Introduction

Every day, the U.S. Department of Labor (DOL) supports workers, job seekers, and retirees, improves working conditions, promotes good jobs, and assures work-related benefits and rights. This vital work produces large volumes of data on worker protection, employment, job training, wages, benefits for workers, and much more. These data are essential to understanding trends and patterns in the labor force, informing decisions around training and skills to obtain or retain a job, and ensuring that businesses and services provide safe, healthy, and fair workplaces.

The Foundations for Evidence-Based Policymaking Act of 2018[1] (Evidence Act) recognizes that data describing Federal program activities, among them the characteristics of program participants, benefit recipients, and our regulated communities, are a critically important asset. Sharing these data among DOL's programs and with our public stakeholders will elicit novel, innovative, and beneficial use cases which bring greater value back to DOL and the people who rely on our programs. While DOL programs must maintain a mission-related focus on defining and creating data that serve as a strategic asset to their specific priorities in program administration, policy, planning, and decision making, we must strive as a Department to ensure that these data can efficiently and effectively be leveraged by the public.

This Enterprise Open Data Plan:
- Establishes the strategies and framework for expanding and improving access to DOL data;
- Implements specific portions of our Enterprise Data Strategy[2];
- Identifies how DOL has used public input to improve our processes, and reinforces our commitment to the public on improving the accessibility and usability of our data assets for public, private, and other Federal data users; and
- Supports alignment across the enterprise of open data actions and goals.

Open Data Plan

This Open Data Plan is composed of six specific strategies that, as implemented, will improve DOL's capacity to share data with the public, ensure that shared data is easier to access and use, and align DOL's component programs with the goals in our Enterprise Data Strategy. Progress in advancing these actions will improve the experience of finding and accessing data for public, private, and Federal stakeholders of DOL programs, result in enhanced data offerings, and better support innovation through efficient and effective data use.

The actions described in this plan can be objectively measured and evaluated to assess progress. This will be used alongside public input to further guide and prioritize development of open data programs and services. This plan concludes with descriptions of recent actions

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[1] https://www.congress.gov/bill/115th-congress/house-bill/4174/text
[2] https://www.dol.gov/sites/dolgov/files/Data-Governance/DOL-Enterprise-Data-Strategy-2022.pdf

and current progress implementing these strategies, demonstrating that they are realistically achievable and bring practical benefits.

Strategy #1: Adopt Enterprise Definitions for "Machine-Actionable" and "Open" Data.
Enterprise definitions are essential to establish consensus expectations and ensure individual efforts are coordinated toward the same goal. We adopt the Data Documentation Initiative's definition of machine-actionable as "information that is structured in a consistent way so that machines, or computers, can be programmed against the structure."[3] Machine-readability is a pre-requisite for data to be machine-actionable, so both characteristics are present in this definition, but emphasize the importance of machine-actionability as it signals considerably more capability for the end user. We define data as "open" if they demonstrate five specific characteristics: data are (1) released without requirements into the public domain; (2) made available in non-proprietary formats; (3) freely and readily accessible; (4) provided in a format that is machine-actionable; and (5) are supported by meaningful metadata or documentation that also meet the prior four criteria. Identifying these five properties is essential to distinguishing which data DOL can appropriately offer as open, enabling objective assessment of how public data offerings and data services meet these guidelines, and ensuring our public stakeholders can be confident in their ability to access and use DOL data.

Strategy #2: Make Open Data Compliant With the FAIR[4] Principles.
Federal data are most valuable when they can be easily found and accessed, and accompanied by documentation and metadata that support informed decisions by potential users on the relevance and utility of data for a specific purpose. DOL has committed through its Enterprise Data Strategy to maximizing the findability and accessibility of data by both humans and computers and improving the public's ability to assess the interoperability and reusability of our open data by improving documentation, migrating towards common data formats and standards, and offering richer metadata. Adherence to these principles is a prerequisite for increasing the comprehensibility and utility of DOL's public data and significantly enhances machine-actionability: the capacity of computational systems to find, access, integrate, and reuse data with minimal human intervention.

Strategy #3: Where Appropriate, Make Data Open by default.
Making data open by default means that DOL is committed to planning, defining, collecting, storing, developing, and managing data across its life cycle with the intent of disseminating it for public use, or ensuring compliance with the presumption of accessibility described in the Evidence Act. This guiding principle ensures that new data collections will incorporate appropriate data standards, validation where necessary, and more robust documentation so that the resulting data will be maximally useful to DOL, as well as others who can appropriately

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[3] https://ddialliance.org/taxonomy/term/198#
[4] https://www.go-fair.org/fair-principles/, as well as references in our Enterprise Data Strategy

access it. When data cannot be made publicly available, DOL programs will seek to design and implement the data collections as if they could become public, both to achieve maximum value from interoperability and reusability within the enterprise, and to anticipate the benefit from emerging use cases for Federal data enclaves, restricted use access programs, and the presumption of accessibility available to the Federal statistical system.[5]

Strategy #4: Align Open Data Services with Customer Needs.

The Executive Order on Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government challenges Federal agencies to align and focus their services to simplify and improve user experience and specifically improve the efficiency and effectiveness of data sharing.[6] DOL will work to ensure that data access, through open data or restricted use access programs, are as transparent and customer focused in their design and implementation as possible. DOL will ensure that input and feedback from customers prioritize how public data services are managed, and how open data are created, formatted, documented, and made available.

Strategy #5: Make open data available in a consistent and predicable way.

Opportunities to innovate using our data's strategic value increase when barriers and complexities in finding and accessing data are decreased. As part of implementing our Enterprise Data Strategy, DOL is prioritizing and promoting practical actions that simplify and increase efficiency in data access. We are emphasizing the importance of delivering data through an Application Programming Interface (API). This will ensure that public data users benefit from a single, simple, and reusable syntax for retrieving data. It will provide notable efficiencies to internal and external data users by allowing them to automate the retrieval of only the specific and relevant subsets of data they need. Data should be made easier to find and access through features such as a common portal that consolidates open data, improved documentation, online and on-demand training materials, and code examples to decrease the time from request to results. Finally, DOL should seek to ensure that our data are suitable for the broadest set of potential applications and supporting automation and machine actionability by offering data in non-proprietary formats such as comma separated values (CSV) or JavaScript Object Notation (JSON).

Strategy #6: Expand appropriate methods for reuse of sensitive data.

The Bureau of Labor Statistics has a longstanding Restricted Data Access program for eligible researchers to gain access to BLS data covered by data protections laws in the Federal statistical system.[7] Outside the Federal statistical system, programs are often limited in the ways they can access, use, and share data with sensitive or non-sensitive identifiable information. There

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[5] See 44 USC 3581(a)

[6] https://www.whitehouse.gov/briefing-room/presidential-actions/2021/12/13/executive-order-on-transforming-federal-customer-experience-and-service-delivery-to-rebuild-trust-in-government/

[7] Who is eligible, what data are available, and how to apply can be found at: https://www.bls.gov/rda/home.htm

are benefits to programs from enabling research, data science, evaluation, and innovative uses of sensitive data, and these benefits can be achieved through appropriate controls. DOL will commit to establishing appropriate methods to better leverage data with sensitive or non-sensitive identifiable information, and to manage those programs transparently with the goal of leveraging the strategic value in those data.

Implementing this Plan

Over the next three years, this plan will guide concrete actions that improve public access to data, consistent with the goals in our Enterprise and Geospatial Data Strategies, further Departmental priorities, and bring a more central focus to customer experience in providing open data to the public. DOL will seek to provide data in ways that increasingly support modern analytical applications, and their reliance on automation to handle data volume, complexity, creation speed, and the consumption demands of data science, AI, and business intelligence. While the strategies in this plan are intended to align and guide open data offerings, significant progress has been made recently. Below are descriptions of recent actions corresponding to each strategy that demonstrate important progress and commitment to this plan, and provide significant enhancements to open data services that will have immediate practical benefit for public data users, DOL programs, and their stakeholders.

Progress in Defining and Assessing Open Data.
DOL is assessing the extent to which current public data adequately meet our definition for "open" and can measure progress in moving towards fuller compliance. DOL has established metrics and measures around data and metadata access supporting a robust understanding of use cases, identifying challenges users face, and characterizing internal and external usage. This information will provide a data-informed basis for open data program management, expansions in available data, and service enhancements. DOL is continuing work to increase the volume of data that meets our open data definition and will add these data to open data services as appropriate.

Progress in Making Data Compliant with FAIR Principles.
DOL maintains and publishes quarterly an Enterprise Data Inventory that offers details concerning much of the data we maintain.[8] This inventory includes tags and keywords from a controlled vocabulary, and offers users a way to search data by aspects of its content, format, origin, and collection.[9] DOL has further enhanced the findability and accessibility of data by creating a consolidated data portal, and significantly enhanced our public-facing API offerings to transition from simple public data offerings towards data-as-a-service.[10] Lastly, considerable effort has gone into ensuring that each data set in our API is supported by machine-readable

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[8] https://www.dol.gov/agencies/odg/enterprise-data-inventory
[9] https://www.dol.gov/agencies/odg/taxonomy
[10] https://dataportal.dol.gov/

and machine-actionable metadata. This will help users to understand what our data signify, how they are produced, how they can be used, and what practical limitations there may be on data use. DOL is working to ensure that available metadata will allow efficient, effective, and informed decisions about whether specific data are suitable for a prospective application.

Progress in Expanding Open Data
DOL's data governance body has been assessing the current state of data through the maintenance of data inventories, the definition and creation of metadata, generation of descriptive statistics, and leading peer-evaluations of data quality. Data governance teams are also reviewing restrictions on access to legacy data and Systems of Record Notices to evaluate processes for identifying data that could potentially be leveraged through restricted use access programs.

Progress in Modernizing and Optimizing Open Data
DOL has established a new API, providing the public with "data-as-a-service" infrastructure. The API allows users to request relevant subsets of data, on-demand, and receive data in their choice of machine-actionable formats. The API uses a consistent syntax for requesting data, enabling reuse of template code to access many different data types. API code can be integrated into widely used programming languages to support automation of data requests, processing, and use. API services are currently accessible through our consolidated data portal, supporting users with explanatory training materials, code templates and examples, video tutorials, and user guides describing options for accessing DOL open data through the API.

Progress in Aligning Data Services with Customer Needs.
 In June 2022, DOL published a request for information (RFI) that invited public input and suggestions on how DOL could best implement features for open data services.[11] This RFI was open for 6 months and comments closed in December 2022. DOL received responses from a wide spectrum of organizations with comments focused on the need to provide timely and accurate data; provide access to additional data sources that would benefit public policy, program analysis, and evidence-based decision making; and suggestions for providing more optimal modes of data access. DOL has used this feedback extensively to create functional requirements and prioritize development of new features for our API and consolidated data portal. We continue to prioritize development of these services based on external stakeholder feedback and internal feedback from our API community of practice, ensuring our programs remain customer focused and evolve appropriately to meet emerging needs. DOL will continue to monitor metrics on internal and external data access and customer perceptions, to seek continuous improvement and increasing the ways in which our data can be a strategic asset for our programs and the public.

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[11] https://www.federalregister.gov/documents/2022/06/15/2022-12510/office-of-the-assistant-secretary-for-policy-request-for-information-on-design-and-implementation

Progress Expanding Appropriate Methods for Reuse of Sensitive Data.
DOL has initiated a research program for restricted-use data through its Chief Evaluation Office.[12] This program complements open data offerings by creating an appropriate path for researchers to seek access to sensitive data to build the evidence base for DOL programs, and for DOL programs to appropriately leverage sensitive data for further research and analytics, expanding the ways in which DOL supports innovation, data-informed decision making, and evidence-based policymaking. In addition, DOL anticipates working with other Federal statistical offices to help implement the presumption of accessibility[13] identified in the Evidence Act, as well as supporting the emerging National Secure Data Service[14] and other Federal data enclaves.

Summary

DOL's Enterprise Data Strategy challenges the Department to "take a comprehensive approach to reframe the role of data that includes reinforcing the importance of designing for quality, accessibility, and utility in infrastructure, ensuring the quality and utility of data are appropriately central to emerging priorities, and maintaining focus on who we serve with our data." This Open Data Plan is an important step towards fulfilling the mandates within our Enterprise Data Strategy. This plan creates a specific linkage, and brings a more central focus, to the relationship between the data DOL can offer through open data and restricted use programs, and the stakeholders who count on the benefit that originates from that. Ensuring that our data can flow through the enterprise and serve the public as a strategic asset advances the management of Government information in important ways. Implementing the strategies in this plan will best enable the goals of promoting entrepreneurship, innovation, evidence production, supporting agency mission, and bringing benefit to all of DOL's core customers.

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[12] https://www.dol.gov/agencies/oasp/evaluation/STRUDL/Engaging/Introduction
[13] 44 USC 3581 (a)
[14] Section 10375 of the CHIPS and Science Act of 2022