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November 9, 2020

Gerald E. Connolly
Chairman
Subcommittee on Government Operations
Committee on Oversight and Reform
House of Representatives

Subject: GAO Response to Post-Hearing Questions on Internal Revenue Service in the Pandemic

Dear Chairman Connolly:

It was a pleasure to appear before your subcommittee on October 7, 2020, to discuss the Internal Revenue Service's (IRS) information technology (IT) operational challenges and opportunities for improvement. This letter responds to a request that I provide answers to post-hearing questions for the record. The questions, along with my responses, follow.

- 1. Delays in service at the IRS have, on average, added more than a month to the processing of paper-based individual tax returns. How much will the delays in tax return processing cost taxpayers as a whole—as in how much will the government have to pay to those taxpayers whose tax return checks are late?**

As we reported in September 2020, during the first 10 months of fiscal year 2020, IRS had paid more in interest on taxpayer refunds than it did in all of fiscal year 2019 due, in part, to the nature of the postponed filing season deadline and delays in processing tax returns.¹ For example, from October 2019 through July 2020, IRS paid 32 percent more in refund interest to corporations (\$1.2 billion) than it did in all of fiscal year 2019 (\$924.6 million). For fiscal year 2020 through July 2020, IRS has paid about \$2.2 billion in total refund interest to individuals and businesses. In comparison, IRS paid about \$2.1 billion in refund interest for all of fiscal year 2019. With IRS's postponement of the tax filing deadline to July 15, 2020, interest for individual refunds began accruing as of the original filing deadline of April 15, 2020, and interest on business-related refunds began accruing 45 days after the applicable filing date. As we reported in September, IRS would continue to pay refund interest through the end of fiscal year 2020 and beyond, until it fully addressed its backlog. For example, in August 2020, IRS announced that it had sent nearly 14 million individuals refund interest payments with an average payment of \$18 per person. IRS also currently has a significant backlog of paper-based returns awaiting processing; any returns with refunds will also be eligible for interest payments.

¹GAO, *COVID-19: Federal Efforts Could be Strengthened by Timely and Concerted Actions*, [GAO-20-701](#) (Washington, D.C.: Sept. 21, 2020).

We have ongoing work in this area that we expect to publish in early 2021.

2. What is the impact that legacy IT systems have on the IRS's ability to deliver services to taxpayers and fulfill its overall mission?

According to IRS, while the agency's legacy systems have enabled it to provide services to taxpayers and execute the filing season, they hinder the agency's ability to ensure instantaneous data access and real-time updates to the systems that support customer services.² To this end, in April 2019, IRS issued a 6-year plan to modernize its systems.³ According to the agency, modernizing its legacy IT systems is expected to create opportunities for IRS to respond more quickly to legislative and other changes and to reinvest resulting savings to keep technology current and grow digital services, consistent with similar trends in the private sector.

3. The IRS plans to replace its outdated Individual Master File (IMF) system with the Customer Account Data Engine 2 (CADE 2). Yet, the replacement date is still unclear. How important is it for the IRS to replace its IMF system? Why is the replacement date unclear?

According to IRS, replacing IMF will enable modern capabilities to better serve taxpayers. However, while IRS has been working to replace the portions of IMF for over a decade, the replacement date for IMF is unclear because the agency has not yet developed an overall retirement plan for the system. In September 2020, IRS's Acting Chief Information Officer and Deputy Commissioner for Operations told us that the agency was in the initial stages of developing this plan and was aiming to complete it by the spring of 2021.

It is important to note that while IRS initially intended for CADE 2 to replace the IMF, in May 2019, the IRS Chief Information Officer told us that the agency had recognized that the original scope of CADE 2 was too broad and complex. This resulted in de-scoping several of the planned CADE 2 projects to focus CADE 2 solely on modernizing the parts of IMF which account for a large portion of tax processing activities (namely taxpayer account updates and processing).⁴ According to IRS, to replace IMF, the agency must complete CADE 2, modernize or eliminate the remaining IMF functions, and update all processing to use modernized CADE 2 data instead of legacy IMF data.

²We recently reported that the consequence of not updating legacy systems has contributed to, among other things, security risks, unmet mission needs, staffing issues, and increased costs. See GAO, *Information Technology: Agencies Need to Develop Modernization Plans for Critical Legacy Systems*, [GAO-19-471](#) (Washington, D.C.: June 11, 2019).

³Internal Revenue Service, *IRS Integrated Modernization Business Plan* (April 2019).

⁴GAO, *Information Technology: Key Attributes of Essential Federal Mission-Critical Acquisitions*, [GAO-20-249SP](#) (Washington, D.C.: Sept. 8, 2020).

4. Outdated technology at the IRS frequently fails and forces its employees to halt their work. What steps can the IRS take to collect service-wide data on this so-called “computer down time”?

In January 2020, we recommended that IRS further assess the increase in “system downtime” and identify possible solutions to mitigate any problems and reduce system downtime.⁵ In response, IRS reported in July 2020 that it had identified potential contributing factors to the system downtime and had implemented changes to the call center environment. In addition, IRS stated that it was updating the Customer Service Representative (CSR) technology platform to further improve system availability. For example, according to IRS officials, to monitor the health and performance of workstations and troubleshoot connectivity and other system issues more quickly, they deployed monitoring software to all CSR workstations. Officials stated that, by the end of January 2021, monitoring software is scheduled to be installed on all IRS workstations to further expand this troubleshooting capability.

We also recommended that IRS monitor system downtime and perform regular monitoring of fluctuations in system downtime charges, such as increases overall or by specific units, to determine what, if any, factors are interrupting CSRs’ work. IRS agreed with the recommendation and reported in July 2020 that it was monitoring the system downtime reported by the CSRs in Customer Account Services in conjunction with making updates to the CSR technology platform to further improve system availability.

IRS told us that it expects to fully implement the actions to address our recommendations by May 2021. We will continue to monitor the agency’s progress in implementing them.

5. How many legacy systems are there at the IRS? What is their average age and how does that average age compare to the average age of IT systems in the private sector?

We have not previously completed a review that would allow us to state the number and average age of IRS’s legacy systems. In addition, according to a recent report completed by the Treasury Inspector General for Tax Administration (TIGTA), IRS does not have a comprehensive inventory of its legacy systems.⁶

Our prior work focused on IRS’s management of its mission critical systems and the agency’s efforts to address risks to those systems. Most notably, since 2016, we

⁵GAO, *2019 Tax Filing: IRS Successfully Implemented Tax Law Changes but Needs to Improve Service for Taxpayers with Limited-English Proficiency*, [GAO-20-55](#) (Washington, D.C.: Jan. 15, 2020).

⁶Treasury Inspector General for Tax Administration, *Legacy Systems Management Needs Improvement*, Reference number 2020-20-044 (August 19, 2020).

have identified IMF as a legacy system in need of modernization and replacement.⁷ In addition, in 2018, we identified the IMF, the Integrated Data Retrieval System, and the Mainframe and Servers Services and Support system as systems posing significant risks to tax processing due to their reliance on legacy programming languages, outdated hardware, and a shortage of human resources with needed skills.⁸ We made several recommendations to IRS to implement practices to better manage the risks. IRS agreed with the recommendations and has begun to address them.

In addition, in its review of IRS's management of its legacy systems, TIGTA found that IRS did not have a consistent definition across the agency for what is a legacy system.⁹ Using a definition established by the agency's IT organization, TIGTA identified about one-third (231 of 669) of IRS systems as legacy; it further noted that IRS did not collect sufficient information for 288 of the 669 systems to determine whether they were legacy. To address these issues, TIGTA recommended that IRS (1) establish, implement, and uniformly apply an IRS enterprise-wide definition of a legacy system, and (2) ensure that all systems are included in the as-built architecture¹⁰ with complete and accurate information, including the managing organizations, application age, and programming language. IRS agreed with the recommendations.

You recently requested that we conduct work related to legacy systems at IRS. We look forward to further examining these systems during our review.

6. How does the IRS's spending on IT development, modernization, and enhancements compare to other federal agencies? To the private sector?

IRS planned to spend about \$605 million, or 22 percent, of its \$2.8 billion IT budget on IT development, modernization, and enhancements for fiscal year 2020.¹¹ This percentage is slightly higher than the planned spending rate of 20 percent for other federal agencies for fiscal year 2020 as reported on the Office of Management and Budget's IT Dashboard. In addition, sources we have reviewed estimate that the spending on IT development, modernization, and enhancements ranges from about 20 percent to slightly more than 50 percent for the private sector.

⁷GAO, *Information Technology: Federal Agencies Need to Address Aging Legacy Systems*, [GAO-16-468](#) (Washington, D.C.: May 25, 2016).

⁸GAO, *Information Technology: IRS Needs to Take Additional Actions to Address Significant Risks to Tax Processing*, [GAO-18-298](#) (Washington, D.C.: June 28, 2018).

⁹Treasury Inspector General for Tax Administration, *Legacy Systems Management Needs Improvement*, Reference number 2020-20-044 (August 19, 2020).

¹⁰ TIGTA used the as-built architecture as its source for information on IRS's systems.

¹¹These numbers are based on the fiscal year 2020 estimated obligations in IRS's fiscal year 2021 President's Budget Request: Summary of Capital Investments.

7. What is a healthy IT modernization target budget percentage spend rate for the IRS?

According to IRS, the agency's target spend rate for IT modernization is 20 percent of its total IT budget.

8. The IRS is in the midst of implementing a six-year IT modernization plan to improve the taxpayer's filing experience while adapting to myriad other changes caused by the pandemic. With so many competing priorities and limited resources, what changes, if any, should the IRS make to its existing IT modernization plan?

According to IRS, the shift in focus and resources in response to the COVID-19 pandemic in fiscal year 2020 created new risks and increased demand for IT equipment and solutions which have underscored the need to continue investing in and accelerating IT modernization efforts. Related to this question, in June 2016, we reported that the agency did not have a structured process for prioritizing its modernization activities.¹² To its credit, IRS has since developed such a process and has begun to implement it for the activities identified in its modernization plan. Specifically, while IRS has identified projects and initiatives to be implemented over the next 6 years, the agency recently developed a process aligned with the budget cycle for evaluating planned work at different stages¹³ to account for changes in priorities and resource levels, among other factors. IRS has begun to implement the process and stated that it plans to fully implement it by fiscal year 2022. Using the process should assist IRS with making changes to the modernization plan that take into account changing priorities and resource levels. As an example of the changes IRS has had to make due to the pandemic, the agency recently reported that it had reallocated resources from its CADE 2 project to provide additional capacity for the upcoming filing season and, as a result, had extended the CADE 2 project schedule by 7 months.

9. What would it cost to make all needed updates to the IRS's IT systems — both hardware and software, and retire or effectively upgrade legacy systems at the IRS?

We have not conducted a review that would provide the basis to determine what it would cost to make all of the needed updates to IRS's IT systems. In addition, IRS has not determined this cost, nor does it have the information that would allow it to make this determination.

Rather than determining the cost of making all of the needed updates to its IT systems, in April 2019, IRS issued a plan for modernizing its systems and operations which describes an incremental approach for modernizing key systems and

¹²GAO, *Information Technology: IRS Needs to Improve Its Processes for Prioritizing and Reporting Performance of Investments*, [GAO-16-545](#) (Washington, D.C.: June 29, 2016).

¹³These stages are budget formulation, planning, and execution.

operations over a 6-year period.¹⁴ The plan identifies several initiatives for modernization in four areas critical to IRS’s mission and future development, referred to as “pillars”—taxpayer experience, core taxpayer services and enforcement, modernized IRS operations, and cybersecurity and data protection. IRS’s Acting Chief Information Officer stated that, to effectively upgrade or retire legacy systems, it would be best for IRS to have a consistent and predictable level of funding along with the ability to attract and hire highly skilled technical staff. To that end, the agency estimated it would need between \$2.3 billion and \$2.7 billion over 6 years to implement the plan¹⁵ and requested \$300 million in the proposed budget for fiscal year 2021.

Based on the findings in TIGTA’s recent report on legacy systems management,¹⁶ it does not appear that IRS has the information it would need to determine the cost of making all needed updates to its systems. As noted earlier, TIGTA reported that IRS did not have a complete inventory of legacy systems. In addition, the agency did not have all the information needed to identify its legacy systems. Further, according to the report, IRS did not always capture costs at the system level, making it difficult to identify the costs associated with legacy systems.

10. What is the replacement rate of personal computers for IRS’s employees?

In November 2020, IRS’s Acting Chief Information Officer told us that laptops are on a 4-year refresh cycle. We have not verified this information.

11. In your testimony you said the GAO currently has work under way looking at the IRS’s IT and operations’ efforts. Specifically, what is the scope of the GAO’s ongoing work in this area?

As mentioned in my testimony, we are undertaking a review of IRS’s IT systems for the House and Senate Appropriations Subcommittees on Financial Services and General Government.¹⁷ The three objectives of this review are to determine

- what has been IRS’s performance related to the cost, schedule, and scope for selected IT investments;
- what has been IRS’s progress in implementing its 2019 IT modernization plan;

¹⁴Internal Revenue Service, *IRS Integrated Modernization Business Plan* (April 2019).

¹⁵ Internal Revenue Service, *IRS Integrated Modernization Business Plan Companion Document* (April 2019).

¹⁶Treasury Inspector General for Tax Administration, *Legacy Systems Management Needs Improvement*, Reference number 2020-20-044 (August 19, 2020).

¹⁷This review is being done in response to the Joint Explanatory Statement, H. Comm. Prt. 38-678, p. 637 (January 2020), accompanying the Consolidated Appropriations Act, 2020, Pub. L. No. 116-93, 133 Stat. 2317 (Dec. 20, 2019).

- what IT-related actions IRS has taken to maximize telework and operate during the COVID-19 pandemic and what the reported impacts of the actions are on IRS's budget and plans for IT modernization and operations.

We also are in the process of undertaking or planning other reviews of IRS's IT operations. Specifically, we are:

- assessing the information systems controls around IRS's financial reporting, as part of our requirement to annually audit IRS's financial statements.¹⁸ We plan to issue the results of this year's assessment in the spring of 2021.
- planning to determine the role of IT in IRS's ability to successfully execute the 2020 filing season, as part of our filing season review. We plan to issue the results of this work in the spring of 2021.
- planning to determine the extent to which IT has hindered or helped IRS distribute economic impact payments, as part of our review of IRS's distribution of these payments. We expect to issue the results of this work in the summer of 2021.

12. IRS's telephone system dates back 20 years. What technological deficiencies are there with the IRS's telecom capacity and what steps should IRS be taking to upgrade its systems? How much would such upgrades cost?

As we reported in September 2018, IRS replaced the approximately 15-year-old telephone equipment it used for answering taxpayer calls because of ongoing failures that contributed to poor service.¹⁹ For example, at times the assistor could hear the customer speaking, but the customer could not hear the assistor. The new equipment enabled future service improvements, such as a call-back feature so customers will not have to wait on the line for a response. IRS completed the upgrades as planned in June 2018.

In January 2020, we reported that Customer Service Representatives (CSR) and frontline managers told us that they frequently experienced issues with their computers that affected their ability to serve taxpayers.²⁰ Specifically, 60 of 67 CSRs and managers told us that they had experienced computer problems frequently, such as freezing or taking excessive time to reboot, or that they experienced difficulty logging on.²¹ We observed these technical difficulties during our visits to IRS service

¹⁸For results of the most recent assessment, see GAO, *Management Report: Improvements Are Needed to Enhance the Internal Revenue Service's Information System Security Controls*, [GAO-20-411R](#) (Washington, D.C.: May 13, 2020).

¹⁹GAO, *2018 Tax Filing: IRS Managed Processing Challenges and Enhanced Its Management of Tax Law Changes*, [GAO-18-471](#) (Washington, D.C.: Sept. 10, 2018).

²⁰[GAO-20-55](#).

²¹We did not ask about this issue in one discussion group, but one individual in that group independently told us that computer issues are a common topic of discussion among CSRs.

centers. The CSRs and managers noted that these problems had worsened with the installation of their new telephone system, which is connected to their computers and through the internet. These computer problems could cause phone calls to disconnect before the taxpayer's issues are resolved, meaning that the taxpayer must call back and wait in the queue again. As noted in response to question 4, these issues contributed to an increase in system downtime and IRS is taking steps to address this.

Since the upgrades to the telephone system in 2018, IRS officials reported to us that they have continued to make additional improvements and to monitor and evaluate system performance. For example, IRS officials told us they have implemented multiple upgrades to maximize capacity and improve system performance. In addition, due to COVID-19, officials reported that they implemented what was a planned 3-year project to achieve 100 percent telework for IRS's toll-free telephone service on an accelerated time frame of about 4 months. Finally, IRS officials reported that the customer call-back feature implemented beginning in January 2019 will be expanded for the 2021 filing season to cover an estimated 40 percent of taxpayer calls.

13. How well is the IRS positioned to effectively carry out the upcoming tax filing season should employees have to continue with telework because of the pandemic?

IRS's annual tax filing activities include processing over 240 million individual and business tax returns electronically or on paper, issuing over \$400 billion in refunds, and providing customer service on return processing issues, such as suspected identity theft and math errors. We reported in September 2020 that the COVID-19 pandemic has affected IRS's ability to assist taxpayers on these issues, which typically require in-person, phone, and correspondence-based interactions.²² As of late July 2020, IRS estimated that filing season processing was at about 61 percent capacity and customer service functions were at about 84 percent capacity, based on employee staffing levels. We have ongoing work in this area that we expect to publish in early 2021.

14. What steps should the IRS be taking right now to better prepare itself for the upcoming tax filing season?

According to IRS, the agency is on schedule for conducting extensive testing to ensure all systems and applications are ready, operating at optimum performance levels, and secure.

We have ongoing work examining IRS's preparedness for the upcoming filing season that we expect to publish in early 2021.

²²[GAO-20-701](#).

15. Is the IRS prepared to distribute another round of stimulus checks to the American people?

Our audit work to date has focused on assessing Treasury and IRS's administration of the first round of economic impact payments (EIP). As part of our review, we asked IRS officials about actions they are taking to prepare for a potential second round of EIP. According to IRS officials, IRS offices, including the Wage & Investment division, Information Technology, and Chief Counsel Office are reviewing pending legislation for a second round of payments. They are trying to figure out how much work they can complete in advance, and then make any necessary changes once legislation is enacted so IT can start programming. IRS officials from the Wage and Investment division which has the lead for administering the EIPs do not know how long it will take IT to complete programming because they do not yet know how similar the eligibility requirements will be for a potential second round of payments. According to the officials, the more changes there are to eligibility requirements, the more IT programming will be necessary.

According to the IRS officials, IRS has addressed some programming challenges from the first round, such as payments to individuals who have filed injured spouse claims, spouses of deceased individuals, and representative payees of federal benefits. To that end, IRS officials assume that there will not be a reoccurrence of these same problems. If there is another round of stimulus payments, we plan to assess Treasury's and IRS's administration of those payments.

16. What lessons learned should the IRS incorporate to its policies and operations to make more efficient the distribution of another round of stimulus checks?

According to IRS officials from the Wage and Investment Division, they have discussed various issues related to lessons learned, but have not formally reviewed or compiled a lessons learned document for a second round of stimulus payments. Based on our ongoing audit work, we have identified several actions Treasury and IRS can take to improve the administration of EIPs. In September, we made two recommendations intended to improve EIP outreach and communication efforts with non-filers. We plan to make a third recommendation in our November report. Treasury and IRS have taken actions that are consistent with our recommendations, such as using tax return information to identify and notify around 8.9 million individuals that they may be eligible for an EIP.

However, Treasury and IRS did not update estimates of those who could be eligible, but have yet to file. Without an updated estimate, Treasury, IRS, other federal agencies, and IRS's outreach partners are limited in their ability to appropriately scale and target outreach and communication efforts to individuals who may be eligible for a payment. Also, Treasury and IRS do not plan to analyze the outcomes of their EIP notice-mailing strategy until 2021. The lack of timely analysis deprives Treasury and IRS of data they could use to assess the effectiveness of their notice strategy and redirect resources as needed. Although the deadline for non-filers to use IRS's online Non-Filers Tool to file for an EIP is November 21, eligible non-filers can still file for an EIP by filing a 2020 tax return before April 15, 2021. By delaying their analysis of the EIP notice-mailing strategy, Treasury and IRS are missing an

opportunity to determine whether the strategy is effectively reaching those who are outside the tax system, likely vulnerable, and in need of an EIP.

In preparing this correspondence, we relied primarily on our prior reports that have addressed IRS's IT management. We also obtained and incorporated IRS's input on selected responses as appropriate. Should you or your staff have any questions on matters discussed in this letter, please contact me at (202) 512-6240, or Sabine Paul, Assistant Director, at (202) 512-6374. We can also be reached by e-mail at dsouzav@gao.gov or pauls@gao.gov, respectively.

Sincerely yours,

/signed/

Vijay A. D'Souza
Director, Information Technology and Cybersecurity