



Office of the Inspector General
SOCIAL SECURITY ADMINISTRATION

Audit Report

Manual Processes for
Resource-intensive Workloads

A-07-19-50882 July 2023



Office of the Inspector General

SOCIAL SECURITY ADMINISTRATION

MEMORANDUM

Date: July 21, 2023

Refer to: A-07-19-50882

To: Kilolo Kijakazi
Acting Commissioner

From: Gail S. Ennis *Gail S. Ennis*
Inspector General

Subject: Manual Processes for Resource-intensive Workloads

The attached final report presents the results of the Office of Audit's review. The objectives were to determine whether the Social Security Administration's automation enhancements (1) reduced manual processing for resource-intensive workloads and (2) were cost-effective.

Please provide within 60 days a corrective action plan that addresses each recommendation. If you wish to discuss the final report, please call me or have your staff contact Michelle L. Anderson, Assistant Inspector General for Audit.

Attachment

Manual Processes for Resource-intensive Workloads

A-07-19-50882



July 2023

Office of Audit Report Summary

Objective

Our objective was to determine whether the Social Security Administration's (SSA) automation enhancements (1) reduced manual processing for resource-intensive workloads and (2) were cost-effective.

Background

As of December 2021, the Old-Age, Survivors and Disability Insurance (OASDI) program comprised more than 65 million beneficiaries whom SSA paid more than \$1.1 trillion in Calendar Year 2021. Through the Supplemental Security Income (SSI) program, SSA paid 7.7 million recipients approximately \$55.5 billion. Because of limitations, SSA's systems do not always fully automate actions to establish or update records. In these situations, SSA technicians must input information manually, which can lead to incorrect calculations, keying mistakes, or erroneous inputs.

SSA's 2017 *IT Modernization Plan* included plans to retire old technology, improve information technology (IT) development processes, and update legacy systems to reduce manual workloads so it can better serve the public. In 2020, SSA updated the Plan to include additional investments focused on enhancing service delivery, modernizing IT, and automating manual workloads to improve timeliness and eliminate and prevent backlogs. SSA stated its *IT Modernization Plan* was an \$863 million investment over 5 years.

Results

SSA's automation enhancements reduced the need for manual processing for some workloads from Fiscal Years 2019 to 2021. These initiatives aimed to improve the efficiency and effectiveness of SSA's operations; however, they were not always immediately cost-effective.

SSA also introduced robotic applications (bots) to assist processing center employees with manual workloads. SSA could increase its return on investment for the robotics initiative by increasing the use of existing bots and developing new bots to assist with additional workloads.

For the SSI workloads SSA identified as resource-intensive and error-prone, SSA must improve its ability to monitor nation-wide pending levels to determine how best to prioritize automation enhancement efforts. A lack of data hinders SSA's ability to identify the most critical SSI processes and workloads on which it should focus its efforts and to determine which initiatives are the most cost beneficial.

Recommendations

We made six recommendations that SSA implement measures to assess cost savings and effectiveness of its automation enhancements; determine whether existing bots are cost beneficial and whether it is cost beneficial to develop bots to assist with field office workloads; issue unused licenses for bot-related software; re-evaluate its licensing needs and, if appropriate, modify its licensing agreement; and establish processes to monitor nationwide pending levels for manual SSI workloads.

SSA agreed with our recommendations.

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ABBREVIATIONS

BOT	Robotic Application
CCE	Consolidated Claims Experience
CY	Calendar Year
DMP	Debt Management Product
FO	Field Office
FY	Fiscal Year
GPO	Government Pension Offset
IT	Information Technology
MACADE	Manual Adjustment Credit and Award Data Entry
MCS	Modernized Claims System
OASDI	Old-Age, Survivors and Disability Insurance
OIG	Office of the Inspector General
PC	Processing Center
ROAR	Recovery of Overpayments, Accounting, and Reporting
RPA	Robotic Process Automation
SSA	Social Security Administration
SSI	Supplemental Security Income
WEP	Windfall Elimination Provision

OBJECTIVE

Our objective was to determine whether the Social Security Administration’s (SSA) automation enhancements (1) reduced manual processing for resource-intensive workloads and (2) were cost-effective.

BACKGROUND

According to SSA’s December 2022 *Annual Statistical Supplement to the Social Security Bulletin*, the Old-Age, Survivors and Disability Insurance (OASDI) program comprised more than 65 million beneficiaries whom SSA paid more than \$1.1 trillion in Calendar Year 2021. Additionally, through the Supplemental Security Income (SSI) program, SSA paid almost 7.7 million recipients approximately \$55.5 billion.¹

Because of limitations, SSA’s systems do not always fully process actions to establish or update records. In these situations, SSA technicians must input information manually, which can lead to errors and delays caused by incorrect calculations, keying mistakes, or erroneous inputs.

Information Technology Modernization

In 2017, SSA published its *IT Modernization Plan*, which included plans to retire old technology, improve information technology (IT) development processes, migrate applications to a modern cloud platform, and update legacy systems to reduce manual workloads so it can better serve the public. In 2020, SSA updated the Plan to include additional investments focused on enhancing service delivery, modernizing technology, and automating manual workloads to improve timeliness and eliminate and prevent backlogs. SSA stated the *IT Modernization Plan* was an \$863 million investment over 5 years.² In accordance with the Plan, SSA modernized multiple databases, improved access to master file data, consolidated and eliminated duplicate data, expanded its enterprise data warehouse, and implemented machine learning to assist in streamlining its processes.

SSA’s *Agency Strategic Plan for Fiscal Years 2022-2026* further emphasized the importance of automation and modernization and outlined several instances in which increased automation would help the Agency meet its strategic goals and objectives. For example, as part of a strategic objective to Improve the Accuracy and Administration of SSA Programs, SSA stated it “. . . will develop, drive, and prioritize business processes, policies, and automation improvements that ensure appropriate benefit decisions and target the root causes of improper payments.” SSA also stated it is “. . . committed to mitigating and preventing improper payments by leveraging audit recommendations, implementing automation and business process improvements, and enhancing data analytics,” and that it, “continue[s] to pursue . . . automation solutions to improve post-entitlement accuracy.”³

¹ SSA, *Annual Statistical Supplement to the Social Security Bulletin*, pp. 2 and 4 (December 2022). Some individuals receive both OASDI benefits and SSI payments.

² SSA, *Fiscal Year 2022 Enterprise Risk Management Risk Profile*, p. 8 (August 2022).

³ SSA, *Agency Strategic Plan for Fiscal Years 2022-2026*, pp. 18 and 19 (March 2022).

As the *IT Modernization Plan* reached its end date in Fiscal Year (FY) 2022, SSA began developing its Digital Modernization Strategy, which will represent SSA's latest strategic plan to leverage technology to provide more digital service options for customers, improve the employee experience, and expand access to digital data. These efforts are crucial, as the Agency emphasized the importance of IT modernization in its *Fiscal Year 2022 Enterprise Risk Management Risk Profile*, stating that if its ". . . legacy systems are not modernized timely or completely . . ." the Agency could face ". . . increased maintenance costs, lack of available support, and decreased capacity to support business and processing needs."⁴

Resource-intensive, Error-prone Manual Workloads

For this report, we focused on the OASDI and SSI manual workloads SSA identified as the most resource-intensive and error-prone.⁵ We defined manual processes as those that require that SSA technicians make calculations or take action through direct input systems to establish or update records because SSA's processing systems cannot automate necessary actions. For example, when claims specialists take claims for OASDI benefits, they enter information into the Modernized Claim System (MCS), which can automatically establish new benefit records, begin paying benefits, and issue award notices. We did not consider the process of entering claimant information into MCS a manual action. However, MCS cannot process some initial claims automatically so claims specialists must forward these claims to processing centers (PC) for manual processing.⁶ We considered the manual processing completed by PC technicians to be a manual action.

We identified 19 prior audits issued between FYs 2016 and 2020 with recommendations that SSA planned to address with IT modernization projects. As of July 2023, SSA had fully implemented the recommendations from only two of these audits, with actions to address the remaining recommendations still in progress (see Appendix B). In these prior audits, we identified significant improper payments caused by issues related to resource-intensive and error-prone manually processed workloads, and we made recommendations for SSA to implement controls to detect and prevent manual processing errors or update its systems to streamline or automate manual actions. In response to several recommendations, SSA stated it planned to increase automation and improve processing accuracy through its IT modernization efforts. For example, in a 2017 audit, we found SSA did not accurately process manual actions for Retirement and Survivors Insurance claims, which we projected resulted in \$44 million in improper payments to beneficiaries. We recommended SSA enhance its systems to reduce common limitations that required manual processing. SSA stated it automated some actions to allow its systems to fully process more claims and reduce the need for manual processing.⁷

⁴ SSA, *Fiscal Year 2022 Enterprise Risk Management Risk Profile*, p. 2 (August 2022).

⁵ We did not review all OASDI and SSI manual workloads. We obtained the data referenced in this report from SSA and did not conduct sample review or independently verify the validity of the data SSA provided. See Appendix A for our full scope and methodology.

⁶ For example, MCS cannot automatically process claims without the number holder's Social Security number.

⁷ SSA, OIG, *The Social Security Administration's Manual Award Process for Initial Retirement and Survivors Insurance Claims*, A-08-16-50053, p. 8 (September 2017).

RESULTS OF REVIEW

SSA's automation enhancements reduced the need for manual processing for some workloads from FYs 2019 to 2021. These initiatives aimed to improve the efficiency and effectiveness of SSA's operations; however, they were not always immediately cost-effective. Additionally, SSA could not identify cost or savings estimates for some enhancements; thus, we could not determine whether they were cost-effective. SSA must continue monitoring and tracking the progress of these initiatives over time to ensure they accomplish their goals.

SSA also introduced robotic applications (bots) to assist processing center employees with manual workloads. SSA could increase its return on investment for the robotics initiative by increasing the use of existing bots, deploying available but unused licenses to employees, and developing new bots to assist with additional workloads. First, SSA must determine whether bots are cost beneficial and how it can best implement bots to ensure they result in net savings.

For the SSI workloads SSA identified as resource-intensive and error-prone, SSA must improve its ability to monitor nation-wide pending levels to determine how best to prioritize automation enhancement efforts. SSA does not collect data or generate management information to continuously track pending levels or accuracy rates nationwide for all of these workloads or assess changes over time. A lack of data hinders SSA's ability to identify the most critical SSI processes and workloads on which it should focus its efforts and to determine which initiatives are the most cost beneficial.

Manual Old-Age, Survivors and Disability Insurance Workloads

For OASDI, SSA identified the following manual workloads as the most resource-intensive or error-prone: initial claims, overpayments, government pension offset (GPO), windfall elimination provision (WEP), workers' compensation, and notices.

SSA's automation enhancements helped reduce the need for manual processing for some of these workloads from FYs 2019 to 2021. Over the same period, we identified a 1.1-percent increase in the accuracy of actions processed through SSA's Manual Adjustment Credit and Award Data Entry (MACADE) system, one of SSA's primary manual input systems for OASDI workloads. Technicians use MACADE to manually establish records for initial claims or process post-entitlement actions to update existing records.

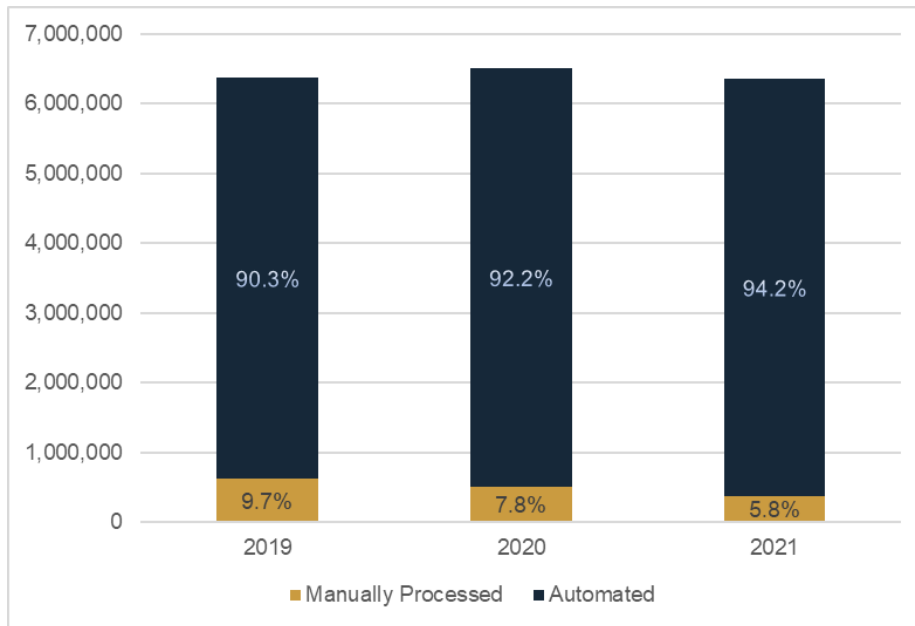
Such factors as changes in state or Federal laws or changes in Agency priorities based on budget or resource limitations could affect manual workloads. We could not determine the extent to which manual workloads decreased as a result of automation enhancements as opposed to other factors; however, SSA did implement multiple enhancements to address resource-intensive, error-prone manual workloads during this period.

Initial Claims

SSA processes millions of initial claims each year, most of which are processed automatically through MCS. From FYs 2019 to 2021, both the number and percent of claims that required manual processing decreased each year, and in FY 2021 the number of claims that required manual processing was nearly 40 percent less than FY 2019.

Additionally, though the total number of claims SSA received fluctuated from year to year, the percent of claims that required manual processing decreased steadily, from 9.7 percent in FY 2019 to 5.8 percent in FY 2021 (see Figure 1).

Figure 1: OASDI Claims Processed, FYs 2019 Through 2021⁸



During our audit period, SSA implemented multiple enhancements to streamline claims processing and reduce the need for manual intervention. In February 2020, SSA released an update that addressed a processing limitation, which eliminated the need to manually process some initial claims.⁹ SSA compared the number of processing limitations the MCS generated the year before the update to the number generated the year following implementation and estimated the update eliminated nearly 20,000 manual-award actions.

Additionally, in January 2021, SSA released an update to reduce the number of manual actions required for end-stage renal disease claims. SSA compared the number of these claims requiring manual action from the prior year to the year after the update and determined the number of claims that required manual processing decreased by 13,000.

⁸ SSA provided this information. We did not evaluate the completeness, accuracy, or reliability of these data.

⁹ SSA, OIG, *The Social Security Administration's Manual Award Process for Initial Retirement and Survivors Insurance Claims*, A-08-16-50053, p. 8 (September 2017). We recommended SSA “. . . resolve system limitations so [technicians] can process claims through [the automated Earnings Computation system] whenever possible.”

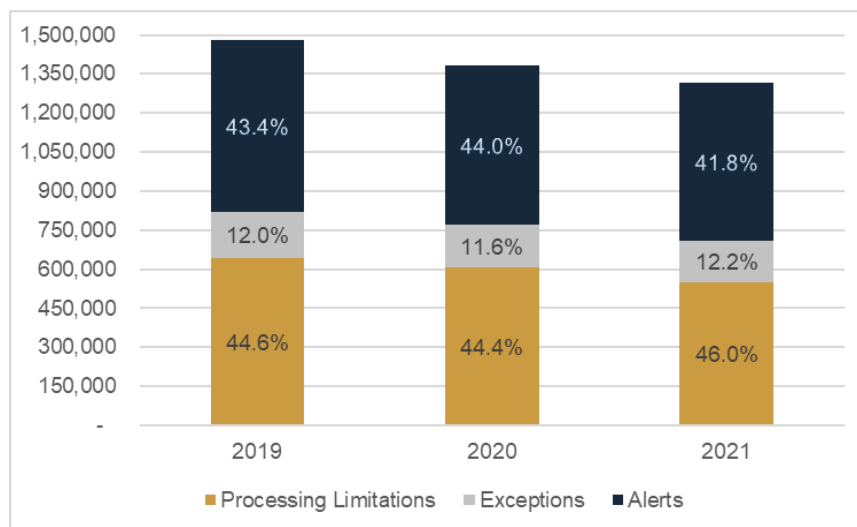
SSA calculated the cost to implement these initiatives at over \$1.2 and \$1.7 million, respectively. According to SSA’s cost-analysis reports, the cost to process an initial claim was \$268 in FY 2021.¹⁰ Based on this information and SSA’s stated reduction of approximately 33,000 manual claims actions, we estimate these initiatives collectively resulted in a cost savings of over \$8.8 million in the year after they were implemented.

Post-entitlement Actions

In addition to the noted reductions in manual processing for initial claims, processing statistics for the Title II Redesign system, which is SSA’s primary automated processing system for OASDI records, further reflect a reduction in post-entitlement cases that require manual action. When the system requires manual intervention to complete an action, it generates output notifying SSA employees of the need for manual action. SSA refers to these notifications as processing limitations, exceptions, or alerts.

The total number of actions processed through the system decreased in Calendar Year (CY) 2020, likely due to issues related to the COVID-19 pandemic.¹¹ As a result, the number of manual actions required also decreased. In CY 2021, however, the total number of actions increased, but the number of cases requiring manual actions decreased again. From CYs 2019 to 2021, the number of cases requiring manual action decreased by over 11 percent (see Figure 2).

Figure 2: Title II Redesign Cases Requiring Manual Action, CYs 2019 Through 2021¹²



¹⁰ Unless otherwise noted, SSA provided all data regarding reductions in the number of work items, cost data, and savings estimates for manual workloads identified in this report. We did not evaluate the completeness, accuracy, or reliability of these data.

¹¹ SSA, OIG, *Comparing the Social Security Administration’s Workload Statistics During the COVID-19 Pandemic to Prior Years*, A-05-21-51062 (July 2022).

¹² Source: SSA, Title II Redesign Processing Information. We did not evaluate the completeness, accuracy, or reliability of these data.

Additionally, the percent of all cases that required manual action decreased slightly, indicating SSA's system enhancements, detailed below, may have reduced the need for manual processing in some instances.

- **GPO and WEP** – In September 2018, SSA implemented alerts in MCS to prevent claims specialists from making errors on claims involving GPO and WEP. SSA stated this reduced the number of overpayments and cases that required manual actions to address GPO and WEP after the claim was processed, but SSA does not have a process to track these issues to verify the success of this implementation or calculate cost savings.
- **Notices** – In February 2020, SSA reduced the manual notices workload by revising some alerts and exceptions and automating some notices that employees would otherwise have had to manually complete and send to beneficiaries or recipients. SSA stated this eliminated the need to manually process 24,723 notices. SSA determined the number of manual items prevented by comparing the number of work items generated for the year before the release to the number generated the year after the release. SSA stated these changes cost over \$372,000 and resulted in over \$735,000 in cost savings.
- **Overpayments, Workers' Compensation, and Windfall Offset**¹³ – SSA also made system enhancements to address processing limitations and exceptions that further reduced manual workloads for PC employees. In August 2020, SSA released enhancements related to numerous workloads involving manual processing, which reduced the number of work items generated in PCs. SSA stated this prevented 62,524 items from generating in the PCs and created better control over these workloads, which reduced incorrect payments. SSA stated it determined the reduction in items generated by comparing totals from the year before the release to the number generated the year after the release. According to SSA, this project cost over \$1.7 million and resulted in approximately \$1.1 million in cost savings. SSA did not estimate future cost savings or a break-even date for this investment.

SSA did not have a process for tracking implementation success or calculating cost savings for some of its automation enhancement projects, while others were not immediately cost beneficial, and it may take time for SSA to realize the full benefits of the investments. SSA should consistently assess cost savings, effectiveness, and return on investment for automation enhancements that affect manual workloads to ensure they deliver value to the Agency.

SSA is developing additional long-term initiatives to help reduce manual workloads and increase the accuracy of manual actions. While it seeks to eliminate the need for manual actions through these initiatives, SSA has introduced new tools to assist technicians with manual workloads by automating and streamlining existing processes.

¹³ We are conducting work related to controls over windfall offset case processing.

Robotic Process Automation

Robotic Process Automation (RPA) involves the use of software to automate high-volume, labor-intensive, or repeatable tasks. This allows employees to focus their efforts on more complex actions. SSA's RPA team programs bots to address issues identified and suggested by SSA employees, which can lead to cost and time savings by preventing human error and reducing the time employees require to make manual inputs and correct mistakes. Through RPA, SSA introduced bots to help technicians in PCs increase the accuracy of manual inputs, streamline processing, and identify potential errors before employees input an action. SSA refers to the three most widely used bots as the "Big Three": the MACADE Accuracy Bot; Recovery of Overpayments, Accounting, and Reporting (ROAR) Bot; and A101 Reviewer Bot.¹⁴

Manual Adjustment Credit and Award Data Entry Accuracy Bot

MACADE is one of SSA's primary manual input systems for OASDI workloads. PC employees use MACADE to manually establish and update OASDI payment records when other direct input programs cannot fully automate processing or to process multiple complex changes at the same time.

When MACADE recognizes an invalid or erroneous input, it will not process the action and will instead generate an exception. When an exception occurs, MACADE generates a code that helps technicians identify the cause of the exception. Because of the complexity of manual inputs and SSA's records, there are hundreds of possible exception codes. For each exception, a technician must review the exception code to determine the cause, revise the input, and resubmit the action through MACADE for processing. The rehandling required for each exception costs time and resources that technicians could devote to other workloads. In FY 2021, technicians input more than 3.7 million actions through MACADE. Of those, nearly 329,000 (8.8 percent) generated exceptions.

Introduced in January 2021, the MACADE Accuracy Bot reviews pending MACADE actions to identify invalid inputs that may cause 10 types of exceptions and enables PC technicians to correct errors before submitting actions for processing.¹⁵ SSA estimated the MACADE Accuracy Bot saved technicians more than 14,000 hours in CY 2021.¹⁶ In addition to saving rehandling time, the bot's ability to identify and prevent the most common exceptions may contribute to increased processing accuracy, which could lead to higher productivity and efficiency for all workloads requiring manual action. SSA's overall MACADE accuracy was slightly higher in FY 2021 (91.2 percent) than in the previous 2 years (90.1 and 90.9 percent, respectively), which may relate to the introduction of the Bot in January 2021.

¹⁴ As of August 2022, the MACADE Accuracy Bot accounted for over 90 percent of all bot use, and the "Big Three" collectively accounted for approximately 97 percent of all bot use, but they are not the only bots SSA has deployed. For example, in July 2022, SSA introduced the Check Return Bot, which analyzes returned check cases and completes manual actions to pay funds owed to beneficiaries.

¹⁵ Three of the 10 exception codes the MACADE Accuracy Bot identifies are in the top 10 most common exceptions, and 2 others are in the top 30 most common.

¹⁶ SSA provided time savings estimates for the Big Three. We did not evaluate the completeness, accuracy, or reliability of these data.

ROAR Bot

SSA uses ROAR to record and track overpayments and overpayment recovery actions on OASDI records. Introduced in January 2021, the ROAR Bot reduces the need for employees to manually process certain overpayment recovery actions. Beneficiaries may repay overpayments by submitting remittance payments to SSA. The ROAR Bot automates the process of resolving exceptions that are made when SSA's systems cannot process remittances automatically. The Bot identifies remittance exceptions, extracts the data from the case documentation and payment records, and completes the necessary actions to process the transactions. SSA estimated the ROAR Bot saved technicians more than 5,000 hours in CY 2021 by allowing technicians to devote more time to complex cases.

A101 Reviewer Bot

When MCS cannot automatically process actions to complete an initial claim, PC technicians receive documentation, referred to as an A101, which they use to establish the record manually. Introduced in January 2021, the A101 Reviewer Bot reviews this information for manual retirement and Medicare initial claims actions to identify common errors. For example, the Bot reviews simple payment calculations, beneficiary identification codes, and Medicare entitlement data for errors and to detect discrepancies or invalidities. If the Bot identifies an error that requires additional handling, it creates an alert for a technician to review and take necessary action before processing the claim. If the Bot finds no errors, it propagates the claim data into MACADE for technician review and processing. This Bot increases the speed and accuracy of claims processing, which is one of SSA's highest-priority workloads. SSA estimated the A101 Reviewer Bot saved technicians more than 1,700 hours in CY 2021.

Robotic Application Costs and Use

To use bots, employees must have a license for specialized software that enables the bots to run on employees' computers.¹⁷ SSA stated it spends \$4.6 million each year for a subscription license bundle that allows it to assign up to 10,000 user licenses.¹⁸ According to SSA, the annual subscription is offered as a tiered structure, and 10,000 licenses is the lowest tier option available. Based on growth projections from FY 2021, when it began the licensing agreement, SSA expected to need 10,000 licenses by FY 2023 and 20,000 by FY 2025. However, as of April 2023, SSA had issued licenses to fewer than 3,800 PC employees, and, according to SSA's internal tracking reports, just over half of all licensed technicians used the bots regularly.¹⁹ SSA plans to issue additional licenses when it deploys a new bot to assist teleservice center employees, to reach a total of 9,800 issued licenses by then end of FY 2023. Until it does so, SSA will continue to expend resources on unused capacity for bot licenses, as it has since it began the licensing agreement 2 years ago.

¹⁷ We did not evaluate the security of the bots or the software used to operate them.

¹⁸ SSA purchases licenses through an annual subscription service from an authorized outside vendor.

¹⁹ SSA cannot track the percent of authorized bot users after August 2022 because of licensing issues that affect the ability to calculate the management information.

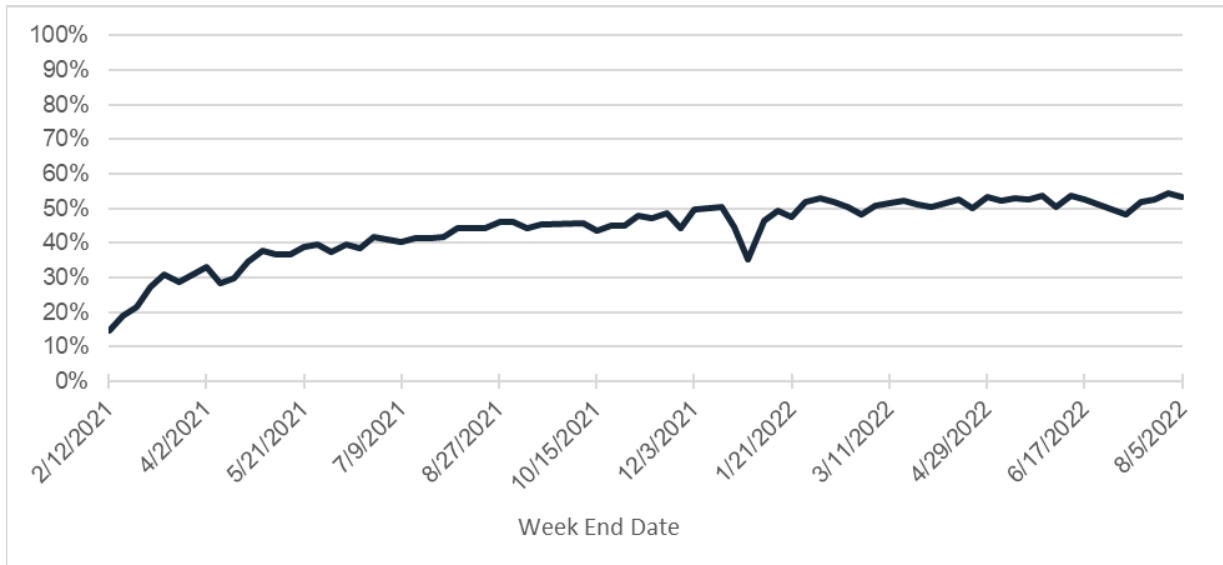
According to SSA, its RPA program is still in the “infancy stage,” and SSA is investigating whether to develop bots to assist with field office (FO) workloads, though it identified the cost of obtaining licenses for FO employees as a significant barrier. FO workloads differ significantly from PC workloads; still, developing bots for FOs could lead to additional time savings, improved productivity and efficiency, and increased accuracy. SSA could apply lessons learned from implementing RPA in PCs to develop bots to assist with FO workloads. As noted above, SSA projects it will need twice as many licenses by FY 2025. While SSA has plans to use most of the remaining available licenses, it will need to consider the cost of obtaining additional licenses—if it does expand the RPA program—and weigh these costs against the benefits it expects to gain.

While SSA has recognized the benefits of using bots, it has not taken necessary steps to maximize bot use. For example, SSA has not established policy that mandates employees use bots for specific workloads. SSA stated various factors affect whether technicians elect to use a bot, including technician preference for other tools and technical issues, such as complicated bot interfaces. SSA also indicated that some users, such as trainees and instructors, do not use bots regularly, and other factors may affect usage rate, including technicians who are on leave or have been assigned workloads not suitable for bot use.

According to SSA, all PCs have undertaken efforts to encourage and increase technicians’ bot use. Efforts include nominating automation coaches to assist technicians who are not actively using bots, holding weekly meetings and discussions to review bot usage rates, providing refresher lessons on how and when to use bots, and creating bot resource web pages with user guides. Despite these efforts, bot use has remained relatively flat since December 2021.

In February 2021, SSA began tracking the percent of licensed technicians using the bots. The number of technicians using the bots increased significantly in the first few weeks after SSA introduced them, approximately doubling to over 30 percent by the end of March 2021. Use continued increasing through December 2021, when it exceeded 50 percent for the first time. After that, use leveled off, averaging approximately 51 percent from January through August 2022 (see Figure 3).

Figure 3: Percent of Licensed Users Using Bots, February 2021 Through August 2022²⁰



SSA’s Robotic Operations Center estimated bots saved almost 21,000 hours of manual processing time in CY 2021.²¹ SSA does not track the costs to develop or maintain specific bots; thus, we could not determine whether time savings resulted in a positive return on investment for each bot.²² However, the licensing subscription necessary to allow employees to use the bots is a fixed annual cost, and SSA has not maximized the potential return on its investment by assigning the allotted number of licenses or ensuring licensed employees use bots to the maximum extent possible. While SSA has identified the time savings associated with the bots, it has yet to determine whether bot use results in net cost savings.

²⁰ Source: SSA, Bot Use from Inception. We did not evaluate the completeness, accuracy, or reliability of these data.

²¹ We did not evaluate the reasonableness of SSA’s estimate.

²² The budget for the Robotic Operations Center, the component that operates the RPA program, totaled \$3.8 million for FYs 2020 through 2022. This is in addition to the fixed annual licensing cost of \$4.6 million.

As more technicians use bots, SSA may realize greater benefits by saving additional work hours that it can allocate to processing other critical workloads. We recognize there are circumstances that prevent some technicians from using bots regularly. So, achieving 100 percent usage may not be feasible or sustainable, but SSA could achieve further time savings and accuracy improvements for manual workloads by requiring that technicians use bots whenever possible. SSA stated it is, “. . . actively expanding [its] bots and looking to expand workloads into other front-line components.”

As it considers whether to develop and deploy additional bots and obtain additional licenses for employees in FOs, teleservice centers, and other components, SSA should determine the cost-effectiveness of these initiatives. Specifically, SSA should weigh the costs it will incur to develop and maintain bots, as well as the licensing costs, against the benefits it expects to realize—for example, staff time savings and improved processing accuracy—to ensure its bots are economical.

Manual Supplemental Security Income Workloads

For the SSI program, SSA identified the following manual workloads as the most resource-intensive or error-prone: manual start date actions; claims, build, or deeming actions; force due actions; over- and underpayments; and dedicated accounts. We could not determine whether SSA’s automation enhancements reduced manual processing for SSI workloads because SSA could not provide nation-wide statistics for the resource-intensive, error-prone workloads it identified. SSA stated the source of those workloads makes them difficult to track. SSA does not collect data or generate management information to continuously track pending levels or accuracy rates nationwide or to assess changes over time. SSA does maintain lists of pending cases for some SSI workloads; however, these are generally limited to producing information for individual FOs or regions at a single point in time. This lack of information prevented us from assessing or concluding on the affect or cost-effectiveness of automation enhancements for the manual SSI workloads SSA identified.

SSA's internal Performance and Quality Review process identified high error rates in several SSI workloads, including those that require manual actions.²³ For example, an April 2022 report noted error rates of 17.3 and 22.8 percent, respectively, for initial SSI disability claims and redeterminations completed between October 1, 2018 and October 31, 2021 that required manual start-date actions.²⁴ Additionally, the report noted some SSA systems were isolated and did not share information, which leads to inconsistencies and errors that SSA could address with enhancements to unify its systems and records. The report stated these enhancements would increase efficiency and prevent errors, and proposed system enhancements to address the errors, stating, "IT Modernization/Digital Modernization efforts currently underway provide an excellent opportunity to integrate these enhancements."²⁵

As noted above, SSA tracks OASDI workloads over time and can target specific areas of concern with automation enhancements. However, SSA does not track Agency-wide pending levels for SSI workloads and therefore it cannot identify specific issues on which it should focus its automation efforts or determine how best to allocate its resources to ensure its efforts will increase accuracy and efficiency and be cost beneficial.

CONCLUSIONS

Opportunities exist for SSA to leverage lessons learned from previous automation enhancements and expand existing initiatives to further reduce its reliance on manual processes. SSA must continue monitoring and tracking the progress of its initiatives over time to ensure they deliver value to the Agency. To do so, SSA must improve its ability to measure the effect of enhancements on manual workloads along with the costs and benefits of each initiative to determine how best to prioritize automation efforts and whether they result in net cost savings to the Agency. A lack of data hinders SSA's ability to identify the most critical processes and workloads on which it should focus its efforts and to determine which initiatives are most cost beneficial.

²³ SSA started the Performance and Quality Review process in 2018 to improve and maintain the accuracy and quality of decisions made in SSA's Office of Operations. The process promotes customer service by monitoring the accuracy of casework and recommending policy clarifications, training recommendations, and systems enhancements.

²⁴ SSA, Performance Quality Review, *Title 16 Disability Claim Allowance and T16 Redetermination Data Analysis Report Findings and Proposals*, p. 5 (April 2022). A redetermination is a review of an SSI recipient's income, resources, and living arrangements to determine eligibility and payment amounts. A manual start date action requires that a technician establish a new record when SSA's system cannot accurately compute a payment or maintain a record.

²⁵ SSA, Performance Quality Review, *Title 16 Disability Claim Allowance and T16 Redetermination Data Analysis Report Findings and Proposals*, p. 7 (April 2022).

RECOMMENDATIONS

We recommend SSA:

1. Implement measures to uniformly assess cost savings, effectiveness, and return on investment for automation enhancements, including bots, that affect manual workloads.
2. Determine whether existing bots are cost beneficial, and, if they are, instruct technicians to use them whenever appropriate.
3. Determine whether it is cost beneficial to develop bots to assist with FO workloads.
4. Issue available unused licenses for bot-related software to technicians.
5. Reevaluate its license needs and growth projections for bot-related software and, if appropriate, modify its licensing agreement.
6. Establish processes to monitor nation-wide pending levels for manual SSI workloads that it does not track to determine how to prioritize automation enhancement efforts.

AGENCY COMMENTS

SSA agreed with our recommendation. See Appendix C.



Michelle L. Anderson
Assistant Inspector General for Audit

APPENDICES

Appendix A – SCOPE AND METHODOLOGY

To achieve the audit objective, we:

- Reviewed workloads the Social Security Administration (SSA) identified as involving resource-intensive manual processing, with a high risk of errors, improper payments, or fraud, including:
 - Old-Age, Survivors and Disability Insurance (OASDI) initial claims, overpayments, Government Pension Offset, Windfall Elimination Provision, and workers' compensation, notices.
 - Supplemental Security Income initial claims, manual start date actions; claims, build, or deeming actions; force due actions; over- or underpayments; and dedicated accounts.
- Reviewed applicable sections of the *Social Security Act* and *SSA Program Operations Manual System*, technical guidance, and reports for manual actions.
- Reviewed management information for Fiscal Years (FY) 2019 through 2021 from the *Processing Center Pending and Age Overview Weekly Report* and Management Information Central to obtain pending levels and age of pending cases for OASDI workloads.
- Reviewed SSA documents and data related to SSA's *Information Technology Modernization Plan* and assessed the progress of information technology modernization initiatives related to minimizing or improving manual processes.
- Obtained workload tracking data provided by SSA, including accuracy of manual inputs, exception rates, robotic application usage reports, and cost-analysis system reports.
- Reviewed quality assurance programs and Office of Quality Review reports to identify areas of concern and recommendations to improve the accuracy of manual actions.
- Considered the effect of temporary changes related to the COVID-19 pandemic on SSA's manual workload processes.¹
- Reviewed OIG reports issued in FYs 2016 through 2020 with recommendations related to information technology modernization.

¹ On March 17, 2020, SSA initiated special procedures to protect the public and SSA technicians from the COVID-19 pandemic. SSA limited in-person services at its field office locations and implemented emergency procedures for certain workloads.

We conducted our review between August 2021 and August 2022. Our review focused on resource-intensive, error-prone workloads identified by SSA. We obtained management information and other data included in our analysis from SSA and did not conduct a sample review of individual cases or independently verify the validity of the information SSA provided. We conducted a limited assessment of the reliability of the management information by reviewing information about the data and the system that produced them and comparing the data obtained against the results of a previous related audit. We determined the data used for this audit were sufficiently reliable to meet our objective.

The principal entity audited was the Office of Operations. We assessed the significance of internal controls necessary to satisfy the audit objective. This included an assessment of the five internal control components, including control environment, risk assessment, control activities, information and communication, and monitoring. In addition, we reviewed the principles of internal controls associated with the audit objective. We identified the following components and principles as significant to the audit objective:

- Component 1: Control Environment
 - Principle 4: Demonstrate commitment to competence
- Component 2: Risk Assessment
 - Principle 7: Identify, analyze, and respond to risk
 - Principle 9: Analyze and respond to change
- Component 3: Control Activities
 - Principle 10: Design control activities
 - Principle 12: Implement control activities
- Component 4: Information and Communication
 - Principle 13: Use quality information
 - Principle 14: Communicate internally
- Component 5: Monitoring
 - Principle 17: Remediate deficiencies

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix B – PRIOR AUDIT RECOMMENDATIONS

We reviewed past audit recommendations from reports issued between Fiscal Years 2016 and 2020. For each of the following recommendations, the Social Security Administration (SSA) stated it would address the identified issues with various information technology (IT) modernization initiatives.

1. *Underpayments Payable to Widow(er)s Eligible for a Higher Monthly Benefit Amount, A-09-14-34103, April 2016*
 - Recommendation: Determine whether it should develop a systems alert to detect when a Widow(er)'s Indexing Primary Insurance Amount should apply.
 - SSA stated it investigated whether to include an alert in its system as recommended and added this enhancement to the Consolidated Claims Experience (CCE) backlog, which is being implemented through IT modernization efforts.
 - Status: In Progress
2. *Cross-program Recovery to Collect Overpayments, A-13-15-15029, April 2017*
 - Recommendation: Consider establishing automated alerts to notify staff to review certain overpayments when cross-program recovery should be used to collect overpayments.
 - SSA stated it evaluated the possibility of establishing an automated alert to notify staff to review certain cross-program recovery overpayments. SSA stated the comprehensive Debt Management Product (DMP) is still in the development phase. SSA anticipates this modernized system will enable it to collect, store, monitor, and report Old-Age, Survivors and Disability Insurance (OASDI) and Supplemental Security Income (SSI) debt activity with confidence, accuracy, and timeliness.
 - Status: In Progress
3. *Manually Reduced Cross-program Recovery Overpayments, A-06-17-50225, July 2017*
 - Recommendation: Consider the cost-effectiveness of implementing controls to prevent systems from erroneously reducing SSI overpayments.
 - SSA stated it considered implementing controls to prevent erroneous deletion of SSI overpayments, and it will address the controls through the DMP.
 - Status: In Progress

4. *Cross-referred Social Security Numbers, A-06-13-23091, July 2017*
 - Recommendation: Implement system controls to prevent simultaneous issuance of payments under cross-referred Social Security numbers.
 - SSA stated it determined the feasibility of taking appropriate action to implement systems controls to prevent simultaneous issuance of payments under cross-referred Social Security numbers. SSA plans to address this initiative as part of its IT Modernization Enumeration Domain.
 - Status: In Progress

5. *The Social Security Administration's Manual Award Process for Initial Retirement and Survivors Insurance Claims, A-08-16-50053, September 2017*
 - Recommendation: Determine the feasibility of enhancing SSA's systems to reduce common entitlement conversion limitations.
 - SSA stated it addressed this recommendation via the Benefits Domain of its IT modernization initiative.
 - Status: Implemented

6. *Higher Benefits for Dually Entitled Widow(er)s Had They Delayed Applying for Retirement Benefits, A-09-18-50559, February 2018*
 - Recommendation: Determine whether it should develop additional controls to ensure it informs widow(er) beneficiaries of their option to delay their application for retirement benefits.
 - SSA stated the IT modernization Benefits Domain is in the development phase for the CCE. SSA added this capability to the product backlog and will evaluate the preliminary and initial claims process to identify enhancements to assist technicians when informing beneficiaries of entitlements and eligibility options.
 - Status: In Progress

7. *Underpayments Paid on Supplemental Security Income Records with Outstanding Overpayments, A-07-17-50182, July 2018*
 - Recommendation: Determine whether, as part of its IT systems modernization, it could limit the number of manual actions required to ensure it withholds SSI prior-month underpayments from SSI recipients to recover outstanding overpayments.
 - SSA stated it determined this recommendation falls in the scope for the Benefits Domain in the *IT Modernization Plan*. SSA is planning the appropriate release order for implementing the recommendation on the proposed Benefits Domain roadmap.
 - Status: In Progress

8. *Accuracy of Month of Entitlement Determinations for Supplemental Security Income Recipients Awarded Old-Age, Survivors and Disability Insurance Benefits, A-08-18-50582, July 2018*
 - Recommendation: Evaluate, as part of IT modernization efforts, the feasibility of new systems controls to help ensure that SSA establishes the earliest OASDI month of entitlement for SSI recipients.
 - SSA stated the issue of ensuring the correct month of entitlement as described in this recommendation was added to the CCE, which is being implemented through SSA's IT modernization efforts.
 - Status: In Progress
9. *Overpayments Not Collected Through Benefit Withholding, A-07-18-50278, July 2018*
 - Recommendation: Determine whether, as part of its Debt Management modernization initiative, it could automate the manual actions currently required to ensure it initiates benefit withholding at the appropriate time.
 - SSA stated it has determined the DMP will automate the manual actions required to initiate benefit withholding at the appropriate time.
 - Status: In Progress
10. *The Social Security Administration's Use of Administrative Tolerance Waivers, A-04-16-50145, August 2018*
 - Recommendation: As part of its Debt Management modernization initiative, establish controls in the new DMP that ensure technicians can only use the administrative tolerance waiver for overpayments allowable under the provision.
 - SSA stated the comprehensive DMP is still in the development phase. SSA anticipates this modernized system will enable it to collect, store, monitor, and report OASDI and SSI debt activity with confidence, accuracy, and timeliness.
 - Status: In Progress
11. *The Social Security Administration's Application of Due-process Provisions for Old-Age, Survivors and Disability Insurance Overpayments, A-07-18-50622, March 2019*
 - Recommendation: Revise systems programming to ensure automated overpayment notices contain all required due-process language.
 - SSA stated it recognizes its system combines the language for the work *Continuing Disability Review Final Notice* and the *Overpayment Notice* into one consolidated notice and did not contain the legally required beneficiary rights to request other recovery options. In the long term, SSA expects the new work continuing disability review product to produce the proper final notice with overpayment notices produced separately.
 - Status: In Progress

12. *Recovery of Old-Age, Survivors and Disability Insurance Overpayments When a Contingently Liable Beneficiary Stops Receiving Benefits, A-04-18-50651, May 2019*

- Recommendation: Establish controls to remove the outstanding debt from terminated contingently liable beneficiaries and transfer the balance to the original debtor for an immediate payment of the overpayment or seek recovery through additional debt collection tools when available.
- SSA stated the comprehensive DMP is still in the development stage. SSA anticipates this modernized system will enable it to collect, store, monitor, and report OASDI and SSI debt activity with confidence, accuracy, and timeliness.
- Status: In Progress

13. *The Social Security Administration's Compliance with Improper Payments Elimination and Recovery Improvement Act of 2012 in the Fiscal Year 2018 Agency Financial Report, A-15-18-50678, May 2019*

- Recommendation: Develop and/or enhance systems to capture data that measure the effectiveness of corrective actions.
- SSA stated it is implementing multi-year IT investments that include enhancements to improve its ability to measure the effects of its actions.
- Status: In Progress

14. *Dedicated Account Underpayments Payable to Children Receiving Supplemental Security Income, A-04-18-50607, September 2019*

- Recommendation: Improve controls to ensure it timely pays dedicated account underpayments for children receiving SSI, such as establishing management reports, retaining diaries, and/or adding automation as discussed in the report.
- SSA stated it is evaluating the recommended enhancements to determine whether they are feasible. SSA is unable to provide an implementation date because of the backlogs and workload challenges created by the COVID-19 pandemic.
- Status: In Progress

15. *Old-Age, Survivors and Disability Insurance Beneficiaries with Overpayments on Suspended and Terminated Records, A-07-18-50317, September 2019*

- Recommendation: Establish a process to identify overpayments that exist on suspended or terminated Social Security numbers that the Re-entitled Beneficiaries process does not detect, so the Agency can transfer and recover them via benefit withholding.
- SSA stated the comprehensive DMP is still in the development phase. SSA anticipates this modernized system will enable it to collect, store, monitor, and report OASDI and SSI debt activity with confidence, accuracy, and timeliness.
- Status: In Progress

16. *Overpayments Pending Collection for Miscellaneous Reasons, A-04-18-50546, September 2019*

- Recommendation: Regularly monitor the debt management database and build controls into the modernized debt system to ensure technicians take appropriate action for overpayments in a due-process status.
- SSA stated the comprehensive DMP is still in the development phase. SSA anticipates this modernized system will enable it to collect, store, monitor, and report OASDI and SSI debt activity with confidence, accuracy, and timeliness.
- Status: In Progress

17. *Benefit Payments to Non-citizen Beneficiaries Living Outside the United States Who Have Not Met the 5-year Residency Requirement, A-07-18-50344, September 2019*

- Recommendation: Complete the planned updates to the Regular Transcript Attainment and Selection Pass alerts process and verify they will identify all non-citizen beneficiaries whose benefits need to be suspended according to policy.
- SSA stated it will improve the Regular Transcript Attainment and Selection Pass selection criteria for records in a "Left US" status as part of its IT modernization Processing Center Automation initiative.
- Status: In Progress

18. *The Social Security Administration's Accounting for, and Monitoring of, Court-ordered Restitutions, A-04-18-50633, September 2019*

- Recommendation: Ensure the Department of Justice is collecting the court-ordered restitutions, and, if not being collected, use all methods of recovery and/or contact the Department of Justice, as required by policy, to determine whether civil actions should be taken.
- SSA stated it is modernizing and streamlining its overpayment collection systems into one system, the DMP, into which it plans to incorporate court-ordered restitution cases.
- Status: Implemented

19. *Agency Processing of Duplicate Payment Detection Alerts, A-05-19-50796, May 2020*

- Recommendation: Determine whether the CCE initiative could automate manual actions needed to establish multiple entitlement to reduce duplicate payments.
- SSA stated it added manual actions needed to establish multiple entitlements to the CCE backlog. CCE is part of SSA's IT modernization efforts. The initial focus for CCE is to process Medicare-only claims, followed by simple retirement claims.
- Status: In Progress

Appendix C – AGENCY COMMENTS



SOCIAL SECURITY

MEMORANDUM

Date: July 14, 2023

Refer To: TQA-1

To: Gail S. Ennis
Inspector General

From: Scott Frey 
Chief of Staff

Subject: Office of the Inspector General Draft Report, "Manual Processes for Resource-intensive Workloads" (A-07-19-50882) -- INFORMATION

Thank you for the opportunity to review the draft report. We agree with the recommendations.

Please let me know if I can be of further assistance. You may direct staff inquiries to Trae Sommer at (410) 965-9102.



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