FEDInsider

# Federal Agencies Prepare for Advanced AI With Proper Training and Compliance

***As the public and private sector identifies which innovative AI solutions to adopt, they're faced with increased consumer expectations, ethical considerations and questions about operational needs.***

Artificial intelligence applications are rapidly expanding and advancing, and government agencies at all levels are pursuing them to address everyday risks. Yet as awareness of AI's potential and impact grows, so does the need to explore trust, design, development, acquisition and the use of AI by government.

For instance, the White House Office of Science and Technology Policy's Blueprint for an AI Bill of Rights adds five principles to guide the design, use and deployment of AI. Thought leaders from government and industry spoke at a recent FedInsider webinar to discuss how they're implementing AI tools and strategies to improve citizen services.

## Adopting AI in Government Starts With Data

Implementing AI tools in government starts with data, workforce support and training. For the Environmental Protection Agency, that means data and metadata management, and following the Federal Data Strategy to ensure a strong foundation of modern data management to support future AI initiatives.

"This process started by doing a data maturity assessment across the agency, and then working to understand challenges and develop use cases," said Jan Krysa, enterprise data architect at the Environmental Protection Agency. "Next, we had a major initiative for an agencywide data skills assessment... an agencywide survey that looked at things like data literacy and quantifying the results into multiple tiers."

The tiers created from those results included beginner, intermediate and advanced designations based on how skilled agency users were with employing AI. The advanced group consisted of AI users and professionals who will be doing most of the work involving AI at the agency. Next, the EPA plans to build a curriculum to target those professionals, and build knowledge about AI across the agency. The goal is to eventually implement a records schedule classifier system that uses machine learning tools in order to predict which records are scheduled for inclusion in internal documents.

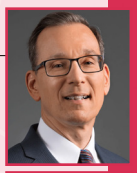
Akhtar Zaman, chief data officer for the National Archives, said they're also aligning the agency's data strategy based on the Federal Data Strategy, and have already established a framework for data governance.

"Building a data culture across the organization is very important," Zaman said. "We need to understand what are the data challenges [the workforce] is having, and how to solve those problems using automation and AI technologies." Data privacy is also top of mind, with the National Archives securing its data using both encryption and data analytics, Zaman added.

At the Department of Education, its Chief Technology Officer Vijay Sharma said they're trying to enable AI in a way that aligns with government mandates that also keeps ethical AI in mind. He said it was also important that users, developers and AI guidance auditors are all included in the planning for that. Ultimately, the agency wants to expand from its current use of basic robotic process automation into a more collaborative platform powered by machine learning and AI.

## Featured Experts:

- Dr. Joseph Glover
  *Provost & Senior Vice President, Academic Affairs,*
  University of Florida

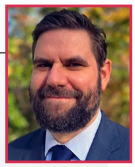


- Dr. Alan Sim
  *Chief Data Officer,*
  Centers for Disease Control

- Vijay Sharma
  *Chief Technology Officer,*
  Department of Education

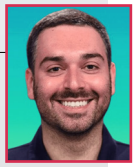
- Akhtar Zaman
  *Chief Data Officer,*
  National Archives

- Jan Krysa
  *Enterprise Data Architect,*
  EPA



- Pat Butler
  *Executive Vice President, Product Management,*
  Babel Street

- Ali Golshan
  *Co-Founder & CEO,*
  Gretel



- Jim Rebesco
  *Founder & CEO,*
  Striveworks

"We are building the technology platform and have selected the best providers. The platform is going to help program officers not only identify and build AI, but also give them a jumpstart on those efforts from day one, including the ability to have RPA applications and platforms immediately available," Sharma said. "We can also share knowledge and existing code, which also gives everybody a jumpstart into AI."

## Building an AI Workforce

The future of AI relies both on talent and an AI-enabled workforce. That's why training, educating and upskilling is crucial. Dr. Joseph Glover, provost and senior vice president of academic affairs at the University of Florida, said that after the school was donated one of the largest AI supercomputers in the U.S., it really "gave us the opportunity to reimagine what education is going to look like in the future, in the AI age."

The school decided to teach AI across the curriculum, not just in the computer science department or the engineering schools. "We believe that these skills and competencies will be absolutely critical for our graduates as they enter the workforce. This will position them to answer what all sectors of the economy need as they integrate AI into what they are doing," Glover said.

He's also trying to spread this model across other universities in Florida. "We think this is going to help fill the national need for an AI-competent workforce and to give a boost to the developing economy of Florida and the southeastern United States," Glover said.

People, along with processes and platforms, are also a critical aspect of AI advancement and adoption. Jim Rebesco, founder and CEO of Striveworks, said it's not only about training people, but also about assessment.

"Understanding where people's data literacy skills rest, and making sure they can interact with AI developers is key if organizations are going to integrate AI systems in a way that is commensurate with both their training and backgrounds," Rebesco said.

## Putting AI Capabilities to Use

The Centers for Disease Control and Prevention (CDC) has been dealing with the largest public health crisis in its history regarding the scale and breadth of the pandemic emergency response effort.

"In many ways we were thrust into the spotlight by having to find ways to think out-of-the-box to respond to the pandemic, and it became very clear that our underlying public health processes and infrastructure was fragmented and could not scale," said Dr. Alan Sim, the CDC's chief data officer.

The National Center for Immunization and Respiratory Diseases leveraged technologies and immunization records to transform data into actionable insights. The CDC also has several projects using AI and machine learning to enable faster and better reporting of health outcomes for the public. Those programs will also help to provide more efficient business operations to address public health challenges.

For example, AI can help identify tuberculosis cases based on image recognition and computer vision on chest X-rays. Natural language processing projects range from scanning legal documentation to analyzing public commentary on CDC or other government policies.

"I would say our primary concern is whether generative AI, or any new technology we are developing or deploying, can be used safely and responsibly," Sim said.

## Overcoming AI Barriers

One surprising challenge to AI development is teaching the technology how to operate if it needs to ingest information in different languages. Pat Butler, executive vice president of product management at Babel Street, said agencies have two paths here: to translate data into English using various machine translation tools and then apply traditional English-based models on that data, or enlist the help of native-speaking experts.

"We have historically found [translation tools] lack the accuracy and have too high of an error rate for use by the Department of Defense or the intel community. For them, there's a much more significant impact if they are wrong, so translation tools are not going to cut it," Butler said. Rather, he suggests building AI models specific to each language. That can, however, create hurdles in commissioning annotation guidelines or bringing in native-speaking experts. To compensate, companies like Babel Street can help pick up the slack with annotation and training, helping to preserve accuracy.

Ali Golshan, co-founder and CEO of Gretel, recommends agencies start by creating a safe sandbox to test integrating different types of data into generative AI technologies.

"What we see most users doing these days . . . is trying to figure out which one of these technologies, services or even managed services are best for the use cases," Golshan said. "But users need to have a better understanding of their needs." To help out, Golshan said that agencies should first dive into learning and discovery, and then implement the tools that offer the best fit for all of their critical missions.

It's clear from listening to all of the speakers at the FedInsider event that AI technologies could potentially revolutionize many agency workflows, but there are still lots of hurdles to overcome. Finding ways to mitigate those challenges, like many of the speakers at the event are already doing, will be the key to ensuring that AI has a smooth transition into key roles within government service.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