Modernizing Governance to
Ensure Success of Data Initiatives

State and local governments are sitting on data gold mines. But they often struggle to manage data programs in a way that allows them to extract full value from constituent and operational data. Establishing the right governance approach will help public sector organizations better leverage the data they're already collecting, empowering them to turn information into data-informed decision-making.

Traditional data governance approaches — where roles, policies, and processes flow top-down from organizational channels of excellence — are often overly complex and out of touch with the ways in which people need to use data on a daily basis. Data consumers cannot easily discover, access, and share data on their own, which impedes real-time decision-making and delays service delivery.

Besides missing out on important opportunities to use data for transformation, organizations also risk wasting investments in analytics, artificial intelligence, and other tools that rely on data. An agile governance approach helps modernize data management and supports a data-driven culture by building a more efficient data supply chain.

Contending with Knowledge Debt

Organizations must overcome a number of challenges when it comes to building a data-driven culture.

- **Data bottlenecks.** When data producers can't keep up with requests, projects stall and users become frustrated. Data consumers may circumvent policies to get the information they need, which can lead to redundancies, inconsistencies, and security vulnerabilities.

- **Data silos and rogue databases.** Data assets may be scattered across numerous systems, making it difficult to find data quickly and reducing its value for real-time decision-making. Without proper governance, databases may use disparate schema, meaning data must be "cleaned" before it can be used for analysis.

- **Data obscurity.** Unwieldy documentation processes often result in delayed, incomplete, or narrowly disseminated documentation, where only those nearest to the data are aware of its existence, what it means, and how to apply it.

- **Lack of transparency and trust.** Poor visibility into the lineage of data work leads to lack of confidence in the work's validity. Different teams may arrive at different conclusions, and projects may go off track.

- **Poor data literacy.** State and local governments often lack workers skilled in statistics, the scientific method, and other essential capabilities for using data effectively and appropriately. According to Gartner, "culture and data literacy are the top two roadblocks for data and analytics leaders."[1]

- **Loss of intellectual capital.** As waves of employees retire or resign, organizations without an accessible knowledge base risk losing decades' worth of institutional, process, and data knowledge.

Building a Data-Driven Culture

Agile data governance addresses knowledge debt and provides a path to a data-driven culture by enabling organizations to build an efficient data supply chain across all users. Like agile development methodology, it prioritizes collaboration, simplicity, and an iterative approach. It also applies a "DataOps" approach to improve systemic processes and workflows across the entire data and analytics life cycle.

With agile data governance, the organization focuses on creating, documenting, and improving data assets by iteratively capturing knowledge as data producers and consumers work together. Data consumers have a direct, self-service way to request and iterate on data assets, which reduces ad hoc requests and helps drive real-time,

data-driven decision-making. The entire organization has a better understanding of what data exists, what it means, and how to use it. By enabling data consumers to participate in the process, the agile data governance process also increases data literacy across the organization.

The following technology approaches support agile data governance and a data-driven culture by making it easy for all users to access and add value to data:

Data mesh architecture makes data more discoverable, accessible, interoperable, available, and secure than is possible in a monolithic, highly centralized data infrastructure. This approach is founded on two important principles. The first is domain-specific decentralization, where data and data pipelines are owned and stewarded by the people who understand the data best. Second, data is considered a product. Data owners treat other teams as customers of their data and publish it so other people can gain value from it.

A data catalog serves as an inventory of data assets, tracks data lineage, and helps users find data in the data mesh architecture. The catalog typically includes metadata, dashboards, analysis, code, and documents, as well as project management tools. It allows creators to more easily aggregate, organize, and present metadata to data and analytics teams, which helps ensure consistency and reproducible results. Because the catalog "understands" relationships among assets, business use cases, and people, data consumers can more easily search for and find what they need.

Automation saves time and improves consistency by updating datasets, making corrections, identifying (and applying policies to) sensitive data, and performing other tasks without human intervention. When powered by artificial intelligence, automation also allows the data catalog to recommend various content and perform specific actions based on context (e.g., the user's initial query).

Getting Started on Modernizing Data

The following best practices will help organizations get started with agile data governance and encourage a data-driven culture:

- **Assess** where the organization is on its path to agile data governance. Understand differences in roles such as data engineers, owners, stewards, and consumers, and identify gaps in skillsets. Evaluate how well teams collaborate within departments and across the organization. Determine whether existing governance tools and processes help extract the full value of data.

- **Achieve buy-in** and support for cultural change. This includes obtaining executive sponsorship, soliciting and incorporating stakeholder input, and aligning on principles.

Smart Strategies for Agile Data

Although each agile data governance program is unique, every state and local government organization can use the following set of guiding principles for agile data governance:[2]

- **Governance should increase transparency, trust, understanding, and speed.**

- **Start with the business problems and analytics questions you have today.**

- **Iterate quickly to build better habits and get to value faster.**

- **One person's work should help everyone else's.**

- **Give all stakeholders ways to add knowledge and improve data assets.**

- **Keep people, data, documents, and analysis connected and accessible from the beginning.**

- **Make documentation easy and iterative, or it won't happen.**

- **Promote good statistical and scientific methods.**

- **Analytics is valuable while it's happening, not just when it's "done."**

- **Make the user experience twice as good as the products and practices it competes with to earn adoption.**

- **Work with a proven partner** to gain industry expertise, thought leadership, and technology innovation. Leverage software-as-a-service (SaaS) to expedite solution deployment, ensure availability and performance, and alleviate on-prem operational burdens.

To meet the demands of today and tomorrow, state and local governments must quickly expand their data and analytics capabilities and maximize the value of ever-expanding data troves. Agile data governance drives a data-driven culture that allows the entire organization to participate in maximizing the value of data.

This piece was written and produced by the Center for Digital Government Content Studio, with information and input from data.world.

1. Gartner. 10 Ways CDOs Can Succeed in Forging a Data-Driven Organization. October 2020. https://www.gartner.com/doc/reprints?id=1-26OCBF3S&ct=210629&st=sb0
2. data.world. Agile Data Governance—Why Modern Data Challenges Require a New Approach to Governance. 2020. https://data.world/resources/reports-and-tools/agile-data-governance-report/