



City of Dallas

City of Dallas Data Governance Standard

Background

In 2020, the Office of Data Analytics and Business Intelligence (DBI) was launched to harvest, analyze, and interpret information so Council members, residents, and City staff were enabled to make more informed decisions about programming and services that impact the community we serve. The Dallas City Manager created DBI, and its purpose is to implement a City-wide data strategy, harness the power of the City's data assets, and provide crucial, data-driven insights to guide policy decisions. To foster a data-driven culture, it was recognized that the City of Dallas required a robust Data Governance Program that could offer guidance and facilitate alignment with strategic objectives. Data Governance can be thought of as how the City of Dallas ensures the data is treated as an asset and brings high-quality, accessible data into the decision-making process. It encompasses all aspects of managing data, from individual data definitions and roles to Administrative Directives (AD).

Mission

In alignment with the City of Dallas's commitment to building a service-first culture, there are five values of service: Empathy, Ethics, Excellence, Engagement, and Equity which guide staff to meet the commitment. The mission statement for DBI is, *To use data to improve the lives of people of Dallas*. DBI will use data and analytics to demonstrate and achieve these five values.

When speaking about data, there is a saying for input and output of it, it is "Garbage in, Garbage out." If the departments and their employees do not seek a systematic standard or set rules for entering data, then the analytics will be garbage. The data governance program provides an enterprise perspective to governing the data but does not necessarily centralize control of the data; rather, it creates systems for identifying individual and departmental data curators and guidelines for these individuals to use as they curate data. The Data Governance Program works in collaboration with many departments, especially with the Information Technology System Department (ITS) to help with data management and data access. The Data Governance Program sets the cultural tone for data integrity, quality, privacy, access, architecture, integrations, and

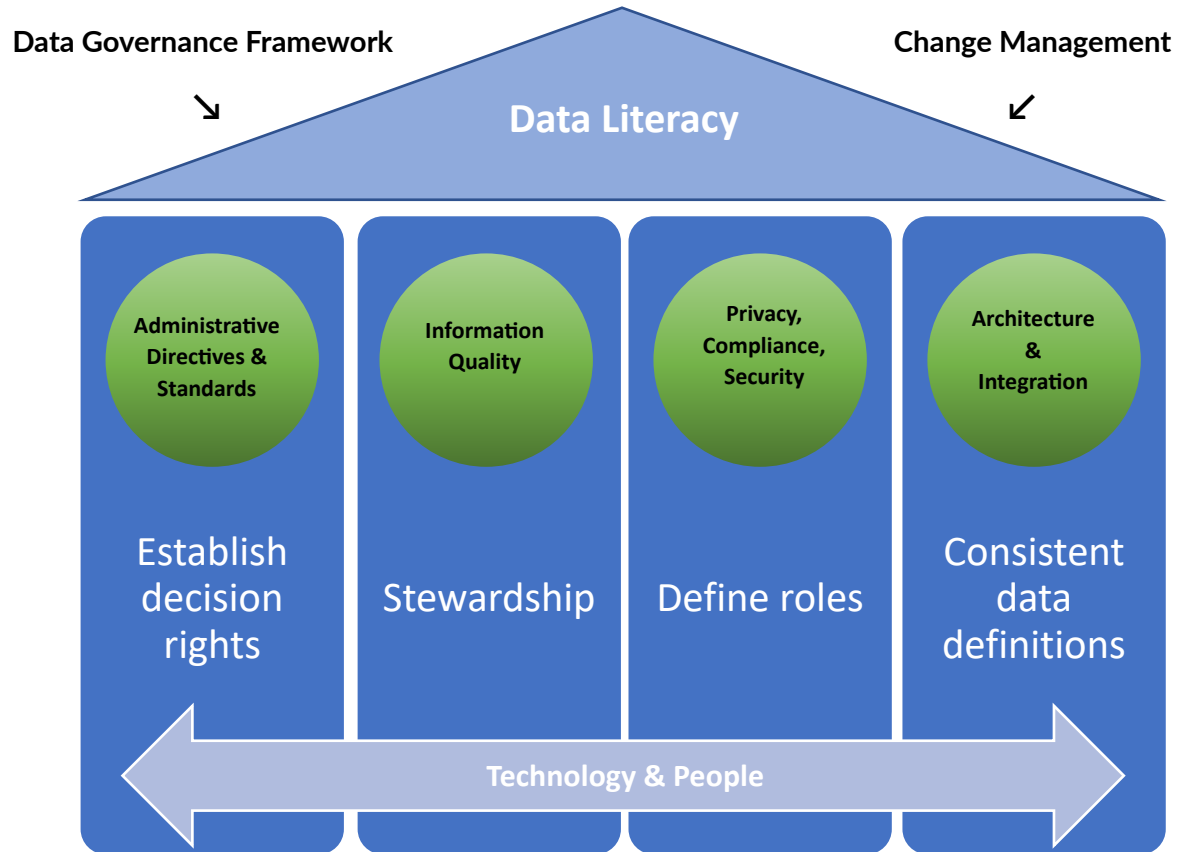
other general data standards. Data governance is not a one-time effort. The program will require ongoing monitoring and maintenance to support continuous improvement. Technology changes rapidly, and this Standard should be reviewed on a bi-annual basis for accuracy and revisions.

Purpose

At the City of Dallas, we have adopted the Data Governance Standard to provide a means and mechanism to ensure the appropriate public provision of Dallas' data sets and services. This Standard guides how the City's data should be accessed, stored, or shared for a consistent approach. The Standard will identify the 'Guiding Principles' and the 'Bill of Rights' for data services and users. The City's vision is to build a service-first culture. To achieve that vision, our policymakers, executive management, and employees must make good decisions about strategy and operations. Decision-makers need access to reliable intelligence about issues and operations to minimize dependence on anecdotal information as the primary driver of decisions. To be effective, our organization must have access to quality data that can be tested and trusted. Data governance must be supported by a structure that ensures that the data governance objectives continue to be aligned with the City's goals. Using this structure will allow the City of Dallas to accomplish not only its Data Governance goals but City-wide goals too.

Scope

The subsequent visual aid highlights the framework of a successful data governance program.



Goals and Objectives

The **Goals and Objectives** of this program are to:

- Establish a data *quality* culture that drives data-driven decision-making.
- Create structured *accountability* with defined roles and responsibilities.
- Draft and approve data-related Administrative Directives.
- Facilitate *collaboration and education* related to data-related ADs and the use of data.
- Facilitate standard, *consistent data definitions* where appropriate.
- Ensure that data policies align with record retention policies.
- Ensure that data sets are classified according to AD 2-25 and that the appropriate actions are followed to be compliant with *privacy and security standards*.

Guiding Principles

The **Guiding Principles** of this program are to:

- Transparency – Provide a clear understanding of how decisions are made, and processes are created.
- Metrics-Driven – Measure and report on how the organization and departments are performing against their own goals.
- Consistency – All decisions should be made consistently, using data analysis.
- Stewardship – While there are formal data stewards within the City of Dallas, it is everyone’s responsibility to protect the privacy, security, and confidentiality of the data as required.
- Accountability – It is essential to audit and document all decisions and processes.
- Agility – All processes should be able to adapt when appropriate.
- Change Management – A new process will require a concerted effort to manage the change among staff.

Data Users Bill of Rights for Data Governance

Data Users *Bill of Rights*

- The **Right** to engage data subject matter experts.
- The **Right** to collaborate.
- With the **Right** data.
- At the **Right** time.
- For the **Right** reasons.
- To make the **Right** decision.
- For the **Right** outcome.

Data Positions with the City of Dallas

These positions play a vital role in Data Governance planning, implementation, and sustainability.

Data Role	Possible Stakeholder	Key Skills	Definition of the Role
Executive Leader	Chief Data Officer or Chief Information Officer	<ul style="list-style-type: none"> • Strong manager with the ability to delegate responsibilities efficiently. • Strong motivator and supporter of this work. • Establish and prioritize roles for data governance 	This is a vital executive role that will serve as the foundational decision-maker for your data governance program. This person should be passionate about the development and ongoing sustainability of a data governance structure because he or she will set the tone for culture and change around this topic.
Communicator	Public Information Officer, Communication Professional	<ul style="list-style-type: none"> • Well-versed in communication practices • Able to translate data and governance policies and practices into data stories for public consumption 	Communicating with the public about data governance is a crucial role as we begin to think critically and ethically about what it means to insert data governance, data analysis, and data management into our more general practices.
Data Leader	Data Governance Manager	<ul style="list-style-type: none"> • Strong manager and clear communicator • Ability to translate data concepts into action • Deep understanding of data concerns and priorities across the organization 	This is a vital role for a government professional or other official who oversees, manages, and conducts various policies, meetings, frameworks, and audits.
Data Steward/Owner	Data Analyst, Data Scientist, Data Engineers, or Data Coordinators	<ul style="list-style-type: none"> • Data subject matter experts (SMEs) • Responsible 	A data steward is a person whose job is to manage data assets on behalf of others and in the best interest of the organization.

		<ul style="list-style-type: none"> • Champions data governance policies within their department • Clear communicator 	<p>These individuals have authority over their department's data. Stewards are responsible for the welfare of data governance.</p>
ITS Liaison	ITS Program Manager, Director, Data Engineers, or Technical Data Steward	<ul style="list-style-type: none"> • Complex understanding of data analysis, data cleaning, and data mining • Ability to translate data governance policies to ITS implementation and vice versa 	<p>The liaison should work to bridge the gap between policy leaders, executive leaders, and the ITS department.</p>
Legal	City Attorney	<ul style="list-style-type: none"> • Oral and written communication skills • Proficient with legal research for software and internet use • Strong ability to collaborate 	<p>A person in a legal role can ensure that data acquired under some sort of contract is managed in compliance with such contracts.</p>
Policy Leader	Mayor, City Council Members, or Chief Data Officer	<ul style="list-style-type: none"> • Knowledgeable about the current state data governance policies across the nation • Has connections with other organizations to learn best practices in data governance 	<p>This is a high-profile role that sets the stage for policy change around data governance. A person who takes on this role must be well-versed in their government's appropriate policies and be in a role where he or she could argue for, support, or amend data governance policies.</p>
Users of Service	Community Members, Business Owners, Academic	<ul style="list-style-type: none"> • Networking • Collaboration • Critical Thinker 	<p>Users are vitally important for the sustainability of the data governance structure as they provide live and realistic feedback.</p>

Committee Stakeholders Roles and Responsibilities

Data Governance Executive Director Steering Committee

Responsibilities: Oversight, Support, Administrative Directive Approval.

Meeting Cadence: Quarterly

Committee Chair: Chief Data Officer

- Foundational decision-maker for the data governance program

Committee Members: Director(s)

- Administrative Directive Approval
- Prioritization
- Cultural and change management support

Data Governance Working Group Committee

Responsibilities: Initiatives, Metrics, Issues, Escalations, Standards, Administrative Directive Review, Procedures, Software Review, promote data literacy, ensure data quality, data integrity, awareness, and appropriate use of data.

Meeting Cadence: Monthly, unless the meeting is near a Holiday or Budget Season, then the meeting is canceled for that month.

Data Governance Manager

- Coordinates and provides support to the Data Governance Working Group.
- Serves as a bridge between the Steering committee and the Data Governance Working Group.
- Writes Administrative Directives for implementation.

Data Architecture and GIS Development

- Collaborates with the ITS department to ensure secure data pipelines and accessibility.
- Provide specific feasibility feedback from a technical perspective on proposed projects.
- Serves as a support and advocate for the development that must be completed by the ITS department.

Data Stewards/Subject Matter Experts (SMEs)

- Individuals who have everyday contact with data sets or software.

- Can inform others about the needs of those who use data.
- Enforce data management policies within their specific domain.

Data Analysts

- Department-specific analysts who understand the potential uses of department data.
- Individuals who can provide insight or analysis, not just information, from the data.

Data Publishing Sub-Committee

Responsibilities: Review, Quality Assurance, Compliance, and Approval of Public-Facing dashboards

Meeting Cadence: Quarterly

Data Governance Manager

- Coordinate and provide support to the sub-committee.
- Provide accountability to committee members.

Committee Members: (A 'Coordinating Data Steward' is a data analyst who understands the available data in multiple departments or areas)

- Review dashboards objectively using an evaluation tool (form) and provide a decision to publish a dashboard.
- Provide guidance and feedback to the dashboard submitter.

Approach to Data Governance

1. Multi-disciplinary team overview

Review and publishing of data should be a collaborative effort for best representation. The DBI team, in concert with the Data Governance team as outlined in the Open Data Administrative Directive, is responsible for the Open Data Portal. Members of various departments in the City of Dallas take part in the Data Governance Working Group to form a collaborative approach to data analysis and awareness. Committee members work together to benefit the residents of the City of Dallas.

Why it's important?

The Data Governance Working Group and the Data Publishing Subcommittee are groups that are made up of individuals with a diverse mix of expertise and skills to serve as a resource for the holistic approach to data services. By involving these important and diverse individuals in the decision-making process, it provides accountability and insight.

What it means

All data groups including City employees producing analytics should:

- Be a multidisciplinary review team that includes technical and non-technical experts to ensure that the service is useful to a variety of users
 - Non-technical experts could include specialist expertise such as legal, data ethics, policy, procurement, communications, or industry-specific analysis.
- Build data services to provide information that can be used to support evidence-based decision-making.

2. Publish data with a purpose

The City of Dallas strives to meet the needs of its customers and the residents we serve, with the Customer Experience Vision Framework as a guiding beacon. The dashboards that have been published and that will be published advance the city and highlight community priorities. A requester who wants to publish data needs to do research before starting to build a dashboard. The requester should ensure that the data sought to be published falls within the City of Dallas' strategic priorities.

Why it's important?

As with any local government, funds for providing services are not limitless. The City of Dallas is no different, the City has limited resources to create data and analytics services. Therefore, DBI prioritizes its efforts toward services that have the most impact on the City and its residents.

What it means

The Data Governance Program, specifically the Data Publishing Subcommittee will seek to understand how the dashboard request contributes to wider City and community priorities; for example, does the data service request inform policymakers, support operational decision-making, or nudge public behavior? The request submittal should identify the purpose the requester is addressing. Documentation should include how different parts of the City government or wider public sector contribute to and benefit from the service provided. Include wording from the City of Dallas's values about how the data and analytics will support the vision.

3. Understand users and their needs

The Data Governance Program (and DBI) seeks to develop a deep understanding of users and the problems they are trying to solve. Work towards creating a service that solves a whole problem for users, working with other teams and organizations when necessary. For data services, the Data Governance groups will aim to understand both the needs of the direct users of the data service and the needs of the end users of the products and services the direct users will build. For analytic services, the aim will be to understand the actions users take because of the information or advice they are provided with.

Why it's important?

Understanding as much of the context as possible yields the best chance of meeting users' needs simply and cost-effectively. Focusing on the problem that needs solving could reveal many possible solutions. Testing assumptions early and often reduces the risk of perhaps choosing the wrong solution.

What it means

Data Governance group members and City employees producing analytics should:

- Ask questions about what data needs to be made available and how it is made available
- Focus on actions or tasks that help a user resolve an issue. Dashboard examples of this are: locating WIC clinics, 311 service request dashboard, and new single-family construction permitting to name a few.
- Use existing data that is available such as surveys and web analytics to enhance the understanding of the problem

- Regularly review Open Records Requests to increase and improve data services that meet the current needs of citizens and create efficiencies.

4. Include democracy as a user need

Ensure that the data service is accessible and can be used by everyone. The service must be neutral and independent.

Why it's important?

Politicizing data and analytic services undermines the evidence the data provides and it can mean that executives, the mayor, and council members are not using the data in their decision-making process. Data and analytics services need to be neutral to be trusted. Raising awareness of the data services helps with visibility, secures ongoing support, and encourages adoption by other City decision-makers.

What it means

Data teams should:

- Ensure that data and analytics are presented neutrally and objectively;
- Distinguish clearly between facts and opinion or commentary
- Test the analytics services
- Make sure the right people know what's happening with the service, at the right level of detail.

5. Inspire data users

The purpose of providing data to the public is to allow members of the public to digest the information and use it when engaging in policy development.

Why it's important?

Public data also provides insight and raises awareness. Most people don't know if the data is available to them, because they do not know where to look for helpful data. Seeing how data can be used helps to encourage developers and analysts to use it to generate new insights and new services that support City workers, residents, and visitors. Often inspiring uses will come from the community of other users and allow the community to make evidence-based decisions.

What it means

Data teams should:

- draw on internal and external expertise to build a library of insights and stories that inspire and support future data users;
- actively engage the City data community with workshops, Innovation Labs, and forum chats;

- provide a route to the discovery of data through good search engine development and clear data descriptions;
- partner with outside organizations to create data stories that are beneficial to the residents; and
- publish data stories on Instagram, X, and other social media platforms to engage residents

6. Provide a united experience across analytics and data services

Allow users of analytics services to access the data that drives them or provides them with the knowledge to better their function within the City of Dallas. Of course, not all data is accessible by everyone due to privacy laws and regulations, but Publishable data should be accessible by all.

Why it's important?

Providing access to the data that underpins an analytics service helps data users find that data. It also improves trust in City government as others can check whether the presentation or analysis it provides is accurate, by processing the data themselves. It can be hard for data users to understand what data means just by looking at a table or documentation. Analytics services provide a human-friendly interface that helps data users to understand the information it contains.

What it means

Data teams should:

- build analytics services on top of data services, using the same APIs as are used by other users of the data service; and
- provide links from analytics services and particular pages or views within the service to the data that is used to create them

7. Make the service consistent and simple to use

Data that the City produces should be simple and intuitive for all users, no matter their skill level or accessibility needs. Quality and consistency are imperative for each data set. Special terms or acronyms should be spelled out for users as part of the data.

Why it's important?

People expect services to just work, and City data and analytics services should be no exception. It costs the City government time and money to deal with mistakes that happen when services don't work well. And making things more complicated than they need to be undermines trust in the City government. Simple tools are often the easiest to develop.

What it means

Data teams should:

- make sure the service helps the user to do the thing they need to do as simply as possible so that people succeed the first time with minimal help;
- test for usability frequently with actual and potential users;
- test all parts of the service that the user interacts with;
- be consistent with the design of the City's website;
- make data services easy to find on the City's website by including keywords that a user may search for in the search bar or by creating a short URL; and
- departments should only allow for pre-defined datasets to be entered into data fields within their software. Free text fields should only be used with extreme caution.

8. [Create a secure service that protects sensitive data](#)

Data will be handled legally, ethically, and equitably. Evaluate what data will be collected, stored, and provided to the public to ensure data compliance with the City's internal Administrative Directive 2-25.

Why it's important?

Data and analytic services often hold sensitive information about people, organizations, and departments. The City has a legal duty to protect this information and an ethical duty to ensure it is used in ways that advance equity. Failing in that duty would undermine public trust in City government.

What it means

Data teams should:

- actively identify security and privacy threats to the service and potential adverse impacts of providing access to data and information, and have a robust, proportionate approach to securing information and governing access to data;
- carefully assess any data acquired from third parties to ensure it has been collected and shared legally and ethically;
- engage with a diverse set of stakeholders, particularly those representing communities reflected by the data or affected by actions that are informed by it, to understand their concerns;
- partner with the ITS department to plan, budget, and manage security as well as help mitigate potential harms during the life of the service (for example by responding to new threats and unanticipated consequences, putting controls in place, anonymizing data, and applying security patches to software);

- process users' and data subjects' personal information in a way that's secure and also respects their privacy, and takes similar care over sensitive information about organizations, communities, or the environment;
- work with the Privacy Officer and the Chief Information Officer to make sure the service meets security requirements and regulations without putting delivery at risk; and
- ensure that appropriate testing is completed to address data intruders, vulnerabilities, and penetration testing.

9. Be transparent and accountable

Enable people to raise concerns about the City's use of data and be responsive in addressing those concerns.

Why it's important?

People worry about how organizations, including governments, are collecting, using, and sharing data. A lack of information breeds suspicion. Being proactively transparent and accountable helps to alleviate those concerns and build trust. City governments must ensure data has equitable impacts. Listening to the concerns and reports from the community, particularly those who are under-represented in City government, can help avoid harm.

What it means

Data teams and public records teams should:

- communicate and consult clearly and early with the City community about the planned use of data within the service, and listen and respond to any concerns that are raised;
- explain how data is collected, stored, and used within the service;
- Understand when data is presented to directors or council members, there should be sufficient evidence to support a decision, however, council members make decisions based on voter's input as well. Data and people can influence the decision at hand.

10. Define what success looks like and publish performance data

Discuss with the department what success will look like for the service and identify metrics that will show what's working and what can be improved.

Remember the value of data and information stems from how it changes people's decisions and actions, not from the number of downloads or users.

Why it's important?

Defining what good looks like and identifying appropriate metrics means that the department will know whether the service is solving the problem it's meant to solve. Collecting the right performance data means one will be alerted to potential problems with the service. When a change is made to the service, one will be able to tell whether it had the effect that was intended or not. Publishing performance data means that the City is being transparent about the success of services funded by public money.

What it means

Data teams should:

- identify metrics that will indicate how well the service is solving the problem it's meant to solve, and track performance against them;
- actively seek feedback to identify impacts – positive and negative – that are not being measured, and improve metrics where necessary;
- use performance data to make decisions about how to fix problems and improve the service; and
- the City will publish data on certain mandatory key performance indicators.

11. Chose the right tools and technology

Why it's important?

When making a technology decision, the department is making a significant investment. The choices one makes will have a huge impact on the ability to create, iterate, and sustainably operate the service. Collaboration with the ITS department is needed to ensure the technology application isn't already in use with another department.

What it means

When considering data and API standards, technical architecture, choice of programming languages, development toolchain, and other technology choices, data service teams should:

- use appropriate tools and technologies to create and operate a good service cost-effectively, for example, by automating things (including data collection) where possible;
- be able to show that they've made good decisions about what technology to build and what to buy;
- understand the total cost of ownership of the technology and preserve the ability to make different choices in the future - for example, reducing the chances of getting locked into contracts for specific tools and suppliers by using open standards; and
- have an effective approach to managing any legacy technology the service integrates with or depends on.

12. Operate a reliable service

Minimize service downtime and have a plan to deal with it when it does happen. The City will fill data gaps and improve data quality over time.

Why it's important?

Users expect to be able to use online services 24 hours a day, 365 days a year and data users expect the data you provide to be accurate, complete, and consistent. Many users have limited choice over how and when they access analytics services. If a service is unavailable or slow, it can mean those users aren't able to get the help they need.

What it means

Data service teams should:

- review the data for quality, proper use of unique identifiers, completeness, and correct documentation (metadata) before uploading to the Open Data Portal and revisit for accuracy quarterly;
- maximize data quality in the data used by the service; where it is lacking, publish information about known issues;
- upon any notification that the data service provided is inaccurate, misleading, or contains sensitive data, the Data Governance Team should immediately remove the data from the Open Data Portal or any other public locations;
- be able to deploy software changes and data improvements regularly, without significant downtime (for example, by minimizing the effort involved in creating new environments and populating pre-production environments with test data);
- have appropriate monitoring in place, together with a proportionate, sustainable plan to respond to problems identified by monitoring (given the impact of problems on users and government);
- have appropriate mechanisms in place to warn users of data services about planned downtime and keep them informed about the status of unplanned service interruptions; and
- actively work towards fixing any organizational or contractual issues that make it difficult to maximize availability or data quality (for example, by agreeing to a common set of languages, tools, and ways of working for technical staff).