEPARTMENT OF THE TREASURY

Department of the Treasury

Department of the Treasury
PO Box 002
Trenton, NJ 08625-0002
609-292-6748

Division of Revenue and Enterprise Services
Department of the Treasury
Division of Revenue and Enterprise Services
PO Box 628
Trenton, NJ 08625-0628
E-file coordinator: Anthony.Johnson@treas.nj.gov

Division of Taxation
Department of the Treasury
Division of Taxation
PO Box 281
Trenton, NJ 08695-0281

Questions about WR-30 e-submissions

For additional information or questions, call (609) 292-8653, FAX (609) 943-6832 or e-mail: AxwayAdmin@treas.nj.gov

Data	Example
Contact Information	**CONTACT—DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT**

Department of Labor & Workforce Development

State of New Jersey
Department of Labor & Workforce Development
P.O. Box 110
Trenton, NJ 08625-0110

Division of Employer Accounts (wage reporting inquiries)
Division of Employer Accounts
New Jersey Department of Labor
PO Box 932
Trenton, NJ 08695
Tel. 609-633-6400
Fax 609-292-2151

Division of Unemployment Insurance
Division of Unemployment Insurance
Customer Service Office
New Jersey Department of Labor
PO Box 058
Trenton, NJ 08625-0058

Appendix C: Improving Federal and State Reporting State Advisory Panel Convening Invitation from NJDOL Commissioner Robert Asaro-Angelo

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lieutenant Governor

State of New Jersey

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
P.O. BOX 110, TRENTON, NEW JERSEY 08625-0110

ROBERT ASARO-ANGELO
Commissioner

May 31, 2022

Dear Valued Partner:

The New Jersey Department of Labor and Workforce Development (NJDOL) is piloting a new initiative under the national Jobs and Employment Data Exchange (JEDx) initiative, Improving Federal and State Reporting, with support from John J. Heldrich Center for Workforce Development at Rutgers, The State University of New Jersey. JEDx was launched by the U.S. Chamber of Commerce to explore a public-private approach for **streamlined employer reporting to state and federal agencies**.

I am pleased to invite you to participate on a state advisory panel for this New Jersey initiative. The panel will include state agency representatives, employers, professional employer organizations, HR technology service providers, and other key stakeholders. At this inaugural meeting, we would like to discuss the following topics:

- **Benefits to employers** of streamlining and standardizing the reports required by government agencies;
- **Any challenges** in changing employer reporting practices, including privacy concerns; and
- **The path forward** for a New Jersey pilot.

Additional information about the convening is attached, including a preliminary meeting agenda. Background information on the U.S. Chamber of Commerce initiative is available in a summary report on their Foundation website.

Please join me in this virtual convening on Thursday, June 16, 2022 from 1:00 pm to 2:30 pm via Zoom. (Zoom credentials will be sent after registration.) Participation in this stakeholder convening is by *invitation;* if you are unable to attend, a designee is welcome. **Please RSVP before June 10, 2022** by registering here. If you have any questions about this convening, please contact jedxnj@ejb.rutgers.edu.

We value your input as a key contributor to our state's economy and are grateful for your participation. We look forward to seeing you on June 16.

Sincerely,

Robert Asaro-Angelo
Commissioner
New Jersey Department of Labor and Workforce Development

"Opportunity. Stability. Dignity."
ROBERT ASARO-ANGELO
COMMISSIONER
New Jersey is an Equal Opportunity Employer
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AD-18B (2/20)

Appendix D: Improving Federal and State Reporting State Advisory Panel Convening PowerPoint Presentation

Today's Discussion Goals

01
Identify benefits to employers of streamlining and standardizing the reports required by government agencies

02
Identify any challenges in changing employer reporting practices, including privacy concerns

03
Chart the path forward for a New Jersey pilot

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Overview of Jobs and Employment Data Exchange (JEDx)

- **The JEDx approach – a public-private, standards-based approach for consistent sharing and using of data on jobs and employment**

- **Primary project objectives**
  - Reduce federal and state reporting costs for employers and government agencies
  - Improve data quality and timeliness
  - Provide better data for public and private workforce analytics and program administration applications

- **JEDx Founding Partner states** – AR, CO, KY, TX, CA, FL, NJ

Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Overview of the Current Situation

- Data not comparable across jurisdictions and collections
- Burden on employers to submit many customized, specialized reports
- Higher-than-necessary employer reporting and government collection costs
- Important data not available
- Fragmented access to data
- Less-than-optimal decision making

Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Where We Are Now – Single-State, Single-Program View
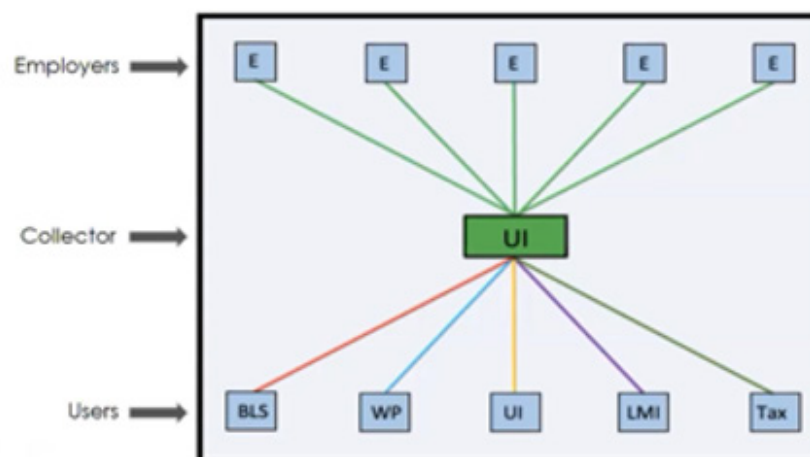
Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Where We Are Now – Single-State, Single-Program View
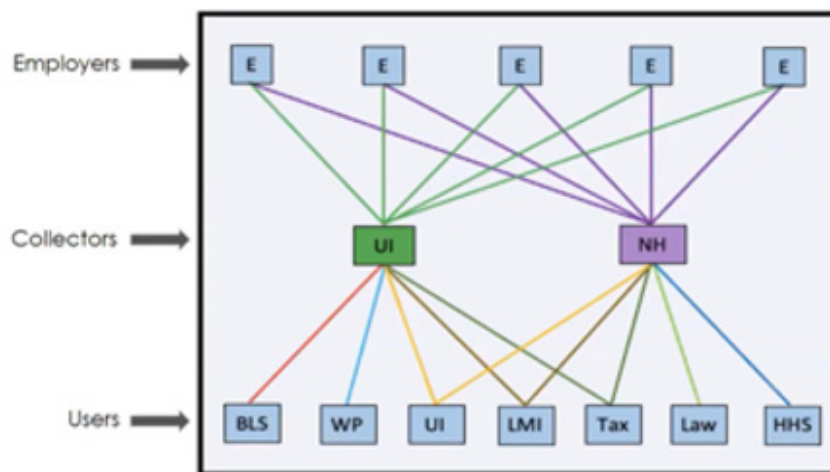
Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Where We Are Now – Single-State, Multi-Program View
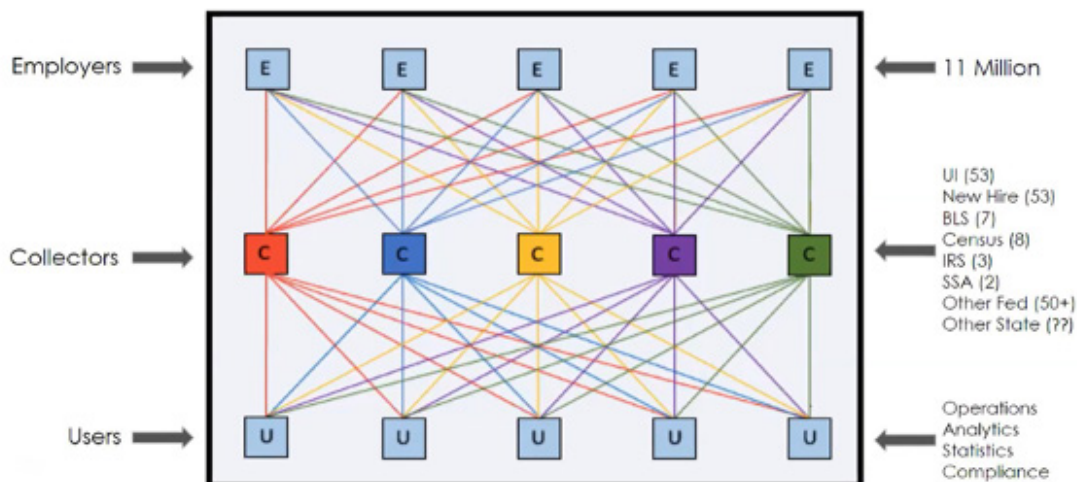
Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Where are we now: Key Characteristics

- **Fragmented**— Many jurisdictions, many systems, disparate objectives
- **Inconsistent** — Varied data elements, definitions, formats, levels of detail
- **Inefficient** — Redundancies, old technologies, customization needed, labor intensive
- **Insufficient** — Lacking important data, surveys subject to errors and non-response, large-area bias
- **Siloed** — Access restricted, collaboration and sharing limited, not synchronized
- **Untimely** — Some data not available for months or years

Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Vision of the Future

Ability to better serve stakeholders objectives at reduced cost through:

- Public/private collaboration
- Common reporting systems design
- Universal reporting
- Fewer, more comprehensive reports

- Expanded content
- Consistent definitions
- More granular data
- Increased frequency
- Improved access

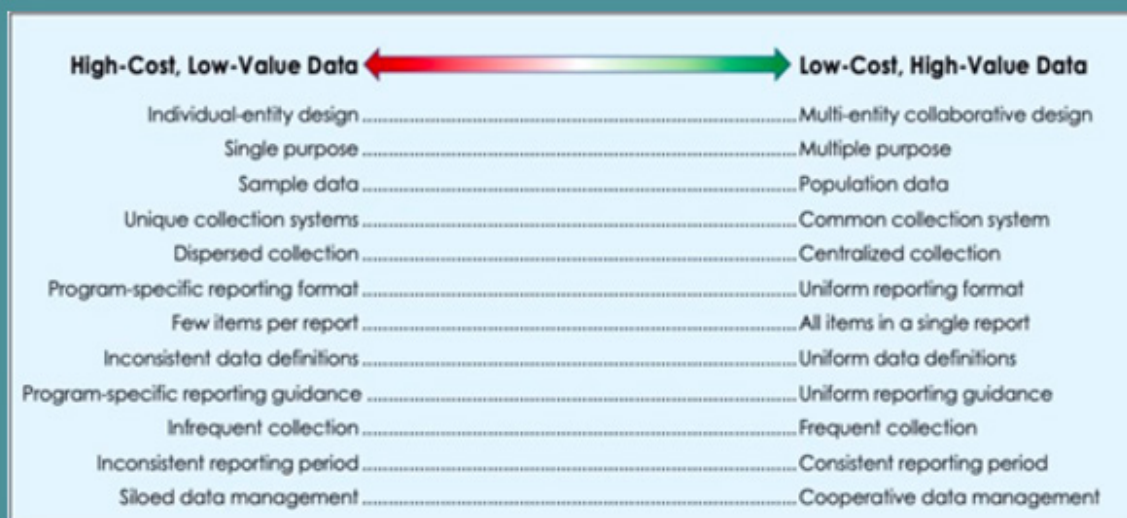Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Vision of the Future: Higher Value at Lower Cost

High-Cost, Low-Value Data ⟵ ⟶ Low-Cost, High-Value Data	
Individual-entity design	Multi-entity collaborative design
Single purpose	Multiple purpose
Sample data	Population data
Unique collection systems	Common collection system
Dispersed collection	Centralized collection
Program-specific reporting format	Uniform reporting format
Few items per report	All items in a single report
Inconsistent data definitions	Uniform data definitions
Program-specific reporting guidance	Uniform reporting guidance
Infrequent collection	Frequent collection
Inconsistent reporting period	Consistent reporting period
Siloed data management	Cooperative data management

Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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JEDx Technical Workgroups

Data and Applications Priorities Workgroup

- What are the major public and private data needs and priorities for the highest value use cases and applications?
- How do we improve the consistency in data definitions and explore opportunities for consolidating reporting to reduce costs?

System Architecture Workgroup

- How can we use public-private standards and technology to reduce reporting costs and improve access and use of data while protecting privacy?

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Expanded Data Collection Under Consideration

In New Jersey, there are seven additional wage record data elements currently under consideration –

- Job title

- Occupation

- Gender

- Race

- Age

- Hours Worked

- Geography of Work Location

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Stakeholders' Data Collection Interests

Businesses
- Improved Analytics
- Reduced government reporting costs
- Simplified/standardized government reporting

Economic Development Organizations
- Assessing value of incentive programs
- Identifying business support needs
- Promoting strengths of local markets

Employment/Workforce Agencies
- Better career guidance information
- More complete job opportunities and placement data

Organized Labor
- Informing contract negotiations
- Assisting members with skill development

Government Agencies
- Improving program operations
- Evidence-based policy making
- Addressing social inequities
- Reducing operational costs
- Reducing fraud

Education/Training Providers
- Aligning programs with market needs
- Marketing
- Program evaluation

General Public
- Informing career and education decisions
- Reducing taxpayer costs
- Working in a more equitable labor market

Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Stakeholders' Data Collection Interests

Businesses
- Improved Analytics
- Reduced government reporting costs
- Simplified/standardized government reporting

Economic Development Organizations
- Assessing value of incentive programs
- Identifying business support needs
- Promoting strengths of local markets

Employment/Workforce Agencies
- Better career guidance information
- More complete job opportunities and placement data

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- Addressing social inequities
- Reducing operational costs
- Reducing fraud

Education/Training Providers
- Aligning programs with market needs
- Marketing
- Program evaluation

General Public
- Informing career and education decisions
- Reducing taxpayer costs
- Working in a more equitable labor market

Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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Employer Value Proposition

Employers would have access to more real-time feedback of local market trends and the characteristics of the workforce. This information could help employers:

Make informed decisions on where to locate or expand their business	Understand the average pay for positions they employ within their company and compete effectively and inclusively	Get a better sense of the available job seekers and their skills in their area	Project employment growth and monitor local, regional, statewide economic and industry trends
Improve HR practices, articulating skills in demand, and crafting more accurate job descriptions that reflect job positions	Improve employee recruitment and retention	Incorporate more inclusive hiring practices	

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Theory of Action

- **A coordinated approach will make data reporting/acquisition simpler, faster, and more accurate for all stakeholders**

- **Principles to consider**
  - Automation and data interoperability could make it easier for all stakeholders to provide and get the jobs and employment data needed
  - More accurate data provides better policy and business decisions
  - More timely data = better utility
  - Submit once, use many

- **How can we get there? What comes next?**

Source: Jobs and Employment Data Exchange (JEDx), US Chamber of Commerce

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BREAKOUT SESSIONS

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Discussion: Motivations & Benefits

- Of the use cases presented, what resonates the most and why?

- What high-priority user applications can be addressed by the recommended data collection?

- What are additional high-priority employer use cases and what additional data elements should be collected?

- What are the major benefits of this effort for New Jersey?

- What matters to you, as employers, employer representatives, professional employer organizations, HR technology service providers, and other key stakeholders?

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Discussion: Data Collection Issues

- What is it about the current reporting system that employers value and why?

- What would be the "must haves" and "nice to haves" in a streamlined and standardized reporting system?

- Which data collection systems can be consolidated?

- On what schedule should these data be collected?

- What are potential implementation issues and costs and logistical details that the state should pay attention to?

- What are potential privacy issues that may arise?

- What strategies can the state implement to use data standards for establishing common enhanced wage record reporting?

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BREAKOUT SESSION REPORT OUT

New Jersey Pilot Program

New Jersey Pilot Program –

• What could the state do to incentivize employer participation in the pilot program?

• What can be done to increase the likelihood of successful pilot program implementation?

• Which data elements could be collected in pilot projects to create the most value at the lowest cost?

Wrap Up & Next Steps

Charging Orders for Next Steps → Heldrich Center research efforts – interviews and focus group requests → Summer 2022 Convening #2 → Pilot program decision – September 2022

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THANK YOU

Thank you for your participation!

If you have any questions, please reach out to jedxnj@ejb.Rutgers.edu

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Appendix E: Improving Federal and State Reporting State Advisory Panel Convening Agenda

June 16, 2022, 1:00 p.m. to 2:30 p.m. EST

Discussion Objectives

- Identify benefits to employers of streamlining and standardizing the reports required by government agencies;
- Identify any challenges in changing employer reporting practices, including privacy concerns; and
- Chart the path forward for a New Jersey pilot.

Time	Session
20 minutes	***Welcome and Overview***

- Introductions - Dr. Carl Van Horn & NJDOL Commissioner Rob Asaro-Angelo
- Discussion of goals and anticipated outcomes of the overall pilot project and today's meeting
- Overview of Jobs and Employment Data Exchange (JEDx) - Jason Tyszko & Dr. Bob Sheets, U.S. Chamber of Commerce Foundation

50 minutes	***Breakout Groups and Discussion Topics***

Participants will breakout into two assigned small groups and discuss the following two topics for 25 minutes each:

Motivations/Benefits and Logistics/Privacy Concerns

- Motivations & Benefits - facilitated by Jason Tyszko

  - Of the use cases presented, what resonates the most and why
  - What high-priority user applications can be addressed by the recommended data collection?
  - What are additional high-priority employer use cases and what additional data elements should be collected?
  - What are the major benefits of this effort for New Jersey?
  - What matters to you, as employers, employer representatives, professional employer organizations, HR technology service providers, and other key stakeholders?

- Data Collection Issues - facilitated by Bob Sheets

  - What is it about the current reporting system that employers value and why?
  - What would be the "must haves" and "nice to haves" in a streamlined and standardized reporting system?
  - Which data collection systems can be consolidated?
  - On what schedule should these data be collected?
  - What are potential implementation issues and costs and logistical details that the state should pay attention to?
  - What are potential privacy issues that may arise?
  - What strategies can the state implement to use data standards for establishing common enhanced wage record reporting?

20 minutes	***Wrap-up and Next Steps***

- Breakout Session Report Out - Participants will come back to the larger group and share
- Discussion of a New Jersey Pilot Program
- Charging orders for next steps

Appendix F: Improving Federal and State Reporting State Advisory Panel Convening Summary

Background

The U.S. Chamber of Commerce Foundation and the T3 Innovation Network's Jobs and Employment Data Exchange (JEDx) initiative have undertaken the task of modernizing America's workforce data, by first focusing on the jobs and employment data that employers and human resources (HR) technology service providers report to federal and state governments. The JEDx initiative aims to reduce employer reporting burden by examining how data standards could be leveraged in order to improve the process of how employers report and share information for federal and state data collections. Moreover, JEDx proposes that leveraged data standards could shed light on critical information such as how employers organize and share information about jobs and workers, thereby improving the quality and value of the data, for both the public and private sector. In this way, access to more valuable data could drive a wide variety of talent analytics that could be used to improve government services and investments, among other potential uses.

In collaboration with the New Jersey Department of Labor and Workforce Development (NJDOL), researchers at the John J. Heldrich Center for Workforce Development at Rutgers University have been tasked with conducting a research study for the adoption of a JEDx pilot program in New Jersey. The goal of the Heldrich Center study is to support NJDOL in determining the viability of adopting a new approach to collecting wage data by participating in a national pilot that leverages emerging technologies and data standards to streamline employer reporting and potentially better align education, workforce, and credentialing data with public and private applications.

Building off of the JEDx initiative, the Heldrich Center team has identified the following stakeholder value proposition and potential associated benefits for adopting measures to streamline federal and state reporting in New Jersey.

▶ Employers will have access to real-time feedback of local market trends and characteristics of the workforce. This information could help employers:

- Make informed decisions on where to locate or expand their business;

- Understand the average pay for positions they employ within their company and compete effectively and inclusively;

- Get a better sense of the available job seekers and their skills in their area;

- Project employment growth and monitor local, regional, and statewide economic and industry trends;

- Improve HR practices, articulating skills in demand, and crafting more accurate job descriptions that reflect job positions;

- Improve employee recruitment and retention; and

- Incorporate more inclusive hiring practices.

This value proposition was presented to participants of the Improving Federal and State Reporting New Jersey State Advisory Panel convening on June 16, 2022.

The New Jersey Convening

The Heldrich Center worked in conjunction with NJDOL to compile a list of key employer stakeholders with interest in the issue of improving federal and state wage reporting in New Jersey. Participants were selected, in

part, based on their representation of key sectors of the state's economy, offering diverse perspectives on the issue of improving federal and state wage reporting. In addition to the economic sector, invited guests were selected based on factors, including but not limited to, representation of northern, central, and southern New Jersey; industry; firm size; and perceived interest and familiarity with the topic. Invitations to participate in the State Advisory Panel convening were sent directly from New Jersey's Commissioner of Labor and Workforce Development, Robert Asaro-Angelo, to state agency representatives, employers, professional employer organizations, HR technology service providers, and other key stakeholders. Specific attendees included representatives from the U.S. Chamber of Commerce Foundation, NJDOL, National Association of State Workforce Agencies, New Jersey Chamber of Commerce, African American Chamber of Commerce NJ, Employers Association of New Jersey, Associated Construction Contractors of New Jersey, Verizon, Comfort Keepers, Sansone Auto Group, and New Jersey Small Business Development Centers.

Convening Objectives

The primary objectives of the convening were:

▸ Identify benefits to employers of streamlining and standardizing the reports required by government agencies;

▸ Identify any challenges in changing employer reporting practices, including privacy concerns; and

▸ Chart a path forward for a New Jersey pilot in conjunction with the JEDx initiative.

Convening Discussion Summary

JEDx Initiative

The JEDx initiative was presented by Jason Tyszko and Dr. Bob Sheets from the U.S. Chamber of Commerce Foundation. The JEDx value proposition is for data standards to be leveraged for federal and state reporting to reduce burden and cost for employers and improve data for their uses. If data standards are leveraged in a way that can lower the cost of how employers organize

and share information about jobs and the workers in those jobs, it can improve the quality and value of the data that is outputted. This value proposition is for both the public sector and the private sector. It can improve the timeliness of the data and streamline how employers report. Additionally, this process could produce more valuable data that can potentially drive a wide variety of talent analytics that can be used to improve government services and investments, and also be utilized by the private sector. The U.S. Chamber of Commerce Foundation's JEDx initiative has multiple potential applications for the business community, thus driving this call to action to engage critical stakeholders who are involved in organizing and collecting data. Currently, seven states make up the JEDx partnership, including Arkansas, California, Colorado, Florida, Kentucky, New Jersey, and Texas.

Current wage record reporting systems are missing critical data elements. It is widely understood that collecting data is very burdensome for employers and currently employers get minimal value out of it. Moreover, with the proliferation of programs that are out there, employers are being asked to report to multiple agencies to address a wide variety of administrative statistical purposes. In this way, these many fragmented systems are currently collecting data at a high cost that is not comparable across jurisdictions, is not standardized, and is missing a lot of important elements.

For JEDx, the value added of the initiative is clear. The goal of streamlined and standardized reporting is to empower stakeholders to be able to make better decisions with data. The JEDx goal is to potentially optimize the tangled web of data sharing through the creation of data standards. The U.S. Chamber of Commerce Foundation is offering a vision of the future with JEDx that promotes adoption and implementation of data standards. Through these efforts, there could be more support for public-private collaboration around data with consistent definitions and data elements, and more streamlined reporting. There are two JEDx partnership workgroups running in parallel to one another that drive decision making (i.e. a New Jersey pilot). There is the Data and Application Priorities Workgroup focused on which data should be prioritized

first and to address which use cases. The second is the Systems Architecture Workgroup, which focuses on the following questions:

▶ What is the supporting technology infrastructure?

▶ How do we support employer-facing technology modules?

▶ How do we develop application programming interfaces that would enable us to collect and share the data that we have prioritized?

New Jersey Landscape

The discussion was open for comments and questions from all participants. From the discussion, it was highlighted that New Jersey is a small business state. Specifically, 88.6% of New Jersey businesses have 9 or fewer employees and 97.7% of New Jersey businesses have 49 or fewer employees. For an undertaking like adopting JEDx, it was suggested that the 2.9% of employers with 50+ employees could be the early adopters or the champions of the initiative in the state. Moreover, it was suggested that engagement with a state-level employer or industry organizations might be the best path forward for early adoption.

Motivations and Benefits

In the discussion of motivations and benefits to improving federal and state reporting, it was clearly stated that access to better data could help companies make decisions about relocation to New Jersey, as any data about local talent pools would be a huge competitive advantage. As New Jersey considers how to streamline data collection as well as to improve the value of the data, some of the data elements under consideration for adoption in New Jersey may be problematic for employers. The specific challenges may arise from collecting employee gender, race, and age, so this is something that the state must consider moving forward. The discussion also clarified that as a primarily small business state, cost and time savings are critical motivating factors for employers in New Jersey. One of the convening participants suggested that the state auto dealer organization would be a great partner for the pilot as it represents over 500 dealers that range from

small to medium- and large-sized businesses and are located all over the state. It was also suggested that the state-level organization would also be a great partner as it represents multiple different job categories and is very familiar with working with "at-risk populations and the people that are left out there that are underemployed" or unemployed. Heldrich Center researchers will consider this finding as the next steps in this initiative are outlined.

Data Collection Issues

In discussing issues around data collection, JEDx, or a New Jersey pilot program of JEDx, would need to demonstrate how any changes to streamline reporting are faster, simpler, and more accurate. It is noted that past initiatives around this issue area have not proven valuable and did not garner the support of employers. Similarly, standardized data definitions are critical to any effort. Definitions for new data collections, as well as existing data collections, are central to this initiative and employers' adoption of a new test program. Convening participants suggested that if New Jersey makes any changes to reporting, the user experience has to be at the forefront of the decision-making and planning. Moreover, there can be no disruptions to current reporting systems while these efforts are under way to redesign and reimagine streamlined federal and state reporting. Furthermore, it was suggested that JEDx and state initiatives could give more thought to the employer value proposition to: (1) identify what employers care about the most, and (2) pinpoint what data systems or data points interact with those core values. There was a suggestion that employers are already inundated with reporting requests so perhaps an initiative like this would have to be a required participation to see any traction. Lastly, the state will have to explore whether legislation in this space is feasible.

Next Steps

As next steps, Heldrich Center researchers will continue to conduct a research study for the adoption of a JEDx pilot program in New Jersey. Researchers will be reaching out to panel participants again throughout July and August 2022. Researchers will conduct follow-up interviews and focus groups with stakeholders to gain even greater perspective on employer motivations and data collection challenges. Specifically, researchers have

plans to follow up with the state-level auto association, the Associated Construction Contractors of New Jersey membership, and the Employers Association of New Jersey to facilitate additional employer connections for further research. In coordination with NJDOL, it is the aim to host a second convening on the topic of improving federal and state reporting in New Jersey in early September 2022. Lastly, NJDOL will make a final decision regarding the adoption and implementation of a pilot program to streamline and standardize employer reporting in New Jersey in fall 2022.

Appendix G: Interview Protocol

Discussion Questions

Review proposed data elements one-pager from JEDx

▶ Were you able to review the "Proposed Data Elements for Addressing High-priority Use Cases and Consolidation and Standardization Opportunities" document? [Share screen to show one pager]

- What is your overall reaction to the information provided? Initial thoughts?

    » Are any of these problematic/red flags?

    » Are you currently collecting these data points (non-highlighted) but not reporting them?

    » If asked to report these data elements, what would be the red flags about it?

    » Are any of these data points off limits?

▶ What type of state and federal reports are you currently required to submit?

- How are they currently being done/submitted?

- Who manages it? (in-house, third-party provider) [Probe: Why choose in-house versus third-party provider?]

Share JEDx "High-priority Use Cases with Related Activities, Preliminary Worker-Specific Data Requirements, and Potential Product Examples" use case #2

▶ Is this enough of a motivator and/or justification for you to adjust how reporting is done?

▶ Can you see how these data points support those use cases? Are these use cases and potential product examples important to you?

▶ Is there anything you can think of that is missing and should be added to the list?

Challenges and Concerns

▶ What are the current challenges of the existing reporting systems and structure?

▶ Do you have concerns about the logistics of changing/updating these reporting systems? What are the implications for you as an employer using these systems?

▶ If we are advising the state to streamline and standardize reporting, what would be your priorities?

Privacy Concerns

▶ How does privacy factor into your priorities and/or concerns? (Clarification: Employer privacy and employee privacy)

- [Probe: What could the state do to allay your concerns?]

Recommendations and Wrap-up

▸ If New Jersey is invited to participate in a pilot – what would you recommend?

- Should New Jersey participate?

- What would New Jersey need in place to run a successful pilot?

▸ What would be the best investments of state efforts for improving state and federal reporting?

- [Probe: Investments as it pertains to logistics and investments, investments as it pertains to privacy concerns]

▸ Any final comments about what we've discussed today?

Appendix H: Employer Use Cases Slides

Employers, Employer Partnerships/Collaboratives, Employer/Industry Organizations, and HR and Payroll Service Providers

Improving state and regional benchmarking information for HR analytics and talent recruitment and management

Improving access to data for projecting of workforce needs and analyzing labor supply to support investment/location decisions, recruiting, and hiring

Improving employer data on skills requirements to expand the number of qualified job applicants

Activities:
- Ensuring company compensation and working conditions are competitive in the market
- Recruiting, hiring, and retaining qualified labor
- Assessing the diversity of employees and differences in compensation, advancement, and retention relative to the market

Examples of Potential Products Addressing the Use Case
- Continuously updated benchmark reports about pay, hours, certain benefits, and worker demographics by labor market area, industry, and occupation
- Continuously updated tool to help employers match their job titles to Standard Occupation Classifications, to aid in benchmarking and local labor supply analysis

Activities:
- Estimating current and future employment demand within industries, occupations, and labor markets
- Developing data for communicating job opportunities to identified talent sources
- Providing input into government demand-supply analysis (See 5.1)
- Identifying sources of supply based on industry and occupational employment of recent program completers and career pathways and job-to-job flows of existing workers and new entrants.

Examples of Potential Products Addressing the Use Case
- Recent employment trends and projections data by labor market area, industry, occupation, and skill set
- Periodically updated (and better quality) supply-demand reports of employed as well as unemployed workers
- On-line access to education/training sources of recent hires by occupation

Activities:
- Communicating timely information on changes in employer-required skills
- Working with education/training entities to incorporate skill changes in curriculum

Examples of Potential Products Addressing the Use Case
- Periodic reports on changing skill requirements by industry and occupation
- Reports identifying emerging occupations and/or emerging skills, including projections on demand based on more frequent (and less biased) data than that available through job postings

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Appendix I: JEDx Data Priorities

Proposed Data Priorities for Addressing High-priority Use Cases and Consolidation and Standardization Opportunities

Employer Organizational Descriptors

- ▶ *Federal Employer Identification Number*
- ▶ Previous Federal Employer Identification Number
- ▶ *State Unemployment Tax Account Number*
- ▶ *Legal Name*
- ▶ Business Structure Type
- ▶ Operating Status
- ▶ Operating Status Date
- ▶ Trade Names
- ▶ *Mailing Address*
- ▶ *Physical address*
- ▶ *Industry Code*
- ▶ Principal Products & Services
- ▶ Contact Name
- ▶ Contact Phone
- ▶ Contact E-mail
- ▶ Parent Company Tax ID
- ▶ Parent Company Name

Employer Establishment Descriptors

- ▶ *Establishment ID Number*
- ▶ Establishment Name
- ▶ Establishment Status
- ▶ Establishment Status Date
- ▶ Establishment Business Functions
- ▶ Establishment Principal Products & Services
- ▶ Establishment Industry Code
- ▶ Establishment Physical Address
- ▶ Contact Name
- ▶ Contact Phone
- ▶ Contact E-mail

Employer Jobs Descriptors

- ▶ Employer Job Code
- ▶ Employer Job Title
- ▶ Business Support Role
- ▶ Employer Job Duties
- ▶ Employer Job-Required Skills
- ▶ Employer Job-Required Education and Experience

Worker Personal Descriptors

- ▶ *Social Security Number*
- ▶ Previous Social Security Number
- ▶ *First Name*
- ▶ *Middle Name*
- ▶ *Last Name*
- ▶ Previous Last Name
- ▶ Birth Date
- ▶ Residence Address
- ▶ Military Status
- ▶ Gender
- ▶ Ethnicity
- ▶ Race
- ▶ Disability

Work Relationship Descriptors

- ▶ *Social Security Number*
- ▶ *Last Name*
- ▶ *Assigned Establishment ID #*
- ▶ Assigned Employer Job Code
- ▶ Primary Work Location
- ▶ Officer Indicator
- ▶ Stock Owner Indicator
- ▶ Work Status
- ▶ Work Status Reason
- ▶ Date of Hire
- ▶ Date of Termination
- ▶ *Seasonal Work Beginning Date*
- ▶ *Seasonal Work Ending Date*

UI Tax Calculation Factors

- ▶ *Period Covered by Report*
- ▶ *Social Security Number*
- ▶ *Last Name*
- ▶ Total Wages Paid Out of State
- ▶ Total Compensation Paid
- ▶ Compensation Paid in Categories (to be determined) that are Used to Calculate Taxable UI Wages
- ▶ *Compensation Subject to State Personal Income Tax*
- ▶ *Personal Income State Personal Income Tax Withheld*

Worker Paid Hours and Compensation Earned

- ▶ *Social Security Number*
- ▶ *Last Name*
- ▶ *Period Covered by Report*
- ▶ *Weeks Worked*
- ▶ *Worked in Payroll Period Including 12th of the Month*
- ▶ Regular Hours Worked
- ▶ Total Premium Hours Worked
- ▶ Total Hours of Paid Leave Taken (Paid Time Off)
- ▶ Salary Earned
- ▶ Regular Hourly Wages Earned
- ▶ Total Premium Hourly Wages Earned
- ▶ Total Leave Pay Earned
- ▶ Total Other Cash Compensation Earned

Color Coding Key:

- ▶ *UI Required*
- ▶ *Collected by At Least One Partner State*

Appendix J: JEDx Systems Architecture Technical Workgroup, August 15, 2022 Draft Report

Systems Architecture Technical Workgroup Report

August 15, 2022

Analysis of Architectural Standards and Pilot Options

Public-private approaches for enhanced collection and use of standards-based jobs and employment data

U.S. Chamber of Commerce Foundation

JEDx

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This public-private approach has the potential to substantially reduce the reporting costs for employers and government while improving data quality and timeliness and protecting privacy.

- Jason Tyszko

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JEDx

Executive Summary

JEDx Architectural Options Report

The U.S. Chamber of Commerce Foundation (Chamber Foundation) and the T3 Innovation Network (T3 Network) established the Jobs and Employment Data Exchange (JEDx) initiative to develop a

public-private approach for collecting and using standards-based jobs and employment data. JEDx builds on the Chamber Foundation's Job Data Exchange (JDX) initiative, to promote public-private standards for job descriptions and postings, and the T3 Network's Employment and Earnings Records Standards Project, to develop and use public-private standards for comprehensive employment and earnings records.

This report is the result of the Design Phase of Project 1. This Design Phase engaged seven founding state coalitions (Arkansas, Colorado, Kentucky, Texas, California, Florida, New Jersey) with stakeholders representing employers, vendors, and policymakers through two technical workgroups to explore a public-private, standards-based approach for collecting and using data on jobs and employment.

Primary Objectives

- Reduce federal and state reporting costs for employers and government agencies
- Improve data quality and timeliness in federal and state government reporting
- Provide better data for improved public and private workforce analytics and program administration applications

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Secondary Objectives (Connections to Future Projects)

Ensure that employers and human resources (HR) technology service providers consistently approach

- sharing and using job description data in career pathways (Project 2);
- improving job posting data for search (Project 3); and
- providing workers and learners with their own learning and employment records (LERs) for job applications and government programs and benefits (Project 4).

This report by the System Architecture Technical Workgroup was informed by the work of the Data and Applications Technical Workgroup, which

- established initial priorities for employment and earnings data collection based on stakeholder needs;
- identified necessary refinements to the data model and dictionary based on those priorities;
- explored consolidated data reporting options in addition to Unemployment insurance (UI) reporting; and
- recommend potential, high-priority applications.

This report also is informed by baseline analysis with and for each participating state coalition to determine the current infrastructure and processes for UI reporting (and, in some cases, other reporting).

The report explores the following opportunities:

- Increased public/private collaboration
- Increased consistency in data collection systems
  - What data are collected (for example, data model, data elements and definitions)
  - How data are collected (for example, API standards)
  - When data are collected (for example, monthly, quarterly)
- Reduced number of required federal and state reports by collecting more comprehensive administrative records
- Improved access and use

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JEDx

Key Findings:

- States and stakeholders have different priorities and needs. They are in different stages approaching the JEDx vision, so the architecture must be flexible to accommodate different next steps and different pathways toward realizing the value of JEDx.
- Existing data standards present a great opportunity to reduce burden on employers and collectors of UI data while providing richer datasets for UI and other use cases.
- Public and private stakeholders have shared interests and can mutually benefit from modernized infrastructures for data collection and use.
- The path to modernization must recognize that this is more than a technology problem. Achieving the JEDx vision also involves complex systems of organizational processes, legislative and governance considerations, and articulation of value propositions that incentivize change.

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JEDx

Background and Methodology

Background

Jobs and Employment Data Exchange (JEDx) is an initiative led by the

U.S. Chamber of Commerce Foundation (Chamber Foundation) and the T3 Innovation Network (T3 Network).

The JEDx project builds on prior efforts by the Chamber Foundation starting with a *Clearer Signals: Building an Employer-Led Job Registry for Talent Pipeline Management* report released in 2017. The *Clearer Signals* report explored how employers could close the gap between open positions and availability of skilled workforce by improving how employers communicate or "signal" their hiring requirements.

In 2018-2019, the Chamber Foundation launched a Job Data Exchange (JDX) pilot with the aim of modernizing labor market data. The JDX initiative promoted public-private standards for job descriptions and postings and explored applications for improved jobs data and skills-based hiring. JDX was developed as a set of open data tools and resources to improve the speed and clarity with which employers can communicate in-demand jobs and in-demand skills to education and workforce providers.

Also in 2018, the Chamber Foundation and Lumina Foundation launched the T3 Network to bring businesses, postsecondary institutions, technical standards organizations, and human resource professionals and their technology vendors together to explore emerging Web 3.0 technologies in an open and decentralized public-private data ecosystem. The T3 Network project further contributed to the development of JDX. The final JDX data dictionary was delivered in 2021 and published by the HR Open Standards Consortium (HR Open).

JDX is now part of the HR Open Standards, which include a standard data dictionary for job and employment data.

The current JEDx project started in 2021 with the formation of a public-private advisory committee and the publication of the JEDx Implementation Report. The report summarized the results of the

two-month planning process conducted by the Chamber Foundation and the T3 Network with input from the advisory committee. The report proposed modernizing workforce data through a public-private approach and outlined several upcoming projects aimed to improve America's workforce data.

The first project focuses on jobs and employment data that employers and their human resources (HR) technology service providers currently report to federal and state governments. The main goals of this project include reducing federal and state reporting costs for employers and government agencies and improving the quality and the timeliness of data. The project aims to improve federal and state reporting, starting with unemployment insurance (UI) reporting, including enhanced UI wage records.

The larger JEDx vision includes other projects in the near term. Several more projects are planned over the next few years. One project will focus on job data-sharing for use in managing career pathways.

Another project will focus on improving job-posting data for search and discovery. Yet another project will examine how employment records can empower learners to more easily apply for benefits and find jobs.

Methodology

In 2022, the JEDx initiative moved into development phase. Two technical workgroups are collaborating on the first JEDx project. Both workgroups focus on the UI and new hire data. The first workgroup is looking at data and application priorities, seeking out the opportunities

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for collaboration and consolidation of data reports to reduce the burden on the employers submitting the data and on data collectors. The second workgroup is focused on standardizing system architecture and optimizing the way in which the data move from the source to collection to storage to data users. The main challenge of the system design task is accommodating for the complex relationships among multiple data collectors, employers, and data users.
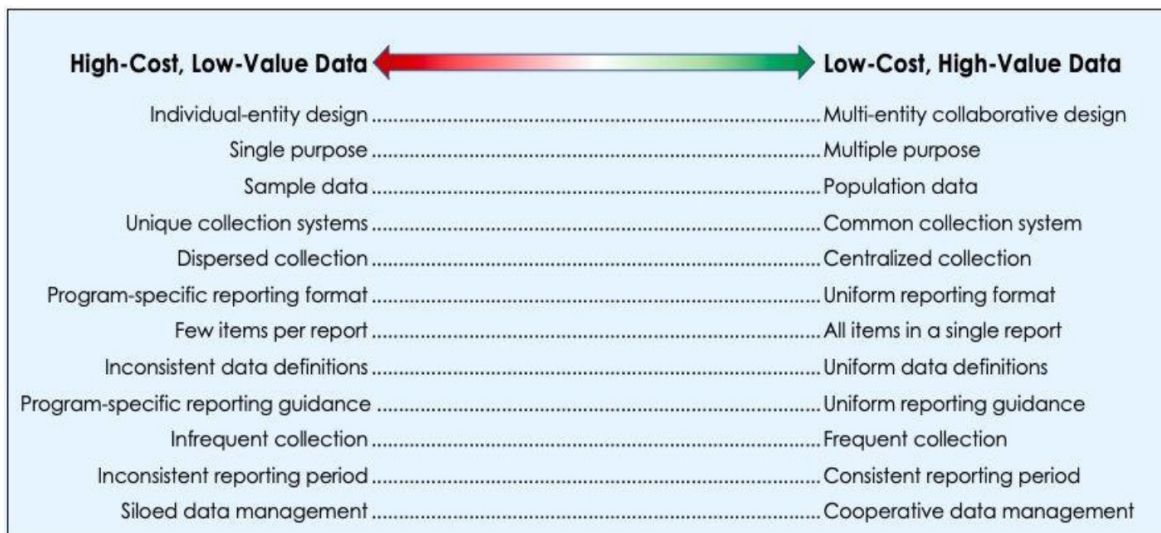
The Chamber Foundation expects that the first JEDx project can succeed through public and private collaboration and that a successful outcome will result in better workforce analytics. The success of the initial project will help lay the foundation for the remaining JEDx projects.

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JEDx Architectural Vision

JEDx will leverage shared data and technology standards and public-private use architectures as part of a vision for

- increased public-private collaboration;
- increased consistency in data collection systems, including
  - what data are collected (for example, data model, data elements and definitions),
  - how data are collected (for example, API standards), and
  - when data are collected (for example, monthly, quarterly);
- reduced number of required federal and state reports by collecting more comprehensive administrative records; and
- improved access and use.

High-Cost, Low-Value Data	Low-Cost, High-Value Data
Individual-entity design	Multi-entity collaborative design
Single purpose	Multiple purpose
Sample data	Population data
Unique collection systems	Common collection system
Dispersed collection	Centralized collection
Program-specific reporting format	Uniform reporting format
Few items per report	All items in a single report
Inconsistent data definitions	Uniform data definitions
Program-specific reporting guidance	Uniform reporting guidance
Infrequent collection	Frequent collection
Inconsistent reporting period	Consistent reporting period
Siloed data management	Cooperative data management

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JEDx

The resulting architecture moves from a highly complex collection and exchange system that creates redundant costs for employers, and other stakeholders to a distributed and secure architecture that serves the needs of the multiple stakeholders in the ecosystem.

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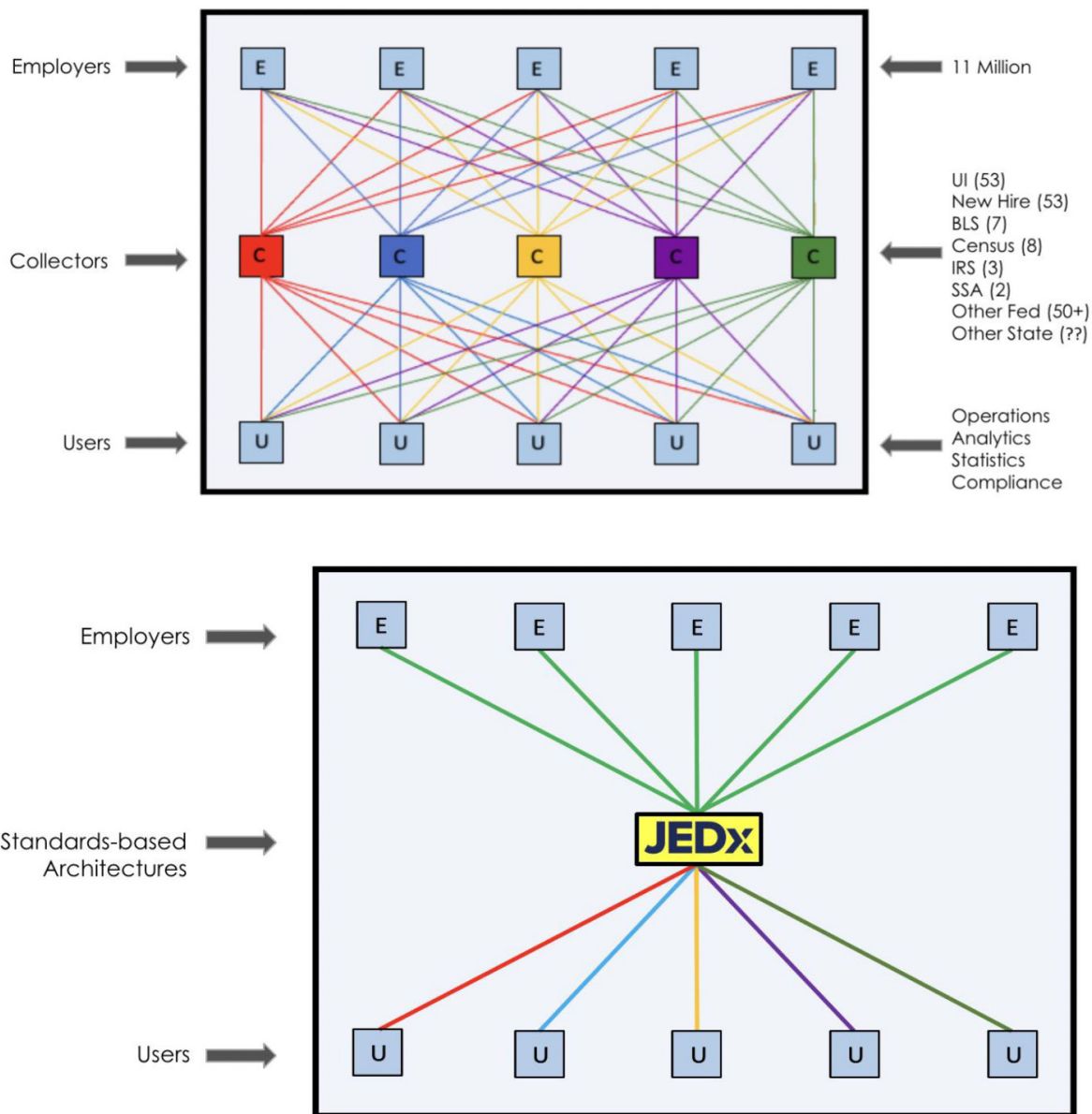
State System Analysis

Overview

The JEDx team conducted baseline research on the current state of unemployment insurance (UI) and/or new hire (NH) data collection systems in several states with participants in the JEDx initiative. The research consisted of two steps. Step 1 involved collecting preliminary information publicly available online. In step 2, states were allowed to give feedback on the baseline analysis and/or engage in deep-dive interviews with state representatives who oversee relevant collection and reporting systems.

The initial research phase focused on gathering the following information: name and description of the data collection program, collection method(s) and periodicity, reporting options and formats, data access controls, data sharing agreements, and any announced system changes. Resources consisted of state agencies' websites, states' requests for proposals, and vendor websites.

After gathering publicly available information, the JEDx team conducted a number of in-depth interviews with interested states. During the interviews, state teams were asked to verify information obtained through preliminary online research and share any additional insights about their UI and/or NH collection systems' functionality, current needs, modernization efforts, and highest data and application priorities where JEDx can provide value.

The JEDx team interviewed stakeholders from several states including Texas, Kentucky, Florida, and New Jersey. Interviews varied in length and in depth. For Texas and Kentucky, interviews consisted of meetings with just the state team lead(s). Florida and New Jersey engaged in deep dive meetings involving larger groups of state representatives.

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[Note: The state deep-dive analysis is ongoing at the time of this draft. Additional findings will be included in the final draft of this report.]

Deep dives with these states covered a variety of technical subjects, including the overall data flow, data transmission, reporting periodicity, format of the submitted data, data storage, access controls, user authentication, data-sharing agreements, administrative and research data uses, compliance with privacy laws, and similar topics. Typical questions covered during deep dive meetings were as follows:

General Questions

- What state agency manages the reporting system, and how does the agency help employers and their third-party administrators report data?
- What are the options given to employers or third-party administrators for reporting their data to these systems?
- How is change managed either to systems and/or data?

System Scope (for UI, New Hire and Employment data)

- What collections do you consider a UI/New Hire/Employment Data collection?
- Who are the sources and targets of those?
- How are data shared and accessed (data and technical governance)?

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For Each System

- What technology do you use to store the data (repeat per data store if there are multiples)?
- What format do you use to check your reports or validate the data?

For Data Movement

- What technology do you use to move individual records (APIs, Services, SFTP)?
- What technology do you use for batch reporting?

What have we not covered?

- Are you moving to any new technologies or structures?
- What expected improvements or changes are already on your roadmap (for example, UI modernization)?

In addition to state deep dives, the JEDx team met with representatives from payroll processing companies associated with the National Personnel Records Center (NPRC), the non-profit trade association of organizations that provide payroll processing and employment tax services directly to employers, and with representative from payroll processors working directly in a state content. The Systems Architecture Technical Workgroup also includes representation from payroll processors. The team also met with experts from key stakeholder organizations such as the National Association of State Workforce Agencies (NASWA).

Findings

[A summary of state deep dive analysis findings will be added to the final draft of this document.]

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Key Design Principles

The JEDx System Architecture Workgroup began with the following theories of action that led into the following sets of design principles:

- Automating and modernizing the data collection process of jobs and employment data between entities and collectors will create increased value, timeliness
- Using a modern, standardized technology whenever possible but allowing for support of the current data collection infrastructure will meet all stakeholders needs, and move the ecosystem in a direction toward the JEDx vision
- Pilot initiatives must offer immediate value and make it easier for future modernization
- The architecture design and approaches must leverage technology standards in flexible ways, allow varying pathways toward modernization.

Data Collection Design Concepts

- Automating how states and other aggregators collect these data "internally" will make the data more usable, accurate, complete, and timely.
- Unifying processes in each state will make federal and state collection of this data easier, and the data will be far more accurate, complete, and timely.
- Using standards will make data collection more thorough and more frequently without placing undue or additional burden on the collectors.
- Using standards and a standardized ecosystem and the automation that they allow will enable employers and providing agents to both generate the data and manage year-to-year changes with less expense and with more utility for themselves.

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Data Movement Design Concepts

- All data will be handled with privacy and security as a paramount consideration. If possible, we will use standard approaches to ensure that this is enacted.
- Using standard APIs will be more sustainable and future-proof.
- Allowing for binary data or non-standardized documents to be uploaded and delivered using a file-storage and upload solution will ease the transition pains and support entities not ready to immediately commit to a fully modern system.

Application Programming Interface Design Concepts

- Standard-based serialization: using a common format like JSON, or JSON-LD, or XML
- Handling large volumes of data quickly and at scale
- Guaranteed delivery
- End-point creation and maintenance
- Being able to easily and natively connect to each stakeholder's data source
- Clean and clear error management
- Works in both peer-to-peer models and hub-and-spoke models
- Privacy of individual worker and employer data
- Security of the connection
- Verifiability of the source and target

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JEDx

Data Standards Stack

Data standards are key to the JEDx strategy. Standards form the fundamental building blocks for modern systems for compatibility, consistency, and interoperability across data systems and data exchanged between systems.

The two JEDx technical workgroups addressed different parts of the data standards stack. The focus of the Data and Applications Priorities Technical Workgroup was on the standard data dictionary and data model. The workgroup built from the existing JDX+ model maintained by the HR Open Standards Consortium. This Systems Architecture Technical Workgroup focused on layers of the standards stack supporting data movement and use.


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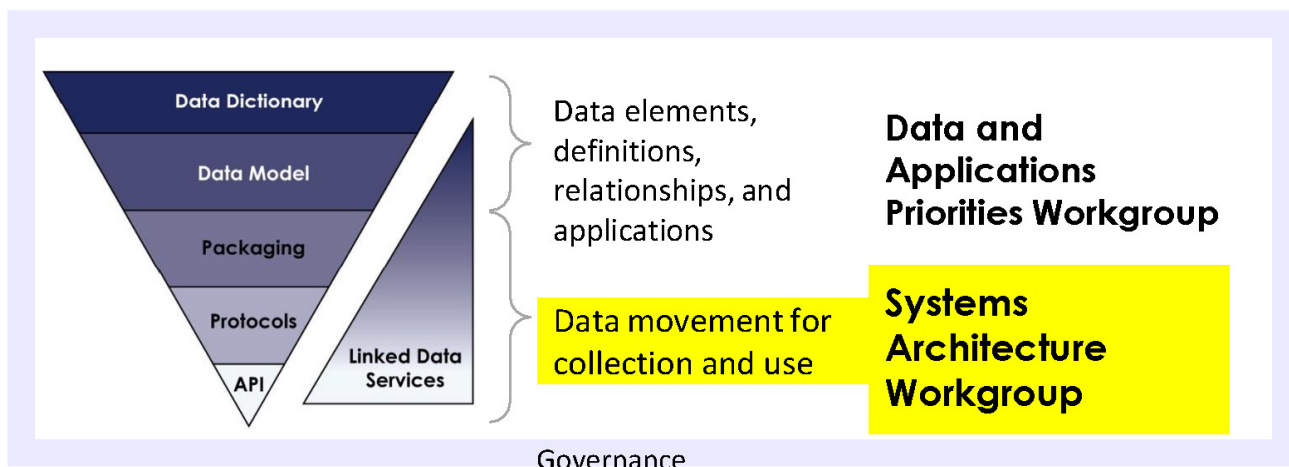
Common API

A tip of the iceberg for an interoperable and scalable data collection is the Application Programming Interface (API). APIs specify how modern data systems and software communicate with one another. A standard API (as opposed to a custom API) allows for any system that has adopted the standard to send or receive the data in predictable ways.

Data Dictionary Data Model Packaging Protocols
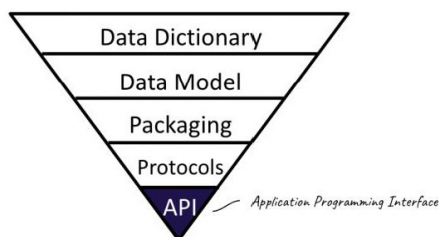
As a companion to   this report, the Systems Architecture Workgroup is developing a Proposed JEDx API Standard that will be offered to HR Open to be the application interface part of the JDX+ package of standards.
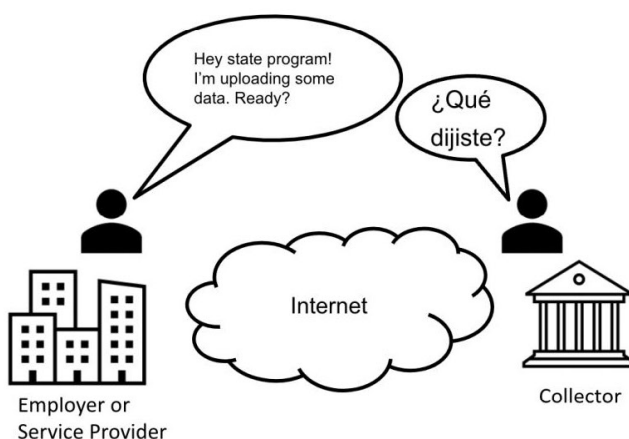
Common Protocols

Standard protocols provide an infrastructure for the secure transport of data. Think of it like the pipe through which the data move. Protocols include things like Secure Socket Layer (SSL) to ensure that data are encrypted when sent over the Internet and Representative State Transfer (or REST), which defines a set of constraints for the architecture of Internet-scale systems. Other protocols, such as secure file transfer protocol (SFTP), support secure transport of files. These generally defined standard protocols can be combined with the next layer in the standards stack, the "packaging" that apply the protocols to the specific data to be exchanged.
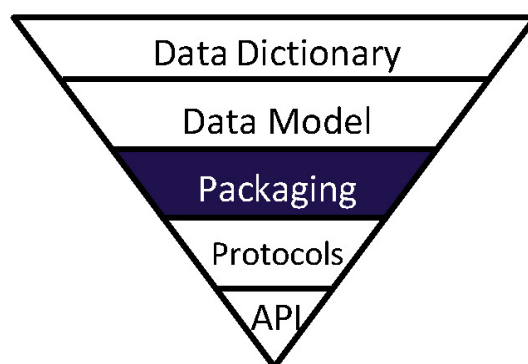

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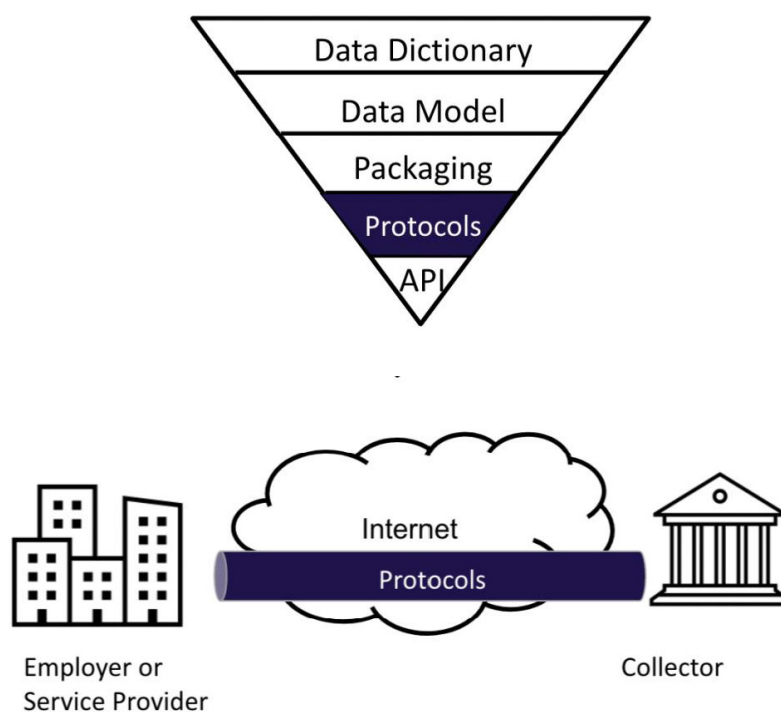
Common Data "Packaging"

Standard "packaging" is the way that data are bundled together to be sent from system to system. The sending and receiving systems need to understand how to pack and unpack the data payload.

For example, modern applications apply the JSON (JavaScript Object Notation) protocol to package or format the data and use JSON-LD (LD = linked data) context specifications to define meaning of the elements. These lightweight data structures help data interoperate at Web-scale.

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JEDx Standards

Standards for JEDx Architectures

The JEDx Architecture is based on the collection and data use cases identified by the JEDx technical workgroups. The modular JEDx reference architecture will include the following standard components:

- JDX/JEDx Data Dictionary and Data Model
- JEDx API
- JEDx Packaging (JSON Serialization)
- JEDx Privacy Protocol (JPP)
- JEDx Reference Data Storage and Access Control

The reference architecture leverages other existing standards, including the following:

- REST—A set of architectural constraints for implementing an API
- HTTP—Application-layer protocol for transmitting data
- JSON—JavaScript Object Notation is a lightweight data-interchange format
- JSON-LD—Linked Open Data serialization format for JSON data
- SSL—Secure Socket Layer
- TLS—Transport Layer Security
- JDX—Jobs Data Exchange Format
- NIST—Framework that integrates industry standards and best practices to help manage cybersecurity risks
- FIPS—Federal standards and guidelines that describe document processing, encryption algorithms and and other standards to protect data
- PII Compliance—Rules and policies for protecting personally identifiable information
- SAML—Open standard for authentication
- OAuth 2.0—Industry-standard protocol for authorization
- OpenID Connect (OIDC)—An Authentication protocol that profiles and extends OAuth 2.0 to add an identity layer
- OpenAPI—Standard for documentation and discovery of APIs

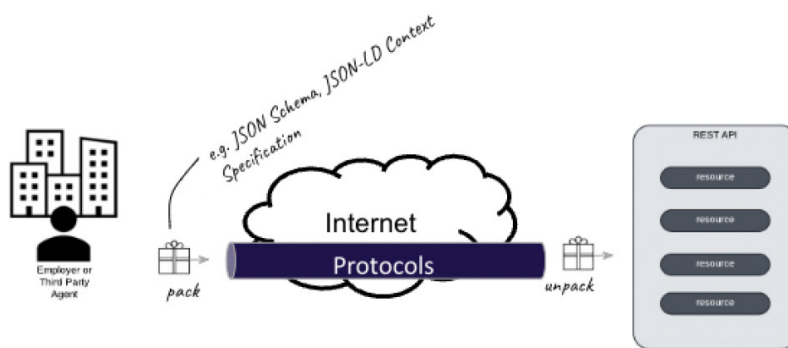U.S. Chamber of Commerce Foundation

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Standards Working Together

The Proposed JEDx API Standard includes packaging specifications and examples for the initial set of JEDx data objects and elements defined by the JEDx Data and Application Priorities Technical Workgroup.

The API and packaging are designed to be flexible and future-proof in two ways:

1. The packaging supports a comprehensive collection of JEDx data types but allows for uses that transport only some of the data elements; and
2. the API's data transport is agnostic of the payload, it will work with enhanced packages of data that add objects or elements in the future.

Architectural Use Cases

The following high level generalized JEDx use case was identified after the current state collection analysis. This generalized use case support multiple scenarios.

- Single-State Single-Program
- Single-State Multiple-Program
- Multiple-State Multiple Program

It also supports variations in data requirements and applications.

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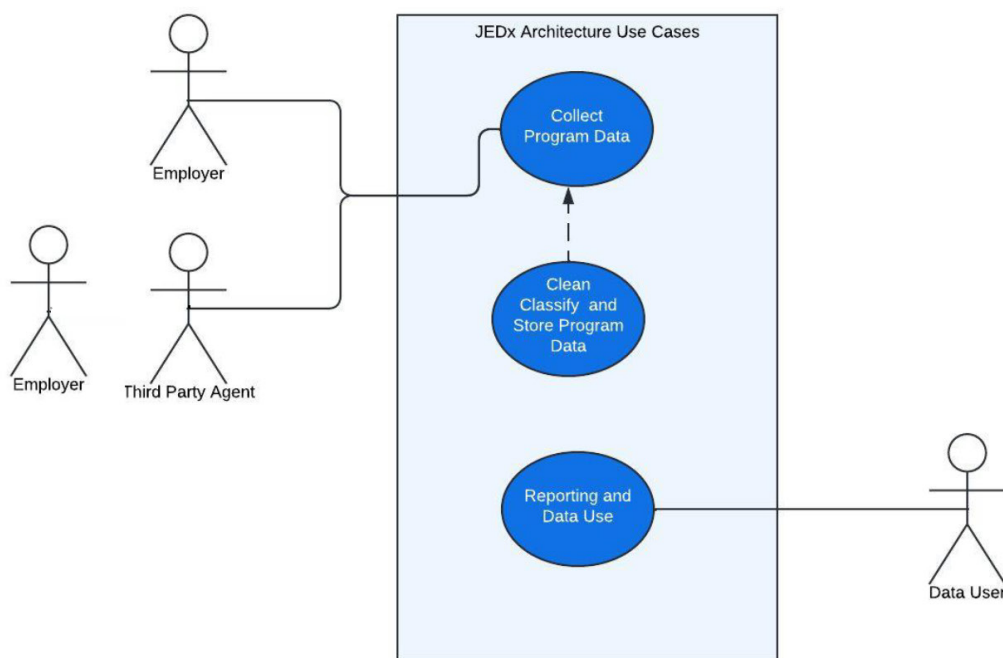
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JEDx System Architecture

Modularized JEDx Architecture

The JEDx architecture is modular to support different implementation needs across states and stakeholders, while standardized to support reuse and efficiency in collection and use. Standard components will provide great efficiencies for employers and third-party agents, especially those that operate in more than one state. The proposed architecture is designed to support the reporting enhancements sought by the participating state coalitions, improving the timeliness and quality of data collected with the potential to drastically reduce the cost, such as by reducing erroneous and fraudulent benefit claims.
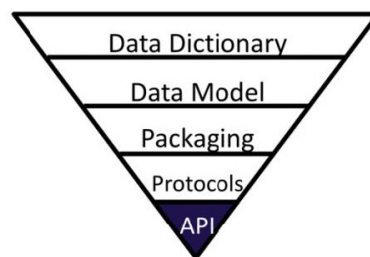
Collection Architecture

Collection API

A key component of the proposed architecture is a standard Application Programing Interface (API). The specification addresses data transport, security, and access management for the transport and exchange of data.

This transport layer of the architecture is separated from the data layer so that the data packages carried by the API are flexible to accommodate current and future needs.

The data package(s) exchanged via the API initially will be defined based on guidance of stakeholders and the JEDx Data and Applications Workgroup and state pilots. Later the API will be able to support other collection and exchange use cases.

Data Dictionary
Data Model
Packaging
Protocols
API

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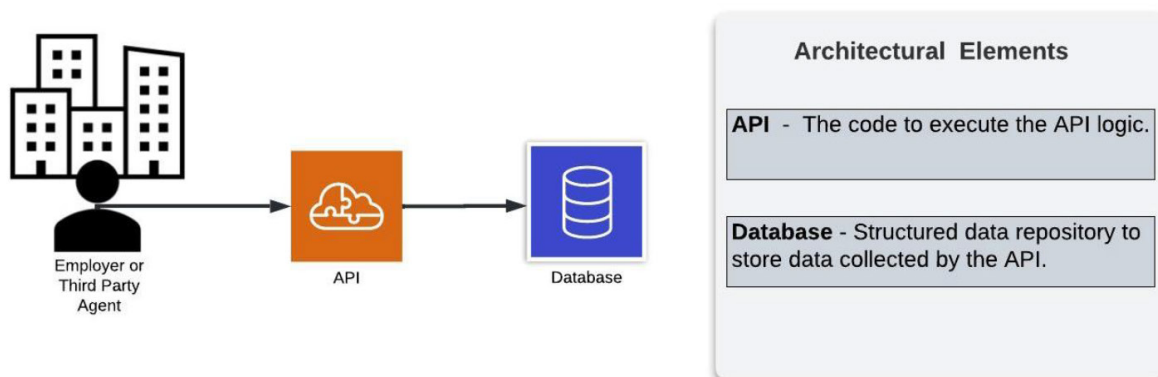
Figure 1. A simplified view of an API Implementation for data collection.
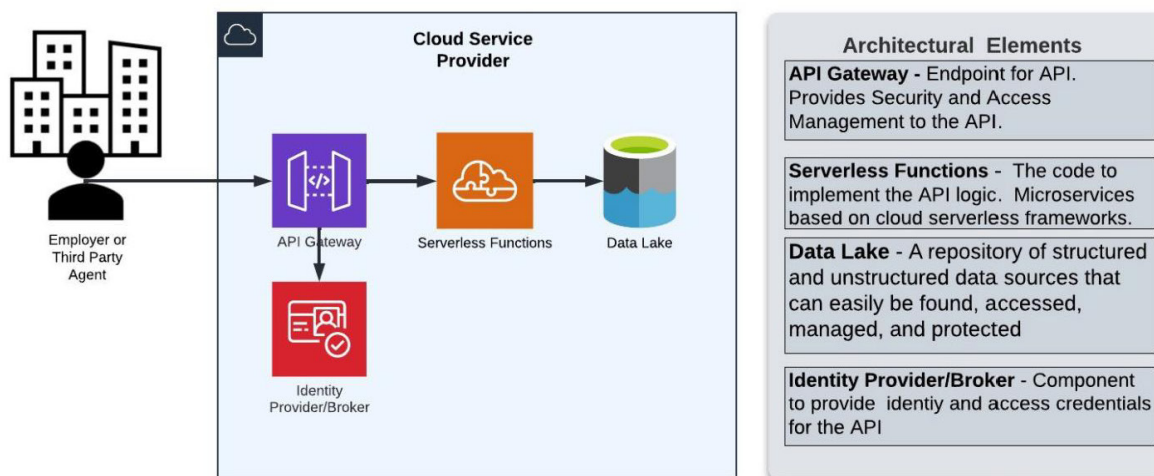

Figure 2. View of a modern cloud-based architecture that includes the API Gateway, API Implementation, Identity Provider/Broker, and Data Lake (or part of a data mesh) for storage of both structured and unstructured data.

Collection of data via a standard API can initially be done without directly impacting existing state agency collection processes. That is, it need not disrupt current infrastructure. That is, it could be piloted as a parallel, alternative method of collection that feeds into existing collection mechanisms while stakeholders assess the value derived from enhanced data collection.
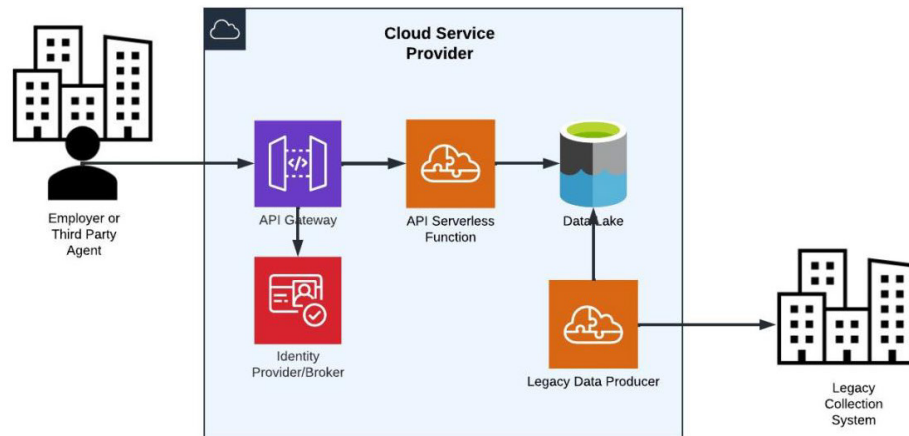
Collection Data Package

The data collection package is designed using the standard protocol for Javascript Object Notation (JSON). The data packages are encrypted for transport. Specifications and examples will be provided in the JEDx API Specification. These specifications and examples include the data package to support collection and JEDx pilots and more robust representations of the JDX data elements.

The data elements are defined in the JDX data dictionary. Data objects and their relationships to each other (data model) are defined based on JDX and guidance of JEDx stakeholder via the JEDx Data and Applications Workgroup.

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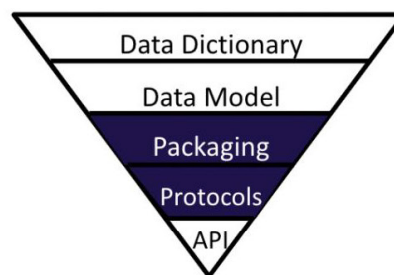
Using standard APIs, standard protocols for data interchange, standard data schemas, and standard data definitions will support both narrow and broad implementations including

- one collection program within one state;
- consolidation of programs within a state; and
- multi-state collaboration.

The submission and collection of data may be done in ways that reduce ongoing costs and risks (such as costs due to missing, inaccurate, or stale data) for employers and third party agents while allowing states to reduce costs while collecting richer data to inform their policy objectives. The burden on submitters is reduced by making data collection easier, such as by removing the need to resubmit the data that have not changed since the previous submission.

Data Use Architectures

Different end uses of public-private data may necessitate different data architectures and local governance models. These *data use architectures* may vary as states and other stakeholders progress from siloed collection and use systems using legacy technology to modern infrastructures that may support public-private collaboration.

Program Reporting	Pooled Analytics for Policy	Third-party Reuse (Analytics & Apps)
- One-to-many data flows and microservices architecture - Data harmonization capabilities and robust metadata management	- Modern cloud data warehouse architecture - Robust governance processes for prioritizing analytics needs	- Robust anonymization routines and privacy guarantees - Research data lake architecture and secure analytics environment for outside parties to access - External publishing APIs

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Possible JEDx Architectures Using Data Mesh

As JEDx participants progress toward the vision for enhanced data collection and use, optimizing public-private collaboration might increasingly leverage architectures such as a "data mesh." These architectures support federated computational governance and data as a service to control appropriate uses of the data and reduce risks associated with centralized data stores.

Data Mesh Architecture for States Implementing JEDx

Data mesh principles and architecture were first developed by Zhamak Dehghani at Thoughtworks and have gained rapid adoption in the enterprise data community for balancing the benefits of data standardization and global governance with decentralized control over data by distinct parties. This balance is best expressed in the four core principles below. Data mesh offers a reasonable architectural paradigm for JEDx implementations because of its alignment with JEDx's goals of efficiency through standardization, privacy and compliance through clear governance and distributed ownership, and flexibility through self-service data provision and access.

Data Mesh Architecture Principles
- Data as a product
- Domain-oriented distributed ownership
- Self-service
- Federated computational governance
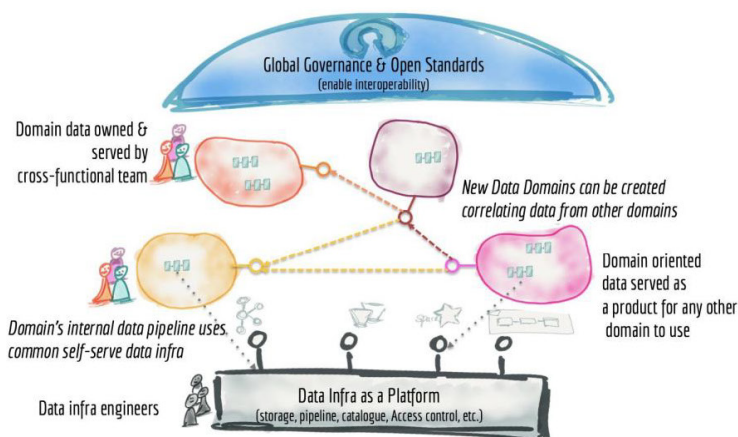
Data Policy Approaches

Data Policies for Trust, Security, & Compliance

JEDx deals with some of the most sensitive data about individuals. In addition to ensuring compliance with federal and state data privacy laws, JEDx's multiple stakeholders have surfaced industry and stakeholder-specific requirements around the data, the systems transacting and storing it, and its downstream uses. The rules and requirements will need to be expressed and enforced as data policies.

JEDx data policies fall into 6 general buckets:

- Privacy
- Security
- Quality
- Transparency
- Access
- Use

Privacy policies are focused on **what needs to happen to the data** before sharing, access, and use, (personally identifiable information (PII) masking, consent, right to be forgotten, and disclosure review, for example). *Security policies* are about **what must be true about the systems** of storage, provisioning, and access. *Quality policies* specify **what data quality checks** must be passed before allowing access. Transparency policies specify **what must be made public** (policies, transformations, use logs, public dataset requirements). *Access policies* state **who can access** the data under what conditions. Lastly, *usage policies* specify **how the data may be used**, and for what purposes.

For this initial report, we'll limit our data policy deep-dive to one of these areas: Privacy.

Privacy

Privacy Controls & Metadata Infrastructure

The JEDx vision is to leverage data for the benefit of employees, employers, and public sector stakeholders while preserving privacy and security of those data. Jobs and employment data contain sensitive personally identifiable information that bad actors would want to exploit. Therefore, the JEDx system architectures must include features of privacy and security by design.

The design principles for JEDx privacy and security build on best practices for any system with sensitive data, including the following:
- Encryption in Transit (SSL/TLS)
- Encryption at Rest
- NIST Cybersecurity Standards
- FIPS
- PII Compliance

In addition, the JEDx System Architecture Workgroup is exploring newer technologies that would embed a governance metadata framework into the fabric of the data structures to inform access control. With this framework, privacy objects are attached to data objects early in the collection pipeline and travel with the data from collection systems to use systems. These attached privacy objects contain both provenance information (where the data came from) and links to the sets of rules and regulations for restricting or granting access including links to

data-sharing agreements and encoded logic for the conditions by which the data may be used. Lastly, the governance group will explore newer cloud-based architectures that allow for analyzing data without copying, moving, or providing unencrypted access to third parties.

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Governance Approaches

Collaborative Governance Models for JEDx

Data governance will play a critical role in enabling the responsible sharing required to support JEDx use cases. Data Governance is ultimately about who has the power to make decisions over data and how those decisions are made. This will include decisions about the rules and process for how JEDx data is collected, shared, accessed, controlled, and used.

Because JEDx relies on a unique public-private partnership, it will rely on governance models that are multi-stakeholder, collaborative, and legally compliant and that protect stakeholders against risks and liabilities.

Several governance models for public-private data sharing have been tested in recent years that could support JEDx stakeholder requirements:
- Multi-party (memoranda of understanding) MOUs and contractual data-sharing arrangements (currently most common, see Longitudinal Employer-Household Demographics (LEHD) as an example)
- Data collaboratives
- Data trusts
- Data cooperatives
- Data marketplaces

Detailed definitions and examples of each of these can be found in recent publications by the Mozilla Data Futures Lab and the Ada Lovelace Institute. The JEDx architecture workgroup at this point is not recommending a particular governance model from the list above for JEDx, but plans to continue requirements gathering among stakeholder and pilot participants in order to make a final recommendation.
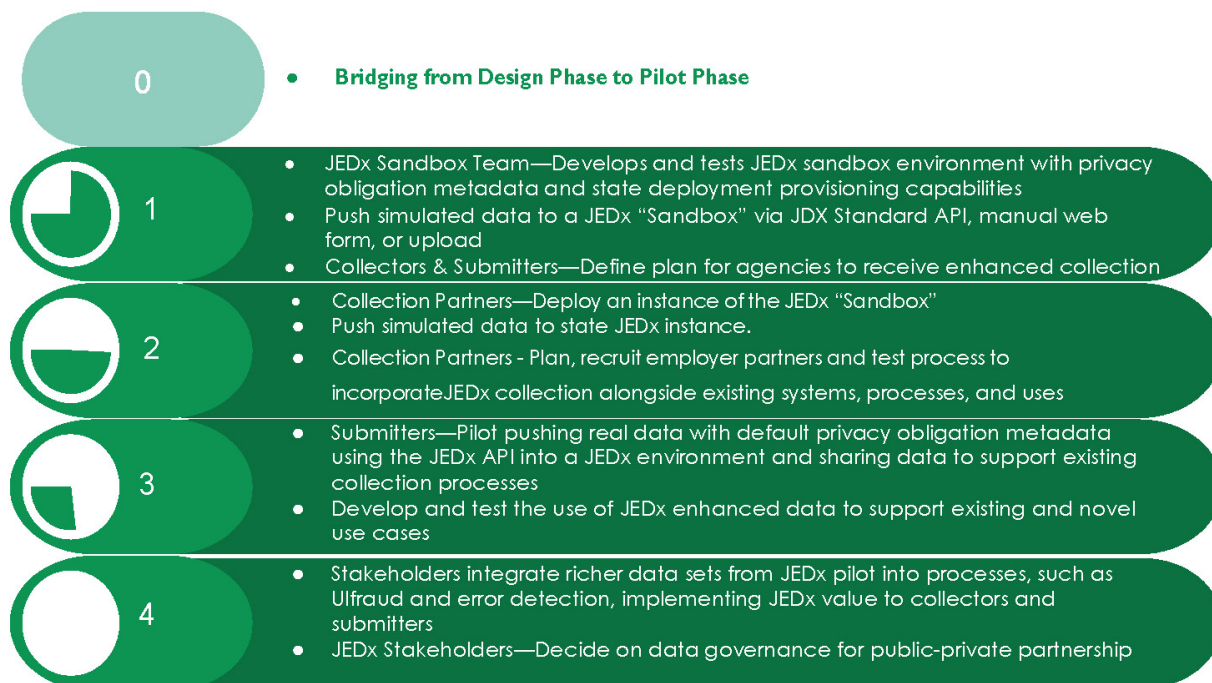
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JEDx Pilot Roadmap

Proposed Pilot Roadmap

0 ● **Bridging from Design Phase to Pilot Phase**

1
- JEDx Sandbox Team—Develops and tests JEDx sandbox environment with privacy obligation metadata and state deployment provisioning capabilities
- Push simulated data to a JEDx "Sandbox" via JDX Standard API, manual web form, or upload
- Collectors & Submitters—Define plan for agencies to receive enhanced collection

2
- Collection Partners—Deploy an instance of the JEDx "Sandbox"
- Push simulated data to state JEDx instance.
- Collection Partners - Plan, recruit employer partners and test process to incorporateJEDx collection alongside existing systems, processes, and uses

3
- Submitters—Pilot pushing real data with default privacy obligation metadata using the JEDx API into a JEDx environment and sharing data to support existing collection processes
- Develop and test the use of JEDx enhanced data to support existing and novel use cases

4
- Stakeholders integrate richer data sets from JEDx pilot into processes, such as UIfraud and error detection, implementing JEDx value to collectors and submitters
- JEDx Stakeholders—Decide on data governance for public-private partnership

The proposed pilots are divided into four stages as shown in the grid above. Milestones at the end of each stage will inform future stages (next page).

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Proposed Pilot Roadmap

Stage 1 Milestones

- JEDx sandbox environment, privacy obligation components, and security infrastructure developed, deployed in a cloud environment, and tested with submitters, including third-party agents.

- Collectors and submitters plan and prepare for JEDx pilot deployment provisioning.

Stage 2 Milestones

- Collection partner deployed JEDx sandboxes tested *with simulated data* pushed via API from pilot submitters.

- Web form submission added to select state pilots based on scope.

- Collectors ready to pilot a defined scale of submissions of JEDx enhanced records alongside existing processes and infrastructure.

- Partners explore multiple options for enhancing their data collection, use, and sharing opportunities, with collaborative agreements on privacy, data management, and security.

- Partners explore data governance and data privacy structures to support chosen data use cases.

Stage 3 Milestones

- Submitters, including third-party agents on behalf of opt-in employers, have successfully pushed real data to the JEDx collection deployment.

- Agencies begin to integrate JEDx data subsets into existing processes.

- Select partners pilot collaborative use options.

- Partners pilot data governance and data privacy structures to support chosen data use cases.

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Stage 4 Milestones

- States have begun to pilot the use of richer data sets made possible by the JEDx architecture.
- High-priority use cases (see *High-Priority Use Cases and Preliminary Data Requirements* from the JEDx Data and Application Priorities Workgroup) take advantage of the richer data sets to enhance a variety of programs. Examples include
  - improved UI administration (for example, through enhanced fraud and error detection);
  - improved HR analytics and management;
  - better job search services and compensation benchmarking;
  - improved analysis of employment outcomes to design more efficient training programs;
  - better analysis of the supply-demand data to enable more accurate alignment of the workforce investment with employer needs; and
  - reduced reporting burden for employers and their third-party agents.
- Plan for scale.

Throughout the pilot, stakeholders will continue developing and implementing a public-private data governance model.

Localized Projects

Parallel to this roadmap, each state and key stakeholder will require their own projects to address existing systems integrations, process improvement planning, and stakeholder engagement to address local variations.

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Privacy Obligation Pilot

Recommendation: Privacy Policy Embedded Data Fabric

The JEDx System Architecture Workgroup recommends development of a **JEDx Privacy Protocol (JPP)** that could be based on Global Education Privacy Standard(GEPS), a standard developed initially to address privacy for P-20 education data. This global set of data privacy obligations (obligations) data structures can be aligned to contractual clauses as well as technical control benchmarks. JPP would include the tagging of data objects with privacy obligation metadata at-rest and in transport. Using this model, JPP allows for organizations to choose the JPP standard suggestions or use other existing standards for privacy obligations (for example, IEEE, NIST, or ISO) to set expectations among stakeholders for appropriate uses of data. Although the GEPS standard was developed initially for student data, it is designed to be extensible to workforce and employer data.

Privacy Obligation Document (POD) Components

1. POD - Privacy Obligation Document: An artifact derived from a paper contract which contains details of the parties involved, the data which can be transferred from one party to another, details of the technical benchmarks which must be adhered to (e.g., encryption levels) and details of any additional parties which may handle the data.
2. POD Lookup Service – Provides a means by which external applications request and obtain the current POD that applies to them.
3. POD Enforcer – Officially the "Data Protection Enforcer Service" this service:
   - Checks that any incoming requests from external applications are referencing their correct POD
   - Uses the rules from the applicable POD to clean the raw data being returned in a request, ensuring that a 'cleansed' data set is returned to the requesting external application.
   - Is placed and configured to honor all payload encryption requirements.

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Technical Workgroup

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About the Heldrich Center

The John J. Heldrich Center for Workforce Development at Rutgers University is devoted to transforming the workforce development system at the local, state, and federal levels. The center, located within the Edward J. Bloustein School of Planning and Public Policy, provides an independent source of analysis for reform and innovation in policymaking and employs cutting-edge research and evaluation methods to identify best practices in workforce development, education, and employment policy. It is also engaged in significant partnerships with the private sector, workforce organizations, and educational institutions to design effective education and training programs. It is deeply committed to assisting job seekers and workers attain the information, education, and skills training they need to move up the economic ladder.

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