



IRS Direct File

Independent Third Party Report to Congress

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Executive summary

The Inflation Reduction Act (IRA) required that the Internal Revenue Service (IRS) produce a report on taxpayer opinions about and the cost to develop and run a direct efile tax return system (“Direct File”), and that the IRS report include “the opinions of an independent third party on the overall feasibility, approach, schedule, cost, organizational design, and Internal Revenue Service capacity to deliver...a direct efile tax return system.”¹

The IRS selected New America and Ariel Jurow Kleiman, Associate Professor of Law at Loyola Law School, Los Angeles, to serve as the independent third party (“Third Party”). Neither New America nor Professor Jurow Kleiman are receiving monetary compensation from the IRS in exchange for providing this independent review.

A new Direct File system, as Congress has directed the IRS to explore, might create both operational complexity for the IRS and an opportunity to improve services for taxpayers.

If the IRS decides to implement a Direct File system, it must consistently and effectively address the following technical and operational imperatives:

- **Product expectations:** Many different stakeholders inside and outside of the government have different views on the potential scope of a Direct File system. IRS leadership would need to define a clear vision for what a potential Direct File system would do at launch and continually define how it would change in successive tax years. See [Delivery expectations](#) for further discussion of this issue.
- **Gradual rollout:** Products as complex as tax-filing software take time and must be rolled out methodically. To be successful, the IRS would need to test, grow, and improve functionality over multiple tax years. The IRS would need to implement functionality in an iterative manner and avoid trying to deliver too much functionality at one time. See [Schedule](#) for further discussion of this issue.
- **Taxpayer experience:** Without continuous improvement, digital services can quickly become cumbersome or dated. Following industry best practices for research, continuous improvement, and user feedback would be necessary for a

¹ Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1832 (2022).

Direct File system to maintain a high-quality taxpayer experience. See [Building a high-quality taxpayer experience](#) for further discussion of this issue.

- **State tax filing:** Taxpayers expect tax-filing software to include state and federal tax filing together. Additionally, a Direct File system could impact state and local tax collection as well as the administration of state and local benefits. See [State tax filing](#) for further discussion of this issue.
- **Customer support:** Customer support is a vital part of the user experience and would also be the most significant, ongoing cost of a potential Direct File system. The success of a potential Direct File system would depend largely on the IRS's capacity to provide effective, dependable customer support to users. See [Customer support](#) for further discussion of this issue.
- **Data privacy & security:** Tax filing involves turning over sensitive personal information. A potential Direct File system would need to carefully protect taxpayer information. This includes secure systems, clear data-usage policies, and accountability mechanisms that garner taxpayer trust. See [Data privacy, security, and fraud](#) for further discussion of this issue.
- **Funding:** A Direct File system would require a stable, ongoing appropriation that accounts for changing user needs and functionality, user numbers, and inflation. See [Long-term resilience to budget fluctuations](#) for further discussion of this issue.

After analyzing the IRS report, interviewing 72 experts, and reviewing reports and data from surveys, **the Third Party review concludes that the feasibility of the IRS to successfully build a Direct File product depends critically on their ability to maintain this initiative as a leadership priority, start with limited scope, expand over time, and address each of the aforementioned imperatives at each stage of design and implementation.**

Findings of the Third Party assessment include:

- **Approach.** After assessing possible approaches, Third Party review research suggests that if the IRS pursues a Direct File project, it should employ current software development practices widely used in the private sector and increasingly used within the federal government.
- **Schedule.** The IRS has not proposed any specific schedule or timeline for the development or launch of a potential Direct File tool. Therefore, the Third Party cannot evaluate or recommend a schedule without further information.
- **Cost.** The Third Party review found that the IRS cost estimate ranges are reasonable.
- **Organizational Design.** Establishing strong, full-time product ownership is the first and most important organizational design challenge that must be resolved in order for the IRS to successfully deliver Direct File.
- **Capacity.** A potential Direct File tool must carefully protect taxpayer information, which contains substantial sensitive personal identifying and financial information.

The IRA does not task the Third Party with determining *whether* the IRS ought to develop a Direct File system, and this report does not do so. Instead, this report documents the process and findings used to determine the broad feasibility and operational implications of a Direct File system, should the IRS choose to implement such a system.

About this report

This report is provided in accordance with §10301(1)(B) of the Inflation Reduction Act (IRA) (Public Law No: 117-169, enacted August 16, 2022) which requires “the opinions of an independent third-party on the overall feasibility, approach, schedule, cost, organizational design, and Internal Revenue Service capacity to deliver such a direct efile tax return system.”

The IRS selected New America and Ariel Jurow Kleiman, Associate Professor of Law at Loyola Law School, Los Angeles, an expert in tax law and policy, to serve as the independent third party (hereafter referred to as “Third Party”). Neither New America nor Professor Jurow Kleiman are receiving monetary compensation from the IRS in exchange for providing this independent review.

To answer the IRA mandate, New America convened a group of five experts with backgrounds in government digital services, private sector software development practices, and policy implementation to join Professor Jurow Kleiman.




The IRS’s report is required to cover “(I) the cost (including options for differential coverage based on taxpayer adjusted gross income and return complexity) of developing and running a free direct efile tax return system, including costs to build and administer each release, with a focus on multi-lingual and mobile-friendly features and safeguards for taxpayer data; (II) taxpayer opinions, expectations, and level of trust, based on surveys, for such a free direct efile system.” The IRS report contains two sections. The first section of the report focuses on taxpayer opinions. The second section explores the costs, potential benefits, and operational challenges of building a Direct File system.²

The IRA did not task the Third Party with answering the question of whether the IRS ought to develop a Direct File system, and this report does not do so.

This report is structured around the key topics mandated by the IRA: approach, schedule, cost, organizational design, and capacity. The report sections can be read in any order. Each section includes a list of critical considerations structured using a uniform format: challenge, current state, and assessment.

² The Third Party reviewed the draft report of the IRS Direct File Task Force in order to understand the intentions, scope, and design of “such a direct efile tax return system.” Statements in this document are based on the draft IRS report.

A number of similar-sounding terms refer to different products, services, and systems in tax filing. This table provides the reader with a guide to some of the most important terms and their definitions:

	Term	Definition	Notes
	Direct File	A potential “free direct efile tax return system” that could be developed by the IRS in the future as an additional option for taxpayers to file their federal tax return. ³ Taxpayers would not be required to use Direct File.	A potential Direct File program, referred to in the IRA as “direct efile,” is the subject of this report. The IRS team exploring this potential system is named the Direct File Task Force.
	e-File, Modernized e-File	The back-end system through which the IRS currently processes all electronically filed returns.	Over 150M individual returns ⁴ were filed via e-file in fiscal year 2022. E-file was initially piloted in 1986, and implementation of Modernized e-File began in 2004. ⁵
	Free File	The Free File Program is a public-private partnership between the IRS and several companies who provide online tax preparation services free of charge to taxpayers who meet eligibility requirements.	In filing year 2019, 2.5 million taxpayers used Free File services. ⁶ The Free File program was created in 2002. ⁷

³ IRS, *Internal Revenue Service Inflation Reduction Action Strategic Operating Plan* (April 2023), 28, <https://www.irs.gov/about-irs/irs-inflation-reduction-act-strategic-operating-plan>.

⁴ This figure includes individual and estate and trust income tax returns; *Internal Revenue Service Data Book*, 2022, Publication 55–B (Washington, DC: March 2023), Table 4, <https://www.irs.gov/pub/irs-pdf/p55b.pdf> (hereafter cited as *IRS Service Data Book* 2022).

⁵ “Modernized e-File (MeF) Overview,” IRS, accessed May 3, 2023, <https://www.irs.gov/e-file-providers/modernized-e-file-overview>.

⁶ “Complexity and Insufficient Oversight of the Free File Program Result in Low Taxpayer Participation,” Treasury Inspector General for Tax Administration, February 3, 2020, at 3, <https://s3.documentcloud.org/documents/6768599/TIGTA-Free-File-audit.pdf>.

⁷ “The Internal Revenue Service’s Free File Program (FFP): Current Status and Policy Issues, Congressional Research Service,” updated January 26, 2023, <https://crsreports.congress.gov/product/pdf/IF/IF11808>.

Methods

The Third Party researched and wrote this report using a “sprint” methodology drawn from private industry in which short, intense periods of investigation are used to identify the most critical questions, concerns, and opportunities to be addressed when assessing a potential project.⁸ Research activities included:

- **Interviews and information-gathering sessions** with IRS officials, external experts, and stakeholders. The Third Party interviewed 40 officials in the IRS and the U.S. Department of the Treasury and conducted 32 interviews with external subject matter experts, community organizations, state government officials, and private industry representatives.
- **Written questions and surveys** to the Electronic Tax Administration Advisory Committee (ETAAC), the Free File Alliance (FFA), the Counsel for Electronic Revenue Communication Advancement (CERCA), and eight private tax preparation software companies. ETAAC, FFA and CERCA provided written responses. FFA and CERCA membership includes a total of 56 private preparers, tax software companies, technology integrators, and financial services companies.⁹ Of ETAAC’s members, five represent state tax agencies, four work in academia or non-profit organizations, and the remaining 15 work in private sector industries including tax preparation, accounting, and law firms.¹⁰ One of the eight private software companies responded to the follow-up survey, and six were represented by written responses from their member organizations.
- **Regular information-gathering sessions with the IRS Direct File Task Force** to learn about specific aspects of their exploration of Direct File.

⁸ Anna Kaley, “Discovery in Agile,” Nielsen Norman Group, February 5, 2023, <https://www.nngroup.com/articles/discovery-in-agile/>.

⁹ The Free File Alliance has seven member organizations: 1040NOW Corp., ezTaxReturn.com, FileYourTaxes, OnLine Taxes, TaxACT, TaxHawk, and TaxSlayer; see Free File Alliance website, accessed May 5, 2023, <https://freefilealliance.org/free-file-alliance-members/>. CERCA has 55 member organizations; see CERCA website, accessed May 5, 2023, <https://cerca.org/members/>. Six organizations are members of both.

¹⁰ One ETAAC member currently works in both academia and the private sector; “Biographies of the Electronic Tax Administration Advisory Committee (ETAAC) Members,” IRS, accessed May 3, 2023, <https://www.irs.gov/tax-professionals/biographies-of-the-electronic-tax-administration-advisory-committee-etaac-members>.

- **Literature review** of over 50 academic papers, reports, and articles on tax administration, tax filing, and other related topics produced by academics, think tanks, non-profit organizations, government agencies, and private companies.
- **Multi-sector review:** The Third Party team was made up of a cross-section of academic and practice disciplines, including service design, digital product management, tax law and policy, and software engineering.

Background

In this section:

- » Approaches to tax filing vary between the U.S. and its peer nations, as well as between states.
 - » The IRS has previously and does currently prepare tax returns or calculate taxes for certain eligible taxpayers.
 - » The Free File program has provided free tax filing for millions of taxpayers. Recent government and private sector reports have identified areas in need of improvements.
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The public tax-filing landscape

Tax-filing options vary between the U.S. and its peer nations, and even from state to state. The U.S. tax system relies on “voluntary self-reporting,” which means that taxpayers are expected to prepare their own tax returns each year. For most taxpayers, preparing a tax return means providing information about their income, household makeup, and certain expenses like student loan payments or childcare. The vast majority of U.S. filers do this with private tax software or by hiring a tax preparer.¹¹

Public tax-filing options around the world

Many other countries include elements of voluntary self-reporting, but with different mechanisms for completing and submitting tax returns.

Some countries require taxpayers to prepare a return, as in the U.S., but in these countries forms may include information that the tax agency already has, such as third-party income information like wages. In countries that use prepopulation (sometimes called pre-filing or auto-populating), taxpayers have the opportunity to verify pre-filled information and make changes as necessary. According to recent OECD

¹¹ “Table 4. Number of Returns and Other Forms Filed Electronically, by Type and State, Fiscal Year 2022,” IRS, 2023, <https://www.irs.gov/pub/irs-soi/22dbs01t04nr.xlsx>.

reporting, 83% of advanced and emerging economies pre-fill some portion of tax returns with information reported by third parties, including Australia, Belgium, Denmark, Spain, Sweden, France, Finland, and Norway.¹²

More than 30 countries have some form of a return-free tax system, including many U.S. peer nations such as Germany, the U.K., and Japan.¹³ In a return-free tax system, certain taxpayers' returns are prepared directly by the public tax agency, often with little or no taxpayer input. Neither the IRS nor the independent Third Party have been asked to assess the feasibility of such an approach in the United States.

Finally, many countries also offer public tax-filing systems (akin to a potential Direct File system), which allow people to file their tax returns online for free directly with the tax agency.¹⁴ Taxpayers provide information, often in response to simple question prompts. Agency software then calculates their tax liability or refund based on this information. Sometimes these public filing systems are provided in addition to return-free or prepopulated systems.

State income tax filing and public filing

Many American taxpayers already have the opportunity to use direct filing at the state level. According to information provided by the Federation of Tax Administrators, fourteen states offer direct filing systems for state income taxes. These systems differ in scope and design, but all allow individuals to file a state income tax return for free through a public filing portal. Some, like California's [CalFile](#), are limited to certain

¹² See Figure 4.1, "Tax Administration 2022: Comparative Information on OECD and other Advanced and Emerging Economies," OECDiLibrary, accessed April 30, 2023, <https://www.oecd-ilibrary.org/sites/1e797131-en/1/3/4/index.html>; Brian Erard, "California," *Prefilled Personal Income Tax Returns: A Comparative Analysis of Australia, Belgium, California, Québec, and Spain*, ed. François Vaillancourt, Studies in Budget & Tax Policy, Fraser Institute (June 2021), 39-62, at 41, <https://www.fraserinstitute.org/sites/default/files/prefilled-personal-income-tax-returns.pdf>.

¹³ "What Other Countries Use Return-Free Filing?" Tax Policy Center, accessed April 27, 2023, <https://www.taxpolicycenter.org/briefing-book/what-other-countries-use-return-free-filing>.

¹⁴ "Inventory of Tax Technology Initiatives," CompareYourCountry.org, accessed May 5, 2023, <https://www.compareyourcountry.org/tax-technology-tools-digital-solutions/en/8/3280/default>.

taxpayers based on income.¹⁵ Others are broader in scope and don't have income caps, like [My Alabama Taxes](#),¹⁶ Pennsylvania's [myPATH](#),¹⁷ and Kansas's [WebFile](#).¹⁸

Relevant IRS-provided tax-preparation options

The IRS does not offer return-free tax filing, prepopulated returns, or an online public tax-filing system to U.S. taxpayers. It does currently offer tax-calculation services as well as in-person tax preparation assistance to qualified taxpayers.

The IRS has also experimented with various types of taxpayer assistance throughout its nearly 70-year history, including public e-filing. This section briefly describes past and current IRS forays into tax preparation assistance.

- In 1995 the IRS attempted to launch a free public tax e-filing system called “Cyberfile.” The IRS canceled the project the year after its launch.¹⁹ A Government Accountability Office (GAO) report preceded the program's end, highlighting mismanagement, poor planning, and security concerns.²⁰ The GAO attributed Cyberfile's problems, at least in part, to an unrealistic development timeline. Ultimately the IRS abandoned plans to provide e-filing services directly, deciding instead to partner with private companies that had already developed expertise and infrastructure.
- In 1997 the IRS launched the “Telefile” program, which allowed taxpayers to file form 1040EZ, several other forms, and income tax returns for eight states via touch-tone telephone.²¹ More than 11 million tax returns were filed via TeleFile

¹⁵ “CalFile Qualifications 2022,” California Franchise Tax Board, accessed May 4, 2023, <https://www.ftb.ca.gov/file/ways-to-file/online/calfile/calfile-qualifications.html>.

¹⁶ “Individual Income Tax Electronic Filing Options,” Alabama Department of Revenue, accessed May 4, 2023, <https://www.revenue.alabama.gov/individual-corporate/individual-income-tax-electronic-filing-options/>.

¹⁷ “myPATH for Personal Income Tax,” Pennsylvania Department of Revenue, accessed May 4, 2023, <https://www.revenue.pa.gov/OnlineServices/mypath/Individuals/Pages/PIT.aspx>.

¹⁸ “Electronic Filing Options for Individual Income and Business Taxes,” Kansas Department of Revenue, accessed May 4, 2023, <https://www.ksrevenue.gov/iwebfile.html>.

¹⁹ Ralph Vartabedian, “IRS Pulls Plug on Its Electronic Tax-Filing System,” *Los Angeles Times*, September 11, 1996, <https://www.latimes.com/archives/la-xpm-1996-09-11-fi-42546-story.html>.

²⁰ “Tax Systems Modernization: Cyberfile Project Was Poorly Planned and Managed,” U.S. Government Accountability Office, August 26, 1996, <https://www.gao.gov/products/aimd-96-140>.

²¹ “Internal Revenue Bulletin: 2005-17,” IRS, April 25, 2005, https://www.irs.gov/irb/2005-17_IRB#ANN-2005-26.

for tax years 2002 through 2004. The IRS discontinued the program in 2005 due to declining use and increasing maintenance costs.²²

- Until 2014,²³ taxpayers could have their returns prepared by an IRS employee for free at Taxpayer Assistance Centers, which are in-person IRS customer service offices.²⁴ To be eligible for this service, a taxpayer had to be eligible for the Earned Income Tax Credit (EITC) or have income below a certain level.

Today, the IRS offers several tax-preparation services to taxpayers:

- The IRS will figure the taxes and certain credits for qualifying taxpayers.²⁵
- The IRS provides free tax-preparation services to low- and middle-income tax filers as well as elderly tax filers through Volunteer Income Tax Assistance (VITA) and Tax Counseling for the Elderly (TCE) programs.²⁶ The IRS manages VITA and TCE in partnership with community organizations, and both programs are staffed by IRS-certified volunteer tax preparers. In 2022, 57,420 volunteers working with the VITA and TCE programs prepared over 2.2 million tax returns.²⁷
- The VITA program also operates Facilitated Self-Assistance (FSA), which provides hands-on support to people who are preparing their own return using online tax software.²⁸ TaxSlayer is the software provider for both VITA and TCE.²⁹

²² Carol Hatch, Amy Ibbotson, and Jeff Wilson, “TeleFile – Taxpayers’ Characteristics and Filing Behavior: A Study to Enhance Taxpayer Assistance Blueprint Knowledge,” Taxpayer Advocate Service, 2010 Annual Report to Congress, vol. 2 (2010), https://www.taxpayeradvocate.irs.gov/wp-content/uploads/2020/11/arc10_vol2_telefile.pdf.

²³ Ann Carrns, “Need Tax Help? I.R.S. May Not Be the Best Place to Go,” *The New York Times*, January 31, 2014, <https://www.nytimes.com/2014/02/01/your-money/need-tax-help-irs-may-not-be-the-best-place-to-go.html>.

²⁴ “IRS Summertime Tax Tip 2011-04: Need Tax Help? Visit an IRS Taxpayer Assistance Center,” IRS, July 13, 2011, <https://content.govdelivery.com/accounts/USIRS/bulletins/b1b1b>.

²⁵ “If you file by the due date of your return . . . you can have the IRS figure your tax for you on Form 1040 or 1040-SR.” IRS, *Tax Guide 2022: For Individuals*, Publication 17 (Mar. 27, 2023), 104-05, <https://www.irs.gov/pub/irs-pdf/p17.pdf>.

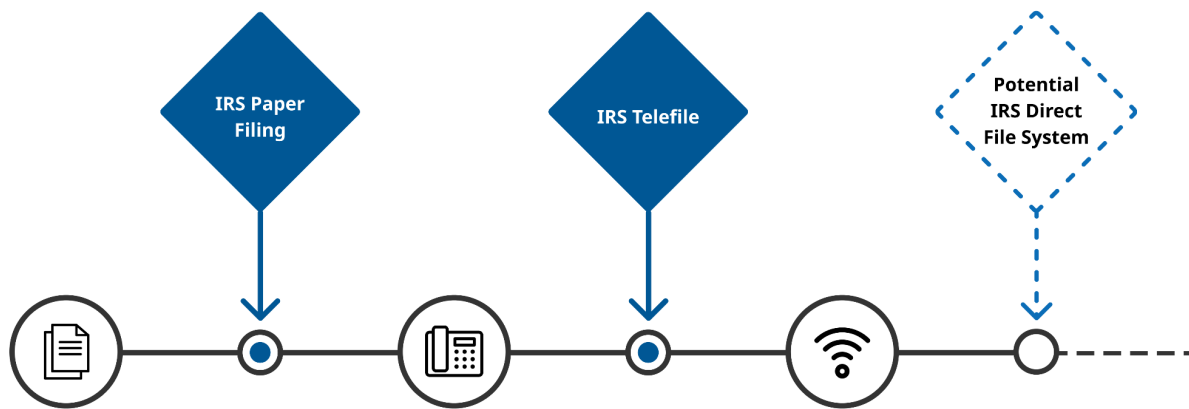
²⁶ “Free Tax Return Preparation for Qualifying Taxpayers,” IRS, January 23, 2023, <https://www.irs.gov/individuals/free-tax-return-preparation-for-qualifying-taxpayers>.


²⁷ *IRS Service Data Book 2022*, 22.

²⁸ MyFreeTaxes, <https://myfreetaxes.com/>.

²⁹ “Filing Season 2023: TaxSlayer Procedural Updates for SPEC Partners and Employees,” IRS, January 2023, <https://www.irs.gov/pub/irs-pdf/p5361.pdf>.

Graphic: IRS-provided options reflect prevailing technology



 The IRS has traditionally offered tax-filing options that align with widely adopted mediums and technology of the time.

The IRS role in electronic filing



E-file

E-file refers to the back-end system the IRS developed to process electronically filed tax forms.³⁰ All returns filed electronically are processed through e-file, including returns self-prepared by filers using commercial software and returns done by professional tax preparers.³¹

The e-file program was first piloted to 25,000 taxpayers in 1986 and made available nationwide in 1990.³² In 2004 the IRS began development of Modernized e-File, a “web-based system that allows electronic filing of corporate, individual, partnership, exempt organization and excise tax returns through the Internet.”³³ Since then, the IRS

³⁰ “IRS E-File: A History,” IRS, June 2011, <https://www.irs.gov/pub/irs-news/fs-11-10.pdf>.

³¹ “Modernized e-File (MeF) Overview,” IRS, accessed May 3, 2023, <https://www.irs.gov/e-file-providers/modernized-e-file-overview>.

³² “IRS E-File: A History,” IRS.

³³ “Modernized e-File (MeF) Overview,” IRS.

has made continuous improvements to the system, and all electronically filed returns are now processed through Modernized e-File.³⁴

Today, over 90% of individual taxpayers file their tax returns electronically, representing over 150 million total individual returns in fiscal year 2022.³⁵ E-filed returns require less human interaction and are more accurate, with an error rate of 1% compared to 20% for paper returns.³⁶ And taxpayers get refunds faster when they file electronically.³⁷



IRS Free File

The **Free File** program is a public-private partnership between the IRS and the Free File Alliance (FFA), a group of tax software companies that have agreed to provide free online tax-filing services.³⁸ Taxpayers with income below a certain level can use free tax software to help them complete their tax return. Those who don't qualify can still file for free using free fillable tax forms,³⁹ which are digital versions of paper tax forms with fillable fields.

The Free File program was created in 2002.⁴⁰ Participating companies receive no payment for providing these services. In exchange, the IRS initially agreed not to create its own free tax-filing software.⁴¹ In 2019 this limitation on the IRS creating its own software was removed from the Free File Memorandum of Understanding.⁴²

Since its inception in 2003, the Free File program has prepared more than 70 million free tax returns worth more than \$2 billion to filers, according to a written response by the

³⁴ "Modernized e-File (MeF) Overview," IRS.

³⁵ "Returns Filed, Taxes Collected & Refunds Issued," IRS, accessed May 5, 2023, <https://www.irs.gov/statistics/returns-filed-taxes-collected-and-refunds-issued>.

³⁶ "IRS E-File: A History," IRS.

³⁷ "What to Expect for Refunds This Year," IRS, accessed May 5, 2023, <https://www.irs.gov/refunds/what-to-expect-for-refunds-this-year>.

³⁸ "Free File: About the Free File Alliance," IRS, accessed May 5, 2023, <https://www.irs.gov/e-file-providers/about-the-free-file-alliance>.

³⁹ "Free File Fillable Forms," IRS, May 3, 2023, <https://www.irs.gov/e-file-providers/free-file-fillable-forms>.

⁴⁰ "The Internal Revenue Service's Free File Program (FFP): Current Status and Policy Issues," Congressional Research Service, updated January 26, 2023, <https://crsreports.congress.gov/product/pdf/IF/IF11808>.

⁴¹ *Memorandum of Understanding on Service Standards and Disputes*, IRS, December 20, 2005, <https://www.irs.gov/pub/irs-utl/2006-first-ff-mou.pdf>.

⁴² Addendum to the *Eighth Memorandum of Understanding on Service Standards and Disputes*, signed December 26, 2019, <https://www.irs.gov/pub/irs-utl/FFI%20Signed%20MOU%20Addendum%2012-26-19.pdf>.

Free File Alliance. The Free File program regularly surveys users regarding customer satisfaction. In 2022, 97.4% of users indicated that they would use Free File again, according to a written response by the FFA. Despite these figures, however, takeup of Free File services has been low relative to the number of eligible tax filers.⁴³ According to an audit conducted by the Treasury Inspector General for Tax Administration (TIGTA), in filing year 2019, 2.5 million taxpayers used Free File services, which represented less than 3% of the 104 million eligible tax filers.⁴⁴ A bipartisan Senate investigation into the Free File program concluded that “a lack of investment by the IRS likely led to a lack of consumer awareness.”⁴⁵

Because each Free File option may have different criteria, it’s difficult for tax filers to quickly understand which Free File options they might qualify for. A recent MITRE report concluded that Free File services “have the most need for improvement” in “transparency around ineligibility.”⁴⁶

In 2019 ProPublica published an investigation alleging that some members of the Free File Alliance charged low-income taxpayers for tax-preparation services even though they were eligible for free services.⁴⁷ An audit by TIGTA estimated that over 14 million tax filers who were eligible for Free File services paid a fee for commercial software to prepare their returns.⁴⁸ In 2022 Intuit agreed to pay \$141 million as part of a settlement with the New York State Office of the Attorney General.⁴⁹

In 2022 the Government Accountability Office (GAO) examined the Free File program in part to “[identify] key challenges and alternative approaches that may exist for IRS to

⁴³ “Complexity and Insufficient Oversight of the Free File Program Result in Low Taxpayer Participation,” Treasury Inspector General for Tax Administration, February 3, 2020, at 3, <https://s3.documentcloud.org/documents/6768599/TIGTA-Free-File-audit.pdf>.

⁴⁴ “Complexity and Insufficient Oversight of the Free File Program Result in Low Taxpayer Participation,” 3.

⁴⁵ Justin Elliott, “Senate Investigation Criticizes the IRS for Failing to Oversee Free Filing Program,” ProPublica, June 9, 2020, <https://www.propublica.org/article/senate-investigation-criticizes-the-irs-for-failing-to-oversee-free-filing-program>.

⁴⁶ “Independent Assessment of the Free File Program: Executive Summary,” MITRE, October 3, 2019, xiii, <https://www.irs.gov/pub/newsroom/exec-summary-free-file-program-assessment-100319.pdf>.

⁴⁷ Justin Elliott, “Intuit Will Pay Millions to Customers Tricked Into Paying for TurboTax,” ProPublica, May 4, 2022, <https://www.propublica.org/article/intuit-will-pay-millions-to-customers-tricked-into-paying-for-turbotax>.

⁴⁸ “Independent Assessment of the Free File Program: Executive Summary,” MITRE, 5, <https://www.irs.gov/pub/newsroom/exec-summary-free-file-program-assessment-100319.pdf>.

⁴⁹ “Press Release: Attorney General James Secures \$141 Million for Millions of Americans Deceived by TurboTax,” Office of the New York State Attorney General, May 4, 2022, <https://ag.ny.gov/press-release/2022/attorney-general-james-secures-141-million-millions-americans-deceived-turbotax>.

help taxpayers file online at no cost.”⁵⁰ The GAO concluded that the IRS faces risks by relying on private industry to provide free tax filing.⁵¹ This conclusion was based in part on the recent departures of five companies from the Free File Alliance. Departing companies included Intuit and H&R Block, which together served about 70% of Free File users in 2019.⁵² The GAO recommended that the IRS should develop other free tax e-filing options outside of Free File.⁵³

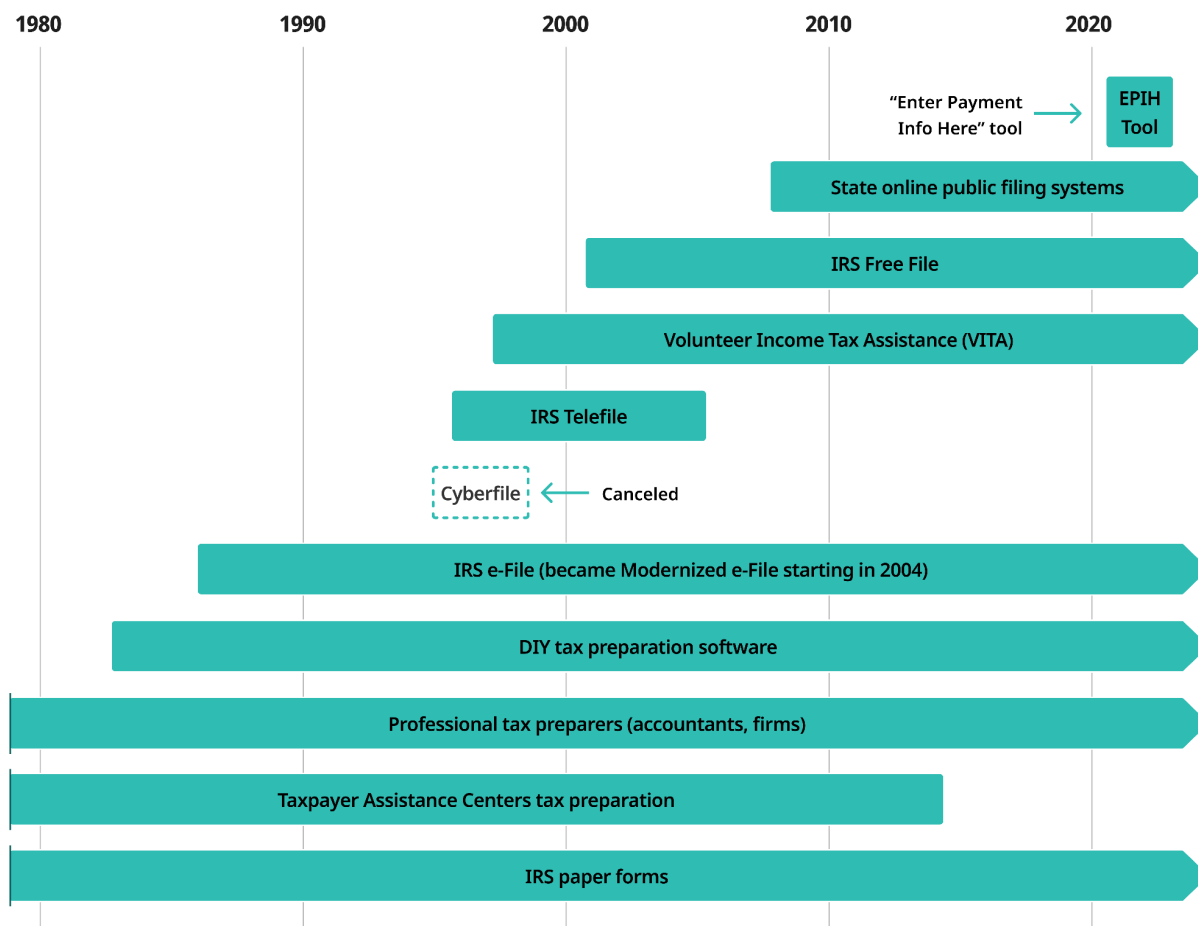
⁵⁰ See “Recommendations,” in “IRS Free File Program: IRS Should Develop Additional Options for Taxpayers to File for Free,” U.S. Government Accountability Office, April 28, 2022, <https://www.gao.gov/products/gao-22-105236>.

⁵¹ See “What the GAO Found,” in “IRS Free File Program: IRS Should Develop Additional Options for Taxpayers to File for Free,” U.S. Government Accountability Office.

⁵² Justin Elliott and Paul Kiel, “TurboTax-Maker Intuit Will Leave Free Tax Filing Partnership With IRS,” ProPublica, July 16, 2021, <https://www.propublica.org/article/turbotax-maker-intuit-will-leave-free-tax-filing-partnership-with-irs>.

⁵³ “IRS Free File Program: IRS Should Develop Additional Options for Taxpayers to File for Free,” U.S. Government Accountability Office.

Graphic: History of public and private filing options



In addition to enforcing the tax code and auditing tax returns, the IRS has historically helped taxpayers prepare and file their returns and aided in tax code interpretation.

The government technology landscape

The federal government has a bad reputation for delivering technology services.⁵⁴ HealthCare.gov is a well-known example due to its scale, cost, and reach.⁵⁵ Its early public failure has become a case study in IT implementation challenges,⁵⁶ and the lessons learned⁵⁷ triggered significant improvements to the federal government's digital service delivery capabilities. These improvements include the development of digital service teams⁵⁸ and growing acceptance and adoption of industry best practices for software development and digital transformation. See [Appendix: Agile software development](#) and [Appendix: Design thinking and iterative prototyping](#) for further discussion on this topic.

Over the past decade, the federal government has reformed IT procurement practices,⁵⁹ increased technological capacity,⁶⁰ adopted cloud computing,⁶¹ and committed to transforming customer experience.⁶² Ten years after the launch of HealthCare.gov,

⁵⁴ Mark Lerner, "Government tech projects fail by default. It doesn't have to be this way," Harvard Kennedy Center Belfer Center for Science and International Affairs "Perspectives on Public Purpose" blog, October 21, 2020, <https://www.belfercenter.org/publication/government-tech-projects-fail-default-it-doesnt-have-be-way>.

⁵⁵ "Affordable Care Act Marketplace," Govini, 2021, <https://govini.com/wp-content/uploads/2022/02/Govini-ACA-Marketplace.pdf>.

⁵⁶ David R. Levinson, "HealthCare.gov: CMS Management of the Federal Marketplace: A Case Study," U.S. Department of Health and Human Services Office of Inspector General, February 2016, <https://oig.hhs.gov/oei/reports/oei-06-14-00350.pdf>.

⁵⁷ Gwanhoo Lee and Justin Brumer, "Managing Mission-Critical Government Software Projects: Lessons Learned from the HealthCare.gov Project," IBM Center for The Business of Government Viewpoints, Fall 2017, 69. Also available online: <https://www.businessofgovernment.org/sites/default/files/Viewpoints%20Dr%20Gwanhoo%20Lee.pdf>.

⁵⁸ Amanda Clarke, "Digital government units: what are they, and what do they mean for the digital era public management renewal?" *International Public Management Journal* 23, no. 3 (2020): 358-79, <https://doi.org/10.1080/10967494.2019.1686447>.

⁵⁹ "Federal Information Technology Acquisition Reform Act (FITARA)," CIO, accessed May 3, 2023, <https://www.cio.gov/policies-and-priorities/FITARA/>.

⁶⁰ Kirsten Errick, "OPM's Efforts to Spur Governmentwide Tech Hiring," Nextgov, April 21, 2023, <https://www.nextgov.com/cxo-briefing/2023/04/opms-efforts-spur-governmentwide-tech-hiring/385426/>.

⁶¹ Vivek Kundra, *Federal Cloud Computing Strategy*, Feb. 8, 2011, https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/eqov_docs/federal-cloud-computing-strategy.pdf; Suzette Kent, *Federal Cloud Computing Strategy*, June 24, 2019, <https://www.whitehouse.gov/wp-content/uploads/2019/06/Cloud-Strategy.pdf>.

⁶² Exec. Order No. 14058, 86 FR 71357 (Dec. 13, 2021). Accessible online here: <https://www.federalregister.gov/documents/2021/12/16/2021-27380/transforming-federal-customer-experience-and-service-delivery-to-rebuild-trust-in-government>.

federal agencies have made improvements in practices and launched effective digital services, though there is much more work to be done.⁶³

Vaccines.gov is one recent high-profile example of a successful government digital service project. In 2021 the White House COVID-19 Response Team partnered with USDS and others to build a vaccine-finder tool. Based on user research, they created a Spanish-language website, Vacunas.gov, a WhatsApp chatbot to reach Spanish speakers, and a call center and an SMS short code tool to reach those who do not have Internet access.⁶⁴ To date, over 105 million people have visited Vaccines.gov or Vacunas.gov, 2.4 million SMS messages have been received, and 776,000 call center inquiries have been answered. COVIDtests.gov is another recent example of a successful digital service product.⁶⁵

⁶³ Ines Mergel, "Digital Service Teams: Challenges and Recommendations for Government," IBM Center for the Business of Government, 2017, <https://businessofgovernment.org/sites/default/files/Digital%20Service%20Teams%20-%20Challenges%20and%20Recommendations%20for%20Government.pdf>. See also Clarke, "Digital government units"; and "Improving the Management of IT Acquisitions and Operations," *High-Risk Series: Efforts Made to Achieve Progress Need to Be Maintained and Expanded to Fully Address All Areas*, GAO, GAO-23-106203, April 20, 2023, <https://files.gao.gov/reports/GAO-23-106203/index.html#appendix13>.

⁶⁴ "Critical code: building COVID-19 vaccine finder tools," U.S. Digital Service, accessed May 5, 2023, <https://www.usds.gov/projects/vaccines-dot-gov>.

⁶⁵ Paul Smith, "Why COVIDtests.gov worked where HealthCare.gov stumbled," FedScoop, January 20, 2022, <https://fedscoop.com/why-covidtests-gov-worked-where-healthcare-gov-stumbled/>.

Approach

In this section:

- » Centering user experience is important to the quality of any potential future Direct File tool. Although IRS divisions have mixed experience with human-centered design, the team currently exploring a potential Direct File system possesses user-experience design expertise.
 - » To be feasible, a potential Direct File project would need to use modern, flexible software development methods. It would not be feasible to build a Direct File system using the traditional requirements-driven software development pattern most common within IRS IT.
 - » Stakeholders and auditors would need to align on a modern, best-practices approach for evaluating product development processes.
-

As required in the IRA, this section provides the Third Party opinion on the IRS’s “approach [to]...a direct efile tax return system.”⁶⁶ It discusses the methods and development processes the IRS would need to adopt in order to make feasible a potential Direct File project.

After assessing possible approaches, Third Party review research suggests that if the IRS pursues a Direct File project, it should meet current software development practices widely used in the private sector and increasingly used within the federal government. For more about best practice resources that inform this section, see [Appendix: Agile software development](#).

Within IRS IT, the standard approach to software development involves a long initial phase of gathering “requirements” (detailed descriptions of planned functionality), followed by a technical implementation phase in which all functionality is built before launching to users. Due to the pace of change in the tax code, user expectations, and

⁶⁶ Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1832 (2022).

software trends, it would not be feasible to develop a potential Direct File system using a requirements-driven approach to software development.

However, interviews with IRS officials in divisions integral to any potential Direct File project—including Online Services (OLS), IT, and Wage & Investment—suggest that a future Direct File team would have the ability to center user-experience and use modern, flexible software development practices. Maintaining a commitment to such approaches would be necessary to the feasibility of delivering any Direct File tool.

Building a high-quality taxpayer experience



Challenge

Due to the complexity of the U.S. tax code, one of the most challenging elements of building any tax-filing system would be creating a tool that is simple and easy-to-use for taxpayers.

Current state

Within the IRS, Online Services (OLS) has user-experience design expertise. Third Party interviews with IRS technical officials across divisions and with technical experts who have collaborated with the IRS revealed that user-experience expertise in other IRS divisions varies widely. The Direct File Task Force includes employees from across the IRS, including from OLS.

Assessment

Achieving a usable software product requires deep understanding of users' needs, challenges, and situations when encountering the product, as well as an understanding of how users will interact with it.⁶⁷ Gathering this information requires regularly listening to users, including by putting iterations of the product in front of users and observing how they respond. See [Appendix: Design thinking and iterative prototyping](#) for further discussion of these methods.

⁶⁷ "Human Centered Design Discovery Stage Field Guide V. 1," General Services Administration, accessed May 3, 2023, <https://www.gsa.gov/cdnstatic/HCD-Discovery-Guide-Interagency-v12-1.pdf>.

Human-centered design methods have already informed the exploratory user research for a potential Direct File tool, as the IRS report describes.⁶⁸ Based on Third Party interviews with IRS technical experts, the IRS has the foundation to address the design challenge of developing a potential Direct File tool, in the form of user-experience design expertise within OLS.

Centering user experience would be a newer approach for an IT project within the IRS.⁶⁹ If a potential Direct File project deployed a more standard IT operating model within IRS, the lack of experience in human-centered design methods would pose a risk to the feasibility of the project. However, if a future Direct File team were composed of similar skill sets as the exploratory Direct File Task Force, it should have sufficient user-experience expertise to build a high-quality product.

The IRS software development lifecycle



Challenge

A potential Direct File project would require cross-functional collaboration and constant feedback, rather than the traditional linear approach most familiar to IRS IT.

Current state

In interviews with IT staff and other technical experts, they explained that the standard working model of IRS IT and their business partners is one in which IRS IT receives requirements up front and then works largely independently to fulfill those requirements. This approach can lead to a long lead time between releases and may result in products that don't match the expectations or actual needs of users. Former IRS

⁶⁸ IRS draft report, Appendix A.

⁶⁹ For instance, a 2019 Government Accountability Office (GAO) report on IRS online services found that "[The] IRS has not sufficiently considered taxpayer input in the prioritization process for these new services and instead prioritizes services primarily based on the potential benefit to IRS operations or how quickly a service might be developed"; see "Taxpayer Input Could Strengthen IRS's Online Services," GAO, December 2019, <https://www.gao.gov/assets/gao-20-71.pdf>. A more recent GAO report on IRS cloud computing implementation noted that "[k]ey shortfalls included IRS not conducting regular evaluations of customer experiences and user needs"; see "IRS Needs to Complete Modernization Plans and Fully Address Cloud Computing Requirements," GAO, January 2023, <https://www.gao.gov/assets/gao-23-104719.pdf>.

technical staff cited this siloed approach to development as a reason for a lack of faith in IRS IT. There are also examples of IRS IT projects that have systematically failed to meet their stated goals.⁷⁰

However, IRS IT has also successfully undertaken modernization projects such as Modernized e-File, the Child Tax Credit Update Portal,⁷¹ document upload tools,⁷² and the IRS Online Account. In addition, during direct interviews with members of IRS IT, staff were knowledgeable in their fields of expertise and gave clear and sensible answers on complex situations—an impression corroborated by interviews with outside technical experts who had previously worked directly with IRS IT.

Interviews with IRS technical staff indicated that, if the IRS were to proceed with a Direct File tool, IRS IT indicated it would only be responsible for the underlying infrastructure, such as hosting, security, and integration. Actual development of a potential Direct File tool, including software engineering, would be led by a cross-functional team with members from across the IRS providing different skills. IRS experts from Online Services (OLS) could provide human-centered design support for this team.

Assessment

Successfully developing a potential Direct File program would require the IRS to continue to evolve its existing practices of software development. Under the standard IRS development lifecycle, an entire product is first designed and then built one part at a time. This approach can lead to poor user experience outcomes because development teams don't get meaningful feedback on how their product works in practice until the very end of the process. As a result, fundamental design decisions may need to be changed, requiring an entire rebuild of the system.

⁷⁰ For instance, a recent GAO review found that the pace, cost, and performance record for certain recent technology modernization efforts have been “troubling”; see “Information Technology: Cost and Schedule Performance of Selected IRS Investments,” GAO, GAO-22-104387, Oct. 19, 2021, <https://www.gao.gov/products/gao-22-104387>.

⁷¹ “The Child Tax Credit Update Portal Was Successfully Deployed, but Security and Process Improvements Are Needed,” Treasury Inspector General for Tax Administration, May 18, 2022, <https://www.oversight.gov/sites/default/files/oig-reports/TIGTA/202227028fr.pdf>.

⁷² Jason Bramwell, “IRS: Taxpayers Can Now Upload Documents for These 9 Notices,” CPA PracticeAdvisor, February 21, 2023, <https://www.cpapracticeadvisor.com/2023/02/21/irs-taxpayers-can-now-upload-documents-for-these-9-notices/76959/>.

A more modern approach breaks up the process into smaller releases.⁷³ These releases allow for delivery of software earlier in the development process, rather than in one high-risk delivery at the end of the contract period. Scope is continually informed by testing, validation, and user feedback in order to avoid wasting money and time on unusable features. See [Appendix: Agile software development](#) for more discussion on this point. The cross-functional composition of the exploratory Direct File Task Force, which includes full-time user experience expertise, is a signal that IRS leadership could adopt a modern, flexible approach if the IRS develops a potential Direct File tool.

If the IRS moves forward with a Direct File program, it would only be feasible long-term if the IRS retains its commitment to this modern software development lifecycle, rather than incorporating this project into its legacy software development approach. If the IRS were to engage development support external to the IRS—whether from within the federal government or from the private sector—it should ensure that it engages an entity committed to a modern, flexible approach to software development.

See [Appendix: Framework to evaluate delivery of Direct File](#) for a framework that the IRS could use to monitor and evaluate progress of a potential Direct File project and determine whether and how it follows modern software development best practices. It is informed by industry best practices, the [Digital Services Playbook](#), and the [TechFAR Handbook](#).⁷⁴

⁷³ “Build the service using agile and iterative practices,” Digital Services Playbook, U.S. Digital Services, accessed April 28, 2023, <https://playbook.cio.gov/#play4>.

⁷⁴ Digital Services Playbook, U.S. Digital Service, accessed April 28, 2023, <https://playbook.cio.gov/>; The TechFAR Handbook, U.S. Digital Service, accessed April 28, 2023, <https://playbook.cio.gov/techfar/>; Appendices: [Agile software development](#), [Design thinking and iterative prototyping](#).

Schedule

In this section:

- » Appropriate development schedules depend on the scope, complexity, and resources of the project.
 - » Because schedule is a function of scope and cost, the IRS would need to be prepared to adjust the cost and scope of the project to remain on schedule.
-

The IRS has not proposed any specific schedule or timeline for the development or launch of a potential Direct File tool. The appropriate and feasible schedule for software development projects can vary significantly depending on the intended scope, expected user base, and development team, none of which has been identified. Therefore, the Third Party cannot evaluate or recommend a schedule without further information.

There are existing scheduling patterns in successful private sector and government software development projects that would increase the success of any potential Direct File project. These methods are designed to reduce the risks inherent in launching new software and to ensure that the release process efficiently addresses user needs.

Using iteration to learn quickly and minimize risk



Challenge

Trying to rapidly launch new, complex software products to large groups of users is high-risk.

Current state

Successful software development teams often use “pilots,” or initial small-scale implementations, to prove the viability of a potential solution.⁷⁵ These enable an organization to manage the risks of a new product, service, or system and identify deficiencies before committing substantial resources.⁷⁶

After an initial pilot, further functionality could be added at regular intervals, allowing for continuous feedback and adjustment. This allows for potential surprises, including user experience challenges, customer support needs, infrastructure bottlenecks, and software bugs, to be discovered quickly and addressed before they cause harm.

Assessment

The IRS has used pilots in the past to successfully roll out new IT systems, including the e-file program pilot in 1986.⁷⁷ However, successful pilots require clearly defining a scope, including the limits of functionality and target audience. Stating clear and measurable goals up front is also critical for accurately assessing which aspects of a pilot product are working and which are in need of improvement.⁷⁸

If the IRS moves forward with a Direct File project, it would be critical to plan around tax-filing seasons and be ready to launch, support, and gather feedback about a specific scope of Direct File system in time for filing season each year. With this constraint in mind, the IRS could set an initial delivery date for the 2024, 2025, or 2026 filing years, depending on the scope defined for the first release. The earliest possible delivery date for a potential Direct File tool would be filing year 2024, but successfully meeting such a date would require that the IRS rapidly address the primary challenges identified herein. Whatever the delivery date, it is important to avoid launching too much at one time and

⁷⁵ Aaron De Smet, “Get agile faster through pilot programs,” People & Organization Blog, McKinsey & Company, February 16, 2018, <https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-organization-blog/get-agile-faster-through-pilot-programs>.

⁷⁶ “Learning Before Going to Scale: An Introduction to Conducting Pilot Studies,” Regional Educational Laboratory Appalachia at SRI International, May 2021, https://ies.ed.gov/ncee/edlabs/regions/appalachia/resources/pdfs/Pilot-Study-Resource_acc.pdf.

⁷⁷ “IRS E-File: A History,” IRS.

⁷⁸ “Google for Education, Pilot Framework,” accessed May 5, 2023, <https://static.googleusercontent.com/media/edu.google.com/en//pdfs/google-pilot-framework-design.pdf>.

losing the benefits of an iterative delivery model. Later delivery dates may come with an expectation of more functionality than would be prudent to include in an initial pilot.

One critical consideration in planning the initial launch of a potential Direct File tool is the time required to obtain a signed Authority to Operate (ATO).⁷⁹ Obtaining an ATO can take months and requires development effort as well as documentation. The IRS's roadmap and schedule would need to account for this. See [Hosting and security for Direct File](#) for further discussion of ATO timing.

⁷⁹ An ATO is "The official management decision issued by a designated accrediting authority (DAA) or principal accrediting authority (PAA) to authorize operation of an information system and to explicitly accept the residual risk to agency operations (including mission, functions, image, or reputation), agency assets, or individuals"; "ATO," NIST Computer Security Resource Center: Glossary, accessed May 5, 2023, <https://csrc.nist.gov/glossary/term/ato#:~:text=Authorization%20to%20Operate%3B%20One%20of,or%20Derived%20Credentia%20issuance%20services>.

Cost

In this section:

- » Customer support would be the primary cost driver of a potential Direct File tool.
 - » Staffing too large a development team may lead to a lower-quality product.
 - » Any potential Direct File program approach would need to be resilient to possible future budget cuts.
 - » Product scope impacts variability of cost estimates.
 - » The IRS cost estimates are in line with the Third Party estimate.
-

This section addresses the cost portion of the IRA language by calculating estimated costs based on Third Party assumptions, comparing them to the IRS's own cost estimates, and discussing discrepancies. It also considers the long-term resilience of a potential Direct File program in light of possible budget fluctuations.

Costs of a potential Direct File program were evaluated along two dimensions:

1. **Immediate and ongoing costs:** If the IRS proceeds with a Direct File program, it would need accurate estimates of costs to develop a potential Direct File tool, adjust the product's scope via iterative development, continually update the tool to reflect current law, and support users. See [Third Party cost estimate](#) for more about methodology and specific estimated costs.
2. **Long-term funding concerns:** History suggests that a potential Direct File program would eventually operate in an environment of budget cuts. A potential Direct File program's continued viability and taxpayer experience would depend on whether such cuts affect core elements of the program. See [Long-term resilience to budget fluctuations](#) for an assessment of this issue.

See [Appendix: Comparison of cost estimates](#) for an assessment of the IRS's cost estimates and where the two estimates differ.

Third Party cost estimate

This cost estimate was created based on independent assumptions about the resources that would be required for the IRS to develop and maintain a potential Direct File system with customer support. In order to precisely calculate infrastructure costs, the IRS would need to share a technical architectural design. The methodology, underlying assumptions, and results of this Third Party cost estimate were reviewed and validated by external experts with experience developing technical products and operating or procuring customer support call centers.

- **Program staff**, which could include federal and contract employees, would be responsible for the development of the application and the operation of the program. The largest portion of program staff costs would be the cost of development teams. The Third Party estimate assumes development teams would be organized in three to five agile Scrum teams of eight to ten people each, in accordance with Scrum methodology best practices.⁸⁰ It also assumes between ten and twenty federal support staff to manage and coordinate software development and customer support.
- **Technical infrastructure costs** include hosting and securing a potential Direct File system. This Third Party estimate assumes that a potential Direct File application would be built and hosted in a cloud environment. There was no detailed technical architectural design in the draft IRS report, which makes infrastructure costs difficult to calculate precisely. As such, infrastructure costs (based on assessment of several possible infrastructures, comparison to similar systems, and interviews with technical experts) are estimated at a base cost of one to five million dollars, plus a marginal cost of five to twenty cents per yearly filer. Storage, third-party services such as text delivery services, and bandwidth costs would make up most of the technical infrastructure cost.

⁸⁰ "The 2020 Scrum Guide," Nov. 2020 version, <https://scrumguides.org/scrum-guide.html#scrum-team>.

The technical infrastructure costs would be expected to reflect a small portion of the overall budget, largely due to the efficiency of cloud environments and the potential that, as suggested through interviews with IRS technical staff, the majority of the tax-processing burden would fall on the Modernized e-File system and other existing IRS tax-processing systems, rather than a potential Direct File system.⁸¹

- **Customer support costs** include both infrastructure and staffing considerations. Technical experts inside and outside the IRS noted that customer support needs would likely make up a large portion of the total cost of a potential Direct File system. The largest source of uncertainty with respect to customer service costs would be volume and complexity of calls. The IRS's cost estimates assume a ratio of one customer service representative per 10,000 filers. This estimate would provide more customer support representatives per user than IRS call centers currently do.⁸² However, it is industry best practice to base target staffing levels on the total time spent handling customer calls.⁸³ Based on interviews with experts outside the IRS who have experience providing similar customer support services, the Third Party estimate also assumes one customer service representative per 10,000 filers, but this estimate should be refined based on early data from a potential Direct File pilot. This estimate takes into account seasonal variability in customer support staffing levels. Based on conversations with experts in customer support, customer service infrastructure such as telephone infrastructure and secure physical office space would cost between ten and forty million dollars, and average cost per agent, including overhead, would likely be between seventy and ninety thousand dollars.

In interviews, staff of third-party organizations that have developed tax-filing software indicated that call volume is tightly tied to the quality of the experience presented by the software. If the IRS fails to develop a quality user experience, more people would call customer support, raising customer support costs

⁸¹ "Modernized e-File (MeF) Overview," IRS, accessed May 3, 2023, <https://www.irs.gov/e-file-providers/modernized-e-file-overview>.

⁸² IRS draft report, Section 2.

⁸³ "Why Customer Assistance Ratio is the Best KPI to Track Contact Center Utilization," Burnie Group, <https://burniegroup.com/customer-assistance-ratio-best-kpi-for-contact-center-utilization/>.

substantially. Ensuring a high-quality user experience would be critical for controlling costs.

This estimate makes two sets of assumptions for areas of cost uncertainty—one conservatively high and one aggressively low—resulting in a range of potential estimated costs. Uncertainty in estimating long-term costs is unavoidable in the planning stages of this type of project. Running a pilot of a potential Direct File tool would resolve much of this uncertainty⁸⁴ and allow for a narrower range of estimated costs.

The Third Party estimate covers a range of possible uptake from one million to 25 million users. The following are the estimated annual costs for each area:

- Program staff cost: \$8 million - \$18 million
- Technical infrastructure cost: \$1 million - \$10 million
- Customer support cost: \$6 - \$14 dollars per yearly filer

⁸⁴ “What is the difference between a trial and a pilot?” Association for Project Management, accessed May 5, 2023, <https://www.apm.org.uk/resources/find-a-resource/what-is-the-difference-between-a-trial-and-a-pilot/>.

Table: Full Third Party cost estimate

1 million filers		Annual Cost
Product development & program staff		\$7.6 - 18 million
Infrastructure		\$1 - 5.2 million
Customer support		\$14 - 24 million
Total		\$22 - 47 million
2 million filers		
Product development & program staff		\$7.6 - 18 million
Infrastructure		\$1.1 - 5.4 million
Customer support		\$21 - 39 million
Total		\$30 - 62 million
5 million filers		
Product development & program staff		\$7.6 - 18 million
Infrastructure		\$1.2 - 6 million
Customer support		\$39 - 53 million
Total		\$48 - 77 million
10 million filers		
Product development & program staff		\$7.6 - 18 million
Infrastructure		\$1.5 - 7 million
Customer support		\$59 - 94 million
Total		\$68 - 119 million
25 million filers		
Product development & program staff		\$7.6 - 18 million
Infrastructure		\$2.3 - 10 million
Customer support		\$116 - 185 million
Total		\$126 - 213 million

Long-term resilience to budget fluctuations



Challenge

Once IRA resources sunset, a potential Direct File system would require a stable, ongoing appropriation that accounts for changing user needs, tax policy, functionality, user numbers, and inflation. Without this, the quality of service delivered to taxpayers would decrease.

Current state

One challenge and concern raised by parties both within and outside the IRS was that prior to IRA funding, the IRS typically operated in a budget environment defined by scarcity. IRS leadership would regularly have to make difficult decisions on how to cover increasing operating expenses with a decreasing budget resulting from budget cuts, impacts of inflation, and an increase in the size of the taxpayer base.

This section analyzes the effects of possible future budget cuts on a potential Direct File system after initial launch. The largest and most obvious target for cuts would be in customer support, which is the most substantial part of the budget.

The other primary target for cuts would be reducing the size of the development team. This would impact the ability of the team to iteratively improve the user experience, integrate changes in tax law, and respond to changing IRS or congressional priorities for Direct File.

Assessment

Future reductions to funding after it has been established would reduce the quality of a potential Direct File program.

IRS staff indicated that past cuts have had negative impacts on customer service capabilities and call center capacity. According to an IRS executive, the cost to maintain existing IRS technical systems goes up every year, and as a result the customer support budget is often reduced in order to make up the difference. Cuts to the customer service budget for a potential Direct File program would likely lead to longer wait times for

customer service calls, especially around peak filing periods, and would prevent the IRS from being able to provide high-quality service.

Similarly, IRS staff also indicated that budget cuts in the past have limited modernization efforts on existing systems. Similar cuts to the development team of a potential Direct File program would reduce the ability of the IRS to continually improve the tax filer experience and, over time, negatively affect the user experience.

Based on the proposed IRS approach, development team budget cuts would not be likely to put the accuracy of tax return filing at risk, as substantive changes to the tax calculations would be managed via a configuration-based system, requiring minimal technical intervention and cost.⁸⁵

⁸⁵ IRS draft report, Section 2.

Organizational design

In this section:

- » A full-time, dedicated product owner would be critical to the successful delivery of a potential Direct File tool.
 - » Collaboration with internal and external stakeholders (including states) is necessary to deliver a potential Direct File tool.
 - » The IRS needs a consistent, funded public communications strategy about IRS tax-filing options.
 - » The IRS may need to increase technical design and development staffing through partnerships, procurement, and hiring to deliver a potential Direct File tool.
-

This section summarizes the key organizational design challenges that the IRS would need to consider in order to deliver a potential Direct File tool.

If the IRS moves forward with a potential Direct File project, success would depend on the following organizational capabilities:

- Clear, decisive, and empowered product ownership within the IRS to manage the scope, stakeholders, and success of a potential Direct File tool. See [Full-time product ownership within the IRS](#).
- Transparency, efficient communication, and deep collaboration, especially with external stakeholders such as state tax administrators. See [Collaborative approach with internal and external stakeholders](#).
- Outreach, communication, and active collaboration with stakeholders outside the IRS. See [Outreach and communication](#).
- Cross-functional product teams with experience in human-centered, iterative approaches to software development. See [Product development team structure](#).

Full-time product ownership within the IRS



Challenge

A potential Direct File system would require a full-time, dedicated person to provide direction for program and product development, lead iterative software improvements over time, and collaborate with other IRS divisions and organizations.

Current state

The complexity of modern software projects means that scope, trade-offs, priorities, functionality, risks, and success metrics must be continuously evaluated, defined, and shared in order to manage costs, timelines, and outcomes. The industry best practice for accomplishing this ongoing work is to identify and empower a single leader, or “product owner,” to be accountable for the success or failure of a software product.⁸⁶

The IRS has not yet identified the division or department that would supply such a full-time product owner, because they have not made a decision on whether to move forward with a Direct File program.

Assessment

Establishing strong, full-time product ownership is the first and most important organizational design challenge that must be resolved in order for the IRS to successfully deliver Direct File. A potential Direct File product owner would need to be appropriately situated within a department or division at the IRS, with leadership support and access to teams across the IRS in order to collaborate on critical areas.

Much of the necessary experience and expertise—in tax policy, procurement, agile software development, human-centered design, customer service, and IRS information systems—exists at the IRS. An empowered product owner would be charged with bringing these areas together into a cohesive, cross-functional unit focused on designing,

⁸⁶ “Play 6: Assign one leader and hold that person accountable,” Digital Services Playbook, U.S. Digital Service, accessed April 28, 2023, <https://playbook.cio.gov/#play6>.

delivering, and supporting Direct File and ensuring alignment among internal and external stakeholders.

Collaborative approach with internal and external stakeholders



Challenge

Many groups and organizations both internal and external to the IRS would be directly impacted by any future Direct File project. Lack of alignment and failure to consider stakeholders' needs could negatively impact the taxpayer experience. Choices made in designing the system could have an especially significant impact on state entities.

Current state

If exploration into a potential Direct File system continues, the Direct File Task Force would need increased collaboration with other groups within the IRS. Based on interviews with IRS staff in the divisions that a potential Direct File project would depend on, these divisions have not engaged deeply with the Direct File Task Force yet but would expect to collaborate closely if the project moves forward.

In interviews, state tax administrators voiced concerns that, if the project were to move forward, the IRS may design Direct File without understanding how it might impact state tax administration. For example, one interviewee shared a specific instance where the IRS made a decision to extend the federal tax filing deadline for its state's residents with minimal discussion with their office.

Assessment

Because the IRS has not made a decision on whether to move forward with Direct File yet, the level of collaboration that the Direct File Task Force has had with internal and external stakeholders thus far has been understandably limited. The Task Force has several staff members who are tasked with coordination within the IRS, but it is not clear how it would plan to collaborate with stakeholders outside of the IRS, such as state tax

entities, if the project were to move forward. State tax administrators noted during interviews that the IRS has not outlined a specific collaborative approach or has not yet shared enough details for a true collaborative process to begin.

Should this initiative move forward, crafting a collaborative approach with internal and external stakeholders would be important. It would encourage examining problems from multiple perspectives, reduce the risk of system incompatibilities and friction between organizations, and ultimately lead to a better taxpayer experience.

Outreach and communications



Challenge

Effective communication to taxpayers, outreach to intermediaries and advocates, and external messaging would be important for taxpayers to understand and trust any future Direct File product.

Current state

Historically, the IRS does very little marketing for products and services available to taxpayers, according to interviews with IRS communications staff. For example, the marketing budget for Free File has been decreasing year-over-year and is currently at zero.⁸⁷ In interviews, both external tax assistance organizations and IRS communications leadership noted this as one reason for the relatively low uptake of the Free File program.⁸⁸

The IRS's communication and outreach strategy centers on developing accessible, multilingual content tailored to the needs of the groups they are trying to reach. This content is distributed through channels such as news articles, e-newsletters, press

⁸⁷ "NTA Blog: Free File: The Free File Program Is Failing to Achieve Its Objectives and Should Be Substantially Improved or Eliminated," Taxpayer Advocate Service, March 15, 2019, <https://www.taxpayeradvocate.irs.gov/news/ntablog-free-file-the-free-file-program-is-failing-to-achieve-its-objectives-and-should-be-substantially-improved-or-eliminated/>.

⁸⁸ A bipartisan Senate investigation came to the same conclusion. Justin Elliott, "Senate Investigation Criticizes the IRS for Failing to Oversee Free Filing Program," ProPublica, June 9, 2020, <https://www.propublica.org/article/senate-investigation-criticizes-the-irs-for-failing-to-oversee-free-filing-program>.

releases, social media, and partnerships with outreach organizations, according to an interview with IRS's communications staff.

Assessment

Outreach and messaging about a potential Direct File system would need to focus on informing Americans about the range of options for filing their taxes, not on selling or advocating a single option. According to interviews with external organizations that specialize in working with non-filers, marketing, guidance to taxpayers, and other types of support would be necessary to make taxpayers aware of a potential Direct File tool. See [Capacity: Customer support](#) for more on supporting taxpayers using a potential Direct File tool.

A potential Direct File system would benefit from digital marketing and advertising to support the IRS's program goals, which would require dedicated funding, according to interviews with IRS officials.

If any Direct File product is developed, the IRS must ensure that it has a high capacity for marketing, communications, and outreach in order to provide clear, correct, and wide-reaching information about Direct File.

Product development team structure



Challenge

In order to deliver a potential Direct File tool, the IRS would need to assemble a product development team that includes application software engineering, human-centered design, and product management expertise.

Current state

The IRS's cost estimates for delivering a potential Direct File system assume that the IRS would leverage iterative product development practices.

Assessment

The IRS has staff with the appropriate experience required to develop a potential Direct File system, but organizing them into a unified cross-functional team poses a challenge. The IRS's application software engineering, human-centered design, and product management expertise is spread across multiple divisions within the IRS, and interviewees have cited that IRS culture can be prone to siloed teams, rather than cross-functional, blended ones.⁸⁹ Should this project move forward, the IRS should consider bringing in external support to help them build an effective cross-functional team to deliver the potential Direct File system.

The IRS has not yet determined the scope of a potential Direct File program. That being said, if this project were to move forward, they would leverage iterative product development practices, starting with a limited initial tax scope and adding additional tax situations over time. To support continuous iteration of a potential Direct File system, the IRS may need to increase technical design and development staffing through procurement of modern engineering and human-centered design expertise, as well as the creation and hiring of full-time federal staff to fill leadership and supervisory roles for the cross-functional team.

⁸⁹ See [Approach: The IRS software development lifecycle](#) for more detail about iterative cross-functional development teams versus siloed teams.

Capacity

In this section:

- » The IRS would need to significantly expand customer support capacity and expertise to support any potential Direct File tool.
 - » The IRS has sufficient capacity to execute on the relatively straightforward technological integration of a potential Direct File tool into the existing IRS tax-filing processes.
 - » Cloud hosting environments could provide the IRS with capacity to manage rapid system updates and seasonal peaks in demand.
-

The IRS does not address the scope of any future work related to a potential Direct File program, and as such the Third Party has limited information upon which to conduct an analysis of IRS capacity.

In lieu of specific capacity analysis of any potential Direct File-related efforts, this section discusses some general observations with respect to the capacity of IRS to develop a potential Direct File program.

Customer support



Challenge

Outdated call center infrastructure and the limited ability of customer service representatives to address new types of support needs present capacity challenges for a potential Direct File tool.

Current state

The IRS has existing customer support infrastructure but has faced substantial capacity issues around customer service in the recent past.⁹⁰

Customer Account Services (CAS) manages the largest customer service operation within the IRS. Staffed by approximately 18,000 customer service representatives, CAS handles customer requests for tax-related assistance throughout the year, with the highest demand coming in the weeks before annual tax deadlines. Customer support agents receive training in tax law and IRS accounts, but do not have experience providing other types of support that may require a very different set of skills. For example, providing customer support for tech-related questions lies outside the area of expertise of CAS.

CAS call center technology is also in need of modernization. An external expert familiar with IRS customer support operations estimated that the infrastructure significantly lags industry technology,⁹¹ and some of interviewees—especially taxpayer representatives and community organizations—expressed skepticism about whether the IRS is ready to provide industry-level customer support⁹² to more tech-savvy customers.

Assessment

The IRS would need to expand customer support capacity, in terms of both skills and resources, in order to support new, taxpayer-facing initiatives. To effectively meet this need, the IRS would have to design a cohesive customer experience for a variety of new customer situations, taking into account data privacy issues, different customer service skill sets required, and level of customer demand for different types of support.

Customer service agents who could handle all types of questions would allow for a more personalized and efficient customer experience. For example, speaking with a single customer service representative who can address tax- and tech-related questions is a

⁹⁰ "TAXPAYER SERVICE: Taxpayer Service Has Reached Unacceptably Low Levels and Is Getting Worse, Creating Compliance Barriers and Significant Inconvenience for Millions of Taxpayers," National Taxpayer Advocate, 2014 Annual Report to Congress, 3, https://www.taxpayeradvocate.irs.gov/wp-content/uploads/2020/08/2014-ARC_VOL-1_S1_MSP-1-508.pdf; "2022 Tax Filing: Backlogs and Ongoing Hiring Challenges Led to Poor Customer Service and Refund Delays," U.S. Government Accountability Office, published December 15, 2022, <https://www.gao.gov/products/gao-23-105880>.

⁹¹ "Taxpayers Face Significant Difficulty Reaching IRS Representatives Due to Outdated Information Technology and Insufficient Staffing," National Taxpayer Advocate, 2020 Annual Report to Congress, https://www.taxpayeradvocate.irs.gov/wp-content/uploads/2021/01/ARC20_MSP_02_Telephone.pdf.

⁹² Al Cook, "Call Center vs. Contact Center: What's the Difference?" Twilio, accessed May 5, 2023, <https://www.twilio.com/en-us/learn/contact-center/call-center-vs-contact-center>.

superior customer experience to being bounced around between representatives in different departments. However, this may create challenges from a training perspective; in practice, it may be unrealistic to expect representatives to maintain expertise across multiple complex knowledge bases.⁹³ Alternatively, having one team of customer service agents manage tax-related questions and another manage tech-related questions simplifies training but could result in a lower-quality customer experience due to more phone transfers and confusion around whom to call.

If this type of customer support expansion is underfunded or poorly executed, the IRS runs the risk of increasing pressure on other, already-overloaded customer support operations. Stakeholders who regularly need access to IRS support, including staff at community organizations and professional tax preparers, expressed this concern in interviews. To maximize chances of success, customer support expansion would need to be undertaken using a human-centered,⁹⁴ iterative approach.⁹⁵

Allowing a potential Direct File system to grow slowly and methodically would increase the chance of successfully providing high-quality customer support. As one industry interviewee put it, “[We have been] successful at recruiting, training and retaining an excellent workforce to meet customer support needs. We do this by managing growth, not overcommitting and continuously improving internal processes and technology to maintain high levels of efficiency and customer support capabilities.”

Expansion of customer support capacity would be a significant cost driver; see the [Cost](#) section for further discussion of this topic.

⁹³ Philippe Chevalier, Robert A. Shumsky, and Nathalie Tabordon, “Routing and Staffing in Large Call Centers with Specialized and Fully Flexible Servers,” March 2004, http://mba.tuck.dartmouth.edu/pages/faculty/robert.shumsky/xtrain_large_cc.pdf.

⁹⁴ John O’Leary, Marc Mancher, William D. Eggers, and Shelly Metschan, “The Future of Government Contact Centers: Seven Strategies for Quantum Leap Improvement,” Deloitte, January 12, 2002, <https://www2.deloitte.com/us/en/insights/industry/public-sector/future-of-government-digital-contact-centers.html>.

⁹⁵ “Contact Center Playbook,” GSA, October 2020, <https://coe.gsa.gov/docs/2020/Contact%20Center%20Playbook%20October%202020.pdf>.

Integration into IRS return processing



Challenge

Successful integration of a new system into existing technology systems would be critical to launching a potential Direct File tool, as this type of integration has been responsible for major issues in other government technology development efforts.⁹⁶

Current state

Any potential Direct File tool would integrate with the IRS return-processing system through the Modernized e-File (MeF) service, which the IRS provides as a mechanism for all e-filed returns.

Assessment

For most government technology projects, integrating a new electronic intake system into downstream processing systems is one of the highest-risk areas; however, the IRS has already addressed this challenge in the process of creating a robust e-filing ecosystem.

Over the last 33 years, the IRS has implemented the back-end e-filing system that supports all electronically filed federal tax forms, including approximately 94% of individual tax returns.⁹⁷ The Modernized e-File service already serves the entire commercial tax preparation software industry and handles the vast majority of the 150 million individual tax returns filed in the U.S.⁹⁸

The majority of potential integration issues have already been addressed by the Modernized e-File system, and a well-tested interface exists to integrate with Modernized e-File. With the Modernized e-File system, the IRS has also demonstrated the capacity to

⁹⁶ One system that struggled with these issues was the [Electronic Immigration System \(ELIS\)](#), which initially struggled to integrate both with other technology systems within DHS and with DHS's existing case management process.

⁹⁷ "Returns Filed, Taxes Collected & Refunds Issued," IRS, accessed May 5, 2023, <https://www.irs.gov/statistics/returns-filed-taxes-collected-and-refunds-issued>.

⁹⁸ "Returns Filed, Taxes Collected & Refunds Issued," IRS.

handle integration issues in a way that supports the demands of the commercial tax software industry.

Other integration challenges



Challenge

In addition to Modernized e-File, a potential Direct File tool would need to integrate with other systems, including the IRS's identity-management system. Integration with third-party systems such as state tax filing tools would also need to be considered.

Current state

The IRS has an existing enterprise identity management system, the Secure Access Digital Identity (SADI) system, which also supports two external identity providers, ID.me and Login.gov.⁹⁹ Integration with this system would be required to allow taxpayers to save their progress and return to view their filed return.

Assessment

SADI, the enterprise identity system currently in use by the IRS's Online Account system, facilitates access to the CTC Update portal and Get Transcript functionality. SADI is likely sufficient to manage identity for a potential Direct File system, though some additional configuration might be required to ensure that taxpayers have a secure and easy-to-use login experience at a level consistent with current IRS tax-filing standards. Configuration of this service for use with a potential Direct File tool is within the IRS's current technical capacity.

Another potential integration challenge may involve third-party services. To support users who need to file state taxes, for example, a potential Direct File tool would need to enable taxpayers to export their data into other tools, which could provide state tax

⁹⁹ "New identity verification process to access certain IRS online tools and services," IRS, November 17, 2021, <https://www.irs.gov/newsroom/new-identity-verification-process-to-access-certain-irs-online-tools-and-services>; John Hewitt Jones, "Internal Revenue Service working to expand use of Login.gov," FedScoop, March 28, 2023, <https://fedscoop.com/internal-revenue-service-to-expand-use-of-login-gov/>.

return filing. Technically, state filing integration would be similar in nature to other technical collaborations, including Modernized e-File and collaboration on security measures to reduce fraud and identity theft. Interviews within IRS as well as with industry stakeholders involved in these collaborations indicate that they have gone well and are viewed positively.

However, coordinating with states is a non-trivial undertaking and would require significant investment. According to an expert with industry experience, private sector tax software companies typically have individual teams assigned to each state they service. For integration with state filing tools, a potential Direct File product might provide some sort of API that the taxpayer could use to import Direct File information into existing state tax preparation software.¹⁰⁰ The IRS would need to adopt a collaborative and transparent model for building a state filing integration API.

Technical scalability



Challenge

One hundred sixty million taxpayers complete individual tax returns every year,¹⁰¹ and 94% of those are filed electronically. In order to be feasible, a potential Direct File system would need to remain functional even under substantial loads concentrated in several peaks during the filing season.

Current state

In interviews, current and former IRS staff and external subject matter experts familiar with the IRS shared concerns about whether the IRS's information systems could handle the volume of filers expected during peak filing periods.

Currently, the IRS operates the Modernized e-File system, which receives all electronically filed returns and distributes them to the necessary systems within the IRS for processing.

¹⁰⁰ Additional discussion of Direct File's potential relationship to state tax filing can be found in [Additional critical considerations](#).

¹⁰¹ *IRS Service Data Book 2022*.

Assessment

The IRS's ability to operate the Modernized e-File system, which handles the existing volume of traffic during filing season, indicates that they have the capacity to support a potential Direct File tool, as long as only a portion of total electronic filings come from a potential Direct File tool.

The IRS report does not indicate whether a potential Direct File system would be implemented in a secure cloud environment; such an approach would be industry best practice for a modern digital service and would provide opportunities to implement automated monitoring, elastic scaling, and disaster-recovery mechanisms that could improve scalability and availability of the system.¹⁰² For further discussion of this issue, see [Capacity: Hosting and security for Direct File](#).

Taking advantage of cloud capabilities requires a team that can implement best practices effectively. This has been a challenge for the IRS in the past, as illustrated by an outage of the Child Tax Credit Portal that occurred due to a human-error misconfiguration.¹⁰³ If the IRS moves forward with building a potential Direct File system, it would need to procure an application development team that is familiar with the methods needed to build robust applications capable of managing high volumes of traffic and load, and that could work closely with IRS IT's infrastructure experts to ensure best-in-class monitoring.

¹⁰² "Digital Transformation for Government: How a Hybrid Multicloud Platform Delivers Outcomes for Government," IBM, accessed May 4, 2023, <https://www.ibm.com/industries/government/resources/digital-transformation-government/>.

¹⁰³ "The Child Tax Credit Update Portal Was Successfully Deployed, but Security and Process Improvements Are Needed," Treasury Inspector General for Tax Administration, 2022, 1-33, <https://www.oversight.gov/sites/default/files/oig-reports/TIGTA/202227028fr.pdf>.

Hosting and security for Direct File



Challenge

A potential Direct File tool built on IRS IT infrastructure would need to maintain compliance with federal IT security policies and procedures, especially given its need to store sensitive taxpayer information. It would also have to handle large spikes in usage during peak tax-filing season.

Current state

The IRS report does not indicate whether a potential Direct File system would be implemented in a secure cloud environment. However, IRS IT currently maintains several FedRAMPed cloud environments, which would be available for use by a potential Direct File system and contain a number of standard security controls that could be inherited by a potential Direct File system hosted in those environments. For application development capacity, the IRS is in a good position to leverage collaboration with USDS to ensure that a technical vendor is procured with a high level of expertise in building applications securely in a cloud environment.

A potential Direct File tool would require a new Authority to Operate (ATO), which involves a security evaluation process that traditionally takes several months across government—up to nine months or more by some estimates.¹⁰⁴ However, IRS IT estimated that for a hypothetical Direct File system based in an existing environment and able to inherit controls, an ATO process might take 60-90 days. It was noted that this is dependent on IRS IT getting the necessary information from the application team in a timely manner.

Assessment

Any potential Direct File system would need to be updated regularly, sometimes very quickly, which is often easier to achieve in a cloud environment due to access to a greater level of automation. Secondly, the elasticity of computing resources available in a

¹⁰⁴ “FedRAMP ATO: Time to Compliance and Authorization,” stackArmor, accessed May 2, 2023, <https://stackarmor.com/fedramp-time-to-authorization/>; “Background,” CMS Security & Compliance Planning, Centers for Medicare & Medicaid Services, accessed May 2, 2023, <https://ato.cms.gov/overview.html#system>.

cloud environment can increase reliability and availability during high-volume times like the end of filing season. Finally, the ability to only scale to (and only pay for) a peak level of server capacity during periods of peak traffic would reduce infrastructure costs for a service such as a potential Direct File tool, which would likely experience periods of very high traffic. Setting up a new cloud environment in federal agencies, especially with federal security requirements, can be a multi-year process, so the availability of already-approved environments for a potential Direct File system is a positive signal.

Similarly, the ability of a potential Direct File system to inherit security controls would make the process of securing the application and obtaining an ATO more streamlined, allowing a reasonable development timeline driven primarily by product needs and stakeholder input, rather than infrastructure constraints. The infrastructure would largely be provided and operated by IRS IT.

In a recent report, the GAO noted that the “IRS addressed most of OMB’s cloud computing requirements.”¹⁰⁵ While a wide variety of security controls and measures would need to be implemented across enterprise cloud systems, it appears from a recent TIGTA audit that security control implementation is actively continuing, indicating that IRS IT has demonstrated capacity to deliver on their plans.¹⁰⁶ This same audit also noted areas where the IRS does need improvements, notably in the speed of remediating vulnerabilities after they are identified. This is consistent with evidence that long development cycle times would be a general risk for any potential Direct File system.

¹⁰⁵ “IRS Needs to Complete Modernization Plans and Fully Address Cloud Computing Requirements,” U.S. Government Accountability Office, January 2023, at 24, <https://www.gao.gov/assets/gao-23-104719.pdf>.

¹⁰⁶ The audit report stated that “the deployment of the Privileged User Management Access System is complete and the system is operational”; see “The IRS Implemented the Business Entitlement Access Request System; However, Improvements Are Needed,” Treasury Inspector General For Tax Administration, March 22, 2023, <https://www.tigta.gov/sites/default/files/reports/2023-03/202320013fr.pdf>.

Data privacy, security, and fraud



Challenge

Tax preparation and filing systems must carefully protect taxpayer information, which contains substantial sensitive personal identifying and financial information.

In addition, a significant number of returns are filed each year by malicious actors, who often seek to impersonate legitimate taxpayers in order to fraudulently claim their refunds.¹⁰⁷ Any potential Direct File system would need to detect and deter such fraud.

Current state

The IRS currently maintains a number of IT systems that handle sensitive tax information. These systems are subject to exacting federal standards for the protection of sensitive information.

The IRS currently collaborates closely with Electronic Return Originators to set standards and guidelines to protect taxpayers and prevent fraud. Privacy, security, and fraud are also discussed and refined at the IRS Security Summit, a meeting of software industry, tax preparation firms, payroll and tax financial product processors, and state tax administrators.

Assessment

The IRS would be required by federal law to meet the exacting standards of the Federal Information Security Modernization Act in protecting taxpayer data in a potential Direct File system.¹⁰⁸ In addition, a potential Direct File program would be most effective if the development team had additional application development security expertise, above and beyond the data security requirements required by an ATO.

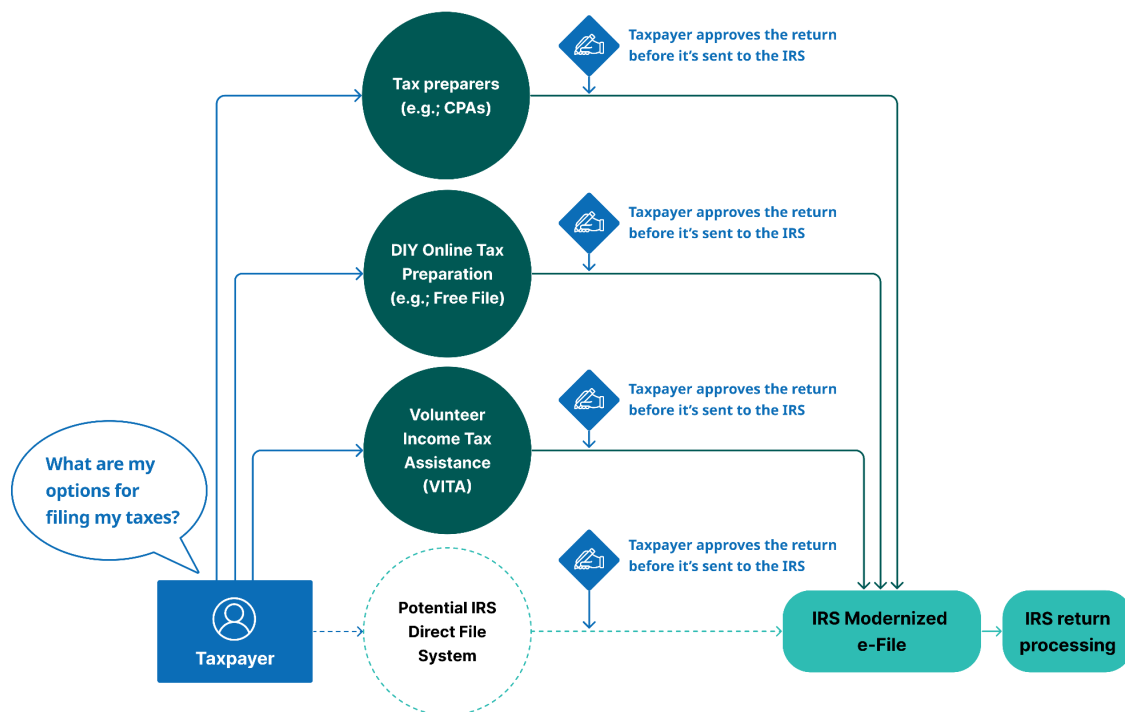
¹⁰⁷ “For 2019, there were 443,000 confirmed identity theft returns”; see IRS Security Summit: Tax Scams/Consumer Alerts (see “Accomplishments”), accessed May 5, 2023, <https://www.irs.gov/newsroom/security-summit>.

¹⁰⁸ See [Hosting and security for Direct File](#) for more about federal compliance controls.

A potential Direct File system would allow taxpayers to e-file their tax returns directly with the IRS without giving information to any third party, which is not possible in the current tax ecosystem.

One additional privacy and trust concern relates to when information is shared with the IRS. Internal IRS officials as well as external stakeholders and subject matter experts indicated that some taxpayers may have concerns about the IRS having access to information that they enter into a tax-filing tool but subsequently edit before submitting the return. To address this concern, the development team for a potential Direct File tool would need to ensure that the IRS would not have access to pre-submission information. This data usage policy would need to be clearly communicated to taxpayers.

Graphic: Taxpayer electronic filing options



No matter which service taxpayers use, their personally identifiable information (PII) and tax data are ultimately delivered to the IRS.

Additional critical considerations

There are two additional critical challenges that are not addressed in the [approach](#), [schedule](#), [cost](#), [organizational design](#), or [capacity](#) sections of this report: state income tax filing and delivery expectations. This section describes these challenges in more detail below.

State tax filing



Challenge

Taxpayers are accustomed to filing federal, state, and local returns at the same time. To meet taxpayer expectations, a potential Direct File tool would need to make it easy for taxpayers to file their state return using data from their federal return.

Additionally, state governments rely on existing IRS systems for tax collection, benefit administration, and fraud prevention. A potential Direct File system would need to take care not to disrupt their current business processes.

Current state

Forty-one states, comprising 78% of the U.S. population,¹⁰⁹ currently require taxpayers to file an income tax return similar in scope to the federal return.¹¹⁰ Many of these state tax returns use information from the federal return as part of the filing process.¹¹¹ According to information provided by the Federation of Tax Administrators, fourteen states offer public direct filing systems for state income taxes.

¹⁰⁹ "State Population Totals and Components of Change: 2020-2022," U.S. Census Bureau, accessed May 5, 2023, <https://www.census.gov/data/tables/time-series/demo/popest/2020s-state-total.html>.

¹¹⁰ Two additional states tax investment income only, but not earnings. Timothy Vermeer, "State Individual Income Tax Rates and Bracket for 2023," Tax Foundation, February 21, 2023, <https://taxfoundation.org/publications/state-individual-income-tax-rates-and-brackets/>.

¹¹¹ Third Party analysis of "State Tax Forms," Federation of Tax Administrators, accessed May 5, 2023, <https://taxadmin.org/state-tax-forms/>.

The IRS report acknowledges that facilitating the filing of state income taxes is a challenge, but does not propose how it would address this within a potential Direct File system.

Assessment

Whether and how a potential Direct File system interacts with state tax filing could have an outsized impact on the overall tax administration ecosystem, both in terms of taxpayer experience and in how state tax administration functions. It is critical that the IRS adopt a transparent, collaborative approach with states, vendors that support state tax filing, and other relevant organizations to ensure that all stakeholders' needs and concerns are heard and addressed.

From a user experience perspective, all major existing commercial tax software products currently offer customers the option to file federal and state taxes together, making this functionality expected for any modern tax filing platform. In interviews, several state tax administrators also expressed that federal and state tax filing must be a cohesive experience for the taxpayer.

Filing state taxes through a potential Direct File system presents complexities different from those that commercial products encounter. A major concern is how users would transfer their information from their federal return to their state return. Once submitted to the IRS, taxpayer information is designated Federal Tax Information (FTI), which is bound by restrictive rules on its usage.¹¹² Taxpayers, on the other hand, have no such restrictions and are free to provide their information to any party they choose. In order to avoid problems associated with FTI, it is important that a potential Direct File system be designed to give the taxpayer full control and decision-making power of the data export and import processes. Questions remain regarding whether the user would have to copy information manually from their federal return to their state return, or whether that information could be programmatically imported into the state return.

From a state tax administration perspective, many states currently receive federal returns electronically through a partnership with the IRS and its [Modernized e-File system](#). According to interviews with state tax administrators, states rely on Modernized

¹¹² "26 U.S. Code § 6103 - Confidentiality and Disclosure of Returns and Return Information," Legal Information Institute, accessed April 28, 2023, <https://www.law.cornell.edu/uscode/text/26/6103>.

e-File for tax and benefit administration as well as fraud prevention. A potential Direct File program would need to collaborate with entities (including states that offer public direct-filing systems) who prepare state tax returns to ensure they could receive the information and avoid disrupting the operations of state tax administrators.

Delivery expectations



Challenge

Stakeholders inside and outside the IRS may have different expectations for what a potential Direct File system could do and when it would be delivered. To be feasible, the IRS would need to ensure that stakeholder expectations are aligned around a limited-scope initial tool that the IRS could test and improve over multiple tax years.

Current state

The IRS has not determined scope for a potential Direct File pilot program or determined whether Direct File will move forward as a project. However, taxpayer survey data, user research, and prototyping work conducted by the IRS Direct File Task Force have demonstrated that there is taxpayer interest in an IRS-run Direct File program and that taxpayers have certain assumptions about the features that such a program would include.¹¹³

Assessment

The IRS would need strong leadership support and a realistic timeline to roll out a potential Direct File tool iteratively and methodically. Although a potential Direct File system could eventually support millions of taxpayers, products of this scale take time and resources and require organization-wide support. Even some of the largest technology companies in the private sector (such as Meta, Dropbox, Twitter, and Airbnb)

¹¹³ IRS draft report, Section 1.

have taken months, and sometimes years, after launching to the public to reach 1 million users.¹¹⁴

Software development speed cannot always be increased by spending more money or adding more technical staff. Indeed, research suggests that too large a development team can actually degrade the quality of the product.¹¹⁵ Developing high-quality digital products takes time and care.¹¹⁶

For a potential Direct File system to be feasible, the IRS would need to test, grow, and improve the system over multiple tax years. In an interview with a government digital services expert, they recommended that the IRS set a clear, long-term vision for the potential Direct File system and start by building it to support a small set of initial users that grows in scope each year. This suggested approach aligns with industry best practices, as described in [Appendix: Agile software development](#) and [Appendix: Design thinking and iterative prototyping](#).

¹¹⁴ Alyson Shontell, "Here's How Long It Took 15 Hot Startups to Get 1,000,000 Users," Business Insider, January 12, 2012, <https://www.businessinsider.com/one-million-users-startups-2012-1>.

¹¹⁵ Nachiappan Nagappan, Brendan Murphy, and Victor Basili, "The Influence of Organizational Structure on Software Quality: An Empirical Case Study," International Conference on Software Engineering (2008), https://faculty.ksu.edu.sa/sites/default/files/the_influence_of_organizational_structure_on_software_quality-_an_empirical_case_study.pdf.

¹¹⁶ See [Appendix: Comparison of cost estimates](#) for more discussion of this pattern.

Conclusion

The Third Party review concludes that the feasibility of the IRS to successfully build a Direct File product depends critically on their ability to maintain this initiative as a leadership priority, start with limited scope, and expand the system over time. Feasibility also depends on their ability to address certain imperatives, including state income tax filing, data privacy and security, expectations from both internal and external stakeholders, and customer service.

Addressing these imperatives is not beyond the IRS's capacity, as indicated by the following Third Party research:

- In its assumptions to estimate cost, the IRS report stated that if it builds a Direct File system, it would use iterative product development practices, starting with a limited initial tax scope and adding additional tax situations over time. This approach reflects best practices in software development,¹¹⁷ which is a positive signal for the feasibility of a potential Direct File tool. See [Approach: The IRS software development lifecycle](#) for more on the importance of an iterative process.
- Based on interviews conducted from March 1st to May 1st, 2023, the IRS's IT Division could integrate a potential Direct File tool into the existing e-file system if the project moves forward. See [Capacity: Integration into IRS return processing](#) for further discussion of integration needs.
- While great variability remains based on product scope, the IRS is realistic about the costs of such a system, based on the broad product approach they have laid out. See [Cost](#) for more detail.
- The IRS has a track record of starting small and building a service over time. The e-file program, launched in 1986, began with a 25,000 person pilot that within four years was available to all taxpayers and now is an integral and efficient part of return processing.¹¹⁸

¹¹⁷ See [Appendix: Design thinking and iterative prototyping](#).

¹¹⁸ "Modernized e-File (MeF) Overview," IRS, accessed May 3, 2023, <https://www.irs.gov/e-file-providers/modernized-e-file-overview>.

Addressing these and other imperatives detailed in this report would require attention and effort from a potential Direct File team, support from IRS leadership and external stakeholders, and stable funding from Congress.

Appendices

Appendix: Agile software development

Agile is a set of frameworks and practices that enables software development teams to deliver value to their customers faster by utilizing iterative development processes and continuous loops of designing and testing software with end users.¹¹⁹ Agile is adaptive, rather than predictive, and focuses on people over processes.¹²⁰ This approach works well for programs where the end goal is known, but specific details about their implementation may change or be refined along the way, as in the case of large, complex, new consumer-facing software products.

In contrast to agile, waterfall development organizes a software project as a series of linear, sequential phases that must all be completed before the software is delivered to end users.¹²¹ This type of approach is best suited for projects where the implementation steps are known and not subject to change. The waterfall approach, when applied to complex IT projects that require significant software design and development, often leads to deferred risk and costly surprises, as well as failing to keep pace with changing needs over the course of the development timeline. Agile development breaks up the process into smaller releases, which allows for delivery of software earlier in the development process rather than in one high-risk delivery at the end of the contract period.¹²² Scope is continually informed by testing, validation, and user feedback in order to avoid wasting money and time on unused or unusable features.

Today, agile is the preferred methodology for government software development contracts that create, update, or maintain digital services (such as websites, mobile

¹¹⁹ "What Is Agile Software Development?" Agile Alliance, accessed May 3, 2023, <https://www.agilealliance.org/agile101>.

¹²⁰ Ines Mergel, Sukumar Ganapati, and Andy Whitford, "Agile: A New Way of Governing," *Public Administration Review* 81, no. 1 (May 18, 2020): 161-165. Preprint accessible online: <https://inesmergel.wordpress.com/2020/04/17/agile-a-new-way-of-governing/>; "Agile Assessment Guide," Government Accountability Office (GAO), September 2020, <https://www.gao.gov/assets/gao-20-590g.pdf>.

¹²¹ "Agile vs. Waterfall Project Management," Atlassian, accessed May 3, 2023, <https://www.atlassian.com/agile/project-management/project-management-intro>.

¹²² "Play 4: Build the service using agile and iterative practices," U.S. Digital Services Playbook, accessed April 28, 2023, <https://playbook.cio.gov/#play4>.

applications, or other digital media).¹²³ By delivering software early and often and engaging customers to inform future iterations, “Agile can save the government billions of dollars by delivering services more efficiently and effectively,” according to a 2020 GAO report.¹²⁴

Appendix: Design thinking and iterative prototyping

Successful software products often improve user experience by creating small prototypes, “testing” those prototypes with real customers by observing their usage, then incorporating feedback and observations.¹²⁵ Iteration continues after launch, as feedback is regularly incorporated into the software to continuously improve the user experience. These processes—pioneered by private companies like Apple, Ford, and GE¹²⁶—are often referred to as design thinking, iterative prototyping, or human-centered design, and are being adopted more widely across the government.¹²⁷ Core tenets of design thinking include: empathizing with people and their experiences, clearly defining the problem, ideating, prototyping, and iterating.¹²⁸

This design thinking and iterative prototyping approach contrasts sharply with a “requirements up front” style of development, in which the entire product is first designed and then built one part at a time, where each part is not functional or usable until the entire product is finished. This approach can lead to poor user experience

¹²³ “What Is Agile Software Development,” TechFAR Hub, U.S. Digital Services, accessed May 3, 2023, <https://techfarhub.usds.gov/pre-solicitation/agile-overview/>.

¹²⁴ “Science & Tech Spotlight: Agile Software Development,” U.S. Government Accountability Office, September 29, 2020, <https://www.gao.gov/products/gao-20-713sp>.

¹²⁵ Henrik Kniberg, “Making sense of MVP (Minimum Viable Product) – and why I prefer Earliest Testable/Usable/Lovable,” *crisp.*, Jan. 25, 2016, <https://blog.crisp.se/2016/01/25/henrikkniberg/making-sense-of-mvp>.

¹²⁶ Ben Taylor, “The Biggest Misconception About Apple,” *Time*, March 19, 2015, <https://time.com/3712678/apple-innovation/>; Maribel Lopez, “How Ford Drives Business Agility With Design Thinking,” *Forbes*, July 26, 2020, <https://www.forbes.com/sites/maribellopez/2020/07/26/how-ford-drives-business-agility-with-design-thinking/>; Sarah J. S. Wilner, “Developing Design Thinking: GE Healthcare’s Menlo Innovation Model,” in *Design Thinking: New Product Development Essentials from the PDMA*, ed. Michael G. Luchs, Scott Swan, Abbie Griffin (Hoboken: John Wiley & Sons, 2015), pp.157-72.

¹²⁷ “The Human Centered Design Discovery Stage Field Guide” was created for the Veterans Experience Office and adapted for use across the government through a partnership between GSA’s Office of Customer Experience and The Lab at OPM; Government Services Association, accessed May 3, 2023, <https://www.gsa.gov/cdnstatic/HCD-Discovery-Guide-Interagency-v12-1.pdf>.

¹²⁸ “Design Thinking,” IDEO U, accessed May 3, 2023, <https://www.ideo.com/pages/design-thinking>; “d.school Starter Kit,” Stanford d.school, accessed May 3, 2023, <https://dschool.stanford.edu/resources/dschool-starter-kit>; “18F Methods,” accessed May 3, 2023, <https://methods.18f.gov/>.

outcomes because development teams don't get any meaningful feedback on how their product works in practice until the very end of the process. As a result, fundamental design decisions may need to be changed, requiring an entire rebuild of the system.

Appendix: Open-source Software

Open-source software is software for which the source code can be accessed, re-used, and shared by the public.¹²⁹ Even when software is open-sourced, the development team can accept or reject changes to the codebase, control what is deployed as part of the product, and control access to data used in the product.¹³⁰

The Federal Source Code Policy strongly encourages federal government agencies to make the source code of custom-developed software available to the public via standard open-source mechanisms.¹³¹ A number of agencies across the federal government have adopted this approach, as cataloged at [Code.gov](https://code.gov), which provides information to the public on where open-source repositories are available for government products.¹³² Allowing established open-source communities to view, comment on, and reuse the source code of government software is not only consistent with the current policy of the federal government,¹³³ but also improves the overall transparency of the government to the people.¹³⁴

The Department of Treasury and the IRS have agency policies that are consistent with the Federal Source Code Policy, according to Code.gov. However, the IRS's open-source presence is as of yet very limited.¹³⁵

¹²⁹ 18F Open source policy, modified April 29, 2020, <https://18f.gsa.gov/open-source-policy/>.

¹³⁰ Ian Lee, "The case for open source software," 18F Blog, July 12, 2018, <https://18f.gsa.gov/2018/07/12/the-case-for-open-source-software/>.

¹³¹ M-16-21: Federal Source Code Policy: Achieving Efficiency, Transparency, and Innovation through Reusable and Open Source Software, Office of Mgmt. & Budget, Exec. Office of the President, August 8, 2016, https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/memoranda/2016/m_16_21.pdf.

¹³² [Code.gov](https://code.gov), accessed April 28, 2023.

¹³³ "The Office of GSA IT has taken an open-first approach to data, application programming interface, and source code"; see "Open Source Software," Government Services Administration, accessed April 28, 2023, <https://open.gsa.gov/oss-policy/>.

¹³⁴ Matt Rumsey and Joel Gurin, "Aligning Open Data, Open Source, and Hybrid Cloud Adoption in Government," IBM Center for the Business of Government, 2021, <https://www.businessofgovernment.org/sites/default/files/Aligning%20Open%20Data%2C%20Open%20Source%2C%20and%20Hybrid%20Cloud%20Adoption%20in%20Government.pdf>.

¹³⁵ IRS organization page on GitHub.com, accessed April 28, 2023, <https://github.com/IRSgov>.

Using an open-source model would both be in line with current federal government policy and also be beneficial to a potential future IRS Direct File team and the general public. It would provide a clear and direct mechanism for the larger tax-preparation industry and interested non-profit organizations in the tax space to give specific comments or suggestions on the design and implementation of a potential Direct File tool, potentially in a way that would allow the federal government to easily incorporate appropriate suggestions with minimal work.

Similarly, outside tax-administration organizations or tax-software preparation companies would potentially benefit from seeing the IRS's approach to building a modern tax-preparation form. This is especially true for states or vendors considering building or improving their own direct file solutions, who could potentially take insights or even reuse code from the IRS's approach.

Finally, especially when combined with the IRS's intent to build a configurable tax engine with a configuration language that is accessible to non-software experts,¹³⁶ an open-source approach would mean that tax lawyers, professionals, and academics would be able to see and evaluate the way that the IRS programmatically interprets the tax code, in a way that could further understanding and discussion of tax law.

Appendix: Framework to evaluate delivery of Direct File

If a potential Direct File project moves forward to development, the IRS should continuously monitor the challenges discussed in this report to ensure the successful delivery of the program and evaluate delivery in comparison to modern software development best practices. The success of any future Direct File project would require auditors to align their expectations and approach to evaluation with modern software development standards. Outdated methods of measuring progress and outcomes could otherwise undermine effective development practices for a potential Direct File tool.

¹³⁶ IRS draft report, Section 2.

Topic	Minimum success requirements if the IRS pursues a Direct File project	Why it's important
Organizational maturity for agile	Starts implementing necessary changes to governance and culture to use agile methods and applies agile methods to other projects prior to Direct File.	If the IRS has never worked this way before, it would be difficult to build Direct File in an iterative, agile manner.
Design thinking methodology	<p>Direct File team centers the taxpayer experience by deeply understanding their needs and solving the problems that are important to them.</p> <p>Team develops prototypes and pilots to learn from and improve upon each iteration.</p>	See Appendix: Design thinking and iterative prototyping for more information.
Product vision and product roadmap	<p>Team has a product vision that informs the product roadmap, which in turn focuses on what Direct File would enable for end users (rather than technical outputs).</p> <p>The vision and roadmap determine the strategic goals for the product.</p>	A product roadmap that focuses on functional requirements gives the team the necessary flexibility to focus on delivering value to end users rather than delivering technical functionality.
Program-level and service-level objectives	<p>Team has well-defined program-level and service-level objectives focused on what a potential Direct File tool enables users to do.</p> <p>These objectives are used to measure progress over the development lifecycle.</p>	These metrics inform the product roadmap and create alignment across stakeholder groups.

Acquisition and procurement	Team uses/has experience using modular contracting and agile solicitations to obtain contractor support.	Modular contracting reduces program risk and incentivizes contractor performance while meeting the government's need for timely access to rapidly changing technology (FAR 39.103).
User experience	Team maintains a focus on supporting the end user through the tax-filing cycle.	Understanding what people need is a critical aspect of any digital service project, and is one of the key plays in the U.S. Digital Services Playbook.
Software development process	Team uses pilots or other methods to get user feedback as early as possible. Team is able to automatically test and deploy Direct File so that new features could be added as necessary. First and future releases aren't rushed.	This is Play #4 of the Digital Services Playbook , which describes key plays to increase the likelihood of a successful digital service.
Team composition	Team has a single, identified product owner within the IRS who has the authority and responsibility to make business, product, and technical decisions.	Having a single accountable owner is Play #6 of the Digital Services Playbook , which describes key methods to increase the likelihood of a successful digital service.
Managing dependencies	Direct File team engages with key IRS stakeholder groups throughout the development lifecycle.	Engaging with these key stakeholder groups early on and continuously would

		maximize the likelihood of successful delivery of Direct File.
Budget	Direct File program has continuous, dedicated funding to build and improve service Direct File.	Any potential Direct File program would require an initial pilot plus later iterations. They would need dedicated funding to deliver these iterations.

Appendix: Comparison of cost estimates

The IRS estimate is structured similarly to the Third Party estimate, except that it combines the program staff and technical infrastructure costs into a single “Technology & Product” category and only covers situations from 5 million to 25 million users. Here is a like-for-like comparison of the two estimates:¹³⁷

¹³⁷ IRS draft report, Section 2.

Table: Comparison of estimated annual costs

	Third Party estimate	IRS estimate (Narrow scope)	IRS estimate (Broader scope)
1 million filers	<i>No estimate</i>		<i>No estimate</i>
Technology & product	\$8.6m - \$23m		
Customer support	\$14m - \$24m		
Total	\$22m - \$47m		
2 million filers	<i>No estimate</i>		<i>No estimate</i>
Technology & product	\$8.7m - \$23m		
Customer support	\$21m - \$39m		
Total	\$30m - \$62m		
5 million filers			
Technology & product	\$8.8m - \$24m	\$23.7m	\$33.8m
Customer support	\$39m - \$53m	\$40.6m	\$44.1m
Total	\$48m - \$77m	\$64.3m	\$77.9m
10 million filers			
Technology & product	\$9.1m - \$25m	\$25.5m	\$35.5m
Customer support	\$59m - \$94m	\$78.1m	\$85.1m
Total	\$68m - \$119m	\$103.6m	\$120.6m
25 million filers			
Technology & product	\$10m - \$28m	\$30.7m	\$40.8m
Customer support	\$116m - \$185m	\$190.6m	\$208.1m
Total	\$126m - \$213m	\$221.3m	\$248.9m

Despite the difference in methodology, the IRS estimates and Third Party estimates largely overlap. The Third Party estimate provides a range of possible costs for each

uptake scenario, which describes the degree of uncertainty about costs. Most IRS estimates fall within the Third Party estimate ranges.

For all estimates, customer support is the largest driver of cost. In the Third Party estimate, this cost is driven by both the infrastructure that would be needed to stand up a new customer service team and the cost of customer support staff. For smaller uptake scenarios, these two costs are balanced, while for larger uptake scenarios, the customer support staff cost dominates.

The largest source of uncertainty with respect to customer service costs would be volume and complexity of calls. The IRS's cost estimates assume a ratio of one customer service representative per 10,000 taxpayers, which is in excess of current call frequency. However, it is industry best practice to base target staffing levels on the total time spent handling customer calls.¹³⁸ Any potential Direct File pilot should gather data on customer service demand that could be used to narrow down future cost estimates and allow for more accurate demand and cost forecasting in the long term. Overestimating customer service demand could lead to spending too much on customer support capacity, especially on the baseline infrastructure, while underestimating demand may lead to the inability of the IRS to provide a quality tax-filer experience to all filers.

Evaluation of IRS “Broader scope” assessment

The IRA requires the IRS to do a differential analysis of cost based on AGI and the complexity of the tax situation. However, as the IRS noted in their report,¹³⁹ imposing AGI limitations on a filing tool does not meaningfully change the functional requirements of that tool, meaning the development cost remains largely the same with or without AGI limitations.

The IRS estimate for “Technology & Product” under their “Broader Scope” scenario is substantially above the high end of the Third Party estimate range. The primary driver of Technology & Product cost is program staff, in particular, staffing the development team, which the IRS report indicates would include both contractors and federal employees.¹⁴⁰ The IRS's “Broader Scope” estimate may reflect an overly ambitious team size and

¹³⁸ “Why Customer Assistance Ratio is the Best KPI to Track Contact Center Utilization,” Burnie Group, <https://burniegroup.com/customer-assistance-ratio-best-kpi-for-contact-center-utilization/>.

¹³⁹ IRS draft report, Section 2.

¹⁴⁰ IRS draft report, Section 2.

development speed, which could lead to a degradation in delivery quality from trying to do too many things at once. In comparison, the Third Party estimate only considers team sizes that would not negatively impact delivery quality.

In interviews with the Third Party, private-sector technology experts noted that spending more on software engineering staff in order to deliver a complex product faster can ultimately degrade the quality of the product. Larger organizations with more teams tend to design larger systems with more parts.¹⁴¹ This can degrade software quality because larger and more complex systems lead to more code, and the number of defects in code is proportional to amount of code, regardless of test quality.¹⁴²

The Third Party opinion on cost is based on a maximum team size that is small enough to develop high-quality software. The “broader scope” cost assessment from the IRS implies a potential team size that may be large enough to degrade the quality of a potential Direct File tool.

If the IRS developed a potential Direct File tool using an iterative process in which the scope of the system was expanded with each release based on feedback from previous releases, both cost strategies could yield a product with comparable functionality, just over different time periods.

If the IRS moves forward, a future Direct File program would need to monitor team size and adjust both the product scope and budget to ensure a high-quality user experience.

Appendix: About New America

The IRS selected New America and Ariel Jurow Kleiman, Associate Professor of Law at Loyola Law School, Los Angeles, an expert in tax law and policy, to serve as the independent third party (hereafter referred to as “Third Party”). Neither New America nor Professor Jurow Kleiman are receiving monetary compensation from the IRS in exchange for providing this independent review.

¹⁴¹ Nachiappan Nagappan, Brendan Murphy, and Victor Basili, “The Influence of Organizational Structure on Software Quality: An Empirical Case Study,” *International Conference on Software Engineering* (2008), https://faculty.ksu.edu.sa/sites/default/files/the_influence_of_organizational_structure_on_software_quality_an_empirical_case_study.pdf.

¹⁴² “Reading 3: Testing,” *Software Construction* on MIT OpenCourseWare, 6.005, accessed May 5, 2023, <https://ocw.mit.edu/ans7870/6/6.005/s16/classes/03-testing/>.

To answer the IRA mandate, New America convened a group of five experts with backgrounds in government digital services, private sector software development practices, and policy implementation to join Professor Jurov Kleiman. The five experts included (in first name alphabetical order): Ayushi Roy, product advisor and Deputy Director of the New Practice Lab; David Koh, software engineering lead; Han Wang, user experience design lead; Ivana Ng, product lead; Mike Wilkening, service delivery advisor.

