

7 Ways to Put Data to Work for Transformation

Technology modernization is key to transformation in federal government — and data is key to driving effective modernization. But while agencies have ample data on hand, they sometimes struggle to use it to support emerging solutions.

At a recent [GovLoop virtual event](#), government and industry experts explored the role of data in government transformation, the challenges agencies may face and some best practices around effective data management. Here are highlights from their discussion.

THE SPEAKERS

Taka Ariga, Chief Artificial Intelligence (AI) Officer and Chief Data Officer, U.S. Office of Personnel Management (OPM)

Greg Carl, Principal Technologist, U.S. Federal, Pure Storage

Lindsey Saul, Chief Data Officer, U.S. Government Accountability Office (GAO)

1 Keep Data Front and Center

“When we talk about modernization, we don’t always include data as having a seat at the table,” and yet its availability is key to success, said Taka Ariga with OPM.

“Data should act like water: It should flow freely,” he said. That understanding helps set the data management agenda, driving leaders to make data readily available in support of cutting-edge uses, such as artificial intelligence (AI). “Having data that is not machine-readable or machine-accessible entirely defeats the purpose of developing these sorts of awesome capabilities.”

2 Focus on Outcomes

Overall, appropriate data use can help agencies “do things faster, more efficiently and get to better critical decision-making,” said Greg Carl with Pure Storage. To achieve those ends, it matters where and how data is used.

Leaders must “strategically think about the outcomes that are really important to that agency” and how data will support those, said Lindsey Saul with GAO. “Not all data will be relevant at all times, but there will be a subset of data that will be critical to the mission.”

3 Ask ‘Why,’ not ‘What’

IT leaders need to avoid falling into a legacy mindset of “this is how we’ve always done it,” said Carl. That can impede effective data management.

To drive modernization, leaders must take a broader look, thinking not just about what technologies are in use, but why they’re being used. With this in mind, agencies can pivot their IT toward building more consistent and realistic data pipelines, he said.

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4 Don't Get Stuck in Silos

One common obstacle is siloed thinking, Saul said. "There are so many different stakeholders and different ways of doing things, and that's where things start to break down," she said. What's needed are "larger, holistic data management or enterprise data management practices."

Ariga likewise sees individual offices or functions that too often pursue their own interests. To support transformation, he said, "you might start thinking: How do we do cross-cutting analytics? How do we combine X and A, Y and Z together to identify unusual, unexpected patterns? That's hard when we're so laser-focused on our individual missions."

5 Rethink Your Storage Strategy

To use data effectively in support of modernization, focus on storage. "We [talk about] the five S's of storage," said Carl. "It's very simple, as long as you stay focused on the data and you can provide speed, simplicity, sustainability, scale and most importantly, security."

To ensure storage doesn't hinder innovation, Pure Storage recommends standardizing flash media because that solves most problems. Also, to break down silos, an agency's storage strategy should be consistent organizationwide, encompassing policy, accessibility and security perspectives, Carl said.

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6 Adopt a Digital Mindset

At OPM, Ariga is fundamentally rethinking the storage piece of data management. "When we talk about data storage, we tend to think rows and columns, but that's not what the digital landscape looks like," he said. In a modernized environment, there's a lot of unstructured data, from photos and videos to conversational AI outputs.

Instead of rows and columns, agencies might, for example, operationalize such data via a graph database, which has tremendous potential for things such as fraud detection and proper payments. Overall, Ariga said, data use and storage need to be tackled "from a digital mindset, as opposed to trying to improve the traditional analog approach."

7 Reduce the Threat Surface

It's similarly crucial to consider security as agencies look to drive modernization with data. At the infrastructure level, that includes continuous diagnostics and mitigation, Saul said. That can "reduce the threat surface and improve federal cybersecurity response generally," she added.

Agencies also must safeguard the data itself with robust data protection management, delivering additional protections to the most critical mission data and systems on federal civilian networks, she said.

To learn more about how data management can support modernization, [watch the full session on demand.](#)

