AUTOMATED LEGAL GUIDANCE
AT FEDERAL AGENCIES

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AUTOMATED LEGAL GUIDANCE AT FEDERAL AGENCIES

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When individuals have questions about Federal benefits, services, and legal rules, they are increasingly seeking help from government chatbots, virtual assistants, and other automated tools. Current forms of automated legal guidance platforms include the U.S. Citizenship and Immigration Services's "Emma," the U.S. Department of Education's "Aidan," and the Internal Revenue Service's "Interactive Tax Assistant." Most scholars who have studied artificial intelligence and Federal government agencies have not focused on the government's use of technology to offer guidance to the public. The absence of scholarly attention to automation as a means of communicating government guidance is an important gap in the literature, given the strong influence that these communications can have on individuals' decisions about the law.

This Report describes the results of a qualitative study of automated legal guidance across the Federal government, which included semi-structured interviews with both agency technology experts and lawyers. This study was conducted under the auspices of the Administrative Conference of the United States (ACUS). During our study, we reviewed the automated legal guidance activities of all Federal agencies and conducted in-depth research on agencies that are already using well-developed chatbots, virtual assistants, or other related tools to assist the public in understanding or following relevant law. After identifying the agencies that are primary adopters of automated legal guidance, we conducted interviews with multiple individuals from each agency, as well as representatives from the U.S. General Services Administration.

We find that automated legal guidance offers agencies an inexpensive way to help the public navigate through complex legal regimes. However, we also find that automated legal guidance may mislead members of the public about how the law will apply in their individual circumstances. In some cases, agencies exacerbate this problem by, among other things, making guidance seem more personalized than it is, not recognizing how users may rely on the guidance, and not adequately disclosing that the guidance cannot be relied upon as a legal matter. In many respects, this is not a problem of agencies' own making. Rather, agencies are faced with the difficult task of translating complex statutory and regulatory regimes for a public that has limited capacity to understand them. Agencies also often lack sufficient resources to engage in more personalized outreach. Fundamentally, we identify a tension between agencies' reasonable desires to promote automated legal guidance and its underappreciated limitations.

In this Report, after exploring these challenges, we chart a path forward. We offer policy recommendations, organized into five categories: transparency; reliance; disclaimers; process; and accessibility, inclusion, and equity. We believe this Report, and the detailed policy recommendations that flow from it, will be critical for evaluating existing, as well as future, development of automated legal guidance by governments.

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I. INTRODUCTION

"Aidan," the virtual assistant created by the U.S. Department of Education (Department of Education) helps members of the public answer questions about Federal student aid, such as whether a student loan is dischargeable in bankruptcy.[1] "Emma," a computer-generated virtual assistant created by the U.S. Citizenship and Immigration Services (USCIS) answers questions that users have about U.S. immigration, such as whether a Green Card holder can travel outside the United States to visit an ailing relative for a lengthy period of time without having an adverse effect on immigration status.[2] And the "Interactive Tax Assistant," an online tool created by the Internal Revenue Service (IRS), can answer tax questions specific to taxpayers' personal circumstances, such as whether winnings from a neighborhood poker game have to be included in income.[3]

These are just a few examples of a broader, and growing, phenomenon: through chatbots, virtual assistants, and other automated tools, Federal agencies are progressively relying more on artificial intelligence (AI) to help the public understand and apply the law.[4] This development is the result of multiple pressures that Federal agencies face. Federal agencies have to contend with expectations that they will provide customer service experiences akin to those provided by the private sector.[5] Further, when explaining the law and regulatory programs to the public, including through internet-based technological tools, agencies are bound by the Plain Writing Act.[6] This statute requires that Federal agency communications with the public be "clear, concise, [and] well-organized."[7] Perhaps even more importantly than this mandate, agencies themselves profess

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[1] Federal Student Aid, *Meet Aidan (Beta)*, https://studentaid.gov/h/aidan (last visited Jan. 20, 2022).

[2] U.S. Citizenship and Immigr. Servs., *Meet Emma, Our Virtual Assistant*, (Apr. 13, 2018), https://www.uscis.gov/emma .

[3] Int. Rev. Serv., *Interactive Tax Assistant (ITA)*, *available at* https://www.irs.gov/help/ita (last visited Jan. 20, 2022).

[4] *See, e.g.*, AI in Government Act of 2019, S. 1363, 116th Cong. § 3(a), (b)(3); *Artificial Intelligence: With Great Power Comes Great Responsibility: Joint Hearing Before the Subcomm. on Research and Tech. & Subcomm. on Energy of the H. Comm. On Sci., Space, and Tech* (2018) (exploring potential promise and perils of emerging artificial intelligence technologies); *Artificial Intelligence for the American People*, WHITE HOUSE, https://www.whitehouse.gov/ai/ (last visited Jan. 18, 2022); Office of Sci. & Tech. Pol'y, White House, Summary of the 2018 White House Summit on *Artificial Intelligence for American Industry* 6 (2018), https://www.whitehouse.gov/wp-content/uploads/2018/05/Summary-Report-of-White-House-AI-Summit.pdf?latest (discussing how "[e]xecutive departments and agencies are applying AI to improve the provision of government services to the American people").

[5] Kathleen Walch, How The Federal Government's AI Center Of Excellence Is Impacting Government-Wide Adoption Of AI, FORBES.COM, Aug 8, 2020,01:00am EDT, https://www.forbes.com/sites/cognitiveworld/2020/08/08/how-the-federal-governments-ai-center-of-excellence-is-impacting-government-wide-adoption-of-ai/?sh=45de28f16660 (*quoting* Neil Chaudhry, Director, AI Implementations at the AI Center of Excellence within the General Service Administration).

[6] Plain Writing Act of 2010, Pub. L. No. 111-274, 124 Stat. 2861 (2010).

[7] Plain Language Act of 2010, Pub. L. 111-274, 111th Cong., 124 Stat. 2861 § 3. Federal agencies also must create plans and procedures to ensure compliance with, and transparency regarding, their plain language efforts. *Id.* at § 4. The Center for Plain Language annually evaluates how well federal agencies are complying with the Plain Language Act on their websites, in terms of organizational compliance and quality of writing. Center for Plain Language, *Reports*, https://centerforplainlanguage.org/reports/ (last visited Jan. 18, 2022). Recently, the Center for Plain Language has found that only a few agencies were excelling at offering plain writing for the public, and a third are failing. Center for Plain Language, *2020 Federal Plain Language Report Card*, https://centerforplainlanguage.org/2020-federal-plain-language-report-card/ (last visited Jan. 18, 2022). Problems included, among other things, that agency websites were focused too much on what agencies have done rather than

that many members of the public simply are not willing to read complex legal requirements.[8] At the same time, Federal agencies are perpetually strapped for resources, limiting their abilities to provide clear explanation of the law to the public.[9] AI seems to promise the government a way to respond to these competing pressures to explain the law, both quickly and clearly, in line with private sector standards, albeit with limited government resources. For this reason, as we explore in this Report, the Federal government is already using virtual assistants, chatbots, and related technology to respond to tens of millions of inquiries from the public about application of the law.[10]

Despite this significant development, scholarly study of automated guidance by Federal agencies remains in early stages. Most scholars who have studied artificial intelligence and Federal agencies have not focused on agencies' use of technology to offer guidance to the public. For instance, among other things, scholars have explored the government's use of AI to make enforcement decisions,[11] design regulations,[12] and make benefits and entitlement determinations.[13] Prior ACUS studies have provided important, broad-based perspectives about government use of AI,[14] as well as frameworks for when the government should automate machine learning tools for decision making.[15] This research has not focused in particular on the government's use of automation to explain what the law is to the public, rather than to actually impose such decisions on the public, such as in the form of an enforcement decision or a benefits determination.[16]

However, government explanations of the law to the public have particular importance.[17] Many, if not most, members of the public lack access to legal counsel who can analyze sources

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the information that users need, the websites are cluttered with acronyms and legal jargon, and they include long, bulleted lists. *Id.*

[8] *See* text accompanying *supra* notes 128-139.

[9] *See, e.g.*, Brian Naylor, *The IRS Faces Backlogs from Last Year as a New Tax Filing Season Begins*, NPR, Jan. 24, 2022, https://www.npr.org/2022/01/24/1074793780/when-are-taxes-due-irs-phones-backlog (describing huge backlogs at the IRS and extreme underfunding, resulting in taxpayers having a 1 in 9 chance of getting their phone calls to the IRS answered).

[10] *See, e.g.*, text accompanying note 70 (noting that USCIS's Emma has "successfully responded to more than 35 million inquiries from more than 11 million users.")

[11] *See, e.g.*, Sandra G. Mayson, *Bias in, Bias Out*, 128 YALE L.J. 2218 (2019) (exploring racial bias in algorithmic criminal justice).

[12] *See, e.g.*, Cary Coglianese & David Lehr, *Regulating by Robot: Administrative Decision Making in the Machine-Learning Era*, 105 GEO. L.J. 1147 (2017) (exploring the use of machine learning in the administrative rulemaking process).

[13] *See, e.g.*, Danielle Keats Citron, *Technological Due Process*, 85 WASH. U. L. REV. 1249, 1267-77 (2008) (exploring as examples state public benefits systems, alongside more enforcement-based decisions such as the No-Fly list).

[14] David Freeman Engstrom et al., *Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies*, Report Submitted to ACUS (Feb. 2020), 6, https://www-cdn.law.stanford.edu/wp-content/uploads/2020/02/ACUS-AI-Report.pdf.

[15] Cary Coglianese, *A Framework for Governmental Use of Machine Learning* (Report Submitted to ACUS) (Dec. 2020), https://www.acus.gov/sites/default/files/documents/ Coglianese%20ACUS%20Final%20Report.pdf

[16] *But see, e.g.,* Citron, *supra* note 13, at 1266 (noting that one type of government mixed automation system may "generat[e] automated advice for citizens and entities, who may then use the advice to make further decisions.").

[17] *See generally*, Joshua D. Blank & Leigh Osofsky, *The Inequity of Informal Guidance*, 75 VAND. L. REV. 1093 (2022) (exploring generally the role that informal government guidance can play in compelling certain members of the public to make decisions, and examining the accompanying equity issues). *See also* Joshua D. Blank & Leigh

of law underlying summaries offered by Federal government agencies.[18] This dynamic is exacerbated by the complexity of many regulatory regimes.[19] The result is that, for most members of the public, guidance they obtain from government explanations of the law will be critical in shaping their behavior and the ways in which they view and respond to the law.[20] As the government expands its use of automated legal guidance, this power to shape public behavior will only grow, even if it is unchecked by administrative rules and procedures that are supposed to monitor government guidance.

This Report describes the results of a qualitative study of automated legal guidance across the Federal government, which included our own research with automated guidance tools as well as semi-structured interviews with both agency technology experts and lawyers. This study was conducted under the auspices of the Administrative Conference of the United States (ACUS).[21] During our study, we reviewed the automated legal guidance activities of all Federal agencies and focused on agencies that have already introduced well-developed chatbots, virtual assistants, or other related tools to assist the public in understanding or following relevant law. Specifically, we focused on automated tools provided by USCIS ("Emma"), the Department of Education ("Aidan") and the IRS ("Interactive Tax Assistant" or "ITA"). After identifying these agencies as the primary adopters of automated legal guidance, we conducted a thorough examination of the tools, principally focusing on how the tools communicate the law to the public. We also conducted interviews with multiple individuals from each agency, as well as with representatives from the U.S. General Services Administration (GSA). Each interview consisted of a range of questions, including questions regarding the agency's reasons for developing the automated tool, process for designing and maintaining the tool, and methods for evaluating the effectiveness of the tool, among others. After describing the results of our interviews and common themes, we offer detailed recommendations that policymakers can adopt to reform agencies' varying approaches to automated legal guidance.

Our study finds that automated legal guidance offers several benefits to both agencies and the public.[22] First, automated tools provide members of the public with answers to their questions faster and more efficiently than human customer service representatives. Second, agency officials viewed automated legal guidance as helping individuals navigate complex legal rules and procedures and also aiding third party advisors, such as accountants and lawyers, who may be

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Osofsky, *Automated Legal Guidance*, 106 CORNELL L. REV. 179 (2020). A long line of literature has explored the role that government guidance generally (outside the automated context) can play in compelling the public to take positions in accordance with government guidance. For one of the canonical works on the works on the matter, see Robert A. Anthony, *Interpretive Rules, Policy Statements, Guidances, Manuals, and the Like-Should Federal Agencies Use Them to Bind the Public?*, 41 DUKE L.J. 1311 (1992) (setting forth how informal guidance can practically bind the public and examining the consequences of this feature of the administrative guidance system). For more recent work on the topic, see, e.g., Michael S. Greve, Ashley C. Parrish, *Administrative Law Without Congress*, 22 GEO. MASON L. REV. 501, 532-34 (2015) (exploring potentially coercive nature of administrative guidance documents).

[18] Blank & Osofsky, *The Inequity of Informal Guidance*, *supra* note 17.

[19] *Id.*

[20] *See, e.g.,* Jessica Mantel, *Procedural Safeguards for Agency Guidance: A Source of Legitimacy for the Administrative State*, 61 ADMIN. L. REV. 343, 354 (2009) ("Guidance documents often have a substantial impact on regulated parties, beneficiaries of government programs, and the public.")*.*

[21] The Administrative Conference of the United States (ACUS), *available at* https://www.acus.gov/administrative-conference-united-states-acus.

[22] *See infra* Part IV.A.

assisting users with their legal compliance obligations. Last, agency officials described how automated legal guidance enables their agencies to clearly and transparently state agency views on legal issues to the public and their advisors.

At the same time, our study highlights potential drawbacks of agency reliance on automated legal guidance as the primary way to advise members of the public.[23] First, through our review of agencies' automated tools, we found that they can provide guidance to members of the public that deviates from the formal law. Automated tools sometimes portray unsettled formal law as unambiguous, add administrative gloss to the formal law, and omit discussion of statutory and regulatory exceptions and requirements. This phenomenon is a byproduct of some of the challenges agencies face. Agencies have the difficult task of translating complex statutory and regulatory regimes for a public that has limited capacity to understand them. Agencies also often lack sufficient resources to engage in more personalized outreach. As we have explored in earlier work, these conditions lend themselves to the types of "simplexity" that we identified in agencies' automated legal guidance.[24]

The likelihood and, indeed, inevitability, of "simplexity" nonetheless merits a careful response, so as to preserve benefits of automated legal guidance, without too significant of a cost. Our study and interviews unearthed issues that merit attention across Federal agencies. First, it is essential to recognize the ways that automated legal guidance may deviate from the complex, underlying law. Our interviews with agency officials suggested that there is work to be done in this regard. Once automated legal guidance tools are subject to searching inquiry regarding how the guidance explanations do, or do not, map onto particular factual scenarios, agencies should then focus on how to better apprise the public of some of the gaps or limitations of such tools. Counterintuitively, this may suggest that agencies should be more transparent about the ways that users are receiving guidance that is not, in fact, personalized, rather than trying to make the tools seem as personalized as possible. Moreover, automated legal guidance tools should provide users greater notice of the formal law than exists at present, as well as more transparent disclosure of the limited legal authority of automated legal guidance tools. Agencies should also provide public archives of changes made to agencies' automated tools' questions and answers.

After presenting and analyzing our findings regarding automated legal guidance, we offer concrete and specific policy reform recommendations.[25] As we describe, a single comprehensive reform that would address all potential drawbacks of automated tools without diminishing their potential benefits to agencies and the public is not likely to appear. Instead, we offer multiple detailed policy recommendations for Federal agencies that have introduced, or may introduce, chatbots, virtual assistants, and other automated tools to communicate the law to the public. Our recommendations are organized into five general categories: (a) transparency; (b) reliance; (c) disclaimers; (d) process; and (e) accessibility, inclusion, and equity.

The remainder of this Report proceeds as follows. Part II describes the emergence of automated legal guidance at Federal agencies as a means of explaining the law to the public. Part III describes our interviews with officials from USCIS, the Department of Education, and the IRS and common themes as well as differences that occurred in these interviews. Part IV extracts from our review of agencies' automated legal guidance tools and our interviews with agency officials the common benefits and costs we observed across agencies. Part V presents our policy

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[23] *See infra* Part IV.B.

[24] *See* text accompanying notes 144-156.

[25] *See infra* Part V.

recommendations regarding the use of chatbots, virtual assistants, and other automated tools by Federal agencies. Part VI concludes.

II. AUTOMATION OF EXPLANATION

A. General Application Across Federal Government

Agency officials have begun to embrace the use of AI across their agencies' operations. As a result of a variety of executive orders and statements, Federal agencies have committed to promoting, developing, and using AI in ways that benefit the public at large.[26] These efforts self-consciously mirror a trend in private industry. As we have described in prior work, private industry has engaged in significant development of "chatbots" and "virtual assistants" to respond to customer service inquiries.[27] While the terms "chatbots" and "virtual assistants" are somewhat malleable, both are conversational interfaces, which attempt to automate interactions.[28] Chatbots can provide accurate answers to queries, but virtual assistants tend to be more intelligent, and can thus perform additional tasks, such as making an appointment or filling out a form in response to a conversation.[29] In both cases, private industry has suggested that these automated tools will revolutionize interactions with the public because they are always on, they learn quickly how to respond to inquiries, and they can therefore provide widely accessible answers to common questions.[30]

Like the Federal government, state and local governments have followed the private sector by embracing tools that automate guidance and interactions with the public. This trend has increased significantly since the onset of the COVID-19 pandemic. By June 2020, nearly three-quarters of states were reported to have employed chatbots to address public needs and inquiries.[31] With catchy names like "Larry," "Missi," "Robin," and "Porter," many U.S. states created these chatbots in a matter of days in order to respond to public claims and common questions with a "consistent" set of answers.[32]

As Federal agencies, like private entities and state and local governments, increase their use of automated guidance tools, the potential reach of these tools grows exponentially. Once programmed, each of these tools faces extremely small marginal costs in engaging in additional interactions. As a result, unlike customer service agents, who face real limits in their capacity to engage, automated guidance tools have extraordinarily broad reach in terms of the extent to which they can inform and influence the public.

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[26] *See, e.g.*, The White House, *Executive Order 13859, Maintaining American Leadership in Artificial Intelligence*, Feb. 11, 2019, https://www.federalregister.gov/documents/2019/02/14/2019-02544/maintaining-american-leadership-in-artificial-intelligence; The White House*, Executive Order on Promoting the Use of Trustworthy Artificial Intelligence in the Federal Government*, Dec. 3, 2020, https://trumpwhitehouse.archives.gov/presidential-actions/executive-order-promoting-use-trustworthy-artificial-intelligence-federal-government/ (setting forth and elaborating principles regarding federal agency development and use of artificial intelligence).

[27] Blank & Osofsky, *Automated Legal Guidance, supra* note 17, at 197.

[28] Naveen Joshi, Yes, Chatbots and Virtual Assistants Are Different!, FORBES, Dec. 23, 2018, 8:17 pm, https://www.forbes.com/sites/cognitiveworld/2018/12/23/yes-chatbots-and-virtual-assistants-are-different/?sh=706589306d7dhttps://www.forbes.com/sites/cognitiveworld/2018/12/23/yes-chatbots-and-virtual-assistants-are-different/?sh=706589306d7d.

[29] *Id.*

[30] Blank & Osofsky, *Automated Legal Guidance, supra* note 17, at 197.

[31] Colin Wood, *Nearly 75% of States Launched Chatbots to Aid Pandemic Response*, STATESCOOP, Jun. 26, 2020, https://statescoop.com/nearly-75-percent-states-launched-chatbots-aid-pandemic-response/. https://statescoop.com/nearly-75-percent-states-launched-chatbots-aid-pandemic-response/.

[32] *Id.*

Scholars who conducted a recent study found that the government's use of AI is "diverse and spans the federal administrative state," including in the contexts of enforcing the law, adjudicating government benefits and privileges, monitoring and analyzing risks to the public, extracting information from government data streams, and communicating with the public about its rights and obligations.[33] Yet, these scholars also concluded that "despite wide agency embrace of AI, the government still has a long way to go," as many agency uses of artificial intelligence remained at early stages of development.[34]

One area of significant expansion of government use of AI is agencies' communication with the public. Federal agencies are engaging in extensive digital outreach, including website and social media communications.[35] As an outgrowth of such efforts, Federal agencies are developing automated tools to answer questions from the public. There is currently wide variety in the sophistication of such tools, with many agencies using rudimentary approaches, while others are already developing more advanced tools. Using these automated tools, government agencies answer a broad range of questions, from questions about basic government functions, to questions about the general legal rules, to questions about how such rules apply in particular situations.

Many Federal agencies have begun the process of automating guidance to the public, with very different levels of sophistication. As a general matter, agencies such as the USDA have developed what are essentially internet search tools. If a user accesses "AskUSDA," the user can type a question into a search box, which will then pull up "knowledge articles" from the USDA website that potentially respond to the question. For instance, typing "Can I bring produce back to the United States?" yields numerous search results including, just to name a few, "Can I bring food into the United States?," "Where can I find regulatory and permit information for importing plants or plant products into the United States?," "What are the regulations for importing rice into the United States?," and "Can I bring back South African Biltong (beef jerky) into the United States of America for personal consumption?".[36] Clicking on one of the search results yields a "Knowledge Report" with detailed information. For instance, clicking on the knowledge article regarding South African Biltong explains that, "The United States Department of Agriculture (USDA) establishes agricultural import regulations to prevent the introduction of potentially devastating animal and plant pests and diseases into the United States," and then goes on to cite

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[33] Engstrom et al., *supra* note 14, at 6.

[34] *Id.* Other scholars have examined federal agencies' experimentation with new ways of reaching the public. *See, e.g.*, Elizabeth G. Porter & Kathryn A. Watts, *Visual Rulemaking*, 91 N.Y.U. L. REV. 1183 (2016) (exploring agencies' use of visual images in the rulemaking process). ACUS has previously studied agencies' use of social media in rulemaking. Michael Herz, *Using Social Media in Rulemaking: Possibilities and Barriers, Final Report to ACUS*, Nov. 21, 2013, https://www.acus.gov/sites/default/files/documents/Herz%20Social%20Media%20Final%20Report.pdf.

[35] *See supra* notes 1-3 and accompanying text. For instance, a visit to the Department of Labor (DOL) website reveals that the DOL uses a suite of different, internet-based technological tools to provide often complicated information to the public. The DOL website contains "Featured Stories," which are adorned with apt pictures. A recent "Featured Story" about "Staying Safe at Work" displayed a grocery store employee wearing a mask and gloves while putting items on a shelf. U.S. Dep't of Labor, *Featured Stories*, https://www.dol.gov/ (last visited Aug. 26, 2021). The website also features "Quick Links" to popular topics, such as the minimum wage and the Family and Medical Leave Act, Blog Posts on topics such as the American Rescue Plan, and links to Twitter posts by the DOL and its Secretary about DOL priorities and programs. U.S. Dep't of Labor, US Labor Department @USDOL, https://www.dol.gov/ (last visited Jan. 20, 2022).

[36] USDA, AskUSDA, https://ask.usda.gov/s/ (Type: Can I bring produce back to the United States?) (last visited Oct. 15, 2021).

and summarize the regulations applicable to cured and dried meat from South Africa.[37]

The U.S. Department of Veterans Affairs (VA) has likewise developed digital tools to automate interactions with the public. Recently, the VA created a coronavirus chatbot, which allows users to click through a series of menus to find the information they are seeking. For instance, a user can click from a menu "Benefits and claims," and then click "Can I have more time to apply for Veterans' Group Life Insurance (VGLI) after separation?" in order to find out what COVID-19 pandemic-related extensions exist for applying for benefits after separation from service.[38] A link at the bottom of this entry connects users to more detailed information about general eligibility for VGLI.[39] The VA has indicated that the technology has effectively helped respond to the dual challenges of a surge in veteran needs and constrained resources by using automation to solve tens of thousands of veteran problems and inquiries in a "human-like" way.[40] The VA has also introduced "e-VA," an "artificial intelligence platform providing modern, streamlined and responsive customer service, as well as automating routine administrative activities with your VR&E Vocational Rehabilitation Counselor (VRC) and staff."[41] In introducing this technology, the VA explained that vocational rehabilitation counselors have "become overwhelmed because the bulk of their time is spent on time-consuming administrative tasks. Veterans and counselors are frustrated."[42] E-VA (pronounced like the name "Eva") promises to allow counselors to focus directly on veterans.[43]

Other agencies are also using digital tools to provide automated guidance to the public. For instance, the automated "What's Covered" App for Medicare "delivers general cost, coverage and eligibility details for items and services covered by Medicare Part A and Part B."[44] The Transportation and Security Administration (TSA) has developed "AskTSA," a messaging tool, in which users can send TSA questions on Facebook or Twitter, which the agency will then answer through Facebook messages and Tweets.[45] While TSA agents are involved in formulating the answers, the system shares some of the features of more automated counterparts from other agencies, including the broad availability of the answers through the use of digital tools, and the provision of accessible, straightforward answers to questions. TSA has indicated that the goal of these tools is making "helpful information as easy as possible."[46]

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[37] USDA, *Can I Bring Back South African Biltong (Beef Jerky) Into the United States of America for Personal Consumption?*, https://ask.usda.gov/s/article/Can-I-bring-back-South-African-Biltong-beef-jerky-into-the-United-States-of-America-for-personal-con (Jul. 12, 2021).

[38] U.S. Veterans Affairs Dep't, VA Coronavirus Chatbot, https://www.va.gov/coronavirus-chatbot/ (last updated Oct. 6, 2021).

[39] U.S. Veterans Affairs Dep't, Veterans' Group Life Insurance (VGLI), https://www.va.gov/life-insurance/options-eligibility/vgli/ (last updated Oct. 12, 2021).

[40] Jason Miller, *VA Found a Fast Solution to its Growing Call Center Wait-Time Problem*, FEDERAL NEWS NETWORK, https://federalnewsnetwork.com/ask-the-cio/2020/09/va-found-a-fast-solution-to-its-growing-call-center-wait-time-problem/ (Sept. 9, 2020, 12:01 pm).

[41] U.S. Veterans Affairs Dep't, *Introducing VR&E's e-VA Customer Service Support*, https://content.govdelivery.com/accounts/USVAVBA/bulletins/29d349a (Sept. 9, 2020, 11:36 am).

[42] E-Va Promo Video, https://www.youtube.com/watch?v=BadKD5hUBpE (Oct. 8, 2019).

[43] *Id.*

[44] Medicare.gov, *Get Medicare's New What's Covered App!*, https://www.medicare.gov/blog/whats-covered-mobile-app (Jan. 28, 2019).

[45] Dep't of Homeland Security, *Have A Question? Now You Can Ask TSA on Facebook*, https://www.dhs.gov/blog/2016/07/07/have-question-now-you-can-ask-tsa-facebook (Jul. 7, 2016, 10:40 am).

[46] Dep't of Homeland Security, *Have a Question? Now You Can Ask TSA on Facebook*, Jul. 7, 2016, https://www.dhs.gov/blog/2016/07/07/have-question-now-you-can-ask-tsa-facebook.

Sometimes these tools perform basic, customer service functions, while other times they engage in more legal guidance-giving. For instance, e-VA automates administrative tasks, such as scheduling and re-scheduling appointments and submitting documentation.[47] On the other hand, AskUSDA offers legal guidance (such as the applicable regulations and permit information for plant imports),[48] albeit alongside definitely non-legal guidance, such as how long opened salad dressing is good for.[49]

Putting aside the variety between the different automated tools the Federal government is using, there is clearly a distinct move by Federal agencies to include automated tools of some sort in their suite of communication tools. A series of recent executive orders has dictated that Federal agencies should continue to support and develop AI, in part to improve government operations.[50] The General Services Administration (GSA) created the Artificial Intelligence (AI) Center of Excellence ("CoE") to support Federal government adoption of artificial intelligence "through direct partnerships, enterprise-level transformation, and discovery work."[51] One of the ways the AI CoE has suggested that the government can do this is through the use of intelligent chatbots, which, like other AI solutions, can "speed service delivery by automatically resolving routine claims, thus freeing up federal employees to focus on more complex problems that require a human touch."[52] Below, we describe three Federal agency automated tools that are particularly well-developed at present and that engage in significant communications of law: USCIS's "Emma", the Department of Education's "Aidan," and the IRS's "Interactive Tax Assistant" (or "ITA").

Before delving into the specifics of each automated tool, it is worth describing some commonalities as well as legal implications. All of these tools attempt to provide straightforward answers to questions that users would have about very complex statutory and regulatory regimes. In so doing, they attempt to make plain in a summary fashion the more complex, underlying law, not serve as affirmative assertions of changes or additions to the existing statutory and regulatory regime. As such, they probably are not "legislative rules" that bind the government as well as the public.[53] Moreover, given their informal status, members of the public are unlikely to be able to

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[47] *VR&E Pilots the Electronic Virtual Assistant (e-VA)*, https://blogs.va.gov/VAntage/73853/vre-pilots-electronic-virtual-assistant-e-va/ (Apr. 22, 2020).

[48] *See supra* notes 36-37 and accompanying text.

[49] USDA, AskUSDA, https://ask.usda.gov/s/ (Type: Can I bring produce back to the United States?) (last visited Oct. 15, 2021).

[50] *See, e.g.*, Executive Order 13859, FR Doc 2019-02544, *Maintaining American Leadership in Artificial Intelligence*, Feb. 11, 2019; Executive Order 13960, *Promoting the Use of Trustworthy Artificial Intelligence in Federal Government*, FR Doc 2020-27065, Dec. 3, 2020 (encouraging agencies to expand use of artificial intelligence and set forth a framework for responsible use of artificial intelligence).

[51] Kathleen Walch, *How the Federal Government's AI Center of Excellence Is Impacting Government-Wide Adoption of AI*, FORBES, Aug. 8, 2020, 1:00 am, https://www.forbes.com/sites/cognitiveworld/2020/08/08/how-the-federal-governments-ai-center-of-excellence-is-impacting-government-wide-adoption-of-ai/?sh=45de28f16660.

[52] *Id.*

[53] *See, e.g.*, Chrysler Corp. v. Brown, 441 U.S. 281, 295 (1979) ("It has been established in a variety of contexts that properly promulgated, substantive agency regulations have the 'force and effect of law.'"); Michael Asimow, *Nonlegislative Rulemaking and Regulatory Reform*, 1985 DUKE L.J. 381, 383. It is often challenging to distinguish legislative rules, which formally bind both the agency and the public, from interpretative statements about the law that are not subject to notice-and-comment requirements. *See* 5 U.S.C. § 553 (2018); *See, e.g.*, Cmty. Nutrition Inst. v. Young, 818 F.2d 943, 946 (D.C. Cir. 1987) ("The distinction between legislative rules and interpretative rules or policy statements has been described at various times as 'tenuous,' 'fuzzy,' 'blurred,' and, perhaps most picturesquely, 'enshrouded in considerable smog.'").

rely upon them as a defense against an enforcement action. Courts have made as much clear in the tax context, in which they have held that informal administrative guidance, such as statements made by ITA, cannot alter the meaning of the formal tax law, statutes, and regulations.[54]

B. Emma

USCIS developed Emma, a computer-generated virtual assistant, that answers questions from users about U.S. immigration.[55] USCIS is a Federal agency within the Department of Homeland Security that "administers the nation's lawful immigration system."[56] Specifically, since 2003, USCIS has been responsible for the "service functions" of the U.S. immigration system, whereas other agencies within DHS (Immigration and Customs Enforcement (ICE) and Customs and Border Protection (CBP)) have been responsible for immigration enforcement and border security.[57]

USCIS has an enormous service-oriented workload, which it spreads across its more than 19,000 government employees and more than 200 offices around the world.[58] USCIS recently estimated that, on an average day, the agency adjudicates more than 26,000 requests for various immigration benefits; processes 2,500 applications to sponsor relatives and future spouses; analyzes nearly 600 tips, leads, cases and detections for potential fraud, public safety and national security concerns; processes refugee applications around the world in support of the refugee admissions ceiling; and receives 50,000 phone calls to the toll-free phone line and more than 150,000 inquiries and service requests via online accounts and digital self-help tools, among many other tasks.[59]

Of particular interest in terms of USCIS's role in guidance-giving, USCIS receives almost a million visitor sessions each day to its website.[60] As this statistic makes clear, USCIS's digital interactions with the public are a critical part of USCIS fulfilling its service mission. This is consistent with USCIS's strategic plan, a major platform of which is to provide a "robust digital environment" that "[p]rovides access to 'the right data at the right time' to support decision-making processes."[61]

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[54] *See, e.g.,* Miller v. Commissioner, 114 T.C. 184, 194–95 (2000); United States v. Josephberg, 562 F3d 478 (2d Cir. 2009); Carpenter v. United States, 495 F2d 175, 184 (5th Cir. 1974); Adler v. Comm'r, 330 F2d 91 (9th Cir. 1964; Zimmerman v. Comm'r of Internal Revenue, 71 T.C. 367, 371 (1978), aff'd sub nom. Zimmerman v. Comm'r, 614 F.2d 1294 (2d Cir. 1979); Johnson v. Comm'r, 620 F.2d 153 (7th Cir. 1980).

[55] USCIS, *Meet Emma, Our Virtual Assistant*, https://www.uscis.gov/tools/meet-emma-our-virtual-assistant (last updated Apr. 13, 2018).

[56] USCIS, *Mission and Core Values*, https://www.uscis.gov/about-us/mission-and-core-values (last updated Jul. 5, 2020).

[57] USCIS, *Our History*, https://www.uscis.gov/about-us/our-history (last updated Aug. 24, 2020).

[58] USCIS, *Mission and Core Values*, https://www.uscis.gov/about-us/mission-and-core-values (last updated Jul. 5, 2002).

[59] USCIS, *A Day in the Life of USCIS*, https://www.uscis.gov/about-us/a-day-in-the-life-of-uscis (last updated Feb. 17, 2021).

[60] *Id.*

[61] USCIS, *Strategic Plan, 2019-2021*, https://www.uscis.gov/sites/default/files/document/reports/USCIS_Strategic_Plan_2019-2021.pdf, at 15.

Within this context, USCIS launched Emma in December of 2015.[62] Emma was created to provide users an alternative means of accessing information about the immigration process and their immigration status. One hope was that Emma would alleviate the burden on USCIS call centers, which were, at the time, receiving over one million calls a month.[63] As USCIS described on Emma's launch:

> Emma was developed in response to a growing interest in self-help tools and to enhance our applicant services. USCIS call centers currently receive many questions concerning general information requests that can be provided through the Web. Now Emma will help provide that information.[64]

Named after Emma Lazarus, whose words inscribe the base of the Statue of Liberty, USCIS has suggested that the chatbot Emma also stands ready to serve immigrants, in this case by providing them accessible information about the immigration process.[65] USCIS has emphasized that Emma answers questions based on your own words; you don't need to know "government speak."[66] In addition to being able to "[p]rovide immediate responses to your questions about all of [USCIS's] services," Emma can "[g]uide you through [USCIS's] website" and "[f]ind information based on the questions and search terms you use."[67] Emma can type answers in either English or Spanish, and she can speak answers as well (although currently only in English).[68] An "Ask Emma" button pops up on USCIS web pages,[69] and USCIS has widely advertised Emma, including on social media platforms like Facebook and Twitter.[70]

USCIS has reported that Emma has received widespread use and has numerous indicia of success. In 2020, USCIS reported that Emma was one of the most widely used chatbots in the U.S. government, having successfully responded to more than 35 million inquiries from more than 11 million users.[71] USCIS also described Emma as a "very highly trafficked" and "very useful tool for many of our applicants and the general public," which USCIS rel[ies] on very heavily."[72] USCIS has also indicated that, by 2021, Emma had a "success rate" (which results

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[62] Aaron Boyd, *USCIS Virtual Assistant to Offer More 'Human' Digital Experience* (Nov. 16, 2015), https://www.federaltimes.com/it-networks/2015/11/16/uscis-virtual-assistant-to-offer-more-human-digital-experience/.

[63] *Id.* As it turns out, Emma did not yield a substantial reduction in calls to the call center. For further discussion, *see infra* notes 76-77 and accompanying text.

[64] USCIS, *USCIS Launches Virtual Assistant - Emma Gives Customers Another Option for Finding Answers*, https://www.uscis.gov/archive/uscis-launches-virtual-assistant-emma-gives-customers-another-option-for-finding-answers (last updated Dec. 2, 2015).

[65] USCIS, *Meet Emma, Our Virtual Assistant*, https://www.uscis.gov/tools/meet-emma-our-virtual-assistant (last updated Apr. 13, 2018).

[66] *Id.*

[67] *Id.*

[68] *Id.*

[69] *See, e.g.*, USCIS, https://www.uscis.gov/ (last visited Oct. 4, 2021) (USCIS home page, prominently featuring an Ask Emma box, which indicates, "Hi, I'm Emma. I'm programmed to help you with questions about this site. What would you like to ask me?").

[70] *See, e.g.*, USCIS, Tweet, https://twitter.com/USCIS/status/1344275632058986497 (Dec. 30, 2020, 8:34 am).

[71] Kathleen Walch & Ronald Schmelzer, *AI Today Podcast # 125: The Emma Chatbot: Interview with Courtney Winship, US Citizenship & Immigration Services*, https://www.cognilytica.com/2020/01/22/ai-today-podcast-125-emma-immigration-chatbot-interview-with-courtney-winship-us-citizenship-and-immigration-service-uscis/ (last visited Oct. 5, 2021).

[72] *Id.*

from not giving an answer of "I don't know") of 93% in English and 90% rate in Spanish, having brought down her "I don't know" response significantly over time.[73] USCIS has described that Emma learns over time by training with adjudicators and case managers, then training with the public, and that Emma has continued to build her skills.[74] USCIS has further described that Emma "has a wonderful team of people, including subject matter experts, who use her data to refine her knowledge-base," or what can be understood as "human in the loop practice."[75]

However, USCIS has acknowledged that, in some ways, Emma has not met all of USCIS's goals. In particular, Emma did not substantially reduce call volumes to the call center.[76] Rather, Emma seemed to just provide another means of accessing the type of information that users could (and were) accessing through the call centers. As a result, Emma did not appear to enable USCIS agents to be re-deployed to more complex questions and away from more standard inquiries.[77] In order to meet this goal, USCIS suggested that authentication tools may have to be used to provide users with more personalized responses.[78] This would enable Emma to access personalized information about a user's immigration status from USCIS's database and provide a tailored response. For instance, if a user's identity can be authenticated, the user may be able to receive not only general information about the immigration process, but also specific information about the status of the user's immigration or benefits application.

One issue that has not received any significant government or scholarly analysis is how Emma translates the law for the public. In line with the vision that Emma will provide relatable and accessible information for the public, and will not use "government speak,"[79] Emma tries to offer straightforward, understandable answers to a wide variety of questions. In large part, Emma does so by acting as a concierge of sorts, directing users to the right place on the website to answer their queries.

For instance, if a user types into Emma, "Where is my visa?," Emma will respond, "USCIS offers many different types of visa categories. Please tell me the specific type of visa or visa category you're interested in learning more about or select from the links below . . . ."[80] If, from the visa choices that Emma offers, the user clicks on "K Visa (Fiancé Visa)," Emma will open up

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[73] *Id.*

[74] *Id.*

[75] Federal Drive, *Vashon Citizen: USCIS' New Virtual Assistant Emma Gets Service Award*, https://federalnewsnetwork.com/tom-temin-federal-drive/2018/05/vashon-citizen-uscis-new-virtual-assistant-emma-gets-service-award/ (May 31, 2018, 9:06 am).

[76] Kathleen Walch & Ronald Schmelzer, *AI Today Podcast # 125: The Emma Chatbot: Interview with Courtney Winship, US Citizenship & Immigration Services*, https://www.cognilytica.com/2020/01/22/ai-today-podcast-125-emma-immigration-chatbot-interview-with-courtney-winship-us-citizenship-and-immigration-service-uscis/ (last visited Oct. 5, 2021).

[77] *Id.*

[78] *Id.* Other parties have raised some questions and concerns about Emma. For instance, Emma appears to be the only government chatbot who not only has a face, but also an image. One group of researchers has critiqued how, "[a]s a flawless English speaker with the potential to be Anglopassing, Emma upholds whiteness as the central qualifier in the American nationalist criteria of belonging and citizenship." Melissa Villa-Nicholas & Miriam E. Sweeney, *Designing the 'good citizen' through Latina identity in USCIS' virtual assistant 'Emma'* (2019), https://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1018&context=lsc_facpubs, at 10.

[79] USCIS, *Meet Emma, Our Virtual Assistant*, *supra* note 2.

[80] USCIS, *Ask Emma*, *https://www.uscis.gov/tools/meet-emma-our-virtual-assistant* (last visited Oct. 8, 2021) (Type: Where is my Visa?).

a webpage titled "Green Card for Fiancé(e) of U.S. Citizen."[81] This webpage contains extensive information for the user, which is contained in accessible pop-out text (with tabs), including information about eligibility for adjustment of status, bars to adjustment, grounds of inadmissibility, how to apply, what to submit (K-1 nonimmigrant applicants), conditional approval, family members, and employment authorization and advance parole documents.[82] It also contains a tab titled "legal reference," which links users to the applicable statutory, regulatory, and USCIS policy manual provisions.[83]

C. Aidan

Federal Student Aid (FSA), an office of the U.S. Department of Education, has developed Aidan, a virtual assistant that helps members of the public answer questions about Federal student aid.[84] FSA is responsible for managing the grant, loan, and work-study funds authorized by Title IV of the Higher Education Act of 1965.[85] In this capacity, FSA has a number of tasks, including, among other things: providing information to students and their families about their eligibility for Federal student aid and the process of applying for and receiving it; developing the Free Application for Federal Student Aid (FAFSA) and processing FAFSA submissions; disbursing and accounting for Federal student aid funds; ensuring compliance by all parties (students, schools, and financial entities) with the law throughout the lending process; managing outstanding loan portfolios; and generally providing information to all participants about the entire Federal student loan process.[86] This portfolio of responsibilities is quite large, both in the aggregate and in terms of individual tasks. As just one example, FSA estimates that it processes approximately 20 million FAFSA submissions annually.[87]

Aidan was designed to both streamline FSA's enormous workflow and to make the Federal government more akin to a private business model. In this regard, Aidan was developed as part of a broader, concentrated effort by FSA to adopt a "next gen" model to improve customer services, through increased use of online technology, in an effort to increase operational efficiency and lower costs.[88] The goal was to provide world class service around the student financial aid lifecycle, which would be available 24/7.[89] The hope was that Aidan would do so while also relieving pressure on the call center.[90]

In introducing Aidan, then Secretary of Education Betsy DeVos explained that "[s]implicity is common place in the private sector," and that FSA needed to completely modernize the way that it interacted with students.[91] Aidan would play a big role in this revamping because, "[i]f

[81] USCIS, *Green Card for Fiancé(e) of U.S. Citizen*, https://www.uscis.gov/green-card/green-card-eligibility/green-card-for-fiancee-of-us-citizen (last updated Feb. 8, 2018).

[82] *Id.*

[83] *Id.*

[84] Federal Student Aid, *Meet Aidan (Beta)*, *supra* note 1.

[85] Federal Student Aid, *About US*, https://studentaid.gov/about (last visited Sept. 3, 2021).

[86] *Id.*

[87] *Id.*

[88] Interview with Federal Agency Officials, Sept. 17, 2021.

[89] *Id.*

[90] *Id.*

[91] Secretary Betsy DeVos's Speech at the 2019 Federal Student Aid Conference, https://www.youtube.com/watch?v=gLo2rNJXRyo.

students have questions, they'll be able to ask Aidan."[92] The result would be that the government would be able to provide Federal student financial aid services "on par with world-class financial firms."[93] Likewise, in an interview about Aidan, a representative from FSA explained that,

> Our financial aid programs are complex, we know it. We have a lot of content on our site and we have to figure out ways to digest that content to make it easy for people to understand given their experiences with private industry, which 9 out of 10 times is very simple and straightforward.[94]

Reports about Aidan have also emphasized how Aidan may help the Federal government better approximate private sector communication expectations. For instance, an *EdSurge* article indicated that Aidan has "plenty of college-based cousins" in the form of chatbots (some of which are multi-lingual), which can respond to parent and student questions.[95] Megan Coval, Vice President of Policy and Federal Relations for the National Association of Student Financial Aid Administrators, has explained that chatbots "really fi[t] in with the technology culture we have today, where we can Google something and find something out in an instant," and they also reduce the workload for financial aid offices.[96]

Aidan, as developed by the Federal government, is a virtual assistant that relies on artificial intelligence and natural language processing to answer common questions about Federal student aid.[97] Aidan is currently available on FSA's website, as well as on its mobile app, and is accessed by clicking on a green owl icon.[98] Aidan is in an early (beta) stage and will improve through interactions with users.[99] FSA keeps a record of conversations with Aidan, which it uses to improve quality and develop new skills.[100] At present, Aidan only speaks in English.[101]

Aidan answers a wide variety of questions, which reflect the diversity of tasks with which FSA is charged. Many of the questions that Aidan answers are traditional, non-legal, customer service type of questions, such as "What is my account balance?" or "Who is my [loan] servicer?"[102]

In line with the foundational goal for Aidan of providing simple answers that are easy for members of the public to digest, Aidan's answers are often straightforward, especially for non-legal questions. And, for many such questions, these straightforward answers provide critical and accurate information for users. For instance, imagine that a student wants to fill out a FAFSA form. The student can ask, "Where is the FAFSA Form?" and Aidan will provide a link to the FAFSA form as well as information about deadlines for filling out the FAFSA form.[103] Or, if a

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[92] *Id.*

[93] *Id.*

[94] *How Chatbots Can Improve Customer Experience*, Feb. 23, 2021, https://digital.gov/event/2021/02/23/how-can-chatbots-improve-customer-experience/.

[95] Rebecca Koenig, *Meet Aidan*, the U.S. Education Department's Financial Aid Chatbot, EDSURGE, https://www.edsurge.com/news/2019-12-04-meet-aidan-the-u-s-education-department-s-financial-aid-chatbot (Dec. 4, 2019).

[96] *Id.*

[97] Federal Student Aid, *Meet Aidan (Beta)*, https://studentaid.gov/h/aidan (last visited Sept. 3, 2021).

[98] *Id.*

[99] *Id.*

[100] *Id.*

[101] *Id.*

[102] Federal Student Aid, *Meet Aidan (Beta)*, https://studentaid.gov/h/aidan (last visited Sept. 3, 2021).

[103] Federal Student Aid, *Meet Aidan (Beta)*, *supra* note 1 (Type: Where Is the FAFSA Form?).

user wants to find out information about their individual account (such as who the user's loan servicer is), the user can log in to Aidan and get accurate information.[104]

D. Interactive Tax Assistant

In 2008, the IRS created the "Interactive Tax Law Assistant" (ITLA), a new online system that its human customer service representatives, known as "IRS assistors," would use when addressing taxpayer inquiries over the phone.[105] The primary motivation for creating this new internal system was to address inconsistent, even conflicting, responses that had occurred previously when IRS assistors would answer taxpayer questions by consulting printed IRS publications.[106] Under this new system, IRS assistors would respond to taxpayer inquiries through the IRS hotline by asking the taxpayer a series of questions that appeared on ITLA and then, after inputting the taxpayers' responses, by reading ITLA's answer to the taxpayer's original question.[107] The IRS concluded that ITLA significantly improved IRS assistors' responses to taxpayer inquiries in terms of consistency, accuracy, and speed.[108]

Two years later, in 2010, the IRS announced its creation of an external version of its internal ITLA system, which taxpayers could access directly through the IRS website: "Interactive Tax Assistant" (ITA).[109] The IRS describes ITA as a "tool that provides answers to several tax law questions specific to your individual circumstances."[110] When taxpayers access ITA through the IRS website, they select a category of questions, such as "Can I Deduct My Medical and Dental Expenses?" and then answer a series of questions provided by ITA.[111] As the IRS describes ITA, this resource "can determine if a type of income is taxable, if you're eligible to claim certain credits, and if you can deduct expenses on your tax return."[112] Once taxpayers have inputted their responses to a series of questions, ITA presents a screen titled "Answers" (*e.g.*, noting that a specific type of business expense is "not a deductible expense.").[113] ITA offers taxpayers answers that are tailored to "individual circumstances"[114] and that use friendly and accessible language, such as second-person pronouns (*e.g.*, "you" and "your").[115]

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[104] *Id*. (Type: Who Is My Loan Servicer?).

[105] *See* TREASURY INSPECTOR GEN. FOR TAX ADMIN., 2011-40-043, THE INTERACTIVE TAX LAW ASSISTANT HELPS ASSISTORS PROVIDE ACCURATE ANSWERS TO TAXPAYER INQUIRIES 1, 24 (Apr. 20, 2011), https://www.treasury.gov/tigta/auditreports/2011reports/201140043fr.pdf.

[106] *Id* at 1.

[107] *Id*. at 15.

[108] *See* TREASURY INSPECTOR GEN. FOR TAX ADMIN., 2015-40-032, INTERIM RESULTS OF THE 2015 FILING SEASON 14 (Mar. 31, 2015).

[109] *See* Int. Rev. Serv., *Interactive Tax Assistant (ITA)*, *supra* note 3. *See also* TREASURY INSPECTOR GEN. FOR TAX ADMIN., 2011-40-070, THE INTERNAL REVENUE SERVICE PROVIDES HELPFUL AND ACCURATE TAX LAW ASSISTANCE, BUT TAXPAYERS EXPERIENCE LENGTHY WAIT TIMES TO SPEAK WITH ASSISTORS, 15-17 (2011).

[110] Int. Rev. Serv., *Interactive Tax Assistant* (*ITA*), *supra* note 3.

[111] *See id*.

[112] *Id*.

[113] *Id*.

[114] *Id*.

[115] *Id*.

Over the past decade, IRS budget cuts and other events, such as the COVID-19 pandemic, have significantly reduced taxpayer access to IRS human customer service representatives.[116] In response, the IRS has emphasized that ITA is the resource that taxpayers should turn to for personalized tax guidance. For example, at the close of 2021, the IRS tweeted, "Have a tax law question? Our #IRS Interactive Tax Assistant has answers," and provided taxpayers with a link to ITA.[117] Five years after the launch of ITA, the IRS reported that ITA responded to 660,430 requests for answers to tax law questions, a 168% increase over 2014.[118] According to IRS officials we interviewed, during 2020, ITA received over five million visits. These officials commented to us that this traffic was partly attributable to the COVID-19 pandemic and the closure of IRS offices and that, in a more typical year, ITA receives over 2.5 million visits from taxpayers.[119] There are many reasons that explain the growing use and popularity of ITA. Compared to print IRS publications, ITA offers guidance that appears personalized, non-qualified, and instantaneous.

From a technical perspective, ITA can be described as a "rules-based" system because its answers are based on rules and decision trees. Taxpayers who visit ITA must choose from a menu of topics in order to ask questions and receive answers. As of January 2022, ITA contained 55 separate topics, such as "Is the Distribution From My Roth Account Taxable?", "Do I Need to File a Tax Return?", and "How Do I Claim My Gambling Winnings and/or Losses?"[120] ITA does not deploy natural language processing or other forms of artificial intelligence used by more sophisticated chatbots, such as USCIS's Emma.[121] Those chatbots use predictive analysis to first translate users' natural language questions into a menu of potential subjects and answers.[122] Further, according to our interviews with IRS officials, the IRS attempts to include topics that are simple enough for ITA to address without the need for lengthy legal analysis or extensive follow-up inquiries.[123]

ITA often provides taxpayers with accurate answers to simple questions, such as the deadlines for filing tax returns and the types of forms that taxpayers are required to file to report certain kinds of income. However, as ITA attempts to respond to questions that are even slightly more complex, it also presents simplified answers that deviate from the formal tax law. Sometimes these simplifications, if taxpayers followed them, would reduce taxpayers' tax liability; at other times, if taxpayers followed them, these simplifications would result in consequences that are adverse to taxpayers' interests.

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[116] *See, e.g.,* David Hood, Allyson Versprille & Katsuv Basu, *Customer Service at the IRS Is So Bad, Even Tax Pros Are Fed Up*, BLOOMBERG BUSINESSWEEK, Jan. 4, 2022; *See* TREASURY INSPECTOR GEN. FOR TAX ADMIN., 2015-40-032, INTERIM RESULTS OF THE 2015 FILING SEASON 14 (Mar. 31, 2015).

[117] IRSnews (@IRSnews), Twitter (Dec. 26, 2021, 1:01 PM), https://twitter.com/IRSnews/status/1475164767929212930.

[118] *See* TREASURY INSPECTOR GEN. FOR TAX ADMIN., 2015-40-032, INTERIM RESULTS OF THE 2015 FILING SEASON 14 (Mar. 31, 2015).

[119] Interview with Interviewee 6. *See also* National Taxpayer Advocate, 2021 Annual Report to Congress, 114 (reporting 2,736,000 visits to ITA during FY 2020).

[120] *Id*. *See* Int. Rev. Serv., *Interactive Tax Assistant* (*ITA*), *supra* note 3.

[121] USCIS, *Meet Emma, Our Virtual Assistant*, *supra* note 2.

[122] *See, e.g.*, Mai-Hanh Nguyen, *How Artificial Intelligence and Machine Learning Produced Robots We Can Talk to*, Bus. Insider (Jan. 27, 2020), https://www.businessinsider.com/chatbots-talking-ai-robot-chat-machine.

[123] Interview with Interviewee 6.

E. Summary

As this discussion illustrates, Federal government agencies are using automated tools to communicate with the public, including regarding the formal law. These tools, which are being extensively used by some Federal agencies, and are in development or in more nascent stages in other Federal agencies, have the potential to increase the reach of Federal agencies' digital guidance efforts generally. Chatbots, virtual assistants, and related automation tools can answer public questions about the law in a straightforward fashion. Ideally, their ability to do so provides useful guidance to the public while also freeing up constrained agency resources, thereby allowing agency officials to focus on more difficult inquiries. Sometimes, the answers that chatbots and virtual assistants provide will fit the question exactly and provide all the information relevant to the inquiry. However, other times, automated tools will fail to provide a comprehensive answer. They may abbreviate the legal requirements or offer overly simplistic summaries. They may categorize the question and respond with answers that fit in that category, while failing to identify a deeper or broader legal issue. They may engage in other simplifications that make the advice usable by members of the public who have little time or inclination to sort through complex statutory and regulatory law, but which are ultimately misleading. Moreover, the more effective the chatbots, virtual assistants, and related tools are in encouraging users to follow their guidance, the more they may amplify these deviations from the formal law.[124]

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[124] For further discussion, *see* Blank & Osofsky, *Automated Legal Guidance, supra* note 17, at 217-22.

III. INTERVIEWS WITH FEDERAL AGENCY OFFICIALS

In order to gain additional insight into the development of Federal automated legal guidance, in the Fall of 2021, we met with Federal agency officials for semi-structured interviews. With the help of officials at the Administrative Conference of the United States (ACUS), an independent Federal agency within the executive branch, we secured interviews with multiple individuals from each of the agencies identified above (FSA, USCIS, and IRS) that have well-developed chatbots, virtual assistants, or related tools. We spoke with individuals who were responsible for the technology specifically or knowledgeable about the guidance process generally as it related to the automated guidance tools, or both. We also spoke with several individuals from the U.S. General Services Administration (GSA) about the development of chatbots, virtual assistants, and related tools by the Federal government generally. In total, we conducted ten interviews. The interviews covered a range of questions, from how and why a tool was developed, to what feedback and evaluation process is undertaken, to how the agency makes decisions about how to present complicated legal information in an accessible fashion, among other topics.

In these interviews, to some extent we confirmed information that we discovered through publicly accessible sources and that we have included in Part II, above. To the extent that we learned information that supplemented and related closely to the information we found through publicly accessible sources, we added it to the descriptions provided in Part II. Through our interviews, we were also able to confirm that the agencies that we focused on—FSA, USCIS, and the IRS—had particularly well-developed or widely used technology, but also that many Federal agencies are contemplating adopting chatbots, virtual assistants, or related tools, and that experts expect this technology to grow increasingly common over time.

Below, we highlight themes from our interviews, which are not already available or accessible through public sources. We believe that these themes are representative of the current state of the development of Federal agency chatbots, virtual assistants, and related tools, although there is likely to be additional, and potentially varied, development of such technology in the future.

A. Models for Development and Coordination within Agencies

The basic technological platform for a chatbot, virtual assistant, or related tool is available through a number of outside vendors or contractors. At present, Federal agencies often acquire the basic technology from one of these outside companies, rather than developing the technology through in-house resources. The agency then works with the outside vendor to input the appropriate content (i.e., questions and answers) into the technology and to refine the technology for the desired user experience. All agency officials with whom we spoke stressed that strict government protocols regarding privacy and accessibility protections are followed when working with an outside vendor.

While working with an outside vendor seemed commonplace, agencies differed in how they coordinated and allocated work on the technology within the agency. In some cases, the team of agency officials who work on the product may be relatively small, and this team may heavily rely on centralized agency development of guidance. In this model, the technology may be under the direction of a "product owner," or a key person who is accountable for the technology. That product owner, along, potentially, with some other individuals, will work with other teams within the agency, such as the content or policy team, to populate the technology with information and

keep it updated. While the process for populating and updating the information in the technology seemed to vary by agency, generally the idea was that any content that was inputted into the technology had to be cleared centrally, or by counsel. Sometimes, the content might be available centrally within the agency, and this centrally available content would be disseminated and used in a variety of channels, such as on the Federal agency's website, by the agency's chatbot, and, potentially, even by the agency's call center.

It was not always clear to us who was responsible for monitoring the law for any changes that might implicate the chatbot, virtual assistant, or related tools under this model. There were many different people and groups that we heard about, who might be involved in updates and changes, including, for instance, the product owner, the policy team, the content team, a chief operating officer, content specialists, counsel, working groups, a design team, and a communication team, among others. However, there was nonetheless some general understanding that content or area specialists were responsible for monitoring any updates that needed to be made, and that these changes would be pushed out to all the appropriate channels, including on a chatbot, on the website, and other locations. As one agency official summarized, "there's different methods of intake, but at a very high level we make sure that the appropriate teams are consulted and before we publish any content out in the public space."[125] Another agency official conceded that "I think it's easier when there's an active change. I think what's harder for us is when we put out guidance that maybe gets outdated but there hasn't been really proactive statutory change."[126] This interviewee also stressed that change to guidance could come about in a number of different ways, including from a program office (or office responsible for administering a particular program), but that changes were passed through many different groups, including counsel. Indeed, this interviewee explained that the various levels of coordination needed to get correct guidance explained why social media may not be appropriate for Federal agencies. This official explained that, "I don't think we're great at using social, to be honest with you, I think it's not an easy thing for us to, there's a lot of tension between making sure everything is approved by all the right people and is in good quality when it goes out and having it be timely and useful."[127]

To be sure, even under this centralized guidance model, the product owner, or team responsible for the chatbot, virtual assistant, or related tool might suggest that particular modifications be made to the centrally created agency guidance (which changes would then have to be approved through various chains of authority). Such modifications might be made in order to make the content more appropriate for users' expectations regarding readability on a chatbot, virtual assistant, or other tool (a topic discussed in further detail below). The overall expectation remained that the team responsible for the chatbot, virtual assistant, or related tool was not creating content from scratch, but rather was working from centrally created models, which were being used and applied in other ways in the agency as well.

An alternative model that we observed involved more autonomous development of the content used by the chatbot, virtual assistant, or related tool. In this model, a larger team may be dedicated to the chatbot, virtual assistant, or related tool, and this team may develop material that is unique for this technology. As a result, the content on this technology may differ from content available elsewhere, including through the call center. Counsel would still be heavily involved in vetting any content developed by this team. Indeed, the development of content for this tool is a laborious

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[125] Interview with Interviewee 1.
[126] Interview with Interviewee 3.
[127] Interview with Interviewee 3.

and lengthy process, in part owing to the fact that the content has to be newly created specifically for this tool. Under this model, rather than updates being pushed through to the technology from some sort of central agency process, the team responsible for the technology is itself responsible for monitoring the law and proposing any changes to the content, which would then be approved by counsel and, once approved, integrated into the chatbot, virtual assistant, or related tool.

B. Usability of Guidance

Agency officials across the board stressed that a goal of offering information through a chatbot, virtual assistant, or related tool is to make complex information usable by the public.

One agency official noted that, through testing of the technology, the agency learned that "people don't read and they don't want a lot of content."[128] So, the agency focused on providing a "super concise" answer that is really "high level," along with a link that might go into details if the user wants to access it.[129] The conciseness of the answers is particularly important because, if the agency put all the requirements that applied in a chat bubble, "most people likely are not going to read it."[130]

Indeed, another agency official indicated that "we have the data at present to show that we can not only say, we think that they don't read, we know that."[131] This data included usability tests, in which the agency would provide an answer to a question and then the user would follow up and ask the question that was provided in the answer.[132] It also included feedback from users, who complained that the agency providing too much content had a negative impact on users, rather than "trying to solve their problems."[133] This sort of feedback required the agency to "cut down on the number of words so that users don't feel overwhelmed by that kind of content."[134]

At least one agency official attributed users' expectations in this regard to their experience with other platforms, like Twitter, which provide "short, quick information."[135] Another agency official explained that this struggle mirrored the difficulties the agency has with issuing guidance generally, in that, "on the one hand, you want that information disclosed . . . and on the other hand, the more disclosures we have, the more people don't read them and they get overwhelmed by the amount of paperwork so there's kind of a pendulum on that, where one administration will add a lot of these disclosures and then the next will take them away."[136] In the context of chatbots, virtual assistants, and related tools, agencies seemed to place a premium on particularly concise answers, in light of user expectations for this sort of platform.

C. Control of Answers by Agency

While machine learning, and other sophisticated forms of artificial intelligence, can allow

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[128] Interview with Interviewee 1.
[129] Interview with Interviewee 1.
[130] Interview with Interviewee 1.
[131] Interview with Interviewee 2.
[132] Interview with Interviewee 2.
[133] Interview with Interviewee 2.
[134] Interview with Interviewee 2.
[135] Interview with Interviewee 1.
[136] Interview with Interviewee 3.

technology to develop more accurate or sophisticated responses at least somewhat autonomously, all agency officials with whom we spoke indicated that, currently, this more sophisticated artificial intelligence is not used to offer guidance to the public through a chatbot, virtual assistant, or related tool. Indeed, many agency officials stressed that, in developing these chatbots, virtual assistants, and related tools to offer guidance to the public, the agencies need to be sure that all of the information the technology offered was authoritative and correct. As a result, at present, these chatbots, virtual assistants, and other tools are not developing their own responses to questions. Rather, all questions and responses are vetted within appropriate agency channels. One individual with whom we spoke indicated that this approach was consistent with the pressure on Federal agencies to get the answers right, and agencies' accompanying reluctance to employ technologies that might impose risk.

D. Differences in How Users Input Questions

We observed and heard about different models in terms of how users input questions. While, as mentioned above, agencies are currently resisting machine learning to develop autonomous responses to user questions, agencies differ in their uses of technology on the front end of interactions with users. Some of the Federal agency chatbots and similar technologies in use rely on natural language processing, or a form of technology that can interpret natural human speech and make it understandable for a chatbot, virtual assistant, or similar tool. So, if a user asks a question in a colloquial way, the natural language processing in the chatbot ideally will recognize the nature of the question and direct the user toward the right response. This might even involve teaching the chatbot, virtual assistant, or related tool to identify a slang term that is often used to signify something legal. USCIS's Emma is a good example of the use of this technology. As indicated on the USCIS website, Emma "answers questions based on your own words; you don't need to know 'government speak.'"[137]

In contrast, other forms of similar tools do not attempt to use natural language processing. Rather, they rely on a less adaptive model, which forces users to choose from pre-set categories in order to receive information in such categories. A good example of this is the IRS's ITA. With ITA, users have to select an initial category (such as "Do I Need to File a Tax Return?") and, from there, provide answers in response to prompts, in order to get an "answer" regarding the question.[138]

E. Differences in Types of "Answers" Offered

We also observed and heard about different models for the type of "answer" that a chatbot, virtual assistant, or online tool would offer. In one model, the goal of the automated tool was to assess what topic area a user was asking about, and then direct the user to the relevant information about that topic area. Again, using Emma as an example, if a user types in an inquiry using common or even colloquial words, Emma will determine into what category the question falls (for instance, whether it is a question about naturalization or Green Cards or something else), and then will direct the user to the automated text in Emma's system, as well as the accompanying

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[137] USCIS, *Meet Emma, supra* note 2.
[138] *See supra* notes 109 – 115 and accompanying text.

USCIS webpage, for such category.

In agencies that adopted this first model, agency officials emphasized that their tools did not tell users what to do. For instance, one agency official explained:

> [I]f you look across social media and how we engage with customers, we don't typically tell users how to act. We provide tools that can help them make decisions, but there is never a case where you will see [the tool] tell users they are eligible. We will provide the information / the criteria for eligibility, but we never actually provide a personalized response in this regard. . . . Ultimately our content is somewhat neutral in that regard.[139]

Agency officials also emphasized that the information that their tool provided was just that—mere information—and definitely not law. One agency official emphasized, "At no time does our [tool] provide any legal advice."[140] Instead, the tool merely provided "information about the . . . process."

In contrast, another model is to obtain information from the user and then provide a personalized answer based on the information that the user offered. For instance, if a user provides ITA basic information, such as amount of income, tax year, and filing status, ITA will tell the user whether the user has to file a tax return for the year. The goal here is not to assess the nature of the user's inquiry and direct the user to the right resources, but rather to provide an "answer" to the inquiry.

In all cases, the agencies with whom we spoke indicated that their tools do not provide publicly accessible archives of old answers, for which users can identify an answer that was given on a prior date. Agencies sometimes indicated that, internally, there would be an archive of old authority. But none of the agency officials believed that an archive of questions and answers that were supplied on a prior date was available to the public, at least not on the chatbot, virtual assistant, or related tool itself.

F. The Information is Correct

Regardless of differences in the types of answers offered by different agencies, agency officials were in general agreement as to the high confidence in the correctness of the responses given as a result of the intensive vetting process applied for all questions and answers. One agency official explained:

> None of the content itself could ever be inaccurate. It's just a matter of did, they didn't give the answer that the user would want basically to answer the question that they would, as a human looking at it, is that actually the right answer. But again, we never produce content that isn't approved so it just might not be the right topic area basically when it's when it's marked inaccurate.[141]

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[139] Interview with Interviewee 2.
[140] Interview with Interviewee 4.
[141] Interview with Interviewee 2.

G. People Do Not / Cannot Rely on It

Perhaps most interestingly, at least some (but not all) agency officials with whom we spoke suggested that users did not actually rely upon the information provided by their tools. The explanation was that the tool only offered general information. If a user actually wanted to take a legal position, the user would have to take additional steps, such as filling out a form, and only undergoing that additional process would constitute reliance on agency guidance. One agency official explained:

> [The tool] provides accurate information based on our policy and our guidance. . . . It is not saying, hey, this is something that we tell you that is specifically for you and it is a binding agreement. . . . The work that we do, it is mostly providing validated information to the user around any questions . . . we are just providing information that you already have available on the website.[142]

However, when asked, the same agency official indicated that there are no general disclaimers that tell users that the information they get is not binding, or not something that users can rely upon. Instead, the agency "stand[s] by our internal process, first and foremost, to push out and publicize the content that we put on our site. . . . [The tool] is not providing new information that is not already accessible or available on the website."[143]

Other agency officials did not stress as strongly that users did not, in fact, rely upon the information given by chatbots, virtual assistants, and related tools, but all agreed that, as a matter of law, users *could not*, in fact, rely upon such tools. This was true even for forms of the technology that provided more personalized "answers" to users. According to agency officials, guidance from chatbots, virtual assistants, and related tools is not considered to be the type of "published" guidance that would support a legal reliance argument.

H. Evaluation Methods

We heard about a variety of methods for evaluating an agency's chatbot, virtual assistant, or related tool. One agency stressed that internal metrics were used to evaluate whether the answer given was the answer the user would have wanted. This same agency stressed that the tool was not capable of giving a "wrong" answer, because all the answers had been internally vetted. Rather, the internal metrics were designed to determine whether the chatbot accurately matched the answer to the question the user would have wanted, based on the question that the user was asking. Agencies often surveyed the users themselves about their experience, asking about usability, and whether the chatbot, virtual assistant, or related tool provided the answer that the user had been seeking.

For tools whose goal it was to navigate users to the relevant information in response to a user's query, lowering the tool's "I don't know" rate was also an important form of evaluation. Agency officials would analyze the tool's "I don't know" rate, determine when the tool was often giving an "I don't know" response, and attempt to reduce the "I don't know" response by offering additional information when necessary. Reducing the "I don't know" rate over time is an important measure of success.

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[142] Interview with Interviewee 1.
[143] Interview with Interviewee 1.

In general, the agency officials we interviewed explained that the feedback users provided was often "technical," such as suggestions about being able to exit the interface more easily. Generally, agencies reported positive feedback from users, who appreciated the additional assistance.

I. Successes and Challenges

When we asked interviewees about successes and challenges that they had experienced with their automated tools, we often heard that the tools had succeeded in expanding service to the public, offering 24/7 answers in an agile way. Agency officials pointed to significant increases in user base over time as indication of the success of the product and favorable ratings of the tools by users. Challenges included having enough resources to provide users all the answers they wanted, and to maintain the product adequately over time.

All of the agencies employing chatbots, virtual assistants, and related tools emphasized that the type of information that the tool could provide was limited, relative to other options within the agency. In one agency, the call center could answer a much wider variety of questions. In another agency, there are various "tiers" of responses that can be offered. Actual agency officers are at a higher "tier" and can answer more complicated questions. As a result of a combination of resource constraints and constraints regarding the type of information that can be offered in an automated, non-authenticated environment, the chatbots, virtual assistants, and related tools currently can only address limited questions and can only provide a limited number of responses. Nonetheless, our interviewees uniformly believed that chatbots, virtual assistants and related tools were a positive addition to the ways that the agencies can interact with, and respond to, public queries.

IV. The Benefits and Costs of Automated Legal Guidance

The virtual assistants, chatbots, and other automated tools currently hosted by Federal agencies all share a common characteristic that we have described as "simplexity."[144] As we have theorized in prior work, simplexity occurs when the government offers clear and simple explanations of the law without highlighting its underlying complexity or reducing this complexity through formal legal changes.[145] Simplicity, by contrast, occurs when policymakers reform the law by eliminating specific complex provisions or procedures through enactment of statutory changes or issuance of regulations.[146] When government agencies communicate the law in ways that exhibit simplexity, they present complex law as clear rules, but do not actually simplify the underlying formal law.

There are several sources of simplexity that appear in automated legal guidance. Common sources are statutes or regulations that attempt to formalize judicially-created standards, such as the test for whether an item is an ordinary and necessary business expense for U.S. Federal income tax purposes.[147] The fact-specific nature of these standards causes the agency, in this case the IRS, to explain this type of formal law by adding its own examples and even terminology in its description of the standard through answers delivered by its automated tools.[148] Other sources of simplexity are statutory standards that rely on the user's intent, purpose, or motivation.[149] The agency, in turn, attempts to summarize the authorities that interpret these statutes, which can result in simplifications that deviate from the underlying formal law.[150] Finally, vague statutory terms may require agencies to offer detailed regulations to define and illustrate these terms, but this text may not always carry over precisely to the statements issued by agencies' automated tools.[151]

This study found that agencies are using automated legal guidance, and the simplexity embedded within it, to reach users who otherwise would not access the formal law. However, this study also revealed that agencies may not be sufficiently attuned to some of the costs of this approach, including the likelihood of user reliance on simplifications that deviate from formal law and insufficient attention to how such simplifications might be created.

A. Benefits

As we discuss below, automated legal guidance presents significant potential benefits to both the public and the government.

1. Administrative Efficiency

At the outset, we acknowledge that Federal agencies face tremendous pressure to assist

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[144] *See* Joshua D. Blank & Leigh Osofsky, *Simplexity: Plain Language and the Tax Law*, 66 EMORY L.J. 189, 206–07 (2017).

[145] *See id.*

[146] *See id.*

[147] *See, e.g.,* I.R.C. § 162(a); Treas. Reg. § 1.162-1(a) (ordinary and necessary business expenses).

[148] *See* Blank & Osofsky, *The Inequity of Informal Guidance, supra* note 17.

[149] *See, e.g.,* I.R.C. § 183(a); Treas. Reg. § 1.183-2(b) (hobby losses).

[150] *See* Blank & Osofsky, *The Inequity of Informal Guidance, supra* note 17.

[151] *See id.* at 126-133 (discussing administrative gloss in IRS publications).

members of the public in their attempts to comply with the law. They must provide the public with "plain language" explanations and instructions for complex formal law, even as some of these agencies have experienced diminished resources, in terms of available funding and labor.[152] Automated legal guidance makes it possible for Federal agencies to provide users with responses to inquiries, and in a manner that is faster and less costly than would occur with the assistance of human customer service representatives.[153]

When users consult automated tools offered by Federal agencies, such as Emma, Aidan and ITA, the users input information in response to questions and receive seemingly personalized responses.[154] Behavioral research shows that personalized statements can have a greater impact on recipients' beliefs and actions than generic publications.[155] Online advertisers, political campaign consultants, and telemarketers often deploy second-person pronouns because they "enhance consumer involvement and brand attitude as a result of increasing the extent that consumers engage in self-referencing."[156] By requiring users to input personal information, such as their own immigration status or adjusted gross income, and responding with personalized language, agencies use automated tools to convince users that these responses directly address their inquiries.

The second significant administrative benefit of automated legal guidance is that it can deliver information more immediately than either printed summaries or human customer service representatives. For example, when users start the process of submitting information to ITA, the initial screen provides an "estimated completion time" for each question.[157] For questions about basic topics, such as filing dates, the estimate is less than ten minutes, and for more complex topics, such as the deductibility of dental expenses, the estimate is fifteen minutes.[158] Static IRS publications, in contrast, may be hundreds of pages in length and require readers to consider numerous exceptions, requirements, and examples.[159] Federal agencies' automated tools often emulate the speed and efficiency with which private sector chatbots deliver information to customers.

2. Complex Law in Plain Language

When automated legal guidance describes the formal law accurately, it can help users understand complex rules and procedures as they exist in the underlying formal law. Chatbots and virtual assistants can enable users to interpret and apply complex formal law to achieve

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[152] Pub. L. No. 111-274, § 3(3) (2010). *See supra* notes 6 - 7 and accompanying text.

[153] *See, e.g.*, Aakrit Vaish, *Five Reasons Why Chatbots Are the Future of Customer Service*, Entrepreneur (Jan. 5, 2019), https://www.entrepreneur.com/article/325830; *AI for Customer Service*, IBM, https://www.ibm.com/watson/ai-customer-service (last visited Jan. 11, 2022).

[154] *See supra* Parts II.B, C, and D.

[155] *See, e.g.,* Ryan E. Cruz, James M. Leonhardt, & Todd Pezzuti, *Second Person Pronouns Enhance Consumer Involvement and Brand Attitude*, 39 J. INTERACTIVE MARKETING 104, 104 (2017); Navdeep S. Sahni, S. Christian Wheele, & Pradeep Chintagunta, *Personalization in Email Marketing: The Role of Non-Informative Advertising Content*, 37 MARKETING SCI. 1, 5 (2016).

[156] Cruz, Leonhardt, & Pezzuti, *supra* note 155.

[157] *See* Int. Rev. Serv., *Interactive Tax Assistant, supra* note 3, (providing an estimated completion time of fifteen minutes for the question whether "I [can] Deduct My Medical and Dental Expenses").

[158] *See id*.

[159] *See, e.g.*, IRS, Publication 17: Your Federal Income Tax (2021) (140 pages).

practical ends, such as filing a tax return, applying for a Green Card, or requesting a discharge of Federal student loan debt. As agency officials told us, this simplification can be critical, as many "people don't read and they don't want a lot of content."[160] Moreover, automated tools can also streamline the inquiry process for third parties, such as accountants, lawyers, and other advisors, who may be assisting users with their legal compliance obligations.

Another communication advantage of automated legal guidance tools is that they tend to offer non-qualified answers in response to users' inquiries.[161] For instance, if a user selects "artificial teeth" from the list of possibilities under medical and dental expenses in ITA, the virtual assistant responds with a non-qualified statement that the expense is deductible.[162] ITA delivers a simple description of complex law by omitting discussion of exceptions and requirements contained in statutes and regulations, such as that in order to qualify for deductibility, expenses incurred related to artificial teeth must be "necessary to ameliorate a deformity arising from, or directly related to, a congenital abnormality, a personal injury resulting from an accident or trauma, or disfiguring disease."[163] Of course, a drawback to this simple approach is that the user does not receive information about additional statutory or regulatory requirements she must satisfy in order to claim a medical expense deduction. Yet by providing users with non-qualified "answers" to their inquiries, automated legal guidance tools simplify the law enough to enable users to pursue action.

3. Agency Interpretation of Law

A final benefit of automated legal guidance is that it reveals agencies' views of the formal law to members of the public and their advisors. Even though statements made by automated tools are not binding legal authorities, they offer users an advance view of how an agency would likely respond to a specific action or position during the audit and/or litigation process.[164] The simplified descriptions of the law that automated legal guidance presents to users can be characterized as illuminating agencies' interpretations of unsettled legal issues.

In addition, automated legal guidance can also help ensure that agencies administer the law consistently. Some scholars have argued that agencies function more effectively "when central officials can advise responsible bureaucrats how they should apply agency law."[165] Rather than empowering individual human customer service representatives to issue varying, potentially conflicting, interpretations of the law through the help lines by phone, agencies can use automated legal guidance tools to ensure that all users receive the same responses to common inquiries.

B. Costs

While automated legal guidance can offer administrative benefits for both the government and the public, it also can present simplifications that deviate from the formal law. We found that

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[160] Interview with Interviewee 1.

[161] *See* Blank & Osofsky, *Automated Legal Guidance, supra* note 17.

[162] *See* Int. Rev. Serv., *Interactive Tax Assistant, supra* note 3.

[163] *See* I.R.C. § 213(d)(9).

[164] Taxpayers cannot rely on these statements as binding legal authority. *See* Adler v. Comm'r, 330 F.2d 91, 93 (9th Cir. 1964); Miller v. Comm'r, 114 T.C. 184, 195 (2000); Zimmerman v. Comm'r, 71 T.C. 367, 371 (1978).

[165] Peter L. Strauss, *Publication Rules in the Rulemaking Spectrum: Assuring Proper Respect for an Essential Element*, 53 ADMIN. L. REV. 803, 808 (2001).

agencies may not always be sufficiently attuned to ways that automated legal guidance can create such simplifications, the ways that users may rely upon them, and the potential, resulting inequitable benefits and burdens among different users.

1. Deviation from Formal Law

Automated legal guidance can deliver answers to users that are consistent with the law, but it can also provide guidance that deviates from the law, in ways both subtle and significant. Automated legal guidance tools sometimes portray unsettled formal law as unambiguous, add administrative gloss to the formal law, and omit discussion of statutory and regulatory exceptions and requirements.[166] In these cases, automated tools may present users with descriptions of the law that deviate from the statutes that Congress enacted, regulations that agencies have adopted, or doctrine that judges have articulated. The ultimate effect of this dynamic is that automated legal guidance may, paradoxically, *diminish* users' knowledge of the formal law.

Deviation from the formal law implicates essential features of democracy: the public's ability to debate the formal law and to hold the government accountable for its laws and actions.[167] First, when government agencies use chatbots and virtual assistance to simplify complex statutory law or unsettled caselaw in order to help members of the public comply with the law, public debate regarding the law may emerge from an artificial foundation of certainty and clarity. For example, in the tax context, Congress appears to have deliberately included ambiguous requirements regarding medical expense deductions in order to allow courts to consider individual cases.[168] Yet, ITA provides unambiguous answers in response to certain inquiries regarding medical expense deductions.[169] Second, automated legal guidance tools may contribute to the public's unwillingness to challenge the government for enacting overly complex or vague rules. By presenting the formal law as clear and simple, automated legal guidance tools create an end-run around public review and challenge of the actions of Congress and Federal agencies.

From an administrative law perspective, there are limited opportunities for the public to hold agencies accountable for providing guidance to the public that conflicts with the formal law. In administrative law, the notice-and-comment procedures are used to ensure accountability, in addition to transparency and non-arbitrariness, of Federal government agencies as they promulgate legislative rules.[170] As mentioned previously, since they are likely not legislative rules,[171] the statements provided by chatbots such as Emma, Aidan, and ITA are not subject to the notice-and-comment procedures that are supposed to enhance accountability. As a practical matter, in any event, they are not currently subject to any such procedures. Yet, many users may follow statements made by automated legal guidance and rely upon them as though they are binding law. We found that agencies may be insufficiently attentive to this dynamic, believing that because users *shouldn't* be treating automated legal guidance as if it is binding law, that users

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[166] *See* Blank & Osofsky, *Automated Legal Guidance, supra* note 17.

[167] *See, e.g.*, Letter from Thomas Jefferson to Charles Yancey (Jan. 6, 1816) ("[I]f a nation expects to be ignorant & free, in a state of civilisation, it expects what never was & never will be."); *see also See* JOHN RAWLS, A THEORY OF JUSTICE 14–15 (rev. ed. 1990; Frederick Schauer, *Transparency in Three Dimensions*, 2011 U. ILL. L. REV. 1339.

[168] *See* I.R.C. § 213(a).

[169] *See* Blank & Osofsky, *Automated Legal Guidance, supra* note 17.

[170] *See, e.g.*, Shu-Yi Oei & Leigh Osofsky, *Legislation and Comment: The Making of the § 199A Regulations*, 69 EMORY L.J. 209, 220–21 (2019).

[171] *Supra* text accompanying note 53.

are not, in fact relying on such guidance in this very fashion.

2. Lack of Notice to Users

Without reform, automated legal guidance tools often provide little, if any, notice to users about some of the drawbacks of such guidance, including failure to capture the nuances of the formal law, how agency positions may change over time, and the inability of users to rely on automated legal guidance tools.

First, automated legal guidance often portrays the law as unambiguous through its clear and simple answers to users. When chatbots and virtual assistants answer users' questions in a manner that always appears to be straightforward, they do not signal to users that the formal law in the area of inquiry may be unsettled or the subject of conflicting judicial decisions or provide citations so that users can access and assess the underlying law. While some of the automated legal guidance tools we reviewed contain introductory disclaimers regarding the formal law,[172] none offer more detailed or specific warnings to users about how unsettled or uncertain law might apply in a particular case.

Second, when Federal agencies revise questions and answers provided by its automated legal guidance tools, they do not provide notice to the user of these changes or their effective dates. Compared to static, printed publications, it is very difficult to determine when an agency has made changes to any aspects of its chatbots and virtual assistants.[173] For instance, when users visit ITA, most of the 55 topics require users to respond to over a dozen questions before receiving an answer to the initial inquiry.[174] When the agency makes changes to any of the questions or answers, the IRS does not announce these changes through either ITA or the IRS website. By contrast, when the Treasury Department issues final regulations, it describes changes made to prior proposed regulations.[175] The lack of transparency around agency changes may lead users to rely on guidance that is not applicable for the year the facts arose in their particular case, and may otherwise obfuscate how the law, and agency interpretations of it, have shifted over time.

Finally, automated legal guidance tools hosted by Federal agencies currently lack adequate warnings to users regarding reliance on their statements to bind the government or defend against penalties for noncompliance. Some automated legal guidance tools, such as ITA, provide users with an initial disclaimer that informs them that its answers are not "written advice."[176] However, ITA does not contain a similar warning that states that users cannot rely on statements provided by ITA to bind the IRS or that they cannot rely on statements it provides to assert certain tax penalty defenses, such as the "reasonable basis" defense.[177] Other tools, such as the Federal Student Aid's Aidan, do not present the user with any disclaimer regarding the advice that it offers through its chat function.[178] The lack of adequate warnings may provide users with a false sense

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[172] *See, e.g.,* Int. Rev. Serv., *Interactive Tax Assistant, supra* note 3.

[173] *See* Blank & Osofsky, *Automated Legal Guidance*, *supra* note 17; National Taxpayer Advocate, Objectives Report to Congress, Fiscal Year 2021, 48, n. 13.

[174] *See* Int. Rev. Serv., *Interactive Tax Assistant, supra* note 3.

[175]*See, e.g.*, T.D. 9655, 2014-9 I.R.B. 541, 541–42 (2014) (Shared Responsibility for Employers Regarding Health Coverage).

[176] Int. Rev. Serv., *Interactive Tax Assistant, supra* note 3.

[177] *See* Treas. Reg. § 1.6662-4(d)(3)(iii).

[178] *See* Federal Student Aid, *Meet Aidan (Beta)*, *supra* note 1.

of confidence of the extent to which they can rely upon the answers that these tools provide.

3. Equal Access to Justice

Without reform, automated legal guidance may further exacerbate inequities in access to the law that different types of individuals enjoy based on their wealth and income. Many people lack access to the formal law, such as statutes, regulations, and case law, as it is nearly impossible for non-lawyers and other experts to understand.[179] Informal law, including automated legal guidance offered by Federal agencies, thus plays an important role in helping many people understand the law that applies to them. On the other hand, high-income and wealthy individuals can access the formal law by hiring lawyers who engage in extensive planning and consultations of the formal law.[180] The two tiers of informal and formal law threaten equitable access to justice for several reasons.

In some cases where the law is unsettled, complex, or ambiguous, Federal agencies may adopt interpretations that are favorable to the government in its use of automated legal guidance tools As a practical matter, individuals who lack access to legal counsel will follow the guidance that government chatbots, virtual assistants, and other automated tools provide. They may follow this guidance even if doing so is contrary to their own financial interests.[181] By contrast, where the formal law is ambiguous, wealthy individuals and businesses who have access to sophisticated advisors are far less likely to follow guidance that is favorable to the government position.[182]

Further, unlike the formal law, automated legal guidance does not bind Federal agencies to take positions during audits, challenges, and litigation that are consistent with statements expressed by virtual assistants, chatbots, and other online tools.[183] As we explained earlier, as mere summaries of the law, rather than formal assertions of changes or additions to the law, automated legal guidance does not have the binding effect of statutes, regulations, or legislative rules more generally.[184] Yet formal law is often only practically available to individuals who can afford legal counsel.

Last, the informal nature of automated legal guidance, like other types of informal law, means that it is of limited use in creating defenses against penalties for noncompliance. Individuals who can access formal law with the assistance of counsel, however, may be able to use statements in

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[179] *See* Blank & Osofsky, *The Inequity of Informal Guidance, supra* note 17; LEGAL SERVS. CORP., THE JUSTICE GAP: MEASURING THE UNMET CIVIL LEGAL NEEDS OF LOW-INCOME AMERICANS (2017), https://www.lsc.gov/sites/default/files/images/TheJusticeGap-FullReport.pdf.; REBECCA L. SANDEFUR, AM. BAR FOUND., ACCESSING JUSTICE IN THE CONTEMPORARY USA: FINDINGS FROM THE COMMUNITY NEEDS AND SERVICES STUDY (2014); and Sara Sternberg Greene, *Race, Class, and Access to Civil Justice*, 101 IOWA L. REV. 1263, 1298 (2016).

[180] *See, e.g.,* Jesse Drucker and Danny Hakim, *Private Inequity: How a Powerful Industry Conquered the Tax System*, N.Y. TIMES, Jun. 12, 2021.

[181] *See id.*

[182] *See* Blank & Osofsky, *The Inequity of Informal Guidance, supra* note 17.

[183] *See, e.g.,* Miller v. Commissioner, 114 T.C. 184, 194–95 (2000).

[184] *Supra* text accompanying note 53. *But see* Department of Homeland Security v. Regents of the University of California, 140 S. Ct. 1891, 1913 (2020) (explaining that "[w]hen an agency changes course . . . it must be cognizant that longstanding policies may have engendered serious reliance interests that must be taken into account.") (internal quotations omitted).
 .114 T.C. at 194–95.

these sources to establish penalty defenses.[185] Further, these individuals may have the resources necessary to pay for written opinions from legal counsel necessary to avoid imposition of certain civil penalties for noncompliance.[186]

C. Evaluating Benefits and Costs

Automated legal guidance tools reflect a trade-off between Federal agencies representing the law accurately and presenting it in accessible and understandable terms. Automated legal guidance tools enable agencies to reach more members of the public and provide them quick and easy explanations of the law. However, these quick and easy explanations sometimes obscure what the law actually is. We believe that more attention to this tradeoff is needed and may yield some nonintuitive recommendations, including, for instance, that agencies should make transparent ways in which their guidance is not personalized. Below, we make recommendations regarding how some of the benefits of automated legal guidance can be preserved, while also better minimizing some of the costs.

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[185] *See* Treas. Reg. § 1.6664-4(c)(1).

[186] For discussion, *see* Heather M. Field, *Tax Lawyers As Tax Insurance*, 60 WM. & MARY L. REV. 2111, 2121 (2019).

V. RECOMMENDATIONS FOR FEDERAL AGENCIES

Automated legal guidance often enables the government to present complex law as though it is simple without actually engaging in simplification of the underlying law. While this approach offers advantages in terms of administrative efficiency and ease of use by the public, it also causes the government to present the law as simpler than it is, leading to less precise advice and potentially inaccurate legal positions. This Part presents detailed policy recommendations for agencies that have adopted, or may adopt, chatbots, virtual assistants, and other automated tools to communicate the law to the public. We have organized our recommendations into five general categories: (a) transparency; (b) reliance; (c) disclaimers; (d) process; and (e) accessibility, inclusion, and equity.

A. Transparency

1. Agencies should notify users when formal law is unsettled.

Agencies should provide users of their automated tools with notice when the relevant formal law is unsettled. Where possible, agencies should include citations or links to conflicting formal law sources, such as judicial decisions with which the agency disagrees. Further, in such situations, agencies could program automated tools to present the government-favorable position by default, along with explicit warnings regarding conflicting or unsettled formal law.[187]

Notice of unsettled law would allow users to make informed planning decisions that are appropriate to their risk tolerance levels. For example, an individual who wants to adopt the most conservative position possible regarding any issue that could affect the ability to become a naturalized U.S. citizen would follow the guidance offered by automated tools such as Emma, even if Emma provides a warning that there are judicial decisions in conflict with its advice. As an alternative example, if an individual who is considering whether to claim a tax deduction receives a warning from ITA regarding conflicting formal law authorities, the individual might investigate the issue further by consulting with an accountant or lawyer. One concern that this recommendation raises is that the inclusion of warnings regarding formal law could diminish the utility of automated legal guidance. However, rather than include lengthy discussion, agencies could include a brief, clear warning notice and, where possible, hyperlinks to specific cases. Agencies have demonstrated that they can provide such brief notice on their websites and in print publications.[188]

2. Agencies should create and maintain a publicly accessible archive that shows and includes explanation of changes to statements made by chatbots and other automated tools.

When agencies make changes to statements provided by automated legal guidance, they should maintain a publicly accessible record of such changes. Throughout our review, we learned

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[187] Agencies currently adopt this approach in other forms of guidance. For example, when the IRS issued a revenue ruling regarding deductiblity of home equity indebtedness, the IRS noted that its position was in conflict with decisions of the U.S. Tax Court. *See* Rev. Rul. 2010-25, 2010-44 I.R.B. 571.

[188] *See, e.g.,* Int. Rev. Serv., Pub. 17 (Your Federal Taxes) (first page of publication contains following: "The information given [by the IRS] does not cover every situation and is not intended to replace the law or change its meaning.").

that agencies have different processes for making revisions in response to changes in the formal law, such as new legislation or judicial decisions, or changes in agency positions.[189] However, we did not observe any instances where agencies have created a mechanism for informing the public of these revisions or maintaining a searchable archive on their websites. In response to criticism from taxpayer and practitioners, the IRS has recently committed to create an archive of certain frequently asked questions (FAQs) on its website.[190] Agencies should adopt this approach regarding statements made by chatbots and other automated tools.[191]

Publicly accessible archives of changes would promote fairness and government transparency. As agencies revise questions and answers provided by automated legal guidance, users may receive different responses to the same inquiry depending on the time of their visits. In the event of a subsequent challenge by the agency, these users cannot access the statement they originally received from the automated tool in situations where the agency subsequently made revisions, due to the lack of a publicly accessible archive of changes.

3. Agencies should include effective dates on statements made by chatbots and other automated tools.

Similarly, when agencies use chatbots and other automated tools to deliver information to users, they should include effective dates for the information provided. Throughout our study, we did not observe any instances in which agencies' automated tools informed users of the effective dates of the information provided. This approach stands in stark contrast to the manner in which formal law sources are drafted, such as statutes, regulations, and rulings, which all contain effective dates.[192] For example, at the conclusion of a chat session with a user, an agency's chatbot should include a brief statement such as "This information is effective as of [date]."

Effective dates serve several important functions. First, they provide information to users who request information about a specific time period.[193] Second, if agencies create publicly searchable archives of statements made by its automated tools, the effective dates will allow users to review how the agency changed statements made by these tools over time in response to legislative, judicial, and other developments. Last, if users could rely on statements made by chatbots and other automated tools to either bind the agency or defend against penalties for noncompliance (issues we discuss in subsequent recommendations),[194] then the inclusion of effective dates of statements made by these tools would become crucial information for users, agencies, and, potentially, courts.

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[189] *See supra* Part III.A.

[190] *See* Int. Rev. Serv., Press Release, *IRS updates process for frequently asked questions on new tax legislation and addresses reliance concerns*, IR-2021-202 (Oct 15, 2021), *available at* https://www.irs.gov/newsroom/irs-updates-process-for-frequently-asked-questions-on-new-tax-legislation-and-addresses-reliance-concerns.

[191] *See, e.g.*, Todd Rubin, *Public Availability of Inoperative Agency Guidance Documents* (Report Submitted to ACUS) (Nov. 2021) (providing guidance regarding when agencies should make inoperative guidance documents public).

[192] *See, e.g.,* Int. Rev. Serv., Int. Rev. Man. 32.1.1.2.5 (describing effective dates of Treasury Decisions).

[193] For example, some users who visit ITA may submit inquiries about prior years, not just the current year. *See* Int. Rev. Serv., *Interactive Tax Assistant (ITA)*, *supra* note 3.

[194] *See infra* Parts V.B.1, 2.

4. Where agencies use decision tree structure in chatbots, agencies should publish content of entire decision tree.

As we have documented, agencies adopt different approaches to designing automated legal guidance tools. For example, the IRS's ITA reflects a decision tree approach to assisting users. For every topic within ITA, the tool provides the same responses to every inquiry, varying only based upon users' inputs when answering a uniform set of questions from ITA.[195] Automated tools that use machine learning, on the other hand, deliver different responses to users' questions over time as they discover patterns.[196]

In the interest of transparency, agencies that adopt decision tree structures when implementing automated legal guidance should publish the entire content of such decision trees. Public disclosure of the decision tree would provide an immediate and comprehensive source of guidance to users who seek to learn the agency's views on legal issues that may vary depending upon the circumstances. The current approach requires users to provide alternative inputs (e.g., answering "yes" or "no" to specific questions) rather than allowing them to view the entire set of possible agency positions at once.[197] Further, public disclosure of the decision tree would facilitate public scrutiny of the questions and answers provided by their automated tools. Without such disclosure, computer programmers working within agencies could make adjustments, large or small, to the wording or ordering of the questions without causing members of the public to realize that these changes have occurred.

B. Reliance

1. Where chatbots and automated tools provide unilateral guidance, that which does not depend upon users' responses to questions, agencies should allow users to reasonably rely on such statements to bind the agency.

Some of the agencies' chatbots and other tools that we reviewed provide information to users who inquire about specific topics without asking the users any follow-up questions. These automated tools present the same information to all users, regardless of their specific circumstances. For instance, when users interact with USCIS's Emma, if they ask Emma, "If I am a lawful permanent resident, may I travel?," Emma responds, "Permanent residents are free to travel outside the United States, and temporary or brief travel (less than 1 year) usually does not affect your permanent resident status," and provides links to other sections of the USCIS website.[198] Emma does not ask the user for additional information or vary her response depending on the user's response to questions.[199] In this case, the agency is the only actor speaking. We describe this type of statement as "unilateral" guidance.

We recommend that where an agency makes statements to all users using language that does

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[195] *See* Int. Rev. Serv., *Interactive Tax Assistant (ITA)*, *supra* note 3.

[196] *Meet Emma, Our Virtual Assistant, supra* note 2.

[197] Int. Rev. Serv., *Interactive Tax Assistant (ITA)*, *supra* note 3.

[198] *Cf., e.g.*, Deirdre K. Mulligan & Kenneth A. Bamberger, *Saving Governance-by-Design*, 106 CALIF. L. REV. 697, 719 (2018) (explaining concern that "governance by way of automated processes is essentially tantamount to rulemaking by programmers," which is a "troubling delegation of legislative power that fails to satisfy norms of administrative process including transparency, participation, and legitimacy" (internal quotation marks omitted)).

[199] *See supra* notes 62-70 and accompanying text.

not vary depending upon responses from users to questions through automated legal guidance, agencies should allow users to reasonably rely on such statements to bind the agency. As a matter of procedural fairness, users should be able to rely on agency statements that do not conflict with formal law. If agency officials were bound by the agency's statements through automated tools, agency officials may also exercise greater caution when programming the responses from these tools. This change would support procedural fairness, create more equal reliance opportunities for users with different economic resources, and, potentially, enhance agencies' perceived legitimacy.[200]

We note, however, that our proposal regarding bindingness does not extend to "bilateral" administrative guidance—where users input information regarding their own personal circumstances in exchange for the output of advice from automated tools. First, the quality of the answers that automated tools, such as ITA, delivers is only as good as the information that the users provide.[201] Second, in the case of bilateral administrative guidance, the information that automated tools provide varies among users, depending on the extent to which taxpayers input requested information accurately.[202] Third, if it were binding on the agency, bilateral guidance could be subject to abuse.[203]

2. *Where chatbots and automated tools provide either unilateral or bilateral guidance, agencies should allow users to reasonably rely on such statements to defend against penalties for noncompliance.*

We recommend that agencies also allow users to reasonably rely on statements made by agencies' chatbots and other automated tools to defend against penalties for noncompliance. This proposal should apply in situations where users show that they have reasonably relied upon *either* unilateral or bilateral administrative guidance.

Users who rely on unilateral guidance offered by agencies' automated tools may not able to access certain defenses against penalties for noncompliance under current law. For example, if the IRS offered unilateral guidance regarding a tax compliance issue to a user through its website, individuals could not assert a "reasonable basis" defense against any subsequent accuracy-related tax penalties.[204] Under this penalty defense, individuals must show that they reasonably relied upon a specific formal tax law source, such as the U.S. Code, regulations, Revenue Rulings, judicial decisions, and announcements published by the IRS in the Internal Revenue Bulletin.[205] Under our recommendation, individuals would be able to show reasonable reliance upon unilateral administrative guidance in order to assert a reasonable basis defense.

In situations involving bilateral administrative guidance, users should also be able to show

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[200] *See, e.g.*, Karyl A. Kinsey, *Deterrence and Alienation Effects of IRS Enforcement: An Analysis of Survey Data*, *in* WHY PEOPLE PAY TAXES: TAX COMPLIANCE AND ENFORCEMENT 259, 259 (Joel Slemrod ed., 1992); John T. Scholz & Mark Lubell, *Trust and Taxpaying: Testing the Heuristic Approach to Collective Action*, 42 AM. J. POL. SCI. 398, 408 (1998).

[201] Blank & Osofsky, *Automated Legal Guidance, supra* note 17.

[202] *See id*.

[203] For example, taxpayers could input information regarding a purchase of equipment into ITA, but ignore the legal requirement that the equipment be related to a business, to generate an answer from ITA that the equipment is tax-deductible. *See* Blank & Osofsky, *Automated Legal Guidance*, *supra* note 17.

[204] Treas. Reg. § 1.6662-3(b)(3).

[205] Treas. Reg. § 1.6662–4(d)(3)(iii).

reasonable reliance to assert defenses against penalties for noncompliance. While we have not recommended that bilateral administrative guidance should be internally binding upon agencies, we do not believe that allowing individuals to rely on such statements to defend against penalties would present opportunities for manipulation and abuse. First, in many cases, individuals must still show reasonable reliance when claiming legal positions.[206] The reasonableness requirement would enable agencies and courts to reject penalty defenses where individuals inputted misleading or false information in order to generate a response that could be used as a penalty defense.[207] Second, under the law applicable to certain agencies, such as the IRS, individuals must disclose their reliance on a specific source to the agency in order to later use this reliance to claim a penalty defense.[208] This disclosure requirement should deter abusive use of bilateral statements by automated tools for the purpose of penalty defenses.

> *3. Agencies should allow users to download a written record of correspondence with chatbots and other automated guidance tools.*

Agencies should design their automated tools to allow users to easily reproduce an electronic written record of every input by the user and output by the automated tool. At the most practical level, users could later refer to this record when deciding to take a specific action and when they wish to consider the guidance they received. They could also use this record when responding to potential challenges of their actions by agencies in the future, including as support for their defense against penalties for noncompliance.[209]

This recommendation addresses limited and inconsistent ability of users to preserve records of their interaction with agencies' automated tools. In most cases of automated legal guidance currently in effect, we did not observe options that users could access for creating such a record. For example, under current law, taxpayers possess limited ability to assert a reasonable cause and good faith defense against accuracy-related tax penalties by claiming reliance on statements made by ITA.[210] After a taxpayer has submitted all of the information requested, which can require over a dozen responses, ITA produces an "answer" screen, but no record of the taxpayers' responses to ITA's questions, making it difficult to show that the taxpayer exercised ordinary business care.[211] Further, ITA's answer screen does not include a date when the taxpayer submitted the request for information or the taxpayer's name.[212]

C. Disclaimers

> *1. Agencies should include disclaimers regarding limits on users' ability to bind agencies using statements by chatbots and other automated tools.*

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[206] *See* Treas. Reg. § 1.6662–4(d)(3)(iii).

[207] *See id.*

[208] *See* Treas. Reg. § 1.6662-4(f) (method of making adequate disclosure).

[209] In order to receive the written record, users could be required to submit some personal identifying information, such as name and date of birth. The written record should include the user's identifying personal information and the date that the automated tool delivered guidance to the user.

[210] *See* Int. Rev. Serv., *Interactive Tax Assistant (ITA)*, *supra* note 3.

[211] *See id.*

[212] *See id.*

Agencies should include explicit disclaimers in their automated tools that describe users' ability to bind the agency using statements made by these tools. While some agencies provide limited disclaimers,[213] we did not observe clear statements regarding the binding or non-binding nature of the information provided by chatbots, virtual assistants, and other automated tools. If current law remains in effect, agencies should inform users that they will not be able to use statements made by automated tools to estop the agency from adopting contrary positions in the event of an agency challenge. On the other hand, if our prior recommendation is adopted,[214] agencies should inform users what types of statements by automated tools are binding on agencies.

A potential objection to this recommendation is that it would require agencies to add significant text to automated tools that are designed to offer concise and simple explanations. However, agencies can offer disclaimers that exhibit clarity and brevity, without referring extensively to legal authorities. Such disclaimers could be as simple as "In the event of future disputes or challenges, you may not rely on the answers provided to prevent this agency from adopting alternative interpretations of the law."

2. Agencies should include disclaimers regarding limits on users' ability to defend against penalties for noncompliance using statements by chatbots and other automated tools.

During our study, we observed that, when offering automated legal guidance, most agencies do not include disclaimers regarding penalty relief. Some agencies, however, offer limited disclaimers. For example, the IRS includes a statement on ITA's final answer screen that describes the limits on taxpayers using statements made by ITA to trigger protections under Section 6404(f) of the Internal Revenue Code (regarding erroneous agency statements), but does not include any disclaimers regarding the reasonable cause, reasonable basis, or other defenses against civil and criminal tax penalties.[215]

Agencies should provide disclaimers that address not only the binding nature of statements made by automated legal guidance, but that also describe users' ability to rely upon these statements to defend against penalties for noncompliance. If our prior recommendation is adopted,[216] agencies should inform users that they may use their reliance on statements made by their automated tools to defend against specific penalties for noncompliance.

3. Where automated legal guidance uses natural language processing, agencies should provide disclaimers that the speaker is not human.

We recommend that when agencies use automated tools that have human appearance and employ natural language processing, they should inform users that the tool is not a human being. As we have documented, agencies have deployed automated tools that appear to be human beings who can engage in natural conversation with users. For example, USCIS's Emma appears to be a female individual with brown hair who speaks to users in the first person (e.g., "Hi, I'm

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[213] *See, e.g.,* Int. Rev. Serv., *Interactive Tax Assistant (ITA)*, *supra* note 3.

[214] *See supra* Parts V.B.1, 2.

[215] *See* Int. Rev. Serv., *Interactive Tax Assistant (ITA)*, *supra* note 3

[216] *See supra* Parts V.B1, 2.

Emma").[217] USCIS provides information on Emma's background on its website by describing to readers that Emma is a "computer-generated virtual assistant who can answer your questions."[218] The agency could provide further disclaimers by programming Emma to state explicitly that she is not a human being and that her responses to questions are not provided by human beings in real time. Without this type of disclosure, chatbots may cause some users to place too much confidence in their guidance, which would be especially problematic where the guidance is not consistent with the formal law and/or where users could not rely upon it to bind the agency or defend against penalties.

D. Process

1. Agencies should adopt a clear chain of command regarding design, maintenance, and review of automated legal guidance and publish information regarding this process.

Agencies should develop clear chains of command regarding the creation, review, and updating of guidance offered by chatbots, virtual assistants, and other automated tools. During our study, we found that agencies have adopted a range of approaches to automated legal guidance. Some agencies have used a "top down" approach, where the agency's general counsel's office direct members of a technology team to program an automated tool to address substantive legal issues and questions.[219] Other agencies have more of a "bottom up" approach, where product developers have autonomy to create chatbots, virtual assistants, and other automated tools and also to program and update the content provided by these tools.[220] Irrespective of the model, our general observation is that employees did not always know the internal process for creating and maintaining automated legal guidance. For instance, individuals involved in computer programming may not know who makes final decisions on the substantive legal rules that should be conveyed and who is responsible for reviewing legislative and judicial developments.[221]

To enhance accountability and transparency, agencies should adopt clear chains of command regarding automated legal guidance that clearly describe the responsibilities of members of the general counsel's office, policy group, communications group, and technology groups, among others. Agencies should also publish this information to ensure that the chain of command is known within the agencies and can be reviewed by oversight institutions.

2. Agencies should solicit independent expert evaluation of user experience regarding chatbots and other automated legal guidance tools, during both the design and delivery of such tools.

As part of the formal process regarding the development and maintenance of automated legal guidance, agencies should include external expert review and analysis. During our interviews, we heard about many different individuals who are involved in the creation and maintenance of automated legal guidance at agencies.[222] They include the product owner and members of the

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[217] USCIS, *Meet Emma, Our Virtual Assistant*, *supra* note 2.

[218] *Id*.

[219] *See supra* Part III.A.

[220] *See id*.

[221] *See id*.

[222] *See id*.

technology group, members of the policy team, members of the content team, members of senior leadership, content specialists, general counsel representatives, and members of the communications department, among others. We frequently heard that the automated tools offered by agencies were highly effective because they provided answers that were consistent with the agency's own summaries of the law, either through the general counsel's office or in other agency publications, and users reported high satisfaction.[223] We did not, however, hear much about the participation of outside experts. Outside experts, and, in particular, outside lawyers, may have a fresh perspective on ways in which automated legal guidance may apply unexpectedly to particular factual scenarios. Or, in other circumstances, outside legal review may apprise agencies of ways that general summaries of the law fail to take into account oft-occurring, or particularly nettlesome, factual scenarios. Outside legal review may also help agencies identify instances where updates to automated legal guidance have not occurred consistent with recent legal changes. Essentially, outside expert review may help create some of the transparency and accountability that comes from a more broadly participatory regulatory process. While, mindful of tradeoffs, agencies may not always accept proposed changes, at the least having advice and guidance coming from outside, as well as inside, agencies, may broaden perspectives and, ideally, improve the guidance that users ultimately receive. As a result, agencies should regularly subject their automated tools to review by technology experts and by subject matter experts. External technology experts should regularly review whether the agency's automated tools are user-friendly and consistent with relevant industry standards. External practitioners should be involved throughout the process of developing and updating automated tools to ensure that they deliver information that is as consistent as possible with the formal law and unlikely to result in confusion among users.

3. The Federal government should regularly evaluate the relative costs and benefits of allowing agencies to use outside vendors, rather than internal departments, for the introduction of automated tools. We also recommend that it should consider developing templates for chatbots and other tools that agencies could adopt rather than purchasing platforms from multiple external vendors.

The Federal government should evaluate the costs and benefits of relying upon outside vendors for the development of automated tools. During our interviews, we learned that most agencies that have deployed chatbots or virtual assistants have purchased these products from outside vendors.[224] Agency officials then work with the outside vendor to design questions and answers that the automated tool will provide to users. A benefit of this approach is that agencies have been able to introduce automated tools, such as Emma and Aidan, quickly and in a manner that is consistent with the types of services that private sector banks, airlines, and media companies offer to consumers.[225] The reliance on outside vendors, however, is not without drawbacks. When agencies use outside vendors independently, the automated tools may differ depending upon the agency, making it difficult for the Federal government to enforce consistent standards across agencies. In addition, external vendors that primarily serve private sector

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[223] *See supra* Part III.F.

[224] *See supra* Part III.A.

[225] *See, e.g., Meet Erica, Your Virtual Financial Assistant in the Bank of America App*, BANK OF AMERICA, https://promo.bankofamerica.com/erica/ (Jan. 17, 2022); *Microsoft Healthcare Bot*, Microsoft, https://www.microsoft.com/en-us/research/project/health-bot/ (last visited Jan. 17, 2022);

businesses and that seek to create the most personable and user-friendly automated tools may not be attuned to concerns that are unique to government agencies. For instance, these vendors may not incorporate disclaimers regarding formal law and the reliance of users into the basic design of their automated platforms.[226] Greater attention to the role, and drawbacks, of outside vendors in the automated legal guidance context will bring agencies more in line with ACUS Statement #20's recommended oversight of the role of outside vendors in the development of government AI.[227]

E. Accessibility, Inclusion, and Equity

1. Agencies should study personal characteristics of users of chatbots and automated tools.

Agencies should study the use of automated legal guidance by users with different personal characteristics, including, among others, based on race, income, education, marital status, gender, and disability. Throughout our interviews, across Federal agencies, officials informed us that they do not collect or study information about the personal characteristics of users of their automated tools to comply with the law.[228] As a result of the "cascading effects" of lack of data, in 2021, President Biden issued an executive order that established an "Interagency Working Group on Equitable Data," which must offer recommendations on best practices for studying effects of legal rules and policies on different individuals based on race, ethnicity, gender, disability, and other characteristics.[229] Consistent with this initiative, agencies should research the types of users who rely on automated legal guidance to comply with the law in order to better "measure and advance equity."[230]

There are numerous ways in which agencies could design their studies of personal characteristics of users. Several agency officials described the extensive advance testing that their agencies conduct before they make these tools publicly accessible. They also commented that they track the annual usage of these tools.[231] In addition to this analysis, agencies could attempt to collect information on the characteristics of users by including surveys following use of these tools regarding users' income, marital status, and race, among others. Private sector businesses use these types of surveys regularly, especially where potential consumers access websites and other online services.[232]

2. In the event that automated tools cannot answer users' questions, agencies should automatically provide options for users to contact human customer service representatives.

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[226] *See supra* notes 211-218 and accompanying text.

[227] ACUS, *Statement #20, Agency Use of Artificial Intelligence* (Dec. 16, 2020), at 3.

[228] *See supra* Part III.H.

[229] Exec. Order No. 13,985, 86 Fed. Reg. 7009 (Jan. 20, 2021).

[230] *Id*. *See also* Jeremy Bearer-Friend, *Should the IRS Know Your Race? The Challenge of Colorblind Tax Data*, 73 TAX L. REV. (2019); Dorothy Brown, *Race and Tax: Colorblind No More*, Jotwell.com, Feb. 25, 2021.

[231] *See supra* Part III.H.

[232] *See 3 Reasons Why AI-Powered Customer Service Is the Next Big Thing*, ELEKS (July 20, 2020), https://eleks.com/blog/artificial-intelligence-customer-service-next-big-thing/#; Aakrit Vaish, Five Reasons Why Chatbots Are the Future of Customer Service, ENTREPRENEUR (Jan. 5, 2019), https://www.entrepreneur.com/article/325830.

When automated tools are unable to provide answers to users' questions, agencies should automatically provide information to users on how to reach human customer service representatives. Private sector businesses that use chatbots and virtual assistants often provide this information where the automated tools are not able to address customers' questions.[233] During our study, however, we found that agencies often do not provide information regarding human customer service as part of the interaction between users and automated tools. For example, when ITA provides its answer screen to users, it does not provide information regarding help lines or live customer service.[234] Similarly, Emma does not automatically offer this information during chat sessions with customers, though the USCIS website contains it.[235] Users must leave the chat session and hunt through multiple pages on the website to find information regarding human customer service.[236] Without addressing this omission, automated legal guidance may disproportionately disadvantage certain individuals, such as those who lack experience with online platforms, those who have disabilities, or those who lack any familiarity with the formal law in the area of inquiry.

> *3. Agencies should supplement automated legal guidance with continued efforts to create other avenues that increase access to the underlying law, including through support for pro bono legal services and increased training of customer service representatives who can address complex questions from users.*

While automated legal guidance offers agencies an efficient and immediate way to communicate the law, agencies that introduce this technology should explicitly acknowledge that it is only a single component of a greater effort to assist the public. As agency officials have acknowledged during our interviews, automated tools cannot address every user and every type of legal question.[237] Agencies should continue to pursue other ways to serve the public, especially low-income individuals and those who lack access to lawyers and other expert advisors. Agencies that adopt automated legal guidance should also continue to allocate resources to provide human customer service representatives, whether these representatives assist individuals in person, by phone, or through electronic means. In addition, agencies should continue to support assistance to individuals through pro bono legal advisors, such as through pro bono legal clinics and by providing access to free online filing platforms, such as the IRS Free File program.[238] Finally, in order to reduce the gap between formal and informal law, policymakers should explore reforms to the way in which they draft formal law, such as through the use of rule-based statutory provisions and formalization of statutory language.[239]

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[233] *See, e.g., Meet Erica, Your Virtual Financial Assistant in the Bank of America App, Bank of America, supra* note 225.

[234] *See* Int. Rev. Serv., *Interactive Tax Assistant (ITA), supra* note 3.

[235] *See* USCIS, *Meet Emma, Our Virtual Assistant, supra* note 2.

[236] *See id*.

[237] *See supra* Parts III.D, E.

[238] *See* Int. Rev. Serv., *Free File: Do your Federal Taxes for Free, available at* https://www.irs.gov/filing/free-file-do-your-federal-taxes-for-free.

[239] For further discussion, *see* Blank & Osofsky, *The Inequity of Informal Guidance, supra* note 17.

VI. Conclusion

This Report has described the results of a study of the use of automated legal guidance across the Federal government. While other legal scholars have studied the role of artificial intelligence in law enforcement, administrative rule making, and other areas, our study has examined in depth the government's use of artificial intelligence to explain complex law to the public. This Report provides policymakers with a guide for how government agencies should seek to maximize benefits and minimize costs as they introduce automated legal guidance platforms.