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Navigating The Future Of Data

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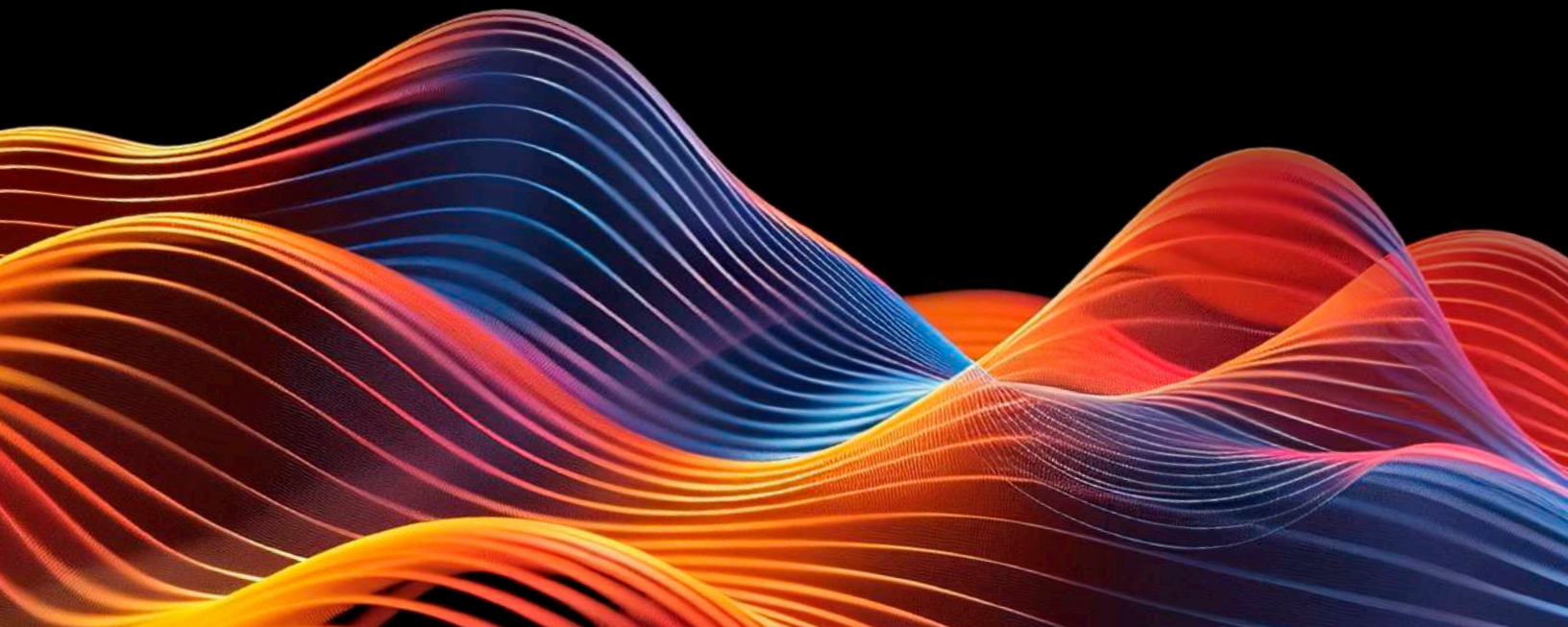
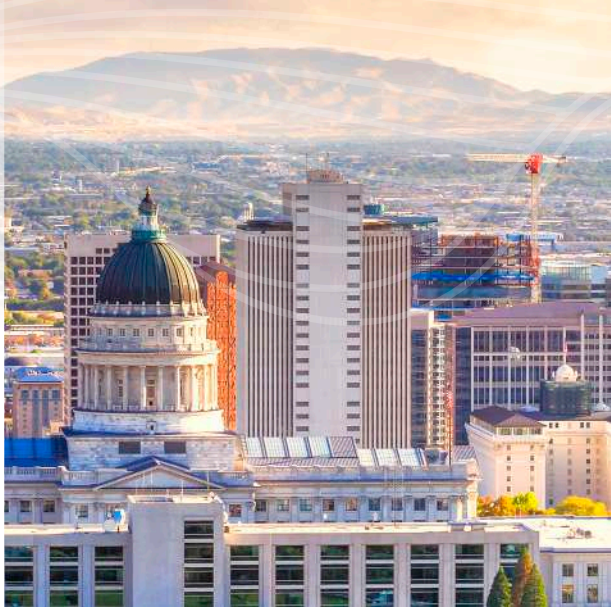
NAVIGATING THE FUTURE OF DATA

These trends and issues are reshaping the government data landscape





Data's strategic importance continues to grow for state and local governments.

Public sector leaders need data to address complex issues and improve government efficiency and performance. Accurate and timely data will also fuel the growth of artificial intelligence (AI) use cases in government.

But as agencies become more data-driven, they need to build trust across diverse stakeholders, mature their data governance practices and data infrastructure, and navigate security and privacy concerns. Agencies also need to upskill their workforces and manage change as they use data to recalibrate their relationship with constituents.

Here's an overview of key trends that are reshaping the government data landscape.

Trend #1:

Strengthening, Standardizing and Simplifying Data Governance

What's happening now

Data governance practices vary widely across states and localities, creating inconsistency that erodes public trust, increases costs and makes it harder for agencies to use data in innovative ways to improve public services.

A 2024 NASCIO survey of CIOs and chief data officers (CDOs) across 46 states found that nearly 80% of states lacked a data quality program.[1]

There's also a data leadership vacuum. About half the states have a CDO. But even where the position exists, CDOs often have little or no staff, according to research from the Beeck Center's Digital Service Network and Data Labs.[2]

Data issues are getting more attention, however. The Center for Digital Government (CDG)'s latest Digital States survey, conducted in late 2024, found that data governance is increasingly important to state IT leaders, ranking sixth on the top 10 list of CIO priorities. The issue is also a top 10 priority for local government CIOs, according to annual CDG Digital Cities and Counties surveys.

What governments need

Insights from CDG's Future of Data Summit and industry guidance highlight common strategies governments can use to build more effective and adaptive data governance policies:

- **Data quality:** Accurate, consistent and complete data is fundamental to support evidence-based decision-making and policy development, as well as the effective use of AI tools.
- **Master data management:** This creates a single source of truth for mission-critical data that ensures quality.
- **A data catalog:** More states and localities are creating enterprise data catalogs to help users understand what data is available and how they can use it. Accurate metadata is a critical part of building an effective data catalog, because it clearly describes the various data sets contained in the catalog. About a third of states already have a data catalog, according to the Digital States Survey, and many said they intended to expand or upgrade it. Another third of states lacked a data catalog but planned to implement one within 12 to 18 months.
- **Data models:** Governments need a new, AI-ready framework to properly structure, organize and understand relationships among data sets.

Data models also create a shared language around data.[3] In addition, data models support data catalogs by providing the schema, relationships and definitions that populate the catalog's metadata.

- **Use case and strategic alignment:** Identifying and defining high-impact data sets and aligning them to specific mission areas or strategic objectives is critical to advance data accessibility, security and data-driven decision-making. Understanding the business value of specific data helps state and local governments protect this information, make it securely accessible to the right stakeholders, and use it to support AI pilots and digital initiatives.

- **Data privacy rules:** Agencies need clear and comprehensive data privacy rules and policies. Jurisdictions are taking different approaches — from policies that involve notice requirements and privacy impact assessments[4] to comprehensive state data privacy laws that apply to all state and local government entities.

- **An analytics platform:** Agencies will need technology to help them extract insights from large volumes of data. These platforms integrate tools that collect, manage, analyze and visualize data.

Real-world examples

Utah's unified approach: In May 2024, Utah enacted the Government Data Privacy Act as part of a broader effort to establish a unified approach to data governance. Chief Privacy Officer Christopher Bramwell is leading the initiative to create a cohesive data governance strategy across state and local agencies.

After reviewing state and local data governance practices, Bramwell's team developed high-level principles to guide agencies and began categorizing government data by service and function. The goal is to identify common data categories across state and local agencies and establish rules to govern their use.

In addition, Utah is considering shortening the length of time agencies must retain data. Speaking at the state's first-ever Data Governance Summit in May, Bramwell said the proposal balances constituents' privacy rights with the need for effective law enforcement.[5] (The proposal sparked concerns that shorter data retention periods could impede criminal investigations.) While Utah works to reshape parts of its data governance strategy, the state continues to offer an open data portal with more than 8,000 data sets, and agency-level public data and data dashboards constituents can easily access.[6]

Salt Lake County's hub-and-spoke model: With the passage of the Utah Government Data Privacy Act, many local governments in the state are strengthening, standardizing and simplifying data governance.

Javaid Lal, director of performance and innovation for Salt Lake County, says his organization has adopted a hub-and-spoke model, where the county's Technology Advisory Board serves as the central governance body to set guidelines, standards and policies. A cross-functional Data Governance Working Group makes recommendations to the board, and each county agency has a data coordinator who serves as a liaison to these groups and implements governance practices within their agency.

"We treat county data as a strategic asset, ensuring the right level of accessibility and data sharing," Lal says. "Data security is a priority for us. Data integrity is a priority for us. Once we set up those guiding principles for ourselves, then we're able to help agencies work within that framework."

Lal says Salt Lake County's governance structure has helped the county become a better data steward and supported efforts to create a more data-driven culture.

"Culture is definitely something you need to work with — it's people first and then processes," he says. "There are still some silos. There's still some cultural resistance. But I think we've made huge strides in helping everybody understand why they should care about data governance — and data itself."

Trend #2:
Defining Data Ethics and Privacy in the AI Era

What's happening now

Governments have unique ethics and privacy requirements, but most data governance frameworks are developed for the private sector. That leaves a gap that states and localities need to fill.

Strong privacy, ethics and security policies are essential foundations for data sharing and AI adoption. These policies are also crucial to building public trust.

What governments need

Comprehensive, yet agile AI rules and guidelines: A proposed federal moratorium on state-level AI regulation was defeated earlier this year, allowing states and localities to establish stronger rules and regulations for responsible AI use.[7] At the same time, these rules can't be so rigid that they compel agencies to severely restrict data access and AI experimentation.

Privacy-preserving, alternative data types: Some states are exploring how to use synthetic data — artificially generated information that mimics real-world data — as a stand-in for personally identifiable information (PII) when conducting research and analysis. Others, such as Ohio, are using data masking and de-identification to preserve privacy.

Robust data sharing infrastructure: Data sharing is key to accelerating AI adoption and making government services more efficient and effective. States and localities are breaking down data silos by employing memorandums of understanding to streamline data sharing across agencies (Illinois), passing executive orders and laws that mandate data sharing and establish new governing bodies to oversee this process (Rhode Island), developing real-time data exchanges to safely share data with external partners (California),[8] and creating playbooks to help agencies share data securely and ethically (Connecticut).[9]

Real-world examples

Hawaii navigates privacy and data sharing: Hawaii shows how jurisdictions can approach privacy when they operate in a decentralized IT environment.

Hawaii doesn't have a blanket privacy law, says CDO Rebecca Cai. Instead, the state established privacy guidelines for government agencies. Agencies manage privacy compliance based on their specific data sets. For example, the Department of Health and Department of Human Services have comprehensive privacy standards that align with federal and state requirements.

"It really depends on the specific data set and use case," she says. "That's why, on the data governance side, we don't want to set any blanket rules around what can and cannot be shared. It has to be controlled by the data owners within the departments."

The state is also exploring developing a data sharing and analytics platform to make data more accessible internally while giving data owners full access control of their data sets. Cai says the platform would be crucial to support use-case specific data sharing.

"The data owners can put their data in a secure bubble. When people want to access their data sets, they have to say how the data will be used and how long they'll use it," she says. "The data owner decides at that point whether to share or not based on the regulations for that data set."

New Hampshire expands its data privacy conversation: New Hampshire uses "standing, formal venues" to advance the conversation around data privacy and security, says Deputy CISO Doug Schelb. These activities are engaging non-technical agency leaders in data privacy and governance issues, identifying cross-agency data privacy concerns and creating common building blocks to address them.

For example, the state used a recent update of its incident response plan to open a conversation with agencies about data privacy. It has also expanded the scope of its cybersecurity committee — which includes representatives from all state agencies — to include digital accessibility and privacy. Schelb says the state hopes to drive consensus through this group.

"We're looking to expand the discussion around privacy wider than the security-focused lane that we've been looking at and make it more enterprise level," Schelb says.

Ohio adapts to technology changes: Ohio's approach to data privacy and ethics has evolved in response to changes in the technology landscape, says Raivo Murnieks, the state's chief data officer.

A 2017 state law established Ohio's data program, giving the Department of Administrative Services authority to compel agencies to share data for the purposes of improving services; informing policy; and addressing fraud, waste or abuse of taxpayer funds. A 2019 executive order created InnovateOhio, a unified digital platform which includes a data analytics ecosystem that lets agencies securely use and share data to improve constituent experience.[10]

The state built on this foundation with an adaptive, forward-looking governance policy that aligns privacy, security and AI enablement.[11]

The policy focuses on encouraging smart and responsible decisions about how data is used, covering issues such as records retention and responding to data requests, Murnieks says. It also seeks to involve the right people — including legal experts, IT leaders, security and privacy officers, and chief data officers — in the process.

"We didn't lock down the policy to be prescriptive," he says. "The policies are established in a way that as technology changes, the framework can be adjusted and scaled, and our policies can stay in sync with each other."

Through its DataOhio Portal, the state also established tiered access while trying to promote transparency. The public can access general data, while researchers can request "secured access" that requires the state to authenticate them. In addition, there's a "protected status" category to allow the state to securely exchange data with local partners.

Hawaii, New Hampshire and Ohio demonstrate how governments can create agile, yet effective privacy and data-sharing policies. Whether it's enacting enterprise-wide privacy rules, creating use case parameters to reduce their risk exposure, embracing privacy-preserving mechanisms or developing tiered access controls, it's clear that privacy and ethics policies must be multifaceted and nimble enough to adapt to a changing risk landscape.

Trend #3:

Modernizing and Scaling Data Infrastructure

What's happening now

States and localities are using several approaches to create future-ready data architecture and infrastructure — from migrating more of their assets to the cloud and implementing new data classification and cataloging processes to API-led modernization of legacy systems.

Preparing backend data systems to support AI is the driving force behind these efforts: In the NASCIO survey, a staggering 95% of CIOs said they expected growing adoption of AI and GenAI to increase the importance of data management.[12]

What governments need

State and local governments can take multiple steps to get their infrastructure data- and AI-ready:

Modernize in place. Consider using platforms such as data lakes to integrate data from legacy systems. States and localities will need to develop strong data models and well-defined data schema to support interoperability.

Set a vision. Create architectural roadmaps for future data infrastructure. This process helps agencies plan for how they will create a scalable, secure data foundation for AI and other emerging technologies.

Gain experience and advance analytics maturity. New Hampshire, for example, has launched a pilot around using data for business intelligence, an effort that could inform future AI use cases.

Update purchasing rules. Develop new processes and guidelines for AI procurement that cover issues such as transparency, ethics, accountability and performance.

Look for opportunities to accelerate progress. Third-party tools can speed up AI model training and development. Consider solutions that provide access to prebuilt or customizable AI and ML models.

Strengthen enterprise security. Update current data management, access and use policies with AI in mind.

Real-world example

Raleigh tackles AI readiness: AI has upended how organizations must approach data management, requiring greater agility, says Marina Kelly, CISO of Raleigh, North Carolina.

"It used to be that you set your data management and you held to your policies, and you'd review those once every year or two," she says. "That has completely changed with generative AI. Data management has to be much more dynamic, equitable and secure — but it also has to be deeply integrated into the organization itself."

Raleigh is taking a comprehensive, yet measured approach to modernizing data infrastructure and processes, including:

- Establishing data management standards
- Implementing a data lake and secure data sharing infrastructure
- Shifting from collecting all data to capturing "the right data at the right time, in the right places," according to Kelly
- Encouraging departments to move to cloud-native technologies for certain systems
- Adopting a data catalog platform with a metadata component that lets the city label data for compliance activities
- Aligning data security and data governance strategies
- Implementing a data security posture management platform to discover and control sensitive data across all departments

In addition, the city recently created an autonomous AI roadmap and is gauging departments' interest in incorporating agentic AI. On that issue, Raleigh will proceed cautiously. Kelly says a recent risk-tolerance exercise found "we are in no way comfortable with the full automation of processes using AI."

The city also added new questions to its procurement process to better understand the security posture of AI providers.

Kelly says fostering cross-functional alignment has been key to developing the city's AI approach and modernizing its infrastructure while ensuring data security and innovation aren't in conflict.

"Data maturity and data security are not competitive — they go together," she says. "They are both foundational. Neither should be looked on as a constraint for your ecosystem, but something that's going to enable better business to be done."

Kelly's advice is to modernize with intention.

"From day one, you want to clarify what your data program is trying to achieve and use that vision to drive your investments and buy-in," she says, adding that while tools are important, so are people.

"Your biggest investments are your people and the culture you create around this. You want to train those people. You want to celebrate your wins. You want to create space where your end users can experiment with data and find new and exciting nuggets that make your organization a better place."

DAVID KIDD

Trend #4:

Operationalizing Data to Drive Better Constituent Outcomes

What's happening now

Jurisdictions are getting tangible results from data-driven activities. Many are starting by implementing internal dashboards to build data literacy and promote data sharing.

These efforts exemplify how technology upgrades and strong policies around data governance, ethics and security can help governments deliver relevant, timely and impactful constituent service.

What governments need

Strong interdepartmental relationships: Data initiatives often require information from multiple sources. Trusted relationships across agencies and departments facilitate data sharing that is vital for these projects.

User engagement: The best ideas may come from frontline staff. Listen to their suggestions and engage with them throughout the project to create data tools that are practical and easy to use.

Quick wins to build momentum: Measure results from data-driven initiatives and make sure decision-makers and stakeholders hear about the benefits. Early successes create support for broader efforts.

Data culture: Government workforces must understand why issues like data access, quality and accuracy are important. Data literacy programs and hands-on training help create a data culture in public sector workplaces.

Real-world examples

D.C. manages a critical resource: Washington, D.C., developed a real-time dashboard to manage blood used for field transfusions. The dashboard captures data from multiple sources, including computer-aided dispatch and automated vehicle location systems, as well as status and temperature information from blood storage equipment like mobile boxes and refrigerators. It also tracks the amount and type of blood used by crews when they respond to accidents and emergencies. The dashboard is available in city fire and EMS vehicles.

The city's technology office worked closely with D.C.'s Fire and Emergency Medical Services Department to acquire data from several agencies, integrate it in real time, develop easy-to-use field tools and provide a complete picture for the critical data points, said city CDO Matt Sokol, in a 2025 annual report on D.C. data initiatives.[13]

Ohio improves community health and constituent service: Ohio uses a predictive analytics model to power its RecoveryOhio Overdose Early Warning Dashboard, which helps the state proactively address potential drug overdoses, Murnieks says. On the constituent side, the Ohio Checkbook, with more than a million views annually, gives Ohioans a trusted source for state and local government financial information. Residents even use the state's open data portal to find the best places for recreational fishing. Murnieks says the portal currently has more than 100,000 views for this purpose alone. Internally, the state is building backend dashboards to monitor workforce activities, such as real-time information to enhance Ohio's cybersecurity posture and ensure access to systems and applications is properly governed.

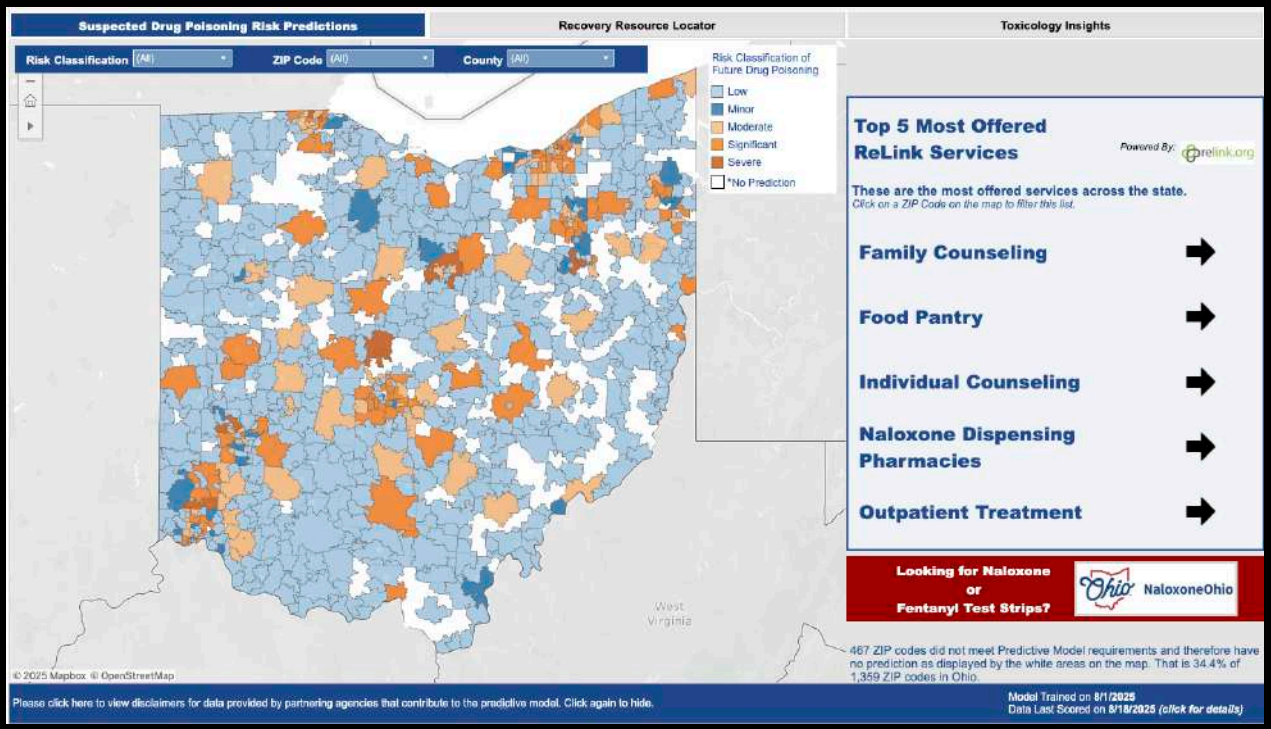
Salt Lake County eases data access and enhances data literacy: Salt Lake's CountyStat platform gives departments access to internal dashboards that provide real-time budget data, operational metrics and department-specific KPIs. The county also created a PowerBI training program for departments to advance their data literacy and empower them to build their own dashboards.

Every departmental dashboard in CountyStat is accessible to other county agencies.

"That's how we started to socialize the use of data and take away the anxiety around data sharing," Lal says. "Like, 'It's okay to share even though you're sharing within the small confines of the county domain. It's okay to share with other people.'"

Those efforts are paying off, he adds. "We've definitely seen progress. There are now quite a few county dashboards that are public-facing, which provides constituents with real-time information."

RecoveryOhio's Overdose Early Warning Dashboard



https://data.ohio.gov/wps/portal/gov/data/view/recoh_od_early_warning

Making Progress Together

Every government organization, regardless of size, must navigate the future of data.

“None of us are ahead of the data maturity curve. The best approach is to help each other and collaborate,” Schelb of New Hampshire says. “There are so many good ideas happening around the country. The trick is finding out what those are, talking about them, and figuring out how you can skip the learning process and leverage good ideas that other people have.”

The insights from IT leaders gathered for this report indicate the pathway to data-driven government involves building adaptive data governance programs, refining data ethics and privacy rules, modernizing and scaling data infrastructure, and finally, putting all these tactics to work by operationalizing data in ways that drive impactful constituent service.

It’s a tall order, but states and localities are making progress.

“I’m very optimistic,” says Hawaii’s Cai. “I see the motivation from government leaders, from the legislature and from the departments to move forward with data and AI.”

Every government organization, regardless of size, must navigate the future of data.

1. https://www.govtech.com/biz/data/nascio-survey-exposes-the-hard-data-truths-of-ai-adoption
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This piece was written and produced by the Center for Digital Government Content Studio.

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