

Service Modernization: IT Modernization Plan, 2020 Update

Social Security Administration
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Securing today
and tomorrow

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Message from the Commissioner

The fundamental principle that drives my decisions as Commissioner of the Social Security Administration (SSA) is to improve our service to the millions of Americans who expect and deserve timely and accurate help from us. Some of the changes we need to make involve updating our infrastructure to take advantage of modern technology so we can provide employees in our local offices with effective, easy-to-use tools that help them do the job well. As the COVID-19 pandemic has underscored, we must also give you additional online, remote service, and self-service options that you expect from organizations today.

While these tools and alternate service options depend on modern technology, many of our systems are more than 30 years old. In fiscal year 2018, the agency initiated an *Information Technology (IT) Modernization Plan* to replace our older legacy systems and the technologies and infrastructure they rely on with updated technology that enhances our capabilities. Over the past two years, our employees have made real progress in fixing many of our core technology issues, but we still have work to do.

I have been committed to harnessing technology opportunities since day one when I asked my Chief Information Officer to review our *IT Modernization Plan* to ensure it focuses on improving our service and is responsive to the evolving needs of the agency. To help with that review, I also appointed a Chief Business Officer to make sure that our employees who are responsible for serving you have input into the technology and services we are delivering.

As a result of this review, I am happy to present our *IT Modernization Update*, which builds on the progress we have made over the past two years and reflects input from public and private technology experts, our frontline employees, and most importantly from our interactions with you, the public we serve.

Improving our services online, over the telephone and in our local offices is central to this update. In addition, the service options we offer you must be both secure and easily accessible. Currently, it is too hard for many of you to securely access our online services, which is why I have made improving our online account registration process foundational to our modernization efforts.

We will continue to review our IT Modernization plans to make sure that they are flexible enough to keep up with rapid technology change and future business needs so we deliver on your expectations.

Andrew S. Saul
Commissioner

Message from the Chief Information Officer, the Deputy Chief Information Officer for Information Technology (IT) Modernization, and the Chief Business Officer for IT Modernization and Digital Services

In October 2017, SSA initiated and executed a multi-year *Information Technology (IT) Modernization Plan* to reorient our customer-focused systems and business processes, enabling us to provide faster and more efficient services to the public through the customer's preferred service channel. That plan included activities to deploy modern technology, simplify policy, and streamline workflows to reduce burden on the public and to meet the public's expectation that we provide convenient and secure digital service options.

We recently reviewed the *IT Modernization Plan* to incorporate input from our front-line employees and ensure that our modernization work aligns with our efforts to improve service. As a part of this review, SSA formed a team of front-line specialists to review the existing plan, prioritize deliverables that provide the most benefit to the public, and supplement the existing plan with additional deliverables they felt would have a significant impact on the public and the employees who serve them. Based on this review, we developed the *Service Modernization: IT Modernization Plan, 2020 Update* to accelerate the delivery of modern software and better leverage technology that improves service and provides the public more and better self-service options.

In the second year of our five year modernization program we accelerated our modernization through incremental delivery of software and institutionalized agile software development processes. Our progress over the past two years has substantially improved the public's and employees' customer experience, which includes:

- Improving accuracy and timeliness of decisions;
- Preventing improper payments across all Federal benefit paying agencies;
- Providing online notices for the Cost-of-Living Adjustment through a **my Social Security** account;
- Consolidating data from multiple sources;
- Improving business processes for processing on-the-record hearing decisions;
- Significantly improving an interactive voice response claim status application on the National 800 Number to provide automated and timely self service to the public; and
- Implementing the Insight application nationwide in all hearing offices to increase policy compliance of hearings decisional notices.

At the start of our third year of the modernization effort, Commissioner Saul created the office of the Chief Business Officer to ensure improved focus on the customer service aspects of the IT modernization effort. The Chief Business Officer collaborated with the existing team to refocus our efforts to benefit our customers by:

- Providing the public more service options and allowing them to use their service channel of preference;
- Developing systems that enable the public to interact with us across all service channels;
- Allowing our technicians to complete more transactions at first contact; and,
- Ensuring that the public receives relevant and timely information.

Through the newly established Service Delivery Domain we are working to provide the public with more options to interact with us via electronic services without the need to visit a field office or speak with a teleservice representative. To assist customers in the transition to automated transactions, we are building additional online services, improving and expanding automated services available through our National 800 Number, and providing additional self-service and expedited services in our field offices.

This update highlights our progress to date and outlines many of the IT Modernization initiatives underway to ensure our use of technology continues to align with agency efforts to improve customer service. With your continued support, we will improve the service we provide to millions of customers across all service channels.

Rajive Mathur
Deputy Commissioner of Systems & Chief Information Officer

Sean Brune
Assistant Deputy Commissioner of Systems and Deputy Chief Information Officer for IT Modernization

Kim Baldwin Sparks
Chief Business Officer for IT Modernization and Digital Services

Service Modernization: IT Modernization Plan, 2020 Update

2017 IT Modernization Plan: A Business and IT Journey

We initiated our multi-year *Information Technology (IT) Modernization Plan* in October 2017 to improve our IT in support of our mission. Our modernization effort has focused on replacing aging systems with more effective software, retiring old technology, improving our IT development processes, and migrating applications to a modern cloud platform. The plan has also focused on modernizing our IT infrastructure to develop new business capabilities, remediating gaps in our legacy systems to reduce manual workloads, and creating new online services to improve the customer experience.

To execute our plan, we grouped IT investments into domains along business and technical lines. The business domains represent the core business systems we use to serve the public:

- Benefits (initially divided into Title II and Title XVI);
- Communications;
- Disability (claims processing);
- Earnings; and,
- Enumeration.

The technical domains represent IT needs that cut across all of our IT systems:

- Cybersecurity;
- Data; and,
- Infrastructure.

Since the plan was first initiated in late 2017, and with \$370 million in dedicated appropriations from Congress, we have delivered on foundational modernization needs including:

- Modernizing multiple database infrastructure and support capabilities;
- Improving access to master file data to allow the eventual retirement of legacy software;
- Consolidating and eliminating duplicate data;
- Expanding our enterprise data warehouse; and,
- Implementing machine learning to assist in streamlining processes.

By modernizing our infrastructure, we improve the speed and accuracy of our applications, ensure that we are working with the most up to date information, require customers to provide or update information less often, and ensure that information and data is shared across all applications.

In addition to our foundational modernization work, we have also delivered modern applications and user interfaces to the public and our frontline employees to improve service such as:

- Releasing the Hearing and Appeals Case Processing System (HACPS) – a modern, integrated, national claims processing system that supports workload sharing to better deliver high quality decisions to the public faster;
- Expanding the Internet Social Security Number Replacement Card (iSSNRC) application – an online application that allows customers to request a replacement of an existing Social Security Number card, submit the legally required evidence, and receive the card to a validated address without the need to come to a field office; and,
- Delivering more services online such as Old-Age, Survivors, and Disability Insurance Cost of Living Adjustment Notices.

Service Modernization: IT Modernization Plan, 2020 Update

When we issued our plan in 2017, we noted that it was a living document that we would update based on agency needs, changes in technology, and lessons learned from our experience as we implemented the plan. Building on the foundational work of our first two years, this document provides an update to our *IT Modernization Plan* to enable us to serve the public quickly and effectively, with a focus on delivering measurable improvements in the services that we provide to our beneficiaries.

Key changes that are reflected in the update include:

- Expanding the plan to include additional investments focused on direct service delivery, including the establishment of a new Service Delivery domain;
- Refining our governance and development methodologies to include the Chief Business Officer (CBO) and ensure we are working on projects that deliver the greatest value to the public; and,
- Revising our IT project roadmaps to reflect the expanded scope and renewed focus on improving service to our customers.

As we entered our third year of execution, we began a review of our plan that incorporated input from our frontline employees, public and private sector experts, our interactions with the public, and Commissioner Saul's emphasis on direct service delivery. As a result of this review, we identified additional opportunities to build on our IT modernization progress.

To modernize business functions and focus efforts to improve service, Commissioner Saul established the role of CBO. The CBO works in partnership with the Deputy Chief Information Officer for IT Modernization to help ensure our IT initiatives are delivering on business needs and customer expectations. Maintaining and strengthening a collaborative partnership between IT and business needs is at the core of our customer-focused modernization.

Based on input from the CBO, as well as front line employees, public and private sector experts, and our interactions with the public, we have increased the scope of our IT modernization program.

Delivery

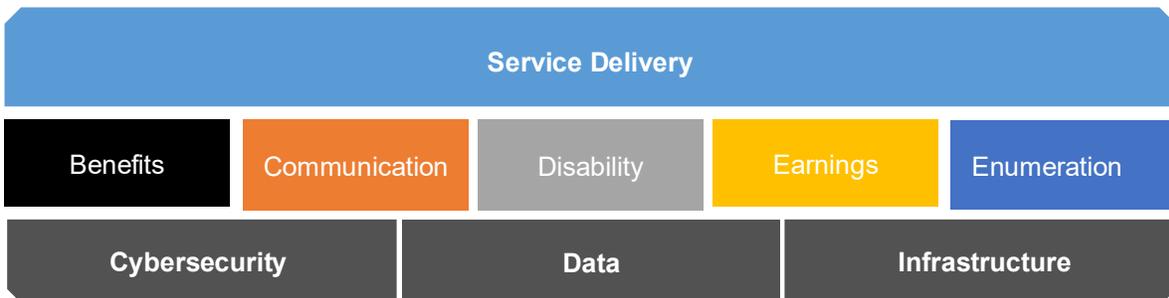
To execute our plan, we grouped IT investments into domains along business and technical lines. The initiatives outlined below highlight modernization efforts within our updated domains. This is not an exhaustive list of the agency's IT modernization efforts, and the *Service Modernization: IT Modernization Plan, 2020 Update* will continue to evolve as circumstances, challenges, and opportunities present themselves.

We grouped IT investments into domains along business and technical lines. The business domains represent the core business systems we use to serve the public:

- Service Delivery
- Benefits (initially divided into Title II and Title XVI);
- Communications;
- Disability (claims processing);
- Earnings; and,
- Enumeration.

The technical domains represent IT needs that cut across all of our IT systems:

- Cybersecurity;
- Data; and,
- Infrastructure.



IT Modernization Domains

Business Domains

Service Delivery Domain

To underscore the importance of IT modernization as a foundation for improving service to the public, we added a new domain to coordinate improvements across all service delivery channels. Some of these products were already in development but outside the scope of the IT modernization investment. The Service Delivery Domain, in collaboration with other domains, will focus on expanding and streamlining self-service channels for our customers while also improving tools used by our technicians.

New Additions:

- **Appointed Representative (AR) Portal** - Provides additional self-service options for ARs, AR support staff, and claimants to conduct AR-related business online.
- **Benefit Entitlement Center (BEC) Plan & Prepare** – Expands current online retirement planning tools to provide customers with scenario planning capabilities using actual earning histories.
- **Visitor Intake Process rewrite (VIPr) Express Services** – Enhances field office check-in kiosks, and streamlines workflows for the most common service requests.
- **Claims Status Tracker** – Improves our online self-service experience by modernizing how customers receive information on pending claims and appeals.
- **Mobile Applications** – Increases mobile self-service capabilities to expand our outreach to customers preferring online options. The mobile capabilities will provide another method for the public to manage their relationship with the agency, take actions to make changes to their records, and receive personalized information through the convenience of their mobile smart device.

	SERVICE DELIVERY	
Domain Focus	Key Investments	Expected Value
Expand and streamline self-service channels for our customers	AR Portal	<p>Allows customers to provide and receive information electronically with the agency.</p> <p>Improves quality, accuracy, and processing time for claimant actions.</p> <p>Automates and improves the fee process to ensure that representatives are paid timely and accurately.</p> <p>Expands eFolder access and improves the registration process.</p>
	VIPr Express Services	Reduces customer wait and interview times.
	Debt Claims Status Tracker BEC Plan & Prepare Mobile Applications	<p>Reduces need for customers to visit an office or call on the phone.</p> <p>Reduces office and phone wait times.</p> <p>Expands access to services outside of live-agent service hours.</p>
	Enhance and modernize interactive voice response (IVR) services	<p>Reduces customer wait time to speak to a live agent.</p> <p>Reduces customer transaction time with a live agent.</p>
Improve tools used by our technicians	Technician Dashboard (TED) Customer View	<p>Improves on the consistency of customer experience.</p> <p>Reduces time for a customer to successfully complete a transaction with a live agent.</p>

Benefits Domain

Shortly after publishing our *IT Modernization Plan* in 2017, we merged the Title II and Title XVI Domains into the Benefits Domain to support our business vision for a consolidated claims experience. The Benefits Domain is focused on streamlining the benefit application process to provide a single, unified experience. By creating a unified experience, we will be able to provide our customers with an experience that lessens the information they must give to the agency, reduces the number of times the agency must contact them, and reduces the time they must wait for the agency to process their claim or action.

New Addition:

- **Enhance Processing Center (PC) Automation**

Benefits Domain		
Domain Focus	Key Investments	Expected Value
Streamline the benefit application process to provide a single, unified experience	Consolidated Claims Experience	<p>Reduces the need for customers to provide redundant information.</p> <p>Improves timeliness of customer claims processing.</p> <p>Reduces the need for customers to be recontacted by agency technicians.</p> <p>Ensures entitlement/eligibility to all programs for which the claimant qualifies.</p>
Modernize the evidence portal	Evidence Portal	Increases accuracy and improves timeliness of benefits processing.
Automate manual actions	Enhance PC Automation	<p>Reduces the need for Customers to be recontacted by technicians.</p> <p>Increases efficiency and reduces improper payments.</p>

Communications Domain

The Communications Domain will continue expanding and automating customer communications, including increasing the inventory of notices available online. The Communications Domain will expand the agency’s use of texts and emails to communicate with the public in the customer’s preferred communication channels,

COMMUNICATIONS		
Domain Focus	Key Investment	Expected Value
Expand and automate customer communications	Customer Communications Management	<p>Provides the public with consistent look and feel from notice to notice.</p> <p>Increases the ability to communicate with customers in their preferred delivery channel.</p> <p>Increases the speed in which employees can respond to customer questions.</p> <p>Expands beyond paper notices (e.g., text, email etc.) to increase and keep customers in the digital service channel.</p>

Disability Domain

The Disability Domain continues development and implementation of modern, national claims processing systems that seamlessly interact with each other from initial claim filing through final decision. The domain is also working to bring decision support tools using Artificial Intelligence technologies, machine learning, and predictive analytics to many aspects of the disability determination process in order to improve decisional accuracy and policy compliance. The Disability Domain will expand to include modernization of several processes that are currently manual or paper-based, and expand online customer communication options.

These enhancements will reduce technicians' manual actions, improving payment accuracy, and transparent processing. The result will be a more efficient, accurate system that will reduce how long a customer must wait for a disability determination, ensure that all customers nationwide have the same experience, and reduce how often the customer must interact with the agency. By being more transparent, we keep the customer informed of what action we are taking and what they can expect from us.

New Additions:

- **Continuing Disability Review (CDR) Internet Portal** - Modernizes both medical and work-related CDRs;
- **Electronic Disability Collection System (EDCS)** - Eliminates electronic case processing exclusions that result in paper-based claims processing;
- **Voice to Text** - Enables automated real-time transcription of a hearing; and,

Disability Domain		
Domain Focus	Key Investments	Expected Value
Enhance accuracy of disability determinations and decisions.	CDR Internet Portal	Reduces the need for field office visits.
	EDCS	Eliminates paper-based processes.
	IMAGEN Insight	Provides claimants with more accurate and timely decisions. Improves accuracy and timeliness of decisions.
Streamline the disability determination process.	HACPS	Provides claimants with more accurate and timely decisions.
		Improves accuracy and timeliness of decisions.

	Disability Domain	
Domain Focus	Key Investments	Expected Value
	Voice to Text	Eliminates the need and associated costs for manual monitoring and recording of a hearing.

Earnings Domain

The Earnings Domain will continue to focus on providing employers with self-service features, real-time communication, and data transparency while improving data quality, reducing paper processes, and automating manual exceptions. As a result, the public will have faster, more accurate posting of their earnings for tax and claims processing actions, and it reduces the need for the customer to contact the agency to rectify earnings issues.

New Addition:

- **Additional Earnings Record Correction Enhancements** – Provides online service options for customers who need to correct their earning records.

Domain Focus	Earnings Domain	
	Key Investments	Expected Value
Streamline and expand customer self-service for wage and earnings-related transactions.	Employer Wage Reporting Journey	Posts earnings faster, and more accurately for customer's tax or benefits calculations.
Improve the speed of processing earnings records and improving access to submission and correction procedures.		Reduces need for the customer to interact with the agency to rectify earnings issues.
Streamline and automate requests from the public to correct the number holder's earnings record.	Earnings Record Correction	Reduces customer visits to Field Office and reduces calls to SSA. Speeds corrections to earnings records to support quicker claim processing.
Consolidate technician queries to aid in researching customer retirement and disability claims.	Web-based application integrating all earnings queries.	Reduces technician processing time and claimant's in-office time.

Enumeration Domain

The Enumeration Domain will continue to focus on expanding the functionality of online enumeration services, expediting Social Security card processing, and improving death reporting and processing. As part of this effort, we will support the ability for VIPr to provide express replacement card service to improve the customer in-office experience and reduce application times.

	ENUMERATION	
Domain Focus	Key Investments	Expected Value
Expand online service functions.	iSSNRC	Reduces the need for customers to visit field offices.
Expedite processing of Social Security cards.	Online Social Security Number Application Process	Reduces customer in-office wait time.
Improve death reporting and processing.	Updating of historical death records	Reduces improper payments.

Technical Domains

Cybersecurity Domain

Our Cybersecurity Domain aims to protect sensitive information for nearly every member of the public, while also making our Digital Identity processes intuitive for the public to use across all service channels. Our strategy is to maintain a highly effective cybersecurity program, to protect against security threats, and comply with federal policies and regulations, including the National Institute of Standards and Technology Cybersecurity Framework. Continued growth of the program and resiliency of the network is critical to ensuring the financial stability of millions of beneficiaries, and enables uninterrupted availability of our network, systems, and IT resources.

CYBERSECURITY		
Domain Focus	Key Investments	Expected Value
Digital Identify for All	Digital identity for: <ul style="list-style-type: none"> • Individuals • Business and Government • IVR 	Covers 100% of the population that wants to conduct business online. Improves digital customer journey. Expands authentication options to customers.
Secure digital service capability for all SSA business	<ul style="list-style-type: none"> • Identity, Credential and Access Management • Federation <ul style="list-style-type: none"> - Federal Community - Other Governments - External Organizations 	Increases use of digital self-service options, eliminates redundancy and increases protection of personally identifiable information.
Better service delivery, citizen privacy, and lower risk	<ul style="list-style-type: none"> • Identity Online Proofing • Identity in Person Proofing 	Provides a dynamic solution to identify, verify and authenticate SSA customers Replaces static and outdated verification processes.

Data Domain

The Data Domain will continue to provide access to customer-centric, integrated enterprise-level data within a secure, standardized, and common architecture that supports daily operations and fact-based decisions. We will integrate the data in the agency's largest programmatic data stores and leverage the benefits of modern systems and access methods to provide a single data view.

DATA		
Domain Focus	Key Investments	Expected Value
<p>Recognize and manage data across organizational and technological boundaries.</p> <p>Standardize information architecture and processes to support optimal data sharing and process integration for internal and external customers.</p> <p>Promote transparency of information available through shared services and secure against unauthorized access.</p> <p>Provide a single version of the truth through data that is timely, complete, and consistent enabling business insight and data-driven customer-centric decisions.</p> <p>Provide flexible data access and data management architecture promoting data transparency, reducing data redundancies, and improving data accuracy.</p>	<p>Person Information - Enterprise-level, authoritative data source for client-related information that eliminates the redundancy and inconsistency in the collection and storage of this data.</p> <p>Enterprise Data Warehouse - Holistic enterprise-wide ecosystem with a modern data management service and platform to support Management Information /Business Intelligence and Advanced Analytics.</p> <p>Master File Data Access - Simplified access to Master File data.</p>	<p>Provide customers with an accurate picture of their information.</p> <p>Improves customer service by establishing the foundation for a 360-degree view of our customers.</p> <p>Conducts business more efficiently and effectively through automation, data consolidation, and improved data accuracy.</p> <p>Provides access to consolidated enterprise data enabling more efficient and consistent decision-making, and optimization of business processes.</p> <p>Provides more modern access methods to existing programmatic data.</p> <p>Provides capability to build relationships amongst the agency's data to better support modernized business processes</p>

Infrastructure Domain

The Infrastructure Domain provides infrastructure platforms necessary for deployment of IT Modernization solutions; and, actively supports related initiatives to increase process automation, improve system development methodologies and improve customer service in a digital age for our employees and for the public. Through the Agency Cloud Initiative, we continue to augment our traditional infrastructure for flexibility and cost efficiency. Our Back Office Modernization is adopting modern services and migrating self-managed infrastructure and services to a managed service for back office support (e.g., email, office productivity, and collaboration tools) so agency resources can focus on meeting our priorities. DevOps is integrating development and operational teams to promote collaboration and innovation during the software development process for rapid software deployment to meet customer needs. In collaboration with customers and enterprise architecture, Platform Transition initiatives are analyzing the use of relevant technologies for optimum software, hardware and other technical efficiencies for sustainable and reliable modernized systems.

	INFRASTRUCTURE	
Domain Focus	Key Investments	Expected Value
Modernize IT infrastructure options Increase process automation Enhance tools and automated processes for deployment of customer software applications.	Agency Cloud Initiative Back Office Modernization Enabling DevOps	Allows for greater and more modern technology solutions to serve the customer. Redirects agency resources to focus on meeting our priorities by adopting modern services and migrating self-managed infrastructure and services to a managed service for back office support. Improves reliability of systems that we depend on to deliver services to the public. Speeds delivery of IT solutions to address customer needs.

Conclusion

As with the 2017 plan, this update is a living document. Our first and foremost goal is to improve service to the public, and we will continue to regularly review the plan to make sure we are delivering on that goal.