



Integrated Benefits Digital Hub: NextGen Citizen Services and Fraud Prevention

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Introduction

Reducing the burden on individuals in vital need of federal benefits and services during a difficult life event has challenged multiple Administrations. Safeguarding these dollars against waste and abuse has been even more difficult. These challenges were particularly apparent during the COVID-19 pandemic as citizens and businesses struggled to apply for and receive benefits, such as unemployment insurance, rental relief, and small business loans. At the same time citizens were struggling to apply for aid, an unprecedented level of fraud occurred, redirecting these dollars away from individuals in need and into the pockets of fraudsters.

Life events often make an individual eligible for more than one form of federal assistance, which means that as individuals navigate multiple federal applications, they must repeatedly provide much of the same information. This is time consuming for the individual and often results in inconsistent data across agency programs.

The federal government needs an extensible, scalable model that can deliver seamless cross-agency customer experiences for diverse citizens with varied life circumstances. This model should improve the digital experience for citizens by providing clear direction on the information they need to provide and also improve the functionality required to enable program administrators. For example, it should electronically verify identity, provide easy-to-navigate tools to collect accurate and reliable application data, reuse data already provided, and link to authoritative documentation that program administrators can use in eligibility determinations.

Government and Congressional Actions

Several Administrations have highlighted the need for improved customer experiences when applying for benefits and have used executive orders¹, Presidential Management Agendas², agency directives³, and other mechanisms to drive agencies toward improvements in this area. Congress has contemplated, but not enacted, legislation⁴. While individual agencies have made some strides in improving their benefit application processes, ***almost no progress has been made toward eliminating the need for citizens to go to multiple federal agencies to apply for each individual benefit program.***

A few states, including Michigan and Minnesota, have demonstrated that it is possible to streamline the process for individuals and families in need by using a single, unified application for a suite of benefits. These states capitalized on existing authorities that link eligibility for federally funded state-administered programs such as the Supplemental Nutrition Assistance Program; Special Supplemental Nutrition for Women, Infants, and Children; Medicaid; and subsidized school lunches. In each case, the state created a unified application that collects the necessary information in one abbreviated process, saving both the applicants and program administrators time and improving the consistency of data.

What Is Blocking Federal Government's Efforts?

Only a few benefits administered directly by the federal government have linked eligibility. For example, Social Security retirement benefits and Medicare share eligibility and have a joint streamlined application process. Today, a unified benefits application is not a scalable solution for most federal programs. The federal government has explored other solutions but has not made commensurate progress for four key reasons:

- Multiple Agencies. Many federal agencies provide citizen benefits, but there are few options to create effective cross-agency collaboration that result in tangible shared technology solutions.
- Legal Roadblocks. Legal constraints designed to safeguard citizen privacy mean that agencies cannot easily share citizen data to streamline applications.
- Data Standards. Each agency has different data standards, which are often hard coded into legacy systems, making aligning applications across benefits difficult.
- Legacy Technology. Legacy systems can make it an expensive and technically challenging prospect to introduce citizen-friendly digital services.

Prototyping a New Approach

The federal government requires creative solutions that move beyond the barriers that have prevented transformation of federal benefits delivery and that improve the integrity of payments. However, the government does not *need* to be the entity that enables secure and efficient data linkages between applicants and each individual agency. Federal agencies *could* serve this function, either through a centralized or shared service, but a trusted third party, such as a federally funded research and development center (FFRDC)⁵ could also provide improved digital services and serve as a firewall between citizen privacy and data sharing with federal agencies. This type of construct would ensure that citizens are in control of sharing their data with federal agencies of their choosing while providing an end-to-end experience in completing applications for benefits and services.

The platform that MITRE envisions would: be extensible to all life events; not require changes to agency data standards or IT systems, or a legislative overhaul; and ensure that citizens are always in charge of their data. In 2023, MITRE developed a prototype—the Integrated Benefits (IB) Digital Hub as illustrated in Figure 1—to begin testing a viable solution.

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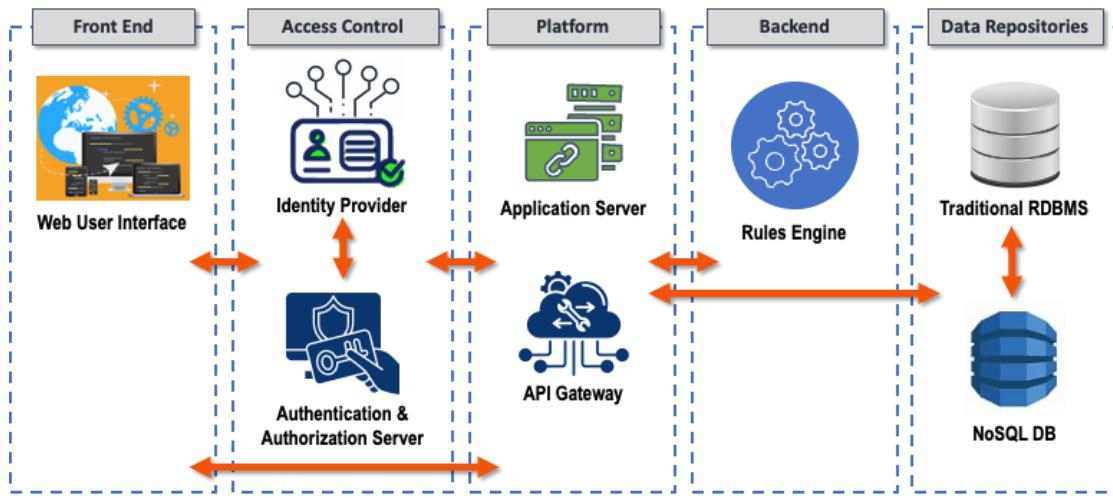


Figure 1: Technical Architecture of the Integrated Benefits Digital Hub

The prototype uses Application Programming Interfaces (API) and microservices to enable functionality for a streamlined digital experience, including:

- Online digital identity verification
- A modern user interface with easy-to-understand questions to improve accuracy in user-entered data, and provide dynamic navigation to collect only the data needed to complete federal application forms
- A digital vault to contain commonly required documents, such as military discharge papers or marriage certificates
- Pre-population of application questions whenever possible using data scraped from documents in the digital vault, which will ensure data consistency and reduce data entry errors in submissions
- Digital connections to authoritative documents, such as tax information commonly required to verify applicant information
- Electronic delivery through a standard API to agencies accepting digital applications and the ability to print pdf files for agencies that are still paper based.

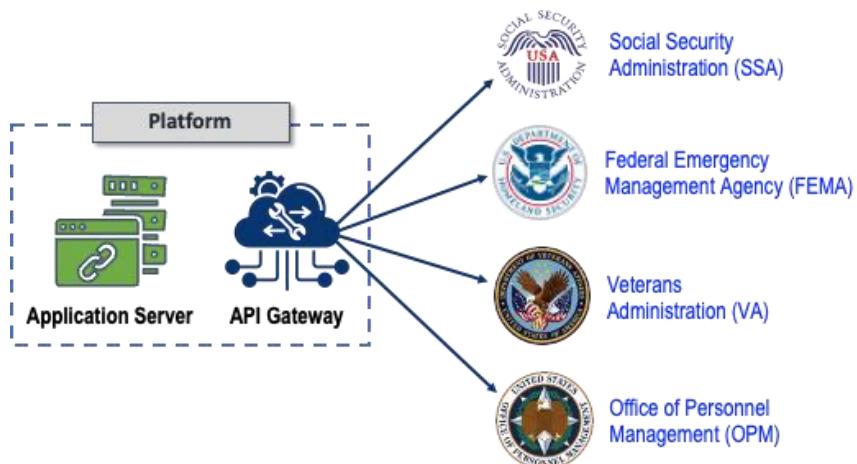


Figure 2: API Delivers Data to Agency Systems

The IB Digital Hub prototype is designed to solve the four key challenges that have prevented progress in improving the delivery of benefits. First, because it can sit outside of government, it can deliver applications to agencies **without the need** for cross-agency infrastructure, Memoranda of Understanding, or complex agreements to facilitate inter-agency collaboration or technology sharing. Second, the citizen chooses which agencies to share his or her data, and only the data required for a specific application is delivered to the agency responsible for determining benefit eligibility. At no point do agencies share data with one another, which avoids the administrative burden associated with data-sharing agreements.

Third, the prototype uses a rules-based engine to deliver data complying with an individual agency's data standards, ensuring that each agency receives data to its specifications and without the need for agencies to migrate to a different or unified data standard. Finally, the prototype is designed to work with agency legacy systems by delivering data through an API, as shown in Figure 2. This means agencies can transform customer experiences without requiring an overhaul to agency systems or disrupting ongoing system modernization plans.

Reducing Fraud and Supporting Program Administrators

In addition to improving citizens' experiences in applying for benefits, agencies must also prevent fraud and make business processes, such as eligibility decisions, more efficient. The IB Digital Hub prototype includes the technology needed to accomplish both of these goals.

- Reducing Identity Fraud. The IB Digital Hub uses government-approved online identity verification tools, which could accelerate agency adoption of these tools and combat fraud. During the pandemic, when New York began using an online identity verification tool, applications for Pandemic Unemployment Assistance declined by 89 percent. While this could indicate that some eligible applicants were discouraged from applying, verification likely blocked rampant use of synthetic identities. Five states using the same tool also found that 50 percent of people who had already filed Unemployment Insurance benefits applications did not try to confirm their identities when another application was initiated in their name. This pattern suggests that fraudsters using stolen identities were deterred from successfully completing an application⁶.
- Reducing Rework from Application Errors. When an agency program administrator finds an error in an application—for instance, the same Social Security number accidentally entered for both the applicant and a deceased spouse—an application either needs to be returned to the applicant for a correction or the administrator must research the information. Automated data validations, as well as reuse of data from authoritative documents such as military discharge papers, can reduce the risk of human error that often occurs when filling out applications. Our prototype would also ensure applicants use the most up-to-date application rather than a deprecated form returned by a search engine. Using outdated forms is another common problem agency officials observe and that causes rework for them and the applicant.

- Making Accurate Eligibility Determinations. In addition to accurate data, many applications require the submission of evidence, generally in the form of authoritative documents such as income statements, marriage certificates, or military discharge papers. When documentation is not included in an application or does not meet standards—for instance, it is a copy of a marriage certificate rather than an original with a raised seal—the result is additional work for the administrator and the applicant. By linking to real-time sources of authoritative administrative data and provisioning verified electronic documents, program administrators would receive more complete applications, enabling faster and more accurate decisions. For example, applicants providing consent to view data from personal accounts of authoritative administrative data, such as a checking account or employment documentation, would offer program officials more transparency into the accuracy of submitted application information. This could potentially streamline application verifications while reducing the risks associated with applicant self-attestation.

Finally, a lesson learned from the pandemic was the need for a strong partnership between the Inspector General (IG) community and agency program officials to identify and quickly share information on fraud risk patterns. The IGs have authority to match data across agencies to detect abusive patterns using identity. Delivering identifying data that is consistent across several benefits programs could strengthen IG monitoring, allowing for the detection of fraud-risk anomalies that could in turn be flagged for agency preventive action.

Early Proof of Concept Testing Shows Promising Results

MITRE conducted cognitive testing of its prototype to assess its potential to reduce administrative burden on applicants. After establishing a baseline of administrative burden for applicants of a current federal benefits program, MITRE researchers asked 27 testers who demographically matched those in the baseline to use the prototype to apply for the same federal benefit. Testing found a statistically significant reduction in administrative burden compared to the baseline, with some participants noting that the effort to complete the application was lower compared to the agency application pathway.

In a second assessment, our research team applied the Paperwork Reduction Act (PRA) to quantify the potential burden reduction for applying for spousal survivor benefits and Veteran burial services. MITRE used the PRA estimates of burden that each agency publishes in its application forms as the baseline and, in one case where the application can only be submitted over the phone or in person, the average phone wait time published by the agency. MITRE then identified the common data elements across three survivor benefits applications and one burial services form. Almost 54 percent of the data elements were in common across the applications, meaning that data entered once would be reused and pre-populated by the prototype.

After reducing the potential time savings by 25 percent since each data element would be entered once by the applicant, MITRE found that the total time a citizen spent on these applications could be reduced from 171 minutes to 83 minutes. Data reuse and

pre-population would also provide more consistent data across each application, which could reduce the potential for rework by the applicant and program administrator, and also reduce improper overlapping payments.

In addition, preliminary questions built into the IB Digital Hub would exclude sections of forms not relevant to the particular situation of an applicant, saving the applicant time reading those sections and determining whether they needed to respond⁷.

Next Steps and Recommended Actions

Agencies need opportunities to safely experiment with new technology that can radically transform the experience citizens have with government while also improving program administration. We offer the following recommendations to help agencies make progress towards this transformation:

1. Pilot the IB Digital Hub prototype and gather lessons learned that would form the requirements for a production-ready solution.
2. Identify opportunities for agencies to modernize internal business processes and policy to maximize a positive digital experience for citizens.
3. Task a public-private consortium of stakeholders to develop options for the business model for delivering a long-term production solution—be that a centralized or shared service or trusted third-party approach. The consortium could weigh the benefits of migrating a solution to private industry, articulate the level of government ownership or oversight, and consider funding options while prioritizing citizen needs.
4. Task a similar consortium of experts to research, vet, and publish guidelines, standards and best practices for the verification of authoritative electronic documents to guide the government in adopting appropriately robust approaches. A range of technologies currently exist to verify an electronic document, depending on the particular situation. They include: digital signatures on an employee's paperwork to retire from federal service, electronic watermarks on a marriage certificate, the use of blockchain to show lineage of ownership, and real-time access through secure APIs to government or personal accounts. These guidelines could aid the government in transitioning away from paper requirements to receiving electronic ones, which can save time and administrative cost.

Note

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About The Authors

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Dr. Laura Leets is an accomplished researcher, teacher, and mentor. She currently serves as an innovation lead and senior principal scientist at MITRE. In this leadership capacity, she works with researchers to conduct important, transformative, and impactful projects for the government. She also serves as an adjunct professor at Georgetown University's Communication, Culture, and Technology Program and previously spent a decade as a Professor of Communication at Stanford University.

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Source for the Images: Marge Britt (MITRE)

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Endnotes

¹ Exec. Order No. 14058. *Executive Order on Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government*. December 13, 2021. Available from: <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/>.

² Performance.gov. *Improving Customer Experience with Federal Services*. Available from: <https://trumpadministration.archives.performance.gov/CAP/cx/>.

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⁴ Congress.gov. H.R.4616 – 117th Congress (2021-2022): *Disaster Survivors Fairness Act of 2022*. November 17, 2022. Available from: <https://www.congress.gov/bill/117th-congress/house-bill/8416?loclr=cga-bill>.

⁵ U.S. National Science Foundation. *Master Government List of Federally Funded R&D Centers*. Available from: <https://www.nsf.gov/statistics/ffrdclist/#agency>.

⁶ U.S. National Science Foundation. *Master Government List of Federally Funded R&D Centers*. Available from: <https://www.nsf.gov/statistics/ffrdclist/#agency>.

⁷ Potential time savings from not needing to review all sections of a form and determine whether each section was relevant was not included in the estimated time savings.