

CDO Position Description

Short Description

The collection and need for data continues to grow exponentially in organizations. Increasingly, data itself—outside of application—has values supporting organizations mission and activities. Data has even more value if it is readily available, easily found, and easily re-usable for new applications.

The Administration has a clear a vision of data managed as an asset and data-driven decision-making. The Chief Data Officer is the role primarily responsible for operationalizing that vision. In essence, managing data as an asset means improving links between silo-ed databases and data stores; making information/data easier to find on-line, making it easier for analysts and policy makers to quickly access and transform data into the new formats and knowledge. It means lowering the cost of consuming and using data because we keep having more data to manage.

The Chief Data officer's role is part data strategist and adviser, part steward for improving data quality, part evangelist for data sharing, part technologist, and part developer of new data products.

The Chief Data Officer role shall seek to:

- Manage open government data effort including coordinating how we offer APIs and create public data products
- Decrease the cost of managing data and increasing the value of the data we have
- Improve how the agency collects, uses, manages, and publishes data.
- Lead the agency efforts to track data collections, data purchases, databases, physical data models, and linkages between datasets.
- Improve data quality and how we measure data quality
- Ensure data is available, reliable, consistent, accessible, secure, and timely to support the mission and activities of the agency.
- Align and standardizing data models
- Head up Agency wide data-working group

Long Description

The collection and need for data continues to grow exponentially in organizations. Increasingly, data itself—decoupled and outside of application—has values supporting organizations mission and activities. Data has even more value if it is readily available, easily found, and easily re-usable for new applications.

The Administration has a clear a vision of data managed as an asset and data-driven decision-making. The Chief Data Officer is the role primarily responsible for operationalizing that vision. In essence, managing data as an asset means improving links between silo-ed databases and data stores; making information/data easier to find on-line, making it easier for analysts and policy makers to quickly access and transform data into the new formats and knowledge. It means lowering the cost of consuming and using data because we keep having more data to manage.

The primary role of Chief Data Officer is insuring the Agency has the right data usable in the right ways to fulfill its mission.

The Chief Data officer's role is part data strategist and adviser, part steward for improving data quality, part evangelist for data sharing, part technologist, and part developer of new data products.

The Chief Data Officer role shall seek to:

- Manage open government data effort including coordinating how we offer APIs and create public data products
- Decrease the cost of managing data and increasing the value of the data we have
- Improve how the agency collects, uses, manages, and publishes data.
- Lead the agency efforts to track data collections, data purchases, databases, physical data models, and linkages between datasets.
- Improve data quality and how we measure data quality
- Ensure data is available, reliable, consistent, accessible, secure, and timely to support the mission and activities of the agency.
- Align and standardizing data models
- Head up Agency wide data-working group

Chief Data Officer Role and Responsibilities

The Chief Data officer's role is part data steward for improving data quality, part evangelist for data sharing, part technologist, and part developer and strategic visionary for creation of new data products.

The Chief Data Officer role is a newly emerging position in the enterprise. The nature of the role and its responsibilities varies from organization to organization and also depends on the expertise and capabilities of the individual in that role. In all cases though, the CDO works closely with the executive leadership and the CIO to address the enterprises ever-growing data assets and needs toward the end of reducing cost and increasing value.

The role of the CDO can be largely be inferred from these recommendations:

1. Appoint an agency Chief Data Officer and Data Officers or points of contacts in each Division, Bureau, and Office
2. Have CDO conduct Zero-based reviews of all data collections
3. Maintain a central inventory of the Agency's data collections and datasets
4. Standardize and automate all future data collections
5. Ensure all potentially public information is accessible via the Agency public website

The Agency's CDO role is to be the agency's executive business lead, ensuring that enterprise data is available, reliable, consistent, accessible, secure, and timely to support the mission and activities of the agency. This includes:

- Separate Data from Apps & Systems
- Expose data as service to enterprise and public
- Add Semantic Layers to power machine learning
- Mine the data for new features
- Enable identity and geography by dataset as a service

The CDO works closely with the CIO, CISO, GIO, and agency leadership to ensure data is being developed as a viable resource for current and future needs both inside and outside of specific IT systems. As the principle Data Steward Data Scientist for the agency, the CDO:

- Works closely with CIO to develop data quality measures and practices to improve the agency's data and to protect sensitive information
- Works with the CIO to develop data management policies and practices to support the mission of the agency
- Decreases the cost of collecting, managing, and sharing data while increasing the value of the data to the agency
- Develops a team of data practitioners to enable and support a culture of data sharing and repurposing including data scientists, data quality experts, and data architects
- Has either CIO-Deputy-like full, or dotted-line responsibility, over the DBA functionality of IT to insure adherence to data standards and speeding data linkages between systems
- Oversees of enterprise entity repository, data catalog, and publishing primary identifiers
- Overseeing the budget and mechanism for managing the data procurement and licensing
- Provides expertise and consults on all new major data-related or data-intensive initiatives
- In consultation with CIO decides on products and services and technical architectures that support data in the agency
- Works to improve search and search experience
- Oversees bulk data products, API development, metadata standards, and compatibility with emerging web data standards;

As an evangelist, the CDO:

- Reaches out to industry, academics, other branches of government, and the public to promote and Agency data and data services; travels to events to promote Agency data
- Develops collaborations that further development of data products and services that speed communication products and innovations to market
- Participates in inter-agency activities such as the CIO Council and Federal legal entity identification standardization/interchange efforts.
- Manages Open Government Data activities

The CDO is responsible for data reform and modernization—how the agency collects, uses, manages, and shares data—toward the Chairman's stated goal of "fact-based, data-driven decision-making." This role includes:

- Coordinates the Zero-Based Data Review of all agency collections
- Ensure data supports specific policy-related activities
- Working with stakeholders to plan future data needs
- Coordinating annual or bi-annual data reviews of the agency data
- Delivering reports to the Agency Executives on progress with data reform
- Prioritizing large scale data projects in conjunction with program owners

What the CDO Is Not

The CDO is not the Agency's Chief Privacy Officer. That responsibility is held by the CIO.

The CDO is not responsible for the security of information. That responsibility is held by the CISO.

A Vision of Success

Success for the CDO is developing culture of data sharing within the organization and planning to make data available to share as part of Agency process, rule makings and IT system design. Data management, well-led by the CDO, should be a profit center for the enterprise, or in the case of a Federal agency, a means to avoiding costs and increasing productivity. Success looks like:

- Measurably improved data quality and data management practices to track, protect, and publish data
- Publishing all publicly available data electronically is structured, machine-readable formats packaged in a variety of formats and syndicated to a variety ways to support a variety to meet the needs of a variety of customers
- Identity of regulated entities, products and services offered as a service to IT systems. Real-time company files and other profiles such as "market fast facts" that can be looked up by unique, commonly known identifiers such as call signs
- Data increasingly syndicated to other parties and publicly available information services from third parties based on real-time, machine accessed services.
- Exposing Agency tools and data in manner that helps speeds products and innovation to markets
- Validating data collections will support planned policy making prior to NPRMs. Data collection NPRMs that include prototypes of data collections
- Being able to rapidly develop data services and offerings based on requests from academics, policy makers, industry, advocates, and public
- Being regarded as the world-class organization in data management. Regularly giving tours to other agencies and being asked to speak on our practices

Executing the Vision

Because the Chief Data Officer role is a newly emerging position in the enterprise, there is flexibility on how to execute for success. The CDO role can be very executive leadership in nature, or it can be very hands on and inculcating culture and practices by example, or it can be highly technical managing IT resources.

Executing depends on the current Agency need and data asset maturity. The vision involves the development of data team oriented toward the technical and data scientist to envision, prototype, evangelize, implement, and support data platform distinct from individual IT applications. Like other IT-related areas, the CDO needs some practicing technologists to support the multitude of projects involving specific data components and having sufficient bandwidth to focus on improving linkages between systems and enterprise data assets.

Scenario One – CDO runs IT data operation One viable path for executing on the vision is for the CDO, depending the structure of IT going forward, to assume direct supervisory responsibility over all DBA-related assets and manage the entirety of "data operation" as single unit. Such a structure would benefit the development of the management of data at the operational role. The principle benefit of this direction is ensuring data value is increased and cost decreased at the IT operational level. The risk of this direction is the day-to-day custodial activities limiting time spent on more speculative and strategic development of data assets.

Scenario Two – CDO runs IT data "asset" operation Alternatively, the CDO could interface with IT with a focus more exclusively on data assets that are outside of existing IT systems with of course generous collaboration on data aspects of new systems. The principle benefit would be the focus on data sharing and data reform as a new area but the disadvantage is the arrangement of new resources in a constrained budgetary environment.

Below is a bullet list of and example data dream team for a medium sized agency. These functions would also apply under Scenario One, but they would be more integrated with existing roles existing resources are pursuing. These are presented purely for example.

- A core team of four developers/data scientists/data architects working at 65%-100% with the CDO to respond quickly to organization data needs, define technical details such as API specifications, and to develop linkages between systems
 - At least one near full-time experienced analyst from to infuse the data effort with subject matter expertise and policy orientation
 - A part-time to full time senior front end designer to make the information products appealing and inspiring
 - A senior DBA or dedicated time from DBA to manage the Enterprise Information Catalog, to assist with proper data documentation and management and to interface smoothly with agency's DBA
 - Scalable computing resources for the processing and data mining
 - Project management and/or COTR resource to keep project reporting and contract management inline with Agency policy
 - Dotted-line reporting of procurement assistance for managing data purchases
-

Edit this Page (<https://github.com/project-open-data/project-open-data.github.io/edit/master/cdo-position-description.md>)

View Revision History (<https://github.com/project-open-data/project-open-data.github.io/commits/master>)

Fork 515