TREASURY INSPECTOR GENERAL FOR TAX ADMINISTRATION

Progress of Information Technology Modernization Efforts

September 11, 2024

Final Memorandum Number: 2024-2S8-055

**TREASURY INSPECTOR GENERAL
FOR TAX ADMINISTRATION**

U.S. DEPARTMENT OF THE TREASURY

WASHINGTON, D.C. 20024

September 11, 2024

MEMORANDUM FOR: COMMISSIONER OF INTERNAL REVENUE

FROM: Danny R. Verneuille
                    Acting Deputy Inspector General for Audit

SUBJECT: Final Memorandum – Progress of Information Technology
                    Modernization Efforts (Review No.: 2024208016)

This memorandum presents the results of our review of the progress of the Internal Revenue Service's (IRS) modernization efforts and the reported Fiscal Year 2023 milestone statuses for Objective Four in the IRS Inflation Reduction Act Strategic Operating Plan. We performed this review during the period November 2023 through July 2024. We are issuing this memorandum to document the actions taken by the IRS.

Management's complete response to the draft memorandum is included as Appendix I. If you have any questions, please contact me or Jena Whitley, Acting Assistant Inspector General for Audit (Security and Information Technology Services).

Background

Information technology plays a critical role in enabling the Internal Revenue Service (IRS) to carry out its mission and responsibilities. The modernization of its information technology and business systems is essential to fulfilling its mission of providing America's taxpayers with top quality service, helping them understand and meet their tax responsibilities, and enforcing the law with integrity and fairness to all. It is also necessary to maintain the integrity of the Nation's tax system, collect trillions of dollars, and keep up with economic and population growth.

In August 2022, Congress enacted the Inflation Reduction Act of 2022 (IRA), originally appropriating the IRS approximately $79.4 billion over the next decade to significantly improve the tax system and the services provided to taxpayers.[1] However, the Fiscal Responsibility Act of 2023 resulted in the rescission of approximately $1.4 billion of IRA funding provided to the IRS.[2] In addition, the enactment of the Further Consolidation Appropriations Act of 2024 reduced future IRS Enforcement funding by approximately $20 billion.[3] Therefore, currently, IRA funding is approximately $57.8 billion. According to the Congressional Budget Office, the IRA increased the IRS Business Systems Modernization budget by 153 percent, providing $4.7 billion in additional funding from Fiscal Year (FY) 2022 to FY 2031. The additional funding to the IRS's business systems modernization program includes the development of callback and other technology to provide more personalized customer service, but it cannot be spent on the operation and maintenance of legacy systems. This legislation grants the IRS the opportunity to accelerate its information technology modernization and digitalization priorities.

The Department of the Treasury (hereafter referred to as the Treasury Department) and the IRS developed a Strategic Operating Plan (SOP) identifying the highest priority opportunities to deliver transformational change for taxpayers.[4] This SOP outlines how the IRS will deploy the investments in the IRA to better serve taxpayers, tax professionals, and the broader tax ecosystem. The SOP is structured to achieve five core transformation objectives that will be accomplished through the completion of 42 initiatives and 39 projects. Figure 1 lists these five core objectives.

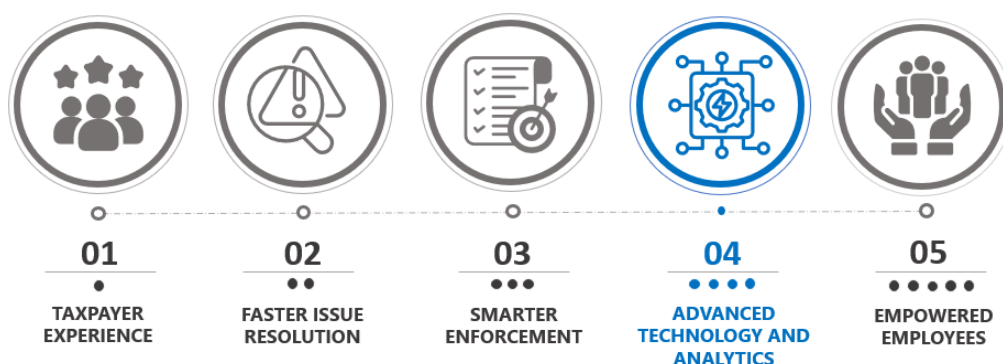[1] Pub. L. No. 117-169, 136 Stat. 1818.

[2] Pub. L. No. 118-5, 137 Stat. 10.

[3] Pub. L. No, 118-47, 138 Stat. 460.

[4] IRS Publication 3744, *Internal Revenue Service Inflation Reduction Act Strategic Operating Plan FY 2023 - 2031* (Rev. 4-Apr. 2023).

Figure 1: IRS IRA SOP Objectives

01	02	03	04	05
●	● ●	● ● ●	● ● ● ●	● ● ● ● ●
TAXPAYER EXPERIENCE	FASTER ISSUE RESOLUTION	SMARTER ENFORCEMENT	ADVANCED TECHNOLOGY AND ANALYTICS	EMPOWERED EMPLOYEES

Source: IRS IRA SOP Key Talking Points.[5]

The goal of these five objectives is for the IRS to be rooted in modern technology that provides taxpayers with increased confidence that data are secure, and that the IRS is prepared to meet new requirements or responsibilities that may emerge in the future. Specifically, Objective Four will facilitate this vision for the future of Federal tax administration by delivering cutting-edge technology, data, and analytics to operate more effectively. This objective will be achieved through the completion of eight initiatives:

1. Transform core account data and processing.

2. Accelerate technology delivery.

3. Improve technology operations.

4. Continue to ensure data security.

5. Maximize data utility.

6. Apply enhanced analytics capabilities to improve tax administration.

7. Strategically use data to improve tax administration.

8. Partner to expand insights.

The organizations spearheading this objective include the Information Technology organization; Research, Applied Analytics, and Statistics (RAAS); and the Transformation and Strategy Office. The Information Technology organization oversees the development, implementation, and maintenance of information technology throughout the IRS. It ensures that information systems are secure, integrated, and modernized to align with the IRS's business priorities. RAAS anticipates and meets customers' needs by providing leading research, analytical, statistical, and technology services. It is the leading source for data analytics, analytical and statistical support, research tools and information, and breakthrough technologies within the IRS. The Transformation and Strategy Office works across the IRS to oversee IRA implementation efforts. It is responsible for communicating, monitoring, and overseeing IRS progress related to the SOP, including change management, stakeholder engagement, risk management, performance monitoring, and performance improvement, along with any future changes to the SOP. The Transformation and Strategy Office works closely with business units to implement the IRA and with the Information Technology organization to align modernization efforts.

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[5] IRS, *Inflation Reduction Act Strategic Operating Plan Key Talking Points ver. 7* (Oct. 2023).

Objective

The overall objective of this review was to evaluate the progress of the IRS's information technology modernization, including transforming core account data and processing efforts funded by the IRA.

Results of Review

The SOP contains a total of 42 initiatives that outline strategic bodies of work, including 39 key projects that will drive the IRS's transformation of how the tax system is administered and the services provided to taxpayers. During FY 2023, the IRS worked on 27 of the 39 key projects that are underlined in Figure 2. The IRS spent approximately $1.2 billion (83 percent) of FY 2023 IRA funding on these projects and supplementary activities.

Figure 2: Key Projects Within the IRS's Initiatives

| Objectives	Key Projects	
Objective One	Live Assistance Multilingual Digitalization Individual Online Account Tax Pro Online Account Business Online Account	Direct File Online Tools/ Self Service Payments Modernization Authentication, Authorization, and Access
Objective Two	Modernized Correspondence, Notices, and Letters	
Objective Three	Digital Asset and Cryptocurrency Program Enterprise Case Selection/Enterprise Anomaly Detection Legacy Systems Changes for Unified Compliance Organization	

Objectives	Key Projects	
Objective Four	Individual Master File Modernization Business Master File Modernization Unified Intake Tax Processing Integrated Data Retrieval System (IDRS) Modernization Information Return Modernization Enterprise Case Management eRecords Management Accelerated Technology Delivery Modernized Accounting and Financial Systems IT Service Management Common Enterprise Services IT Operations Transformation	Enterprise Tax Calculator Service Provider Enterprise Data Platform Advanced Analytics Platform Network Modernization Virtual Desktop Infrastructure Robotic Process Automation Event Driven Architecture Identity and Access Management Security and Operations Management Vulnerability and Threat Management Customer Relationship Management
Objective Five	Automated Background Investigation System Modernization IRS University	

Source: Program Exec Leads Roster [for] IRS IT Transformation Programs (Oct. 2023).
IT = Information Technology organization.

Delivery of Cutting-Edge Technology, Data, and Analytics

Many of the transformation objectives within the SOP are dependent on the modernization of the IRS core information technology infrastructure. Figure 3 shows that our review of the 42 initiatives determined that 35 (83 percent) are dependent upon one or more of the eight information technology initiatives within Objective Four.

Figure 3: Initiatives Dependent on Objective Four
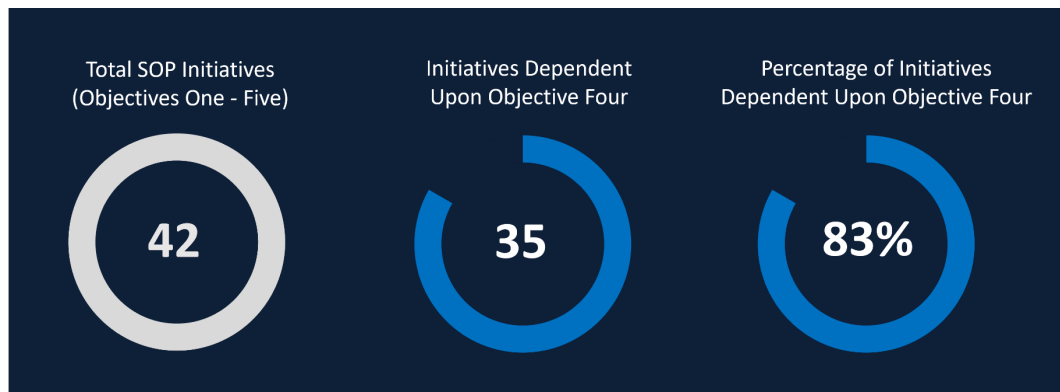
Source: Treasury Inspector General for Tax Administration analysis of the IRS IRA SOP.

In addition to outlining the initiatives, the SOP also includes specific milestones to be delivered in support of completing the initiatives. The IRS identified 58 SOP milestones planned to be delivered in FY 2023. As of September 30, 2023, the IRS reported that:

- 19 (33 percent) milestones were completed.

- 36 (62 percent) milestones were making progress.

- 3 (5 percent) milestones were delayed.

Within the 58 SOP milestones that were to be delivered in FY 2023, 13 were related to Objective Four. Of the 13 milestones, the IRS reported that as of September 30, 2023:

- Seven (54 percent) were completed.

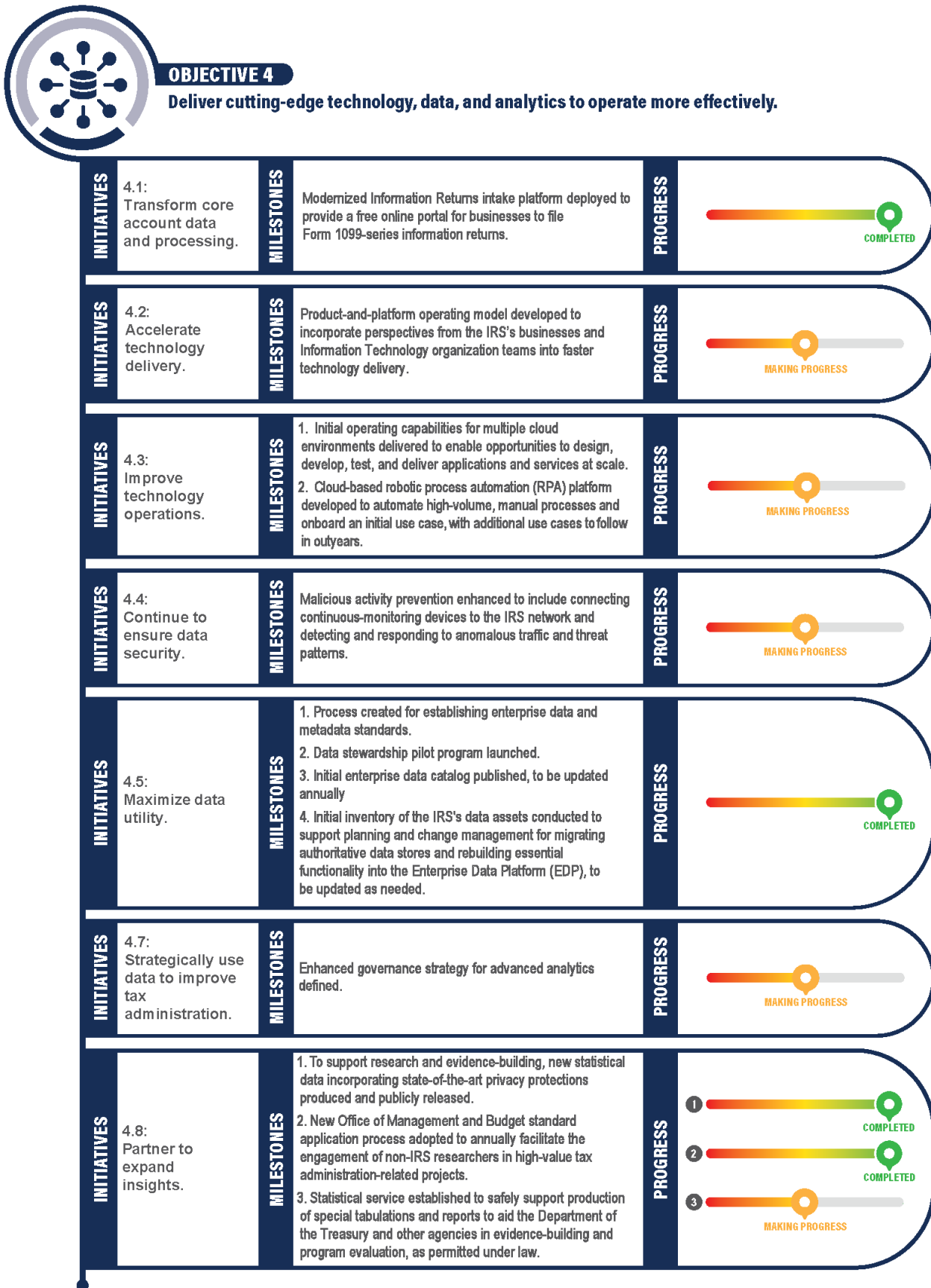- Six (46 percent) were making progress.

As part of our review, we assessed the effectiveness of six of the 13 milestones to be delivered in FY 2023. We reviewed:

- Four completed milestones (associated with Initiative 4.5).

- Two milestones that were making progress (associated with Initiative 4.3).

Figure 4 provides an overview of the 13 milestones and their completion progress for FY 2023.

Figure 4: Objective Four Initiatives, Milestones, and Completion Progress

OBJECTIVE 4
Deliver cutting-edge technology, data, and analytics to operate more effectively.

INITIATIVES	MILESTONES	PROGRESS
4.1: Transform core account data and processing.	Modernized Information Returns intake platform deployed to provide a free online portal for businesses to file Form 1099-series information returns.	COMPLETED
4.2: Accelerate technology delivery.	Product-and-platform operating model developed to incorporate perspectives from the IRS's businesses and Information Technology organization teams into faster technology delivery.	MAKING PROGRESS
4.3: Improve technology operations.	1. Initial operating capabilities for multiple cloud environments delivered to enable opportunities to design, develop, test, and deliver applications and services at scale. 2. Cloud-based robotic process automation (RPA) platform developed to automate high-volume, manual processes and onboard an initial use case, with additional use cases to follow in outyears.	MAKING PROGRESS
4.4: Continue to ensure data security.	Malicious activity prevention enhanced to include connecting continuous-monitoring devices to the IRS network and detecting and responding to anomalous traffic and threat patterns.	MAKING PROGRESS
4.5: Maximize data utility.	1. Process created for establishing enterprise data and metadata standards. 2. Data stewardship pilot program launched. 3. Initial enterprise data catalog published, to be updated annually 4. Initial inventory of the IRS's data assets conducted to support planning and change management for migrating authoritative data stores and rebuilding essential functionality into the Enterprise Data Platform (EDP), to be updated as needed.	COMPLETED
4.7: Strategically use data to improve tax administration.	Enhanced governance strategy for advanced analytics defined.	MAKING PROGRESS
4.8: Partner to expand insights.	1. To support research and evidence-building, new statistical data incorporating state-of-the-art privacy protections produced and publicly released. 2. New Office of Management and Budget standard application process adopted to annually facilitate the engagement of non-IRS researchers in high-value tax administration-related projects. 3. Statistical service established to safely support production of special tabulations and reports to aid the Department of the Treasury and other agencies in evidence-building and program evaluation, as permitted under law.	1. COMPLETED 2. COMPLETED 3. MAKING PROGRESS

Source: Treasury Inspector General for Tax Administration, Report No. 2024-IE-R010, Inflation Reduction Act: Continued Assessment of Transformation Efforts - Evaluation of Fiscal Year 2023 Delivery of Initiatives (Mar. 2024).
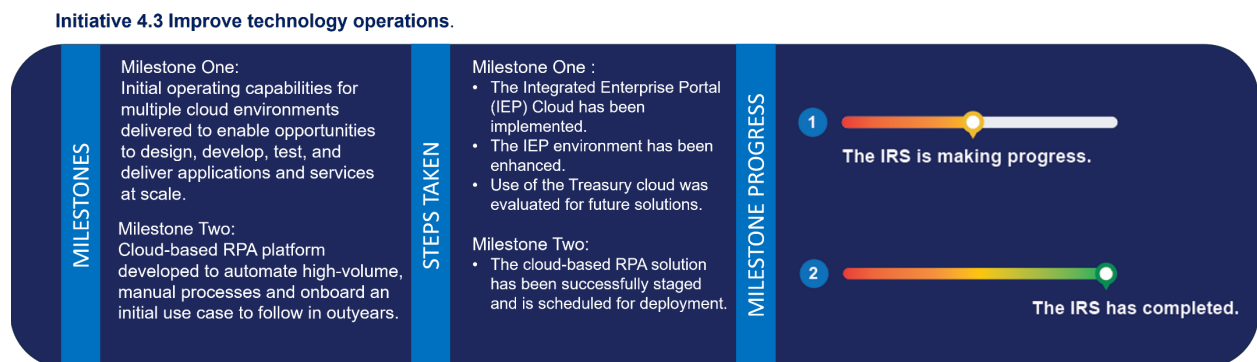
Progress Is Being Made to Enhance Core Technology Processes and Platforms to Support the Delivery of Expanded Capabilities

The focus of Initiative 4.3 is to enhance core technology processes and platforms to support the delivery of expanded capabilities for taxpayers and employees. To accomplish this initiative, the IRS plans to build flexible platforms with modern data infrastructure and high-fidelity networks to serve taxpayers with:

- Ongoing data security.

- More productive workforce.

- Faster processing times with fewer errors.

- Faster adaptation to future needs.

The two milestones to be delivered in FY 2023 for Initiative 4.3 included the implementation of multiple cloud environments and the Robotics Process Automation (RPA) platform. During FY 2023, the IRS spent approximately $4.4 million (over $200,000 on implementing multiple cloud environments and over $4.1 million on RPA) of IRA funds on the two milestones.

Figure 5: Initiative 4.3 FY 2023 Milestone Status as of April 2024

Initiative 4.3 Improve technology operations.

MILESTONES	STEPS TAKEN	MILESTONE PROGRESS
Milestone One: Initial operating capabilities for multiple cloud environments delivered to enable opportunities to design, develop, test, and deliver applications and services at scale.	Milestone One : • The Integrated Enterprise Portal (IEP) Cloud has been implemented. • The IEP environment has been enhanced. • Use of the Treasury cloud was evaluated for future solutions.	1 The IRS is making progress.
Milestone Two: Cloud-based RPA platform developed to automate high-volume, manual processes and onboard an initial use case to follow in outyears.	Milestone Two: • The cloud-based RPA solution has been successfully staged and is scheduled for deployment.	2 The IRS has completed.

Source: IRS IRA SOP and information provided by the IRS regarding the status of the milestones.

Milestone One – Initial operating capabilities for multiple cloud environments

The IRS reported Milestone One is making progress as of October 2023

- The IRS expanded its use of the Integrated Enterprise Portal Cloud for IRS-developed solutions. The Integrated Enterprise Portal Cloud was implemented with several IRS solutions, such as Individual Online Account, Business Online Account, and Information Returns Modernization. The IRS is enhancing the Portal environment by increasing connectivity bandwidth and improving testing capability with IRS legacy systems to allow for continued growth with the addition of solutions like Enterprise Tax Calculator Service and Direct File.

- The IRS will evaluate the use of Treasury Cloud for future solutions and continue to leverage cloud-based solutions to implement technology platforms and accelerate delivery.

Since October 2023, the IRS has developed a new Cloud Service Request Fulfilment Workflow that replaced the former Cloud Service Request process for migrating to the cloud. By creating this workflow, the IRS can track cloud service requests through intake, automate approvals and

notifications, and generate reports. The workflow enables project or application teams to obtain enterprise-approved cloud design and architecture as well as track security, firewall change, and budgetary requests and approvals. The IRS launched the new cloud request process in February 2024.

To confirm that the new cloud request process workflow was live and functioning, we reviewed documentation from the first three IRS organizations to use the process. The Applications Development, Enterprise Services, and User and Network Services functions were the first organizations to engage Enterprise Cloud Architecture and Design through the workflow. As of April 2024, none of these requests have deployed to the cloud, but they are undergoing the workflow process. <u>We concur with the IRS reported status of making progress for this milestone in FY 2023</u>.

Milestone Two – Cloud-based RPA platform

In April 2019, the IRS introduced the Integrated Modernization Business Plan.[6] The RPA, along with artificial intelligence, data analytics, and intelligent automation, were identified as emerging technologies to consider to drive automation to enhance taxpayer services and modernize IRS operations. In April 2020, the RPA program was created to integrate RPA technology into business and technology processes to increase accuracy, improve productivity, and allow employees to focus on higher value tasks.

The foundational framework necessary for implementing automations is provided by the RPA Enterprise Platform. Applications Development's Internal Management Domain sponsors this system. The RPA platform team focuses on the release and technological management of the automations. The IRA SOP required the platform to be cloud-based.

The IRS reported Milestone Two is making progress as of October 2023

- As of October 2023, the cloud-based RPA solution was successfully staged and scheduled for deployment by November 2023.

The IRS achieved its scheduled go-live deployment of the cloud-based RPA solution in October 2023. The cloud environment for the RPA platform was designed by the Enterprise Cloud Architecture and Design team and deployed in October 2023. In December 2023, the IRS completed deployment of the initial case of automations. The RPA team created a bot to automate the manual process for validating course developer files prior to publication to the training system.[7] Automation of this validation process saves the Human Capital Office an estimated 37 hours monthly that can be used for higher value tasks. For the Wage and Investment Division, the RPA team created a bot to automate the process for inputting and verifying around 3,500 manual refunds a day, which translates to about 1.2 million refunds a year.[8] Automating this manual process produces an estimated $4.44 million in annual savings for the Wage and Investment Division. Based on the interviews conducted and supporting documents reviewed, we determined that this milestone was completed in December 2023.

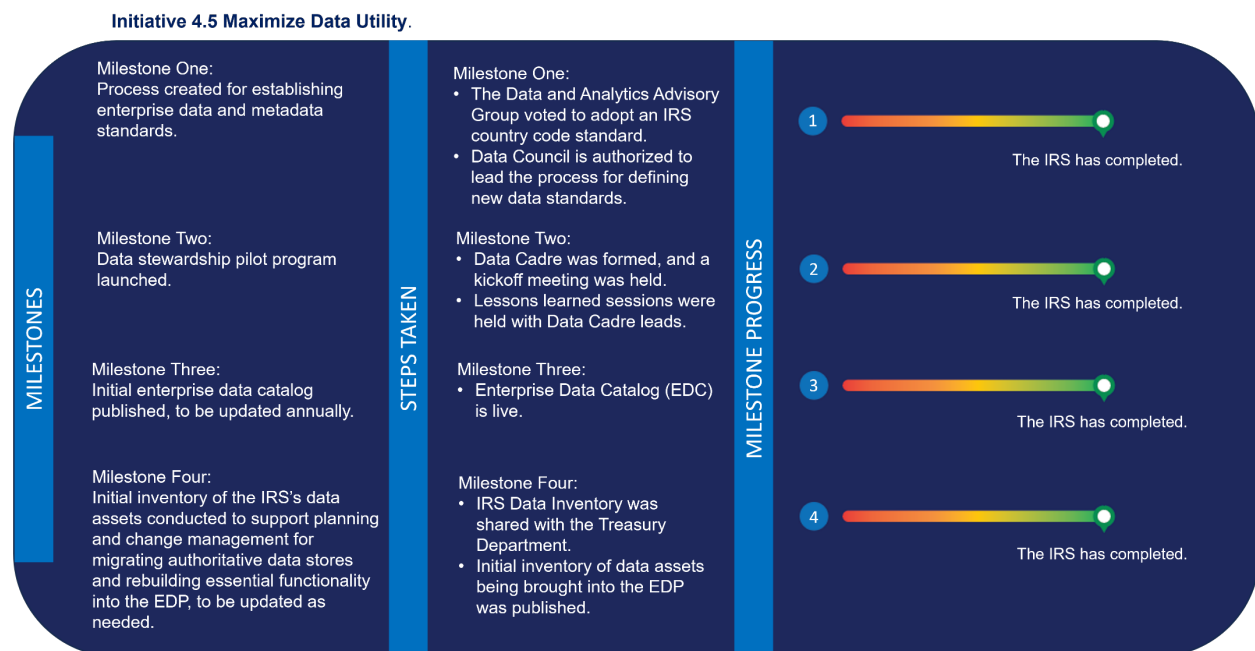[6] *IRS Integrated Modernization Business Plan* (Apr. 2019).

[7] 29 U.S.C. §794d.

[8] The IRS renamed the Wage and Investment Division to Taxpayer Services in April 2024.

The IRS Is Making Significant Strides in Streamlining Data Processes and Increasing Data Efficiency

Thirty-five (83 percent) of the 42 initiatives in the IRA SOP are dependent upon one or more of the eight information technology initiatives in Objective Four. More specifically, 27 (64 percent) of the 42 initiatives are directly dependent on the IRS delivery of Initiative 4.5 (maximize data utility). This initiative is focused on improving the storage and management of data to support improved taxpayer services and enforcement. To accomplish this initiative, the IRS plans to identify which data are needed for business purposes, ingest the right data in timely ways, ensure that the data are complete and accurate, and put mechanisms in place to allow appropriate access to data while protecting taxpayer privacy. Initiative 4.5 consists of four milestones to be delivered in FY 2023. These four milestones involved one key project, the Enterprise Data Platform (EDP). During FY 2023, approximately $53 million of IRA funds were spent on the EDP.

Figure 6: Initiative 4.5 FY 2023 Milestone Status as of April 2024

Initiative 4.5 Maximize Data Utility.

MILESTONES	STEPS TAKEN	MILESTONE PROGRESS
Milestone One: Process created for establishing enterprise data and metadata standards.	Milestone One: • The Data and Analytics Advisory Group voted to adopt an IRS country code standard. • Data Council is authorized to lead the process for defining new data standards.	1 The IRS has completed.
Milestone Two: Data stewardship pilot program launched.	Milestone Two: • Data Cadre was formed, and a kickoff meeting was held. • Lessons learned sessions were held with Data Cadre leads.	2 The IRS has completed.
Milestone Three: Initial enterprise data catalog published, to be updated annually.	Milestone Three: • Enterprise Data Catalog (EDC) is live.	3 The IRS has completed.
Milestone Four: Initial inventory of the IRS's data assets conducted to support planning and change management for migrating authoritative data stores and rebuilding essential functionality into the EDP, to be updated as needed.	Milestone Four: • IRS Data Inventory was shared with the Treasury Department. • Initial inventory of data assets being brought into the EDP was published.	4 The IRS has completed.

Source: IRS IRA SOP and information provided by the IRS regarding the status of the milestones.

Milestone One – Establishing enterprise data and metadata standards

Data standards define minimum requirements for consistency and quality of the data, the metadata (data about the data), and database characteristics to support business processes. Data standards improve data quality; reduce processing time; and increase ease of sharing, reuse, and interoperability.

The IRS reported Milestone One was complete as of July 2023

- In July 2022, the Data and Analytics Advisory Group voted to authorize the Data Council to lead the process for defining new data standards. The Data Council assesses the need for a standard, identifies the appropriate standard, and makes recommendations to the Chief Data and Analytics Officer for review and approval. For example, it established the

Geopolitical Entities, Names, and Codes Standard as the IRS country code standard, replacing the Federal Information Processing Standard that was withdrawn in 2008.

The Data and Analytics Data Council solicited feedback from business operating divisions and other stakeholders regarding the need for country codes as a new data standard over the enterprise. The documents reviewed show that the Data Council members voted to approve the recommendation to adopt the Geopolitical Entities, Names, and Codes Standard as an authoritative source for country code data and authorized the Data Council to lead the process for defining new data standards. Currently, the IRS is working toward developing an implementation plan related to establishing data standards for use in new or future iterations of systems. We concur with the IRS reported status of complete for this milestone in FY 2023.

Milestone Two – Data stewardship pilot program

The Data Cadre, which served as a stewardship pilot program, was established in May 2022. The Data Cadre is a consulting body of subject matter experts established by the Data and Analytics Advisory Group to serve as a resource to business and information technology leaders. The Data Cadre pilot program provides feedback to the implementation of the statutes and ensures that the goals of analytics are considered. The Data Cadre established data stewards, who will provide expert advice and recommendations to ensure that data are maintained and made available for use as a strategic asset.

The IRS reported Milestone Two was complete as of July 2023

- The newly formed Data Cadre Kickoff meeting was held in October 2022.

- Lessons learned sessions were held in June 2023, with Data Cadre leads and the Chief Data and Analytics Officer; Deputy Chief Data and Analytics Officer; Executive Director, Data Management Division; and RAAS management.

To verify the completion status of this milestone, we interviewed RAAS leadership and reviewed briefing documents discussing the roles and responsibilities of the Data Cadre. According to the IRS, RAAS leadership provided guidance at the kickoff to ensure that the business units were supported through IRA provisions. The Data Cadre held weekly meetings to review progress, reports, and answer questions related to transcribing data.

We reviewed the lessons learned session briefings from June 2023 that discussed IRA provision implementation, anticipated IRA legislation changes, future program implementations, and recommendations presented to RAAS executives. We concur with the IRS reported status of complete for this milestone in FY 2023.

Milestone Three – Initial Enterprise Data Catalog (EDC) Published

The EDC is an artificial intelligence powered data catalog. The EDC scans and catalogs data assets across the enterprise and organizes all data assets in the IRS's information landscape based on the data's metadata. The EDC is a central point of reference for disparate data assets within the IRS, and it makes those assets easy to discover, understand, and use at scale. The EDC provides a comprehensive view of data assets, enabling efficient discovery, understanding, and lineage tracking.

The IRS reported Milestone Three was complete as of July 2023

- As of May 2023, the EDC went live to support metadata for Individual and Business Taxpayer Account data.

- As of July 2023, the EDC was populated with the Customer Account Data Engine 2 data, which was loaded into the EDP.

To verify the completion status of this milestone we interviewed key Information Technology organization and RAAS personnel and reviewed briefing documents to validate fulfillment of the EDC. In addition, we attended a live demonstration of the platform that houses the EDC. According to the IRS, the intent for the EDC is to have a unified data glossary in a centralized place for the IRS. The EDC includes not only the glossary and the definitions but also the stakeholders, the process of approvals, and change management process. The EDC contributes to the foundation of EDP analytics tools for end users through data ingestion, a secure landing zone, and data pipelines that enable users to manage enterprise assets in the platform.

The live demonstration of the platform and documents reviewed provided insight into the role, function, and capabilities of the EDC. During the platform demonstration in February 2024, we confirmed that the EDC is live with Customer Account Data Engine 2 data loaded into the EDP. In addition, system-level documentation shows that the EDC went live on the Treasury cloud in April 2023, and we confirmed that the Customer Account Data Engine 2 data were populated in the EDC in July 2023. Therefore, we concur with the IRS reported status of complete for this milestone in FY 2023.

Milestone Four – Initial inventory of data assets and EDP functionality

The EDP is a component-based open architecture platform that delivers universal data access for users and systems at the enterprise level, as well as provides an analytics platform for enterprise users. The EDP is foundational technology for several modernization initiatives and is important to portfolio integration.

The IRS reported Milestone Four was complete as of October 2023

- The IRS supplied the IRS Data Inventory to the Treasury Department in June 2021.

- The IRS completed the initial data inventory in September 2022. The IRS published an initial inventory of data assets brought into the EDP in April 2023.

To verify that this milestone is complete, we conducted interviews with the EDP team and stakeholders to determine the differences between the Treasury Department and IRS inventory reporting. The IRA SOP milestone regarding an inventory of all data assets is also from a prior requirement established in a 2019 data call by the Treasury Department. The Treasury Department requires the IRS to provide updates with data resources from all available sources, including third parties. In 2021, the IRS made its first attempt to produce a complete data inventory list.

According to the IRS, the initial inventory of data assets brought into the EDP are Business Master File, Clean Energy, Customer Account Data Engine 2, Web Apps Enterprise Services Online Payment Plan, Direct Debit Installment Agreement, Modernized Individual Custodial Accounting, and the Information Returns Master File. These data assets were ingested into the EDP through releases and workstreams. We encountered difficulties in confirming the exact dates of when the initial list was compiled and when the initial inventory was integrated into the

EDP. However, based on our review of various system documentation, the initial inventory was found to be ingested into the EDP prior to the end of FY 2023.

- The initial inventory of the IRS's data assets for migration to the EDP was completed. The IRS continues to update the EDP data ingestion roadmap based on shifting IRA priorities, including clean energy.

- The IRS will submit a refreshed IRS data inventory to the Treasury Department in February 2024, per Treasury Department requirements.

According to the IRS, once the onboarding of new data sources is ingested into the EDP and made available for processing and analysis, the intake team and IRS stakeholders will collaborate on IRS priorities and address configuration changes. We reviewed the FY 2024, FY 2025, and FY 2026 roadmap documentation that outlines the schedule for onboarding data assets into the EDP. The roadmap represents the:

- Completed data pipeline.

- Data coming from the Integrated Production Model migrations.

- Data complete from other sources such as individual taxpayer account, information return, and business taxpayer account.

There is a dependency on the Integrated Production Model because several of the data assets to be ingested onto the EDP are being brought on as part of the Integrated Production Model migration effort. However, according to the roadmap, not all data assets have undergone a full migration into the EDP. The IRS stated that the EDP roadmap is in the process of being revised to match the needs of the tenants requesting specific data sets. The revised roadmap will clearly define when data will be ingested, standardized, transformed, and available for use.

In addition, we reviewed the data asset list and the correspondence document exchanged between the Treasury Department and the IRS to determine whether the data inventory was submitted by the requested due date. We confirmed that the required IRS data inventory containing all the data sets within the IRS as defined by the Treasury Department was submitted in February 2024, in response to its 2023 data call. The IRS will continue to update the Treasury Department data call with IRS inventory that meets the requirement of a Treasury Department data set. <u>We concur with the IRS reported status of complete for Milestones One through Four in FY 2023.</u>

Objective Four Milestones Are Not Outlined in the IRA Enterprise Roadmap

The IRS developed an IRA Enterprise Roadmap detailing its priority transformation efforts through Calendar Year 2024 and Filing Season 2025. The first iteration of this roadmap, issued December 2023, focused on the highest priority transformation outcomes across the IRA SOP Objectives One, Two, and Three. It included 36 IRA outcomes along with key results and executive level execution plans. The IRS stated that the second iteration of the roadmap, to include both IRA Objectives Four and Five outcomes and key results for efforts through Filing Season 2026, would occur in early 2024. However, the second iteration issued in May 2024 includes minimal information regarding Objective Four outcomes and key results for Calendar Years 2023 and 2024. The IRS should update its IRA Enterprise Roadmap with all IRA objectives related to Objective Four, with expected outcomes for future years.

Conclusion

The IRS is making progress in its modernization efforts while adhering to its strategic goals. Specifically, in Initiatives 4.3 and 4.5, the Information Technology organization is making significant technical advancements in the areas of artificial intelligence, automation, cloud capabilities, data access, data quality, and data standards. The IRS is undergoing multiple new processes, and once fully operational, they will pave the way for a new technology era across the enterprise. We thoroughly examined a substantial amount of documentation and conducted several interviews to assist us in verifying the IRS reported milestone status for FY 2023 milestones within Initiatives 4.3 and 4.5. Our assessment aligns with the IRS conclusion that the milestones are either completed or making progress as indicated.

Performance of This Review

We conducted this review in accordance with the Council of the Inspectors General on Integrity and Efficiency *Quality Standards for Federal Offices of Inspector General*. Those standards require that the work adheres to the professional standards of independence, due professional care, and quality assurance and followed procedures to ensure accuracy of the information presented.

Major contributors to the review were Jena Whitley, Acting Assistant Inspector General for Audit (Security and Information Technology Services); Kasey Koontz, Director; Myron Gulley, Audit Manager; Paula Benjamin-Grant, Lead Auditor; Natalie Russell, Senior Auditor; and Laura Christoffersen, Information Technology Specialist (Data Analytics).

Management's Response to the Draft Memorandum

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, DC 20224

CHIEF INFORMATION OFFICER

August 27, 2024

MEMORANDUM FOR ACTING DEPUTY INSPECTOR GENERAL FOR AUDIT

FROM: Rajiv Uppal,   Rajiv K.   Digitally signed by Rajiv
                Chief Information Officer   Uppal   K. Uppal
                                                       Date: 2024.08.27
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SUBJECT: Draft Audit Report – Progress of Information Technology
                Modernization Efforts (Audit #2024208016)

Thank you for the opportunity to review and comment on the draft audit report. We agree that IRS is making progress with information technology modernization efforts using the additional funding allocated by the Inflation Reduction Act (IRA). Specifically, we are making significant technical advancements in the areas of artificial intelligence, automation, cloud capabilities, data access, data quality, and data standards.

With the additional funding, we have been able to identify, prioritize, plan and implement new capabilities that improve taxpayer service, improve the employee experience and ensure fairness in the enforcement of tax laws. As this report confirms, we are making progress with all of the transformation initiatives described in the IRS Strategic Operating Plan that are designed to deliver cutting-edge technology, data and analytics (Objective 4), and some initiatives have been completed already. However, much work remains.

Ongoing success hinges on sustained investments. Given current funding structures, we anticipate that the Business System Modernization funding provided under IRA – critical for technology improvements – will run out by fiscal year 2026. The Administration's fiscal year 2025 budget proposal would restore and maintain the full IRA investment in the IRS through 2034 and avoid funding cliffs that would dramatically degrade IRS work ability in many different areas, including technology modernization.

The IRS values the continued support and partnership provided by your office. If you have any questions, please contact me at (202) 317-5000, or a member of your staff may contact Rob Ahart at (757) 613-5399.

Glossary of Terms

Term	Definition
Artificial Intelligence	The ability of a digital computer to perform tasks commonly associated with intelligent beings.
Bot	A software program that can execute commands, reply to messages, or perform routine tasks such as online searches, either automatically or with minimal human intervention.
Cloud	The use of computing resources, *e.g.*, hardware and software, which are delivered as a service over a network (typically the Internet).
Data Set	A collection of data. This includes data procured from private third parties, data procured from other governments (foreign, Federal, State, local agencies), data collected for regulatory purposes, and data developed by combining data from multiple data sources.
Filing Season	The period from January through mid-April when most individual income tax returns are filed.
Firewall	A gateway that limits access between networks in accordance with local security policy.
Fiscal Year	Any yearly accounting period, regardless of its relationship to a calendar year. The Federal Government's fiscal year begins on October 1 and ends on September 30.
Legacy System	An information system that may be based on outdated technologies but is critical to day-to-day operations.
Robotic Process Automation	A software that can be easily programmed to perform computer-based tasks across applications just as a human would. It mimics human interaction with computers to drive business process efficiency and effectiveness.

Abbreviations

EDC	Enterprise Data Catalog
EDP	Enterprise Data Platform
FY	Fiscal Year
IRA	Inflation Reduction Act of 2022
IRS	Internal Revenue Service
RAAS	Research, Applied Analytics, and Statistics
RPA	Robotics Process Automation
SOP	Strategic Operating Plan

**To report fraud, waste, or abuse,
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