



**MODERNIZED IRS
OPERATIONS**



**TAXPAYER
EXPERIENCE**



**CYBERSECURITY
& DATA
PROTECTION**



**CORE TAXPAYER
SERVICES &
ENFORCEMENT**

IRS Integrated Modernization Business Plan

April 2019

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1.0 MESSAGE FROM THE COMMISSIONER AND DEPUTY COMMISSIONERS

Information technology is critical to the health and security of our tax system, and as Commissioner and Deputy Commissioners of the IRS, we're committed to making sure the IRS becomes the best it can be. Modernizing the agency's infrastructure is one of our top priorities. To that end, we fully support our Chief Information Officer's plan and look forward to leading the agency through this multi-year transformation.

The IRS is important to every American, and every American is important to the IRS. The values of hard work and serving your community permeate the IRS. We carry these values with us each day; and, even though the IRS is a large institution, it's run by people who care.

During our time working in both the private and public sector, we have repeatedly seen the IRS work to quickly implement major tax law changes under demanding deadlines. We've also seen the IRS's aging infrastructure and competing demands hinder our ability to improve taxpayer services. If providing high-quality, personalized service is key to helping taxpayers understand and comply with their filing and reporting obligations, then modernizing the information technology that makes those interactions possible is the way we will deliver.

This plan is built on the need to improve the taxpayer experience, by modernizing core tax administration systems, IRS operations and cybersecurity. As the nation's tax agency, we're responsible not only for collecting over 90 percent of all federal revenues but also for protecting hundreds of millions of taxpayer accounts every minute of every day. We can't always predict the future, but we can be transparent and open about what we can and must do in the near-term.

We all know that advances in technology will require adjustments over time and that challenges lie ahead. If and when disaster strikes, the story shouldn't be that a system went offline but rather how quickly we recovered and resumed normal operations. Keeping up with technology isn't easy, but we're confident that with this plan, the IRS will continue making critical improvements that will enhance security, efficient operations, and the taxpayer experience this year and for years to come.



Charles P. Rettig
Commissioner of
Internal Revenue



Jeffrey J. Tribiano
Deputy Commissioner
for Operations Support



Kirsten B. Wielobob
Deputy Commissioner for
Services and Enforcement

2.0 MESSAGE FROM THE CIO

Every day, private-sector companies introduce new technologies that enhance how people conduct their business and raise expectations of the services they should receive. We expect the services we receive from our government to keep pace. This belief rings particularly true for the IRS. Taxpayers expect to access their sensitive financial information securely and easily, find and understand complex tax information from any device, and to resolve issues quickly, proactively, using a variety of self and assisted services.

The IRS Integrated Modernization Business Plan positions the IRS to transform the customer experience and meet these expectations. The IRS processes trillions of tax dollars and hundreds of millions of interactions every year and adjusts routinely to an ever-changing set of tax rules and regulations. However, it is increasingly difficult to meet taxpayer expectations and deliver upon our growing mission without extensive changes to our core tax systems. Our legacy computing infrastructure cannot keep pace with the desire for instantaneous data, real-time interactions, and other customer-centric services. And the cost to operate our current technology ecosystem continues to increase. Our ability to successfully modernize our information technology foundation is critical to our ability to continue to deliver the IRS mission in a cost-effective way.

Modernization is more than the replacement of aged infrastructure, software products and outdated code. To endure, modernization must transform all aspects of our organization. It must address how our workforce, processes and culture will evolve and sustain on-going innovation and transformation. The solutions we implement must be resilient and flexible to adapt. With this in mind, we created a vision for the future that drives change across all aspects of our organization. Guided by that vision and the lessons learned from prior modernization efforts, the Integrated Modernization Business Plan defines how we will achieve IRS transformation goals.

We expect to implement this plan, monitor our progress over time, and adjust our investment decisions along the way. We have confidence that with this approach we will know where to focus our transformation efforts and where we are going on our modernization journey.

We are pleased to present the IRS Integrated Modernization Business Plan– a six-year road map for achieving necessary modernization of IRS systems and taxpayer services in two three-year phases beginning in fiscal year (FY) 2019.

We are excited by this opportunity and plan, and we hope you are, too.



S. Gina Garza

IRS Chief Information Officer



Marla L. Somerville

Deputy Chief Information Officer for Strategy and Modernization

3.0 INTRODUCTION

The IRS and the Department of the Treasury (Treasury) are committed to modernizing and are fully engaged in this effort. The IRS Integrated Modernization Business Plan (the Business Plan) outlines the major components necessary to transform our technology and deliver a modernized taxpayer experience in support of the IRS mission. Our goal is to serve all our customers in an effective and sustainable manner.

Rapid advancements in the digital customer service experience offered by private industry increase customer expectations of superior service from government agencies, including the IRS. Over the last several years, the IRS has prioritized resources to implement numerous tax laws, legislative changes, and deliver the annual filing season, leaving the IRS with limited opportunity to transform the taxpayer experience. The IRS has had success in delivering high priority business requirements and applications such as daily return processing and a relational database through Customer Account Data Engine 2 (CADE 2), sophisticated identity theft and anomaly detection through Return Review Program (RRP), and breakthroughs in online account access for taxpayers through our Web Applications program. We have made great progress towards modernizing our systems to provide quality taxpayer service, and we know there is more that we must accomplish to meet our modernization goals.

There is a robust network of technology infrastructure that supports these and all business applications and while we have maintained the supporting infrastructure, we have not been able to focus on modernizing it as we should. Adding and layering new business applications has created a complex IT infrastructure that impedes our ability to keep pace with evolving customer expectations. The cost to operate the IRS technology infrastructure annually now exceeds \$2.2 billion and is expected to exceed \$3 billion by FY2026 if current trends continue. Modernization is necessary to deliver efficient taxpayer services and enforcement with enhanced user experiences and to curtail the rising operational costs.

Now is an opportune time to transform the IRS given increasing customer demand and advances in technology. Delivering the Business Plan will enable the IRS to:

- Significantly improve the taxpayer experience by standardizing customer workflows and by expanding access to information.
- Reduce call wait and case resolution times with customer callback

IRS MISSION

“Provide America’s taxpayers top quality service by helping them understand and meet their tax responsibilities and enforce the law with integrity and fairness to all.

IRS IT MISSION

“To deliver IT services and solutions that drive effective tax administration to ensure public confidence.

technology, online notices, and live online customer support.

- Expedite return and refund processing with real-time return processing and taxpayer error correction.
- Simplify identity verification to expand access to online services while protecting data.
- Increase systems availability for taxpayers and practitioners.
- Facilitate implementation of new tax provisions including common extenders enacted by Congress by eliminating millions of lines of legacy code.

The Business Plan will enable the IRS to consistently provide superior service to taxpayers and deliver long-term budget efficiencies as the IRS decommissions legacy applications, automates manual processes, and expands advanced analytics programs to more effectively serve and bring taxpayers into compliance. Additionally, this plan will allow the IRS to stabilize the rising costs associated with maintaining legacy applications and infrastructure and creates opportunities to reinvest savings to keep technology current and grow digital services consistent with similar trends in the private sector.

Our Modernization Pillars

The Business Plan is organized around four **Modernization Pillars** critical to the agency's mission and future development: Taxpayer Experience, Core Taxpayer Services & Enforcement, Modernized IRS Operations, and Cybersecurity & Data Protection. Together, these four Pillars and key objectives represent a strategic view of our initiatives and help us ensure alignment with the agency's mission critical work.

The IRS modernization portfolio includes key programs and initiatives that help accelerate this transformation. This includes new options for live assistance and enhanced security operations. We will also standardize business operations, expand the digital conversion of paper case files and documentation, automate repetitive manual processes, leverage existing data to detect noncompliance earlier, and enable a strong and secure systems platform for taxpayer-facing applications. With these investments, we are positioning ourselves to adopt the taxpayer service enhancements made possible through artificial intelligence (AI), analytics, cloud and other emerging technologies (see **Section 5.2.1** for a detailed look at our future analytics capabilities, and **Section 5.3.1** for insight into our cloud implementation strategy).



Creation of the Business Plan & the Companion Document

The IRS developed the Business Plan with input from IRS employees, the Treasury, Federal government partners, and independent assessors, including the MITRE Corporation and McKinsey & Company (McKinsey). The plan's overall feasibility, approach, schedule, cost, and the IRS's capacity to deliver were independently validated by McKinsey. One key recommendation was that a previous iteration of the plan was overly aggressive given a portfolio of this size within the timeframe proposed and the magnitude of the underlying assumptions. IRS agreed, and developed a six-year schedule to be implemented in two phases. McKinsey conducted a second review using the same criteria of feasibility, approach, schedule, and cost, and found it to be reasonable based on the IRS's capacity to deliver.

Our phased implementation is detailed in the *IRS Integrated Modernization Business Plan Companion Document* (the Companion Document). While the Business Plan articulates our modernization strategy, the Companion Document serves as the current implementation plan, which will be updated throughout the plan's two phases (FY2019 - FY2021; FY2022 - FY2024). These phases are comprised of a series of discrete projects and initiatives, and we anticipate new capabilities will be incorporated into the current baseline over time due to technology advances and evolving customer expectations. Delivering on the phased plan will allow us to achieve the expected outcomes we have identified.

4.0 INTEGRATED BUSINESS PLAN OVERVIEW

The IRS runs one of the largest and most complex business operations in the world, serving a broad and diverse customer base comprised of millions of individual filers, small businesses, large corporations, tax exempt organizations, and preparers. We also operate one of the largest call centers in the country, answering more than 64 million calls annually and providing essential support to numerous agencies, including surge call center support for victims of disaster on behalf of the Department of Homeland Security and support to the Old-Age Survivors and Disability Health Insurance and Unemployment Insurance Trust Funds. This modernization effort impacts our full breadth of customers and partners, from taxpayers to government entities, and supports the customer experience for all groups as we transform our systems.

Foundation for Taxpayer Service

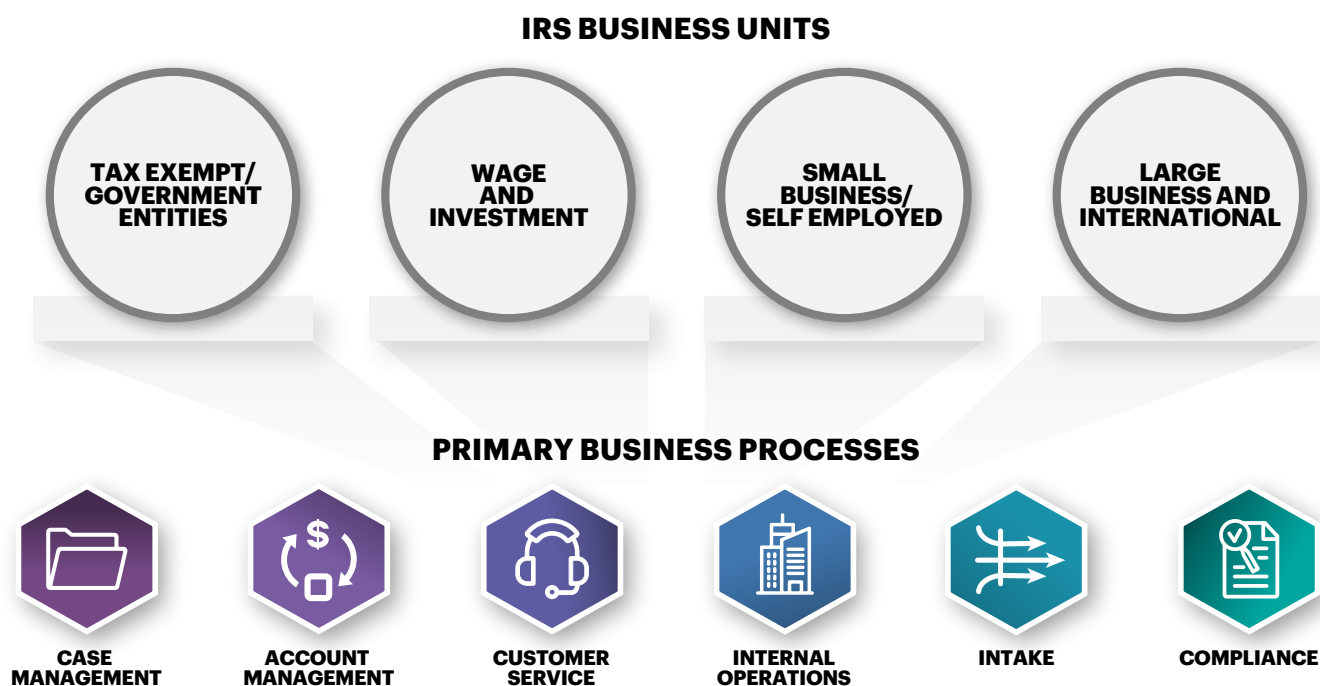
With the capabilities provided by the modernization initiatives, we will deliver a customer experience comparable to the best financial institutions in the world. The taxpayer experience will be characterized by a more proactive and interactive relationship between the IRS, taxpayers, and their representatives. Taxpayers and their representatives will have access to more proactive assistance to help them avoid pitfalls through an expanded array of service channels. Employees and taxpayers will have a complete view of their interaction history regardless of the channel or the employee assigned. The Business Plan represents a unified strategy for enabling this experience by modernizing case management, account management, real-time tax processing, data and analytics, centralized information return processing, and anomaly detection.

To support the taxpayer experience, the IRS delivers major technology investments and key initiatives aligned to our major business unit and our six primary business processes:

- Large Business and International (LB&I)
- Tax-Exempt and Government Entities (TE/GE)
- Small Business/Self-Employed (SB/SE)
- Wage & Investment (W&I)

These primary business processes, depicted in **Figure 1**, include:

- Case Management
- Internal Operations
- Account Management
- Intake
- Customer Service
- Compliance

FIGURE 1: IRS Business Units & Primary Business Processes

Delivering Modernized Business Capabilities

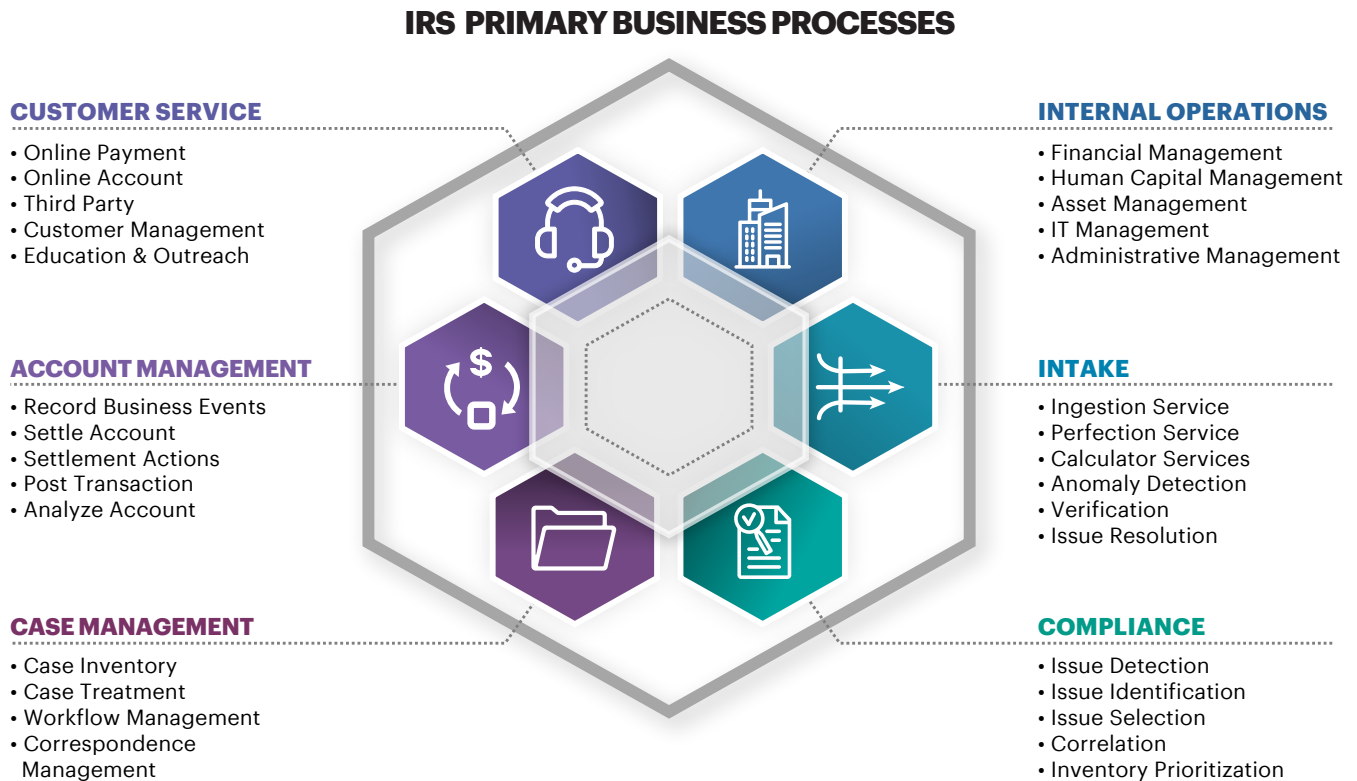
We will engage early and often to understand and address emerging business requirements and manage potential technology risks to operational functions and business processes. Modernization investments require careful prioritization based on business needs, taxpayer impact, and available resources.

To enable delivery of the *IRS Strategic Plan FY2018-2022* and modernization initiatives, we developed a phased approach to transform IRS operations and facilitate the delivery of primary business processes. In **Figure 2**, we depict the support provided by our information technology initiatives to meet the evolving needs of the IRS and taxpayers.

Challenges to Supporting an Enhanced Taxpayer Experience

The IRS's legacy computing infrastructure reflects a complex set of demands: ongoing changes to tax rules and regulations, a tremendous surge of more than 150 million returns and refunds every January through April, and rigorous security measures to protect taxpayer data. These factors make it increasingly difficult to meet taxpayer expectations without extensive changes to core tax systems. Our goal is to meet taxpayer expectations for easy, simple, secure access to real-time data and provide more personalized, proactive interactions through multiple channels and touchpoints.

The cost of maintaining the current complex technology ecosystem continues to grow every year on an unsustainable trajectory. The cost of operating these systems

FIGURE 2: IRS Information Technology Support to Primary Business Processes

is overtaking other important components of effective tax administration and limiting capacity to deliver quality service.

We need to transform the taxpayer experience to deliver taxpayer services with speed and quality. We can do so by modernizing our processes and systems and aligning the IRS with industry standards for digital innovation.

Leverage Every Dollar

We commit to being mindful of every dollar we spend and considering every investment an opportunity to advance modernization. As the pace of business operations and service delivery expectations accelerates, we will respond with agile and innovative solutions aimed at stabilizing costs. We will take advantage of industry trends that are proven to decrease time to market, provide enhanced customer experiences, and reduce cost.

To fully achieve our “leverage every dollar” principle, the IRS is revisiting core processes and resources across the enterprise. Our broader transformation themes include the adoption of new industry standards for capability delivery (e.g., Development & Operations (DevOps), Agile, Cloud, Managed Services), along with refining how we procure products and leverage the expertise of our industry partners.

4.1 MODERNIZATION PORTFOLIO & PILLARS

The modernization portfolio incorporates four core Pillars that will drive innovation within the IRS over the next six years (FY2019-FY2024). Modernization objectives and initiatives support these Pillars and will transform the taxpayer experience. **Section 5.0** provides additional detail.

Modernization Pillar

TAXPAYER EXPERIENCE

Our view of taxpayer experience incorporates all parties across the tax ecosystem, including individual and business taxpayers, taxpayer representatives, and federal tax return preparers. We fully understand the complexities associated with delivering quick and efficient tax filing services. As a result, we have taken steps to ensure that taxpayers receive the necessary tools for successful filing. We commit to providing a high-quality service experience including simpler interfaces, faster processing times, enhanced digital platforms, and consistent access to critical systems and applications—all while protecting taxpayer information and data.



Modernization Pillar

CORE TAXPAYER SERVICES & ENFORCEMENT

The taxpayer experience depends on the underlying business processes that support smooth, accurate, and efficient taxpayer services. We will overhaul core tax systems to provide quicker and easier tax filing services that taxpayers expect through data-driven operations and decision-making, real-time tax processing, and core taxpayer administration integration.



Modernization Pillar

MODERNIZED IRS OPERATIONS

Our modernization investments in IRS Operations will accelerate the pace of change and adoption of emerging technologies within our core functional operations. We will improve operational efficiencies by reducing system complexities, and increasing standardization across the enterprise. Our plan also considers areas where emerging technologies (AI, robotics process automation (RPA), data analytics) drive automation to enhance taxpayer services.







Modernization Pillar

CYBERSECURITY & DATA PROTECTION

IRS systems contain a high volume of sensitive taxpayer data, representing a target for cyber-attack. The IRS has encountered increasingly advanced cyber threats, requiring strong security and a dedication to safeguarding taxpayer information. We acknowledge that new technologies result in increased use of online systems, which may raise the risk of unauthorized access to taxpayer data. In response, our workforce will need to function as security stewards and consider how our modernized programs and applications affect taxpayer information and data.



TABLE 1: Modernization Portfolio & Pillars

MODERNIZATION PILLAR	KEY OBJECTIVES	KEY PROGRAMS & INITIATIVES
 Taxpayer Experience: Deliver a service experience comparable to private industry	<ul style="list-style-type: none"> • Help taxpayers resolve issues quickly and efficiently • Empower taxpayers with information about their account, obligations, and payment options • Make services available to customers when they need them • Protect taxpayer information and data 	<ul style="list-style-type: none"> • WebApps (Web Applications) • Taxpayer Digital Communications Outbound Notifications (TDC—ON) • Live Assistance (Callback & Omnichannel)
 Core Taxpayer Services & Enforcement: Streamline and integrate IT programs that enable top-quality service	<ul style="list-style-type: none"> • Integrate tax processing systems to increase the cost effectiveness of operations • Enable real-time processing and increase transparency of returns status • Increase data usability and the use of data analytics to combat fraud 	<ul style="list-style-type: none"> • Customer Account Data Engine (CADE) 2 Transition State 2 (TS2) • CADE 2 Target State • Enterprise Case Management (ECM) • Enterprise Case Selection (if necessary) • Return Review Program (RRP) • Real-Time Tax Processing (RTTP) • Information Returns Processing
 Modernized IRS Operations: Retire and decommission legacy systems in place of more sustainable infrastructure	<ul style="list-style-type: none"> • Reduce complexity of the technical environment • Leverage data to deliver secure, agile, and efficient applications and services • Strengthen organizational agility through automation and streamlining processes 	<ul style="list-style-type: none"> • Application Programming Interface (API) Management • Cloud Execution • Data Digitization • Next Generation Infrastructure • Robotics Process Automation (RPA) • Universal Data Hub / Analytics Tools / Platform • Virtual Desktop
 Cybersecurity & Data Protection: Continue to protect taxpayer data and address emerging threats	<ul style="list-style-type: none"> • Establish trusted and streamlined access to information through identity and access management technologies • Proactively identify emerging threats and vulnerabilities through the use of real-time intelligence information and analytics • Protect taxpayer data and systems via end-to-end visibility and common platforms 	<ul style="list-style-type: none"> • Identity & Access Management (IAM) • Security Operations & Management • Vulnerability & Threat Management

4.2 STRATEGIC ALIGNMENT

We set ambitious modernization targets to provide the highest-quality service to taxpayers and members of the tax community. We articulate these goals in the key documents focusing on the IRS's organizational direction, including the *Treasury Strategic Plan 2018-2022*, and the *IRS Strategic Plan FY2018-2022*. The Business Plan is guided by these foundational documents, in addition to the *President's Management Agenda*, to establish a transformational modernization vision.

The *IRS Strategic Plan FY2018-2022* guides enterprise resource decisions, programs, and operations to meet the taxpayer and tax community members' changing needs and expectations. The Business Plan details a technology and cultural modernization strategy to meet the strategic goals articulated in the *IRS Strategic Plan FY2018-2022*:

- **Strategic Goal 1:** Empower and enable taxpayers to meet their tax obligations
- **Strategic Goal 2:** Protect the integrity of the tax system by encouraging compliance through administering and enforcing the tax code
- **Strategic Goal 3:** Collaborate with external partners proactively to improve tax administration
- **Strategic Goal 4:** Cultivate a well-equipped, diverse, flexible and engaged workforce
- **Strategic Goal 5:** Advance data access, usability and analytics to inform decision-making and improve operational outcomes
- **Strategic Goal 6:** Drive increased agility, efficiency, effectiveness and security in IRS operations

The plan also aligns to Treasury's strategic plan, specifically Objective 1.1 (Tax Law Implementation), Objective 4.1 (Financial Data Access and Use), and Objective 5.3 (Customer Value).

4.3 IMPLEMENTATION & MANAGEMENT

We developed the Business Plan and the Companion Document to align with federal regulations and guidelines, including:

- Elements of the **Federal Information Technology Acquisition Reform Act (FITARA)**; and,
- The **Capital Planning and Investment Control (CPIC)** process, as mandated by the Clinger-Cohen Act of 1996.

In addition, the Business Plan aligns to enhanced information technology and customer experience metrics in the **President's Management Agenda Cross Agency Priority Goals (CAP)**, specifically:

- **CAP Goal 1:** Modernize IT to increase productivity and security
- **CAP Goal 4:** Improve customer experience with Federal services

The Office of Management and Budget (OMB) publishes the results of these efforts on Performance.gov quarterly.

The IRS commits to achieving concrete milestones in each fiscal year. We will track and report on progress as a part of budget and strategic reports including, customer experience/outcome-oriented performance measures and project/program scope, schedule, and cost. Examples of the outcome-oriented metrics the IRS will track include: the number of taxpayers utilizing the new services; lines of legacy code converted to modern language; taxpayer burden hours, and; National Institute of Standards and Technology cybersecurity benchmarks. The IRS will baseline these metrics and refine them over the next year (see **Section 6.2** for more information).

Our overall success will depend on several special legislative proposals and regulatory authorities that we believe are appropriate for an effort of this scope and importance:

- Engaging the Office of Personnel Management to utilize existing direct hire authority for IT modernization positions and/or broadening government-wide critical pay authority;
- Seeking reauthorization of IRS Streamlined Critical Pay Authority that expired in 2013; and,
- Ensuring funding is available for multiple fiscal years at somewhat predictable intervals.

Our existing governance bodies and external stakeholders will provide modernization portfolio oversight. We will ensure that modernization investments benefit from our and Treasury's extensive experience in strategic planning, budgeting, procurement, and management processes to deliver capabilities that support the IRS's mission and business needs.

5.0 INTEGRATED BUSINESS PLAN DETAIL

Information technology supports nearly every facet of the IRS. Technology is vital to successfully delivering annual tax filing season services, ensuring the health of the nation's tax system, and supporting the federal government's financial strength. The country depends on our systems and services to collect \$3.5 trillion or over 90 percent of federal receipts (FY2018). Together, these multiple and complex duties require proven technology solutions that support the delivery of secure and customer-focused services. The Business Plan aligns to critical business functions and needs with a vision to transform operations and improve service delivery.

The Business Plan facilitates voluntary compliance and self-service by providing taxpayers the resources and technology needed to efficiently file their taxes and receive their refunds easily and quickly. To narrow the tax gap and increase voluntary compliance, we are updating our service approach of multi-channel offerings that deliver consistent service quality, empowering taxpayers to select their most efficient service option. In addition, this multi-channel strategy also enhances existing service channels to increase overall taxpayer engagement and satisfaction. Updated online services will provide streamlined service options to taxpayers who have simple, informational interactions, making telephone and in-person taxpayer resource services more readily available for taxpayers with more complex needs.

Consolidating Priorities

The Business Plan consolidates the priorities for the IRS established in the *IRS Strategic Plan FY2018-2022* and related strategy and planning artifacts to define a single path forward. The Business Plan outlines the specific programs and initiatives defined within the modernization portfolio. By executing the strategies in the Business Plan, the IRS will help taxpayers to meet their tax obligations, increase voluntary compliance, and decrease the gross tax gap (estimated at \$458 billion in 2017) while stabilizing information technology costs over time.

Sections 5.1, 5.2, 5.3, and 5.4 describe each modernization Pillar, along with corresponding modernization portfolio initiatives and accompanying capabilities. Each Pillar outlines the transformation trajectory over the next six years to reach a modernized information technology ecosystem.

5.1 MODERNIZATION PILLAR TAXPAYER EXPERIENCE

Taxpayers stand at the core of the IRS mission. We will place taxpayer needs at the front and center of every program and application embedded within the modernization portfolio, including enhancing our multi-channel engagement model to improve taxpayer interactions with the IRS so taxpayers may elect their preferred or most efficient option as described in **Section 5.0**.

We will focus on modernizing the taxpayer experience through the implementation of innovative technologies (e.g., mobile) and the enhancement of existing capabilities. This development will provide an environment that encourages multiple points of engagement through enhanced digital platforms and high levels of customer service interaction. By reducing taxpayer burden and achieving the objectives detailed in **Section 5.1.1**, the IRS could facilitate an increase in voluntary compliance.

The remainder of **Section 5.1** describes the Taxpayer Experience Pillar in detail across three key elements:

- Objectives & Outcomes
- Modernization Programs & Initiatives
- Target Capabilities & Roadmap

5.1.1 | Objectives & Outcomes

To guide the modernization of the taxpayer experience, we defined objectives and mapped desired outcomes to each objective:

Objective 1: Help taxpayers resolve issues quickly and efficiently

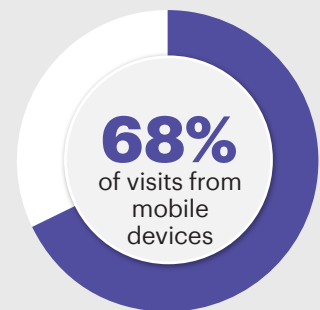
Expanding digital options will allow customers to easily and conveniently access information. With taxpayers increasingly accessing our service channels through mobile devices, we have redesigned IRS.gov to be more mobile-friendly through deployment of a new Web Content Management Systems (WCMS). Taxpayers will be able to navigate to the most efficient service channel that meets their needs, with the potential to resolve the majority of support



Filing Season 2018

Peak of filing season

February 2018



171 million
total IRS.gov website visits

Source: Fiscal Year 2018
Management's Discussion
and Analysis, November 5, 2018

requests using self-service tools. By providing taxpayers with easy and secure services, taxpayers will be able to resolve many simple requests quickly and on their own. This will reserve IRS staff assistance for complex issues and non-digital service touchpoint requirements. Regardless of the service channel used, taxpayers will receive timely responses to their questions. Ultimately, we will provide an environment where taxpayers can navigate to the most efficient service channel based on level of support required.

Objective 2: Empower taxpayers with information about their account, obligations, and payment options

Modernizing the taxpayer experience will empower taxpayers with knowledge of their tax responsibilities. We will continue to support taxpayer education efforts by improving the delivery of educational material on IRS.gov to help taxpayers resolve common tax-related questions. We will also deploy programs such as Taxpayer Digital Communications Outbound Notifications (TDC-ON), which provides a web-based platform for taxpayers to receive online notifications (e.g., tax credit qualifications, balance due). Over time TDC-ON can reduce the amount of time it takes for the IRS and taxpayers to resolve compliance issues by instantly delivering notices to a secure online account and avoiding costly, time-consuming mail delivery. Ultimately, this technology will save the IRS and taxpayers millions of dollars in postage and printing. Taxpayers and tax professionals will also be able to address compliance questions preemptively through IRS communications and related targeted outreach using findings from behavioral science and other inputs. These efforts will improve the taxpayers' knowledge regarding proper filing processes and payment obligations and increase transparency across the tax process lifecycle.

Objective 3: Make services available to customers when they need them

We will enhance existing tools and services to improve the customer experience and allow taxpayers to access any tax service at any time. Some of these tools are immediately accessible on the IRS website, where taxpayers have access to forms, instructions and tax calculators. We will continue to build upon this core customer-facing platform to provide taxpayers with the tools they need and the dynamic experience they expect. In concert with this effort, we seek innovative ways to interact with the tax community on how it wants to engage with the IRS, and then use those findings to streamline taxpayer communications.

Objective 4: Protect taxpayer information and data

We are committed to providing a secure tax environment that protects sensitive taxpayer data. In the face of constantly evolving threats, we continue to implement stringent security standards to prevent unauthorized users from gaining access to taxpayer information. In meeting this goal, we must also deliver a user-friendly experience where taxpayers can easily and confidently verify their identity and access necessary services across our service channels (e.g., online, in-person, telephone).

As we improve our system architecture, we remain dedicated to providing taxpayer security and enhancing the overall taxpayer experience. This new system architecture will lead to three primary outcomes:

1. Taxpayers know that the IRS protects their information and proactively combats identity theft tax refund fraud;
2. Taxpayers know that we quickly identify and mitigate any attempt to steal IRS or taxpayer data; and,
3. Taxpayers know that the IRS has a secure but user-friendly technology environment.

5.1.2 | Modernization Programs & Initiatives

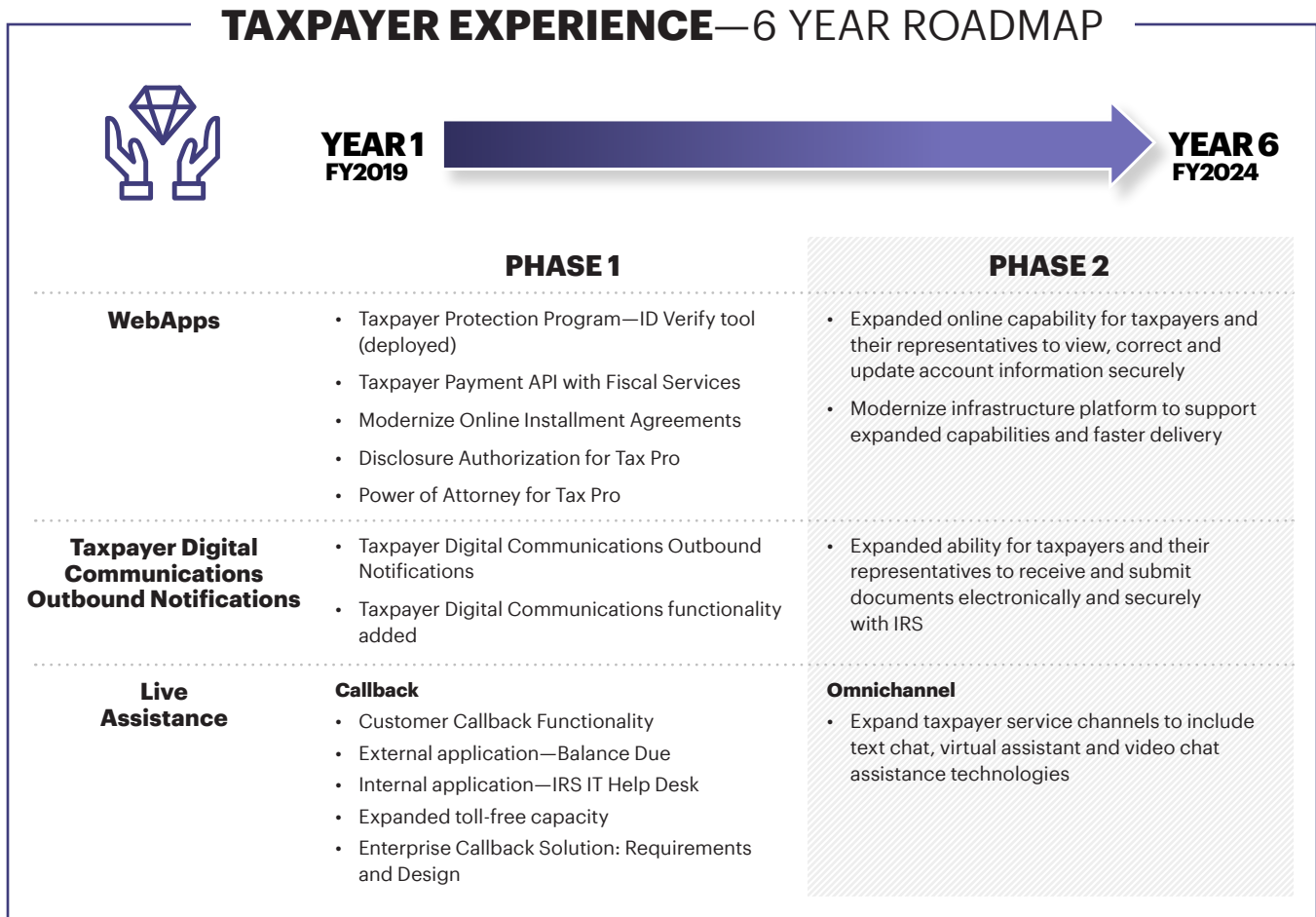
We identified several programs that will improve the taxpayer experience through increased functional capabilities. These include:

- **Web Applications (Web Apps):** These programs and initiatives improve interactions and communications across taxpayers, employers, the IRS, and third parties by providing a broad range of self-service options, establishing secure information exchange options, and building internal capabilities. By enabling authorized third parties and taxpayers to interact digitally with the IRS, the investment will provide a better user experience, achieve significant savings by moving some service interactions to lower cost channels, and deliver consistent data and services through reusable Application Programming Interfaces (APIs). Web Apps will transform the way the IRS does business by delivering a digital service that allows taxpayers to track and receive information they need when they need it.
- **Taxpayer Digital Communications Outbound Notifications (TDC-ON):** The program will improve the user experience through reliable, user-friendly, secure online services. For example, the IRS will develop digital notices through the secure messaging platform that provides communications to taxpayers who prefer that channel over mailed correspondence, including digital chat.
- **Live Assistance (Callback & Omnichannel):** Taxpayers will receive customer call-back, engage a redesigned customer voice portal, and enjoy improved identity verification. Future live assistance enhancements will broaden service channels to include live text chat, virtual assistant capabilities, and video chat assistance.

5.1.3 | Target Capabilities & Roadmap

To achieve the Pillar's four objectives, we identified target capabilities for each initiative over the next six years (FY2019-FY2024). **Figure 3** depicts the targeted individual capabilities for this Pillar.

FIGURE 3: Taxpayer Experience: Capabilities & Implementation



Timeline is subject to budget and available resources

5.2 MODERNIZATION PILLAR CORE TAXPAYER SERVICES & ENFORCEMENT

Looking at the future needs of the IRS and taxpayers, we will assess and identify opportunities to modernize tax administration. We will modernize core tax systems to provide the quicker and easier tax filing experience that taxpayers expect, realizing these outcomes through data-driven operations and decision-making, real-time tax processing, and core tax administration systems integration. These systems will enhance the taxpayer experience when taxpayers engage with IRS personnel, such as during audits.

The remainder of **Section 5.2** describes the Core Taxpayer Services & Enforcement Pillar in detail across three key elements:

- Objectives & Outcomes
- Modernization Programs & Initiatives
- Target Capabilities & Roadmap

5.2.1 | Objectives & Outcomes

To guide the modernization of the tax administration, we defined objectives and mapped desired outcomes to each objective:

Objective 1: Integrate tax processing systems to increase the cost effectiveness of operations

We will emphasize the customer experience when engaging with IRS systems. Our goal is to enable an end-to-end view of taxpayer cases and interactions, in part, by aggregating customer experience data across different taxpayer touchpoints with the IRS. These touchpoints allow us to trace customer engagement throughout the tax system and enhance overall service.

Through the Enterprise Case Management (ECM) program, the IRS is developing a long-term solution to deliver a consolidated enterprise-wide case management system. This will allow us to decommission approximately 60 case management systems. This solution will allow



FY 2018 Tax Statistics Highlights



- Total Returns and Other Forms Processed—**253 million**
- Number of 3rd party information returns received (of **\$3.6B** received, **\$3.2B (90%)** received electronically)
- Total Revenue Collected—**\$3.5 trillion**
- Enforcement Revenue Collected—**\$59.4 billion**

Source: Fiscal Year 2018
Management's Discussion
and Analysis, November 5, 2018

the IRS to effectively resolve tax administration issues through better management of case creation, execution, maintenance, and closure.

Standardization provides compatibility benefits while reducing the burden on employees to support multiple technologies and platforms. Refactoring redundant system components will inevitably create reusability across the enterprise using a modern architecture.

Objective 2: Enable real-time processing and increase transparency of returns status

Real-time processing is core to the commercial financial experience—whether a taxpayer engages with their bank or another lender. Enabling that same capability for the tax process is fundamental for improving overall customer experience through enterprise speed and efficiency. Processing data quickly will improve operational outcomes and allow the IRS to react in real time.

Additionally, the ability to deliver real-time processing allows us to meet taxpayers' expectations of service. For instance, through Real Time Tax Processing (RTTP) we will standardize data intake which allows us to provide taxpayers with faster responses.

Objective 3: Increase data usability and the use of data analytics to combat fraud

We will increase data analytics capabilities, skills, and tools. Ultimately, our data will be one of our strongest assets, allowing our workforce to make data-driven strategic and operational decisions. Enhanced analytics will allow for increased fraud detection, more effective taxpayer notification of issues, prediction of filing patterns, and improved understanding of taxpayer interactions.

Return Review Program



Protection of
96% more ID theft fraud on electronic returns than legacy systems



From **2015** to August **2018**



RRP decreased ID theft victims by over **60%**

As of August 22, 2018



1,692%
RRP's ROI on total investment

RRP has protected over
\$13.09 billion
in total confirmed revenue

Source: Fiscal Year 2018 Management's Discussion and Analysis, November 5, 2018

5.2.2 | Modernization Programs & Initiatives

The following programs will support modernization of the IRS's core taxpayer services and enforcement processes:

- **CADE 2 Transition State (TS) 2:** The "Customer Account Data Engine" Program includes investments to achieve Transition State 2. The program will help modernize the taxpayer account processing environment and develop an integrated, near real-time processing environment to support tax returns, information returns, payments, and other transactions. A key project supporting CADE 2 TS 2 is

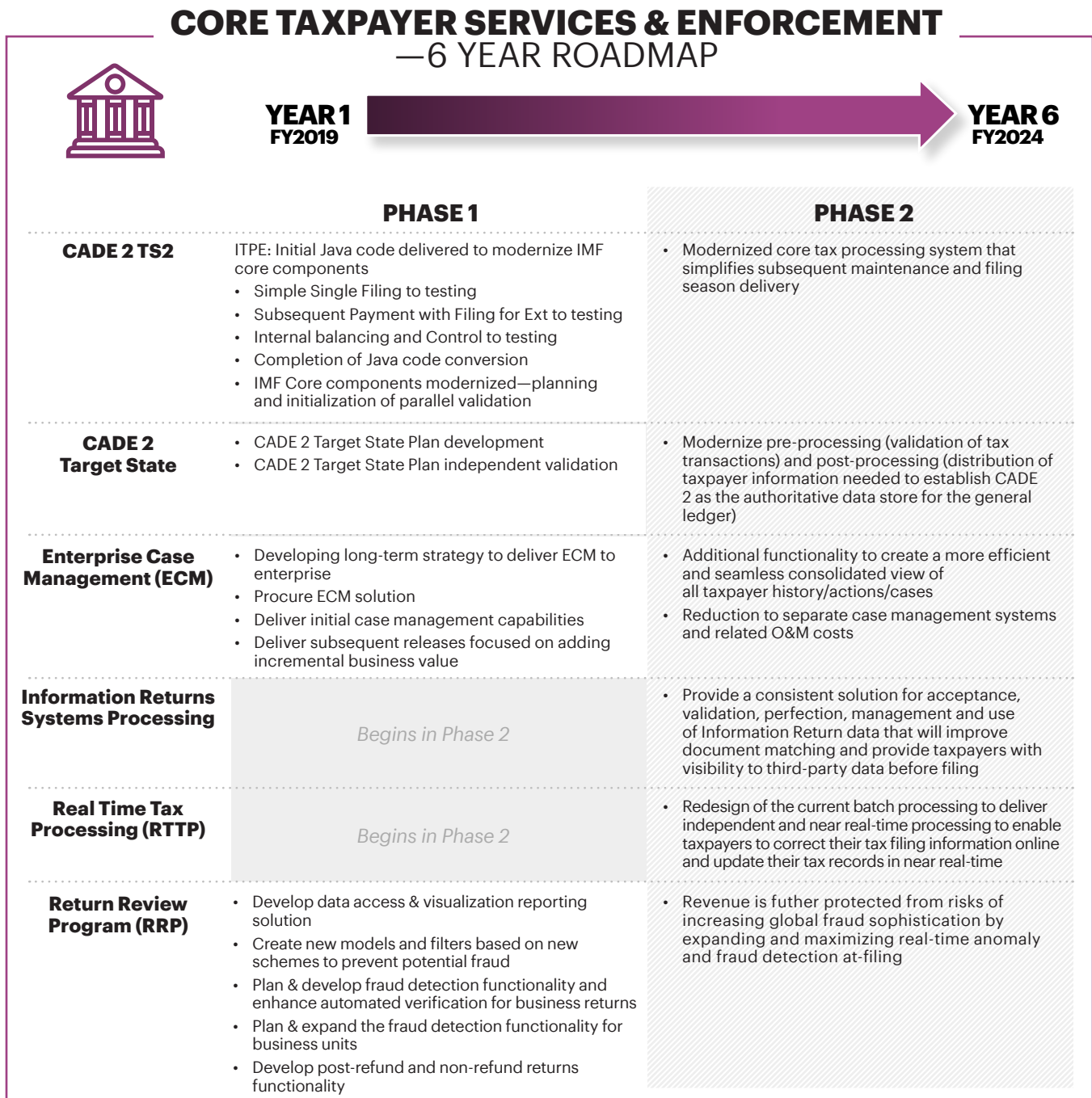
the Individual Tax Processing Engine (ITPE) project, which will convert approximately 200,000 lines of legacy assembly language code to modern software language. This code conversion is a major milestone towards retiring the Individual Master File (IMF).

- **CADE 2 Target State:** The CADE 2 Target State includes activities focused on evaluating the new CADE solution architecture to inform planning and execution. This target state environment provides capabilities that will allow direct visibility and access to taxpayer account detail on a near real-time basis and furthers the overarching effort to retire the IMF. This will facilitate voluntary compliance and improve traceability of financial data from core accounting systems to IRS financial statements.
- **Enterprise Case Management (ECM):** This solution provides an IRS-wide solution for streamlining case and workload management processes. The solution digitizes case information, automates work selection, and improves resource alignment. Once the ECM solution is identified, we will determine if a separate investment for Enterprise Case Selection (ECS), as a stand-alone initiative, will be necessary.
- **Return Review Program (RRP):** The program seamlessly integrates taxpayer data from multiple sources and provides taxpayer data and systemic anomaly detection results for fraud and civil noncompliance detection using a service-oriented approach and modern user interface technologies. The program provides an enterprise platform for anomaly detection at the IRS.
- **Real-Time Tax Processing (RTTP):** The program will deliver independent and near real-time data processing, allowing the IRS to move away from batch processing, view returns dynamically, and understand the status of a return as it is processed. Currently, batch processing prevents a taxpayer from easily adjusting their individual return. Within certain parameters, RTTP will allow amendments to be processed directly, improving the overall taxpayer experience and level of confidence with multi-channel options to enable account access. It also improves at-filing compliance and communication with the IRS.
- **Information Returns System Processing:** The program consists of a modern intake database and applications that allow for improved document matching to improve intake consistency.

5.2.3 | Target Capabilities & Roadmap

To achieve the Pillar's three objectives we identified target capabilities for each initiative over the next six years (FY2019-FY2024). **Figure 4** depicts the targeted individual capabilities for this Pillar.

FIGURE 4: Core Taxpayer Services & Enforcement: Capabilities & Implementation



Timeline is subject to budget and available resources

5.3 MODERNIZATION PILLAR

MODERNIZED IRS OPERATIONS

Our focus in this Pillar is developing standardized, agile, solutions that leverage emerging technologies, while decommissioning and replacing legacy systems. A leaner, nimbler capability portfolio will power the IRS while keeping operational costs controlled.

Our approach combines investments in new and emerging technologies while also taking advantage of expiring contracts to acquire technologies that will accelerate modernization efforts. By modernizing IRS operations, we will improve existing business processes. We project cost savings in O&M due to reduced costs associated with supporting antiquated systems as we improve processes and implement contemporary systems.



The remainder of **Section 5.3** describes the Modernized IRS Operations Pillar in detail across three key elements:

- Objectives & Outcomes
- Modernization Programs & Initiatives
- Target Capabilities & Roadmap

5.3.1 | Objectives & Outcomes

To accomplish operations modernization, we identified the following objectives and desired outcomes:

Objective 1: Reduce complexity of the technical environment

Addressing business requirements without a clear understanding of required functionality propagates IT complexity, creating duplicative and potentially unnecessary systems. We can accelerate “time to value” by minimizing fragmentation of both business and IT processes across legacy applications. Building with the future in mind, we foster a proactive approach to eliminating legacy technical debt, which occurs when we continue to patch and re-work instead of creating

modern, flexible solutions.

For example, we are standardizing business processes currently supported by numerous systems to create an enterprise-wide solution for case management, ECM. Although ECM is a component of the Core Taxpayer Services & Enforcement Pillar, it is a key example that demonstrates our efforts to simplify infrastructure. By integrating existing case management programs where possible and migrating legacy systems, we encourage an incremental and low risk alternative to traditional solutions, which may involve a complete redesign of older systems. Additionally, a “reuse-first” mindset leverages common services and data, and optimizes technologies to support efficient and reliable change, configuration, and release management.

We are also upgrading technology by migrating applications from Solaris to Linux, while limiting operational costs and risks associated with the retirement of aged infrastructure and the need for extended support. Refreshing our aging infrastructure from Solaris to Linux will also drive us to deliver several thousand servers efficiently. Similarly, efforts are underway to migrate from text-based legacy programming languages (e.g., Common Business-Oriented Language (COBOL)) to modern, common languages (e.g., .NET, JAVA), which will promote programming language standardization and reduce workforce sustainment risks.

Reducing complexity will allow us to quickly respond to changes. For example, heavily tangled systems often make it difficult to detect the root causes of system outages. Investigating multiple systems delays timely resolution and affects high service availability. A standardized environment opens the ability to detect and resolve issues quickly with minimal disruption to end users. Ultimately, for many of the systems within our portfolio, the most sensible path to the future is retirement. We will reduce costs and vulnerabilities by working to eliminate legacy systems no longer capable of supporting their required business processes.

Objective 2: Leverage data to deliver secure, agile, and efficient applications and services

Effective decision-making relies on key insights obtained through trusted information. High-quality data when managed as an asset supports the continuous delivery of value. With data as an asset, we will continue to drive, develop, and enhance value from data capabilities to support exchanges with external agencies, partners, taxpayers and their representatives. We will also support effective data use by IRS staff and leadership, automated operational dashboards, and tracking of strategic priorities and processes.

Utilizing data in day-to-day operations and decision-making has transformed our existing processes. For example, utilizing systems data as part of our enterprise IT Asset Management (ITAM) modernization strategy, our team will employ a data-driven approach to strengthen our security posture and management. Similarly, enabling end-to-end visibility for IT applications will allow the prioritization and delivery of critical customer and IRS user-facing services.

Maintaining application efficiency—and its underlying data—is critical in creating end-to-end visibility and enhancing overall service agility. For this reason, we will transition IRS data, applications, and services from on-site to the cloud, where applicable. Maintaining a cloud infrastructure will reduce fixed investment, minimize the risks of aging hardware, and improve scalability and elasticity. The expansion to private and hybrid cloud, will support long-term and emergent business requirements for enterprise IT orchestration and service management. IRS systems must accommodate heavy demand during peak times, resulting in the critical need for both infrastructure scalability and flexibility.

Objective 3: Strengthen organizational agility through automation and streamlining processes

We continue to implement unified standards as a component of our transition to cloud and virtual environments, including expanding our current use of DevOps, Agile, and other methodologies to streamline delivery across our IT functions.

Similarly, by automating transactional processing, task replication occurs faster and with greater accuracy. For instance, 1) DevOps enables automated software development lifecycle (SDLC) processes to simplify handoffs between development, test and production; 2) Robotics Process Automation enables the execution of highly laborious tasks in seconds via artificial intelligence; and 3) machine learning allows for almost-instant document analysis as tax information is scanned, aiding in compliance case selection accuracy. These technologies will aid in eliminating error-prone and time-consuming manual work. This change reduces the need for manually intensive processes by IRS staff, allowing them to focus on implementing modernization technologies and processes.

5.3.2 | Modernization Programs & Initiatives

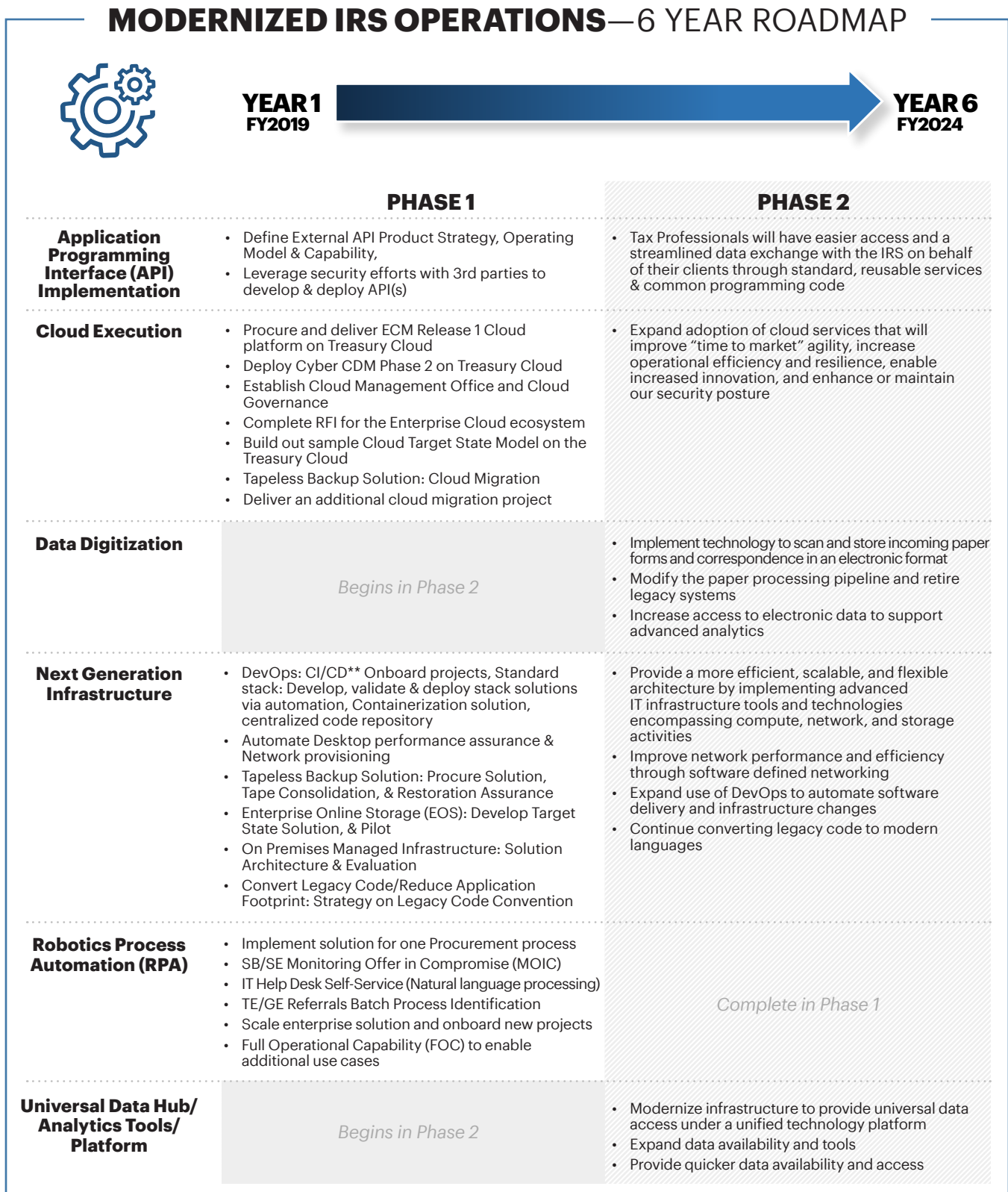
We targeted seven modernization programs and initiatives to support operations modernization:

- **Application Programming Interface (API) Implementation:** Our API initiative incorporates efforts to drive internal and external API deployment. For example, authorized third parties will have easier access and a streamlined data exchange with the IRS on behalf of their clients through standard, reusable services and common programming code.
- **Cloud Execution:** Execution will result in improved “time to market” agility, increased operational efficiency and resilience, increased innovation, and an enhanced or maintained security posture by migrating workloads to cloud platforms and services.
- **Data Digitization:** Electronic files will be enhanced, and the intake of paper forms and correspondence will be simplified and streamlined through the integration of scanned data and content management systems. This will improve processing of taxpayer paper submissions and create efficiencies from not having to manually process, transcribe, and store documents.

- **Next Generation Infrastructure:** A series of packaged initiatives to support a more efficient, scalable, and flexible architecture implemented through advanced IT infrastructure tools and technologies (e.g., Standard Stacks, Enterprise Storage Solution). Implementing our Next Generation Infrastructure initiative encompasses transformation of compute, network, and storage activities—along with DevOps—to automate software delivery and infrastructure changes. We will also continue to convert legacy code to modern languages.
- **Robotics Process Automation (RPA):** Enhancing business process execution, speed, and accuracy through smart software designed to perform high-volume, repeatable tasks.
- **Universal Data Hub / Analytics Tools / Platform:** The program will support foundational architecture and technology elements that enable business capabilities like real-time processing, error correction, expanded online tools and data analytics capabilities, improved fraud detection, and other anomaly detection capabilities. The program will streamline data availability and will allow for more data-driven business decisions.
- **Virtual Desktop:** The program will enable streamlined patching, provisioning, and troubleshooting, and higher availability by storing user “desktop” centrally in the data center.

5.3.3 | Target Capabilities & Roadmap

To achieve the Pillar’s three objectives, we identified target capabilities for each initiative over the next six years (FY2019-FY2024). **Figure 5** depicts the targeted individual capabilities for this Pillar.

FIGURE 5: Modernized IRS Operations: Capabilities & Implementation

Timeline is subject to budget and available resources

* CI/CD=Continuous Integration & Continuous Delivery

5.4 MODERNIZATION PILLAR CYBERSECURITY & DATA PROTECTION

Protecting our systems and taxpayer information against cyber threats is a top priority for the IRS. The cyber landscape is constantly evolving, and we continue to experience increasingly sophisticated and frequent efforts by cybercriminals to steal taxpayer data (1.4 billion attacks annually, including denial-of-service attacks, unsuccessful intrusion attempts, probes or scans, and other unauthorized connectivity attempts), file fraudulent refunds, and infiltrate our systems. Due to the proliferation of sophisticated security threats and the sensitive taxpayer information contained within our systems, we must have an agency-wide, proactive approach to security. Continued investment in technology, tools, and processes is necessary to defend against expanding cyber threats and stay current with changing NIST guidelines.

For example, as part of our Network Security Enhancement initiative, our teams have deployed Network Segmentation to restrict IRS Local Area Network (LAN) access to users and devices based on pre-determined authorization levels. This effort enhances visibility across our networks and drives proactive mitigation of potential threats. As part of the initiatives within this Pillar, we will continue to enhance our real-time insights and defensive capabilities across the IRS enterprise to protect the organization and American taxpayer data from cyberattacks.

The remainder of **Section 5.4** describes the Cybersecurity & Data Protection Pillar in detail across three key elements:

- Objectives & Outcomes
- Modernization Programs & Initiatives
- Target Capabilities & Roadmap



Safeguarding Taxpayer Data

1.4B

Cyber access
attempts
denied in FY2018



The IRS's computer systems
currently withstand

2.5 million

unauthorized access
attempts each day

*Source: IRS Strategic Plan
FY2018–2022, Congressional
Testimony, September 2018*

5.4.1 | Objectives & Outcomes

To protect IRS systems and retain public trust, we must maintain a strong security posture with a focus on Identity & Access Management (IAM), vulnerability and threat management, and enterprise-wide security operations and management. The following objectives and capabilities characterize our approach to transforming our cybersecurity posture:

Objective 1: Establish trusted and streamlined access to information through identity and access management technologies

IAM refers to the capabilities (processes, technologies, and policies) for managing users' digital identities and controlling their use to access enterprise resources. In the target IRS environment, we will implement existing IAM capabilities as a set of common services. Standardizing authentication and authorization across platforms will reduce complexity while enhancing end user experience through streamlined identity verification, e.g., with federated IAM protocols and certificate management processes. We adhere to Federal guidelines and standards to ensure proper authentication, access, and authorization requirements on our public-facing applications.

Our data approach is critical to reaching and sustaining our target-state cyber environment. Currently, we collect and correlate cyber risk data across the IRS enterprise and external partners and use advanced analytics and threat sensing approaches to identify threats. We work proactively to detect and evaluate business risk associated with emerging threats and vulnerabilities. One example initiative, the Continuous Diagnostics and Mitigation (CDM) program, will establish a set of COTS information security continuous monitoring tools to help protect IRS networks. CDM will provide dashboards to improve situational awareness and enhance the IRS's ability to identify and respond to the risk of emerging cyber threats.

Objective 2: Proactively identify emerging threats and vulnerabilities through the use of real-time intelligence information and analytics

It is critical that we maintain defense in depth to detect breaches and mitigate threats effectively. To support this, we proactively hunt for threats active within the IRS ecosystem. While a focus on external threats is important, it is equally critical to monitor internal activities to address potential breaches arising from unintentional actions or as the result of malicious intent. We will provide end-to-end monitoring of security integration into the delivery lifecycle, creating a complete understanding of what and who operates within the security ecosystem.

The IRS is also implementing data encryption at rest and in transit to protect against taxpayer data loss. This effort provides us the ability to integrate secure services effectively while maintaining a strong security posture aligned with technological advancements.

Objective 3: Protect taxpayer data and systems via end-to-end visibility and common platforms

We must integrate effective and efficient security within our systems, a requirement that stretches across our environments. To do so, we will establish security standards and reusable security services and tools appropriate to the evolving technology ecosystem. We will integrate security processes into the service design/operations lifecycle to deliver systems and processes with security built in at the outset.

Following industry best practices, we will focus on security throughout the enterprise and development lifecycle. Integrating security throughout the delivery lifecycle may involve: 1) iterative security testing at all stages of development, 2) new collaboration with development teams throughout the lifecycle to define secure approaches, and, 3) proactively embedding cybersecurity within new technologies before they enter production.

5.4.2 | Modernization Programs & Initiatives

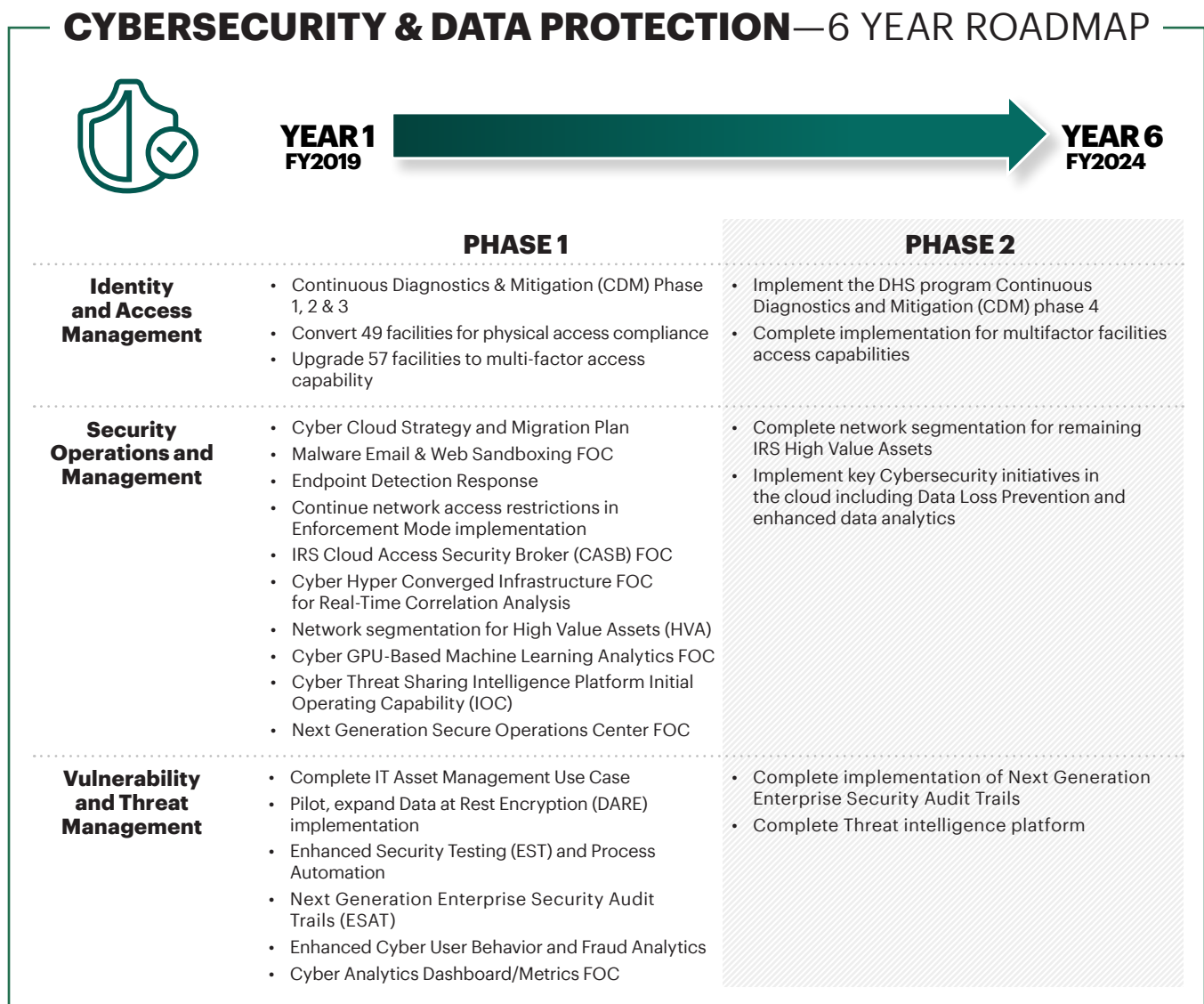
We have three inter-related cyber modernization initiatives:

- **Identity & Access Management:** Further prevent malicious or unintended access and disclosure of taxpayer and other sensitive data using a common platform for secure authorization and authentication services and encrypting sensitive data at rest as well as in transit.
- **Security Operations & Management:** Enhance the ability to secure taxpayer data and systems through full visibility of hardware and software on the network, and enhance incident response and detection of internal threats to data and systems.
- **Vulnerability & Threat Management:** Enable IRS cybersecurity professionals to protect taxpayer data and systems, providing full visibility into endpoints and servers to monitor.

5.4.3 | Target Capabilities & Roadmap

To achieve the Pillar's three objectives, we identified target capabilities for each initiative over the next six years (FY2019-FY2024). **Figure 6** depicts the targeted individual capabilities for this Pillar.

FIGURE 6: Cybersecurity & Data Protection: Capabilities & Implementation



Timeline is subject to budget and available resources

6.0 IMPLEMENTATION & MANAGEMENT

The Business Plan outlines the direction and goals for our modernization program and includes developing, monitoring, and reporting progress against a baseline series of metrics. We will hold ourselves accountable to our modernization investments through regular reporting, providing stakeholders with insight on modernization performance and progress, beyond cost/schedule/scope of individual initiatives.

6.1 MANAGING MODERNIZATION

Our current governance framework provides oversight via a multi-layer leadership and management structure encompassing the full lifecycle of information technology investments and projects. The IRS administers IT oversight recommendations through four separate IT Executive Steering Committees (ESCs): Infrastructure, Strategic Development, Sustaining Operations, and Information Technology Enterprise. Each IT ESC meets at regular intervals throughout the fiscal year to oversee the IT investment portfolio and escalate risks brought forward by their subordinate Governance Board (GB).

We will use established forums and cadence to provide updates on modernization performance. Owners of individual modernization initiatives will continue to provide status updates, progress, and other metrics directly through their governance bodies. Throughout the modernization initiative and IT program lifecycles, leadership and stakeholders will review and assess factors that could influence a change in the implementation direction. Leveraging existing project-level reporting, we will incorporate an enterprise portfolio reporting overlay (using initial measures described in **Section 6.2**).

6.2 MEASURING SUCCESS

Metrics are crucial for determining the success of our modernization efforts. As part of our implementation planning, we constructed an initial set of outcome-oriented metrics (in addition to the collection of normal Cost/Schedule/Scope metrics at the individual initiative/project levels). We will establish the baseline metrics in year one and monitor progress over the course of the plan. The process of refinement includes assessing the effectiveness of individual metrics during performance reviews, determination of additional metrics for collection, and potential recommendations for retirement, as appropriate.

As we work to refine our modernization metrics, we will consider the following:

- Ability to move the enterprise closer to strategic goals
- Achievement of improvements in speed, accuracy, and efficiency
- Effect on taxpayers and stakeholders, including taxpayer burden
- Identification of opportunities for innovation
- Development of documentation and tools to track value and ongoing returns on investments
- Cost effectiveness of implemented solutions

Modernization Metrics

We will deliver and report on incremental value and progress on measures each year. Our initial modernization metrics baseline includes reporting on performance indicators comprised of enterprise outcome-focused metrics in addition to traditional IT project management measures (Cost/Schedule/Scope).

Most metrics have an associated numerical goal, but in some instances indicators will need to be developed as the detailed planning process proceeds. The timeline to achieve these initial goals is FY2024, unless otherwise stated, and we will report incremental progress. To support our overall goals of stabilizing operations and maintenance and being a nimble organization, we will target the following initial metrics:

- **Promote ease and simplicity in taxpayer interactions and deliver a customer experience in line with the Customer Experience Agency Priority Goal**
 - Increase American Customer Satisfaction Index score
 - Increase Enterprise Self-Assistance Participation Rate

- 75 percent of taxpayer interactions have a digital alternative
- 80 percent of annual outbound notifications available to be delivered digitally
- Convert 100 percent of high-volume notices to an electronic format for taxpayer view by FY2020; with 10 percent of taxpayers completing an online installment agreement opting in to receive the monthly installment agreement notice through online account by FY2021 and increasing adoption to 25 percent by FY2024
- 95 percent of product lines will offer callback capability
- **Protect revenue by improving the ability to identify fraudulent returns and assisting victims of identity theft**
 - Reduce the amount of unprotected identity theft tax refunds paid by two percent by the end of CY2019, and an additional one percent annually through CY2024
 - Increase the number of return types screened for anomaly detection through Return Review Program (RRP)
 - Increase the percent of taxpayer using the ID Verify tool to validate their identity by five percent in FY2020 and 50 percent by FY2024
- **Expand opportunities and assistance for voluntary compliance and enhance systemic identification of non-compliance and fraud**
 - Increase taxes collected as a percent of taxes owed
 - Increase audit efficiency, as measured by more closures per FTE, via reduced audit cycle time and less time on case, and fewer no-change audit results
 - Measure enforcement impact on voluntary compliance
 - Measure taxpayer self-correction rate
- **Stabilize operations and maintenance costs in line with industry standards**
 - O&M cost stabilized at 80 percent of total IT spend in FY2019
 - Reduce and then sustain aged infrastructure at 25 percent
 - Retire 75 percent of legacy code (Assembly Language Coding (ALC) & Common Business-Oriented Language (COBOL))
 - 75-80 percent efficiency gain on work processes where robotic process automation is applied
- **Minimize the risk of catastrophic system failure and data breaches**
 - Ensure high-service availability with 100 percent of critical systems at the appropriate level of redundancy
 - Protect systems with 100 percent of applications at assessed level of risk or mitigated with compensating controls

In addition to tracking and reporting on the initial metrics above, we will also track performance measures aligned to the [FY2020 Congressional Budget Justification and Annual Performance Report and Plan](#).

6.3 ALIGNMENT TO FEDERAL REGULATIONS

We will report progress towards modernization goals as directed by Congress and the Office of Management and Budget. In addition, we will execute our governance processes in compliance with federally mandated legislation, such as the Federal Information Technology Acquisition Reform Act (FITARA). As part of implementing the modernization portfolio, we will continue to implement FITARA oversight and controls, enabling effective management of the portfolio and utilization of lessons learned. Leadership engagement in overseeing the Business Plan is key to aligning with FITARA.

We will continue to adhere to the primary requirements of Capital Planning and Investment Control (CPIC), mandated by the Clinger-Cohen Act of 1996 as we manage and report on effective portfolio performance metrics associated with the targeted modernization initiatives described in **Section 5.0**.

We will also continue to work towards the underlying goals and objectives described in the President's Management Agenda, specifically in relation to modernizing IT and transforming the customer experience.

7.0 CONCLUSION

We continue our commitment towards fulfilling the IRS's mission to provide America's taxpayers with top quality service by helping them understand and meet their tax responsibilities. The Business Plan illustrates the tools and techniques necessary to achieve the customer experience and modernization goals over the two-phase six-year plan. The four modernization Pillars and initial metrics provide the foundation for organizing and measuring the IRS's success in achieving its goals.

Delivering on our modernization plan will enable the IRS to provide enhanced services to taxpayers and deliver long-term budget and personnel efficiencies. Efficiencies are the results of decommissioning legacy applications, using robotics to automate manual processes, and expanding advanced analytics programs to more effectively serve and facilitate taxpayer compliance. Deploying these capabilities, while simplifying our legacy applications and infrastructure, is necessary for stabilizing the rising cost associated with maintaining our IT ecosystem. In the end, this holistic approach will accelerate our modernization journey by putting taxpayer needs first, supported by innovative technologies and sound operational processes.



APPENDICES

Appendix A |

IRS PRIMARY BUSINESS PROCESSES

The IRS focuses on six primary business processes enabled by information technology services and solutions. The following section describes each business process, the individual business units that utilize their functionality, and the supporting capabilities.



Intake

The Intake business process includes the receipt, conversion, validation, issue resolution and processing of all inbound electronic and paper submissions (for example, tax returns, payments, information returns and reports), correspondence and other inbound taxpayer information. It also encompasses the initial capture and accounting of tax revenues and user fees, handling of exempt determinations, issuing of taxpayer notices and processing of refunds. Moreover, Intake entails up-front issue detection and resolution activities that contribute to effective tax law enforcement.

The Intake business process' core capabilities include:

- Submission Receipt and Preparation
- Submission Conversion and Formatting
- Submission Validation and Issue Resolution
- Remittance Transaction Processing

The IRS business units associated with Intake are:

- Wage & Investment (W&I)
- Large Business & International (LB&I)
- Small Business/Self Employed (SB/SE)
- Tax Exempt/Government Entities (TE/GE)



Account Management

The Account Management business process maintains centralized access to billions of tax records and provides critical account services to: process tax returns, payments and other types of financial transactions; post transactions; and settle taxpayer accounts. Account Management supports the other primary business processes by providing the ability to access and update the taxpayer account data necessary to investigate, respond to and resolve taxpayer account issues, refunds and notice inquiries. It is also used by Internal Operations to support tax processing (for example, financial reporting) and the annual Government Accountability Office (GAO) audit of financial systems.

Account Management is in some capacity associated with every IRS business unit. Some of those are:

- Wage & Investment (W&I)
- Small Business/Self Employed (SB/SE)
- Tax Exempt/Government Entities (TE/GE)
- Large Business & International (LB&I)
- IRS Criminal Investigation (CI)

Account Management's core capabilities include:

- Account Services
- Account Validation and Posting
- Account Settlement
- Account Analysis
- Post-Settlement Actions
- Fee Processing



Compliance

The Compliance business process includes those processes that prevent, detect and resolve income tax filing, payment, refund and reporting compliance issues. The IRS designed the maintenance and enhancement of these processes to make non-compliant taxpayers compliant and save taxpayers and corporations time in return preparation and refund receipt. This business process spans taxpayer and tax-preparer awareness and education; validates returns and tax data after filing; and enforces compliance for any violations. Compliance includes the collection, examination, appeals and criminal enforcement functions, with key activities that include forecasting potential non-compliance issues, performing pre-filing preventive treatment, case prioritization models and algorithms, performing filing, payment and reporting compliance actions and investigating criminal violations of the tax law.

The IRS business units associated with Compliance are:

- Wage & Investment (W&I)
- Large Business & International (LB&I)
- Small Business/Self Employed (SB/SE)
- Tax Exempt/Government Entities (TE/GE)
- IRS Criminal Investigation (CI)
- IRS Office of Appeals

The Compliance business unit's core capabilities are:

- Compliance Planning
- Workload Identification
- Compliance Modeling
- Preventive Treatment
- Compliance Actions
- Criminal Enforcement



Case Management

The Case Management business process provides complex processing capabilities that require a combination of IRS business personnel and electronic workflow for a wide range of case types, such as a newly identified compliance issue, a submitted taxpayer claim, a taxpayer complaint, or a compliance issue that is moving to litigation. The enterprise case management functions include case identification; case creation; workflow; case decision-making support; case processing and case closure. Case Management is a cross-cutting primary business process that comprises policy, programmatic and managerial support functions necessary to IRS operations for cases that may originate in other primary business processes (for example, compliance and customer service). An enterprise-level case management solution will yield efficiencies by implementing standard case management functions, providing visibility across various tax transactions and improving data accessibility and usability.

The IRS business units associated with Case Management include:

- Wage & Investment (W&I)
- Large Business & International (LB&I)
- Small Business/Self Employed (SB/SE)
- Tax Exempt/Government Entities (TE/GE)
- IRS Criminal Investigation (CI)

The core capabilities that encompass Case Management are:

- Account Administration
- Case Initiation
- Case Select & Assign
- Case Work
- Case Closure
- Case Tracking & Control
- Reporting & Analytics
- Case Management Administration



Customer Service

The Customer Service business process provides tax law and compliance assistance; taxpayer and stakeholder education and outreach; third party services, and; responses to taxpayer account, refund and notice inquiries. This primary business process provides account specific, non-account specific and advocacy services. Customer Service assistance is provided through three primary means: centralized contact centers (phone, written and electronic inquiries); Automated Self-Service Applications (ASSA) via the phone and web, and; Taxpayer Assistance Centers (TACs) for walk-in assistance.

IRS business units tied to Customer Service are:

- Wage & Investment (W&I)
- Large Business & International (LB&I)
- Small Business/Self Employed (SB/SE)
- Tax Exempt/Government Entities (TE/GE)

Customer Service's core capabilities include:

- Inbound Receipts, Routing and Resolution
- Outbound Management
- Taxpayer Assistance
- Outreach and Education
- Third-Party Services
- Self-Services



Internal Operations

The Internal Operations primary business process defines enterprise-wide administrative systems related to workforce support, human capital management, accounting, and financial management, IT management, budget and planning, procurement, facilities, and travel. Many related organizations perform Internal Operations functions, including the Commissioner's Complex (CC), Chief Financial Officer (CFO), Chief Information Officer (CIO), Human Capital Officer (HCO), Chief Risk Officer (CRO), Facilities Management and Security Services (FMSS), Information Technology and the Office of Procurement.

Internal Operations systems support all the business and functional operating divisions defined within the IRS.

The core capabilities include:

- Financial Management
- Human Resources Management
- Asset Management
- Administrative Management
- IT Management
- Enterprise Strategy, Planning, Governance, and Policy
- Legal & Legislative Affairs

ACRONYMS

TABLE 2: Acronyms & Descriptions

ACRONYM	DESCRIPTION
AI	Artificial Intelligence
API	Application Programming Interface
ASSA	Automated Self-Service Applications
CADE	Customer Account Data Engine
CADE 2 TS 2	Customer Account Data Engine 2 Transition State 2
CAP	Cross-Agency Priority
CC	Commissioner's Complex
CDM	Continuous Diagnostics and Mitigation
CFO	Chief Financial Officer
CI	Criminal Investigation
CIO	Chief Information Officer
COBOL	Common Business-Oriented Language
COTS	Commercial Off-the Shelf
CPIC	Capital Planning and Investment Control
CRO	Chief Risk Officer
CSF	Cybersecurity Framework
DevOps	Development & Operations
EA	Enterprise Architecture
ECM	Enterprise Case Management
ESC	Executive Steering Committee
FITARA	Federal Information Technology Acquisition Reform Act
FMSS	Facilities Management and Security Services
GAO	Government Accountability Office

ACRONYM	DESCRIPTION
GB	Governance Board
HCO	Human Capital Officer
IAM	Identity & Access Management
IMF	Individual Master File
IRS	Internal Revenue Service
IT	Information Technology
ITAM	IT Asset Management
LAN	Local Area Network
LB&I	Large Business and International
LOS	Level of Service
NIST	National Institute of Standards and Technology
O&M	Operations and Maintenance
PMA	President's Management Agenda
RPA	Robotic Process Automation
RRP	Return Review Program
RTTP	Real Time Tax Processing
SB/SE	Small Business/Self-Employed
SDLC	Software Development Lifecycle
TAC	Taxpayer Assistance Centers
TE/GE	Tax-Exempt and Government Entities
TDC-ON	Taxpayer Digital Communications Outbound Notifications
WCMS	Web Content Management System
W&I	Wage & Investment
WebApps	Web Applications



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