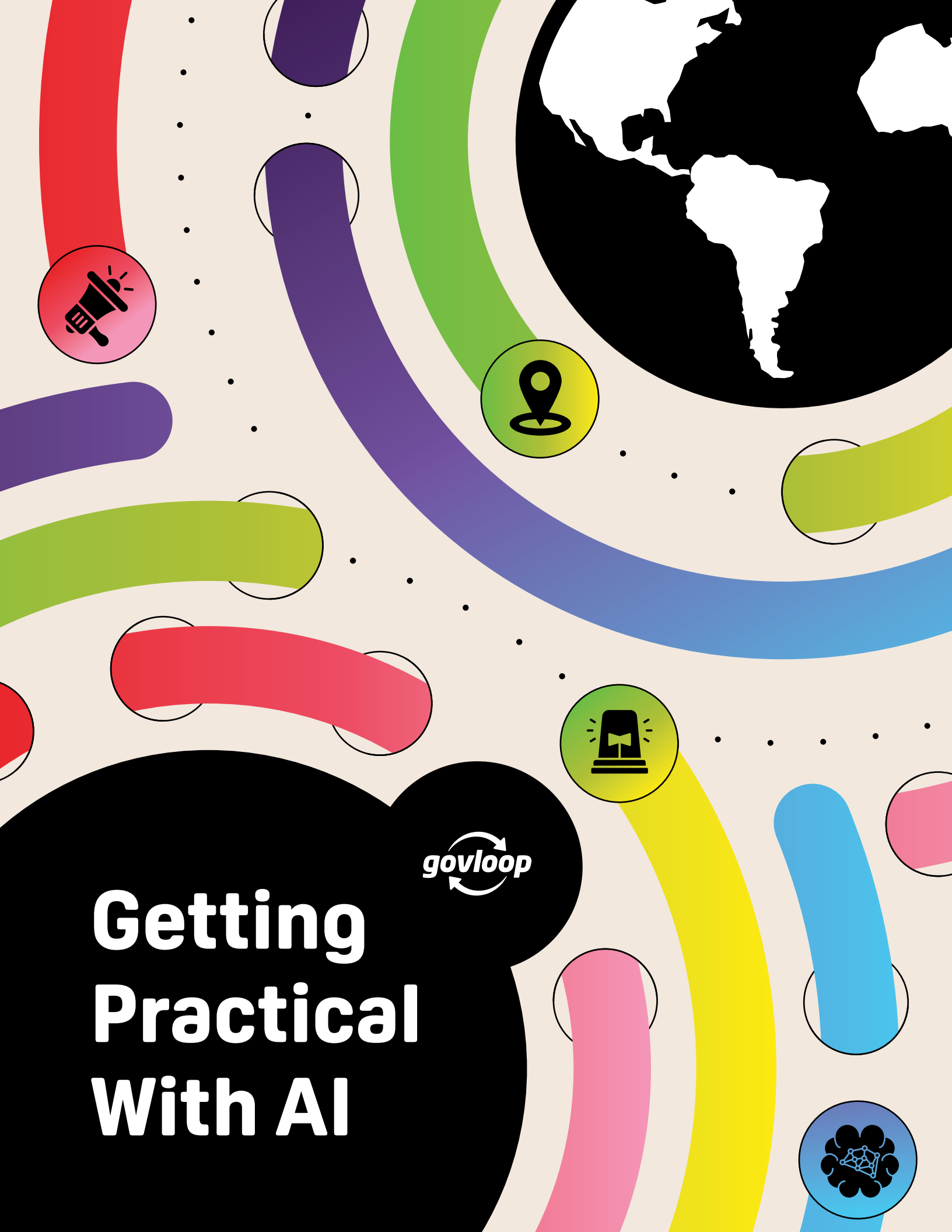
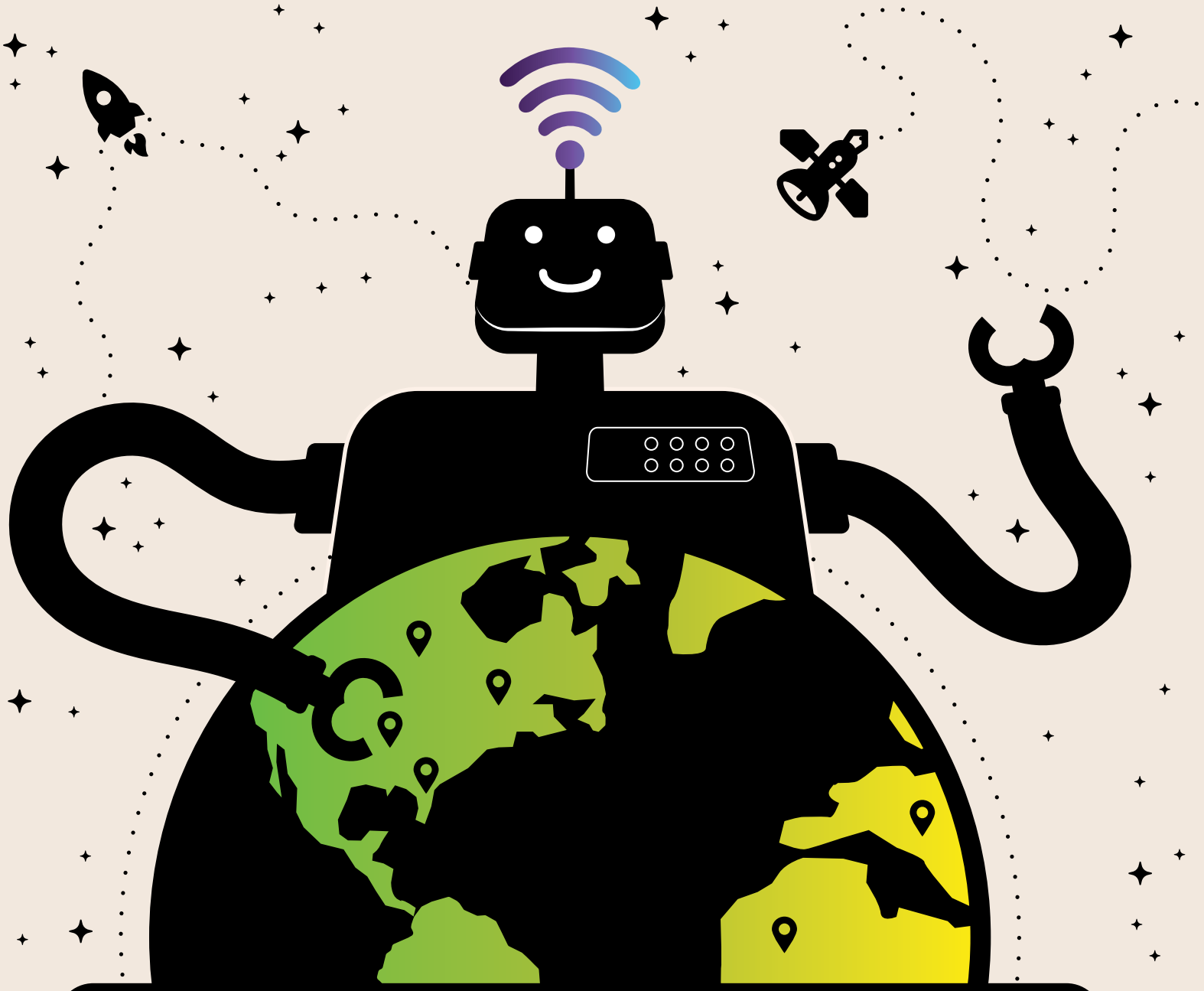

govloop
Getting Practical With AI



Welcome to the Real World of AI

What a difference a few months make! While there's still plenty of enthusiasm about the potential of generative AI (GenAI), investors and the tech press have grown increasingly skeptical of some of the most exorbitant claims. At the same time, down-to-earth, practical applications are proving their value.

So what does that mean for government users? Maybe that agencies have been doing it right all along.

In this guide, we'll share some of the latest thinking about AI, along with a half-dozen examples of how government — from cities and states to federal agencies — are taking advantage of the power of this new technology.

We hope you'll find inspiration for your own AI journey.

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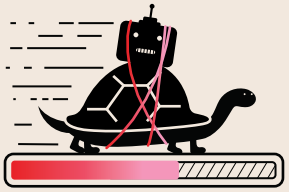
The News in AI

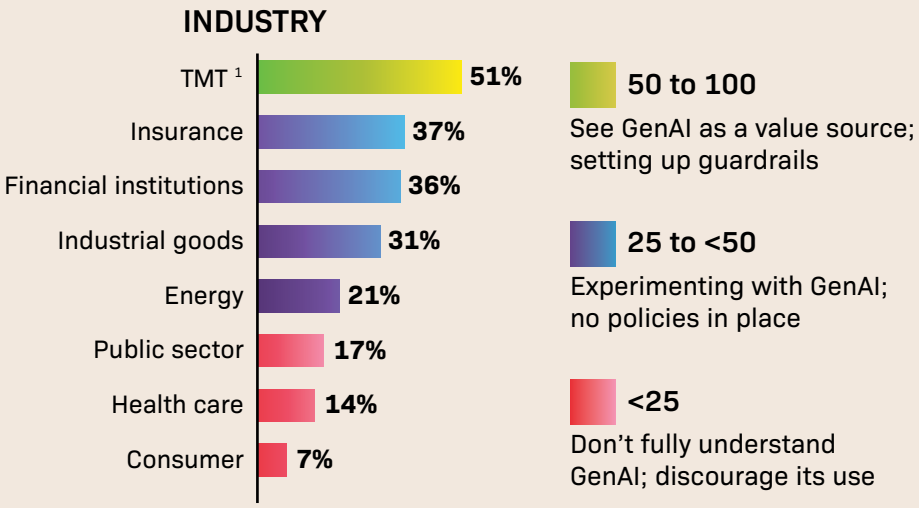


Public Sector Slow to Move to AI

In North America, the public sector lags behind many industries in GenAI maturity, where leaders include technology, media and entertainment, according to a study by Boston Consulting Group (BCG).

NEWS

GenAI Maturity in North America



[1] Technology, media and communications, and telecommunications *Source: BCG*

About half of all states surveyed by the National Association of State Chief Information Officers (NASCIO) and McKinsey said they have done initial research on GenAI, and some workers use AI tools occasionally, but the technology is not part of their regular work.

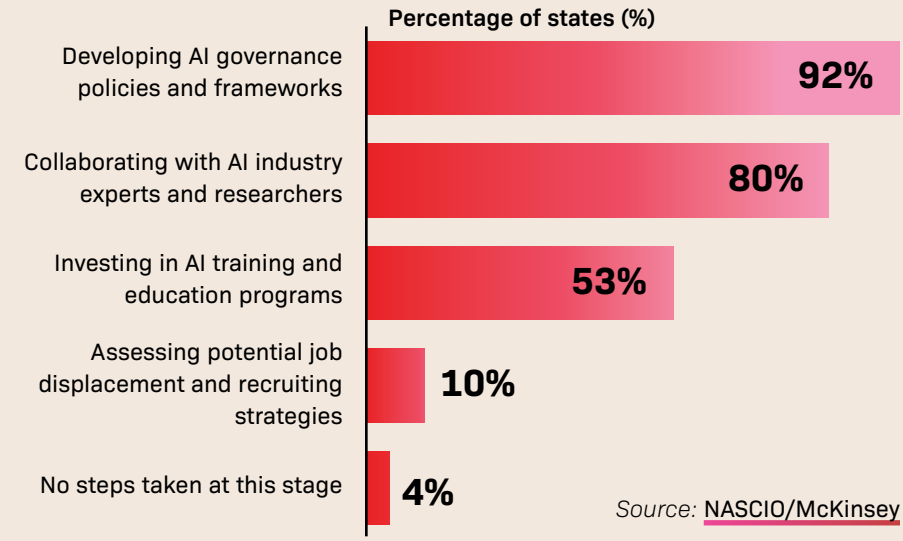
NEWS

States Scale up the AI Workforce

According to the NASCIO/McKinsey report, "With policy guardrails in place, and many pilots underway or complete, now is the time for states to move into the scaling phase to realize the benefits of GenAI."

One of the biggest hurdles the state CIOs said they face is the lack of AI skills in the workforce. More than half are investing in training and education to raise the level.

Steps states are taking to address GenAI's potential impact on their government workforces:



Source: NASCIO/McKinsey

NEWS

AI Faces Sustainability Issues

AI's staggering use of energy and water have raised questions about its environmental impact and sustainability. Although AI may be essential to finding solutions for other sustainability issues, in the near term, its environmental costs could cancel them out.

Given the increasing emphasis on sustainability both in the United States and worldwide, where does that leave government users of AI? The best approach may be the most practical one: Use AI tools where they provide a solid benefit, not just for their novelty value.

NEWS

Is AI a Bubble? Investors Begin to Doubt Potential Returns

A recent report from investment bank Goldman Sachs sent a shiver through the AI community when it suggested that the technology is not generating financial returns commensurate with the estimated $1 trillion the industry will spend to support the technology in the next few years. Many tech journalists have been skeptical from the beginning, noting that AI's current capabilities don't justify its underlying costs.

If AI companies cease to be investor darlings, the technology may take longer to reach its potential. But the naysaying could just be a reaction to earlier overexuberance.

NEWS

The Realities of Controlling Risk

Officials are taking steps to mitigate the risks of government's AI use. Following up on the Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, the Office of Management and Budget issued guidance that includes a Dec. 1, 2024, deadline for implementing concrete safeguards when using AI in a way that could impact Americans' rights or safety. Federal Risk and Authorization Management Program (FedRAMP) has released its priorities for authorizing GenAI vendors for agency use.

Many agencies lifted their bans on use of popular AI applications such as ChatGPT, but some have added prohibitions — including the National Archives and Records Administration, which said in a memo banning the tools that the programs pose an "unacceptable risk."

How AI Could Revolutionize Cyber Operations

An interview with Robert Imhof, Consulting Systems Architect, Fortinet Federal

Adoption of AI has been widespread in recent years, touching every area of life because of its potential to improve operations. For government agencies' cybersecurity operations, AI holds especially great promise.

For instance, AI can automate and enhance cybersecurity practices by recognizing and remediating threats faster than a human could. These capabilities are more important than ever because as attackers weaponize AI, agencies need to respond by implementing defensive AI in their networks.

"It will be an essential technology and tool that really every security professional is going to eventually need to master," said Robert Imhof, of Fortinet Federal, which delivers modern, secure infrastructure to government agencies.

Where AI Can Help

Imhof highlighted several uses for AI in cybersecurity operations. The most profound is anomaly detection, or finding unusual patterns in behavior in network traffic, user activity or application usage that may indicate a compromise.

"We have these in a lot of tools right now, but this is really going to become more sophisticated and more advanced," he said.

AI can also assess risk by quickly analyzing large amounts of data. Eventually, it could even suggest ways to better design security systems.

"The speed of AI to accomplish these tasks, while ingesting that significant amount of data, is going to give it that distinct advantage over traditional tools," Imhof said.

What to Watch Out For

Because use of AI is relatively new, agencies must take care to avoid missteps with it.

The biggest is replacing support staff with AI tools, said Imhof. "Sometimes you have issues like hallucinations" with AI, where it gives false positives, he said. "You still need those security professionals to be able to parse that data and really put it into context."

They also must understand how AI conducts its analysis. "Does it remain local to the agency, or is it sending that data back to somewhere else?" Imhof said. "If it's being sent somewhere else, how is that [controlled unclassified] data being protected?"

AI Best Practices

Whenever a new technology is involved, there's a learning curve — and there's always new technology, Imhof said.

"It's going to be worth investing the time and effort to learn this technology," he said. "Security professionals that can master utilizing AI in addition to their other technical skills are going to be highly sought after by employers."

That will also help separate fact from hype, which is rampant because of the excitement around the technology. That's where cybersecurity operations officials come in again, Imhof said.

"They're going to have to learn how the AI itself works to assess how it fits in [a given] environment," he added.

To do that, he recommends using a test environment to determine how AI-powered defenses work within the network one at a time.

Ultimately, Imhof said, remember that "AI is a tool that can be used to enhance the security of a network, so it should be used in that correct context."

FORTINET FEDERAL

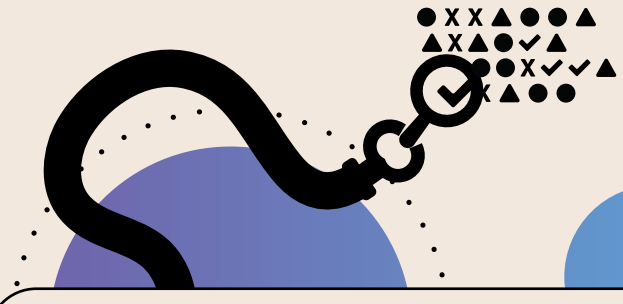
DHS Embraces AI

In March 2024, the Department of Homeland Security (DHS) announced its first Artificial Intelligence Roadmap, which describes the department's plan for agencywide AI implementation. DHS also introduced three pilot projects involving the use of large language models (LLMs) and GenAI. Here are outlines of those projects and their goals.

Finding Clues at HSI

Homeland Security Investigations (HSI), the primary enforcement arm of DHS, is charged with investigating transnational crime and threats. In the AI pilot project, HSI agents will use an LLM to help summarize, search and find patterns in investigative reports and other text-based data.

For example, a detective looking for a suspect in a blue pickup truck could use the LLM to search all homeland security investigations for similar blue trucks, according to an article in the New York Times. DHS says that if the pilot is successful, it could help detect drug and human trafficking networks.



Preparing for Disaster at FEMA

The Federal Emergency Management Agency (FEMA) will use GenAI in a pilot project to help state, local, tribal and territorial governments identify disaster risks and plan mitigation strategies. Such plans are basic to building local resilience, but local governments often lack the time and resources to develop them.

As part of the pilot project, AI will generate sample language from public sources that the local governments can customize to meet their needs, according to FEMA. Having a well-articulated plan helps communities apply for grants to fund disaster-mitigation programs.

Training Agents at USCIS

Officers of the U.S. Citizenship and Immigration Services (USCIS) will soon have training materials available on a GenAI-powered interactive app. The training will be personalized to an officer's specific needs and keep them up to date on current policies and laws affecting their work, USCIS says.

Chatbots will also provide mock interviews so immigration officials can practice their skills.

"The goal is to help enhance trainees' understanding and retention of crucial information, increase the accuracy of their decision-making process, and limit the need for retraining over time," according to DHS.

"Our Department will lead in the responsible use of AI to secure the homeland and in defending against the malicious use of this transformational technology. As we do this, we will ensure that our use of AI is rigorously tested to avoid bias and disparate impact, and is clearly explainable to the people we serve."

Alejandro Mayorkas, DHS Secretary

How MLOps Helps Agencies Get the Most Out of AI

An interview with John Dvorak, Chief Technology Officer, Red Hat North America Public Sector

Building a large AI data model from scratch is prohibitively expensive for most organizations. But the release of AI foundation models, particularly LLMs, has allowed organizations to take advantage of broader community investments in AI.

But there's a catch: Agencies need to tweak and train these models to meet their specific objectives, maintain privacy and ensure regulatory compliance.

"These models are trained on a broad range of data, a wide understanding of language and concepts and images," said John Dvorak with Red Hat. "Fine-tuning is essential to maximizing the relevance of the model, the accuracy, the effectiveness for the specific use cases that you have."

Understanding Foundation Models

Keep in mind that foundation models are purposefully versatile and adaptable. Because they draw from a broad base of inputs, "they can be adapted for use across a wide variety of ranges and use cases," Dvorak said.

But that strength is also a potential weakness. In their raw form, broad-based foundation models are not ideally suited to support the nuanced needs of government agencies, which deal in "unique libraries or vocabularies, terminologies and processes, aren't necessarily captured or semantically linked in the model. They are also not tuned to address bias or handle concepts such as novel or emerging topics."

Those models also may not be adept at protecting sensitive or private data, or may not act in accordance with agency regulations and collection authorities.

How MLOps Helps

By using their own data to adjust the foundation model, whether through fine-tuning or newer strategies such as Retrieval-Augmented Generation (RAG), agencies can drive more effective AI outputs. But any effort to maintain a model in production requires a secure, transparent and consistent process for making improvements over time.

This is where Machine Learning Operations (MLOps) comes into the picture. MLOps offers a streamlined approach to making iterative improvements to the model. "It's taking that model through its life cycle: from data collection, to training that data, putting it into production and then monitoring — then going back and doing it again," Dvorak said.

Red Hat OpenShift AI provides a flexible and scalable platform for building AI-enabled applications. It includes all the elements of MLOps, empowering organizations to automate and simplify the iterative process of integrating ML models into software development processes, production rollout, monitoring, retraining and redeployment for continued accuracy.

With a flexible platform built on a scalable infrastructure, developers can hone the foundation models in support of AI applications that understand government's highly specific subject matter and align to its particular operational requirements.

"OpenShift AI can run on prem, in the cloud or on the edge of your network. The platform is plug-and-play: it's consistent, it's flexible and provides all the components" to train, fine-tune, serve and monitor models, Dvorak said.

Below the Surface

Something transformational is happening in an unexpected place. Sixty feet below **Macomb County, Michigan**, the Public Works commissioner's office is using drones and AI to inspect sewer lines. It's the first time the state has deployed this type of drone and AI, which let workers scrutinize lines more safely, cheaply and efficiently than ever before.

The county's sewer transmission line serves 850,000 residents in 25 municipalities, including Detroit. Regular inspections are an absolute necessity to prevent collapses like one that occurred in 2016. That incident led to the evacuation of 23 homes and the condemnation of several houses.

The sewer drones, outfitted with LED lights and protective cages, carry high-definition video cameras through large interceptor drains that collect and remove water from the soil. An AI system analyzes the footage to look for compromised areas and make recommendations to engineers. The flights and AI inspections make what used to be months of work possible within mere days. They cost the county less than $100,000, and no new staffing was required.

Commissioner Candice Miller called the technology "transformational" and spoke of the excitement surrounding the change. She predicts other jurisdictions will switch to the same type of system. For Macomb, she believes it will lead to millions of dollars in savings, more frequent inspections, better information about the sewer infrastructure and a safer community.

Don't Trash This Place: The Trucks Are Watching

Litter, dilapidation, overgrown yards and illegal dumping damage a city's appearance and livability. But it's difficult for code enforcement officials to learn about and process every incident.

In **Columbia, South Carolina**, garbage trucks could become the eyes of the city's Public Works Administration, Using a beautification grant, the city is testing a program that would outfit trash trucks with cameras that gather footage for an AI system called City Detect to analyze for code violations -- a potential boon to code enforcers.

Recently, a 12-week pilot surveyed half of the city, revealing 7,000 potential code violations. Those included debris and litter, cars parked in yards, and overgrown properties. City Detect can also spot illegal dumping, which Columbia Chief Code Enforcement Officer Richard Blackmon said is one of the most common violations.

Homeowners associations are optimistic about the increased accountability that City Detect may bring to Columbia. Some residents are concerned that the AI may flag them for normal transitional activities, such as moving or renovations, but City Detect creators say that the system can account for non-violation contexts. Overall, its goal is to expedite code enforcement, which will improve both the city's appearance and health.

Modernization For — and With — AI

An interview with Matthew Rose, Industry Principal, Global Public Sector, Snowflake

Federal AI adoption is increasing. Also, national rulemaking about AI safety and security is increasing pressure on agencies to refresh their IT infrastructure. Prior to COVID-19, said Matthew Rose of Snowflake, the Government Accountability Office reported that some federal systems were as much as 60 years old. Readying them for AI has highlighted the importance of architectures that enable AI use at scale.

But, according to Rose, "you cannot have an AI strategy without a data strategy."

An Ecosystem for Data

Legacy data architectures are expensive — and, in some cases, impossible — to maintain. Outdated programming languages, incompatible apps and siloed data impede modern security measures and comprehensive analytics. Moving to the cloud has made it possible for agencies to share data and standardize security. The next step, Rose said, is to normalize the data layer, eliminating redundancy that bloats databases and can cause errors.

"When you normalize the infrastructure layer, the cost and inefficiencies are reduced. The same [thing] occurs when you normalize the data layer," he said. "It frees up the user's time and energy. You can focus on getting access to the data in a secure way and building applications [that] allow the users to achieve what they want to."

In California, for example, the onset of the pandemic resulted in an explosion of data that overwhelmed a legacy public-health platform, which couldn't scale up to meet the sudden needs.

The California Department of Technology brought Snowflake in to deliver a secure, centralized platform for all the incoming data, including positive cases, testing, deaths and available hospital beds. Snowflake Marketplace enabled secure data sharing with other state agencies, departments and health partners.

"It reduced cost, yes, but more importantly, questions that had taken months to answer now were answered in hours," Rose said.

Where AI Will Take Us

The ability to scale is even more important as agencies adopt AI. "Most organizations start with a proof of concept or a pilot," Rose said. "And that's right. But they commonly overlook the idea of scaling. With each [pilot] project, leaders should ask themselves, 'What would happen if this is hyper-successful and we need it everywhere?'"

Structure the pilot with the ability to scale, he advised. That also applies to data — lay a technical and contractual groundwork that can incorporate data from multiple sources.

AI's capabilities continue to improve. "What's just around the corner is AI for agents," he said. AI agents can focus on just one function, such as improving prompts, researching an answer or editing a document. Another AI brings all the results together in the final product.

Snowflake's tools will help pave the way. "We're focused on making AI easy, efficient and trusted," said Rose. "What gets us up every single day is the fact that we are charged with mobilizing the world's data so it can be utilized to its full potential and full value."

AI Augments 911, Emergency Response Efforts

Cities and counties across the country are piloting the use of AI to support emergency response agencies, with a focus on helping 911 dispatchers and first responders gather, analyze and act on incoming information more quickly and effectively.

One particular area of interest is 911 call center operations. A 2022 survey of 774 call centers found that more than a third were stuck with 36% of their positions unfilled, and at many that number exceeded 40%, according to the International Academies of Emergency Dispatch.

AI has the potential to reduce the workload of 911 dispatchers, either by offloading common tasks or by reducing barriers to their effectiveness, according to researchers at the University of Maryland Center for Health and Homeland Security (CHHS), a nonprofit consulting group and academic center.

Promising use cases include:

- **Enhancing** the audio quality of 911 calls, allowing dispatchers to better understand callers and respond more quickly, ultimately fielding more calls
- **Creating** real-time maps of emergencies, which can be shared with first responders heading to the scene
- **Integrating** 911 systems with smart city applications, giving them access to information collected by internet-connected smart devices in the area around the emergency

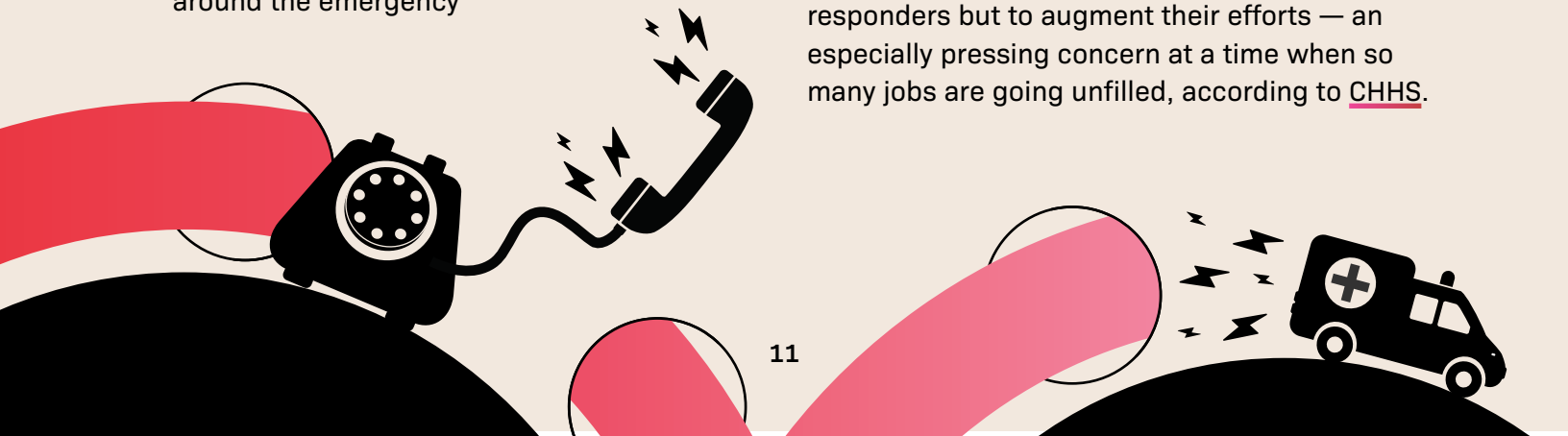
Here are some real-world examples of AI supporting emergency response:

Wildfire response: The University of California, San Diego, and the California Department of Forestry and Fire Protection are testing whether AI can help detect fires in the wilderness before they get out of control. Researchers have set up more than 1,050 high-definition cameras across the state, with AI scanning the images for air particles that might indicate heat, fire or smoke. If any are detected, the system notifies the appropriate authorities.

Language translation: The city of Baltimore's latest 911 system uses AI to provide dispatchers with automated two-way translation of more than 140 languages. The on-the-fly translation service reduces the need to spend time connecting with human translators, which can be slow and frustrating. City officials say that in the past, non-English speakers have been reluctant to call 911 because of the language barrier.

Redirecting non-emergency calls. The city of Portland, Oregon, has deployed an AI-based automated attendant to screen incoming 911 calls. The conversational program, called Case Service, asks basic questions to determine if callers should be passed through to dispatchers or routed to other resources. According to the latest data, approximately 32% of calls to the 911 service are not emergencies.

In these and other use cases, AI is not seen as a way to replace human dispatchers or first responders but to augment their efforts — an especially pressing concern at a time when so many jobs are going unfilled, according to CHHS.



Transforming Government With AI

An interview with Mark Hughes, Chief Strategy Officer; Stephen Moore, Chief Technology Officer; and Chris Steel, AI Practice Lead, AlphaSix

AI is changing the way government does business. Through automation, predictive analytics and advanced data analysis, AI is set to enhance operations and service delivery, said Chris Steel of AlphaSix, which provides data management platforms and tools for data analysis.

"Its transformative potential in government operations is vast, ranging from predictive analytics in defense and law enforcement to automating benefits processing, and everything in between," he said.

And it's time for agencies to get started, said Mark Hughes, also of AlphaSix.

"You don't have to start large if people are interested in playing with the tools and seeing what they can do," he said. "It easily scales as their needs scale."

Getting Practical

Agencies are using AI for a range of applications, he said, including anticipating maintenance needs in public infrastructure, automating routine administrative tasks and using natural language processing for more responsive chatbots.

"Some of these innovations not only streamline processes," Steel said, "but they make government services more accessible and responsive to citizen needs."

AI also plays a significant role in cybersecurity. For instance, at a large federal agency, AlphaSix used ML and AI to create a complex anomaly-detection tool to protect sensitive customer data. "This not only secures critical data, but streamlines operations,"
Steel explained.

Overcoming Hurdles

Preparing to adopt AI takes work, AlphaSix's Stephen Moore said: "The first thing is just knowledge. You need [someone] who understands the technology behind the buzzwords." Because there's a shortage of skilled AI professionals, agencies may have to bring in vendors and consultants who can provide that expertise.

Another issue is having data that is AI-ready. "If your data's spread all over the place in a bunch of stovepipe systems, it's going to be hard to unlock the true value of looking at a higher level across datasets," he explained.

Connecting all those silos unleashes vast amounts of data, often on systems that aren't designed to handle those volumes, forcing analysts to summarize or use fewer datasets. "They're missing the input that they would need to get the output, the analysis they're looking for," Moore said.

AlphaSix brings 13 years of experience in developing data tools and platforms to help agencies spend less time on data management and more on analytics, Hughes said.

Its solution is a data fabric, a system that starts with bringing in billions of records from diverse applications and making them available for analysis. The next step is to run queries and build the required analytics. "And the third phase is to add in AI and ML so you can start building models that can detect more in real time," Moore said.

AI is ready for its role, Steel added. "It's time to embrace AI as a transformative tool for government."

Hawaii DOT Predicts the Future

Like many government agencies, the **Hawaii** Department of Transportation (DOT) — responsible for all the state's roadways, airports, harbors and other transportation infrastructure — had more data than it could handle. That put it at a disadvantage, since officials could react to safety hazards, such as traffic accidents, but not anticipate them.

"In the past, we would hold off on collecting data because we couldn't do anything with it," said DOT Director Ed Sniffen. Today, however, AI technology filters a vast amount of information from various datasets so that DOT staff can make informed, proactive decisions.

Initially, "we had to train [DOT's] AI platforms to ensure they helped us act before an incident or accident, to prevent it," Sniffen acknowledged. Now, DOT is incorporating and analyzing data from other entities. For example, high school students are using the AI program Road DX to analyze their campus for traffic blind spots.

DOT has begun using AI to better predict climate-related infrastructure needs and foster safer, more resilient communities. Using the technology, "we are affecting things that will benefit communities, given what we know is coming in the future," he said.

New Jersey Supplies Employees With GenAI Tools, Know-How

New Jersey Gov. Phil Murphy wants state employees to learn how to use GenAI to provide better services to the public, but he wants them to do so without compromising security or privacy. That dual focus on innovative, responsible AI was reflected in the simultaneous rollout of the NJ AI Assistant, a GenAI tool designed specifically for state employees, and a companion training program.

The NJ AI Assistant provides employees with access to an AI tool that is hosted on the state's technology infrastructure and comes with built-in safeguards that prevent users from compromising the security or privacy of state data, either intentionally or unintentionally. As part of the program, the state does not allow its own data to be used to train any vendor-provided LLM, which could put that data at risk of exposure.

But New Jersey isn't just banking on a foolproof platform. The state developed a new training program to help employees understand how to use GenAI responsibly. The course, developed in collaboration with InnovateUS, provides an overview of how GenAI works; highlights risks around security, privacy and bias; and outlines key state policies. Additionally, the curriculum covers basic GenAI use cases, such as document summary, content creation and brainstorming.

The training course, offered through the state's learning management system, is available to government employees and contractors, according to the training website.

"With the launch of the state's very own AI Assistant and the GenAI training course ... we are empowering our public servants with the knowledge, skills, and training to comfortably and responsibly leverage this technology to solve real problems for New Jerseyans," Murphy said in a press announcement.

How AI Can Help Drive Mission Success in Government

An interview with Dom Delmolino, Vice President, Technology Solutions Architectures, AWS, and Adilson Jardim, Senior Vice President, Public Sector Solutions Engineering, Salesforce

Government is understandably excited about the potential for AI to elevate constituent services and enhance mission outcomes. But AI needs data — lots of data — to understand patterns and deliver intelligible guidance to federal workers.

With this in mind, "the modernization challenge really revolves around making sure that data is prepared, accessible and ready to be used," said Dom Delmolino of Amazon Web Services (AWS).

At the same time, government modernization teams must ensure that their infrastructure upgrades deliver deeper insights into end-user needs. "We can sprinkle AI everywhere, but what if you don't know who it is you're interacting with?" said Salesforce's Adilson Jardim.

In government, "there are silos of data everywhere," Jardim said. To bring AI to life, agencies need a modern environment that enables them to understand "who it is that's engaging with you through your service delivery."

Putting AI to Work

As agency leaders tackle these hurdles, they need to think about the desired outcomes and how AI can add value to the mission.

In terms of constituent service, that might mean using AI to better manage the "crush of calls" that can roll into a government service center, Jardim said.

For instance, suppose a new federal benefit becomes available. "We're talking about potentially 20, 30 or 40 million people trying to register for a service or a benefit that we didn't have a week before," he said. That scalability "is where we see the potential value of AI helping."

Another promising area is in the use of AI for intelligent document processing. Agencies now can leverage AI to "analyze and use the data that's been locked up in some of those paper-based workflows," Delmolino said. "We're starting to see real adoption and success there."

Jardim pointed to several agencies that already use these capabilities. The Internal Revenue Service uses AI to streamline tax submissions and reduce the need for human interventions, he said. And education agencies are tapping AI to more effectively sort through vast numbers of grant applications, an effort that previously required extensive human labor.

Across a range of government functions, "when we take AI and we put it in the hands of the people who have to do the work, we make them so much more productive," Delmolino said. "These tools help them do their job faster, do it more quickly, do it more accurately."

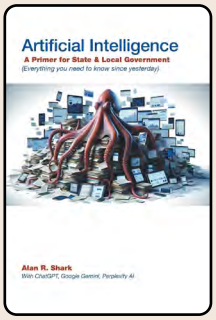
All that starts with data. "Is there a tangible problem that we can solve for? And what's the data that is ultimately required to solve for that problem?" Jardim said. When agencies can answer those questions, they're well on the road to realizing the benefits of AI.

Augmenting Intelligence in State and Local Government

Alan Shark is an Associate Professor at George Mason University's Schar School of Policy and Government, an affiliate faculty member at GMU's Center for the Advancement of Human-Machine Partnership, and Executive Director of the Public Technology Institute.

He's also the author of "Artificial Intelligence: A Primer for State & Local Government."

The cover of the book gives away his message: AI gets more capable every day, and governments need to learn about and experiment with it, starting now. The book was drafted, edited and illustrated with the aid of AI.



"I wanted to show proof of concept for what can be done," Shark said.

Experiment Safely

The biggest AI mistake that state and local governments make is focusing solely on its hazards, he explained. "I think everybody is so afraid of what this could do. They've had these commissions and study groups and whatnot, and they've instilled a sense of fear," he said. "What worries me is that everyone's talking about guardrails and restricting use, coming up with things 'thou shalt not do' as opposed to what we should be doing."

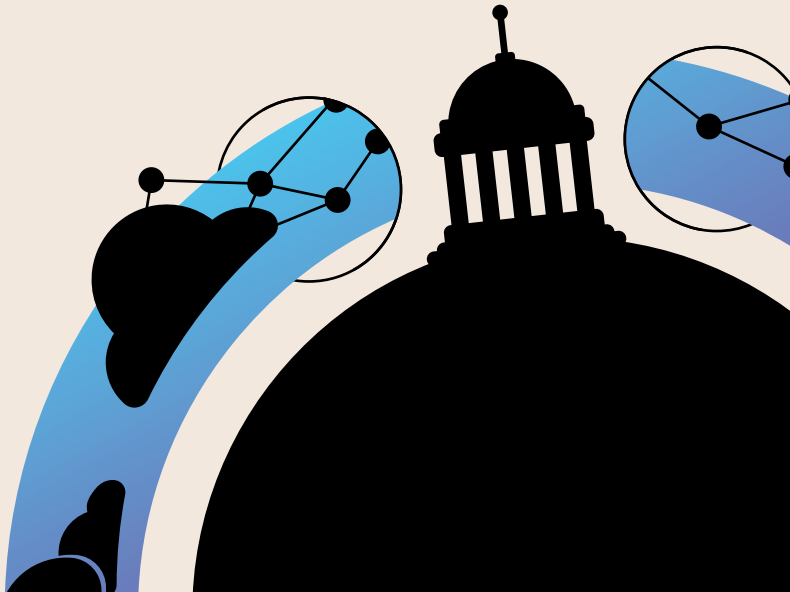
He recommends an atmosphere of curiosity. "Let's experiment. Let's see what we can do," Shark said. One way to get users familiar with the possibilities is to create a sandbox where they can test implementations without releasing them to the wider system or to the public, he advised.

Shark also recommends overcoming fears with information. He's laid out a sample curriculum for basic in-house AI training but says most agencies feel the need to bring in expert trainers. And because new AI uses emerge every day, he suggests having regular internal AI meetings for people to exchange their experiences.

A Valuable Tool

AI is already in use more than people realize, Shark said, especially in applications that improve individual productivity. Government enterprises have been slower than the private sector to adopt the technology. Where it is being used — for such as in digital assistants and chatbots — the quality of the responses has become more realistic. "The quality of voice responses has really improved, almost to the point where it's hard to decipher whether this person is real or virtual," he said.

Data analysis offers additional opportunities. "This is where AI works its best, where it can really do things that humans can't possibly do within a given time frame," said Shark. "An AI system can look at things and see anomalies, see patterns that we may very well miss, and can do it in microseconds." That helps agencies make more informed decisions and predictions, and better understand health, public safety, transportation and other issues.



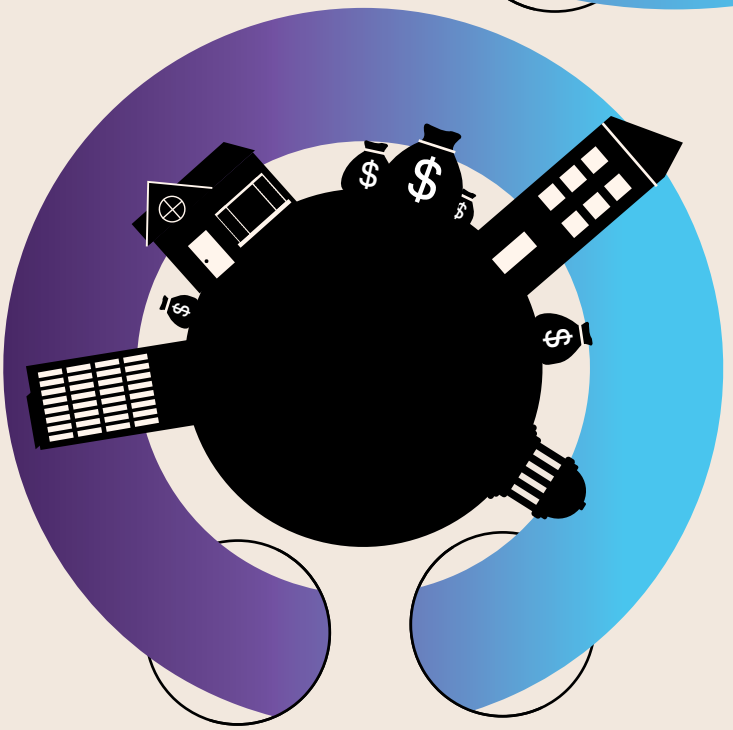
What About the Cost?

Although familiar AI offerings are free to the public, that obscures hefty costs, including energy and data center requirements. “We just type in this little dialogue box, or we download a document or ask it a question. We don’t see what goes on behind it,” Shark said.

Adapting the technology to agencies’ specific security, privacy and data access needs will be expensive, he explained, and agencies must make tough choices. Someone will need to decide which employees have access to AI applications, he said.

“Somebody has to say, ‘How does this meet our mission? How much better are the outcomes if we use this?’” Shark said. “You’re going to have to justify [it] in terms of costs [and] benefits. If the answer is, ‘It makes us more accurate, it’s more responsive to public need,’ then it becomes [easier] to justify.”

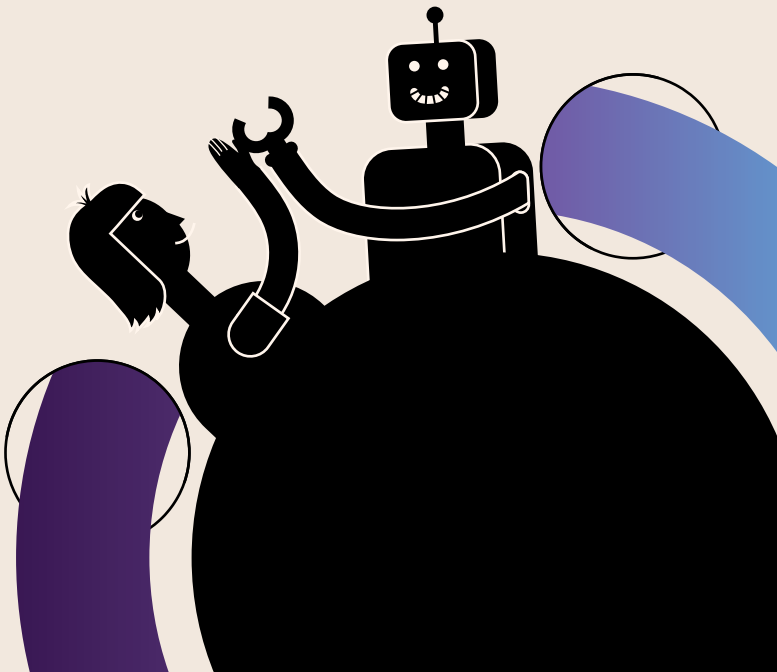
For most state and local agencies, AI will be available as a cloud-based subscription service. “You’re either paying for it on a monthly basis or on a usage basis, and you’ll have to understand up front what those costs will be.” As with other cloud services, it initially might be difficult to estimate usage. “It’s going to be a learning curve on two parts: recognizing [AI’s] cost and recognizing all it can do,” Shark said. “Not only are we going to use it and pay for it, we’re going to use it more.”



Enhancing, Not Replacing

Shark acknowledged the concern that AI will replace jobs, but he said people and AI can work together to produce better results than either can alone.

“When [you] think of AI, most people think of it as ‘artificial intelligence,’” he said. “The AI that I think of today is ‘augmented intelligence.’ It’s augmenting humans in terms of making what we do better, more productive, and hopefully more accurate.”



How Agencies Can Bring AI to Life

An interview with Maria Fahmi, Executive Vice President, Technology & Engineering, V3Gate

AI offers government agencies unprecedented opportunities to enhance efficiency, improve decision-making and deliver better services to citizens.

"Generative AI specifically enables agencies to automate complex tasks such as content creation, data analysis and predictive modeling," said Maria Fahmi with V3Gate, which specializes in providing emerging technology to the public sector. "It empowers agencies to innovate rapidly and derive insights from large datasets that were previously impractical to process manually."

But agencies may struggle to bring AI to life. They may face challenges deciding where to house AI infrastructure and when creating guardrails for safe data usage, including bias removal and data authenticity. Best practices can help implement AI safely, securely and effectively.

Tips for Success

Agencies should start by developing a clear AI strategy, one "aligned with their mission objectives and operational needs," Fahmi said. "Identify specific use cases where AI can add value, whether it's improving service delivery, enhancing operational efficiency or addressing regulatory compliance."

It's important to prioritize data quality to build trust with end users. This means ensuring that the data you're collecting and processing is authentic, reliable and relevant. Inaccurate or low-quality data can lead to misleading outputs.

It's also important to prioritize strong data governance and security. "Implement robust data governance frameworks to ensure the ethical use of data and protect against breaches," she said. "Establish stringent security measures to safeguard sensitive information and comply with relevant regulations."

Agencies must promote accountability, which means being open and honest. "Ensure transparency in AI algorithms and processes," she suggested, "to build trust among stakeholders and the public." Document AI methodologies and practices to facilitate audits and demonstrate compliance. And organizations must continuously educate staff on AI tools, to maximize AI benefits.

"Equip your workforce with the necessary skills and knowledge to leverage AI technologies effectively," Fahmi said. Trainings and workshops offer opportunities to upskill employees in AI concepts, data analytics and cybersecurity. Interacting with AI immersively is important.

Choosing the Right Partner

And agencies should choose a vendor that has demonstrated expertise and knows the public sector. "It's important to have a partner that understands the specific challenges the government faces," Fahmi explained.

A trusted vendor "can deliver tailored AI solutions that align with your agency's objectives and regulatory requirements," she said.

V3Gate, for example, has expertise in leveraging technologies such as AWS Generative AI to streamline operations, enhance decision-making and improve services, she noted, and is "uniquely positioned to provide customers with an agnostic viewpoint on AI solutions."

"Our approach," she said, "ensures agencies derive practical, measurable value from AI investments while maintaining compliance and security."

AI is no longer on the horizon — it's here — and "the best thing to do is be proactive, because otherwise you will have to force-fit solutions with limited time," Fahmi said. The right partner can lay out options and provide valuable guidance for navigating today's complexity.

Learn More

This the second of three AI guides for 2024 that explore a range of AI best practices for government. See the first one, “Gearing up for AI,” **here**. Pre-register for the upcoming guide **here**.

GovLoop’s mission is to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 300,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to the public sector.

For more information about this report, please reach out to info@govloop.com.

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