



October 2020

# OPEN DATA

Agencies Need  
Guidance to Establish  
Comprehensive Data  
Inventories;  
Information on Their  
Progress is Limited

Accessible Version

# GAO Highlights

Highlights of GAO-[GAO-21-29](#), a report to congressional addressees

## Why GAO Did This Study

Federal agencies create and collect large amounts of data in support of fulfilling their missions. Public access to open data—data that are free to use, modify, and share—holds great promise for promoting government transparency and engendering public trust. Access to open data is particularly important in the current pandemic environment as government agencies, scientists, and the public work to understand and respond to COVID-19 using data-focused approaches.

The OPEN Government Data Act includes a provision for GAO to report on federal agencies' comprehensive data inventories. This report examines the extent to which 1) OMB, GSA, and NARA met their statutory requirements to facilitate the establishment of federal agencies' comprehensive data inventories; and 2) CFO Act agencies developed data inventories in accordance with OMB guidance.

GAO reviewed agencies' websites and related documentation, and interviewed OMB staff and GSA and NARA officials.

## What GAO Recommends

GAO is making two recommendations to OMB to issue required implementation guidance and report on agency performance. GAO also recommends that OMB and GSA establish policy to ensure the routine identification and correction of errors in agency data. GSA concurred with GAO's recommendation and OMB did not comment on the report.

View GAO-[GAO-21-29](#). For more information, contact Michelle Sager at 202-512-6806 or [SagerM@gao.gov](mailto:SagerM@gao.gov).

October 2020

## OPEN DATA

### Agencies Need Guidance to Establish Comprehensive Data Inventories; Information on Their Progress is Limited

#### What GAO Found

The Open, Public, Electronic and Necessary Government Data Act of 2018 (OPEN Government Data Act) codifies and expands open data policy and generally requires agencies to publish information as open data by default, as well as develop and maintain comprehensive data inventories.

The Office of Management and Budget (OMB) has not issued statutorily-required guidance for agencies to implement comprehensive data inventories, which could limit agencies' progress in implementing their requirements under the act. OMB also has not met requirements to publicly report on agencies' performance and compliance with the act. Access to this information could inform Congress and the public about agencies' open data progress and statutory compliance.

#### Implementation Status of Selected OPEN Government Data Act Requirements

	Assessment
<b>Federal data catalogue:</b> By July 2019, the General Services Administration (GSA) must maintain a point of entry dedicated to sharing agency data assets with the public, known as the "Federal data catalogue". The Office of Management and Budget (OMB) and GSA must ensure agencies can publish data assets or links on the website.	Requirement fully met
<b>Online repository:</b> By July 2019, OMB, GSA, and the National Archives and Records Administration (NARA) must collaborate to develop and maintain an online repository of tools, best practices, and schema standards to facilitate the adoption of open data practices across the federal government.	Requirement fully met
<b>Implementation guidance:</b> By July 2019, OMB must issue guidance for agencies to implement comprehensive inventories.	Requirement not met
<b>Biennial report:</b> By January 2020, and biennially thereafter, OMB must electronically publish a report on agency performance and compliance with this act.	Requirement not met

Source: GAO analysis of Pub. L. No. 115-435, 132 Stat. 5529 (Jan. 14, 2019), [resources.data.gov](https://www.data.gov), [www.data.gov](http://www.data.gov), and an interview with OMB staff. | GAO-21-29.

GAO found that all 24 Chief Financial Officers (CFO) Act agencies display their data inventories on their websites, as well as on an online catalogue of federal data assets. Agencies took a variety of approaches to providing public access to individual data assets such as using Data.gov as the human-readable public interface, hosting searchable inventories on their own agency websites and providing lists of data or downloadable files on their websites.

Information on the extent to which agencies regularly update their data inventories is limited. OMB and GSA do not have a policy to ensure the routine identification and correction of errors in electronically published information. The absence of such a policy limits publicly available information on agency progress.

As of September 2020, seven of the 24 CFO Act agencies had also publicly released COVID-19 related datasets or linked to related information from their open data web pages as required by the Federal Data Strategy. These datasets provide data on a range of COVID-19 related topics including data on disease transmission and loans provided to businesses.

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**Abbreviations**

CAP	Cross-Agency Priority
CFO	Chief Financial Officer
COVID-19	Coronavirus Disease 2019
DATA Act	Digital Accountability and Transparency Act of 2014
FFATA	Federal Funding Accountability and Transparency Act of 2006
GSA	General Services Administration
M-13-13	Open Data Policy—Managing Information as an Asset Memorandum
NARA	National Archives and Records Administration
OGIS	Office of Government Information Services
OMB	Office of Management and Budget
OPEN Government Data Act	The Open, Public, Electronic and Necessary Government Data Act of 2018
The Commission 2020 Action Plan	The Commission on Evidence-Based Policymaking Federal Data Strategy 2020 Action Plan

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October 8, 2020

The Honorable Ron Johnson  
Chairman  
The Honorable Gary Peters  
Ranking Member  
Committee on Homeland Security and Governmental Affairs  
United States Senate

The Honorable Carolyn Maloney  
Chairwoman  
The Honorable James Comer  
Ranking Member  
House Committee on Oversight and Reform

Federal agencies create and collect considerable amounts of information in support of fulfilling their missions. Open data—public access to federal data that are free to use, modify, and share—hold great promise for promoting government transparency, engendering public trust in government, and stimulating entrepreneurship, innovation, and economic activity.

Open access to the large stores of government data is particularly important in the current pandemic environment as government agencies, scientists, and the public work to understand and respond to the Coronavirus Disease 2019 (COVID-19) using data-focused approaches. Managing government information as an asset could also create efficiencies for federal agencies that support mission needs, improve services and increase public access to information.<sup>1</sup>

Recognizing the need to make federal government data accessible and usable for the public, Congress passed and the President signed the Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act).<sup>2</sup> Title II of the Evidence Act—the Open, Public, Electronic and Necessary Government Data Act of 2018 (OPEN Government Data Act)—requires federal agencies to publish their information as open data

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<sup>1</sup>Office of Management and Budget, *Open Data Policy—Managing Information as an Asset*, OMB Memorandum M-13-13 (Washington, D.C.: 2013).

<sup>2</sup>Pub. L. No. 115-435, 132 Stat. 5529 (Jan. 14, 2019).

using standardized, nonproprietary formats, making data available to the public open by default, unless otherwise exempt.<sup>3</sup> The act codifies and expands on existing federal open data policy including the Office of Management and Budget's (OMB) memorandum M-13-13 (M-13-13), Open Data Policy—Managing Information as an Asset.

The OPEN Government Data Act requires that agencies develop and maintain comprehensive data inventories and collaborate with non-governmental entities, such as stakeholders, researchers, and the public, to understand how users value and use government data.<sup>4</sup> The act also includes requirements related to agency strategic planning efforts, including a requirement that each agency have an open data plan that prioritizes data sets for disclosure on the Federal Data Catalogue.<sup>5</sup>

In addition to these agency requirements, the OPEN Government Data Act directs OMB to facilitate agency implementation by issuing guidance and reporting on agencies' progress in meeting their open data statutory requirements. OMB must also collaborate with the General Services Administration (GSA) to maintain a federal data catalogue of agency inventories and collaborate with GSA and the National Archives and

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<sup>3</sup>44 U.S.C. § 3506(b)(6) as amended by OPEN Government Data Act, § 202(c)(1)(A)(iv). Throughout this report we refer to Title II of the Evidence Act—the Open, Public, Electronic and Necessary Government Data Act of 2018—as the OPEN Government Data Act. Under the OPEN Government Data Act, the term “agency” means any executive department, military department, government corporation, government controlled corporation, or other establishment in the executive branch of the government (including the Executive Office of the President), or any independent regulatory agency, but does not include— (1) ourselves; (2) the Federal Election Commission; (3) the governments of the District of Columbia and of the territories and possessions of the United States, and their various subdivisions; or (4) government-owned contractor-operated facilities, including laboratories engaged in national defense research and production activities. 44 U.S.C. § 3502.

<sup>4</sup>44 U.S.C. § 3506(b)(2)(B)(i)(II) as amended by OPEN Government Data Act, § 202(c)(1)(A)(i). The term “data” means recorded information, regardless of form or the media on which the data are recorded.

<sup>5</sup>44 U.S.C. § 3506(b)(2)(B)(iv) as amended by OPEN Government Data Act, § 202(c)(1)(A)(i). The priority data sets are also evaluated for a determination under 5 U.S.C. § 552.

Records Administration (NARA) to develop a repository of tools and resources to support agencies' open data efforts.<sup>6</sup>

The OPEN Government Data Act includes a provision for us to report on federal agencies' comprehensive data inventories, among other requirements.<sup>7</sup> This report is in partial response to that provision. Specifically, this report examines the extent to which (1) OMB, GSA, and NARA met their statutory requirements under the act to facilitate the establishment of federal agencies' comprehensive data inventories; and (2) Chief Financial Officers (CFO) Act agencies developed data inventories in accordance with OMB guidance.<sup>8</sup> Consistent with our mandate under the act, we plan to issue a subsequent report that examines the value and completeness of the agency open data inventories.

To assess the extent to which OMB, GSA, and NARA met their statutory requirements we reviewed the OPEN Government Data Act to determine the legal requirements for establishing and maintaining comprehensive data inventories. We compared these requirements to OMB guidance to see if OMB guidance complied with the requirements.<sup>9</sup> We also reviewed websites developed and maintained in fulfillment of OMB guidance or statutory requirements for a central data catalogue and online

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<sup>6</sup>44 U.S.C. § 3511(c)(1), (2) as amended by OPEN Government Data Act, § 202(d)(1). Specifically, the Director of OMB is required to collaborate with the Office of Government Information Services, a component of NARA, and the Administrator of General Services, the head of GSA.

<sup>7</sup>OPEN Government Data Act, § 202(g)(1).

<sup>8</sup>The CFO Act, among other things, established the position of agency Chief Financial Officer in the following 24 agencies, known as the CFO Act agencies: Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, Interior, Justice, Labor, State, Transportation, Treasury, Veterans Affairs, National Aeronautics and Space Administration, Environmental Protection Agency, Agency for International Development, GSA, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, and Social Security Administration. 31 U.S.C. § 901(b).

<sup>9</sup>Office of Management and Budget, *Open Data Policy—Managing Information as an Asset; and Office of Management and Budget, Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Learning Agendas, Personnel, and Planning Guidance*, OMB Memorandum M-19-23 (Washington, D.C.:2019).

repository.<sup>10</sup> We interviewed officials and staff from OMB, GSA and NARA who were involved in administering and overseeing OPEN Government Data Act data inventory requirements.

To identify the extent to which CFO Act agencies developed data inventories aligned with existing OMB guidance, we reviewed all 24 CFO Act agency websites. To identify whether CFO Act agencies' open data inventories meet M-13-13 requirements, we reviewed inventory metrics available through GSA's Agency Progress Dashboard.<sup>11</sup> Metrics available through the dashboard include information on the percentage of datasets in each agency's inventory with appropriate descriptive information and working web links. We also interviewed agency officials about the dashboard's intent and use.

We also identified the extent to which agencies prioritized publishing COVID-19 related datasets as directed by the Federal Data Strategy. OMB issued guidance in March 2020, which directed agencies to reprioritize work and leverage existing information to support COVID-19 response efforts. Toward that end, the Federal Data Strategy Development Team directed agencies to prioritize these datasets, consistent with OMB guidance. Accordingly, we identified COVID-19 related datasets made available on Data.gov or on agency websites as of September 2020. Additional details on our objectives, scope, and methodology can be found in appendix I.

We conducted this performance audit from January 2020 to October 2020 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

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<sup>10</sup>The central data catalogue is a public searchable consolidated resource of government data, available at <https://www.data.gov/> and hosted by GSA. The online repository provides tools and resources to federal agencies to help them develop and maintain their open data inventories, available at <https://resources.data.gov/>.

<sup>11</sup>GSA tracks several automated metrics regarding the content of agency data inventories on the Project Open Data Dashboard (referred to in this report as Agency Progress Dashboard), located at: <https://labs.data.gov/dashboard> For example, these metrics include number of public datasets, percentage of datasets with working links to data, and percentage of datasets that include all required descriptive information. Due to inconsistencies in this dashboard, we reviewed four quarterly reports (May 2019-March 2020) to determine whether each CFO Act agency appeared at least once. If an agency appeared at least once during the four reports, we considered it to meet M-13-13's standard that inventories can be aggregated by Data.gov.



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the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

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### Government-wide Open Data Initiatives

The OPEN Government Data Act is one of several government-wide initiatives focused on improving the public's access to government information.<sup>12</sup> For example, during the past 14 years, Congress and the administration have taken several steps to improve the availability, transparency, and quality of federal data:

- In 2006, Congress passed and the President, signed the Federal Funding Accountability and Transparency Act (FFATA). This act requires agencies to report information on federal awards to the public—such as contracts, grants, and loans.<sup>13</sup>
- In 2013, OMB issued M-13-13. The memorandum directed executive departments and agencies to make new government information accessible to the public in open formats, standardize data formats and locations to access information, and institute strategic planning and privacy protections for open data.<sup>14</sup>
- In 2014, Congress passed and the President signed, the Digital Accountability and Transparency Act (DATA Act). The DATA Act expanded FFATA to include direct federal agency expenditures and link contract, loan, and grant spending information to federal programs so that taxpayers and policy makers can more effectively track federal spending.<sup>15</sup>

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<sup>12</sup>Pub. L. No. 115-435, 132 Stat. 5529, 5534 (Jan. 14, 2019).

<sup>13</sup>Pub. L. No. 109-282, 120 Stat. 1186 (Sept. 26, 2006), *codified at* 31 U.S.C. § 6101 note.

<sup>14</sup>Office of Management and Budget, M-13-13 Open Data Policy--Managing Information as an Asset.

<sup>15</sup>Pub. L. No. 113-101, 128 Stat. 1146 (May 9, 2014).

- In 2016, Congress established the Commission on Evidence-Based Policymaking (the Commission) to study the availability and use of evidence, such as data, in government.<sup>16</sup> The Commission's 2017 report states that multiple entities within the federal government (such as components, agencies, or offices) are responsible for generating different sources of evidence. However, the Commission noted that agencies' capabilities to generate a full range of evidence varied and their efforts were poorly coordinated.<sup>17</sup>
- In 2019, Congress passed, and the President signed, the OPEN Government Data Act. It requires federal agencies to publish recorded information as open data using standardized, non-proprietary formats, making data available to the public open by default unless otherwise exempt.<sup>18</sup>
- In 2020, the Federal Data Strategy team issued a 2020 Action Plan (2020 Action Plan) to guide agencies' initial efforts to establish processes, build capacity, and align existing work on strategic use of data.<sup>19</sup> The Federal Data Strategy supports the Leveraging Data as a Strategic Asset Cross-Agency Priority (CAP) Goal. This CAP Goal focuses on enabling public use of and access to data and improving use of data for government decision-making and accountability.<sup>20</sup>
  - The May 2020 update to the Federal Data Strategy 2020 Action Plan directed agencies to prioritize adding COVID-19 response-related data assets to their comprehensive data inventories when performing quarterly updates to their inventories. This requirement is consistent with OMB guidance contained in M-20-16. This memorandum directs agencies to align agency operations to

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<sup>16</sup>Evidence-Based Policymaking Commission Act of 2016, Pub. L. No. 114-140, 130 Stat. 317 (Mar. 30, 2016).

<sup>17</sup>Commission on Evidence-Based Policymaking, *The Promise of Evidence-Based Policymaking* (Washington, D.C.: Sept. 7, 2017).

<sup>18</sup>Pub. L. No. 115-435, 132 Stat. 5529, 5534 (Jan. 14, 2019).

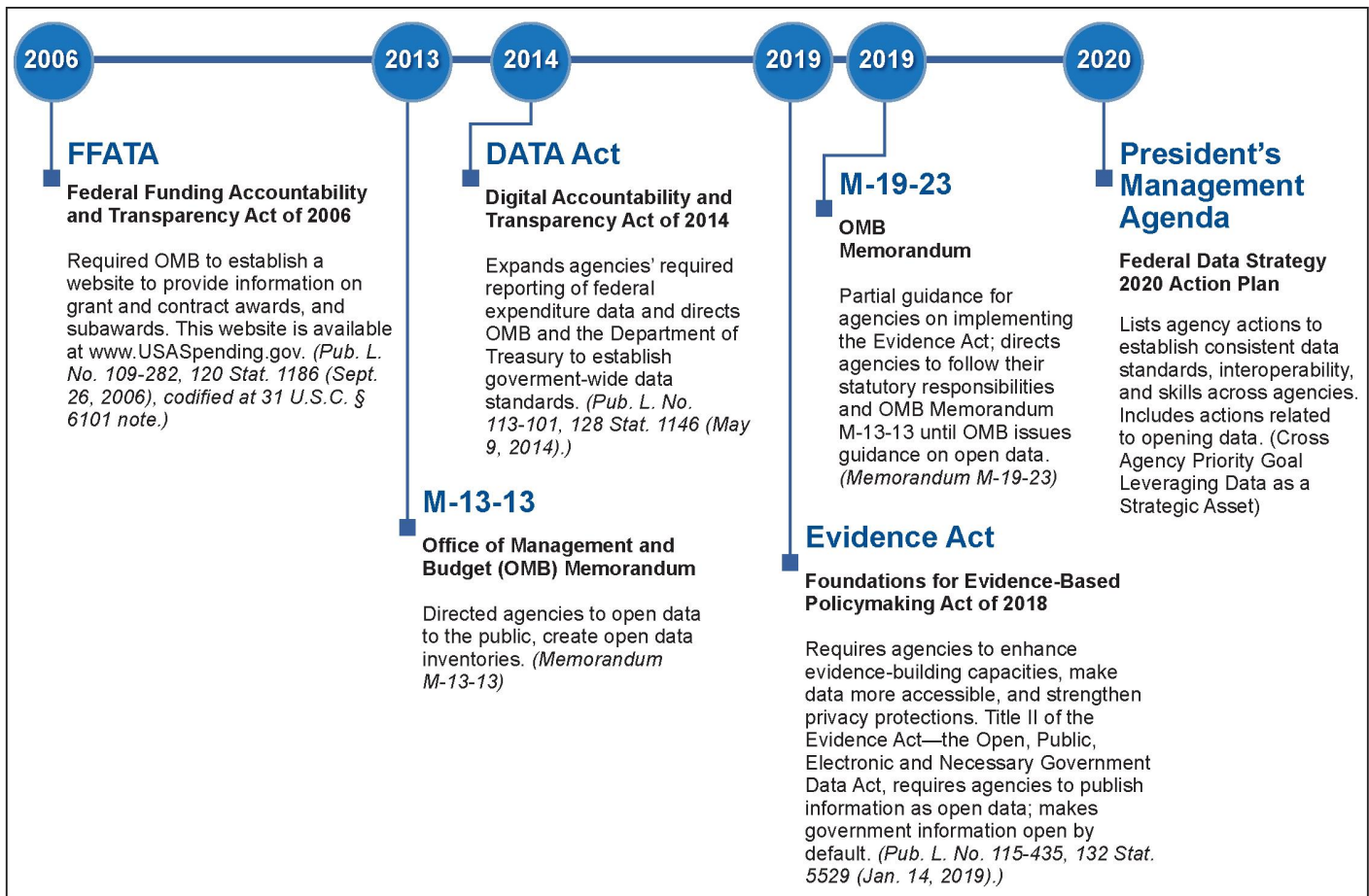
<sup>19</sup>Presidents Management Agenda, Federal Data Strategy Development Team, *Federal Data Strategy 2020 Action Plan* (2020).

<sup>20</sup>CAP Goal, Leveraging Data as a Strategic Asset, accessed August 12, 2020. <https://www.performance.gov/CAP/leveragingdata/>. OMB coordinates with agencies to develop CAP goals. These goals are 4-year outcome-oriented goals covering a number of complex or high-risk management and mission issues.

support essential work and information sharing due to the COVID-19 pandemic.<sup>21</sup>

- The May update to the Federal Data Strategy also extended the July 31, 2020 deadline for agencies to update and standardize open data descriptive information (metadata) in their data inventories to within 90 days of OMB and GSA issuing associated guidance. As of September 2020 this guidance has not been issued.

Figure 1: Timeline for Open Data Related Statutes and Guidance



Source: GAO analysis of select statutes and information from OMB and the Federal Data Strategy. | GAO-21-29

<sup>21</sup>Office of Management and Budget, *Federal Agency Operational Alignment to Slow the Spread of Coronavirus COVID-19*, M-20-16 (Washington, D.C.: Mar. 17, 2020).

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## Open Data Statutory Requirements and Policies

The OPEN Government Data Act includes additional requirements and codifies current practices documented in existing OMB guidance.<sup>22</sup> For example, both the OPEN Government Data Act and M-13-13 require that agencies publish data inventories on their websites, make public data available for inclusion in a central government-wide data catalogue, and use standardized resources and tools for open data. OMB directed agencies to continue following M-13-13 while they wait for OMB to issue implementation guidance—known as Phase II Implementation guidance—that is required under the act. One key difference between the existing open data policy and the OPEN Government Data Act is that the act includes requirements for a broader group of agencies than the agencies that OMB and GSA monitored under M-13-13.<sup>23</sup>

The 2020 Action Plan includes specific steps or actions that agencies can take to implement their requirements in the OPEN Government Data Act. For example, the 2020 Action Plan includes actions focused on creating a federal data catalogue, developing an online repository of tools for agencies and building agency-specific open data plans. While these actions provide a framework for agencies to implement specific requirements of the OPEN Government Data Act, some timeframes in the 2020 Action Plan are either contingent on other actions or due after the statutory deadlines included in the act.

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## OMB Met Some of Its Statutory Requirements, but Has Not Issued Implementation Guidance Nor Reported on Agency Progress

OMB met some of the specified statutory requirements to help federal agencies move forward with data inventories but has not issued required implementing guidance nor published a required report on federal agencies' performance and compliance. The OPEN Government Data Act

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<sup>22</sup>Office of Management and Budget, *M-13-13 Open Data Policy—Managing Information as an Asset*. New requirements under the OPEN Government Data Act include establishing chief data officers, requiring that OMB establish implementation guidance for agencies and criteria for agency determinations on restricting datasets, among others.

<sup>23</sup>Under OMB memorandum M-13-13, OMB and GSA monitored inventory progress made by the 24 CFO Act agencies.

contains statutory requirements for OMB, GSA, and NARA related to agencies' comprehensive data inventories as shown in table 1 below. The act requires OMB to coordinate with GSA and NARA to develop and maintain a federal data catalogue of agencies' data inventories and to establish a central website, or repository, of public data assets to facilitate open data best practices.<sup>24</sup>

The act also directs OMB to issue implementation guidance—known as Phase II Implementation Guidance—to help agencies meet their requirements under the act and to publish a report within a year of enactment and biennially thereafter on agencies' implementation efforts. As illustrated in table 1 below, we determined that the requirements to develop a federal data catalogue and a central website for open data resources have been met, but the requirements to issue implementation guidance and report on agency performance and compliance have not been met.

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<sup>24</sup>44 U.S.C. § 3511(c)(1), (2) as amended by OPEN Government Data Act, § 202(d)(1).

**Table 1: Implementation of OPEN Government Data Act Requirements Related to Comprehensive Data Inventories**

Select Statutory Requirement	Assessment
<b>Federal Data Catalogue</b>	Requirement fully met
<ul style="list-style-type: none"> <li>By July 2019, the General Services Administration (GSA) must maintain a single public interface online as a point of entry dedicated to sharing agency data assets with the public, which shall be known as the “Federal data catalogue.”</li> <li>OMB and GSA must ensure that agencies can submit public data assets, or links to public data assets, for publication and public availability on the interface.</li> </ul>	Requirement fully met
<b>Online Repository</b>	Requirement fully met
<ul style="list-style-type: none"> <li>By July 2019, OMB, GSA, and the Office of Government Information Services within the National Archives and Records Administration (NARA) must collaborate to develop and maintain an online repository of tools, best practices, and schema standards to facilitate the adoption of open data practices across the federal government, which must:               <ul style="list-style-type: none"> <li>include any definitions, regulations, policies, checklists, and case studies related to open data policy;</li> <li>facilitate collaboration and the adoption of best practices across the federal government relating to the adoption of open data practices; and</li> <li>be made available on the federal data catalogue</li> </ul> </li> </ul>	Requirement fully met Requirement fully met Requirement fully met Requirement fully met
<b>Implementation Guidance</b>	Requirement not met
<ul style="list-style-type: none"> <li>By July 2019, the Office of Management and Budget’s (OMB) Offices of Information and Regulatory Affairs and Electronic Government must issue guidance for agencies to implement comprehensive inventories.</li> </ul>	
<b>Biennial Report</b>	Requirement not met
<ul style="list-style-type: none"> <li>By January 2020 and biennially thereafter, OMB must electronically publish a report on agency performance and compliance with this act.</li> </ul>	

Source: GAO analysis of Pub. L. No. 115-435, 132 Stat. 5529 (Jan. 14, 2019), [resources.data.gov](https://www.data.gov), [www.data.gov](https://www.data.gov) and an interview with OMB staff. | GAO-21-29

## OMB and GSA Established the Required Catalogue of Agency Inventories

We found that OMB, in collaboration with GSA, established an online catalogue where agencies can link their public data listings to Data.gov for publication as required by the OPEN Government Data Act. This central portal of agency data assets builds on the Project Open Data dashboard established to track agencies’ progress implementing M-13-13. The dashboard includes data assets from CFO Act and other agencies. Prior to enactment of the OPEN Government Data Act, OMB and GSA had taken steps to track CFO Act agencies’ progress in establishing data inventories.

According to GSA officials, they provide technical assistance to help agencies establish and maintain their data inventories as well as ensure their data are publicly available. While the 24 CFO Act agencies have

already established online inventories, GSA officials told us that they are also providing outreach and assistance to non-CFO Act agencies, including OMB. GSA officials told us they use a list of agencies that have designated Chief Data Officers (CDO)—a requirement also found in the OPEN Government Data Act—to help them identify agencies that should be developing comprehensive data inventories.<sup>25</sup> The Chair of the CDO Council reported that 77 agencies had designated a CDO as of August 2020.

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## OMB, GSA, and NARA Established a Central Website of Open Data Resources

We found that OMB, GSA, and NARA established, and are now maintaining, a repository of resources intended to facilitate the adoption of open data practices across the federal government, as required by the OPEN Government Data Act.<sup>26</sup> The OPEN Government Data Act requires OMB, GSA, and the Office of Government Information Services (OGIS) within NARA to collaborate to develop and maintain an online repository—or central website—of tools, best practices, and schema standards (definitions of data attributes), to facilitate the adoption of open data practices across the federal government.<sup>27</sup> OMB, GSA, and NARA developed the resources.data.gov website to comply with the OPEN Government Data Act. The website replaced Project Open Data, a now-defunct website established under the previous administration.

GSA officials said they transferred many of the resources hosted on the Project Open Data website to the resources.data.gov website after the enactment of the OPEN Government Data Act in 2019. The website is managed by GSA's Technology Transformation Services, OMB's Office of the Federal Chief Information Officer, Office of Information and Regulatory Affairs (OIRA), and NARA's OGIS.<sup>28</sup> The repository—resources.data.gov—is an open source project available on GitHub which provides an open forum for federal agencies and the public to share

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<sup>25</sup>Agencies subject to the OPEN Government Data Act are required to identify and appoint CDOs who are members in the CDO Council. 44 U.S.C. § 3520A, as amended by OPEN Government Data Act, § 202(f)(1).

<sup>26</sup>See <https://resources.data.gov>.

<sup>27</sup>44 U.S.C. § 3511(c)(2), as amended by OPEN Government Data Act, § 202(d)(1).

<sup>28</sup>See <https://resources.data.gov>.

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resources and examples of leading practices.<sup>29</sup> It includes links to resources such as tools to assist agencies with development of their data inventories, playbooks on data governance, data innovation and digital services, case study examples of open data from selected agencies, applicable guidance, and a set of resources called *Skill builders*. *Skill builders* provides information on key activities such as identifying data sets for public release, website best practices, and principles for open government data.

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<sup>29</sup>GitHub is a commercial platform for open-source communities that provides for collaboration on documentation and code. The Data.gov GitHub website is available at: <https://github.com/GSA/data.gov>.



Figure 2: OPEN Data Resources Page on Skills Development

An official website of the United States government [Here's how you know](#)

Welcome to resources.data.gov. This is a work in progress version of a new site on federal data resources.

**resources.data.gov**  
A repositior of Federal Enterprise Data Resources

Glossary

Resources Data standards Communities About

## Skills development

Guides, tutorials, and personnel-related resources to build and develop a data-savvy workforce

### Data Scientist Titling Guidance [↗](#)

This memo provides titling guidance to agency Human Resources Offices for use in classifying data science positions within agencies.

Source  
Office of Personnel Management

Keywords  
[position description](#), [data analytics](#), [data management](#), [data visualization](#), [data cleaning](#), [workforce development](#)

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### How to Get Your Agency's Data on to Data.gov [↗](#)

Webinar guide to using data.gov, produced by DigitalGov University, an initiative of the General Services Administration.

Source  
digital.gov

Keywords  
[open data](#), [workforce development](#), [data sharing](#)

Format  
Video (45 mins)

Source: Resources.data.gov website (<https://resources.data.gov/categories/skills-development/>) Accessed July 9, 2020. | GAO-21-29

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## OMB Has Not Issued Comprehensive Data Inventory Implementation Guidance

The OPEN Government Data Act requires OMB to issue implementation guidance by July 14, 2019, that includes requirements for each agency to: (1) include metadata on each data asset; (2) describe how to access each data asset; and (3) exclude any data asset that includes national security information, among other requirements.<sup>30</sup> The act also directs OMB to include criteria to help agencies determine whether a particular data asset should not be made publicly available. The criteria must take into account, among other things, the risks and restrictions related to disclosure of personally identifiable information, security considerations, and the costs and benefits to the public of converting the data into a format that can be understood and used by the public.

OMB did not meet its statutory requirement for issuing guidance to agencies regarding comprehensive data inventories. As of September 2020, OMB had not issued Phase II implementation guidance. Minutes from the August 4, 2020, Open Data Working Group indicate that the Phase II guidance is in draft form and, according to OMB staff, OMB plans to send it to agency Chief Data Officers for review after OMB has completed its internal review. Under the Evidence Act, OMB issued what is referred to as Phase I implementation guidance in July 2019.<sup>31</sup> This guidance directed agencies to continue following existing open data policies under M-13-13 and OMB Circular A-130 until Phase II guidance is issued.<sup>32</sup>

While agencies may continue to make progress on the open data requirements specified in M-13-13, progress on meeting the additional requirements specified in the OPEN Government Data Act could be delayed in the absence of the Phase II guidance. As a result of the

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<sup>30</sup>44 U.S.C. § 3511(a)(2)(A), as amended by OPEN Government Data Act, § 202(d)(1). OMB is to issue the implementation guidance 180 days after the January 14, 2019 enactment of the Evidence Act. Pub. L. No. 115-435, § 403.

<sup>31</sup>OMB M-19-23: *Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Learning Agendas, Personnel, and Planning Guidance*.

<sup>32</sup>Office of Management and Budget, *Managing Information as a Strategic Resource*, OMB Circular A-130 (July 28, 2016). OMB Circular A-130 establishes general policy for the planning, budgeting, governance, acquisition, and management of federal information, personnel, equipment, funds, information technology resources, and supporting infrastructure and services.

absence of implementation guidance, agencies do not have clarity on timeframes for meeting their requirements under the OPEN Government Data Act or guidance to help prioritize data assets for publication in their data inventories.

In January 2020, OMB staff said that OMB was deliberating on the Phase II Implementation guidance and had not established a timeline for issuing the guidance. OMB staff explained that while they do their utmost to meet statutory timelines, developing guidance requires engaging with agencies through a variety of interagency working groups to provide technical assistance and learning what additional guidance agencies need to help them comply with their statutory responsibilities.

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### **OMB Has Not Reported on Agency Performance and Compliance**

As of September 2020, OMB has not issued a publicly available report on agency performance and compliance, the first in a series of biennial reports required under the act. The act requires OMB to issue its first report on agency performance and compliance with the act within 1 year of enactment and biennially thereafter.<sup>33</sup> In January 2020—1 year after enactment—OMB staff told us that they were deliberating on a report format and did not have a timeframe for issuing the report.

Without OMB's report on agency performance and compliance with the OPEN Government Data Act, Congress and the public lack key information about the extent to which agencies are meeting their requirements under the act, including whether agencies have made all required data assets open and available to the public.

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<sup>33</sup>Pub. L. No. 115-435, § 202(g)(2).

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## CFO Act Agencies Published Open Data Inventories, but Data Quality Limitations Hinder the Ability to Track Agency Progress

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### Open Data Inventories Vary in How They Are Displayed on Agency Websites

All 24 CFO Act agencies posted their open data assets on their agency websites in a format that allowed for automatic aggregation into Data.gov.<sup>34</sup> All 24 CFO Act agencies met the requirement for publicly posting their data assets on their respective websites. We identified human-readable agency data inventories and machine-readable public data listings for each agency, but the location of the information varied. For example, some agencies described their open data efforts or provided a link to Data.gov on the required webpage, but posted their inventory on a different page on their website.

As illustrated in figures 3, 4, and 5 below, the 24 CFO Act agencies took a variety of approaches to allow the public to access individual data sets within their inventories. For example:

- Six out of the 24 CFO Act agencies provided a human-readable public interface for their data listings through Data.gov, as illustrated in figure 3.
- Nine out of the 24 agencies hosted searchable data inventories on their own websites, as illustrated in figure 4.
- The remaining nine agencies provided human-readable lists of data or downloadable Excel files on their websites, but did not have search and filter capabilities, as illustrated in figure 5.

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<sup>34</sup>Under existing open data policy from OMB Memorandum M-13-13, agencies must provide access to their data assets on a uniform website ([www.agency.gov/data](http://www.agency.gov/data)) and in a format that allows for automated aggregation to Data.gov. According to GSA officials, Data.gov automatically harvests agencies' data files if they are in the ".json" format and located at [www.agency.gov/data.json](http://www.agency.gov/data.json). For initial setup of the automated harvest, an agency must notify GSA that it has a data listing that meets these standards.

Figure 3: Example of Human Readable Public Interface on Data.gov

The screenshot displays the Data.gov interface for the General Services Administration (GSA) organization page. The top navigation bar includes "DATA CATALOG" and "Organizations" with a home icon and "/ Datasets". The breadcrumb trail shows "General Services Administration".

On the left side, there is a GSA logo and the text "General Services Administration" with a "read more" link. Below this, it states "Datasets 105". There are three filter sections: "Topics", "Topic Categories", and "Dataset Type", each with "A-Z" and "1-9" filters and a "Clear All" button. The "Topics" section shows "There are no Topics that match this search". The "Topic Categories" section shows "There are no Topic Categories that match this search". The "Dataset Type" section shows "non-geospatial (104)" and "geospatial (1)".

The main content area shows "105 datasets found" and a search bar. Below the search bar, there are several dataset collections:

- Collection: Enterprise Infrastructure Solutions (EIS)**: These datasets represent the Enterprise Infrastructure Solutions (EIS), business volume of each government agency that has ordered telecommunications services from the EIS...
- GSA DCOI Strategic Plan**: Under the Data Center Optimization Initiative (DCOI), covered agencies are required to post DCOI Strategic Plans and updates to their FITARA milestones publicly. File formats: JSON, PDF.
- GSA IT Reform Cost Savings/Avoidance**: GSA IT provides data related to Agency IT initiatives that save or avoid expenditures. This data is provided as a requirement of OMB's Integrated Data Collection (IDC) and... File format: JSON.
- GSA IT Policy Archive Zip**: A compressed zip file containing all of GSA's public IT policy documents, posted publicly at gsa.gov/digitalstrategy/policyarchive.zip and identified in the agency public data... File format: ZIP.
- GSA FITARA Actions and Milestones**: This JSON file represents GSA's FITARA Actions and Milestones submission to OMB. This file abides by the OMB JSON schema found here:... File format: JSON.
- FY 2018 Federal Real Property Profile Data for Civilian Agencies**: An XLSX export of data from FRPP, a database of Federal Real Property for Civilian Agencies. File format: EXCEL.

Source: GAO snapshot of Data.gov website (https://catalog.data.gov/organization/gsa-gov), accessed July 8, 2020. | GAO-21-29

**Appendix I: Objectives, Scope, And Methodology**

**Figure 4: Example of Searchable Data Catalogue on Agency Website**

The screenshot shows the NASA's Open Data Portal search results page. The browser address bar displays <https://data.nasa.gov/browse>. The page header includes the NASA logo, the text "NASA's Open Data Portal", and navigation links for "Data Catalog", "About", and "Developer Resources". A search bar is located at the top left. On the left side, there are three filter panels: "Categories" (listing Ae.rospace, Applied Science, Apps, Earth Science, Management/Operatio...), "View Types" (listing Calendars, Charts, Data Lens pages, Datasets, External Datasets, Files and Documents, Filtered Views, Forms, Maps), and "Tags" (listing national geospatial data asset, ngda). The main content area shows a search message: "Your search had more assets than we are able to fetch. Please refine your result set with a more specific search term or filter." Below this, it indicates "10000 Results" and a "Sort by" dropdown set to "Recently Added". Three data asset results are displayed:

- MuSLI Multi-source Land Surface Phenology Yearly North America 30 m V001** (External link)
  - Description: NASA's Multi-Source Land Imaging (MuSLI) Land Surface Phenology (LSP) Yearly North America 30 meter (m) Version 1 product (MSLSP) provides a Land Surface Phenology product for North America derived from Harn-
  - Created: June 8, 2020
  - Views: 7
  - Tags: earth science biosphere vegetation and surface land use/land cover, and 2 more
- TES/Aura L2 Ozone Nadir Special Observation V008** (External link)
  - Description: TES Level 2 data contain retrieved species (or temperature) profiles at the observation targets and the estimated errors. The geolocation, quality and other data (e. g. surface characteristics for nadir observations) are also pro-
  - Created: June 8, 2020
  - Views: 2
  - Tags: earth science atmosphere air quality atmospheric chemistry ngda, and 1 more
- OCO-3 Level 2 geolocated XCO2 retrievals results. physical model VEarlyR (OCO3\_L2\_Standard) at GES DISC** (External link)
  - Description: The Orbiting Carbon Observatory-3 (OCO-3) was deployed to the International Space Station in May, 2019. It is technically a single instrument almost identical to OCO-2.
  - Created: June 8, 2020
  - Views: 0
  - Tags: earth science atmosphere, atmospheric chemistty, ngda, national geospatial data asset
- OCO-3 Level 2 geolocated XCO2 retrieval resu lts and algorithm diagnostic information VEarlyR (OCO3\_L2\_Diagnostic) at GES DISC** (External link)

Source: GAO snapshot of National Aeronautics and Space Administration website (<https://data.nasa.gov/browse>), accessed June 4, 2020. | GAO-21-29

Figure 5: Example of Non-Searchable List of Datasets on Agency Website

**NRC's High-Value Datasets**

- » Canceled U.S. Commercial Nuclear Power Reactors
- » CIO Governance Board Membership List
- » Contract Awards
- » Dry Spent Fuel Storage Designs
- » Dry Spent Fuel Storage Licensees
- » Emergency Preparedness: NRC Biennial Evaluated Exercise Schedule

**Findings from Fire Inspections**

A summary of findings from fire inspections conducted by the NRC. Available data include the plant name, cognizant NRC regional office, event date, type of finding that was issued to the licensee and the specific violation for which the finding was issued, report number and comments associated with each finding, year in which the finding was first observed, and type of report in which the finding was identified.

[Access the Dataset](#)   
[Data Dictionary/Variable List](#)

- » Fire Events Data from Licensee Event Reports
- » Generic Issues
- » Human Reliability Analysis
- » Materials Environmental Reviews Under NEPA
- » Materials Licensing Actions Received

- » NRC IT Policy Archive
- » NRC-Regulated Complex Materials Sites Undergoing Decommissioning

**Operating Reactor Performance Indicators**

Raw data for the Plant Performance Indicator (PI) values for each of the operating commercial nuclear power reactors in the United States. Available data include the plant name, indicator code, year and month in which the PI was reported, and value of the PI based on its type.

[Learn more...](#)

- [Performance Summaries](#)
- [PI Summary Matrix](#) (graphical depiction of the raw data)

[Access the Dataset](#) (raw data file)   
[Data Dictionary/Variable List](#)

- » Power Reactors Formerly Licensed to Operate
- » Reactor Event Notification Report
- » Reactor Inspection Reports for the Last Year
- » Reactor Status
- » Research & Test Reactors
- » Research & Test Reactors under Decommissioning
- » Significant NRC Enforcement Actions
- » Tribes Physically Located Within 50 Miles of a Nuclear Power Plant
- » Waste Incidental to Reprocessing (WIR) Documents

Source: GAO snapshot of Nuclear Regulatory Commission website (<https://www.nrc.gov/data/>), accessed July 8, 2020. | GAO-21-29

## Data Quality Challenges Limit Publicly Available Information on Agency Progress

GSA administers the Agency Progress Dashboard—a public-facing resource that tracks agency progress in developing and maintaining open data inventories. The dashboard is updated quarterly and provides information to help the public understand the progress and status of

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agencies' public dataset listings.<sup>35</sup> According to GSA officials, OMB used the information from the dashboard to monitor agency progress and to inform quarterly progress reports that OMB published until November 2017.

Under existing open data policy, OMB remains responsible for monitoring agency implementation of open data policy. GSA officials told us that they continue to work with OMB to update the dashboard. For example, in September 2019, GSA relabeled the dashboard quarterly reports as "Evidence Act Milestones." In January 2020, GSA began including performance metrics for non-CFO Act agencies on the dashboard. The performance indicators published on the dashboard include the number of datasets listed on each agency website, the date when the agency last updated its datasets, the percent of listings that include metadata (descriptive information about the datasets), and the percentage of agency listings with broken links to datasets.

Data quality challenges prevented us from determining the extent to which agencies regularly update their inventories, include appropriate metadata, or have working links to data inventories. Our review of the dashboard identified a number of errors in the data that are routinely published on the dashboard. These errors include:

- **Inaccurate data labeling.** The dashboard includes a metric for total public datasets on its summary page but the numbers do not match those listed for public datasets in each agency's detailed data. This issue occurred across all agencies' detailed data, and GSA officials acknowledged this error when we asked them about it during an interview. The error appears for multiple reporting periods.
- **Agencies with incomplete or missing data.** The dashboard displayed no or partial metrics for eight out of the 24 CFO Act agencies in their March 31, 2020, report.

GSA officials told us they have no current plans to make additional modifications to the dashboard related to the OPEN Government Data Act unless directed to do so by OMB. The officials also said they are exploring, in coordination with OMB, alternative ways to ingest data from

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<sup>35</sup>The Agency Progress Dashboard is officially titled the "Project Open Data Dashboard." We refer to it as the "Agency Progress Dashboard" in this report for clarity and readability. The dashboard is available at <https://labs.data.gov/dashboard>. A description of the dashboard is available at <https://labs.data.gov/dashboard/docs>.



agencies' public data listings to minimize the dashboard's maintenance requirements.

GSA officials said that there is no established schedule for identifying data quality issues nor do they have formal policies for correcting technical errors after they are identified. Officials explained that they might identify errors during routine maintenance or agency contacts may alert them to data quality issues. GSA also provides a mechanism to report issues through GitHub. This mechanism provides a public-facing log of open and resolved issues. GSA officials said they work to resolve errors by coordinating with agencies' open data leads.<sup>36</sup>

Complete, accurate and timely performance information is needed to monitor agencies' required development and maintenance of comprehensive data inventories. Moreover, high quality performance information is important to inform the public's understanding of agencies' open data assets.

Our prior work on enhancing agencies' use of performance information identified key practices that can contribute to greater use of performance information for management decision-making.<sup>37</sup> These practices include improving the usefulness of performance information and communicating performance information frequently and effectively. We reported that performance information must meet users' needs for completeness, accuracy, consistency, timeliness, validity, and ease of use for this information to be useful. Improvements in the use of performance information for decision-making can also be achieved through frequent and routine communication and the use of effective communication tools, such as dashboards or other visual aids. In addition, federal standards for internal control, which are generally accepted standards for organizational effectiveness, state that management should design controls that validate the integrity of the measures and indicators.<sup>38</sup>

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<sup>36</sup>According to GSA officials, the open data leads are agency contacts who work with GSA on implementation of the OPEN Government Data Act requirements, such as adding agency data to the Federal Data Catalogue.

<sup>37</sup>GAO, *Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making*, GAO-05-927 (Washington, D.C.: Sept.9, 2005).

<sup>38</sup>GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: September 2014)

Data quality issues we identified with the dashboard can impede data users' ability to access timely and accurate datasets. For example, the public and researchers could inadvertently use outdated data for analysis or have difficulty accessing data sources due to broken links. Lack of accurate and up-to-date metrics also limit agencies' abilities to detect technical problems with data inventories, inform key decisions, and make effective process improvements. A systematic approach for identifying and disclosing known data limitations could help data users better understand potential quality issues as well as how to appropriately interpret the data. In the absence of such information, users are unable to consider these differences in their assessment of how to use and understand the data.

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## OMB Directed Agencies to Prioritize COVID-19 Related Datasets for Publication

As of September 2020, seven out of the 24 CFO Act agencies had released COVID-19 related datasets to the public or linked to COVID-19 related information from their data web pages as required by the Federal Data Strategy 2020 Action Plan. In addition, six of the 24 CFO Act agencies published COVID-19-related datasets on Data.gov (the Departments of Commerce, Health and Human Services, Transportation, and Veterans Affairs, as well as the Environmental Protection Agency and the Small Business Administration).

For example, the Department of Health and Human Services provides data on a number of COVID-19-related topics including disease transmission, death rates, and health provider supports, while the Small Business Administration posts data on loans provided through the Paycheck Protection Program. While only some CFO Act agencies had COVID-19-related datasets on their open data web pages or data.gov, all 24 agencies had COVID-19 information or links to government-wide COVID-19 resources in other areas of their websites. The COVID-19 web resources did not link to open data pages on the agency websites.

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## Conclusions

The enactment of the OPEN Government Data Act is one of an evolving set of actions taken by Congress and the administration to improve the availability and transparency of the federal government's vast store of information. Open access to government data is particularly important in

the current pandemic environment as government agencies, scientists, and the public work to understand and respond to COVID-19 using data-focused approaches.

An immense amount of data is now open and available to the public due to government open data initiatives. While the availability of this information represents progress in the evolution of open data, much work remains to be done to make a comprehensive list of federal data assets available to the public. To continue moving forward with open government data, the issuance of OMB implementation guidance should help agencies develop comprehensive inventories of their data assets, prioritize data assets for publication, and decide which data assets should or should not be made available to the public.

Implementation of this statutory requirement is critical to agencies' full implementation and compliance with the act. In the absence of this guidance, agencies, particularly agencies that have not previously been subject to open data policies, could fall behind in meeting their statutory timeline for implementing comprehensive data inventories.

It is also important for OMB to meet its statutory responsibility to biennially report on agencies' performance and compliance with the OPEN Government Data Act and to coordinate with GSA to improve the quality and availability of agency performance data that could inform this reporting. Access to this information could inform Congress and the public on agencies' progress in opening their data and complying with statutory requirements. This information could also help agencies assess their progress and improve compliance with the act.

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## Recommendations For Executive Action

We are making the following three recommendations to OMB, one in collaboration with GSA:

The Director of OMB should comply with its statutory requirement to issue implementation guidance to agencies to develop and maintain comprehensive data inventories. (Recommendation 1)

The Director of OMB should comply with the statutory requirement to electronically publish a report on agencies' performance and compliance with the OPEN Government Data Act. (Recommendation 2)

The Director of OMB, in collaboration with the Administrator of GSA, should establish policy to ensure the routine identification and correction of errors in electronically published performance information. (Recommendation 3)

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## Agency Comments

We provided a draft of this report to GSA, OMB, and NARA for review and comment. In its comments, reproduced in appendix II, GSA concurred with our recommendation. GSA also provided technical comments, which we incorporated as appropriate. OMB had no comments on the draft report. NARA provided technical comments, reproduced in appendix III, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees; the Administrator of the General Services Administration, the Archivist of the United States; the Director of the Office of Management and Budget, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff has any questions about this report, please contact Michelle Sager at (202) 512-6806 or [sagerm@gao.gov](mailto:sagerm@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of our report. Key contributors to this report are listed in appendix IV.



Michelle Sager  
Director  
Strategic Issues

# Appendix I: Objectives, Scope, And Methodology

The Open, Public, Electronic and Necessary Government Data Act of 2018 (OPEN Government Data Act) includes a provision for us to report on federal agencies' comprehensive data inventories, among other requirements.<sup>1</sup> This report is in partial response to our requirements under the act. Specifically, this report examines the extent to which (1) the Office of Management and Budget (OMB), the General Services Administration (GSA), and the National Archives and Records Administration (NARA) met their statutory requirements under the act to facilitate the establishment of federal agencies' comprehensive data inventories; and (2) Chief Financial Officers (CFO) Act agencies developed data inventories in accordance with OMB guidance.

To assess the extent to which OMB, GSA, and NARA met their statutory requirements, we reviewed the OPEN Government Data Act to examine the legal requirements set forth in the act pertaining to establishing and maintaining comprehensive data inventories.<sup>2</sup> We compared these requirements to guidance from OMB such as Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Learning Agendas, Personnel, and Planning Guidance, OMB Memorandum M-19-23.<sup>3</sup> We reviewed the central data catalogue developed and maintained by OMB and GSA, and the online repository developed and maintained by OMB, GSA, and NARA. We also interviewed OMB staff, GSA, and NARA officials.

To identify agencies' implementation of data inventories in accordance with OMB guidance, we interviewed GSA officials involved in administering and overseeing the Federal Data Catalogue where agencies' inventories are posted. We also interviewed GSA officials regarding efforts to track and evaluate agency progress in developing and

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<sup>1</sup>OPEN Government Data Act, § 202(g)(1).

<sup>2</sup>44 U.S.C. § 3511(c)(2), as amended by OPEN Government Data Act, § 202(d)(1).

<sup>3</sup>Office of Management and Budget, *Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Learning Agendas, Personnel, and Planning Guidance*, OMB Memorandum M-19-23 (Washington, D.C.: 2019).

sharing inventories with the Federal Data Catalogue and their efforts to assess quality and consistency of agency inventory submissions.

To assess agency progress in creating and making open data inventories available to the public, we assessed agency compliance with a subset of directions from Open Data Policy—Managing Information as an Asset, M-13-13.<sup>4</sup> We focused on this memorandum because it directly related to accessibility and availability of data inventories. We also chose to assess agencies under M-13-13 because agencies currently manage their data inventories based on guidance in the memorandum. As of September 2020, OMB had not issued OPEN Government Data Act implementation guidance. Specifically, we reviewed the extent to which:

- datasets in agency data inventories were made publicly available on agencies' websites
- agency data inventories were located at the designated website, [www.\[agency\].gov/data](http://www.[agency].gov/data); and
- agency data inventories can be automatically aggregated by [www.data.gov](http://www.data.gov), the centralized public portal to all government data inventories.

To identify the extent to which CFO Act agencies aligned their comprehensive data inventories with this OMB guidance, we reviewed all 24 CFO Act agency websites.<sup>5</sup> We selected the 24 CFO Act agencies because OMB and GSA monitored these agencies under M-13-13. While the OPEN Government Data Act expands requirements to a larger set of agencies, OMB has not yet issued implementation guidance required by the OPEN Government Data Act.

To determine whether each CFO Act agency had a data inventory that was publicly available and easy to find, we visited each open data page ([www.\[agency\].gov/data](http://www.[agency].gov/data)). If we did not find a data inventory on the

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<sup>4</sup>Office of Management and Budget, *Open Data Policy—Managing Information as an Asset*, OMB Memorandum M-13-13 (Washington, D.C.: May 9, 2013)

<sup>5</sup>31 U.S.C. § 901(b). The CFO Act, among other things, established the position of agency Chief Financial Officer in the following 24 agencies, known as the CFO Act agencies: Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, Interior, Justice, Labor, State, Transportation, Treasury, Veterans Affairs, and National Aeronautics and Space Administration, Environmental Protection Agency, Agency for International Development, GSA, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, and Social Security Administration.

designated page, we then searched the agency website using the terms “open data” and “data inventory.” If we were unable to locate the inventory through the website searches, we then went to the Project Open Data Dashboard to identify the direct links to data inventory public data listings to determine whether agencies hosted them on their websites. Finally, if we were unable to find an inventory on an agency website based on these steps, we searched for agency data sets on [www.data.gov](http://www.data.gov) to verify that a public data listing linked to a source on the agency website.

To identify whether Data.gov could aggregate and harvest agencies’ inventory files, we reviewed Data.gov listings for each agency. If an agency had datasets listed on Data.gov, we then considered that information as evidence that agencies provided inventory data listings in an appropriate format.

To identify any Coronavirus Disease 2019 (COVID-19) related datasets we searched Data.gov for datasets tagged with “COVID” and “Coronavirus” We also reviewed May 2020 changes to the Federal Data Strategy related to COVID-19 response efforts.

To identify quantitative metrics that we could use for more detailed data inventory analysis, we reviewed GSA’s Agency Progress Dashboard. The dashboard captures quarterly metrics on each agency’s data listing and tracks data availability, accessibility and quality for all agency public data listings harvested by Data.gov.<sup>6</sup> We reviewed data documentation and interviewed GSA officials who oversee the dashboard. In the course of our reviews, we identified inconsistencies and errors in the dashboard. We then evaluated the effectiveness of the dashboard as a measurement tool for agency data inventories by reviewing the results from the previous four quarterly reporting cycles (May 2019 to March 2020) and documented missing information and inconsistencies.

We conducted this performance audit from January 2020 to October 2020 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain

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<sup>6</sup>GSA tracks several automated metrics regarding the content of agency data inventories on the Project Open Data Dashboard, located at: <https://labs.data.gov/dashboard>. Due to inconsistencies in this dashboard, we reviewed four quarterly reports (May 2019 to March 2020) to determine whether each CFO Act agency appeared at least once. If an agency appeared at least once during the four reports, we considered it to meet the requirement in M-13-13 that inventories should be able to be aggregated by Data.gov.

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**Appendix I: Objectives, Scope, And  
Methodology**

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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: Comments from General Services Administration

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The Administrator

September 28, 2020

The Honorable Gene L. Dodaro  
Comptroller General of the United States  
U.S. Government Accountability Office  
Washington, DC 20548

Dear Mr. Dodaro:

The U.S. General Services Administration (GSA) appreciates the opportunity to review and comment on the U.S. Government Accountability Office (GAO) draft report titled *OPEN DATA: Agencies Need Guidance to Establish Comprehensive Data Inventories; Information on Their Progress is Limited* (GAO-21-29).

GAO recommends that the Director of the Office of Management and Budget (OMB), in collaboration with the Administrator of General Services, should establish policy to ensure the routine identification and correction of errors in electronically published performance information. GSA will collaborate with OMB, as appropriate, in addressing this recommendation.

If you have any questions or concerns, please contact me at (202) 969-7277 or Jeffrey A. Post, Associate Administrator, Office of Congressional and Intergovernmental Affairs, at (202) 501-0563.

Sincerely,

A handwritten signature in blue ink that reads "Emily W. Murphy".

Emily W. Murphy  
Administrator

cc: Ms. Michelle Sager, Director, Strategic Issues, GAO

1800 F Street, NW  
Washington, DC 20405-0002

[www.gsa.gov](http://www.gsa.gov)

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Text of Appendix II: Comments from General Services  
Administration

Page 1

September 28, 2020

The Honorable Gene L. Dodaro  
Comptroller General of the United States

U.S. Government Accountability Office  
Washington, DC 20548

Dear Mr. Dodaro:

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If you have any questions or concerns, please contact me at (202) 969-7277 or

Jeffrey A. Post, Associate Administrator, Office of Congressional and Intergovernmental Affairs, at (202) 501-0563.

Sincerely,

Emily W. Murphy  
Administrator  
cc: Ms. Michelle Sager,  
Director, Strategic Issues,  
GAO

1800 F Street, NW Washington, DC 20405-0002

[www.gsa.gov](http://www.gsa.gov)

# Appendix III: Comments from National Archives and Records Administration



28 September 2020

Michelle Sager  
Director, Strategic Issues  
United States Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Ms. Sager:

Thank you for the opportunity to comment on the draft report, *OPEN DATA: Agencies Need Guidance to Establish Comprehensive Data Inventories; Information on Their Progress is Limited* (GAO-21-29). I appreciate your highlighting the implementation of the OPEN Data Act, which dovetails nicely with one of the four strategic goals of the National Archives and Records Administration (NARA): Make Access Happen.

We provided several technical comments regarding references to NARA and NARA's Office of Government Information Services. If you have any questions regarding this memo, please contact Kimm Richards at 301-837-1668 or via email at [kimm.richards@nara.gov](mailto:kimm.richards@nara.gov).

Sincerely,



DAVID S. FERRIERO  
Archivist of the United States

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Text of Appendix III: Comments from National Archives  
and Records Administration

Page 1

28 September 2020

Michelle Sager  
Director, Strategic Issues

United States Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

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Sincerely,

DAVID S. FERRIERO  
Archivist of the United States

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# Appendix IV: GAO Contacts and Staff Acknowledgements

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## GAO Contact

Michelle Sager, (202) 512-6806 or [SagerM@gao.gov](mailto:SagerM@gao.gov)

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## Staff Acknowledgement

In addition to the contact named above, Kathleen Drennan (Assistant Director), Silvia Symber (Analyst-in-Charge), Maria Belaval, Jenny Chanley, Jacqueline Chapin, Michael LaForge, Samantha Lalisian, Hannah Laufe, Paula Rascona, Robert Robinson, Andrew J. Stephens, Rachel Schultz, and James Sweetman, Jr. made major contributions to this report.

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