Action area 3
Building resilient and responsive state IT systems

Building Resilience:
A plan for transforming unemployment insurance

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States' unemployment insurance (UI) technology challenges pre-date the COVID-19 pandemic. A 2016 Government Accountability Office (GAO) study found that most states (60 percent) believed that their information technology (IT) systems had significant issues that limited their ability to efficiently process UI claims and serve claimants.[70] As of 2019, only 22 of those states had moved the administration of UI from legacy mainframe systems to a modern application technology.[71] Both the GAO and the Department of Labor, Office of Inspector General (DOL-OIG) pointed to the condition of state UI IT systems as a reason that states struggled to pay benefits accurately and timely during the pandemic.[72]

The condition and design of state IT systems contributes to the UI system's vulnerability to fraud. This was especially evident during the massive increase in claims and exponential growth in complex fraud attacks during the pandemic. The development of resilient IT systems that can continuously adapt to changing conditions and integrate evolving fraud prevention technologies needed to protect the program is a critical component of a comprehensive program integrity strategy. Such investments in IT infrastructure protect the system from fraud, while also providing a mechanism to promote equitable access, increase timely access to benefits, and deliver improved customer experience. These IT investments complement targeted antifraud strategies like identity (ID) verification, data analytics, and cross-matching.

[70] Government Accountability Office, *Unemployment Insurance: States' Customer Service Challenges and DOL's Related Assistance*, GAO-16-430 (May 12, 2016) www.gao.gov/products/gao-16-430.

[71] Julia Simon-Mishel and others, *Centering Workers—How to Modernize Unemployment Insurance Technology* (The Century Foundation, October 2020), https://tcf.org/content/report/centering-workers-how-to-modernize-unemployment-insurance-technology/.

[72] For example, the DOL-OIG found that modernized states implemented the PEUC and PUA programs 15 and 8 days faster than non-modernized states during the critical early days of the pandemic. See Testimony of Larry D. Turner, Inspector General, Office of Inspector General, Department of Labor, before House of Representatives Committee on Oversight and Accountability, Subcommittee on Government Operations and the Federal Workforce, *Waste, Fraud, and Abuse Go Viral: Inspectors General on Curing the Disease* (March 9, 2023), www.oig.dol.gov/public/reports/oa/2023/19-23-004-03-315.pdf.

Despite the need for IT modernization in states, such efforts have been challenging due to a lack of state staff capacity or expertise to manage IT projects, and the capacity of contractors to follow through.[73] Funding is another challenge. Apart from the American Rescue Plan Act (ARPA), Congress has not provided significant additional funds to support state IT upgrades. The Department of Labor (the Department) made nearly $400 million available to states between 2011 and 2017, but this was cobbled together from a series of supplemental budget requests; and some states struggled to convert this funding into completed projects.

Technology architecture has also proven to be a significant barrier. The technical term for the brittle and inflexible systems still in use today is "monolithic." Monolithic software is designed to operate as a single unit rather than as a series of independently managed parts. While monoliths may be easier to implement initially, they are more difficult to maintain because the various components cannot be easily changed or replaced without affecting the entire system. This "all or nothing" approach is sub-optimal as it makes it difficult for states to adapt systems quickly and leverage emerging technologies. It also forces states into a choice between maintaining their legacy technology far longer than is preferred or embarking on system overhauls that either fail to deliver desired results or deliver short-lived results that require repeating the overhaul process a few years later.

As laid out in Unemployment Insurance Program Letter (UIPL) No. 11-23, an effective approach to UI IT modernization starts with the understanding that technology is always evolving, and state systems must be responsive to the changing and increasingly complex external environment, including shifts in demand for UI's income support, the creation of new federal programs, demands for data collection, and emerging fraud threats. In line with recommendations from the DOL-OIG to "develop and operate a modular set of technological capabilities,"[74] the Department encourages states to pursue modular and incremental approaches to IT modernization.

[73] Government Accountability Office, *Unemployment Insurance: DOL Needs to Further Help States Overcome IT Modernization Challenges*, GAO-23-105748 (July 2023), www.gao.gov/assets/gao-23-105478.pdf.

[74] Department of Labor, Office of Inspector General, *COVID-19: States Struggled to Implement CARES Act Unemployment Insurance Programs*, Report No. 19-21-004-03-315 (May 28, 2021), www.oig.dol.gov/public/reports/oa/2021/19-21-004-03-315.pdf.

Such approaches involve "breaking down" complex monoliths into smaller, more interchangeable components (i.e., modules) that are easier to change and maintain.

As described below, the Department is making an initial investment of $204 million towards this new approach. Though still sizable, this initial investment was greatly reduced following the Fiscal Responsibility Act recission of ARPA UI funding in June 2023. Additional ongoing resources will be needed at the federal and state levels to evolve towards this more sustainable model.

In addition, using ARPA resources, the Department has piloted new technologies with states and assessed states' technical assistance needs. The Department has leveraged the lessons of these efforts to refine its approach for the coming fiscal year and beyond, with the aim of helping states improve the resilience, performance, and agility of their IT systems.

Strategies

Completed	
3.1. Apply principles of effective pilot program design (GAO-23-105478)	Following GAO recommendations, the Department has implemented best practices in effective pilot design. The Department defines a pilot as a small scale, time-limited test, the results of which can be studied to assess the efficacy, value, and feasibility of a proposed solution. Pilots require testing with people (e.g., users) and a structured approach to gathering and incorporating user feedback into a human-centered and outcome-driven software development process. While the learning goals for pilots may vary, the Department's pilot design includes the following items concerning pilot-related documentation and supporting activities: clearly defined objectives; an evaluation plan; targeted scope; risk assessment and management; and stakeholder engagement and communication. The Department has applied these principles to its existing pilots on responsible automation and government-operated ID verification solutions.

Underway	
3.2. Invest in measurable and agile UI IT modernization through grants (GAO 23-105478)	The Department awarded more than $204 million in grants to support strengthening and modernizing UI systems in 18 states and the U.S. Virgin Islands. States identified at least one of three grant categories that align with the Department's vision for IT modernization: migration from legacy platforms to cloud-based technology; modular and Application Programming Interface (API)-driven approaches; and measurable improvements to the customer experience. States then have up to five years from the notice of award to implement these projects. These grants will focus on translating UI technology changes into measurable improvements in system performance and customer experience. As a condition of receiving a grant, states agree to report quarterly on at least one "desired outcome metric" specific to each category. As part of the effort, the Department will encourage grant recipients to share models, lessons learned, and software modifications with other states to allow them to also benefit.
3.3. Create opportunity for knowledge-sharing and collaboration on open and modular IT solutions	As a next phase of our modernization work, the Department is working to ensure that states have the infrastructure to implement resilient and sustainable technology. Through a collaborative agreement with the National Association of State Workforce Agencies' UI Information Technology Support Center (UI ITSC), and in partnership with the Beeck Center for Social Impact and Innovation, the "Open UI Initiative" aims to change how states build and buy technology, by: (1) establishing a common framework and approach for modular IT system development; (2) creating market-based incentives that drive innovation; and (3) providing more choices for how states invest in technology to meet the goals of the UI program. In Fiscal Year 2024, UI ITSC will establish and lead a Technical Advisory Group (TAG), composed of key experts and stakeholders that represent the many facets of the UI community. The TAG will provide guidance and input on the development of the Open UI framework and help UI ITSC define the core modules to orient around, as well as their related interoperability protocols.

	With the first version of this framework in place, UI ITSC will engage states and vendors to begin sourcing software that aligns with the framework and show traction towards the Open UI Initiative's larger vision, with early adopters starting to contribute to, or using, the emerging solutions before the end of the year.
3.4. Enhance the reliability and accessibility of the Department's UI database management system	The Department operates a foundational database management system for the UI programs through which states provide critical UI data, including statistical samples, to the Department. These data are used for program performance monitoring and oversight, and to determine funding to state agencies. This data management system is critical to the Department's effort to transform the program. The Department has commenced a multi-year modernization of the UI Database Management System. The modernization will transition the system from physical servers to an enterprise cloud-based solution. The project will increase reliability and ease of use for the states, while ultimately reducing maintenance costs; improve state data collection by reducing submission burden with more automation and validation; improve access management to minimize security vulnerability; reduce custom coding and reduce operations and maintenance costs; and modernize the external/public website to improve the user experience and incorporate data visualization capabilities.
Planned	
3.5. Enhance the UI IT Modernization Pre-Implementation Planning Checklist	The Department had previously issued guidance (UIPL No. 11-18) advising that any state undertaking a modernization of a major component of a UI IT system or systems must submit an Employment Training Administration (ETA) 9177 Report. A major component can be a full benefits or tax system, or it can be a significant component subset. The ETA 9177 Report is a comprehensive checklist denoting critical functional areas that states should verify prior to implementation including, but not limited to, technical IT functions and UI business processes that interface with the new system. With this information, ETA will be able to identify any needed technical assistance as states prepare for the implementation of a modernized system and have an assurance that the state's implementation will have a significant likelihood of being successful.

	This requirement was reiterated with the publication of UIPL No. 11-23 on July 13, 2023. As part of the learnings from the ARPA IT Modernization grants, the Department will continually update the ETA 9177 Report checklist, as necessary, and use it to drive improvements.