

## Antiquated Technology Jeopardizes Current and Future Tax Administration, Impairing Both Taxpayer Service and Enforcement Efforts

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### TAXPAYER RIGHTS IMPACTED<sup>1</sup>

- *The Right to Be Informed*
- *The Right to Quality Service*
- *The Right to Pay No More Than the Correct Amount of Tax*
- *The Right to a Fair and Just Tax System*

### EXPLANATION OF THE PROBLEM

Despite its responsibility for collecting the most tax revenue in the world and its vital role in social benefits administration, the IRS operates with severely outdated information technology (IT) systems and infrastructure. Without a substantial overhaul of its IT systems, some of which were originally developed in the 1960s, and transformation of how the IRS interacts with taxpayers, the IRS cannot provide first-rate taxpayer service or efficiently carry out its enforcement and collection efforts. The IRS will require significant, sustained multiyear funding from Congress to modernize its IT systems.

The consequence of not fully modernizing IT systems can range from minor inconvenience (*e.g.*, requiring taxpayers who choose to e-file their tax returns to still submit some paper forms) to major catastrophe (*e.g.*, taxpayers being unable to e-file or make payments, and the IRS being unable to process tax returns and disburse refunds). As the nation's tax collector, the IRS can ill-afford to have its systems crash (even for a day, as occurred during the last day of the 2018 filing season). Significant disruptions in IRS operations can erode taxpayer confidence in the tax administration system and ultimately lead to reduced levels of tax compliance.

### ANALYSIS

#### Background

A Supreme Court Justice famously opined that “taxes are the lifeblood of government.”<sup>2</sup> Indeed, the IRS is responsible for collecting approximately \$3.6 trillion in taxes each year — roughly 96 percent of all federal

<sup>1</sup> See Taxpayer Bill of Rights (TBOR), [www.TaxpayerAdvocate.irs.gov/taxpayer-rights](http://www.TaxpayerAdvocate.irs.gov/taxpayer-rights). The rights contained in the TBOR are also codified in the IRC. See IRC § 7803(a)(3).

<sup>2</sup> *Bull v. United States*, 295 U.S. 247, 259 (1935).

revenue.<sup>3</sup> In addition, the agency is tasked with administering recurring social benefits programs such as the Earned Income Tax Credit (EITC) and one-time financial relief programs such as the Economic Stimulus Payments in 2008 and Economic Impact Payments (EIPs) in 2020. Despite these enormous and critical responsibilities, the IRS is overwhelmingly reliant on “legacy” IT systems — which the IRS’s IT function has defined as systems that are at least 25 years old, use obsolete programming languages (*e.g.*, Common Business-Oriented Language (COBOL)), or lack vendor support, training, or resources to maintain.<sup>4</sup>

In recent years, much has been written about the IRS’s antiquated IT systems.<sup>5</sup> The IRS can modernize some legacy systems, replace some with new technology, and retire or decommission others that no longer serve their intended purpose. The Treasury Inspector General for Tax Administration (TIGTA) issued a report in August 2020 that found the IRS had not developed a coordinated plan to address updating, replacing, or retiring its legacy systems.<sup>6</sup> Of the 231 legacy systems TIGTA identified, 45 were due for modernization, and 34 should have been retired.<sup>7</sup>

In a recent congressional hearing, the Government Accountability Office (GAO) noted that the IRS was still reliant on the Individual Master File (IMF), a system initially developed over 50 years ago, to update taxpayer account data, assess taxes, and generate refunds.<sup>8</sup> The IRS is continuing to develop the Customer Account Data Engine 2 (CADE 2) to replace core functions of the IMF. The GAO has identified CADE 2 — which uses modern computing language, is faster to process, and is more adaptable — as one of the federal government’s critical IT acquisitions.<sup>9</sup> Unfortunately, the IRS is not expected to complete the second phase of CADE 2 until 2024, partially because the project had been “rebaselined” seven times from 2016 to 2019 due to budget cuts, hiring freezes, and changes in scope.<sup>10</sup>

**Analogy:** An apt analogy is to think of the IRS’s IT systems as a 1960s-era car. The IMF is the engine, and while it has impressively served the needs of the IRS for over 50 years, with the IRS modifying it to coax a few more years out of it, it is time for an engine replacement. While it may be possible for aficionados of classic cars to integrate modern technology for safety (*e.g.*, anti-lock brakes, airbags) or convenience (*e.g.*, Bluetooth, GPS navigation), at some point it simply is no longer practical or cost-effective to transform a 1960s-era car to safely drive the

3 IRS, 2019 Data Book 1 (June 2020); *IRS in the Pandemic, Hearing Before the H. Comm. on Oversight and Reform, Subcomm. on Government Operations*, 116th Cong., at 1 (Oct. 7, 2020) (statement of Charles P. Rettig, IRS Commissioner), <https://oversight.house.gov/sites/democrats.oversight.house.gov/files/Rettig%20Testimony.pdf>.

4 IRS response to TAS information request (Oct. 19, 2020). Current IRS criteria for legacy system includes (but is not limited to): aged software applications (25 years or older); obsolete programming languages (*e.g.*, Assembler Language Code, COBOL, or Visual BASIC); outdated development methodology or lack of industry adoption; lack of vendor support; lack of resource and training; or outdated architecture adoption.

5 See, *e.g.*, National Taxpayer Advocate 2019 Annual Report to Congress 15-22 (Most Serious Problem: *Information Technology Modernization: The IRS Modernization Plan’s Goal to Improve the Taxpayer Experience Is Commendable, But the IRS Needs Additional Multi-Year Funding to Bring It to Fruition*); National Taxpayer Advocate Fiscal Year 2019 Objectives Report to Congress 47-51 (Area of Focus: *The IRS’s Enterprise Case Management Project Shows Promise, But to Achieve 21st Century Tax Administration, the IRS Needs an Overarching Information Technology Strategy With Proper Multi-Year Funding*).

6 See TIGTA, Ref. No. 2020-20-044, *Legacy Systems Management Needs Improvement 1* (Aug. 19, 2020).

7 *Id.*

8 GAO, GAO-21-178T, *Information Technology: IRS Needs to Address Operational Challenges and Opportunities to Improve Management 4, 9* (Oct. 7, 2020) (statement of Vijay A. D’Souza, Director, Information Technology and Cybersecurity). See also IRS, Customer Account Data Engine (CADE) 2 Database Implementation (DI) – Privacy Impact Assessment (Oct. 4, 2010).

9 GAO, GAO-20-249SP, *Information Technology: Key Attributes of Essential Federal Mission-Critical Acquisitions 41-42* (Sept. 2020). CADE 2 will benefit the IRS by “enabling increased agility in response to changing taxpayer priorities and legislation, reduced IT costs and complexity, reduced workforce risk, and reduced burden of manually intensive processes on IRS employees by enabling automated calculations.”

10 GAO, GAO-20-249SP, *Information Technology: Key Attributes of Essential Federal Mission-Critical Acquisitions 41* (Sept. 2020).

roads in 2020. Similarly, the IRS cannot afford to continually retrofit safety (e.g., fraud detection filters) and convenience (e.g., e-filing, Direct Pay) features into an antiquated platform. The IRS, and taxpayers, would be much better served with a brand new electric vehicle, one capable of integrating new features seamlessly via software updates without needing to repeatedly take it off the road (or offline) for maintenance.

### Impact of COVID-19

With its antiquated IT systems holding it back, the IRS has had to deal with unprecedented challenges imposed by the COVID-19 pandemic for much of 2020. The disruption caused by the pandemic revealed the IRS's IT-related challenges for managing its workforce and serving taxpayers.

The IRS's primary workforce-related obstacle stemmed from its inability to continue core functions (such as answering phones, issuing notices, and opening and processing taxpayer correspondence, mailed payments, and paper-filed returns) during the height of the 2020 filing season with the majority of staff under an emergency evacuation order.<sup>11</sup> For example, the IRS was unable to quickly implement a programming fix to halt the creation of more than 20 million systemically-generated notices, which it could not mail to taxpayers due to shifting of staffing and resources.<sup>12</sup> When the IRS resumed its mailing operations, it mailed millions of notices bearing dates that had already passed, along with inserts containing updated due-date information. In June 2020, the National Taxpayer Advocate published a blog entry anticipating that this would result in confusion among taxpayers.<sup>13</sup>

The IRS workforce, like much of the rest of the country, had to overcome unforeseen obstacles as it dealt with COVID-19. To ensure its employees could continue to work during the pandemic, the IRS had to figure out ways to securely allow remote connectivity of employees to key IT systems. The IRS issued more than 15,000 laptops to customer service representatives and thousands more to non-customer-facing employees.<sup>14</sup> The IRS's internal networks support approximately 57,000 employees online concurrently, all in a secure environment.<sup>15</sup>

To provide relief for taxpayers impacted by the COVID-19 pandemic, Congress passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act in March 2020.<sup>16</sup> Most notably, the CARES Act authorized an advance recovery rebate credit (hereafter referred to as "economic impact payments" or EIP) for individuals, which Congress directed the IRS to distribute. Given the time-sensitive nature of the payments, the IRS had to pivot, in the middle of the filing season without full staffing, to develop processes and procedures and perform system changes that would allow for the quick release of the EIPs. Although there have been glitches, the National Taxpayer Advocate commends the IRS for timely delivering 165 million EIPs to taxpayers.<sup>17</sup>

11 See *Supplemental Review of the 2020 Filing Season*, *infra*; IRS response to TAS fact check (Nov. 19, 2020).

12 Erin Collins, Keep an Eye on Your Mailbox: Millions of Backlogged Notices Are Being Mailed Over the Next Few Months, Some Reflect Expired Action Dates. But Don't Panic, See Inserts Providing Extended Due Dates, NATIONAL TAXPAYER ADVOCATE BLOG, <https://www.taxpayeradvocate.irs.gov/news/ntablog-keep-an-eye-on-your-mailbox-millions-of-backlogged-notices-are-being-mailed-over-the-next-few-months-some-reflect-expired-action-dates-but-dont-panic-see-inserts-providing-extended/> (June 22, 2020).

13 *Id.*

14 IRS response to TAS information request 7 (Oct. 19, 2020); IRS response to TAS fact check (Nov. 19, 2020).

15 *IRS in the Pandemic*, *Hearing Before the H. Comm. on Oversight and Reform, Subcomm. on Government Operations*, 116th Cong., at 5 (Oct. 7, 2020) (statement of Charles P. Rettig, IRS Commissioner), <https://oversight.house.gov/sites/democrats.oversight.house.gov/files/Rettig%20Testimony.pdf>.

16 The Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), Pub. L. No. 116-136, 134 Stat. 281 (Mar. 27, 2020).

17 IRS response to TAS fact check (Nov. 19, 2020).

Despite the IRS’s admirable performance handling the challenges of the pandemic, some taxpayers experienced unusual difficulties in their dealings with the IRS. While a portion of those difficulties is attributable to the impossibility of anticipating and planning for the impacts of a national shutdown, some difficulties would have been substantially lessened if the IRS had better technology and more staff to meet the needs of taxpayers. For an in-depth discussion of the IRS response to the COVID-19 pandemic and implementation of CARES Act provisions, refer to the National Taxpayer Advocate’s Fiscal Year 2021 Objectives Report to Congress.<sup>18</sup>

## Modernization Plan

In April 2019, the IRS released a six-year Integrated Modernization Business Plan (“modernization plan”) to improve IT infrastructure, make tax administration more efficient, and enable the IRS to provide better taxpayer service.<sup>19</sup> The modernization plan clarified that it involves “more than the replacement of aged infrastructure, software products, and outdated code... it will also address how IRS workforce processes and culture will evolve to sustain ongoing innovation and transformation.”<sup>20</sup>

The modernization plan became even more important after the Taxpayer First Act (TFA) became law on July 1, 2019. The TFA established the position of the IRS Chief Information Officer (CIO) responsible for the “development, implementation, and maintenance of information technology,” as well as the security and integration of technology into IRS systems. The CIO is also directed to develop and implement a multiyear strategic plan for the IRS’s IT needs.<sup>21</sup> However, Congress did not provide additional funding to the IRS in the TFA, including funding for the modernization efforts.

The modernization plan contains four “pillars” critical to the agency’s mission and future development.

1. **Taxpayer Experience.** Incorporate experiences from all parties across the federal tax ecosystem, including business taxpayers, taxpayer representatives, and tax return preparers (*e.g.*, web/mobile applications, taxpayer digital communications);
2. **Core Tax Services and Enforcement.** Overhaul core tax systems to provide quicker and easier tax filing services through data-driven decision-making, real-time tax processing, and core taxpayer administration integration (*e.g.*, CADE 2, Enterprise Case Management (ECM));
3. **Modernized IRS Operations.** Accelerate the adoption of emerging technologies to enhance taxpayer services (*e.g.*, artificial intelligence, data digitization, robotics process automation); and
4. **Cybersecurity and Data Protection.** New technologies must function as security stewards of sensitive taxpayer information (*e.g.*, identity and access management, vulnerability and threat management).

To advance in these areas, the IRS set forth two phases for delivering these capabilities — phase one was planned for fiscal years (FYs) 2019 to 2021, and the second phase to take place in FYs 2022 to 2024. The IRS described this modernization plan as a “six-year road map for achieving necessary modernization of IRS

18 See National Taxpayer Advocate Fiscal Year 2021 Objectives Report to Congress 10-45 (Systemic Advocacy Objective: *Protecting the Rights of Taxpayers Impacted by the COVID-19 National Emergency and Restoring Much-Needed Taxpayer Services*); National Taxpayer Advocate Fiscal Year 2021 Objectives Report to Congress 46-68 (Systemic Advocacy Objective: *Reducing Burden Resulting From the Implementation of the Coronavirus Aid, Relief, and Economic Security (CARES) Act*).

19 IRS Pub. 5336, IRS Integrated Modernization Business Plan (Apr. 2019).

20 *Id.* at 4.

21 TFA, Pub. L. No. 116-25, §§ 2101-2103, 133 Stat. 981 (2019).

systems and processes to improve taxpayer service”<sup>22</sup> — a perfect analogy to go with the IRS’s quest to replace its 1960s-era car with a sleek, modern electric vehicle capable of taking full advantage of the new road map.

### Pillar One: Taxpayer Experience

The goal of this modernization pillar is to have the IRS deliver a service experience comparable to private industry. The leading financial institutions in the world have invested heavily into ensuring their customers remain engaged, whether it be via online account access, live chat support, mobile phone apps, or a global network of ATMs that can handle transactions from customers. With smart investments and bold leadership, there is no reason the IRS cannot match the best financial institutions in private industry for customer service.

The IRS is exploring ways to expand its offering of online account tools for taxpayers.<sup>23</sup> Robust online accounts would be helpful to many taxpayers accustomed to viewing account information online from private sector financial institutions and even some government agencies. However, as a federal agency, the IRS faces certain challenges that do not apply to private companies. For example, the IRS is subject to oversight from multiple entities, including the IRS Oversight Board, the Secretary of Treasury, GAO, TIGTA, and various congressional committees<sup>24</sup> — each of which might have its own version of how the IRS should proceed. In addition, as a federal agency, the IRS must adhere to standards and protocols imposed by the Federal Information Security Modernization Act and by the National Institute of Standards and Technology.<sup>25</sup> Such limitations have hindered the IRS’s efforts to provide complete account information to taxpayers, necessitating more IRS employees to answer phone calls and respond to correspondence about matters that many taxpayers would handle quickly and efficiently online if the functionality were available.

Similarly, taxpayer representatives would benefit enormously from online account access. While a typical taxpayer can go many years without having to contact the IRS with account questions, some practitioners have to contact IRS personnel multiple times a day. Hold times on the Practitioner Priority Service telephone line can be long (average of 12.7 minutes in FY 2020), and hold times when practitioners must call the IRS’s compliance telephone lines can be even longer.<sup>26</sup> For inquiries such as balance inquiries, requests for transcripts, or obtaining copies of correspondence, telephone calls are not nearly as effective as a robust online account.<sup>27</sup>

The California Franchise Tax Board (FTB) has launched an online account service called “MyFTB” on its website. This online account tool provides real-time access to tax account information to individuals, business representatives, and tax professionals. Besides “view-only” account access, taxpayers (or their representatives)

22 IRS Pub. 5336, IRS Integrated Modernization Business Plan 4 (Apr. 2019).

23 See Most Serious Problem: *Online Records Access: Limited Electronic Access to Taxpayer Records Through an Online Account Makes Problem Resolution Difficult for Taxpayers and Results in Inefficient Tax Administration*, *supra*.

24 See IRS, IRS Oversight Organizations, <https://www.irs.gov/about-irs/irs-oversight-organizations> (last visited Nov. 5, 2020).

25 See Cybersecurity & Infrastructure Security Agency, Federal Information Security Modernization Act, <https://www.cisa.gov/federal-information-security-modernization-act> (last visited Nov. 2, 2020); National Institute of Standards and Technology, <https://www.nist.gov/> (last visited Nov. 2, 2020).

26 IRS, Joint Operations Center (JOC), Snapshot Reports: Enterprise Snapshot Product Line Detail 14 (week ending Sept. 30, 2020). The BMF Customer Response line had an average wait time of 35.3 minutes. IRS, JOC, Snapshot Reports: Enterprise Snapshot Product Line Detail 3 (week ending Sept. 30, 2020).

27 See Most Serious Problem: *Telephone and In-Person Service: Taxpayers Face Significant Difficulty Reaching IRS Representatives Due to Outdated Information Technology and Insufficient Staffing*, *supra*.

can file a power of attorney, file certain forms, protest a proposed assessment, live chat with a customer service representative, or send a secure message (with attachments).<sup>28</sup>

When we spoke with the FTB in September 2020 regarding its technology strategy, a key lesson shared with us was that IRS divisions should partner more closely with IT staff to ensure alignment of goals throughout the project.<sup>29</sup> MyFTB did not happen overnight; it was the culmination of years of support from FTB leadership and sustained funding from California taxpayers.<sup>30</sup>

Clearly, there are multiple layers of challenges for the IRS to consider as it seeks to use technology to improve the taxpayer experience. California and other states<sup>31</sup> have shown that with a significant investment of time and resources, it is possible to overcome security and privacy obstacles to offer taxpayers a comparable online experience they are accustomed to receiving from private sector firms.

### Pillar Two: Core Taxpayer Service and Enforcement

The absence of modernized IT systems prevents the IRS from providing core taxpayer services and conducting its enforcement efforts as effectively as it could. For example, the IRS currently uses over 60 discrete case management systems it has developed over many years to support the individual needs of multiple business units.<sup>32</sup> Many of these systems are incapable of communicating with each other, resulting in redundancies, bottlenecks, and increased risk. The result is that taxpayers are harmed, practitioners' efforts are hindered, and the IRS is hampered in delivering on its mission to provide U.S. taxpayers top quality service and apply the tax law with integrity and fairness to all.

**The absence of modernized IT systems prevents the IRS from providing core taxpayer services and conducting its enforcement efforts as effectively as it could.**

Taxpayers will benefit if the IRS takes a taxpayer-centric approach to servicing their accounts. ECM is an example of a solution geared toward core taxpayer service. The IRS formally began the ECM initiative in January 2015 and has the daunting task of consolidating case management systems and information across the IRS and replacing them with a cloud-based case management system to improve taxpayer service.<sup>33</sup>

28 See State of California FTB, *MyFTB*, <http://ftb.ca.gov/myftb/features.html> (last visited Oct. 23, 2020). For further discussion on MyFTB and IRS online account capabilities, see Most Serious Problem: *Online Records Access: Limited Electronic Access to Taxpayer Records Through an Online Account Makes Problem Resolution Difficult for Taxpayers and Results in Inefficient Tax Administration*, *supra*.

29 State of California FTB response to TAS questions (Sept. 4, 2020).

30 The State of California FTB reported that it took six years and two months to develop its online tools (including MyFTB) and spent nearly \$423 million on projects relating to the hardware and software to implement the systems behind its online tools. State of California FTB response to TAS questions (Sept. 4, 2020).

31 See, e.g., New York Department of Taxation and Finance, <http://tax.ny.gov/online/learnmore.htm> (last visited Oct. 23, 2020).

32 See TIGTA, Ref. No. 2020-20-061, *The Enterprise Case Management Solution Deployment Is Delayed, and Additional Actions Are Needed to Develop a Decommissioning Strategy 1* (Sept. 21, 2020).

33 *Id.*



The IRS awarded an ECM software contract with a value of more than \$45 million, with plans for deployment of Release 1.0 by the end of calendar year 2020.<sup>34</sup> The first phase of ECM was demonstrated in September 2020 to the Tax Exempt/Government Entities (TE/GE) division, with a full rollout expected in December 2020.<sup>35</sup> The IRS estimates it will require an additional \$255 million over the next four years to implement its ECM plan.<sup>36</sup> Implementation of the ECM plan should be a top priority, and Congress should provide the funding necessary for the IRS to complete the project.

The Return Review Program (RRP) is an example of a system that supports the core enforcement efforts of the IRS. RRP is a key system for detecting tax fraud and preventing the issuance of questionable refunds that uses predictive modeling techniques to identify subtle data patterns as it protects the integrity of the tax system.<sup>37</sup> The Electronic Fraud Detection System (EFDS) is the primary platform by which the IRS screens, verifies, and refers to a treatment process potentially fraudulent returns selected by RRP.<sup>38</sup> The IRS has plans to phase out EFDS (a system created in 1994) as part of the ECM plan.<sup>39</sup> The IRS's investment in fraud detection systems that would allow it to retire the antiquated EFDS platform should pay many dividends.

Another key element of the modernization plan is the transition to CADE 2 and the retirement of IMF. CADE 2 is expected to offer an integrated, near real-time environment to support the processing of individual tax returns, information returns, payments, and other transactions.<sup>40</sup> Curiously enough, the modernization plan does not include any mention of replacing the IRS's Business Master File (BMF), which contains records pertaining to business taxpayers and exempt organizations.<sup>41</sup>

### Pillar Three: Modernized IRS Operations

The goal of this modernization pillar is to enable the IRS to retire or decommission legacy systems in place of more sustainable infrastructure. One example of this is to move away from paper documents and toward full data digitization. If the IRS processes documents (both internal to the IRS and from taxpayers) electronically, it can capture the data in digital form — without the need to scan the document and/or manually transcribe the data.

Another tangible way the IRS can achieve modernized operations is to move to cloud-based data storage. Because the IRS handles so much sensitive taxpayer information, it has to be concerned about data security and has historically been reluctant to forgo the old-fashioned computer disk backup protocol for data storage. However, with increasing security features available for cloud-based data storage, it is just a matter of how soon the IRS will embrace cloud-based data storage. The IRS has started pursuing cloud-based solutions,

<sup>34</sup> See TIGTA, Ref. No. 2020-20-061, *The Enterprise Case Management Solution Deployment Is Delayed, and Additional Actions Are Needed to Develop a Decommissioning Strategy 4* (Sept. 21, 2020).

<sup>35</sup> IRS Case Management Milestone: New Foundational and Business Capabilities Delivered in TE/GE FY 2020 Partial Release (Sept. 30, 2020).

<sup>36</sup> IRS response to TAS information request (Oct. 1, 2020).

<sup>37</sup> Individual returns are run throughout the RRP and scored to identify suspicious returns exceeding certain tolerances for false or inflated wages and/or withholding claimed on returns. Internal Revenue Manual (IRM) 25.25.11.1, Program Scope and Objectives (Mar. 24, 2020). See also IRM 25.25.2.2, Data Mining Screening (June 3, 2020).

<sup>38</sup> IRM 25.25.2.22, Returns Not in EFDS (Feb. 26, 2020).

<sup>39</sup> See TIGTA, Ref. No. 2015-20-093, *Review of the Electronic Fraud Detection System 1* (Sept. 29, 2015); IRS, W&I response to TAS information request (Oct. 22, 2020); Most Serious Problem: *Refund Delays: Taxpayers Whose Legitimate Refunds Are Flagged by IRS Fraud Filters Experience Excessive Delays and Frustration in Receiving Their Refunds*, *infra*.

<sup>40</sup> IRS Pub. 5336, IRS Integrated Modernization Business Plan 22 (Apr. 2019).

<sup>41</sup> See IRM 25.71.2, Overview of Exempt Organizations Business Master File (Jan. 1, 2020). The BMF and the Exempt Organizations Master File were merged January 1, 1981, and the resulting file is referred to as the EO/BMF.

having added 26 systems, projects, and applications leveraging cloud infrastructure in FY 2020.<sup>42</sup> For example, the IRS utilizes leading commercial cloud providers to host and deliver secure, agile, and efficient cloud-based solutions.<sup>43</sup>

#### Pillar Four: Cybersecurity and Data Protection

The final modernization pillar relates to the protection of taxpayer data. As the guardian of valuable taxpayer data, the IRS will always be a target of hackers and identity thieves. The IRS estimates there are more than 2.5 million unauthorized access attempts per day, including denial-of-service attacks, unsuccessful intrusion attempts, probes or scans, and other unauthorized connectivity attempts.<sup>44</sup> As one of the nation's largest repositories of sensitive data, the IRS has strategically deployed enterprise safeguards to detect and prevent emerging cyber threats (*e.g.*, insider threats, social engineering, and unauthorized access to sensitive information).<sup>45</sup>

The IRS takes seriously its responsibility to develop and maintain an agencywide, proactive approach to security, which necessitates continued investment in cutting-edge technology to defend against expanding cyber threats. One of the most significant cybersecurity-related challenges that the IRS has articulated is the disadvantage in attracting specialized talent when competing with private sector, where its competitors can offer compensation packages commensurate with qualifications.<sup>46</sup>

#### Risk of Catastrophic Systems Failure

Because the IRS's core IT systems are among the oldest in the federal government,<sup>47</sup> its reliance on outdated and unsupported IT has been described as “a ticking time bomb.”<sup>48</sup> With the IRS collecting trillions of dollars (the IRS collected \$3.6 trillion in FY 2019),<sup>49</sup> a catastrophic disruption in government operations could occur if core IRS IT systems suffered a long-term failure. The IRS Commissioner reiterated the importance of protecting against catastrophic systems failure, pointing out that “we cannot have a functioning government without a functioning IRS.”<sup>50</sup>

Shortly before the 2018 filing season began, GAO had warned that “relying on these antiquated systems for our nation's primary source of revenue is highly risky, meaning the chance of having a failure during the filing season is continually increasing.”<sup>51</sup> IRS leadership had foreshadowed in an October 2017 congressional hearing that the antiquated IT infrastructure has increased “the potential for a catastrophic system failure.”<sup>52</sup>

42 IRS response to TAS information request (Oct. 19, 2020).

43 *Id.*

44 IRS response to TAS fact check (Nov. 19, 2020).

45 IRS response to TAS information request (Oct. 19, 2020).

46 *Id.*

47 GAO, GAO-16-468, *Information Technology: Federal Agencies Need to Address Aging Legacy Systems* 28-30 (May 2016).

48 *Federal Agencies' Reliance on Outdated and Unsupported Information Technology: A Ticking Time Bomb, Hearing Before the House Comm. on Oversight and Government Reform*, 114th Cong. 2d Sess. (May 25, 2016).

49 IRS, 2019 IRS Data Book 1 (June 2020).

50 *The 2019 Tax Filing Season and the 21st Century IRS, Hearing Before the S. Finance Comm.*, 116th Cong., at 1 (Apr. 10, 2019) (statement of Charles P. Rettig, IRS Commissioner).

51 See Frank Konkel, *The IRS System Processing Your Taxes Is Almost 60 Years Old*, NEXTGOV 2 (Mar. 19, 2018) (quoting David Powner, GAO's director of Information Technology Management Issues), <https://www.nextgov.com/it-modernization/2018/03/irs-system-processing-your-taxes-almost-60-years-old/146770/>.

52 *Internal Revenue Service's Information Technology Modernization Efforts, Hearing Before the H. Ways and Means Comm. Subcomm. on Oversight*, 115th Cong., at 1 (Oct. 4, 2017) (statement of Jeffrey J. Tribiano, IRS Deputy Commissioner for Operations Support, and Silvana Gina Garza, IRS Chief Information Officer), <https://gop-waysandmeans.house.gov/wp-content/uploads/2017/10/20171004OS-Testimony-Tribiano-Garza.pdf>.



The concerns were well-founded, and on April 17, 2018, an IRS systems outage prevented taxpayers from electronically submitting their tax returns and payments on the day of the filing deadline for submitting 2017 tax returns for individuals. The outage was attributed to a malfunction in hardware supporting the IMF — a legacy system that requires ongoing support every year.<sup>53</sup> The IRS gave taxpayers an extra day to file to mitigate the damage from the crash, but the systems failure created significant confusion and anxiety among taxpayers and preparers, serving as a wakeup call and a warning of future problems if the IRS cannot replace its legacy systems soon.

## Funding

The IRS cannot implement its modernization plan that includes ECM and online services until Congress provides adequate, predictable funding — which is outside of the IRS’s control.<sup>54</sup> Not only must Congress provide the IRS with sufficient appropriations, but such funding must be consistent and reliable from year to year. In addition, the IRS must internally allocate enough of its budget to IT modernization in a manner that will not allow interruption of the modernization efforts.

There are at least two factors in play that make it challenging for IRS modernization projects to proceed as planned. First, there is a real risk that Congress cannot timely pass an appropriations bill. When that happens, the government operates on a “continuing resolution” — a stopgap funding measure that freezes the level of funding at prior year levels. This risk is not unique to the IRS or to IT, but it makes planning for modernization more difficult. Second, there is a risk that money and personnel budgeted for systems modernization get diverted to other IT projects. GAO noted in recent congressional testimony that the IRS has often had to shift its IT resources to implement tax law changes versus ongoing activities that it had planned to enhance its systems.<sup>55</sup> When there are competing priorities, it is tempting for the IRS to shift funds from one area to pay for another area that is seemingly more time-sensitive.

**Example:** Assume modernization Project X is estimated to cost \$90 million over three years. Congress funds the IRS budget request in year one, and the IRS allocates \$30 million of its budget to Project X. In year two, Congress does not pass an appropriations bill on time, and the IRS operates on a continuing resolution. By the time a full budget for year two is finalized by Congress, the period for requesting bids from contractors has expired, delaying Project X by three months. In year three, Congress approves IRS funding timely but not in the amount requested. In addition, Congress has directed the IRS to administer a one-time economic stimulus payment to over 150 million taxpayers, due within 90 days of the legislation’s passage. To account for this budget shortfall, the Commissioner halts funding for Project X altogether in year three.

53 See Aaron Boyd & Frank Konkel, *IRS’ 60-Year-Old IT System Failed on Tax Day Due to New Hardware*, NEXTGOV (Apr. 19, 2018) (citing an IRS official), <https://www.nextgov.com/it-modernization/2018/04/irs-60-year-old-it-system-failed-tax-day-due-new-hardware/147598/>.

54 The IRS is planning technological customer service focused features as part of the new comprehensive “customer service strategy” required by the TFA, which will be released in a forthcoming report. See TFA, Pub. L. No. 116-25, § 2302, 133 Stat. 1013 (2019). Each of these forthcoming new customer service features, such as concierge support to help shepherd taxpayers calling the IRS to the right people and a robust AI-powered employee assistant, will require dedicated multiyear funding and refinement of the budget requests to allow the IRS to invest in the technological infrastructure, such as additional server capacity, that will be a prerequisite for implementation. See IRS, FY 2022 Treasury Departmental Budget Submission 12-13 (June 5, 2020) (describing some of the new features including concierge support and use of artificial intelligence).

55 *IRS in the Pandemic, Hearing Before the H. Comm. on Oversight and Reform, Subcomm. on Government Operations*, 116th Cong. (Oct. 7, 2020) (statement of Vijay A. D’Souza, Director, Information Technology and Cybersecurity), <https://www.rev.com/blog/transcripts/house-oversight-hearing-on-irs-operations-transcript-october-7>.

## Most Serious Problem #6: Information Technology Modernization

The IRS had estimated that full implementation of its modernization plan over six years would cost \$2.3 to \$2.7 billion.<sup>56</sup> Congress appropriated \$150 million in FY 2019 and \$180 million in FY 2020 to the IRS for modernization efforts.<sup>57</sup> The President’s budget for FY 2021 allocated \$300 million for IRS modernization,<sup>58</sup> while the appropriations bill by Congress for FY 2021 initially had \$250 million in appropriations for business systems modernization.<sup>59</sup> The full-year continuing resolution for FY 2021 caused the modernization funding to revert to the FY 2020 level of \$180 million.<sup>60</sup>

Even using the lower limit of the modernization plan cost (\$2.3 billion), the IRS would need sustained funding of nearly \$400 million a year over the six-year period ending in FY 2024. Figure 1.6.1 shows that the modernization plan is severely underfunded, even if Congress appropriates the full amount of the proposed FY 2021 budget.

**FIGURE 1.6.1, Estimated Modernization Funding Shortfall, FYs 2019-2024 (in Millions)<sup>61</sup>**

FY (Plan Year)	2019 1st Yr	2020 2nd Yr	2021 3rd Yr	2022 4th Yr	2023 5th Yr	2024 6th Yr
<b>Upper Limit IT Modernization plan (Even Funding on \$2.7B)</b>	\$450	\$450	\$450	\$450	\$450	\$450
<b>Lower Limit IT Modernization plan (Even Funding on \$2.3B)</b>	\$383	\$383	\$383	\$383	\$383	\$383
<b>FY Appropriations Approved by Congress in Budget</b>	\$150	\$180	\$250			
<b>FY Appropriations Received by IRS</b>	\$150	\$180	\$180			
<b>Lower Limit Dollars Needed to Makeup Prior &amp; Current Year Shortfall(s)[\$2.3B]</b>	\$233	\$437	\$640			
<b>Upper Limit Dollars Needed to Makeup Prior &amp; Current Year Shortfall(s)[\$2.7B]</b>	\$300	\$570	\$840			

56 IRS Fact Sheet, FS-2019-9, IRS Modernization Plan Provides Plan to Improve Services for Taxpayers, Tax Community (Apr. 2019), <https://www.irs.gov/newsroom/irs-modernization-plan-provides-plan-to-improve-services-for-taxpayers-tax-community>.

57 Consolidated Appropriations Act, 2020, Pub. L. No. 116-93, 133 Stat. 2441 (Dec. 20, 2019); Consolidated Appropriations Act, 2019, Pub. L. No. 116-6, 133 Stat. 145 (Feb. 15, 2019).

58 Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2021*, at 86, [https://www.whitehouse.gov/wp-content/uploads/2020/02/budget\\_fy21.pdf](https://www.whitehouse.gov/wp-content/uploads/2020/02/budget_fy21.pdf).

59 See S. Comm. on Appropriations, Committee Print of FY 2021 Financial Services and General Government Funding Bill (Oct. 29, 2020), <https://www.appropriations.senate.gov/imo/media/doc/FSGGFY2021.pdf>.

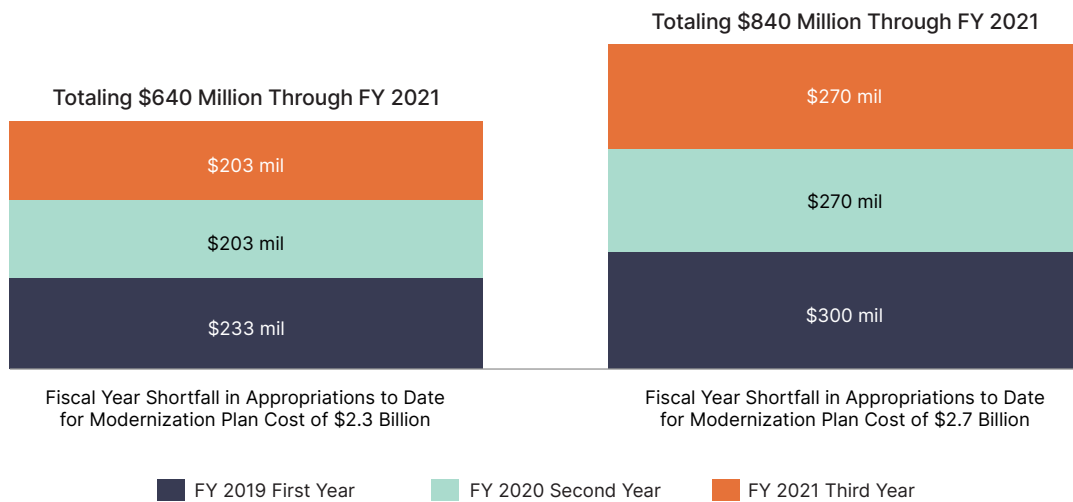
60 See H.R. 8337, Continuing Appropriations Act, 2021 and Other Extensions Act, Pub. L. No. 116-159 (2020). On December 27, 2020, the President signed H.R. 133, Consolidated Appropriations Act, 2021, 116th Cong. (2020), Div. E, appropriating \$223 million for IRS business systems modernization.

61 Upper limit and lower limit funding for IT modernization are from IRS Fact Sheet, FS-2019-9, divided by six for the years in the modernization plan. Congressional IRS appropriation amounts for 2019, \$150M; 2020, \$180M; and 2021, \$250M are respectively from Pub. L. No. 116-93, 133 Stat. 2441 (2019), Pub. L. No. 116-6, 133 Stat. 145 (2019), and H. Comm. on Appropriations, FY 2021 Financial Services and General Government Funding Bill (July 7, 2020). IRS appropriations or expected amounts for 2019, \$150M; 2020, \$180M; and 2021, \$180M are respectively from Pub. L. No. 116-93, 133 Stat. 2441 (2019), Pub. L. No. 116-6, 133 Stat. 145 (2019), and Pub. L. No. 116-159, § 101 (2020). Lower limit shortfall is derived by adding prior year shortfall dollars plus (lower limit dollars minus IRS appropriations or expected dollars) for each FY. Upper limit shortfall is derived by adding prior year shortfall dollars plus (upper limit dollars minus IRS appropriations or expected dollars) for each FY. Numbers for each year were rounded separately so the cumulative shortfall may exceed the total of the individual year shortfalls.

As Figure 1.6.1 shows, the IT modernization plan will require funding of between \$383 million and \$450 million per year, from the IRS’s own estimates. Yet the amounts appropriated by Congress in the past three years fell substantially short of that amount, as depicted in Figure 1.6.2.

**FIGURE 1.6.2<sup>62</sup>**

Estimated Cumulative IT Modernization Funding Shortfall, FYs 2019-2021



Unless IT modernization funding is dramatically increased in the next three years, it is not feasible that the IRS will achieve its modernization plan goals by FY 2024. This is akin to receiving an estimate from an auto mechanic for \$5,000 to replace a transmission and getting authorization for a loan to finance the project, only to have the bank disburse only 40 percent of the funds to cover the cost of the repair. Congress needs to provide the IRS with full funding — provided to the IRS in a consistent and reliable manner — to implement its IT modernization plan.

The urgency of the IRS modernizing its IT systems is such that the House Majority Leader recently proposed a \$2 billion addition to the Technology Modernization Fund (TMF) — a revolving fund administered by the General Services Administration and the federal CIO — to fund the technology refresh.<sup>63</sup> For example, the Customs and Border Protection received a \$15 million loan from the TMF to upgrade its last remaining

62 Upper limit and lower limit funding for IT modernization are from IRS Fact Sheet, FS-2019-9, divided by six for the years in the modernization plan. Congressional IRS appropriation amounts for 2019, \$150M; 2020, \$180M; and 2021, \$250M are respectively from Pub. L. No. 116-93, 133 Stat. 2441 (2019), Pub. L. No. 116-6, 133 Stat. 145 (2019), and H. Comm. on Appropriations, FY 2021 Financial Services and General Government Funding Bill (July 7, 2020). IRS appropriations or expected amounts for 2019, \$150M; 2020, \$180M; and 2021, \$180M are respectively from Pub. L. No. 116-93, 133 Stat. 2441 (2019), Pub. L. No. 116-6, 133 Stat. 145 (2019), and Pub. L. No. 116-159, § 101 (2020). Lower limit shortfall is derived by adding prior year shortfall dollars plus (lower limit dollars minus IRS appropriations or expected dollars) for each FY. Upper limit shortfall is derived by adding prior year shortfall dollars plus (upper limit dollars minus IRS appropriations or expected dollars) for each FY. Numbers for each year were rounded separately so the cumulative shortfall may exceed the total of the individual year shortfalls.

63 Letter from House Majority Leader Steny Hoyer to Secretary of the Treasury Steven T. Mnuchin (July 31, 2020), <https://www.majorityleader.gov/sites/democraticwhip.house.gov/files/attachments/Hoyer%20Letter%20to%20Mnuchin%20on%20TMF.pdf>.

COBOL-coded mainframe application.<sup>64</sup> The IRS has never secured TMF funding, but it should continue to explore all options.

The IRS can also take cues from the private sector. In many for-profit enterprises, an investment in IT is a business decision substantiated by an expectation of a positive return on that investment. The IRS is different in that, as a governmental agency, it has a statutory obligation to conduct certain tasks, whether there is a return on that investment or not. But often, the IRS may be able to show IT modernization will have a net-positive effect. For example, perhaps the Exam function can show it could complete 40 percent more audits if it had the most up-to-date ECM software. Or the Collection function might estimate it could take in receipts 30 days faster if certain online payment tools were available to its taxpayers. If the IRS divisions requesting the programming change can articulate the expected return on investment of the requested IT modernization effort, it would help IT prioritize competing requests. Having a record of the anticipated return on investment for each project will help Congress keep the IRS accountable for how it spends its funds earmarked for IT modernization.

### Challenges With Maintaining Antiquated Information Technology Systems

IRS legacy systems are facing significant risks due to their reliance on outdated programming languages, antiquated hardware, and a shortage of human resources with critical skills.<sup>65</sup> For example, GAO noted that the IRS's reliance on primitive Assembler Language Code or obsolete COBOL, developed in the 1950s, exposes these legacy systems to rising operating costs and a decrease in staff available with the proper skillsets to maintain these systems.<sup>66</sup>

Because IRS legacy systems still require significant programming to prepare for each filing season and other purposes, the shrinking pool of qualified programmers poses a growing concern. There simply are few qualified IT personnel proficient in the antiquated COBOL programming language, so even expert computer programmers hired by the agency need extensive training before they can program some IRS systems.<sup>67</sup>

The older a system becomes, the more difficult it is to maintain. The sooner the IRS can replace its antiquated 1960s-era car, the less it must spend on maintaining the vehicle. In addition to improved taxpayer service, one benefit of IT modernization is that the IRS expects its legacy IT operations and maintenance (O&M) expenditures to fall as its IT systems become more modernized.

64 *Pandemic or Not, Federal Agencies Continued Efforts to Update Their Legacy Systems and Adopt Modern Ways of Buying, Developing and Implementing Technology*, NEXTGOV (Oct. 22, 2020), <https://www.nextgov.com/it-modernization/2020/10/whats-next-it-modernization/169428/>.

65 See GAO, GAO-18-298, *IRS Needs to Take Additional Actions to Address Significant Risks to Tax Processing* (June 2018). See also *Most Serious Problem: IRS Recruitment, Hiring, and Employee Retention: Quality Taxpayer Service and Protection of Taxpayer Rights Are Directly Linked to the IRS's Need to Improve Its Recruitment, Hiring, and Retention Strategies*, *supra*.

66 See GAO, GAO-18-298, *IRS Needs to Take Additional Actions to Address Significant Risks to Tax Processing* (June 2018).

67 See GAO, GAO-19-471, *Agencies Need to Develop Modernization Plans for Critical Legacy Systems* (June 2019).

**FIGURE 1.6.3, IRS Information Technology, Past and Future**

IT procured 1960s-era tools and technologies that were state-of-the-art then but obsolete to serve taxpayers in modern era. Therefore, IT needs to modernize its arsenal to better serve taxpayers.

Dated IRS IT Tools and Services <sup>68</sup>	IRS 2020 to Future IT Tools and Services <sup>69</sup>
<p>Systems:</p> <ul style="list-style-type: none"> <li>• Accounts Management System</li> <li>• Individual Master File (IMF)/Business Master File (BMF)</li> <li>• Electronic Fraud Detection System (EFDS)</li> <li>• Integrated Data Retrieval System (IDRS)</li> </ul>	<p>Systems:</p> <ul style="list-style-type: none"> <li>• Enterprise Case Management</li> <li>• Customer Account Data Engine 2 (CADE 2)</li> <li>• Automated Fraud Detection Filters Using Machine Learning</li> <li>• Real Time Tax Processing</li> </ul>
<p>Taxpayer Correspondence Options:</p> <ul style="list-style-type: none"> <li>• Paper Filing</li> <li>• Wet Signature</li> </ul>	<p>Taxpayer Correspondence Options Expanded:</p> <ul style="list-style-type: none"> <li>• Paperless Filing for All Forms</li> <li>• Digital/Electronic Signature</li> </ul>
<p>Taxpayer Service Options:</p> <ul style="list-style-type: none"> <li>• Phone Based Customer Service</li> <li>• Mail Correspondence</li> <li>• Fax Service</li> <li>• Walk-in (in person)</li> </ul>	<p>Taxpayer Service Options Expanded:</p> <ul style="list-style-type: none"> <li>• Integrated Telephone Assistance (e.g., Customer Callback)</li> <li>• Online Services including Self Service Portal</li> <li>• Digital Communications (e.g., Web Chat, Secure Messaging)</li> <li>• Mobile-Ready Application</li> </ul>
<p>Information Technology Skills:</p> <ul style="list-style-type: none"> <li>• Basic Statistics and Mathematics</li> <li>• Computer Science</li> <li>• Business-Oriented Language (e.g., COBOL and Assembler Language Code (ALC))</li> </ul>	<p>Information Technology Skills:</p> <ul style="list-style-type: none"> <li>• Data Science</li> <li>• Artificial Intelligence Skills</li> <li>• Image Processing</li> <li>• Open Source Language (e.g., Java, Python)</li> <li>• Cloud Engineers</li> </ul>

However, the longer it takes the IRS to roll out new technology, the more it will spend on O&M. This becomes especially true when we account for the costs of operating dual systems during an extended transition phase. For example, the Taxpayer Advocate Service continues to spend resources maintaining the Taxpayer Advocate Management Information System (TAMIS) for its case management, while the IRS spends millions developing a usable ECM platform that can replace TAMIS. IRS IT should continue working with the IRS divisions to identify the priority ECM components to reduce overall O&M costs.

### Staffing Challenges

Along with funding issues, the IRS has several challenges for hiring the right staffing to oversee IT modernization. First is identifying the right subject matter experts. When dealing with legacy systems written in obsolete programming languages, there is a limited population of individuals with the appropriate technical competencies.

68 This is not an all-inclusive list of IRS IT tools that are obsolete. See TIGTA, Ref. No. 2020-20-044, *Legacy Systems Management Needs Improvement* (Aug. 19, 2020); IRS, FY 2022 Treasury Departmental Budget Submission (June 5, 2020). See also TIGTA, Ref. No. 2020-20-061, *The Enterprise Case Management Solution Deployment Is Delayed, and Additional Actions Are Needed to Develop a Decommissioning Strategy* 1 (Sept. 21, 2020).

69 This is not an all-inclusive list of IRS future IT tools. See IRS Pub. 5336, *IRS Integrated Modernization Business Plan* (Apr. 2019).

Second, even if the desired IT personnel are identified, how can the IRS attract and retain these employees, while largely constrained by the General Schedule pay system for federal employees? Although Congress recently reinstated the IRS's ability to offer critical pay (that is, compensation levels higher than typical government pay scale) to key IT employees, the IRS will still need to develop a robust recruiting strategy that proactively seeks IT expertise.<sup>70</sup> For example, the IRS may streamline its hiring processes and collaborate more closely with the IRS divisions by giving them more control over their own hiring.<sup>71</sup>

Third, the IRS should consider how it organizes itself internally. The IT professionals working under the CIO might be extremely well-versed in best practices, industry standards, and the latest technology offerings, but if the IRS divisions do not have counterparts who are trained and knowledgeable about both the business needs and the technical aspects, then there is a risk of a disconnect between what the IRS divisions need and what IT can deliver.

The ability to recruit, hire, and retain the next generation of employees will determine the IRS's ability to fulfill its IT mission, ultimately determining the IRS's effectiveness, while impacting taxpayer service and taxpayer rights and the ability to administer necessary social programs.

### Competing Priorities

Each filing season, the IRS must make numerous programming changes to various IT systems. Whenever there is new tax legislation, such as the CARES Act, the IRS is tasked with the responsibility to implement major changes, often in a short amount of time. To manage requests for IT products and services, the IRS has instituted a Unified Work Request (UWR) process. A UWR is a written agreement between IRS IT and IRS divisions that seek IT's assistance. The primary goal of the UWR process is to register the demand for IT products and services in a transparent manner before making data-driven decisions to approve or deny such requests from IRS divisions.<sup>72</sup>

Because of such competing priorities and a finite IT budget and resources, it is understandable how UWRs unrelated to filing season or new legislation can receive lower priority, which may cause delays as the IRS staff creates workarounds.

## CONCLUSION AND RECOMMENDATIONS

Because taxpayers deserve first-rate customer service, and because the fiscal health of the federal government depends on the IRS's collection capability, it is critical that the IRS modernize its IT systems and infrastructure. Apart from the risk of catastrophic collapse, the lack of modern IT systems harms taxpayers, inconveniences tax practitioners, and hinders the IRS from delivering its mission to provide taxpayers top quality service and to apply the tax law with integrity and fairness to all.

We are not advocating that Congress provide the IRS with a blank check, rather a more predictable flow of funds to implement IRS's modernization efforts. With additional funding and proper oversight, we are

<sup>70</sup> TFA, Pub. L. No. 116-25, § 2103, 133 Stat. 981 (2019).

<sup>71</sup> See Most Serious Problem: *IRS Recruitment, Hiring, and Employee Retention: Quality Taxpayer Service and Protection of Taxpayer Rights Are Directly Linked to the IRS's Need to Improve Its Recruitment, Hiring, and Retention Strategies*, *supra*.

<sup>72</sup> See IRM 2.22.1, Unified Work Request (UWR) Process (Jan. 27, 2020).



optimistic the IRS can modernize its IT systems, provide better taxpayer service, more efficiently collect tax revenue, and reduce its IT systems maintenance costs.

### Preliminary Administrative Recommendations to the IRS

The National Taxpayer Advocate preliminarily recommends that the IRS:

1. Compile data on the operations and maintenance costs of all legacy systems to assist in prioritizing decommissioning decisions.
2. Prioritize the development of a Servicewide centralized system to store digital tax records to allow the IRS to go completely paperless.<sup>73</sup>
3. Create CIO liaisons for each IRS division knowledgeable about both the business needs and the technical aspects to bridge the disconnect between the needs of the IRS divisions and what IT can deliver.
4. Compile a list of IT lessons learned during COVID-19, documenting the problems taxpayers experienced due to IT-related challenges during the pandemic so it can be better prepared for the future.
5. Expand modernization efforts to include BMF to provide the same level of service to business taxpayers it will provide to individual taxpayers.
6. Ensure the amount requested for its IT budget is sufficient and sustainable to fund its multiyear modernization plan.
7. Consider seeking financial assistance from the Technology Modernization Fund.

### Legislative Recommendations to Congress

The National Taxpayer Advocate recommends that Congress:

1. Provide the IRS with sufficient, sustained funding to improve taxpayer service and modernize its IT systems over a predictable multiyear period, allowing the IRS to properly implement its modernization plan as a whole and not in pieces.<sup>74</sup>
2. Ensure that any increase in funding for enforcement (including program integrity cap adjustments) is coupled with a commensurate increase in funding for service and operations support so taxpayers seeking to respond to the IRS can do so easily. This way, the IRS need not prioritize IT over enforcement.<sup>75</sup>

<sup>73</sup> See Most Serious Problem: *E-Filing and Digitalization Technology: Failure to Expand Digitalization Technology Leaves Millions of Taxpayers Without Access to Electronic Filing and Wastes IRS Resources*, *supra*.

<sup>74</sup> For more detailed recommendations, see National Taxpayer Advocate 2020 Purple Book, *Compilation of Legislative Recommendations to Strengthen Taxpayer Rights and Improve Tax Administration* 6-8 (*Provide the IRS With Sufficient Funding to Meet Taxpayer Needs and Improve Federal Tax Compliance*).

<sup>75</sup> *Id.*

## IRS COMMENTS

The IRS appreciates the National Taxpayer Advocate's support for significant, sustained multi-year funding to modernize the IT systems that enable 21st century taxpayer service and fairness in our tax system. The IRS interacts with more Americans than any other public or private organization. As the National Taxpayer Advocate recognized, IT systems are critical to all aspects of tax administration, including collection of almost \$3.6 trillion in revenue each year (representing almost 96 percent of the gross revenue of the United States, each year), administering various subsidies such as the Earned Income Tax Credit, distributing hundreds of billions of dollars in tax refunds, delivering hundreds of billions of dollars in any potential future stimulus payments, providing customer service to tens of millions of taxpayers, and, as we saw in 2020, providing rapid financial relief to individuals and businesses when necessary.

The IRS also appreciates the National Taxpayer Advocate's recognition of the unprecedented challenges posed by the COVID-19 pandemic and the outstanding performance of our employees in delivering more than 160 million Economic Impact Payments totaling more than \$270 billion and implementing other CARES Act provisions, provisioning more than 15,000 IRS customer service representatives and other employees with laptops, and growing network capacity five-fold to support over 59,000 employees working remotely at one time – all during the middle of the longest filing season in history.

As the National Taxpayer Advocate noted, IRS is making considerable progress delivering upon the initiatives within the IRS Integrated Modernization Business Plan, despite appropriated funding at just over half the requested level. In the first two years of the plan, the IRS deployed secure online account features for individuals, the first iteration of a cloud-based case management system to improve taxpayer service, customer callback on several toll-free phone lines, and over 35 other capabilities to improve our technology infrastructure, systems, and cybersecurity defenses.

Although some of the IRS's core tax administration applications use aged programming languages, they operate on current, state-of-the-art hardware. In fact, at the end of FY 2020, the IRS's aged hardware percentage was 16 percent, below the industry standard of 20 to 25 percent. As the National Taxpayer Advocate describes, the primary risk in maintaining these systems is that there is a small and shrinking pool of engineers and developers who can make the changes required to prepare for each filing season and promptly respond to new legislation. We are mitigating these risks with robust training and a focus on transferring knowledge to our next generation of technical experts.

The IRS remains committed to transparent reporting on modernization progress, challenges, successes, costs, and risks to Congress and other stakeholders. We share the National Taxpayer Advocate's vision for improved taxpayer service, more effective revenue collection, and more efficient operations, in part through the modernization of the IRS's information technology.

## TAXPAYER ADVOCATE SERVICE COMMENTS

The National Taxpayer Advocate shares many of the sentiments expressed in the IRS response to this Most Serious Problem. Without question, the IRS is increasingly being asked to do more with less. The fallout of the COVID-19 pandemic exacerbated the challenges, but the IRS has performed admirably during this crisis to continue delivering quality service to taxpayers.

As the nation's primary revenue collector, the IRS is tasked with a role that is too important for Congress to short circuit its necessary investment in technology. It is vital that the IRS succeed in these efforts.

We are aligned with the IRS regarding the need for Congress to fully fund the IRS's efforts to modernize its systems. The IRS has devoted a substantial amount of thought and resources into developing its modernization plan; Congress should help, not hinder, the IRS's efforts to implement that plan.

## RECOMMENDATIONS

### Administrative Recommendations to the IRS

The National Taxpayer Advocate recommends that the IRS:

1. Compile data on the operations and maintenance costs of all legacy systems to assist in prioritizing decommissioning decisions.
2. Expedite the development of a Servicewide centralized system to store digital tax records to allow the IRS to go completely paperless.<sup>76</sup>
3. Create CIO liaisons for each IRS division knowledgeable about both the business needs and the technical aspects to bridge the disconnect between the needs of the IRS divisions and what IT can deliver.
4. Compile a list of IT lessons learned during COVID-19, documenting the problems taxpayers experienced due to IT-related challenges during the pandemic so it can be better prepared for the future.
5. Expand modernization efforts to include BMF to provide a comparable level of service (e.g., online accounts, digital services, shorter processing cycles (CADE 2), etc.) to business taxpayers it will provide to individual taxpayers.
6. Ensure the amount requested for its IT budget is sufficient and sustainable to fully fund its multiyear modernization plan.
7. Consider seeking financial assistance from the Technology Modernization Fund.

<sup>76</sup> See Most Serious Problem: *E-Filing and Digitalization Technology: Failure to Expand Digitalization Technology Leaves Millions of Taxpayers Without Access to Electronic Filing and Wastes IRS Resources*, *supra*.

### Legislative Recommendations to Congress

The National Taxpayer Advocate recommends that Congress:

1. Provide the IRS with sufficient, sustained funding to improve taxpayer service and modernize its IT systems over a predictable multiyear period, allowing the IRS to properly implement its modernization plan as a whole and not in pieces.<sup>77</sup>
2. Ensure that any increase in funding for enforcement (including program integrity cap adjustments) is coupled with a commensurate increase in funding for service and operations support so taxpayers seeking to respond to the IRS can do so easily. This way, the IRS need not prioritize IT over enforcement.<sup>78</sup>

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77 For more detailed recommendations, see National Taxpayer Advocate 2020 Purple Book, *Compilation of Legislative Recommendations to Strengthen Taxpayer Rights and Improve Tax Administration* 6-8 (*Provide the IRS With Sufficient Funding to Meet Taxpayer Needs and Improve Federal Tax Compliance*).

78 *Id.*