



# Setting the Standard: Developing the Framework for DATA Act Implementation

**Collaboration & Transformation Shared Interest Group  
Financial Management Committee**

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## **SYNOPSIS**

The upcoming requirement to publish federal spending data mandated by the recently enacted Digital Accountability and Transparency Act (DATA Act), creates an imperative for the Department of the Treasury (Treasury) and the Office of Management and Budget (OMB) to begin working with federal agencies, private-sector vendors and data consumers, and other stakeholders on building a DATA Act community and beginning a conversation about the implementation strategy. This ACT-IAC briefing acknowledges key strategic questions raised by Treasury and OMB to date, and outlines initial measures to address them and potential avenues of discussion and inquiry.



## **American Council for Technology-Industry Advisory Council (ACT-IAC)**

The American Council for Technology (ACT) is a non-profit educational organization established in 1979 to improve government through the efficient and innovative application of information technology. In 1989 ACT established the Industry Advisory Council (IAC) to bring industry and government executives together to collaborate on IT issues of interest to the Government.

ACT-IAC is a unique, public-private partnership dedicated to helping Government use technology to serve the public. The purposes of the organization are to communicate, educate, inform, and collaborate. ACT-IAC also works to promote the profession of public IT management. ACT-IAC offers a wide range of programs to accomplish these purposes.

ACT-IAC welcomes the participation of all public and private organizations committed to improving the delivery of public services through the effective and efficient use of IT. For membership and other information, visit the ACT-IAC website at [www.actiac.org](http://www.actiac.org).

### **Collaboration & Transformation Shared Interest Group**

The Collaboration & Transformation Shared Interest Group (C&T SIG) focuses on the business/people issues related to government transformational and collaboration initiatives. These areas, when performed well, make programs more successful, enabling technical solutions to be more easily and more effectively implemented. Through the primary focus area of Open Data within the C&T SIG, the Financial Management, DATA Act Transparency in Federal Financials subcommittee was established to work in collaboration with Treasury and OMB in an ACT-IAC project to follow the progress of the law from the pilot phase through practical/production implementation, providing useful information for industry and government managers to consider as they assess their readiness and develop their strategies to meet the new requirements.

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## Executive Summary

The Digital Accountability and Transparency Act ([DATA Act](#)) increases transparency and accountability in federal financial management by requiring federal agencies to publish the wide variety of government reports related to financial management, procurement, and assistance in a standardized, searchable, and downloadable format. The Act charges the Department of the Treasury (Treasury) and the Office of Management and Budget (OMB) with overseeing the implementation of the DATA Act. In response, Treasury and OMB have begun working with federal agencies, private-sector vendors, data consumers, and other stakeholders to build a DATA Act community and open dialog about the implementation strategy. This briefing acknowledges strategic questions raised by Treasury, OMB, and the broader community, and offers potential avenues for inquiry, discussion, and discovery.

## The DATA Act: Changing the Federal Transparency Game

The DATA Act may constitute the most significant shift toward openness in government since the passage of the Freedom of Information Act (FOIA) in 1966. The new measure, enacted on May 9, 2014, defines a federal government-wide mandate for providing standardized, electronic spending data to the public. The DATA Act reinforces transparency in government's operations by bolstering legislation affecting information, transparency, and financial data enacted over the past 50 years<sup>1</sup> and building on existing capabilities to advance the cause of open data and open government.

ACT-IAC has been active in promoting and supporting the Open Data movement since its origins. In 2014, the ACT-IAC Collaboration & Transformation (C&T) Shared Interest Group (SIG) Financial Management Committee, in conjunction with OMB and Treasury, began a project to focus on the implementation of the DATA Act. This project is actively monitoring progress on the development of standards and guidance, and will continue to follow progress on the pilot phase through implementation, providing useful information to help industry and government managers assess their readiness and develop their strategies for meeting the new requirements.

The project's first phase included four DATA Act Panels, hosted by ACT-IAC over the summer of 2014, with senior executive speakers from throughout the federal government, including the Department of the Treasury, the Department of Health & Human Services (HHS), the Department of Homeland Security (DHS), the Department of Agriculture, and the General Services Administration. Similar panel sessions will continue throughout the law's implementation, as new milestones are met, and may cover such topics as pilot agency case studies or future releases of standards and guidance.

Clear and open communication will be paramount in supporting the iterative implementation approach of the DATA Act's provisions. To that end, ACT-IAC will continue the partnership to facilitate dialog between industry service providers and the government project officials responsible for implementing the DATA Act's requirements. The next phase of the project

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<sup>1</sup>e.g., Freedom of Information Act, Chief Financial Officers' Act, the E-Government Act, Federal Funding Accountability and Transparency Act (FFATA), Recovery Act (ARRA).

calls for developing a series of briefs that may be incorporated into a comprehensive ACT-IAC white paper on recommendations for helping the government implement improvements. These briefs will be the start of ongoing collaboration between government and industry to better plan for, execute, and assess the progress of DATA Act implementation.

## **Opening the Door to Dialog**

The DATA Act ushers in a new era of open data, offering revolutionary potential for additional transparency, timely and actionable insights, and improved decision-making for the federal government. Defining the underlying data elements and implementing the technological infrastructure necessary to support their collection and reporting are just the first in a series of critical steps needed to realize the DATA Act's vision. But success will also depend on fundamental changes in how federal agencies operate and transact, view and use data, and develop and execute programs to achieve their missions. Those changes will evolve as people discover and grasp the potential of the valuable information made available and useful by the DATA Act and synergistic open data measures.

Since the Act's enactment, Treasury and OMB have been seeking and facilitating conversations on such high-level strategic topics and questions as:

- What are specific questions the government should be asking to solicit the most informative feedback and responses?
- What are the points of concern?
- What is the best way to organize the conversation?
- What are the right questions to ask about data standards to ensure clarity?
- How do we get to the underlying issues, concerns, questions and recommendations?
- What are the initial questions from industry?

## **What are specific questions the government should be asking to solicit the most informative feedback and responses?**

Treasury and OMB have the opportunity to build a DATA Act community that includes federal agencies, private sector entities, and trade organizations as potential resources and partners in the implementation dialogue. DATA Act implementation planning will derive the greatest benefit from an open, expansive approach and broad participation in the conversation. A wide array of stakeholders stands ready to contribute.

While the open data initiative remains at its beginning stages within many federal government entities, there are other public-sector agencies, industry professionals, and private-sector organizations that have attained some degree of success in comparable efforts. These include:

- The Recovery Accountability and Transparency Board (RATB), which was originally mandated to promote the integrity and effectiveness of American Recovery and Reinvestment Act (ARRA) funds. RATB published [Recovery.gov](http://Recovery.gov), a pioneering effort to disseminate detailed spending data related to ARRA projects.

- Treasury's Office of Financial Research and the Commodity Futures Trading Commission, which in conjunction with international regulators and private-sector trade groups, has made substantial progress in moving forward the legal entity identifier (LEI) code for corporate entities mandated by the Dodd-Frank Act.
- DHS, whose data efforts to date have included:
  - The Accounting Classification Structure, which was a major milestone in standardizing financial data across the agency and enables standardized internal and external financial reporting and business analysis, and
  - The National Information Exchange Model (NIEM), an open, cross-platform data dictionary of terms, definitions and formats developed with the input of a broad-based user community of federal, state, local, and tribal agencies.

By inviting representatives of these projects into the DATA Act conversation, everyone involved in the implementation effort can benefit from the hard-earned experience and insights of these pioneers.

As the DATA Act community strives to broaden the dialogue even further, these questions are likely to emerge:

- Who are affected stakeholders that the federal government should encourage to join the conversation? These naturally include federal agencies, private sector vendors supporting them, trade groups, and prospective consumers of DATA Act-compliant information. Should other parties be included as well?
- What parties within federal agencies should Treasury and OMB encourage to engage in conversation on DATA Act implementation?
- What lessons have other groups and efforts learned in the course of comparable efforts that will be helpful in DATA Act implementation?
- What procedures and formats (e.g., roundtables and conferences) will most usefully encourage involvement and contribution to the larger dialog from all DATA Act stakeholders?
- What mechanisms and approaches can optimize the availability of innovations and best practices in the implementation of the DATA Act?
- What are the most effective ways to promulgate new or changed data standards clearly and quickly to all involved?
- What is the impact related to the quality of each individual data element?
- What challenges arise from reporting individual elements in a new way?
- What could the federal government do to improve the ease of reporting?

## **What are the points of concern?**

An implementation effort as complex and comprehensive as that of the DATA Act will naturally create many questions from the community of affected stakeholders. One area of concern is the current timeline required by the DATA Act. To meet the timelines mandated by Congress and minimize the potential for error, Treasury and OMB can encourage federal agencies to begin their implementation planning efforts promptly and flush out their own

questions as soon as possible. Moreover, everyone involved in the implementation effort can set the right example by making their own DATA Act implementation process as transparent as possible.

To mitigate this concern, the DATA Act oversight team can encourage dialog in the near term around a number of essential early-stage implementation steps and assist federal agencies with their DATA Act preparation, planning, and analysis efforts. The implementation effort will require establishment of an open and flexible, yet rigorous data governance process, including conversations with business owners and other stakeholders. Clearly identified principles and priorities early in the process will minimize the potential for confusion and error later on. In this light, key questions to ask include:

- How do business owners involved in the DATA Act implementation envision their roles and responsibilities?
- What actions would optimize data quality and accuracy now, during whatever transitions are needed for DATA Act implementation, and in the long-term steady state?
- With mapping and data exchanges that enable the extraction and transmission of open data, what steps are possible to ensure the validity of the data flowing through these conduits?
- What accountability mechanisms are necessary for enforcing data governance and addressing episodes of noncompliance?
- How can the DATA Act implementation community identify interdependencies, within and among agencies? How can it promote interoperability between agencies and systems?
- How will the DATA Act implementation interact with other initiatives and mandates, including the recent Financial Shared Service Provider rollout?
- How can the DATA Act implementation minimize impact to existing agency systems and processes?

## **What is the best way to organize the conversation?**

Because the DATA Act implementation effort spans the whole of the federal government, as well as a wide range of private-sector vendors, data consumers, and other community members, successfully organizing the DATA Act implementation conversation will depend on setting up a framework that is open and inclusive, yet also clear and authoritative.

ACT-IAC recommends a paradigm that would support this balance by inviting existing stakeholders and organizations with relevant experience into the DATA Act implementation dialogue via open, transparent formats such as public roundtable discussions. At the same time, posting information such as minutes of these discussions and key definitions and decisions on an authoritative web archive will ensure the clarity of communication and standards that set the firm foundation on which a successful DATA Act implementation project must ultimately rest.

The conversation around data standards is best organized by associating data elements with categories such as functional user groups or the process groups which are impacted by the quality of the data element being standardized. Of course, even creating these metadata themselves requires some basic definitions that must be published. One example is the stakeholder groups: budget, finance, grantee, and the like. A further classification of comments related to each element, such as definition, process impact, impact priority, or stakeholder group would help to organize the conversation. Minimizing ambiguity in this respect lays the foundation for ultimate success.

Technology platforms, such as the issues feature of GitHub, are ideal for collecting feedback. Simple text analytics can be performed for truly large numbers of comments. A key concept is to standardize the comments as much as possible to facilitate comment analysis. Segmentation of the comments as part of triage is important in ensuring that the most relevant ideas are addressed first.

## **What are the right questions to ask about data standards to ensure clarity?**

To ensure that all the DATA Act's implementation stakeholders can collaborate smoothly and efficiently, they must all speak the same language from the outset. Providing clear definitions of the Federal Spending Data Elements and Data Standards will help Treasury and OMB create a consistent, well-understood foundation for interpreting and implementing the DATA Act reporting requirements. Providing rigorous, unambiguous Federal Spending Data Elements and Data Standards definitions in sufficient detail is essential for obtaining truly actionable information from open data, and for supporting the disclosure of federal funds and spending.

One prominent example of this need pertains to the DATA Act's definition of "program activity." The information available to date for the Federal Spending Data Elements positions the interpretation of the program activity value around the concept that this data element is only the value present on the program and financing schedules of the government's annual budget. The program activity data element is typically at a high level, but may contain many underlying programs and projects. The data attributes associated with these underlying, more detailed values are where much of the open data and actionable information resides for both internal and external government decision making and analysis purposes.

Developing and promulgating clear definitions of the Federal Spending Data Elements, and providing federal agencies with prototypes of resultant DATA Act spending and funding data, will help those agencies accelerate internal plans and timeframes for compliance with the Act, provide clearer insight into the potential of open data for their organization, and promote uniform interpretations for cross-walked and exchanged data.

A precise, descriptive, and shared lexicon is required to support a uniform understanding of federal spending data across the DATA Act community. Relevant questions toward this goal include:

- What steps are needed to build a common, uniform, reliable lexicon for DATA Act compliance across agencies and meet essential objectives early on?
  - Elimination of redundancies and ambiguity in data definitions,
  - Materiality thresholds for financial reporting,
  - Level of granularity available from federal data and/or desired by data consumers,
  - Definitions for program activities, and
  - Data validation, governance, and versioning control.
- What are the appropriate internal plans and timeframes for implementing DATA Act compliance?
- Is XBRL the best publication standard? What, if any, alternatives are preferable, and why?
- How can data users and providers specify and validate the level of actionable information that can be obtained from the Federal Spending Data Elements?
- In addition to those data elements already mandated and listed, should other elements or categories be included?
- What procedures should the larger DATA Act implementation community develop and follow in defining and promulgating data elements and structures?

## **How do we get to the underlying issues, concerns, questions, and recommendations?**

At the heart of successful DATA Act implementation will be an effort to effect cultural changes to embrace not only the requisite technology, but the values and opportunities that it presents. Necessary as they are, equipment and software depend on the insights and commitment of the human beings who will carry out this mission. To highlight this imperative, a number of questions arise pertaining to the DATA Act implementation effort's underlying issues, concerns, questions, and recommendations:

- How can Treasury and OMB help federal agencies to empower and identify data champions and sponsors who will move the implementation process forward?
- Are there organizational changes within federal agencies, such as the Department of Commerce's creation of a chief data officer and a data advisory council that will support carrying out the DATA Act's mandate across the federal government?
- Who, if anyone, should be "data gurus" within federal organizations? Should there be standards, requirements, or certifications that apply to such individuals?
- How can federal guidance instill an ethos of continuous improvement within federal offices affected by the DATA Act?

Getting to the underlying issues or concerns requires a managed data governance process including data stewards with authority to make decisions from the relevant stakeholder groups. At some level the decision of the group must be binding through either a voting mechanism or an executive champion "tie-breaker". It is important in this process for interested stakeholders to understand that there is the concept of both a global definition used across the organization but also that a local definition may still be employed internally if

necessary. Consensus on a global level is necessary for information sharing; many conditions, some system and some cultural, will exist to maintain a local definition. The key is to foster a consensus regarding a definition for the DATA Act standard rather than a never-ending dialog about the government definition.

## What are the initial questions from industry?

Even at this early stage, the topic of DATA Act implementation has drawn many detailed and thoughtful responses from across industry on a variety of aspects. The [Appendix](#) summarizes the questions and themes that our industry membership has raised thus far.

## Conclusions and Recommendations

Treasury and OMB seek to involve the full universe of stakeholders in a dialog that addresses the right questions and helps to uncover the new possibilities. In light of those objectives, the most important potential next steps include:

- Public outreach to the full range of stakeholders,
- Organizing formal, open roundtables and panel discussions,
- Seeking out leaders of previous, related efforts to discover and incorporate their experience and best practices, and
- Establishing a centralized, authoritative repository for guidance and information on a web portal, such as the existing GitHub facility.

The DATA Act implementation community stands at the vanguard of a paradigm shift in how information is assembled, distributed, and used. The Act offers the potential to truly transform the effectiveness, efficiency, and accountability of how government works. With the right questions and open dialog among all the stakeholders in this vital effort, working together we can confidently plan and undertake these first steps into the future. The ACT-IAC C&T SIG looks forward to collaborating with all stakeholders, and will continue its analysis and thought leadership efforts to help the federal government make the DATA Act's implementation a groundbreaking success.

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## Appendix

### *Initial Questions from Industry*

#### **Purpose and Strategy**

##### ***What is the strategic vision for DATA Act implementation?***

While the details of implementing the DATA Act's requirements are certainly important, transmitting a strategic vision of what that implementation should do is equally so. By linking the implementation effort to a compelling narrative of more effective and efficient government, Treasury and OMB can generate support and buy-in from all the major stakeholders and observers at federal agencies, in Congress, and among the public.

##### ***How can the DATA Act implementation team make clear the Act's benefit to federal agencies themselves?***

At the outset of implementation, federal agencies may perceive the DATA Act's mandate strictly as a compliance requirement. In fact, previous standard-setting exercises in the private sector (for example, the adoption of universal product codes and stock keeping units across the retail sector) have catalyzed multibillion-dollar benefits in supply-chain management and manufacturing efficiency. As part of the DATA Act evangelism effort, the implementation team should strive to illustrate the potential for comparable benefits within and across affected federal agencies. Well-selected and developed case studies may be immensely helpful in this respect.

##### ***How can the DATA Act implementation process set an example for transparency in its own implementation?***

As the DATA Act itself is an initiative designed to improve the efficiency and transparency of government spending, what steps can the implementation team itself take to optimize the openness and transparency of its own standard setting and decision making?

##### ***What are the implementation details and lessons learned from ongoing pilots?***

While the language of the DATA Act itself mandates reference to previous work, most notably that of RATB, the implementation team should be conscious of the need and opportunity to draw from many previous data standardization efforts, in both the public and private sectors. While successes obviously offer valuable insights into what works, even failed efforts can provide lessons of their own.

#### **Data Definitions**

##### ***What is the entire set of data elements under consideration?***

It is understood that data will be released in tranches with an initial set of baseline elements for discussion provided on GitHub. Treasury, OMB, federal agencies, and industry partners

could facilitate long-range planning and extension from the baseline element set by drawing up “under consideration” data elements for review and discussion, using a process similar to that which proved successful for USASpending.gov.

***When will clear definitions of the data elements be developed and promulgated, and at what level of detail?***

Complete and clear definitions will promote accuracy and parity of data by facilitating uniform interpretations of the Federal Spending Data Elements. Complete and clear definitions will also ensure that data is accessible at the level of detail required for the transparency intended by the Act. For example, if the program activity data element were to be defined as a strict interpretation of the DATA Act legislation (i.e., the program and financing schedules of the government’s annual budget), it would not be possible to decompose the reported summary level data down to the detailed program and project level data required for analyzing and comparing mission spending.

***What is the meaning of “data standards”?***

Data standards can be classified in terms of “syntax” versus “semantics.” Should the implementation team align the syntax for data elements with pre-existing conventions? How should it create standards for common, well-understood concepts underlying the elements that will support robust reporting – e.g., the semantics? How do we implement robust quality control procedures that minimize scope for confusion and support the audit process? Should all standards be global, or should there be a protocol for local standards of limited scope and utility?

***The current data elements do not have enough specificity on the purpose, reasons, or measured effectiveness of federal awards. What other data elements could enhance these properties?***

Are additional properties, or building out a category, appropriate to provide the specificity that stakeholders and the public will find optimally valuable?

***What will detailed requirements for the data be?***

For example, what standards do Treasury and OMB expect with respect to the source of the data? Their as-of dates? Maintenance requirements? (For example, in many cases congressional district data will change over time in a given location.)

***Will the DATA Act requirements be retroactive to existing spending commitments?***

For example, will the standards be applicable to outstanding contract awards, or only to awards going forward?

## **Organizational Roles and Responsibilities**

***How will agencies manage their responsibility under the Act to provide high-quality data, while consolidating and integrating that data for maximum value across the federal government?***

The DATA Act, the mission-support benchmarking, and the shared services initiative share a common goal to find opportunities for improvement through analysis of data across government. In line, Treasury and OMB's strategy calls for establishing confidence in each agency's data and integrating federal spending data across the array of federal executive-branch agencies. How can all parties ensure that the quality of the data they access is sufficient for use at all scales, from the smallest to the largest agencies?

***The government has indicated that it is not building a large data warehouse or central repository for the federal spending data. What architecture is under consideration from a technology perspective?***

Given the federal government's expressed desire to shift from a system-centric architecture to a data-centric "hub and spoke" model, what infrastructure is best suited to meet this strategic objective and the mission of the DATA Act?

***Who will define roles and responsibilities at individual federal agencies, and how will that impact governance?***

Tradeoffs exist between a "top down" model in which DATA Act-related roles and responsibilities are promulgated for each agency by Treasury and OMB, and a "bottom up" paradigm wherein the agencies themselves determine the right organizational structure. The DATA Act implementation team will need to consider which is preferable for this effort.

***How will shared service providers integrate with DATA Act requirements?***

Given the government's strategic shift toward shared services, the DATA Act implementation team should be mindful of shared services agencies' need to scale up and integrate their DATA Act reporting efforts smoothly as the scope of their responsibilities grows.

***What is the anticipated governance model with respect to DATA Act implementation?***

Reliable governance is essential to providing a well-understood language of elements and concepts that form the core of open data's value. An open-source paradigm for disseminating these parameters will go far to encourage acceptance of the standards that are decided upon.

***What is Treasury's and OMB's approach to developing the implementation guidance?***

Will the final result be a series of directives? Will drafts be available for public comment? How can ACT-IAC help?