Reviving and Reimagining the Federal Data Strategy for Mission Success

ERIC EGAN | JUNE 2023

The Federal Data Strategy (FDS) suffers from a lack of leadership and fails to link its well-defined principles and practices to government-wide and agency-level missions. The Biden administration must revive and reimagine it in order to succeed in transforming the federal government into a 21st century organization.

KEY TAKEAWAYS

- While federal agencies initially pursued activities such as developing governance structures, inventorying data, and responding to the COVID-19 pandemic partly in response to the FDS, progress with the FDS has since stalled.

- OMB has not provided updates on the progress of the 2021 Action Plan—the mechanism that specifies which activities federal agencies need to complete in support of the FDS—and has not published the annual Action Plans since the 2021 plan.

- Agencies are not prioritizing activities from the FDS but rather focusing on their own agency-level data strategies that are more aligned with their individual business outcomes.

- The FDS does not clearly link its overarching mission to "fully leverage the value of federal data" with government-wide priorities, thereby limiting the strategy's impact to improve operations, service delivery, and customer experience.

- While federal agencies get advisory support from the Federal CDO Council, the governance body created specifically to help drive the FDS, OMB's Federal Data Policy Committee, has not engaged in any activity to advance the strategy.

CONTENTS

INTRODUCTION

Data is a powerful resource in the digital era. Organizations can use data to better understand their operational efficiency, improve the customer experience with their services, and monitor future challenges and opportunities. These benefits are particularly impactful for an entity as large as the U.S. federal government, with a budget in the trillions and a customer base in the hundreds of millions.[1] Furthermore, the federal government already collects and manages an inordinate amount of data. Unfortunately, the federal government has historically underutilized that data. As Federal Chief Information Officer (CIO) Clare Martorana put it two years ago, "Much of the data we have in government is siloed in systems, and is oftentimes not accessible, even across an agency, let alone across the entire federal enterprise."[2]

In response to this problem, the Trump administration conceptualized the Federal Data Strategy, or FDS, in 2018 as a 10-year plan to transform how the whole of the federal government leverages data as a strategic asset.[3] The Biden administration appeared similarly dedicated to

this vision, releasing 2021 Action Plans for agencies to continue the FDS even amid a global pandemic. Ultimately, the FDS represents an important, coordinated, and necessary effort across the federal government in defining a set of aspirational principles and practices for a 21st-century data organization.

The FDS is the first-ever government-wide data strategy in the United States. The Office of Management and Budget (OMB) developed the strategy collaboratively, with nearly two dozen agencies and more than 50 people making up the team that created it.[4] Additionally, the FDS contains a well-defined set of principles and practices around what a mature data organization should be able to do with data. Together with recent legislation—namely, the Foundations for Evidence-Based Policymaking, or Evidence, Act of 2018—the FDS reflects the federal government's desire to achieve openness, transparency, accountability, planning, forecasting, and general usefulness with the boundless amount of data at its disposal.

An organization that truly leverages data as a strategic asset isn't just making dashboards and throwing numbers around. Data-mature organizations are more capable of delivering on mission priorities. A fully executed FDS in which every agency has adopted and implemented its principles and practices in service of mission objectives would produce a federal government that is more efficient, collaborative, and customer focused. Imagine a Transportation Security Administration that uses analytics to staff airport checkpoints based on predicted surges in air travel, ensuring wait times never exceed 15 minutes; a Customs and Border Protection that uses data from law enforcement agencies across the country to dynamically respond to surges in fentanyl and other contraband smuggled into the country; and an Environmental Protection Agency that combines data from the public and private sectors on air quality, water quality, and other ecological indicators to rapidly assess and respond to environmental risks impacting American communities. With rapid advances in artificial intelligence (AI), federal agencies will soon have even more opportunities to leverage this emerging technology, but will be hamstrung from seizing this opportunity if agencies have not mastered data governance.

Unfortunately, the FDS as originally conceived is inherently flawed, as it does not clearly connect its aspirational principles and practices for a mature data organization with government-wide or agency-level mission outcomes such as these examples. In its current format, the FDS and its latest Action Plans are too generic and high level for agency use, with many chief data officers (CDOs) instead relying on their own enterprise-level strategies that better align and support agency mission outcomes. Furthermore, the FDS has stalled, as the Biden administration has not shared a 2022 or 2023 Action Plan and has still not provided guidance on open data and standards required to implement the Evidence Act.

Given that the federal government's fundamental purpose is to serve American citizens and residents—an effort that increasingly relies on digital services—effective use of data is not optional. While the FDS includes a comprehensive set of aspirational principles and practices for a mature data organization, these practices mean little if they are not integrated with government-wide and agency-level mission objectives and CDOs do not get enough guidance or support to affect change.

This report offers a breakdown of the FDS's content and structure, explores and reflects on the problems in its implementation, and provides the following recommendations to help the FDS get back on track:

- OMB should amend the FDS to clearly connect the strategy's principles and practices with both government-wide priorities and agency-level mission outcomes, including changing its approach to the annual Action Plans.

- OMB should establish a Federal CDO that will chair the Federal CDO Council and act as a critical executive in driving FDS implementation while providing support to agency CDOs.

- The Federal CDO Council should publish annual scorecards or progress trackers based on the annual Action Plans.

- OMB's Federal Data Policy Committee (FDPC) should become fully realized as an oversight and governance body for the FDS and commit to providing critical guidance for open data and standards as soon as possible.

- Congress should provide greater funding access to agency CDOs to support delivering FDS actions and legislative requirements as well as increasing workforce and data skills development.

OVERVIEW OF THE FEDERAL DATA STRATEGY

The FDS represents a collaborative effort across multiple federal agencies to develop a 10-year plan focused on improving how the federal government manages and uses data. OMB designed the strategy to support other data-related federal policies and legislation through a framework of foundational principles, aspirational practices, and annual Action Plans with the goal of executing the FDS by 2030.

Background

In March 2018, the Trump administration issued a new Cross-Agency Priority (CAP) Goal—a leadership target and method to advance certain presidential priority areas that require active collaboration across multiple federal agencies—via the President's Management Agenda (PMA), the executive roadmap for management priorities across agencies, within the PMA's overarching CAP "Data, Accountability, and Transparency."[5] The new CAP goal specified the development and implementation of a "comprehensive Federal Data Strategy."[6] In response, the OMB-led Data Strategy Development Team composed of 57 members across 23 federal agencies drafted the FDS, as well as the 2020 Action Plan that defined a set of actionable steps in Year 1 for agencies to complete to support the FDS's long-term vision.[7] The Data Strategy Development Team requested feedback from both federal employees and the public through requests for comments and forums.[8]

Figure 1: OMB's public engagement efforts for FDS development[9]

Public Engagement on the Federal Data Strategy

47	601	82
Events	**Public Comments**	**Speakers**

The June 2019 OMB Memorandum M-19-18, "Federal Data Strategy — A Framework for Consistency" formally shared the FDS mission statement and key components regarding how federal agencies should manage and use data by 2030. In December 2019, OMB published the first annual Action Plan for federal agencies to complete in the 2020 calendar year.

OMB designed the FDS to complement existing laws, mandates, and programs that aimed to improve how the federal government manages and uses data, including:

- Foundations for Evidence Based Policymaking Act, or Evidence Act, of 2018: Aims to improve federal agencies' evidence-based decision-making by increasing access to data and expanding its evaluation capacity.[10]

- Open, Public, Electronic, and Necessary Government Data Act, or OPEN Government Data Act, of 2018: Defined within Title II of the Evidence Act, requires federal agencies to maintain a comprehensive data inventory, designate a CDO, and publish their data online in a standardized, nonproprietary, machine-readable format.[11]

- Data.gov: Created by the Office of the Federal Chief Information Officer in 2009 to be the federal government's open data site that offers increased openness and accountability of the federal government.[12]

- Geospatial Data Act, or GDA, of 2018: Codifies the committees, processes, and tools supporting the National Spatial Data Infrastructure, the infrastructure for sharing geospatial data across federal, state, tribal, and local governments and the private sector.[13]

- Executive Order 13859, Maintaining American Leadership in Artificial Intelligence (February 11, 2019): The federal government's principles and strategies to strengthen how the United States uses AI to support scientific and technological discovery, national security, and economic competitiveness.[14]

- M-19-15, Improving Implementation of the Information Quality Act (April 24, 2019): Requires federal agencies to maximize "the quality, objectivity, utility, and integrity of information disseminated to the public."[15]

According to the FDS, annual Action Plans should also align with and complement the following ongoing federal programs, policies, and statutory requirements: Paperwork Reduction Act; E-Government Act of 2002; Privacy Act of 1974; Federal Information Security Management Act (FISMA) of 2002; Confidential Information Protection and Statistical Efficiency Act (CIPSEA) of 2002; Freedom of Information Act (FOIA); and Federal Records Act.[16]

Congress authorized the creation of a Federal CDO Council in the Evidence Act, and the FDS's 2020 Action Plan included launching the council as an OMB action. The Federal CDO Council adopted its charter in 2020 with a vision to "improve government mission achievement and increase the benefits to the Nation through improvement in the management, use, protection, dissemination, and generation of data in government decision-making and operations," as well as adhering to the essential goals supporting the implementation of the Evidence Act and delivery of the FDS.[17] As of March 2022, the Federal CDO Council membership includes more than 90 federal agencies and other representatives.[18] Over the past three years, the Federal CDO Council

has been the governance body most focused on driving the FDS, with six working groups designed to focus on FDS actions.[19]

FDS Content and Structure

Per the strategy's official website, the FDS "encompasses a 10-year vision for how the Federal Government will accelerate the use of data to deliver on mission, serve the public, and steward resources while protecting security, privacy, and confidentiality."[20] The strategy developed a framework to implement this vision based on a set of foundational principles that define a set of aspirational practices.[21] Agencies can achieve these practices through defined actions, which are developed annually via Action Plans to ensure the overall strategy progresses. Figure 2 from the FDS document reflects the strategy's overall framework.

Figure 2: Core FDS components[22]
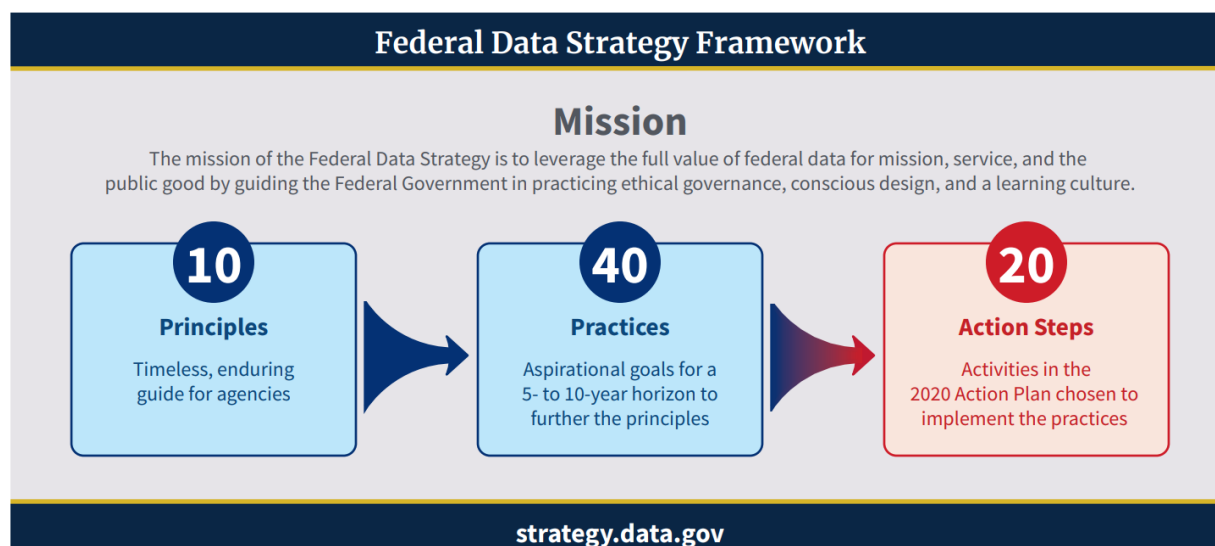
The FDS's 10 foundational "principles" or "motivational guidelines" are bucketed into three categories:

- Ethical Governance (3): Focuses on data privacy, public trust, and the responsible use of data.

- Conscious Design (4): Focuses on leveraging existing data, ensuring data quality, promoting interoperability, and incorporating user and stakeholder feedback.

- Learning Culture (3): Focuses on data skills training and knowledge sharing in the federal government, as well as accountability.

The 40 "practices" or "aspirational goals" further these principles while also informing agency "actions" and are separately categorized:

- Building a Culture that Values Data and Promotes Public Use (10): Focuses on data use, including how it's used and who uses it.

- Governing, Managing, and Protecting Data (16): Focuses on data management, including quality, privacy, and standards.

- Promoting Efficient and Appropriate Data Use (14): Focuses on communication and data access and use.

The OMB-led Data Strategy Development Team designed the principles and practices as fundamental, immutable components of the FDS, whereas the annual Action Plans are measurable activities to implement the FDS. These actions are assigned according to "Agency Actions" (actions that all agencies should complete), "Community of Practice Actions" (actions that a specific agency or interagency body should complete for a common topic that impacts all agencies), and "Shared Solution Actions" (actions that a specific agency or interagency body should complete to contribute to government-wide data services to benefit all agencies). Each action is in turn broken into sets of **milestones** an agency or interagency body must complete in order to execute the overarching action. Each milestone includes information on how progress is measured for that milestone, a target date, a reporting mechanism, and who is required (and who is encouraged) to complete that milestone.

OMB committed itself to developing Action Plans every year based on agency progress with the following year's actions, as well as the changing legal, regulatory, and technical landscape. As the first annual Action Plan of the FDS, the 2020 plan focused on data governance, planning, and infrastructure, as well as implementing components of the Evidence Act and other statutory requirements. The 2020 Action Plan also included activities around identifying data sets and inventories that support the federal government's response to the COVID-19 pandemic. The 2021 Action was effectively a continuation of the 2020 Action Plan, as only half of the prior year's actions were completed by the target dates. The 2021 Action Plan also confirmed the Biden administration's commitment to moving the strategy forward even if it did not expand on the strategy or incorporate the administration's immediate priorities or CAP goals.[23] Notably, OMB did not release a 2022 Action Plan and has not indicated that a 2023 Action Plan is forthcoming.

Finally, the 2021 Action Plan introduced an "incremental maturity ladder" to reflect how the FDS builds on its progress toward the 2030 target. Each phase is intended to reflect increasing levels of the federal government's maturity in data management and use. According to figure 3, agencies should be wrapping up the "Foundational Activities" phase in 2023 that focuses on governance, planning, and infrastructure, and transitioning to the next "Enterprise Activities" phase that develops government-wide data standards, as well as securing the funding to complete the remaining phases. OMB has also expressed an understanding that agencies may be at different levels of maturity throughout this timeline, but the FDS design (e.g., Action Plans) accommodates flexibility in how agencies advance along the ladder.

Figure 3: The FDS Incremental Maturity Ladder 2020–2030[24]
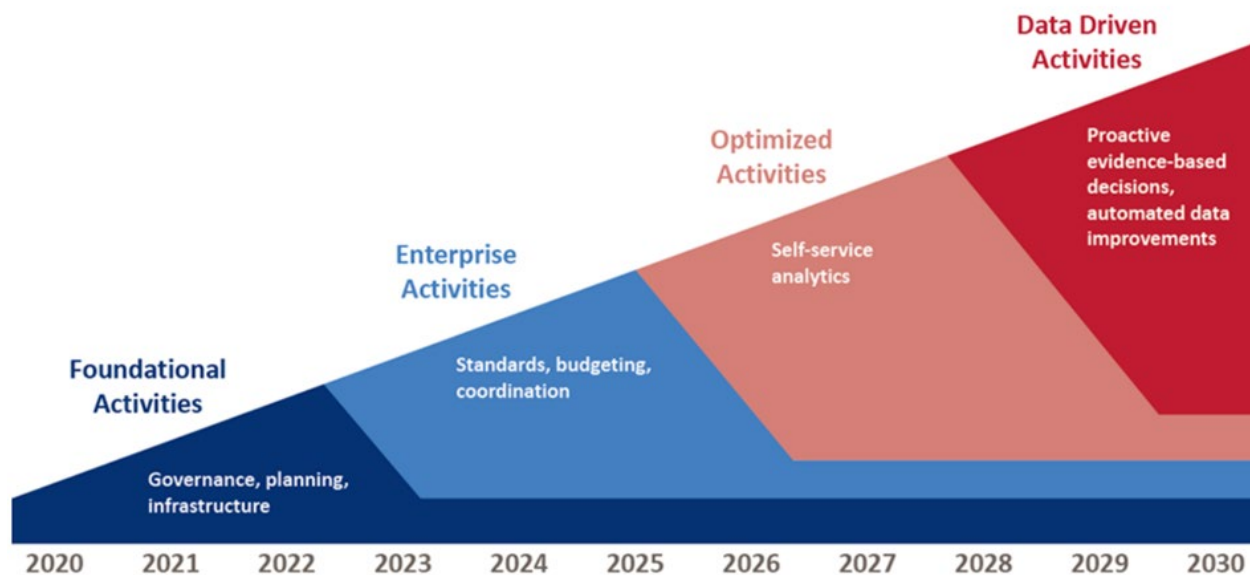
FDS in a Nutshell

Three core components make up the FDS's overall structure: Principles, Practices, and Annual Action Plans. At a high level, the principles and practices act as "pole stars" for how federal agencies should manage and use data by 2030, principally:

- Be able to provide secure data access to federal customers, including making data easier to find and use.

- Have the training and knowledge around all things data.

- Increase federal data sharing with state, local, and tribal governments.

- Implement data maturity models.

- Make greater use of data management and analytics tools.

An OMB-led team develops the Annual Action plans, which can incorporate new laws, mandates, and guidance as needed and include measurable actions and milestones that agencies complete to advance along the incremental maturity ladder. By 2030, the 40 practices should be implemented across all federal agencies.

ANALYSIS AND FINDINGS

While the FDS contains a strong set of principles and practices for a modern data organization, the overarching strategy does not do a good job of incorporating government-wide or agency-level mission goals. As such, the FDS Action Plans that are intended to implement the principles and practices are too high level and don't offer precise-enough guidance for agencies or cross-agency entities to incorporate into their own data-related activities. In fact, OMB guidance and governance around the FDS have generally been lacking, leaving agency CDOs struggling with direction and support in implementing the strategy.

Well-Defined Principles and Practices

The FDS represents an important, collaborative, and necessary effort across the federal government that includes a well-defined set of aspirational principles and best practices for what a mature data organization should be able to do with its data. The FDS includes efforts to:

- mature data infrastructure,
- implement governance structures,
- centralize assets and catalogs,
- set data standards,
- employ data-sharing tools and culture,
- increase data skills and literacy, and
- leverage analytics and AI.

Data-mature private sector organizations would adhere to many of the same principles and practices.

Importantly, the FDS represents the federal government's awareness that strong data management and use is essential for operating in the digital era, particularly for an organization that has access to as much data as the federal government. Furthermore, OMB developed the strategy inclusively and openly, bringing together participants from across several federal agencies and making the development process available for public contribution.

The FDS also has strengths in its implementation design. The concept of an iterative, annual Action Plan that can adjust to new laws, policies, and technologies rather than a "set in stone" strategic plan is a good one. Such a component creates a new mechanism for OMB, the Federal CDO Council, and agency CDOs to continue advancing data-related priorities year-over-year even after the federal government fully executes the FDS.

Figure 4: OMB's concept for adaptable FDS annual Action Plans[25]
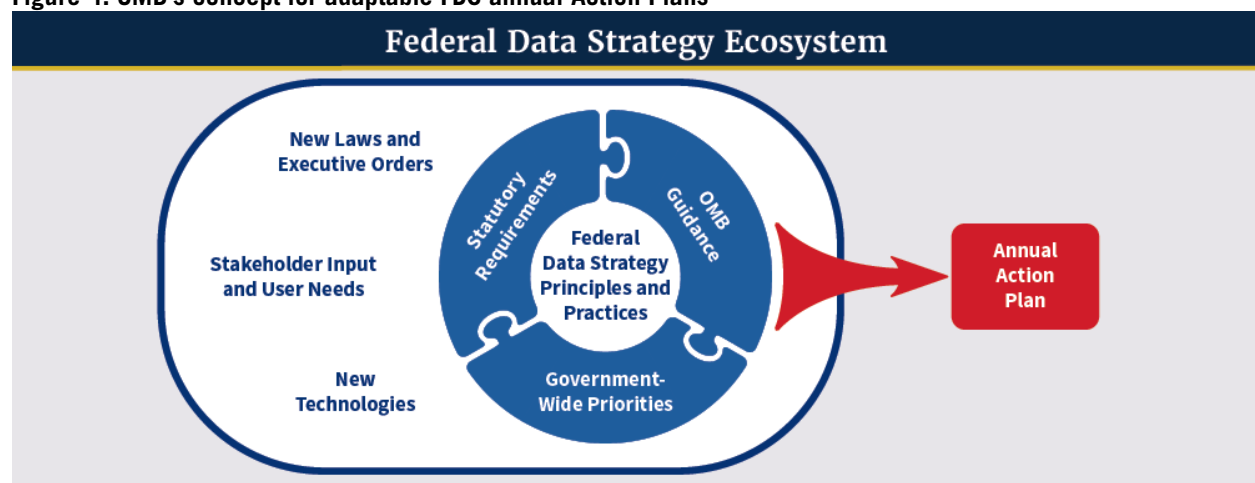
The FDS also contributed to early progress and wins by helping agencies implement data-related policies and laws. Agencies indexed their data assets and inventories on data.gov.[26] The General Services Administration (GSA) created a Data Skills Playbook and Data Ethics Framework.[27] The Federal CDO Council established a COVID-19 Coordination Working Group and published a guide.[28] Indeed, this initial momentum was particularly important in light of the COVID-19

pandemic, which required federal agencies to consider and share data in ways they had not previously. Because new governance structures and agency CDOs were in place, federal agencies were able to use data and analytics for COVID-19 tracking and reopening efforts.[29] As the State Department's acting CDO, Janice DeGarmo, put it, "The efforts of the COVID-19 working group led to sharing important data sets and creating data standards on issues such as community transmission that paved the way for risk indicators across the federal government."[30]

Missing Mission Priorities

The biggest problem with the FDS is that its well-defined set of aspirational principles and practices—and the action plans that aim to implement these principles and practices—do not clearly incorporate 1) the federal government's overarching priorities and 2) agency-level mission outcomes. The Biden administration's 2021 Action Plan was essentially a continuation of the Trump administration's 2020 Action Plan. Though the 2021 Action Plan included targeted efforts around AI and wildland fires data management, it didn't include many of the White House's other immediate priorities or CAP goals, and many of these priorities require a more mature use of data. For example, different types of information—from contact tracing and hospitalization rates to geographic and demographic data—were critical for government response to the COVID-19 pandemic. Similarly, addressing immigration issues requires understanding migration, mobility rates, and demand across multiple countries, as well as improving processing time.

Furthermore, high-level, one-size-fits-all annual Action Plans do not link to agencies' own mission outcomes. Indeed, one agency CDO, who asked that their name and agency not be published, stated that they didn't find the FDS particularly helpful or instructive as a document and shared that they're focused more on their own enterprise data strategies that allow them to integrate their own data priorities with their agency's ongoing mission priorities.[31] In a GovExec report focused on understanding the FDS, State Department CDO Dr. Matthew Graviss explained that the main focus of the FDS should be "solving business problems across the board and making sure that governance and data management are enablers for solving problems. At the end of the day, that's what we need to be focused on. Solving mission-oriented problems and management problems using data. That's really a cultural change that we need to work on."[32]

The FDS reads like a set of guidelines that could be applied to any organization rather than a strategy to leverage the power of data to specifically drive the federal government's mission outcomes. For example, one of the 40 practices refers to using a range of communication tools and techniques to convey insights from data to a broad set of audiences. While that may be good practice for an organization generally—from a higher education institution to a delivery company—the FDS doesn't take the extra step in what such a practice should look like for a federal agency. Which tools and techniques are most appropriate for federal agencies, and for which audiences? How can agencies prioritize data insights that are most important to their own missions? The FDS's mission statement is "to fully leverage the value of federal data for mission, service, and the public good," and while OMB clearly understands that there is great value in data, the FDS doesn't do enough to connect its considered data principles and practices to known mission priorities.

Too Generic and High Level

The core mechanism for implementing the FDS is the annual Action Plan, but in its current format, the actions and milestones are too generic and high level. As the FDS points out, agencies are at different stages in their data maturity journey, and every agency has unique mission outcomes and different opportunities for how to leverage data to achieve these mission outcomes. The way the actions and milestones have been worded so far means agencies can interpret and implement them in a variety of ways. For example, Action 2 in the 2021 Action Plan is "Mature Data Governance" and includes creating "a customized data-governance plan that demonstrates [agencies'] progress over time in each of the FDS Practices."[33] Without more specific guidance and cross-agency collaboration, agencies may be accomplishing this step in disparate and ineffective ways. As one CDO put it in a 2022 survey of agency CDOs, "Many federal bureaus or agencies are spending countless hours and sizable amounts of funding doing the same things [in] dozens of different ways."[34]

This lack of clear, tactical guidance on how to complete actions is particularly problematic given that agency CDOs don't have great clarity on their roles and responsibilities and many actions require explicit guidance from OMB—namely the guidance for implementing the Evidence Act. OMB designed FDS implementation through the Action Plans, but according to the most recent update on FDS progress from OMB, no agency completed all six actions from the 2020 plan.[35] Additionally, a survey from the Data Foundation finds that no agency reported completing all the 2021 action items.[36] These findings don't necessarily mean that no progress is being made, of course, but they suggest that agencies are struggling with the Action Plans, particularly as 42 percent reported completing no items from the 2021 Action Plan.[37] This issue combined with some of the other findings in this report put the strategy's timely implementation at risk.

Figure 5: OMB hasn't provided FDS guidance in nearly two years.[38]

🇺🇸 An official website of the United States government Here's how you know ⌄

Federal Data Strategy
Leveraging Data as a Strategic Asset

Home   About ⌄   Action Plan ⌄   Action Progress ⌄   Resources   News

2021 Action Plan Progress

The Federal Data Strategy provides a common set of data principles and best practices. The 2021 Action Plan, released in October 2021, identifies milestones that are essential for establishing processes, building capacity, and aligning existing efforts. As milestones are completed, information will be uploaded to this page. Once this page is fully operational, you will be able to check agency activity on every action.

This page was last updated on October 22, 2021.

Collecting Progress Reports

Progress reports are currently being collected from federal agencies.

Sign up for our newsletter to get updates!

Lack of OMB Leadership

OMB has stopped issuing guidance for the FDS and related legislation, which directly hinders the strategy's implementation. OMB has not provided an annual Action Plan since the 2021 Action Plan in October 2021, nor shared whether the agency will still be releasing a delayed 2022 Action Plan or a 2023 Action Plan. The FDS states that "fully implementing the 40 practices, described in the strategy will require a sustained, iterative, and systematic effort over a ten-year period," with OMB's FDS memorandum subtitled "A Framework for Consistency."[39] Without the "sustained," "iterative," and consistent mechanism of the annual Action Plans driving the FDS, implementation will stall completely, if it hasn't already.

Additionally, the FDS is intended to complement the implementation of the Evidence Act and other laws, policies, and directives related to maturing how the federal government leverages data. However, OMB has still not shared any guidance regarding open data access and management required by the OPEN Government Data Act (Title II of the Evidence Act) or government-wide data standards.[40] Without such guidance, agencies cannot complete certain actions, such as "Publish Agency Open Data Plans," and the FDS cannot progress according to its own incremental maturity ladder. OMB launched its own FDPC to "help agencies deliver on mission and effectively steward taxpayer dollars by enhancing OMB's coordination of Federal data policy, governance, and resource considerations."[41] The FDPC is supposed to be OMB's mechanism to coordinate the federal government's data policy development and implementation and is responsible for "governmentwide management, governance, and resource priorities for data management standardization and use."[42] Additionally, the FDPC is supposed to coordinate the activities of other governance bodies and FDS stakeholders, including the Federal CDO Council. OMB has not published any information about the FDPC's activities since its creation.

Unsurprisingly, agency CDOs are seeking clarity on responsibilities and expectations regarding the data strategy.[43] They believe that the lack of OMB guidance is inhibiting the implementation of both the FDS and the Evidence Act.[44] This issue is another reason agency CDOs have started focusing on their own enterprise data strategies, with the Federal CDO Council offering broader support in this capacity rather than specifically focusing on the (delayed or nonexistent) FDS Action Plans. For example, the CDO Council met earlier this year on February 10, 2023, and the FDS was not included in the agenda.[45]

Resource Constraints for CDOs

CDOs don't have the resources to fully advance their own priorities, let alone the FDS. According to the 2022 Data Foundation survey, less than 20 percent of agency CDOs responded that they have "most or all of the resources needed" for full implementation of the strategy.[46] Resources in this circumstance include funding and workforce, but also greater clarity on their role and responsibilities and where CDOs sit in relation to other agency executives. In the Federal CDO Council's 2022 survey, agency CDOs stated that lack of direct funding" and "limited staff skills or workforce hiring challenges" were some of the greatest obstacles to using data to support their agency's mission.[47] Agency CDOs may report directly to the agency director or administrator, COO, or CIO, complicating how data-related priorities are managed within a given agency. Without a seat at the table in how their agencies request and use appropriations, CDOs must consider low- or no-cost approaches for their activities and staffing. Furthermore, many CDOs wear multiple hats, particularly in smaller agencies.

These findings suggest that with missing guidance from OMB, imprecise and high-level Action Plans, constraints on their budgets and staff, and a general lack of clarity in what their job entails, CDOs are left trying to figure out how to comply with the FDS while moving their own agency-specific priorities forward. While the Federal CDO Council appears to be a valuable resource, CDOs across the federal government can do things very differently from one another, which can be problematic in executing a government-wide data strategy.

RECOMMENDATIONS

FDS implementation is stalling, but there are a few actions and improvements that stakeholders, such as OMB, the Federal CDO Council, and Congress, can take to leverage the strategy's strengths while addressing its weaknesses and still deliver by the 2030 goal.

Align Strategic Principles and Practices to Missions

OMB should amend the FDS to clearly connect the strategy's principles and practices with both government-wide priorities and agency-level mission outcomes, including changing its approach to the annual Action Plans.

To successfully implement the FDS by 2030, OMB should leverage the strategy's strengths and address its weaknesses. If OMB amended the FDS's comprehensive set of principles and practices with additional context that incorporates how the strategy improves government-wide operational priorities and mission outcomes, agencies will be able to better prioritize annual Action Plan items that serve these outcomes. While OMB during the Trump administration developed the initial FDS, the Biden administration should amend both the overarching strategy and the annual Action Plans to better incorporate the current administration's operational and mission priorities.

For example, one of the Biden administration's priorities for federal agencies focuses on streamlining service delivery through a "life experiences" model, a way to improve how federal customers interact with agencies, that overcomes traditional federal barriers and silos. The "recovering from a disaster" life experience requires data sharing across multiple agencies and could include medical and recovery cost calculations. The FDS should clarify which FDS practices drive improving this life experience and offer additional guidance via the annual Action Plans regarding how impacted agencies (e.g., FEMA and HHS) should prioritize their actions for the year. Similarly, the PMA CAP goal of "Delivering Excellent, Equitable, and Secure Federal Services and Customer Experience" requires agencies to capture better customer experience data. The FDS should highlight which components, shared solutions, and interagency activities help achieve this result across the 10-year strategy. Lastly, while the 2021 Action Plan incorporates more shared data solutions, this action plan should detail how they will be used to advance broader mission outcomes.

OMB should also change its approach to the annual Action Plans to involve more codevelopment with agencies, particularly CFO Act agencies and high-impact service providers (agencies that have large customer bases or provide vital services). OMB can release an "initial" annual Action Plan that incorporates new guidance or changes in the political, regulatory, or technical landscape, and agencies can "respond" to the initial Action Plan with a "final" annual Action Plan that demonstrates how the agency is completing FDS activities in a way that contributes to both government-wide and agency-level mission outcomes. These final Action Plans should be

made public but shouldn't require official approval from OMB (to avoid additional red tape and delays). Rather, the plans should offer transparency into agency-level activities to advance the FDS and allow governance bodies—namely OMB's FDPC and the Federal CDO Council—to support agencies' plans.

OMB Memo M-19-23 requires agencies to establish Data Governance Bodies (DGBs), which are supposed to set and enforce priorities for managing an agency's data in support of its mission, as part of Evidence Act implementation.[48] Though agencies have underutilized DGBs thus far, they include the required agency-level stakeholders (chaired by the CDO, with membership from "relevant senior-level staff in agency business units, data functions, and financial management") for completing the "final" annual Action Plan.[49] Where appropriate, OMB should also include technical guidance on how to complete certain actions if such guidance contributes to agencies moving together in the same direction and supports key FDS practices (e.g., federal data maturity model, data sharing, automation, etc.).

This new approach to developing the annual Action Plans would allow agencies at different maturity levels to customize the plans according to where they are while still moving along the incremental maturity ladder. For example, some agencies may already have an active data skills recruitment process, whereas others might need to formulate a plan given limited resources. Such an approach would also be particularly effective for delivering an overarching, government-wide strategy in a federated environment.

Establish a Federal CDO

OMB should establish a Federal CDO that will chair the Federal CDO Council and act as a critical executive in driving FDS implementation while providing support to agency CDOs.
With the FDS stalling, OMB not providing guidance, and agency CDOs demanding greater clarity around their roles and responsibilities, there's a clear leadership problem in this space. With a Federal CDO in place, agencies will have a leader and representative in OMB who will speak on their behalf and share their concerns, such as the lack of formal guidance from OMB, funding and staffing constraints, and a lack of clarity in their role and responsibilities. Many CDOs have been in the role for less than a year and a majority of those surveyed would like to see such a Federal CDO position created.[50] Furthermore, a Federal CDO and team can act as a bridge between agency-level and government-wide mission outcomes. Creating this office also adds legitimacy to the CDO role at the agency level and can ensure that agency CDOs have greater authority and decision-making power. Indeed, a 2023 MITRE Corp. survey of 22 agency CDOs reports that CDOs require greater empowerment to deliver on their enterprise data strategies.[51]

Publish Scorecards

The Federal CDO Council should publish annual scorecards or progress trackers based on the annual Action Plans.
With a Federal CDO in place and chairing the Federal CDO Council, as well as agency-tailored annual Action Plans publicly available, there will be new opportunities to share progress, wins, and lessons learned regarding the FDS. Not only would a scorecard or progress tracker offer Congress and the public insight into FDS-related activities, but it would also provide an accountability mechanism. Such a mechanism is particularly important, as most CDOs report that their offices don't have formal key performance indicators or performance measures.[52] This

scorecard or progress tracker could also include a visual diagram of how agency CDO activities contribute to broader government-wide priorities.

Provide Real Oversight and Guidance

OMB's FDPC should become fully realized as an oversight and governance body for the FDS and commit to providing critical guidance for open data and standards as soon as possible.

Right now, the FDPC is a paper entity that engages in no real activities. Given OMB's role in coordinating the implementation of the FDS—and ongoing government-wide oversight of data policy thereafter—this is a potentially critical governance body regarding how the federal government manages and uses data and therefore needs to be fully realized and operationalized. FDS tasks the FDPC with several vital responsibilities in supporting the strategy, and its current defunct state puts the timely implementation of the FDS at risk.

The FDPC should drive the development of the "initial" annual Action Plans provided to agencies, as these plans will need to recalibrate frequently according to the changing political, regulatory, and technical landscape. This effort should also involve working closely with the Federal CDO Council to understand and incorporate agencies' progress with the prior year's Action Plan and how agencies can make better use of government-wide resources and shared solutions. For example, the CHIPS and Science Act of 2022 authorized the creation of a National Secure Data Service (NSDS) that would set standards for data sharing and access across the federal government.[53] This initiative is a perfect example of how new legislation and technical solutions can impact the FDS and should be considered and incorporated into an annual Action Plan. But there was no 2022 Action Plan.

Agency CDOs have made it known that they need clearer, better guidance from OMB, so it's vital that the FDPC be up and running as soon as possible. Immediate priorities for the FDPC include releasing guidance on open data access and management as required in the OPEN Government Data Act, as well as defining government-wide data standards. In coordination with the Federal CDO Council, the FDPC should also encourage legislative changes that reduce barriers to federal data collection and sharing. Finally, the FDPC should consider the recommendations from Federal CDO Council's Data Sharing Working Group and incorporate them into the FDS where appropriate.[54]

Boost Funding

Congress should provide greater funding access to agency CDOs to support delivering FDS actions and legislative requirements, as well as increasing workforce and data skills development.

Agency CDOs are often boxed out of budget discussions and have expressed frustration in accessing funding for their various and increasingly vital priorities. Congress should authorize CDOs to access agency-level discretionary funding, as well as provide direct funding for certain initiatives as part of annual budget requests. The latter will require agency CDOs playing a greater role in agency budget deliberations and ideally allow them to coordinate with other executives on which initiatives drive agency-level mission outcomes.

CONCLUSION

Digital transformation in government is not the same as modernizing technology in government. It's about transforming how government functions in a digital age, and data is a critical component in achieving that goal. The FDS reflects recent administrations' beliefs that the

federal government needs to improve how it manages and uses data. But its well-defined principles and practices are only one piece of a comprehensive data strategy. The principles and practices are only as good as their ability to contribute to mission outcomes and how government serves customers and constituents. The FDS is an important initiative, but it requires improvements and greater commitment from its stakeholders if it's to truly transform how the federal government operates.

About the Author

Eric Egan is a policy fellow for digital government at the Information Technology and Innovation Foundation. He researches digital transformation in government and how technology can help the public sector achieve mission objectives in innovative and effective ways.

About ITIF

The Information Technology and Innovation Foundation (ITIF) is an independent, nonprofit, nonpartisan research and educational institute focusing on the intersection of technological innovation and public policy. Recognized by its peers in the think tank community as the global center of excellence for science and technology policy, ITIF's mission is to formulate and promote policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress.

For more information, visit us at www.itif.org.

ENDNOTES

1. "How much has the U.S. government spent this year?" U.S. Department of Treasury, accessed May 16, 2023, https://fiscaldata.treasury.gov/americas-finance-guide/federal-spending/; Eric Egan, "With Customer Satisfaction at a New Low, Federal Agencies Still Fail to Measure It Well or Provide Enough Digital Services" (ITIF, October 2022), 3, https://itif.org/publications/2022/10/24/federal-hisp-digital-customer-experience/.

2. Phil Goldstein, "What Is a Chief Data Officer and How Can the Role Help Agencies?" *FedTech*, June, 28, 2021, https://fedtechmagazine.com/article/2021/06/what-chief-data-officer-and-how-can-role-help-agencies-perfcon.

3. "Leveraging Data as a Strategic Asset," U.S. Office of Management and Budget's CAP Goal Overview, accessed November 7, 2022, https://trumpadministration.archives.performance.gov/CAP/leveragingdata/.

4. "Background," U.S. Federal Data Strategy official website, accessed November 7, 2022, https://strategy.data.gov/background/.

5. "Performance Framework Cross-Agency Priority Goals," Office of Management and Budget, accessed November 18, 2022, https://trumpadministration.archives.performance.gov/about/CAP_about.html; "Data, Accountability, and Transparency: Creating a Data Strategy and Infrastructure for the Future," U.S. Federal Data Strategy official website, accessed November 18, 2022, https://strategy.data.gov/action-plan/creating-a-strategy/.

6. "Background," U.S. Federal Data Strategy official website.

7. "The Federal Data Strategy Development Team," U.S. Federal Data Strategy official website, accessed November 21, 2022, https://strategy.data.gov/team/; Office of Management and Budget, Executive Office of the President, "Federal Data Strategy - A Framework for Consistency," OMB Memorandum M-19-18, (Washington DC: OMB, June 4, 2019), https://www.whitehouse.gov/wp-content/uploads/2019/06/M-19-18.pdf.

8. "Background," U.S. Federal Data Strategy official website.

9. Office of Management and Budget, "Federal Data Strategy 2020 Action Plan" (Washington DC: OMB, 2019), 3, https://strategy.data.gov/assets/docs/2020-federal-data-strategy-action-plan.pdf.

10. U.S. Congress, House, *Foundations for Evidence-Based Policymaking Act (Evidence Act) of 2018*, H.R.4174, 115th Cong., introduced in House October 31, 2017, https://www.congress.gov/bill/115th-congress/house-bill/4174/text.

11. U.S. Congress, House, *Open, Public, Electronic, and Necessary Government Data Act (OPEN Data Act) of 2018*, H.R.1770, 115th Cong., introduced in House March 29, 2017, https://www.congress.gov/bill/115th-congress/house-bill/1770.

12. "Open Government," General Services Administration, accessed March 6, 2023, https://data.gov/open-gov/.

13. "Advancement of the National Spatial Data Infrastructure," Federal Geographic Data Committee, accessed March 6, 2023, https://www.fgdc.gov/nsdi/nsdi.html.

14. President Donald Trump, "Executive Order on Maintaining American Leadership in Artificial Intelligence," The White House, February 14, 2019, https://www.federalregister.gov/documents/2019/02/14/2019-02544/maintaining-american-leadership-in-artificial-intelligence.

15. Office of Management and Budget, Executive Office of the President, "Improving Implementation of the Information Quality Act," OMB Memorandum M-19-15, (Washington DC: OMB, April 24, 2019), 1, https://www.cdo.gov/assets/documents/OMB-Improving-Implementation-of-Info-Quality-Act-M-19-15.pdf

16. Office of Management and Budget, "Federal Data Strategy 2020 Action Plan," 15.

17. "About US," Federal CDO Council, accessed November 29, 2022, https://www.cdo.gov/about-us/.

18. "Council Members," Federal CDO Council, accessed November 29, 2022, https://www.cdo.gov/council-members/.

19. "Federal Data Strategy," Federal CDO Council, accessed November 29, 2022, https://www.cdo.gov/federal-data-strategy/.

20. "Federal Data Strategy — Data, accountability, and transparency: creating a data strategy and infrastructure for the future," Federal Data Strategy official website, accessed December 1, 2022, https://strategy.data.gov/.

21. Office of Management and Budget, "Federal Data Strategy 2020 Action Plan," 15.

22. Ibid.

23. "The Biden-Harris Administration Immediate Priorities," The White House, accessed December 1, 2022, https://www.whitehouse.gov/priorities/; "The President's Management Agenda," Office of Management and Budget, accessed December 1, 2022, https://www.performance.gov/pma/.

24. Office of Management and Budget, "Federal Data Strategy 2021 Action Plan" (Washington DC: OMB, 2021), 2, https://strategy.data.gov/assets/docs/2021-Federal-Data-Strategy-Action-Plan.pdf.

25. Office of Management and Budget, "Federal Data Strategy 2020 Action Plan," 16.

26. Dave Nyczepir, "Federal Data Strategy finally gets Year 2 Action Plan," *FedScoop*, October 27, 2021, https://fedscoop.com/federal-data-strategy-2021-action-plan/.

27. "Success Stories," Federal CDO Council, accessed December 5, 2022, https://www.cdo.gov/success-stories/.

28. Ibid.

29. Ibid.

30. Randy Bean, "How The U.S. Federal Government Is Mobilizing To Enable Data-Driven Decision Making," *Forbes*, June 1, 2022, https://www.forbes.com/sites/randybean/2022/06/01/how-the-us-federal-government-is-mobilizing-to-enable-data-driven-decision-making/amp/.

31. Interview with anonymous agency chief data officer, March 22, 2023.

32. Government Business Council, "Understanding the Federal Data Strategy: Embracing the future of federal data management" (Government Business Council, October 2021), 7, https://www.govexec.com/media/gbc_-_expert_dialogue_-_understanding_the_federal_data_strategy.pdf.

33. Office of Management and Budget, "Federal Data Strategy 2021 Action Plan," 8.

34. Natalie Alms, "What do CDOs really want? Guidance from the Office of Management and Budget," *FCW*, November 3, 2022, https://fcw.com/digital-government/2022/11/what-do-cdos-really-want-guidance-office-management-and-budget/379287/.

35. "2020 Action Plan Progress," U.S. Federal Data Strategy official website, accessed January 9, 2023, https://strategy.data.gov/2020/progress/.

36. Lori Gonzalez, Tracy Jones, and Jeff Lawton, "The Growth and Challenges of the Chief Data Officer (CDO) Role and Agencies' Data Maturity" (Data Foundation, November 2022), 16, https://static1.squarespace.com/static/56534df0e4b0c2babdb6644d/t/636035381229536ab82e55e1/1667249471112/2022+CDO+Report+-+Final.pdf.

37. Ibid, 17.

38. "2021 Action Plan Progress," U.S. Federal Data Strategy official website, accessed April 28, 2023, https://strategy.data.gov/2021/progress/.

39. Office of Management and Budget, "Federal Data Strategy 2020 Action Plan," 15.

40. Natalie Alms, "What do CDOs really want? Guidance from the Office of Management and Budget."

41. Office of Management and Budget, "Federal Data Strategy 2020 Action Plan," 36.

42. Ibid.

43. Phil Goldstein, "Federal CDOs Seek More Guidance on Government's Data Strategy," *FedTech*, October 13, 2021, https://fedtechmagazine.com/article/2021/10/federal-cdos-seek-more-guidance-governments-data-strategy.

44. Natalie Alms, "What do CDOs really want? Guidance from the Office of Management and Budget."

45. Federal CDO Council Public Meeting Agenda, "The Evolving Role and Impact of Federal CDOs," February 10, 2023, https://www.cdo.gov/assets/documents/CDO%20Council%202023%20Public%20Meeting%20agenda.pdf.

46. Lori Gonzalez, Tracy Jones, and Jeff Lawton, "The Growth and Challenges of the Chief Data Officer (CDO) Role and Agencies' Data Maturity," 22.

47. Federal CDO Council, "Chief Data Officer Council 2022 Survey and Results," (OMB, July 2022), 63, https://www.cdo.gov/assets/documents/CDO-Survey-2022-Analysis.pdf.

48. Office of Management and Budget, Executive Office of the President, "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 DC: OMB, July 10, 2019), https://www.whitehouse.gov/wp-content/uploads/2019/07/m-19-23.pdf.

49. Office of Management and Budget, "Federal Data Strategy 2020 Action Plan," 24.

50. Federal CDO Council, "Chief Data Officer Council 2022 Survey and Results," 3; Lori Gonzalez, Tracy Jones, and Jeff Lawton, "The Growth and Challenges of the Chief Data Officer (CDO) Role and Agencies' Data Maturity," 5.

51. Nick Pesce and Andrea Heithoff, "Federal Chief Data Office Survey Analysis: Traits of Model Programs and Common Areas of Strength," (MITRE Corporation's Intelligence After Next series, Number 16, February 21, 2023), https://www.mitre.org/sites/default/files/2023-03/PR-23-0110-traits-model-programs-common-areas-strengths.pdf.

52. Federal CDO Council, "Chief Data Officer Council 2022 Survey and Results," 59.

53. U.S. Congress, House, *Chips and Science Act of 2022*, H.R.4346, 117th Cong., introduced in House July 1, 2021, https://www.congress.gov/bill/117th-congress/house-bill/4346.

54. Federal CDO Council Data Sharing Working Group, "Findings & Recommendations," (OMB: 2022), https://resources.data.gov/assets/documents/2021_DSWG_Recommendations_and_Findings_508.pdf.