



December 2021

FEDERAL SPENDING TRANSPARENCY

Opportunities Exist for
Treasury to Further
Improve
USAspending.gov's
Use and Usefulness

GAO@100 Highlights

Highlights of [GAO-22-104127](#), a report to congressional addressees

Why GAO Did This Study

In fiscal year 2020, the federal government spent \$7.4 trillion. USAspending.gov, the Data Lab website, and PandemicOversight.gov provide key information on this spending.

Congress included a provision for GAO to review implementation of the Digital Accountability and Transparency Act of 2014, which requires federal reporting of spending data. This report examines (1) user perspectives on useful activities for, and challenges with, these websites; (2) the extent to which information on use and usability of the USAspending.gov and Data Lab websites informs updates of their design and operation; and (3) the extent to which Treasury has addressed challenges regarding the awareness of, and data limitation disclosures on, USAspending.gov.

For this report, GAO collected user input from a nongeneralizable sample of 63 individuals and organizations using a snowball sampling technique. This allowed GAO to identify contacts through referrals, and additional information from a projectable sample of federal managers who were familiar with USAspending.gov. GAO also analyzed documents, compared Treasury actions with guidance and good practices, and interviewed agency officials.

What GAO Recommends

GAO is making four recommendations to Treasury, including that it should target USAspending.gov promotion and training to specific user personas, and make known data limitation disclosures more prominent and easily accessible to users. Treasury concurred with our recommendations.

View [GAO-22-104127](#). For more information, contact Michelle Sager at (202) 512-6806 or SagerM@gao.gov.

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Opportunities Exist for Treasury to Further Improve USAspending.gov's Use and Usefulness

What GAO Found

Federal spending data websites let users search, download, and analyze how the U.S. government spends public funds. Users GAO interviewed—representing the public, recipients of federal funds, and federal agencies, among others—identified a variety of uses for, and challenges with, these websites (see figure).

Useful Activities and Challenges Identified by Selected Users of Federal Spending Data Websites



Useful activities

- ✓ Foster greater transparency
- ✓ Identify funding opportunities
- ✓ Identify potential fraud, waste, and abuse, and inform enforcement of recipient compliance
- ✓ Inform decision-making and program administration



Challenges

- ✗ Lack of awareness of websites and how to effectively use them
- ✗ Limitations with data availability and quality
- ✗ Difficulties locating known data limitations

Source: GAO analysis of interviews from actual and potential spending data users. | [GAO-22-104127](#)

The Department of the Treasury has collected website user feedback through various channels including usability testing sessions and an online community forum. In response to that input, Treasury officials have added information on unreported data to, created a data dictionary for, and provided additional file formats for downloads on their spending data websites.

Consistent with user-centered website design principles, Treasury identified specific types of expected users through the development of user “personas”—such as citizens and recipients—each with different interests and needs. However, GAO’s analysis found limited evidence that Treasury targeted USAspending.gov training toward these personas. GAO also found that Treasury generally did not target promotion efforts to these personas. Without taking these steps, Treasury may miss opportunities to encourage greater use of the website or properly address the needs of the different types of users.

Website users also reported difficulties locating disclosures of data limitations on USAspending.gov. This information is typically unavailable on or near the pages where users are searching for, or viewing, the data. In addition, GAO found that USAspending.gov does not include a site search function that could be used to more easily locate information on data limitations. If users cannot easily locate data limitation disclosures, they could inadvertently draw inaccurate conclusions from the data or lose confidence in them.

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Abbreviations

API	application programming interface
BFS	Bureau of the Fiscal Service
CFO	Chief Financial Officer
COVID-19	Coronavirus Disease 2019
DATA Act	Digital Accountability and Transparency Act of 2014
DTS	Daily Treasury Statement
FFATA	Federal Funding Accountability and Transparency Act of 2006
GSA	General Services Administration
HHS	Department of Health and Human Services
OMB	Office of Management and Budget
PRAC	Pandemic Response Accountability Committee
SEO	search engine optimization
SES	Senior Executive Service
Treasury	Department of the Treasury

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December 16, 2021

Congressional Addressees

In fiscal year 2020, the federal government spent \$7.4 trillion, including about \$1.6 trillion in supplemental spending to respond to the Coronavirus Disease 2019 (COVID-19) pandemic.¹ This level of annual spending is 46.3 percent higher than fiscal year 2019 spending, and is equal to 35.3 percent of the total gross domestic product of the United States in fiscal year 2020. Given this large and increasing amount of spending, it is especially important to have the ability to track and understand how, where, and for what federal funds are spent. Such transparency provides the foundation for efforts by Congress, agencies, and the public to have insight into and oversee federal spending.

The Digital Accountability and Transparency Act of 2014 (DATA Act) expands on previous federal transparency legislation by requiring a greater variety of data related to federal spending by agencies—such as budget and financial information—to be disclosed and agency spending information to be linked to federal program activities.² These requirements are intended to help policymakers and the public track federal spending throughout its life cycle. The act gives the Office of Management and Budget (OMB) and the Department of the Treasury responsibility for establishing government-wide financial data standards for reporting all federal funds made available to, or expended by, federal agencies and entities receiving federal funds.

Implementation of the DATA Act has evolved since its enactment in 2014. USAspending.gov has also evolved and serves as the official source of spending data submitted by federal agencies pursuant to the Federal Funding Accountability and Transparency Act of 2006 (FFATA), as

¹According to the fiscal year 2020 *Financial Report of the United States Government*, the federal government's net costs for fiscal year 2020 were \$7.4 trillion and its gross outlays for COVID-19 response funded by relief legislation for the same period were \$1.6 trillion.

²Pub. L. No. 113-101, 128 Stat. 1146 (2014). The DATA Act amended the Federal Funding Accountability and Transparency Act of 2006 (FFATA). Pub. L. No. 109-282, 120 Stat. 1186 (2006), codified at 31 U.S.C. § 6101 note. We refer to language added to FFATA by the DATA Act as DATA Act requirements. Enacted on September 24, 2021, the Congressional Budget Justification Transparency Act of 2021 amends FFATA to require the budget justifications and appropriation requests of agencies be made publicly available. Pub. L. No. 117-40, 135 Stat. 337 (2021), codified at 31 U.S.C. § 6101 note.

amended by the DATA Act.³ This evolution in DATA Act implementation and USAspending.gov presents an opportunity to explore the value users gain, as well as the challenges they encounter, when using USAspending.gov and related federal spending websites. Related federal spending websites include Treasury's Data Lab website and the Pandemic Response Accountability Committee's (PRAC) PandemicOversight.gov.⁴ The March 2020 enactment of the CARES Act led to the creation of the latter website.⁵

The DATA Act includes a provision for us to review implementation.⁶ This report builds on our body of work on the DATA Act by reviewing the use and usefulness of federal and COVID-19 spending data available on USAspending.gov, the Data Lab website, and PandemicOversight.gov. Specifically, this report (1) identifies examples of useful activities and challenges cited by users of these websites and the spending and related data available on them; (2) evaluates the extent to which information on use and usability of the USAspending.gov and Data Lab websites informs updates of the design and operation of these websites; and (3) assesses the extent to which Treasury has addressed challenges regarding the awareness and use of USAspending.gov, and communication of data limitations on the website.

To identify examples of useful activities and challenges cited by users of federal and COVID-19 spending and related data available on these three websites, we (1) identified users of federal spending data based on information acquired in part from Treasury and PRAC documents, Offices of Inspectors General products issued in fiscal year 2020, and a literature review, among other sources; (2) conducted structured telephone or written interviews with individual users and organizations selected based on our prior work and their availability; (3) interviewed additional individual

³USAspending.gov was first launched in December 2007.

⁴See <https://www.usaspending.gov/> for USAspending.gov. See <https://datalab.usaspending.gov/> for the Data Lab website. See <https://www.pandemicoversight.gov/> for PandemicOversight.gov. The PRAC was established as a committee within the Council of the Inspectors General on Integrity and Efficiency by the CARES Act to promote transparency and conduct and support oversight of covered funds and the Coronavirus response to (1) prevent and detect fraud, waste, abuse, and mismanagement and (2) mitigate major risks that cut across program and agency boundaries. Pub. L. No. 116-136, § 15010(b), 134 Stat. 281, 534 (2020).

⁵Pub. L. No. 116-136, § 15010(g)(1)(A), 134 Stat. at 539.

⁶FFATA, § 6(b).

users and organizations we identified by employing a snowball sampling technique using referrals from previous interviewees; and (4) analyzed the information collected from these sources.

We used this analysis to identify examples of useful activities and challenges related to USAspending.gov, the Data Lab website, and PandemicOversight.gov and the data on these sites. The information obtained from these interviews is not generalizable to all actual or potential users of the three websites and associated spending data, but represents a range of viewpoints from website users.⁷ We also reviewed responses to selected questions regarding USAspending.gov from our 2020 survey of federal managers on organizational performance and management issues.⁸ We used information from the survey responses that addressed the useful activities and challenges we identified from our analysis of the interviews.

To evaluate the extent to which information on use and usability of the USAspending.gov and Data Lab websites informed Treasury's design and operation of these websites, we analyzed documentation collected from Treasury and interviews with Treasury officials to examine actions the agency has taken to identify website users, collect and assess feedback from the users, and update the design or operation of the websites. We then compared Treasury's actions to the following: (1) FFATA requirements for opportunities for public input regarding USAspending.gov;⁹ (2) actions for engaging with users that contribute to a key practice we have previously identified for transparently reporting

⁷When describing the views of the 63 individuals and organizations we interviewed, we used the following modifiers to convey how often the issues were raised in the interviews: "many" represents 13 to 19 individuals and organizations; "several" represents eight to 12 individuals and organizations; and "some" represents three to seven individuals and organizations. No more than 19 individuals and organizations identified any specific useful activity or challenge discussed in this report.

⁸Section 5 of our 2020 survey covered federal financial information, including questions about USAspending.gov. For more information on the survey, including our scope and methodology, see GAO, *Supplemental Material for GAO-21-536: 2020 Federal Managers Survey: Results on Government Performance and Management Issues*, GAO-21-537SP (Washington, D.C.: July 27, 2021). The supplement provides the estimated aggregated government-wide and agency-level results (with related 95 percent confidence intervals) on each survey question.

⁹FFATA, § 2(c)(3), 120 Stat. at 1188.

open government data;¹⁰ and (3) human-centered design principles that the General Services Administration (GSA) identified for considering federal website audience’s expectations and needs.¹¹

To assess the extent to which Treasury has addressed challenges related to the awareness of USAspending.gov and use of data on the website, we reviewed documentation and interviewed Treasury officials to identify actions Treasury has taken to improve website awareness. Next, we compared these actions against good practices for promoting the awareness and use of government websites we identified from a review of peer-reviewed studies, our prior work, and GSA’s Digital.gov website.¹² To assess to what extent Treasury has addressed challenges related to the communication of data limitation disclosures on USAspending.gov, we identified actions Treasury has taken to place information on the disclosures in areas of the website where users are searching for or viewing spending data. We compared these actions to OMB and Treasury guidance for placement of data limitation information on federal websites, and criteria we identified in previously issued products.

We conducted this performance audit from February 2020 to December 2021 in accordance with general accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. See appendix I for additional details on our scope and methodology.

¹⁰GAO, *Open Data: Treasury Could Better Align USAspending.gov with Key Practices and Search Requirements*, GAO-19-72 (Washington, D.C.: Dec. 13, 2018).

¹¹The U.S. Web Design System—a project of GSA—is a toolkit of principles, guidance, and code that uses human-centered design principles. These principles include starting with real user needs and earning trust. Key considerations for addressing these principles include considering the audience’s expectations and user needs. Practical actions for implementing these principles include testing products regularly with potential users to ensure it meets people’s needs. For more information, see <https://designsystem.digital.gov/design-principles/>. Accessed August 3, 2021.

¹²For this report, a “good practice” means that relevant literature (such as peer-reviewed studies and our prior work) identified the practice as enhancing the awareness or use of government websites.

Background

Overview of Federal Spending Websites

USAspending.gov is the official source of spending data submitted by federal agencies pursuant to FFATA, as amended by the DATA Act. USAspending.gov also includes data from government-wide reporting systems, such as the Federal Procurement Data System, the System for Award Management, and the Federal Funding Accountability and Transparency Act Subaward Reporting System.¹³ Since 2020, Treasury has made spending data from the federal government's response to COVID-19 available to view and download on USAspending.gov. These data include Disaster Emergency Fund Code tags that identify the funding as coming from a specific COVID-19 supplemental appropriation. They also include obligation and outlay data for COVID-19 spending and breakdowns of spending data by federal agency, award recipient, and various budget categories.

In September 2017, Treasury launched its Data Lab website with the stated intention of providing the public with a better understanding of government spending and demonstrating how open data can be used to promote innovation both inside and outside of the government. The Data Lab is a separate website linked to USAspending.gov that offers visual interpretations of spending data. The website includes topical analyses and visualizations—such as figures and graphs—of spending on specific groups such as colleges and universities, the homeless, and federal employees, as well as COVID-19 supplemental spending for fiscal year 2020.

The CARES Act required the PRAC to, among other things, create a website to foster greater accountability and transparency.¹⁴ The website, PandemicOversight.gov, provides COVID-19-related spending data imported from USAspending.gov. It also includes other data from federal agencies as well as Treasury's Office of Inspector General. Additional

¹³The Federal Procurement Data System is the official source for U.S. federal procurement data and the central collection point for federal contract information in accordance with the Federal Acquisition Regulation. 48 C.F.R. §§ 4.600-4.607. The System for Award Management is the primary database for information on entities that do business with the federal government (i.e., contractors and grantees), and in which such entities must register. The Federal Funding Accountability and Transparency Act Subaward Reporting System provides data on first-tier subawards that prime grant and contract recipients report to meet the FFATA reporting requirements.

¹⁴Pub. L. No. 116-136, § 15010(g), 134 Stat. at 539-540.

information on the characteristics of these three websites is provided in table 1.

Table 1: Comparison of USAspending.gov, Data Lab Website, and PandemicOversight.gov

Website	USAspending.gov (usaspending.gov)	Data Lab (datalab.usaspending.gov)	PandemicOversight.gov (pandemicoversight.gov)
Mission (according to agency)	To serve as the official open data source of federal spending information.	To promote transparency of government finances through engaging and informative analysis of spending data.	To promote transparency of COVID-19 awards and spending, and prevent and detect fraud, waste, abuse, and mismanagement.
Date established	Current version: March 2018 Initial launch: December 2007	September 2017	First data update: September 2020 Launched: April 2020
Operated by	Office of the Chief Data Officer, Bureau of the Fiscal Service, Department of the Treasury	Office of the Chief Data Officer, Bureau of the Fiscal Service, Department of the Treasury	Pandemic Response Accountability Committee, Council of the Inspectors General on Integrity and Efficiency
Sources of data	Various (including agency-level financial and award systems and government-wide reporting systems)	USAspending.gov and fiscaldata.treasury.gov, along with other agency data as needed	USAspending.gov, federal agencies, Offices of Inspectors General
Data update schedule	Varies based on data source (quarterly, monthly, semimonthly, daily)	Most presentations are point-in-time analyses and not updated regularly. However, the Daily Treasury Statement (DTS) Tracker and America's Finance Guide are updated regularly.	Varies based on award date (quarterly or monthly), with ad hoc updates from USAspending.gov
Selected features	<ul style="list-style-type: none"> • Spending Explorer allows users to drill down into spending data by agency, budget function, or object class, down to the individual recipient level. • Profiles of agencies, federal accounts, states, and recipients provide a snapshot of relevant spending data, with the ability to drill down further. • The download feature allows users to extract either the entirety or a portion of the DATA Act dataset (from fiscal years 2001 to present) for off-line analysis. 	<ul style="list-style-type: none"> • Topical Analyses cover high-interest topics for a particular period, such as homelessness in fiscal year 2019. • The DTS Tracker displays the federal government's daily total spending. • America's Finance Guide uses the previous fiscal year's data to walk users through federal revenue, spending, deficit, and debt. 	<ul style="list-style-type: none"> • Data & Interactive Tools includes interactive tools to drill down to the recipient level for various COVID-19 programs, such as the Paycheck Protection Program, an interactive funding map, and a data download tool. • Reporting on Oversight provides a centralized collection of COVID-19 reports from federal and state government entities, including audits, investigations, and lessons learned. • Report Fraud, Waste & Abuse tool to submit attributable, confidential, or anonymous tips of COVID-19-related fraud.

Source: GAO analysis of websites and agency documentation. | GAO-22-104127

Use of Spending Data Websites

Treasury and the PRAC rely on metrics for tracking use of USAspending.gov, the Data Lab website, and PandemicOversight.gov. We focused on two key metrics—total sessions and page views—to track the use of the sites over time.¹⁵ The web traffic for the USAspending.gov website greatly exceeds the Data Lab and PandemicOversight.gov sites.

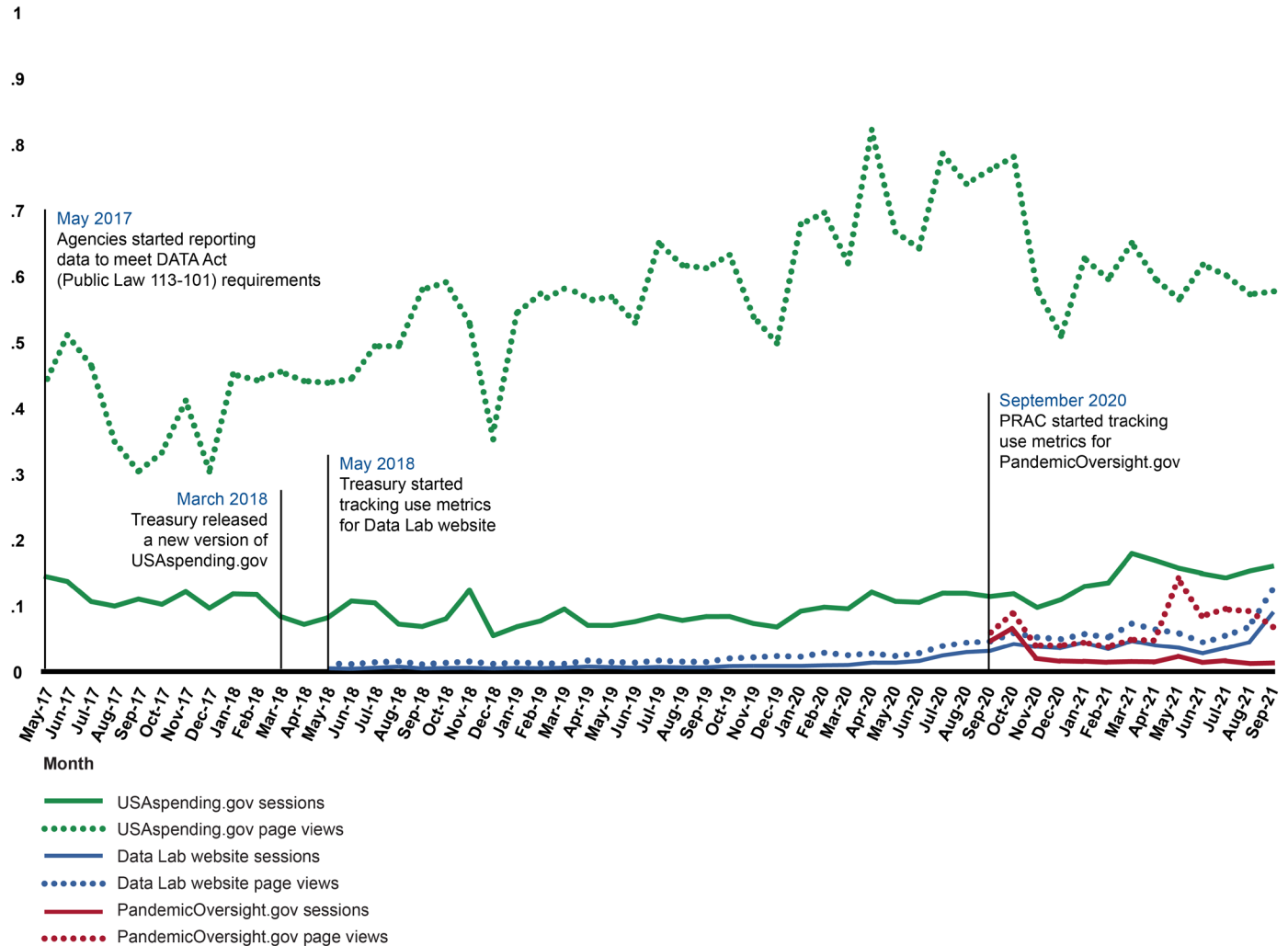
The total number of sessions on USAspending.gov was 11 percent higher in September 2021 compared to May 2017 (159,443 vs. 143,877).¹⁶ As shown in figure 1, page views were generally highest near the transition between federal fiscal years, September and October, lower in November and December, and then higher again at the end of each fiscal year. Given this variation, when comparing page views over time it is helpful to compare similar points in the cycle. Total page views of USAspending.gov were 90 percent higher in September 2021 compared to September 2017 (575,716 vs. 302,986).

¹⁵A “session” covers the entire time a user browses a website until the user leaves it or closes the browser window. In contrast, a “page view” represents each time a page loads on a website.

¹⁶Agencies started reporting data to USAspending.gov to meet DATA Act requirements in May 2017.

Figure 1: Total Sessions and Page Views of USAspending.gov, Data Lab Website, and PandemicOversight.gov, May 2017 through September 2021

Total sessions and page views (in millions)



Sources: GAO analysis of Department of the Treasury and Pandemic Response Accountability Committee (PRAC) data. | GAO-22-104127

Notes: A “session” covers the entire time a user browses a website until the user leaves it or closes the browser window. In contrast, a “page view” represents each time a page loads on a website.

Treasury adjusted use metrics for the USAspending.gov and Data Lab websites to exclude known nonhuman (bot) traffic. A bot is a software program that can, among other things, perform online searches, either automatically or with minimal human intervention.

Treasury provided Data Lab metrics for February 2021 with an expanded date range of January 29-February 28, 2021.

Treasury provided Data Lab metrics for May 2021 with a reduced date range of May 2-31, 2021.

The PRAC did not adjust the website traffic data for PandemicOversight.gov to eliminate bot traffic. However, according to PRAC officials, they instituted measures—such as blocking suspicious Internet Protocol addresses—to prevent or reduce the number of bots accessing the website.

In contrast, although much smaller in raw numbers, both Data Lab sessions and page views were substantially higher in September 2021 compared to September 2018. Specifically, Data Lab sessions were more than 21 times higher (85,710 compared to 3,866), and page views were more than 11 and a half times higher (128,137 compared to 10,129).

The use of PandemicOversight.gov demonstrated a different pattern during the period for which metrics are available. Total sessions were about 74 percent lower in September 2021 compared to September 2020 (11,729 compared to 44,566). However, page views were about 8 percent higher (60,669 compared to 56,043).

Users Identified a Variety of Uses for and Challenges with Federal Spending Data

Users Leveraged Data from Websites to Foster Greater Spending Transparency and Inform and Improve Decision-Making

Users of USAspending.gov, the Data Lab website, and PandemicOversight.gov identified a variety of purposes and activities for which they obtained these data.¹⁷ As discussed below, these activities included fostering greater transparency and identifying funding opportunities. These activities also included identifying potential fraud, waste, and abuse; informing enforcement of recipient compliance; and informing decision-making and program administration (see table 2 for specific examples of these challenges).

Foster greater transparency. Some users told us they used data from the websites to foster greater transparency of federal spending. These users included staff from a legislative branch agency, research organizations, and a watchdog group. One way users sought to increase transparency was to report out information on various topics—such as

¹⁷See appendix II for a list of individuals and organizations we interviewed regarding their use of federal and COVID-19 spending websites and associated data.

COVID-19 response or military contracting—using the websites’ data. Another way users sought to increase transparency was to repurpose federal spending data from USAspending.gov for use on other websites.

In our 2020 survey of federal managers, we asked managers to what extent, if at all, data available on USAspending.gov were useful for selected activities.¹⁸ An estimated 81.3 percent of managers responding to the survey who were at least somewhat familiar with USAspending.gov said that the website helped increase the availability and transparency of spending data and related information regarding their programs for the public or other stakeholders to at least some extent.¹⁹

Identify funding opportunities. Some users told us they used federal spending data to identify funding opportunities such as contracts and grants. These users included organizations representing groups such as state governments; federal, state, and local government employees; and federal contractors.

Identify potential fraud, waste, and abuse, and inform enforcement of recipient compliance. Some users told us they leveraged federal financial data from the websites to identify potential fraud, waste, and abuse or to reduce program risk. Users also employed spending data from the websites to identify potential program risks. In addition, users analyzed information from the sites to help enforce federal award recipients’ compliance with statutory and other requirements. These users included staff from executive branch agencies and an inspector general’s office, and organizations representing government employees.

Inform decision-making and program administration. Some users we interviewed told us that they used data from the websites to inform decision-making on how they administered programs. These users included staff from federal executive branch and state agencies.

¹⁸We used information from responses to survey questions that addressed the useful activities and challenges we identified from our analysis of the interviews. See appendix I of this report for more information on how we analyzed results from our 2020 survey of federal managers.

¹⁹Percentages of managers reporting that the website was useful for increasing the availability and transparency of spending data and related information are based on the 8 percent of managers who reported familiarity with USAspending.gov in response to a previous survey question. This survey estimate has a 95 percent confidence interval of 73.7 to 87.5 percent. For additional information, see survey item 30d in [GAO-21-537SP](#).

Respondents to our 2020 survey of federal managers also reported using USAspending.gov for program administration. Specifically, an estimated 66.3 percent of managers responding to our survey said they used the website to manage their own programs to some extent.²⁰

Table 2: Examples of Activities Identified by Selected Users of Federal Spending Data Websites as Useful

Useful activity	Examples provided by website users
Foster greater transparency	<ul style="list-style-type: none"> <li data-bbox="337 703 1511 783">• Legislative branch staff used USAspending.gov to provide transparency into the spending of specific agencies, and provide information to Congress on how much money agencies had spent from each source of COVID-19 supplemental funding. <li data-bbox="337 789 1511 844">• A research organization accessed and analyzed defense spending data to develop a report that provided transparency into the increase in military contracting since September 11, 2001. <li data-bbox="337 850 1511 930">• The Pandemic Response Accountability Committee’s (PRAC) PandemicOversight.gov used an application programming interface (API) to directly transfer data from USAspending.gov. As a result, spending data were updated dynamically as corresponding data were updated on USAspending.gov.^a <li data-bbox="337 936 1511 993">• A watchdog group repurposed USAspending.gov data to populate the group’s web page for tracking and increasing transparency of COVID-19 spending.
Identify funding opportunities	<ul style="list-style-type: none"> <li data-bbox="337 1005 1482 1060">• An organization representing state governments researched new grant opportunities through reviews of previously awarded grants. <li data-bbox="337 1066 1482 1121">• University staff used spending data to identify programs from which they were interested in obtaining grants, in part by comparing funding their universities and other universities received. <li data-bbox="337 1127 1482 1182">• Companies researched where federal contract dollars were spent, and used these data to obtain insight into potential business opportunities.
Identify potential fraud, waste, and abuse, and inform enforcement of recipient compliance	<ul style="list-style-type: none"> <li data-bbox="337 1194 1482 1274">• The Department of Health and Human Services (HHS) Office of Inspector General created a dashboard using the data to identify which grantees had received funds from other agencies. This information supported numerous investigations, audits, and evaluations since its initial deployment in 2018. <li data-bbox="337 1281 1482 1381">• Federal, state, and local government employees analyzed and identified anomalies and potentially fraudulent procurement activities. They said they could use the information to contact state offices to discuss these activities. If the activities were found to be fraudulent, they could use the information to determine how they could prevent them from occurring in the future. <li data-bbox="337 1388 1482 1442">• PRAC officials built risk models to identify multidipping, which involves the use of funds from multiple sources of federal spending to fund the same program or project. <li data-bbox="337 1449 1482 1509">• The Department of Labor identified federal contractors that fell under its jurisdiction, and scheduled contractors for compliance evaluations related to nondiscrimination and affirmative action obligations.

²⁰Percentages of managers reporting that they used USAspending.gov to manage programs are based on the 8 percent of managers who reported familiarity with USAspending.gov in response to a previous survey question. This survey estimate has a 95 percent confidence interval of 57.3 to 75.3 percent. For additional information, see survey item 30e in [GAO-21-537SP](#).

Useful activity	Examples provided by website users
Inform decision-making and program administration	<ul style="list-style-type: none"> State government officials reviewed how other state governments allocated federal reimbursements. They used this information to determine if hospitals or other entities that obtained direct payments from the federal government also gained access to CARES Act funds through their local government. HHS introduced a preaward risk assessment tool to automate gathering and analysis of grant recipient risk-related information and present results in a standardized and transparent manner. It used the data to provide HHS officials with information they needed to make expedited risk assessments of each grantee. Use of the tool reduced the time needed for grant reviews from 4 hours to 15 minutes on average and saved HHS an estimated \$142 million annually.

Source: GAO analysis of interviews with users of USAspending.gov, Treasury's Data Lab website, and PandemicOversight.gov. | GAO-22-104127

Notes: Federal spending data websites including USAspending.gov, Treasury's Data Lab website, and PandemicOversight.gov.

^aAPI is a tool that enables computer programs to request and receive information from USAspending.gov in a format they can understand.

Challenges Individuals and Organizations Identified with Using Spending Data Websites

In addition to identifying activities for which they used federal spending data, individuals and organizations we contacted cited several challenges they encountered with USAspending.gov, the Data Lab website, and PandemicOversight.gov as well as the data on these websites. As discussed below and later in this report, these challenges relate to awareness of the websites and how to use them, data availability and quality, and disclosure of data limitations (see table 3 for specific examples of these challenges).

Awareness and Use of Websites

Lack of awareness of the existence of websites. Many individuals and officials from organizations we interviewed said either they or their colleagues did not know that USAspending.gov, Data Lab website, or PandemicOversight.gov existed. These included nonprofit organizations, researchers, and organizations representing state and local government officials. However, when we informed some users about the websites, they said that the websites and the information on them could be helpful for them or the public to use.

As previously mentioned, some federal managers responding to our 2020 survey of federal managers responded that they might want to use USAspending.gov to increase transparency of spending data or manage programs. However, an estimated 92 percent of survey respondents said they were unfamiliar with USAspending.gov.²¹ This includes an estimated

²¹This survey estimate has a 95 percent confidence interval of 90 to 93.7 percent. This survey finding is also projectable to managers across 24 agencies identified in the Chief Financial Officers Act of 1990, as amended. 31 U.S.C. § 901(b). For additional information, see survey item 29 in [GAO-21-537SP](#).

80.9 percent of career Senior Executive Service (SES) respondents and an estimated 92.5 percent of non-SES respondents.²²

Lack of knowledge regarding specific data available on the websites or how to use them. Some individuals and organizations we interviewed identified as having used USAspending.gov encountered challenges from a lack of knowledge regarding specific data available from the website. In addition, representatives expressed concern they lacked an understanding of how to effectively use USAspending.gov or PandemicOversight.gov, or to obtain spending data on them.

Respondents to our 2020 survey of federal managers also expressed a lack of knowledge regarding available data on USAspending.gov. Specifically, an estimated 50 percent of survey respondents said they were unsure of what was available on the website to at least some extent.²³

Data Availability and Quality

Limited or lack of data availability. Many users we interviewed cited limited or lack of availability of specific data they were searching for on USAspending.gov. These included state and local officials, staff from an inspector general's office, think tanks, watchdog groups, and research institutions. Multiple organizations reported challenges with limited or missing information regarding award or grant subrecipients on USAspending.gov. One organization representing local government officials said that because of the lack of tracking of federal funds to local agencies by USAspending.gov and other websites, it could not determine whether federal funds were supporting the work of local agencies and reaching them in a timely manner.

Data quality issues. Many users we interviewed also identified issues with the quality of data available on USAspending.gov and PandemicOversight.gov. Specifically, they encountered challenges with the timeliness and accuracy of data. These users included executive and

²²The survey estimate for career SES respondents has a 95 percent confidence interval of 76.7 to 85.1 percent. The survey finding for non-SES respondents has a 95 percent confidence interval of 90.4 to 94.3 percent. For additional information, see survey item 29 in [GAO-21-537SP](#).

²³Percentages that expressed a lack of knowledge of available information on USAspending.gov are based on the 8 percent of managers who reported familiarity with USAspending.gov in response to a previous survey question. This survey estimate has a 95 percent confidence interval of 38.5 to 61.4 percent. For additional information, see survey item 31c in [GAO-21-537SP](#).

legislative branch agencies, watchdog groups, and other nongovernmental organizations. USAspending.gov users also expressed concerns with the accuracy of data on the website. This led some users to distrust the data available.

Respondents to our 2020 survey of federal managers also expressed concerns with the quality of data on USAspending.gov. Specifically, an estimated 50.1 percent of managers who responded to the survey said that data and information on the website were, at least to some extent, insufficient to meet their needs.²⁴

In our prior work addressing implementation of the DATA Act, we also identified challenges with the quality of data on USAspending.gov.²⁵ Our November 2021 report includes information on some of these challenges, and actions OMB and Treasury should take to address them.²⁶ Some of these issues were also cited in a report released by the PRAC in October 2021.²⁷

Disclosure of Data Limitations

Several users also expressed concerns about the location of data limitation disclosure information on USAspending.gov, or made suggestions to improve the location. These included staff from federal agencies, state officials, and research organizations. While representatives of one nongovernmental organization found the data limitation disclosure statement helpful and detailed, they and some other users told us the statement could be difficult to find, particularly for novice data users who might not know to look for it. One member of an organization representing state officials added that such users might

²⁴Percentages that expressed views about the quality of data on USAspending.gov are based on the 8 percent of managers who reported familiarity with USAspending.gov in response to a previous survey question. This survey estimate has a 95 percent confidence interval of 38.6 to 61.6 percent. For additional information, see survey item 31f in [GAO-21-537SP](#).

²⁵See, for example, GAO, *DATA Act: Quality of Data Submissions Has Improved but Further Action Is Needed to Disclose Known Data Limitations*, [GAO-20-75](#) (Washington, D.C.: Nov. 8, 2019); and *DATA Act: OMB, Treasury, and Agencies Need to Improve Completeness and Accuracy of Spending Data and Disclose Limitations*, [GAO-18-138](#) (Washington, D.C.: Nov. 8, 2017).

²⁶GAO, *Federal Spending Transparency: Opportunities Exist to Further Improve the Information Available on USAspending.gov*, [GAO-22-104702](#) (Washington, D.C.: Nov. 8, 2021).

²⁷Pandemic Response Accountability Committee. *Increasing Transparency into COVID-19 Spending* (Washington, D.C.: Oct. 19, 2021).

assume there were no issues with the data and draw inaccurate conclusions.

Table 3: Examples of Challenges Selected Individuals and Organizations Identified with Using Federal Spending Data Websites

Challenges	Examples provided by individuals and organizations
Awareness and use of websites	<i>Lack of awareness of the existence of websites</i>
	<ul style="list-style-type: none"> Some state and local government officials said they did not know about the USAspending.gov or Data Lab websites.
	<ul style="list-style-type: none"> Some researchers said they believed there was not a broad awareness of the websites in the academic community.
	<ul style="list-style-type: none"> Staff from an organization representing state governments said that the biggest barrier to using USAspending.gov was a lack of understanding of the site's data and how to find them.
	<i>Lack of knowledge regarding specific data available on the websites or how to use them</i>
	<ul style="list-style-type: none"> Pandemic Response Accountability Committee officials said they received feedback from state agencies that they did not know how to use COVID-19 spending data on PandemicOversight.gov to respond to COVID-19-related issues at the state level.
Data availability and quality	<i>Limited or lack of data availability</i>
	<ul style="list-style-type: none"> Staff representing local government officials could not determine whether federal funds were supporting the work of local health departments and were reaching them in a timely manner because USAspending.gov and other websites did not track federal funds intended to be passed through state health departments to local health departments.
	<ul style="list-style-type: none"> A state budget and management official said that USAspending.gov did not present a complete picture of how much grant funds grant recipients spent, compared to the federal funds obligated. As a result, oversight agencies from that state had to request copies of the off-line award tracking sheet to get a true picture of grant expenditures—a time-intensive, manual, and error-prone process.
	<ul style="list-style-type: none"> Staff from a public interest group could not fully identify resources diverted from other parts of the federal budget on USAspending.gov and other websites to fund COVID-19 spending before the CARES Act's passage. Because of this issue, staff said they felt unable to provide complete and correct spending data to the public on the COVID-19 response.
	<i>Data quality issues</i>
	<ul style="list-style-type: none"> Staff from two watchdog groups did not use USAspending.gov as a primary source of data because of problems with timeliness of the data, such as when Treasury updates data on USAspending.gov after agencies report them to the department. Instead, staff used data obtained from agencies or other sources.
<ul style="list-style-type: none"> Research organization staff said they were unable to follow funds down to the place of performance that USAspending.gov identified as where funds were spent. This is because such information was often inaccurate. Lacking confidence in the data, the staff decided to focus on a subset of programs known to be exclusive to rural communities, rather than rural spending from programs benefitting both rural communities and other areas. 	
<ul style="list-style-type: none"> Legislative branch staff could not always or easily correlate USAspending.gov account-level information with corresponding information in the SF-133 reports or the Office of Management and Budget budget appendix.^a Separately, they also found cases where aggregations of multiple accounts in USAspending.gov's Spending Explorer might have double counted expenditures and corresponding offsets—such as transfers—unless agencies proactively netted out the expenditures and offsets from these aggregated figures.^b 	

Challenges	Examples provided by individuals and organizations
Disclosure of data limitations	<ul style="list-style-type: none"> • Watchdog group staff found that COVID-19 spending data limitations on USAspending.gov were not directly tied to particular search results for corresponding data. • Members of an organization representing state officials found that the location of data limitations statements on USAspending.gov were not linked to the location where corresponding data were presented on the website. They cautioned that users might assume there were no issues with the data and draw inaccurate conclusions. • Research organization staff expressed concerns that downloads of custom award and custom account data from USAspending.gov do not include information on data limitations.

Source: GAO analysis of interviews with users of USAspending.gov, Treasury's Data Lab website, and PandemicOversight.gov. | GAO-22-104127

Notes: Federal spending data websites covered are USAspending.gov, Treasury's Data Lab website, and PandemicOversight.gov.

^aThe SF-133 is a report on budget execution and budgetary resources. It provides a consistent presentation of information across programs within each agency, and across agencies.

^bOffsetting collections are authorized by law to be credited to appropriation or fund expenditure accounts. Offsetting receipts are collections that are offset against gross outlays but are not authorized to be credited to expenditure accounts. These receipts are deposited in receipt accounts.

Treasury Has Mechanisms in Place to Solicit Feedback and Has Responded with Website Revisions

We have previously reported that engagement with users is a key practice for transparently reporting open government data.²⁸ Underlying this designation is the idea that open government data can only create value to the extent that they are used, and engagement with users can increase use of websites providing such data. Key actions for engaging with users include identifying users and their needs, and soliciting and being responsive to user feedback. We found that Treasury's practices aligned with these key actions by identifying spending data users and their needs through user research, and obtaining and responding to USAspending.gov user feedback using various mechanisms.

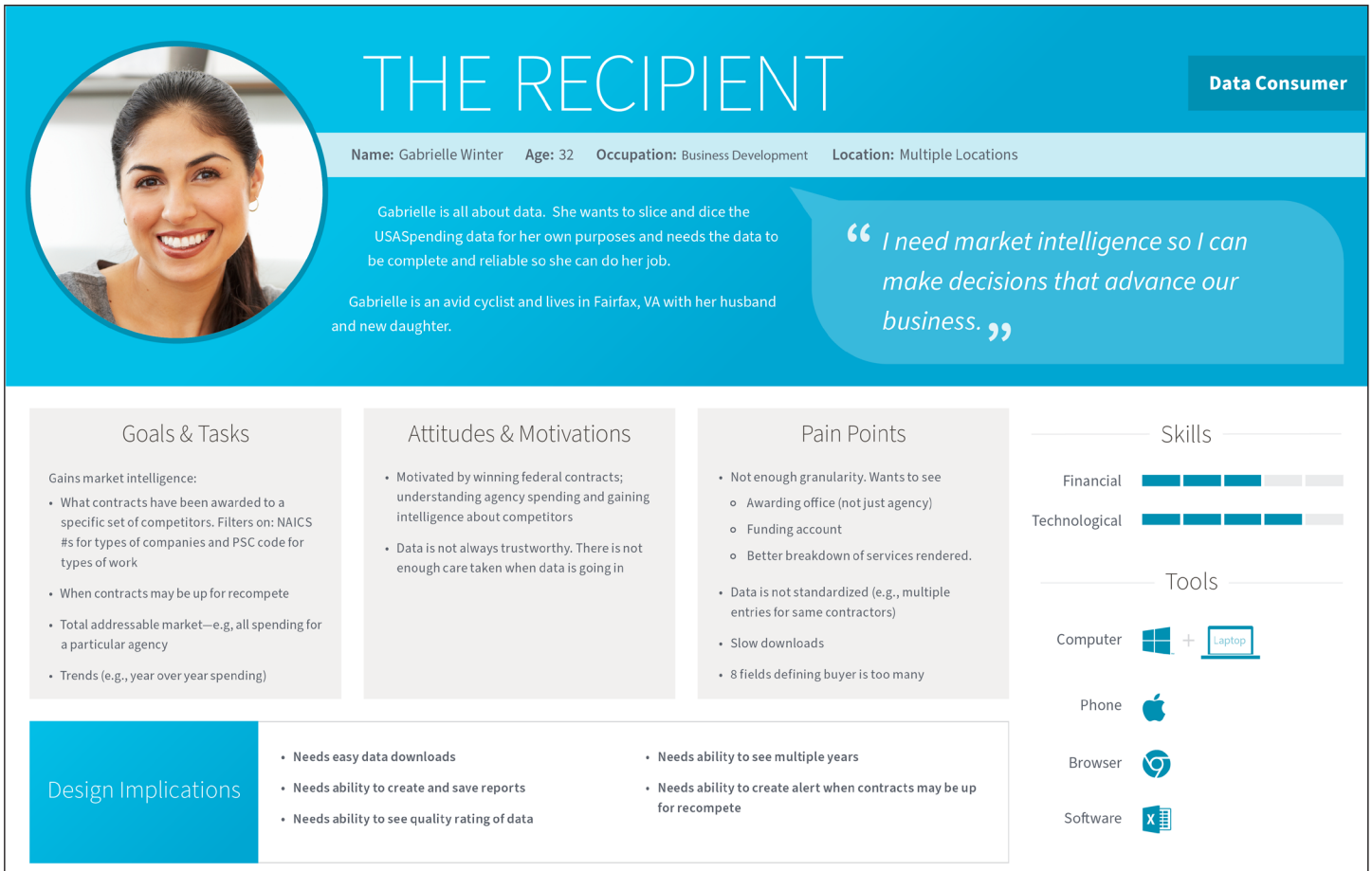
Treasury's Collection of Website Feedback Is Consistent with Requirements and Key Actions for User Engagement

In December 2018, we reported that Treasury had conducted research to understand the needs of users when working with USAspending.gov data, and developed "personas"—or profiles—for eight types of users ranging from data consumers such as citizens and journalists to budget analysts and chief financial officers (CFO).²⁹ Information collected on each persona includes characteristics of the persona, motivations for accessing USAspending.gov, and goals for using spending data (see figure 2 for an example).

²⁸GAO-19-72.

²⁹GAO-19-72. The other USAspending.gov personas Treasury identified were recipients, data owners, agency developers, and repurposers.

Figure 2: Example of Information Generated on a Treasury USAspending.gov Persona



Source: https://fedspendingtransparency.github.io/assets/downloads/user_personas/Recipient_user_persona.pdf, accessed October 20, 2021. | GAO-22-104127

Note: According to Treasury, the photos and personal details of persona profiles are merely illustrative and used to help make them more real and relatable. They are not intended to represent an actual individual.

These personas were part of Treasury’s user-centered design process in which officials told us they learned from users, made changes to the websites, and tested whether those changes make the website more useful and intuitive to users.

Treasury has continued to identify users of USAspending.gov data. In summer 2020, Treasury completed research on its user personas, which incorporated user testing to validate existing user personas and identify

three potential new personas.³⁰ Treasury also identified opportunities to expand each persona's use of USA Spending.gov. In addition, Treasury has identified three Data Lab website user personas used for the development of specific analyses—accountant, engineer, and program head/professor. Treasury officials are also working to develop a “general user” persona for a new analysis they plan to develop to target novice data users.

Treasury has also actively solicited user feedback for USA Spending.gov. For example, Treasury conducted usability testing of USA Spending.gov's design with Treasury staff and volunteers, who can be solicited through emails Treasury sends to subscribers of its mailing lists. Specifically, Treasury used A/B testing (also sometimes called split testing), which involves showing two or more variants of the same digital media to different segments of website visitors at the same time and comparing which variant drives more engagement. As part of this process, Treasury officials said they generated different “wireframes” of proposed web pages and displays for users' reactions.³¹ They said they found that the feedback helped them design websites that were responsive to users' needs.

In addition, Treasury responded to questions emailed from other federal agency users regarding how to submit data to USA Spending.gov, and from the public on how to use available data from the website. Since May 2017, Treasury has also hosted a Community page, which allows users to provide feedback and pose questions to Treasury, where website users posed questions and received responses from Treasury officials. Other mechanisms used by Treasury to obtain USA Spending.gov user feedback included community forums, one-on-one interviews, quarterly meetings with agencies, and monthly CFO Council working groups. Treasury officials used the quarterly meetings with agencies, in part, to showcase changes to USA Spending.gov and obtain agency feedback on them.

Treasury is also planning to implement an additional mechanism to obtain user feedback. Treasury officials said they plan to deploy a user survey

³⁰The three potentially new personas Treasury identified are policy makers, researchers, and state and local representatives. Treasury also divided its recipient persona into two separate personas addressing for-profit and nonprofit recipients.

³¹A wireframe is a two-dimensional illustration of a page's interface that specifically focuses on space allocation and prioritization of content, functionalities available, and intended behaviors. Wireframes also help establish relationships between a website's various templates.

on USAspending.gov. The department is renewing its contract with a vendor to administer surveys, and is including USAspending.gov in the contract. As of October 2021, Treasury officials said they had submitted a request for approval of their proposed survey questions, and were awaiting a response from OMB.

These actions are consistent with requirements in the Federal Funding Accountability and Transparency Act of 2006 (FFATA) that the public be given an opportunity to provide input regarding the utility of USAspending.gov as well as recommendations for improvements.³² Treasury's actions are also broadly consistent with human-centered design principles that the General Services Administration (GSA) identified for considering federal website audience's expectations and needs.³³ Finally, they are also consistent with key actions we previously identified for engaging with users.³⁴ Specifically, Treasury's identification of spending data users and their needs through user research—and efforts to obtain and respond to USAspending.gov user feedback using various mechanisms—helped the department engage with users to more transparently report open spending data.

Treasury Has Revised the Design and Operation of USAspending.gov and Data Lab Website in Response to User Feedback

Treasury leveraged feedback from users to tailor USAspending.gov and the Data Lab website, and otherwise respond to user needs. For example, in June 2018, in response to user comments on USAspending.gov's Community page message boards, Treasury added information on unreported data to top-level views of USAspending.gov's Spending Explorer. The page now shows the percentage of Unreported Data at the top-level Budget Function, Agency, and Object Class views.³⁵ In October 2018, Treasury added a data dictionary to USAspending.gov's

³²FFATA, § 2(c)(3), 120 Stat. at 1188.

³³The U.S. Web Design System—a project of GSA—is a toolkit of principles, guidance, and code that uses human-centered design principles. These principles include starting with real user needs and earning trust. Key considerations for addressing these principles include considering the audience's expectations and user needs. Practical actions for implementing these principles include testing products regularly with potential users to ensure it meets people's needs. For more information, see <https://designsystem.digital.gov/design-principles/>. Accessed August 3, 2021.

³⁴GAO-19-72.

³⁵According to Treasury, unreported data can happen when an agency submits data late, or an agency is not required to submit certain data elements. It can also happen in cases of accounts that represent a small percentage of overall federal spending that do not report to Treasury, but are included in the President's budget.

Download Center in response to email requests from users. The data dictionary describes in detail the data available in downloadable files, including the definition of each data element.

Treasury made other revisions to USAspending.gov following user feedback. In January 2020, Treasury enabled custom award downloads using two different file types. Treasury provided these options in response to emails and Community page comments requesting additional file formats on the website’s award and account data download pages. In May 2021, Treasury created the website’s Agency Submission Statistics Page in response to user feedback—including feedback we provided—requesting greater transparency into the completeness of agency data available on USAspending.gov.³⁶ This page displays summary information by fiscal year, by period, and by agency about the data that federal agencies submit under the DATA Act. Most recently, in June 2021, in response to user feedback, Treasury updated the “reveal date” for spending data on the website. Specifically, at the end of a submission period when there is a higher volume of data to load onto the website, pages will not update until all of the data are finished loading to avoid displaying incomplete information.

Treasury officials said they used information from the Data Lab website’s accountant persona to tailor the Data Lab website’s Daily Treasury Statement tracker. Treasury also used information from the website’s engineering persona to tailor the content of that website’s analysis exploring the federal investment in colleges and universities. In addition, Treasury officials said they used information from Data Lab personas to develop that website’s analysis of contract funding invested in research and development.

Treasury’s actions were broadly consistent with key actions we previously identified for incorporating user feedback.³⁷ Specifically, Treasury solicited and responded to USAspending.gov and Data Lab website user feedback. Treasury also tailored these websites to meet user needs, a

³⁶For more information on feedback we provided Treasury on the need to sufficiently disclose data limitations on USAspending.gov, see [GAO-22-104702](#); [GAO-20-75](#); and [GAO-18-138](#).

³⁷[GAO-19-72](#).

leading practice we previously identified for effective government websites.³⁸

Opportunities Exist to Improve Awareness and Use of USAspending.gov

As previously discussed, Treasury solicited and responded to user feedback when designing and operating USAspending.gov. Nonetheless, users we interviewed identified ongoing challenges with the website. These include challenges related to the awareness and knowledge of USAspending.gov and spending data on the website, as well as those related to the communication of data limitation disclosures on the website.

Treasury Has Opportunities to Improve USAspending.gov Promotion and Training by Better Targeting Specific User Personas

One significant challenge Treasury faces with the use and usefulness of spending data on USAspending.gov is that many potential users are unaware of the website's existence. As discussed earlier in this report, an estimated 92 percent of respondents to our 2020 survey of federal managers said they were unfamiliar with the website.³⁹ In addition, some individuals and organizations we interviewed said they or members of their respective organizations were unfamiliar with USAspending.gov. Further, USAspending.gov has experienced only modest changes in user sessions over the past few years. Total user sessions were only about 11 percent higher in September 2021 compared to May 2017.

To assess Treasury's efforts at promoting USAspending.gov, we reviewed our prior reports and external studies and identified four good practices for promoting awareness and use of government websites. Our review of Treasury documents and interviews found that the department has at least partially implemented these practices. Table 4 includes a summary of the practices and our assessment of the extent to which Treasury has implemented them.⁴⁰

³⁸GAO, *Recovery Act: Grant Implementation Experiences Offer Lessons for Accountability and Transparency*, [GAO-14-219](#) (Washington, D.C.: Jan. 24, 2014).

³⁹This survey estimate has a 95 percent confidence interval of 90 to 93.7 percent. This survey finding is also projectable to managers across 24 agencies identified in the Chief Financial Officers Act of 1990, as amended. 31 U.S.C. § 901(b). For additional information, see survey item 29 in [GAO-21-537SP](#).

⁴⁰See appendix I for the list of peer-reviewed studies and prior work we reviewed to identify good practices.

Table 4: Assessment of Treasury’s Implementation of Good Practices for Increasing Awareness and Use of Government Websites

Good practice	Description	Overall assessment
Improve visibility through search engine optimization	Optimizes website to help search engines more effectively visit and download its content, improve its placement in search engine rankings, and increase its visibility in the users’ search results	● Substantially implemented
Implement social media outreach	Uses social media to increase government transparency, promote public participation, and encourage collaboration with federal agencies	⦿ Partially implemented
Target promotion efforts	Targets promotion strategies to address specific characteristics and needs of intended users	⦿ Partially implemented
Provide training resources	Make training resources and related support available so that users can effectively access websites and understand the data they contain	⦿ Partially implemented

Legend: ● “Fully implemented” means that we determined that the evidence Treasury provided demonstrated all the characteristics of the good practice.
 ● “Substantially implemented” means that we determined that the evidence Treasury provided demonstrated a large portion of the characteristics of the good practice.
 ⦿ “Partially implemented” means that we determined that the evidence Treasury provided demonstrated some of the characteristics of the good practice.
 ⦿ “Minimally implemented” means that we determined that the evidence Treasury provided demonstrated a small portion of the characteristics of the good practice.
 ○ “Not implemented” means that we determined that the evidence Treasury provided demonstrated none of the characteristics of the good practice.

Source: GAO analysis of Department of the Treasury information. | GAO-22-104127

Notes: To determine the extent to which Treasury has addressed challenges related to the awareness of USAspending.gov and use of data on the website, we identified actions Treasury has taken to improve website and data awareness and use. Then, we compared to good practices for promoting awareness and use of government websites we identified from a review of peer-reviewed studies, our prior work, and GSA’s Digital.gov website.

Improve Visibility through Search Engine Optimization



Source: GAO analysis of Department of the Treasury information. | GAO-22-104127

One practice for increasing awareness and use of government websites, according to literature on government website promotion, is improving the ranking of a target website in the retrieval results of a search engine through use of search engine optimization (SEO). This can be done by optimizing a website and its pages to help search engines more effectively visit and download the website's content, improve the website's placement in search engine rankings, and, in turn, increase the visibility of the website in the users' search results. Treasury's efforts substantially aligned with this practice.

One type of strategy to implement SEO focuses on revisions to the websites' design, code, and content to make it easier for search engines to understand the website's content and structure. This, in turn, can improve the website's prominence in search results. Treasury implemented several initiatives for improving SEO following an April 2021 audit, including improving its sitemaps, conducting a mobile audit, and completing work to better detect broken links.⁴¹ In October 2021, Treasury officials said the department was also taking steps to remove duplicative content coming from agency and recipient pages on the websites. Separately from work performed in response to the SEO audit, Treasury implemented a process known as dynamic rendering, which allows search engines to index content from all USAspending.gov pages.

In October 2021, Treasury officials said that, based on advice from an external SEO expert, they prioritized their efforts on techniques that address revisions to the website itself. Treasury has subsequently taken steps to build outside links to USAspending.gov. These include having the Internal Revenue Service add a link to USAspending.gov in the footer of its website's homepage, and posting links to USAspending.gov on the website's Twitter page and on the Bureau of the Fiscal Service's (BFS) Facebook page.⁴² Treasury officials also used GSA's Digital Analytics Program to identify federal websites with the highest levels of traffic, and plan to ask relevant agencies to add external links to USAspending.gov.

⁴¹The mobile audit aimed to find areas to improve the mobile experience. A sitemap is a file that provides information about the pages, videos, and other files on a website, and the relationships between them. Search engines read this file to crawl a website more efficiently. A web crawler is a computer program that automatically and systematically searches web pages for certain keywords.

⁴²For USAspending.gov's Twitter page, see <https://twitter.com/usaspending?lang=en>. Accessed September 23, 2021. For BFS's Facebook page, see <https://www.facebook.com/fiscalservice/>. Accessed September 24, 2021.

Following through on these activities should help Treasury fully implement this good practice.

Implement Social
Media Outreach



Source: GAO analysis of Department of the Treasury information. | GAO-22-104127

A second practice for increasing awareness and use of government websites involves using social media for website promotion. Such outreach can increase government transparency, promote public participation, and encourage collaboration with federal agencies.

Treasury has partially implemented this practice. From May 28 through August 16, 2021, Treasury paused tweets from its USAspending.gov Twitter account to develop a new social media campaign for USAspending.gov and related sites in partnership with federal agencies and award recipients. Treasury launched its new Twitter campaign in mid-August 2021, and shared stories describing specific federal spending while providing links to USAspending.gov for more information. Treasury officials said they partnered with agencies they identified as having high amounts of web traffic to develop the tweets to raise awareness of USAspending.gov. See figure 3 for examples of tweets.

Figure 3: Examples of USAspending.gov Tweets



Source: USAspending.gov Twitter account. | GAO-22-104127

Treasury officials reported that during the campaign, USAspending.gov traffic generated from its Twitter site increased by 75 percent compared to 2020. The initial impact of the campaign seems promising. Continuing to generate posts linking spending stories to USAspending.gov, as Treasury officials plan to do, may help improve Treasury's social media presence and drive traffic to the website.

Target Promotion Efforts



Source: GAO analysis of Department of the Treasury information. | GAO-22-104127

A third practice for increasing awareness and use of government websites is to target promotion efforts to address the specific characteristics and needs of intended users. Literature on government website promotion states that promotion efforts stem from understanding the characteristics of intended users before adopting particular promotion strategies. This includes, among other things, identifying the specific needs of intended users.

Treasury's efforts partially aligned with this practice. Treasury has taken some actions to understand its users and promote USAspending.gov. However, we found that while Treasury obtained and responded to USAspending.gov user feedback using various mechanisms, it generally does not target its communications toward specific user personas and their needs.

For example, our review of Treasury's recent Twitter posts incorporating custom graphics and links to USAspending.gov found that they generally addressed a broad audience rather than clearly targeting specific user personas. Treasury officials told us that in developing those posts, they prioritized content linked to agencies identified as having high web traffic to improve visibility of USAspending.gov. Opportunities exist for Treasury to further benefit users by tailoring the posts to address the characteristics of specific user personas. In another example, update emails that Treasury sent to its USAspending.gov mailing list could be improved by explaining—when appropriate—how the website updates address the needs and interests of specific user personas.

Treasury officials said that a recently hired specialist was developing the marketing and communications vision and strategy for the Office of the Chief Data Officer, which maintains USAspending.gov. In October 2021, Treasury told us it did not plan to target USAspending.gov promotion efforts to user personas such as award or contract recipients, journalists, and data owners. By not developing and implementing promotion efforts that clearly target the user personas, Treasury could miss opportunities to fully reach the various users for which the website was designed.

Provide Training Resources



Source: GAO analysis of Department of the Treasury information. | GAO-22-104127

A fourth practice for increasing awareness and use of government websites is to provide training resources and related support so that users can effectively access websites and understand the data they contain. The literature on government websites states that user help, online training, and assistance focused on new users are essential features that make using a government website easier. The literature on open government data also states that being aware of the existence of open government data is insufficient by itself to promote its use. Rather, training that provides skills on using the data is central to encouraging its actual use.

Treasury's efforts partially aligned with this practice. As mentioned previously, representatives from some organizations we interviewed said that they lacked an understanding of how to effectively use USAspending.gov and obtain data from it. In addition, an estimated 50 percent of respondents to the 2020 Federal Managers Survey were unsure of what was available on the website to at least some extent.⁴³

Toward that end, Treasury has provided some tools for educating users of USAspending.gov on how to use the website. For example, USAspending.gov has a web page that provides answers to frequently asked questions. In April 2020, Treasury updated its *Analyst's Guide to Federal Spending Data*, which provides information on how to navigate and use USAspending.gov.⁴⁴ However, the guide is only available on Treasury's Data Lab website and not on USAspending.gov, which does not mention the resource. Treasury also offers an introductory tutorial on USAspending.gov's application programming interface (API) capabilities for users interested in developing programs that directly request and receive data from the website.⁴⁵

The literature on increasing awareness and use of open government data emphasizes the importance of tailoring the content of training to the particular characteristics, interests, and expectations of different types of

⁴³Percentages that expressed a lack of knowledge of available information on USAspending.gov are based on the 8 percent of managers who reported familiarity with USAspending.gov in response to a previous survey question. This survey estimate has a 95 percent confidence interval of 38.5 to 61.4 percent. For additional information, see survey item 31c in [GAO-21-537SP](#).

⁴⁴See <https://datalab.usaspending.gov/analyst-guide/>. Accessed September 27, 2021.

⁴⁵See <https://api.usaspending.gov/docs/intro-tutorial>. Accessed September 27, 2021.

users. Similarly, our prior work has also found that when considering different options for delivering training, agencies need to consider the type of audience intended for the training.⁴⁶ However, with the exception of the analyst's guide and API tutorial, Treasury did not identify training resources tailored to specific types of USAspending.gov users and the different information needs they may have.

As of October 2021, Treasury had not provided documentation of any training or plans for training that specifically addresses the needs of USAspending.gov user personas such as journalists, federal award or federal contract recipients, or citizens who might not have any prior experience using the website. Without providing such training, user personas that Treasury identified may be unable to effectively use the website to meet their needs. In turn, Treasury will be unable to fully realize the investment it has previously made to identify and understand the characteristics of the user personas.⁴⁷

In addition, while USAspending.gov includes search functions for specific purposes—such as spending data and responses from its Frequently Asked Questions and Community pages—it does not provide a global website search function that the public could use to find training resources or other information on the website. Search functions are a universal and expected web feature that OMB requires federal agency websites to contain.⁴⁸ However, officials told us USAspending.gov does not include this function yet because they have been focused on developing and improving data search functions. Without a broad search function, users interested in learning more about how to use USAspending.gov may have greater difficulty locating training resources on the website.

⁴⁶See GAO, *Human Capital: A Guide for Assessing Strategic Training and Development Efforts in the Federal Government*, [GAO-04-546G](#) (Washington, D.C.: Mar. 1, 2004).

⁴⁷As gaps in training for specific website user groups and methods of training delivery have emerged, a variety of USAspending.gov training videos by third parties has emerged on external resources such as YouTube. These videos show viewers how to take specific actions on USAspending.gov such as finding set aside awards on the website. However, Treasury does not have control over the content or quality of these products.

⁴⁸Office of Management and Budget, *Policies for Federal Agency Public Websites and Digital Services*, OMB Memorandum M-17-06 (Washington, D.C.: Nov. 8, 2016).

Treasury Could Improve User Confidence in USAspending.gov by Making Its Data Limitation Disclosures More Prominent

Among the disclosure challenges identified by users we contacted for this review were that the location of disclosure statements were not linked to the location where corresponding data were presented on the website, including search results. Our prior work has also found that Treasury insufficiently disclosed known limitations regarding the quality of data on USAspending.gov.⁴⁹

OMB guidance states that federal agencies should make information readily accessible to users, be transparent about the quality of information, and identify the limitations of the data they disseminate to the public.⁵⁰ In addition, Treasury's Information Quality Guidelines state that information disseminated to the public should be presented within the proper context and in an accurate, clear, complete, and unbiased manner.⁵¹ We have also found that disclosure of known data issues and limitations is a key practice for transparently reporting government data.⁵²

One way to make data limitation disclosures more readily accessible to users is to include a website search function that could be used, among other purposes, to more easily locate information. A search function is a feature that website users expect and OMB requires of federal agency websites.⁵³ However, as mentioned previously, USAspending.gov does not offer users a broad website search function aside from the search functions for spending data and for responses to questions from its Frequently Asked Questions and Community web pages.

To access the data limitation disclosure document for COVID-19 spending, a user previously could click directly on a prominent banner stating "Known Data Limitations," with a link to the document, at the top of

⁴⁹We have previously made several recommendations to Treasury regarding the need to more fully disclose specific data issues on USAspending.gov. For example, in November 2021, we found that Treasury could improve its disclosure of changes in data reporting standards and of the existence of unlinked awards. We made recommendations to the agency to address these issues. See [GAO-22-104702](#) for more information. We have also made recommendations regarding other aspects of the need to disclose data limitations. See [GAO-20-75](#) and [GAO-18-138](#).

⁵⁰OMB M-17-06.

⁵¹Department of the Treasury, *Information Quality Guidelines*. <https://www.treasury.gov/about/organizational-structure/offices/Mgt/Pages/infoguide.aspx>. Accessed July 22, 2021.

⁵²[GAO-19-72](#).

⁵³OMB M-17-06.

the website’s main COVID-19 spending data page (“The Federal Response to COVID-19”). Treasury drew additional attention to the statement by including an icon depicting an exclamation point surrounded by a yellow triangle next to the link (see figure 4). However, in June 2021, Treasury removed this banner. Without the banner, users needed to take an additional step by first navigating to the “Data Sources and Methodology” section, where they could then locate and click the link to access the statement. Treasury officials said they believed that making the statement available in the section was sufficient for users. In contrast with the previous location, however, the new location made it more difficult to find key disclosures about data limitations unless the user knew to seek out information about the data and methodology.

Figure 4: Screenshot of Earlier Version of USAspending.gov COVID-19 Spending Web Page



Source: Image created by GAO using screenshot of USAspending.gov COVID-19 Spending Web Page (June 1, 2021). | GAO-22-104127

Another way to make data limitation disclosures more readily accessible to users is to place the disclosures next to the corresponding data. However, Treasury does not systematically place data limitation statements for specific programs and awards on the same

USAspending.gov pages where users are searching for or viewing data. For example, when users perform searches using both the website’s “Advanced Search” and “Keyword Search” functions, the results do not disclose data limitation disclosures automatically linked to corresponding data. In addition, the website’s “Custom Award Data” and “Custom Account Data” download pages neither consistently include a column to specifically disclose data limitations, nor provide an option for downloading them along with requested data.

In some cases, the website does provide data limitation information near displayed data. For example, when a user accesses the “Spending Explorer”—a feature that offers visualizations of federal spending by agency, budget function, and object class—a statement appears below the data graphics alerting users that there is a 90-day delay in displaying contract award data, subcontract data, and other data for the Department of Defense.⁵⁴ However, this is not systematically done for known data limitations throughout the website. For example, although agency-supplied information regarding known data limitations with COVID-19 spending was supplied as a downloadable document and linked to the website’s COVID-19 spending page, neither this information nor a link to it appears if a user searches for data regarding affected programs elsewhere on the site. Rather, users need to download and open the relevant document on data limitations to find out whether the particular program for which they have interest is listed.

Users we interviewed identified several challenges related to not having data limitation disclosure information located close to corresponding data. One user told us that USAspending.gov could confuse users by publishing data limitation disclosures in a location separate from the data itself. The user added that those without prior awareness of data limitations would have greater difficulty finding such information—particularly novice data users who might not know to look for them. Another user said that the placement of data limitation statements in other

⁵⁴On USAspending.gov’s “Advanced Search” page’s map feature, Treasury included language that disclosed that Department of Health and Human Services data related to Medicare payments do not reflect the place where “the majority of the work” occurs. On another page, Treasury clarified that location fields for Medicare payment data on the website do not reflect the places where Medicare beneficiaries or provider physicians and hospitals are located. However, this information is not automatically tied to searches of such data.

locations on the website could result in users assuming there are no limitations to the data they are examining.

Treasury officials told us that they try to provide disclosures at the point of need without distracting from the experience on the website and also consider the effects to the design of the page and design consistency across the website, among other things. However, when key information about known limitations is difficult to locate and separated from presentation of the data itself, users are at a risk of viewing, downloading, or analyzing data without full knowledge of the data's quality.⁵⁵ Users could inadvertently draw inaccurate conclusions from the data. In addition, users who identify potential discrepancies among spending data for the same agency or award could lose confidence in the data without prominent disclosures that explain the sources of such discrepancies.

Conclusions

USAspending.gov remains a key resource for tracking federal spending to address the COVID-19 pandemic as well as other federal program activities. Treasury has identified the importance of transparently reporting spending data. Accordingly, it has refined the USAspending.gov and Data Lab websites to help meet user needs and respond to their feedback. However, organizations and individuals we spoke with identified several challenges including a lack of awareness of the existence of the websites as well as knowledge gaps in how to effectively use them. Users also raised concerns with shortcomings in the disclosure of known data limitations. This led some users to lose confidence in the data on USAspending.gov and look for alternative sources of information.

Moving forward, fully implementing the good practices we identified for promoting awareness and use of government websites could help Treasury further address these challenges. Treasury can leverage the solid foundation it has already established in following a user-centered approach to designing USAspending.gov to ensure that it targets its promotion and training efforts toward different types of users. In addition, by taking steps such as adding a broad website search function and better disclosing data limitations, Treasury can increase user trust in USAspending.gov and make federal spending data more useful to Congress and the public.

⁵⁵As of August 2021, Treasury officials said they are not explicitly testing the placement of data limitation disclosures on USAspending.gov for new features it is currently testing. Rather, they are more broadly asking users about the clarity of information on web pages.

Recommendations for Executive Action

We are making the following four recommendations to Treasury:

The Secretary of the Treasury should develop and implement website promotion efforts that are clearly targeted toward the USAspending.gov user personas that it has previously identified. (Recommendation 1)

The Secretary of the Treasury should develop and implement training that targets the specific needs of USAspending.gov user personas, and make training (including existing resources such as its *Analyst's Guide to Federal Spending Data*) prominent on the USAspending.gov website. (Recommendation 2)

The Secretary of the Treasury should add a broad website search function to USAspending.gov to help users find content on the website. (Recommendation 3)

The Secretary of the Treasury should develop and implement approaches to make known data limitation disclosures more prominent and easily accessible to USAspending.gov users. (Recommendation 4)

Agency Comments

We provided a draft of this report to the Secretaries of Health and Human Services, Housing and Urban Development, Labor, and the Treasury; the Administrators of the General Services Administration and the Small Business Administration; the Acting Director of the Office of Management and Budget; and the Executive Director of the Pandemic Response Accountability Committee.

Treasury provided written comments stating that it concurred with our four recommendations. Treasury's comments are reprinted in appendix III. Treasury, OMB, and PRAC provided technical comments, which we incorporated as appropriate.

The Departments of Health and Human Services, Housing and Urban Development, and Labor, the General Services Administration, and the Small Business Administration told us that they had no comments on the draft report.

We are sending copies of this report to the appropriate congressional committees; the Secretaries of Health and Human Services, Housing and Urban Development, Labor, and the Treasury; the Administrators of the General Services Administration and the Small Business Administration; the Acting Director of the Office of Management and Budget; the Executive Director of the Pandemic Response Accountability Committee;

and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-6806 or SagerM@gao.gov. Contact points for our offices of Congressional Relations and Public Affairs are on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.

A handwritten signature in black ink that reads "Michelle Sager". The signature is written in a cursive, flowing style.

Michelle Sager
Managing Director, Strategic Issues

List of Addressees

The Honorable Gary C. Peters
Chairman
The Honorable Rob Portman
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Carolyn B. Maloney
Chairwoman
The Honorable James Comer
Ranking Member
Committee on Oversight and Reform
House of Representatives

The Honorable Gerald Connolly
Chairman
The Honorable Jody Hice
Ranking Member
Subcommittee on Government Operations
Committee on Oversight and Reform
House of Representatives

The Honorable Thomas R. Carper
United States Senate

The Honorable Mark R. Warner
United States Senate

Appendix I: Objectives, Scope, and Methodology

Our objectives were to (1) identify examples of useful activities and challenges cited by users of USAspending.gov, the Data Lab website, and PandemicOversight.gov, and the federal and Coronavirus Disease 2019 (COVID-19) spending and related data available on these websites; (2) evaluate the extent to which information on use and usability of the USAspending.gov and Data Lab websites informs updates of the design and operation of these websites; and (3) assess the extent to which the Department of the Treasury has addressed challenges regarding the awareness and use of USAspending.gov, and communication of data limitations on the website.¹ Because financial data were unavailable on PandemicOversight.gov when we began our review, we only addressed the first of these three objectives for that website. In addition, because the Data Lab website was in beta when we began our review, we focused our third objective on challenges linked to USAspending.gov.

To identify examples of activities and challenges cited by users of federal and COVID-19 spending and related data available on these websites, we first identified users of federal spending data based on information acquired from the following sources:

- Treasury and Pandemic Response Accountability Committee (PRAC) documents.
- information collected from our other prior and ongoing work, including work examining Digital Accountability and Transparency Act of 2014 implementation.
- lists of organizations with federal spending data portals, as identified by the Congressional Research Service and other sources.
- selected Offices of Inspectors General products issued in fiscal year 2020 that address USAspending.gov.
- review of selected journal papers, reports, news articles, and other literature created over the past 5 years that (1) used USAspending.gov, Data Lab website, and/or PandemicOversight.gov as sources of federal and COVID-19 spending and related data; or (2) focused on data transparency and open data governance.

¹See <https://www.usaspending.gov/> for USAspending.gov. See <https://datalab.usaspending.gov/> for the Data Lab website. See <https://www.pandemicoversight.gov/> for PandemicOversight.gov.

- responses to relevant questions regarding the use of USAspending.gov from our 2020 Federal Managers Survey.

Among the organizations we identified from the sources previously listed were five federal agencies we selected that met specific criteria.²

Second, we conducted structured telephone or written interviews with individual users and organizations. We determined whether we would interview individuals or organizations based on our prior work and their availability.

Third, we interviewed additional individual users and organizations we identified by employing a snowball sampling technique. Specifically, we obtained referrals from our first set of interviews regarding other individuals and organizations with significant knowledge or experience in using the three websites included in our review, or other sources of federal and COVID-19 spending data.

Finally, we analyzed information collected from these sources. We used our findings to identify examples of useful activities and challenges related to USAspending.gov, the Data Lab website, and PandemicOversight.gov, and the data on these sites. The information obtained from these interviews is not generalizable to all actual or potential users of the three websites and associated spending data, but were selected to represent a range of viewpoints from website users.

Throughout the report, when describing the views of the 63 individuals and organizations who we interviewed, we used the following modifiers to

²We identified and selected federal agencies to contact that obligated more than \$25 million in fiscal year 2020 (including federal and COVID-19 spending). The five agencies were the Departments of Health and Human Services, Housing and Urban Development, and Labor; General Services Administration; and Small Business Administration. We selected the agencies from three ranges of fiscal year 2020 obligations (\$25 million-\$99.9 million, \$100 million-\$1 billion, and more than \$1 billion) and selected agencies from each range. To streamline work and address agencies known by spending data users, we selected agencies that (1) we identified in our March 2021 CARES Act report whose COVID-19 spending data on outlays we found exceeded corresponding obligations, and (2) were identified by other organizations as knowledgeable of either USAspending.gov or spending data in general. For more information on our March 2021 CARES Act report, see GAO, *COVID-19: Sustained Federal Action is Crucial as Pandemic Enters Its Second Year*, [GAO-21-387](#) (Washington, D.C.: Mar. 31, 2021).

convey the extent to which useful activities and challenges were raised in the interviews:

- “many” represents 13 to 19 individuals and organizations,
- “several” represents eight to 12 individuals and organizations, and
- “some” represents three to seven individuals and organizations.

No more than 19 individuals and organizations supported any specific useful activity or challenge discussed in this report.

We also reviewed responses to selected questions regarding USAspending.gov from our 2020 survey of federal managers on organizational performance and management issues.³ We used information from the survey responses that addressed the useful activities and challenges we identified from our analysis of the interviews.

We administered the web-based survey to a stratified random sample of 3,993 managers at 24 agencies between July and December 2020.⁴ We received usable questionnaires from about 60 percent of the eligible sample. After accounting for the sampling of federal managers and response rates, the resulting weighted response rate was 56 percent.⁵ All results are subject to some uncertainty, or sampling error. For instance,

³Section 5 of our 2020 survey covered federal financial information, including questions about USAspending.gov. For more information on the survey, including our scope and methodology, see GAO, *Supplemental Material for GAO-21-536: 2020 Federal Managers Survey: Results on Government Performance and Management Issues*, [GAO-21-537SP](#) (Washington, D.C.: July 27, 2021). The supplement provides the estimated aggregated government-wide and agency-level results (with related 95 percent confidence intervals) on each survey question.

⁴Consistent with our prior surveys, we defined managers as federal employees at General Schedule levels 13 through 15, at comparable levels on equivalent schedules, and in the career Senior Executive Service or equivalents. The 24 agencies are those identified in the Chief Financial Officers Act of 1990, as amended. 31 U.S.C. § 901(b).

⁵We applied weights to survey responses to account for the design of our sample and ensure that estimates are generalizable to the population of federal managers. The difference between the unweighted and weighted government-wide response rate in 2020 is due to higher response rates at small-to-mid-sized agencies, and lower response rates at certain mid-to-large-sized agencies. After accounting for this, the weighted government-wide response rate was lower than the unweighted rate.

our data may be subject to bias from unmeasured sources for which we cannot control.

The results of our 2020 survey are generalizable to the population of managers across the 24 agencies. We presented those results as percentage estimates, aggregated to two different levels:

- government-wide estimates, which reflect the views of managers across the 24 agencies; and
- career Senior Executive Service (SES) and non-SES manager level estimates, which reflect the views of managers at career SES and non-SES manager levels, respectively.⁶

We expressed our confidence in the precision of our particular sample's results as a 95 percent confidence interval.⁷ The maximum margin of error was less than or equal to 11.5 percentage points for government-wide estimates, and 4.2 percentage points for career SES and non-SES manager-level estimates.

To determine the extent to which information on use and usability of the USAspending.gov and Data Lab websites informed Treasury's design and operation of these websites, we used documentation collected from Treasury and interviews with Treasury officials to examine actions the agency has taken to identify website users, collect and assess feedback from the users, and update the design or operation of the websites. We then compared Treasury's actions to the following: (1) Federal Funding Accountability and Transparency Act of 2006 requirements for opportunities for public input regarding USAspending.gov;⁸ (2) actions for

⁶We use the term "government-wide" to collectively refer to the 24 federal agencies covered by our survey. We define career SES managers as federal employees in the career SES or equivalents. We define non-SES managers as federal employees at General Schedule levels 13 through 15, and at comparable levels on equivalent schedules.

⁷Because the selected managers were a stratified random probability sample, our sample is only one of a large number of samples that we might have drawn. Since each sample could have provided different estimates, we express our confidence in the precision of our particular sample's results as a 95 percent confidence interval. This is the interval that would contain the actual population value for 95 percent of the samples we could have drawn.

⁸Pub. L. No. 109-282, § 2(c)(3), 120 Stat. 1186, 1188 (Sept. 26, 2006), *codified at* 31 U.S.C. § 6101 note.

engaging with users that contribute to a key practice we have previously identified for transparently reporting open government data;⁹ and (3) human-centered design principles that the General Services Administration (GSA) identified for considering federal website audience’s expectations and needs.¹⁰

To assess the extent to which Treasury has addressed challenges related to the awareness of USAspending.gov and use of data on the website, we reviewed documentation and interviewed Treasury officials to identify steps Treasury has taken to improve website and data awareness and use. Next, we compared these actions against good practices for promoting awareness and use of government websites we identified from

⁹GAO, *Open Data: Treasury Could Better Align USAspending.gov with Key Practices and Search Requirements*, [GAO-19-72](#) (Washington, D.C.: Dec. 13, 2018).

¹⁰The U.S. Web Design System—a project of GSA—is a toolkit of principles, guidance, and code that uses human-centered design principles. These principles include starting with real user needs and earning trust. Key considerations for addressing these principles include considering the audience’s expectations and user needs. Practical actions for implementing these principles include testing products regularly with potential users to ensure it meets people’s needs. For more information, see <https://designsystem.digital.gov/design-principles/>. Accessed August 3, 2021.

a review of peer-reviewed studies, our prior work, and GSA's Digital.gov website.¹¹

¹¹For this report, a "good practice" means that relevant literature (such as peer-reviewed studies and our prior work) identified the practice as enhancing the awareness or use of government websites. For our review of peer-reviewed studies of good practices, we conducted a literature search for requirements, guidance, and other criteria federal agencies must or should follow to promote, advertise, or otherwise raise awareness of federal websites. To identify existing studies from peer-reviewed journals, we searched various databases, including ProQuest, EBSCO, and Scopus. From these sources, we identified 46 peer-reviewed studies that were published between January 2011 and May 2021. We then reviewed the results and identified relevant and appropriate practices for promoting awareness and use of government websites. Studies from which we identified good practices included Gant, Jon and Diana Gant. "Web Portals and Their Role in E-Government." *Americas Conference on Information Systems 2001 Proceedings* (Boston, MA: 2001); Gascó-Hernández, Mila, Erika G. Martin, Luigi Reggi, Sunyoung Pyo, and Luis F. Luna-Reyes. "Promoting the use of open government data: Cases of training and engagement." *Government Information Quarterly*, vol. 35 (2018); Picazo-Vela, Sergio, Marilu Fernandez-Haddad, and Luis F. Luna-Reyes. "Opening the black box: Developing strategies to use social media in government." *Government Information Quarterly*, vol. 33 (2016); and Wang, Fang and Ying Wang. "A Grounded Theory of Government Website Promotion." *Proceedings of 13th European Conference on e-Government* (Como, Italy, June 13-14, 2013). Digital.gov web pages we used to augment good practices identified in studies include Bitzer-Wales, Victoria, *Webinar Recap: Social Media + External Affairs = Outreach Success* (Washington, D.C.: General Services Administration), last updated September 8, 2020, <https://digital.gov/2016/11/17/webinar-recap-social-media-plus-stakeholder-engagement-equals-outreach-success/>, accessed August 17, 2021, and *Federal Social Media Accessibility Toolkit Hackpad*, (Washington, D.C.: General Services Administration), last updated October 20, 2020, <https://digital.gov/resources/federal-social-media-accessibility-toolkit-hackpad/>, accessed June 21, 2021. We reviewed our prior work to identify good practices in [GAO-19-72](#) and GAO, *Human Capital: A Guide for Assessing Strategic Training and Development Efforts in the Federal Government*, [GAO-04-546G](#) (Washington, D.C.: Mar. 1, 2004).

- First, we identified characteristics applicable to each of the four good practices.¹²
- Second, we compared information collected from USAspending.gov, Treasury documentation, and interviews with Treasury officials to each characteristic.
- Third, we scored Treasury’s adherence to each characteristic using “1” for “Yes,” “0.5” for “Partial” or “In Progress,” or “0” for “No.”
- Fourth, we totaled Treasury’s total score for Treasury’s adherence to each characteristic for each good practice.
- Fifth, we divided Treasury’s total score by the number of characteristics under each good practice.
- Sixth, we used the percentage to determine the extent to which, overall, the evidence Treasury provided demonstrated the characteristics of each good practice. The numeric ratings and ranges of the resulting percentages were as follows: (1) “fully implemented”: all of the characteristics of the good practice; (2) “substantially implemented”: a large portion of the characteristics of the good practice; (3) “partially implemented”: some of the characteristics of the good practice; (4) “minimally implemented”: a small portion of the characteristics of the good practice; and (5) “not implemented”: none of the characteristics of the good practice.

To assess to what extent Treasury has addressed challenges related to the communication of data limitation disclosures on USAspending.gov, we identified steps Treasury has taken to place information on the disclosures in areas of the website where users are searching for or

¹²Characteristics we identified for improving visibility through search engine optimization (SEO) include whether Treasury has substantially implemented internal and external SEO techniques for USAspending.gov. Characteristics we identified for implementing social media outreach include whether Treasury has (1) created social media accounts for USAspending.gov to interact with the community; (2) facilitated movement and communication between USAspending.gov’s social media presence and corresponding websites; (3) engaged with partners to support each other’s social media campaigns; and (4) developed a plan or strategy for social media outreach for the website. Characteristics we identified for targeting promotion efforts include whether Treasury has (1) identified USAspending.gov user needs and characteristics; and (2) reached out to specific USAspending.gov user personas Treasury identified to encourage the use of data on the website. Characteristics we identified for providing training resources include whether Treasury has (1) educated USAspending.gov users on how to use the websites and available spending data on them; (2) provided training tailored to USAspending.gov users and their unique needs and characteristics; and (3) connected training for users and the public to efforts to achieve its strategic and performance goals, such as through a formal training strategy.

viewing spending data. We compared these steps to Office of Management and Budget and Treasury guidance for placement of data limitation information on federal websites, and criteria we identified in previously issued products.

In addition to the work previously mentioned, we reported on total user sessions and page views for USAspending.gov from May 2017 through September 2021. We also reported similar data for the Data Lab website from May 2018 through September 2021, and for PandemicOversight.gov from September 2020 through September 2021. To assess the reliability of these data, we (1) performed electronic testing for obvious errors in accuracy and completeness; (2) reviewed related documentation from Treasury and GSA's Digital Analytics Program; and (3) interviewed and obtained written responses from agency officials. When we found problems with missing data, we brought them to Treasury's and the PRAC's attention and obtained complete data. We determined that the data were sufficiently reliable for the purpose of describing total user sessions and page views for the websites within the time frames previously mentioned. However, USAspending.gov performance metrics data from 2017 was marked "Low Precision" by Treasury because Treasury entered the data in the spreadsheets before implementing a process for standardized data.

We conducted this performance audit from February 2020 to December 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: List of Individuals and Organizations Participating in Interviews on Use of Spending Websites and Data

Table 5: Participants We Interviewed Regarding Their Use of Federal and COVID-19 Spending Data Websites and Associated Data

User group	User subgroup	Individuals and organizations
Recipients of federal awards	Organizations representing nongovernmental recipients of federal awards	<ul style="list-style-type: none"> American Council for Technology-Industry Advisory Council National Council of Nonprofits Professional Services Council
	State and local government agencies and officials	<ul style="list-style-type: none"> City of Alexandria, Virginia; Office of Organizational Excellence City of Baltimore, Maryland; Mayor's Office of Performance and Innovation State of California, Government Operations Agency, Office of the Chief Data Officer State of Illinois, Governor's Office of Management and Budget State of Ohio, Office of Budget and Management State of Rhode Island, Office of Management and Budget State of Texas, Comptroller of Public Accounts State of West Virginia, State Auditor's Office
	Organizations that include federal, state, and/or local governments and officials	<ul style="list-style-type: none"> Association of Certified Fraud Examiners Association of Government Accountants The Council of State Governments Government Finance Officers Association National Association of Counties National Association of County and City Health Officials National Association of State Auditors, Comptrollers and Treasurers National Association of State Budget Officers National Conference of State Legislatures National League of Cities
Public users	Nonprofit organizations/think tanks/advocacy groups/consultants	<ul style="list-style-type: none"> Brookings Institution Center for Data Innovation Center for Open Data Enterprise Committee for a Responsible Federal Budget Data Coalition/Data Foundation Federal Funds Information for States IBM Center for the Business of Government Nelson A. Rockefeller Institute of Government Object Management Group Peter G. Peterson Foundation Pew Charitable Trusts Project on Government Oversight University of Pennsylvania, Penn Wharton Budget Model Urban Institute USA Facts U.S. Public Interest Research Group

Appendix II: List of Individuals and Organizations Participating in Interviews on Use of Spending Websites and Data

User group	User subgroup	Individuals and organizations
	Data analytics firms and software developers	<ul style="list-style-type: none"> • HData • Informatica • Rotunda Solutions
	Others (academics, researchers, and journalists)	<ul style="list-style-type: none"> • Co-Director, Costs of War Project, Brown University • Director, Arms and Security Program, Center for International Policy • Fellow, State Chief Data Officers Network, Georgetown University • President and Founder, MacroPolicy Perspectives • Professor, Robert F. Wagner Graduate School of Public Service, New York University • Professor and Director, National Center for Disaster Medicine and Public Health • Professor and Knight Chair in Journalism, Walter Cronkite School of Journalism and Mass Communication, Arizona State University • Senior Research Fellow, Third Way • Vice President of Government Analytics and Innovation, Elder Research; former Deputy Assistant Secretary, Department of the Treasury
Federal government	Agency senior management	<ul style="list-style-type: none"> • Senior Executives Association
	Federal agencies	<ul style="list-style-type: none"> • Department of Health and Human Services • Department of Housing and Urban Development • Department of Labor • Department of the Treasury • General Services Administration • Office of Management and Budget • Small Business Administration
	Inspectors General	<ul style="list-style-type: none"> • Council of the Inspectors General on Integrity and Efficiency, Pandemic Response Accountability Committee • Department of Health and Human Services Office of Inspector General • Department of Housing and Urban Development Office of Inspector General
	Congressional staff and legislative branch support agencies	<ul style="list-style-type: none"> • Congressional Budget Office • Congressional Research Service • Senate Committee on Homeland Security and Governmental Affairs

Source: GAO. | GAO-22-104127

Appendix III: Comments from the Department of the Treasury



DEPARTMENT OF THE TREASURY WASHINGTON, D.C.

November 24, 2021

Michelle Sager
Director, Strategic Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Sager:

Thank you for the opportunity to review the draft report by the Government Accountability Office (GAO) entitled *Federal Spending Transparency: Opportunities Exist for Treasury to Further Improve USAspending.gov's Use and Usefulness*. The draft report examines the use and usefulness of federal and COVID-19 spending data available on the Department of the Treasury's (Treasury) USAspending and Data Lab websites and discusses the sites' benefits and challenges based on interviews with a sample of individuals and a survey of federal managers.

We are pleased that the draft report recognizes Treasury's efforts to substantially increase the public's use of USAspending and the Data Lab. Treasury also appreciates that the draft report identifies how USAspending and the Data Lab sites are useful, including by fostering greater transparency, identifying funding opportunities, identifying potential fraud, waste, and abuse, and informing decision-making.

Human-centered design is a critical component of the USAspending development cycle and Treasury is committed to making the site as useful as possible. As noted in the draft report, Treasury collects website user feedback in a variety of ways and consistently makes changes based on that feedback. We agree that Treasury should continually work to increase the use and usefulness of its sites, and we currently plan to undertake more targeted website promotion efforts and provide additional training resources to users, as well as to improve the search experience on USAspending. Treasury concurs with GAO's recommendations and will work to address them in the coming months.

Thank you for the opportunity to review and comment on the draft report. We look forward to continuing to work with GAO as we fulfill our ongoing commitment to improve federal financial spending transparency for the American public.

Sincerely,

A handwritten signature in cursive script that reads "Amy E Holmes".

Amy Edwards Holmes
Deputy Assistant Secretary
Accounting Policy and Financial Transparency

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Michelle Sager, (202) 512-6806 or SagerM@gao.gov

Staff Acknowledgments

In addition to the contact named above, Peter Del Toro (Assistant Director), Mark Ryan (Analyst-in-Charge), Kimberly Bohnet, Karen Cassidy, Amalia Konstas, Danny Lee, Loren Lipsey, Steven Putansu, Robert Robinson, Andrew J. Stephens, River Stone, and Andrew Titmus made key contributions to this report.

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