How to Raise Your Agency's Data Maturity

Government agencies are experiencing some growing pains when it comes to data-driven decision-making. They understand the concept and have a wealth of data, but in many ways their people, processes and systems are not aligned with this key agency management and performance priority.

This is the case, especially, in many human resources departments. They have the data they need to drive workforce planning, but it's often scattered across siloed legacy systems, not kept up to date or is littered with inconsistent data elements or classifications that make it impossible to understand the single source of truth for agency leaders. In short, their data operations need to mature — quickly.

That was the focus of a recent GovLoop roundtable sponsored by Workday, which brought together government and industry leaders to discuss how to address these significant challenges and prepare agencies for the new opportunities presented by artificial intelligence (AI) and modern data governance strategies.



The Participants

Donald Bauer
Chief Technology Officer for Office of Technology Services, Global Talent Management, U.S. State Department

Matthew Cornelius
Managing Director for Federal Industry, Workday

Berivan Demir Neubert
Director of Analytics, Operations and Governance, Office of Inspector General (OIG), U.S. Postal Service

Michael Wetklow
Deputy Chief Financial Officer, National Science Foundation (NSF)

The Pillars of Data Maturity

Over time, data can become less accurate as a result of poor processes, changing data definitions and taxonomies, and employee turnover. "When records aren't accurately kept or you've got disparate systems with data that's several years old, it can drastically compromise decision-making," Workday's Cornelius said. It's all about agencies having confidence that the data they need is accessible and reliable. Speakers pinpointed important actions to take:

Develop a Single Source of Truth

One of the biggest obstacles to a single source of truth is shadow IT. Often, perfectly well-intentioned people bring in their own analytics tools so they can do their own data analysis. The problem is they end up creating their own database that no longer aligns with the authoritative source of truth within the agency.

Taking the time to clean data up will ensure it's accurate and can serve as the system of record, so employees and managers can have confidence in the data they are using to make strategic decisions.

"[Agencies] recognize the need to go back and fix bad data," Bauer said. "If you're the technology provider for that data within the department, it's your responsibility to create the appropriate APIs within your ecosystem to supply that data when it's asked for."

Go Hard on Governance

The best way to support and impose a single source of truth is through enforced data governance — a process that establishes and enforces policies and procedures for maintaining and updating that data. One way to do that is by building up the role of chief data officers, with responsibility for stronger governance and custody of the agency's suite of data assets and processes.

Neubert added that data governance shouldn't be seen as an obstacle, but an opportunity. "Sometimes it's seen as something that stops us from doing work, but it actually helps us stay within the bounds and work faster," she said. She discussed her agency's approach to the issue, which involves both setting up a data risk environment to gain insights faster and re-skilling analysts into engineering roles.

Move Past Legacy Tech

Legacy systems often can't ingest, process and analyze data as quickly and effectively as newer technology, but agencies must find ways to work around that technology to address their performance and compliance requirements. One solution, Wetklow said, is to adopt open-source solutions and use them in conjunction with that legacy technology.

"There are so many solutions available today that enable agencies to get started with open source, even on legacy technology," he said. "Take this time to develop the skill-building, so you'll be ready when moving to newer technology."

Bauer's agency has worked around legacy technology by creating a user interface extraction, which enables it to use modern technologies like web services to connect to legacy platforms. "That way, the user experience immediately gets the benefit, and it gives us an opportunity to slowly work out how to migrate and get off the old system," he said.

The Path Forward

Agencies are looking for ways to modernize infrastructure, improve processes and find value, all while reducing — or at least not increasing — cost. Here are some ways to move forward effectively and efficiently:

Think Beyond Compliance — and About Your Audience

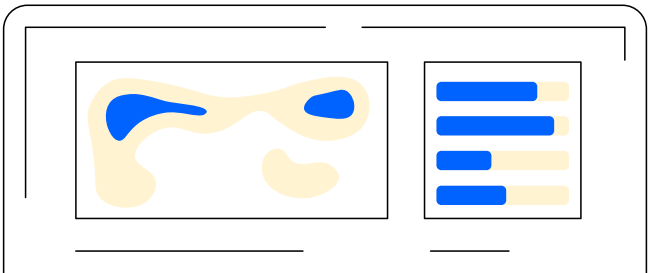
Governance and compliance are important, but they only go so far in providing real value.

"Governance processes aren't always equipped for the times," Wetklow said. "It's also about finding the right way to produce value with your role. How can you serve your program offices, the public and your stakeholders better, and do it in an innovative way?"

Leverage Spending Data to Move Off Legacy Tech

Maintaining legacy software and hardware is expensive — but so is modernization. The most expensive of all, however, is having to keep old systems up and running while building new ones. It's important to track all these costs so that you can convince decision-makers to move decisively one way or another, said Bauer.

"If it costs an agency $15 or $20 million per year to maintain a system, the obvious choice is to modernize, even though it can take three to five years to stand up a new system," he said.



Consolidate Your Systems

One way for agencies to cut costs is by reducing their overall technology footprint. For example, if cybersecurity is a challenge, reduce the systems you have to secure, Wetklow said. Another option is partnering with agencies that share similar processes or systems. NSF took this approach with Federal Information Security Management Act (FISMA) auditors for audit and compliance. It has drastically reduced complexity and cost.

"It's important to narrow down what you're supporting," Neubert said. "One thing we're doing this year and next is figuring out all of our points of consolidation, whether it's backend data or front-end interfaces. We want to create that value in one system versus 20."

Reducing tech also can mean moving workloads to the cloud. It's about figuring out the best way to move things around, consolidate and eliminate resources that don't bring value to the organization, she added.

Advocate for Change

When it comes to getting support for modernization initiatives, you need more than good data or a good modernization plan. You need people who know how to advocate for change.

"Agencies can be more efficient and effective by finding creative ways to save money, improve customer service and reduce cybersecurity risks, but they have to be able to tell their story," Cornelius said. "There is a lot of great creativity and ingenuity happening across the board. None of that happens without smart people who can make smart decisions."

Preparing for the Age of AI

These days, it's impossible to talk about data without talking about the current and future impact of AI. Agencies are rapidly identifying use cases for applying generative AI and related solutions.

Neubert sees trend analysis as a primary use case for AI. In fact, her agency already uses AI to create risk scores for targeting high-risk people. This will empower the OIG to become more proactive in its investigations.

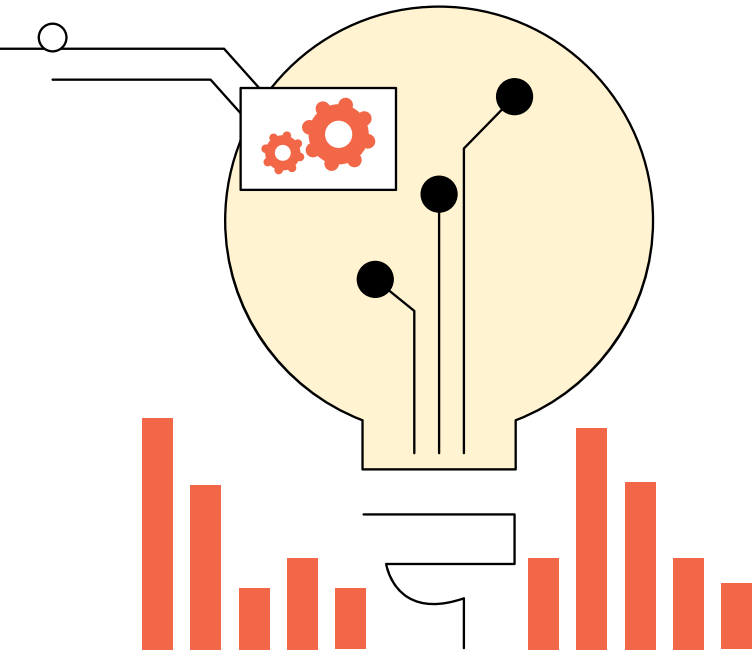
In addition, the agency plans to acquire generative AI licenses for its existing environment. One strong use case for generative AI is to analyze and summarize reports. The OIG has created a lot of reports over the years that auditors could use to do trend analysis and evaluate the impact of OIG's work, she said. That plays to the strength of generative AI.

AI is already in fairly wide use at the Department of State. For example, the agency is already using robotic process automation (RPA) to perform some bulk processing. Bauer said the agency next plans to connect ChatGPT to internal systems to improve search.

"Our chief data officer always says, 'The written word is the currency of diplomacy.' So we've encouraged all of our diplomats to get accounts and start using it to help craft communications," he said.

Eventually, the agency plans to move into retrieval-augmented generation (RAG), an AI-based process that enables large language models (LLM) to retrieve and present accurate information with source attribution. "The idea is to know where you got that answer," Bauer said.





Evolving Solutions

For several years now, agencies have benefited from AI built into commercial products, such as Workday's workforce management solutions. But those solutions can also serve as the foundation for additional AI capabilities.

"There is a difference between the AI that's embedded in our products and works on the back end to synthesize data and streamline processes and AI layered on top," Cornelius said. Workday's core HCM solutions leverage integrated AI to reduce administrative burdens and increase the availability and accuracy of data that decision-makers need to take action. "That's where we have to make sure that the ethics, rules and guardrails are in place," he said.

To position themselves to use AI more fully, agencies should focus on educating the workforce about AI and developing clear policies around its use, speakers said.

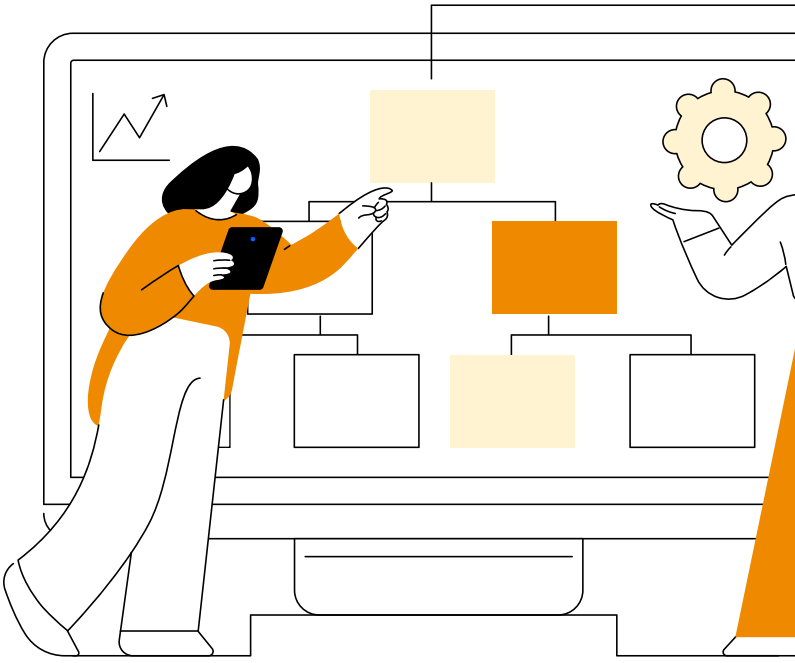
"It's like a Wizard of Oz type of thing," Wetklow said. In other words, agencies can't just take it for granted. Instead, they should take the time to learn about it and make sure employees understand both the capabilities and drawbacks. "There is a saying that you're not going to be replaced by AI, but you could be replaced by someone who knows AI," he said.

Conclusion

Agencies have no shortage of data. And as they continue to digitize their core processes, the growth of that data is accelerating. They are on the cusp of becoming data-driven organizations, with the ability to use data to shape policies, measure the impact of their programs and gain new insights into their operations and services.

The challenge is that many agencies still rely on siloed data stores, resulting in outdated or duplicated data sets, reduced visibility and limited analytics capabilities. These problems are becoming even more pressing as agencies look to adopt AI solutions.

In short, agencies need to raise their data maturity. That means updating their governance strategy and adopting modern data management solutions, ensuring that high-quality data is readily accessible to decision-makers and knowledge workers at every level of the organization. That is how agencies become data driven.



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