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How to embrace transformational AI

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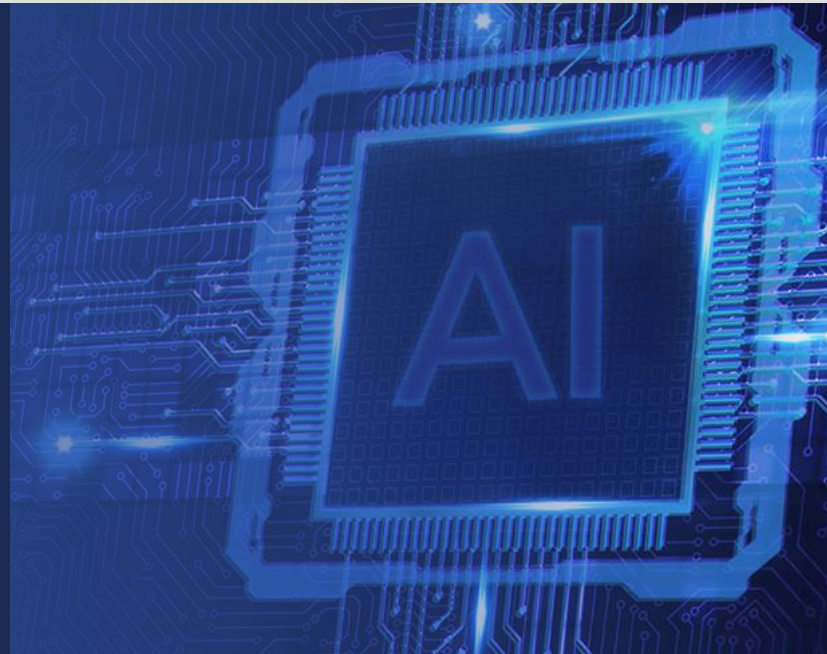




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The potential of emerging AI capabilities takes hold

Every day, we read about a new artificial intelligence tool or possible use. The speed of evolution seems to be happening at a rapid-fire pace.

That speed is starting to drive an evolution in AI uses — or possible uses — in government too. Instances of narrow AI, robotic process automation and big data analytics are well established, but now agencies want to test, adopt and scale newer AI capabilities as well.

“There are new opportunities to reshape government services for the better, to give everyone the opportunity to feel relief rather than frustration, to have the relevant context understood and to feel confident that their data and privacy are being rigorously protected,” points out Mo Earley, portfolio lead for federal high-impact service providers at the Office of Management and Budget.

And interestingly, within the White House and across agencies, there’s a willingness to be in on AI technologies early. It’s why the administration showcased a dozen trail-blazing use cases at an AI summit. The goal? To provide inspiration and encourage trials and tests across government, shares Arati Prabhakar, director of the White House’s Office of Science and Technology Policy.

“Usually, when we are talking about projects, we are talking about very concrete things that are happening today, that are already locked into budget. This is actually a bit different,” Prabhakar notes. *(Learn more about how the administration is encouraging agencies to take the AI leap on Page 3.)*

Clearly, success will require an investment in people and technology. The administration views that people aspect as critical and has since before President Biden issued his AI executive order. There’s a serious push under way right now to recruit and hire people specifically to work on federal AI initiatives.

The White House believes it’s possible to attract people to these jobs in part because techies outside the government are expressing interest in joining these federal efforts. “The message is clear: The public is ready and motivated to join the federal government to work on AI priorities,” notes the AI and Tech Talent Task Force in a new report. *(Read more about the government’s hiring efforts to attract techies to federal AI jobs on Page 26.)*

In this ebook, Federal News Network journalists take a look beneath the hood at several AI initiatives taking place across government. We also talk to industry experts about tools and approaches that can help agencies use AI to make transformational changes in how they operate and deliver on their missions. We hope you find these articles both inspirational and aspirational.

Vanessa Roberts
Editor, Custom Content
Federal News Network

White House showcases what's possible with AI across 12 agencies

BY JORY HECKMAN

The Biden administration expects artificial intelligence will set a higher standard for a range of government services and is showcasing what's possible with these tools.

The White House's Office of Science and Technology Policy (OSTP), during an "AI aspirations" summit, demonstrated how a dozen federal agencies are up to the task of using AI to deliver more services to more people.

At the event, OSTP Director Arati Prabhakar said accelerating the use of AI in government will require expertise, resources and datasets from the private sector and academia.

"To build this future, we will need to do together what we can't do separately," she said.

Shalanda Young, director of the Office of Management and Budget, said AI "shows so much potential" for agencies to provide better customer service to the public — as long as agencies deploy the tools effectively.

"This is actually an opportunity for us to embrace exciting changes and show that this power can be used for good, especially for services. But it also reminds me if we get it wrong, and we don't marry the need to improve government service and use AI to do that in a way that is beneficial for people ... if we don't use AI to actually equitably deliver, we will lose people and their trust," Young said.

Revving up AI in government

Mo Earley, portfolio lead for federal high-impact service providers at OMB, said that with the advent of AI, "there are new opportunities to reshape government services for the better, to give everyone the opportunity to feel relief rather than frustration, to have the relevant context understood and to feel confident that their data and privacy are being rigorously protected."

Earley continued, "If done right, AI could help bring new opportunities that can more effectively connect each individual with the right support in a seamless and secure way."

This is exactly the right time to ask: What could go wrong? Because the answers to this question point the way to building the protections and mitigations before a new technology is deployed.

— Arati Prabhakar,
Director, Office of Science
and Technology Policy



The summit featured leaders from across the government, including the Commerce and Education departments, and the National Science Foundation:

- Commerce Secretary Gina Raimondo said the National Oceanic and Atmospheric Administration is leveraging AI to create faster, more accurate weather models.

“NOAA’s vast data archives will help train the datasets needed to create AI predictive weather models,” Raimondo said.

- NSF Director Sethuraman Panchanathan said the past 50 or 60 years of sustained federal research in AI is driving the breakthroughs happening now.

“NSF, of course, has been investing continuously in AI, even in AI winters. And here we are, all of us seeing the outcome of that. Yes, there’s a lot more work to be done, and NSF is truly excited to be able to continue to work with all of you and achieve those innovations,” Panchanathan said.

- Education Secretary Miguel Cardona said AI could cause “enormous disruption” in schools and universities across the country, on par with the rise of the internet age.

“The AI train has left the station, and it’s moving full-steam ahead. It may be in its early stages, but we can be sure that it’s going to be present in the homes and in the classrooms of our country,” Cardona said. “And we can be sure that young people are going to use it in their lives and in their education — perhaps in ways we haven’t even dreamed of yet. So we have to meet them where they are.”

Prabhakar told reporters in a call before the event that the administration is showcasing work that’s already underway at a dozen federal R&D agencies. “These are specific advances that are paving the way for even bigger things that are ahead,” she said.

Government looks to partner with industry, academia on AI

The administration wants to highlight the potential of AI to accelerate drug research and approve new medications in “months rather than decades,” support individualized programs for K–12 students and enable neighborhood-level weather forecasts, Prabhakar said.

The White House also expects AI to accelerate progress in raising the standard for customer services across the government.

“Accessing the government services that are intended to help people in their most difficult moments is often a vexing experience with forms and processes from so many different agencies. Building on a strong foundation of privacy protection, AI can help us deliver critical services to any American, right when they need them most,” Prabhakar said.

**The AI train has left the station,
and it’s moving full-steam ahead.**

— Miguel Cardona, Secretary,
Education Department



While the White House has outlined what agencies can do with AI technologies, it's also calling on private-sector experts, academics and researchers to partner with the government on these efforts.

"This is exactly the right time to ask: What could go wrong? Because the answers to this question point the way to building the protections and mitigations before a new technology is deployed," Prabhakar said. 🌀

"Usually, when we are talking about projects, we are talking about very concrete things that are happening today, that are already locked into budget. This is actually a bit different," Prabhakar said. "This is a vision conference because we want to show people how big the possibilities are ahead. In every one of these cases, there is work going on in government that starts us on this path."

She said agencies are also looking at how to field AI tools ethically and responsibly, as well as ensure algorithms are free of bias.



Beyond chatbots: How agencies can apply LLMs to business applications to unlock efficiencies

As government pushes more intently toward adopting artificial intelligence into its operations, its focus is increasingly on the potential of large language models (LLMs).

The most common application agencies talk about for these AI models is chatbots, trained on their own internal documents to answer FAQs for customers and constituents. But agencies that are further along in experimentation and proofs of concept have found that some of the greatest

returns on investment from AI and automation come from adopting LLMs into back-of-house business applications. That's leaving agencies searching for the best possible use cases to apply their limited budgets most effectively.

"A lot of what I'm seeing is: 'I have all this information. Can I get a summary of chunks of that information?' And this is where traditional text analytics can do really well, in terms of curating what to send to a large language model," said Tom Sabo, principal solutions architect at [SAS](#). "For some of these generative AI approaches, it's a bit of a misnomer that the more data you give it, the better. We're finding that this can also benefit customers' bottom lines too. If you target what data you want to send to a large language model to tune it, then it can give you better answers, require less resources resulting in cost savings and will consequently improve business applications."

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— Tom Sabo, Advisory Solutions Architect, SAS



Employing text analytics when using LLMs

One example Sabo gave was work he did with data from the city of Chicago, helping summarize and extract insights from food inspection reports. He said that providing the full reports themselves to an LLM and asking questions like, "How can a grocery store prevent pest infestations?" is actually less efficient. Instead, he got faster and better insights by running text analytics first to identify references

to pest issues in the context of where they occurred. That way, he provided only relevant reports to the LLM and left out the rest.

Sabo said the benefits of doing this are threefold:

- It's faster and cheaper to run the analyses. The text analytics can run in a matter of seconds, and then the LLM can process much faster and with fewer resources because it's only focused on the relevant data.

SAS also partners with Intel for developer tools and hardware to optimize this capability. Aligning the hardware and software is an important part of the speed that can be achieved.

- Using only relevant data serves as a guardrail, helping reduce hallucinations and preventing the use of inappropriate content in the output.
- Text analytics capabilities let you drill down into the statements themselves to see where the LLM's results come from.

"That can be different from more common methods in retrieval augmented generation, where you get references when you do a search," Sabo said.

"But those typically only pull back information from several sources. In the methodology I'm talking about, we can pull from potentially hundreds or even thousands of statements or documents to create a summary."

Importantly, the process is LLM-agnostic. As long as text analytics are used to calibrate the LLMs, an agency has the freedom to incorporate a variety of — or the latest — models, whether they are called via an application programming interface or run locally.

How to use large language models effectively

SAS Advisory Solutions Architect Tom Sabo offers this 411:

Q: When should I be leveraging LLMs?

A: When you need to convey and consolidate information to a variety of audience members as part of an overall business process. This works well in conjunction with text review. For instance, LLMs can generate a high-level summary of the complaints facing a financial organization or help a regulator better understand the kind of patterns that are emerging from consumer complaints overall.

Q: How do I assess if an analytics problem is a good fit for an LLM?

A: It is important to keep in mind that LLMs are not often the solution; rather, they are part of an analytics-enabled solution. For an analytics problem to leverage LLMs as part of the solution, you can start by considering whether all of the following apply:

- There is more freeform text involved than an individual could conceivably review in a day, week or year.
- There is the desire to categorize information in that text, extract key entities — people, places or things, for instance — from that text and identify connections between those entities. Or there is a need to otherwise access information or patterns from that text.
- The results can be presented in a user-friendly visual manner which could potentially include a curated Q&A interface.
- While results can be verifiable with the methods presented, there is a human in the loop to serve this purpose.

Implementing LLMs as part of a process

In another use case, Sabo said he's working with a federal partner that does regulations analysis. When an agency proposes a regulation to the public, it has to solicit feedback, which can easily run into the tens of thousands of comments, he pointed out.

By law, the government has to respond to all salient points in those comments. Reading and sorting those comments into similar themes can be an exhaustive process, but employing text analytics and LLMs can help.

Text analytics can extract similar themes and sort them into various categories, like privacy and security. Then those themes can be summarized. That's where LLMs come in — by generating a first draft summary of each category. Experts can then use each generated summary as a starting point and evaluate or modify draft

The idea here is to empower folks who are leading change. We want to provide capabilities to them which they can use to monitor what's going on related to AI at an organization, validate what's going on and use that to build internal coalitions around the use of new technologies. That is AI governance.

— SAS' Tom Sabo

responses based on their knowledge of the subject matter. Having experts involved in the process also helps to create a feedback loop so that the LLM results in its output becoming more accurate and trustworthy over time.



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"The large language model itself is part of a process," Sabo said. "It involves business expertise, analytics and then large language models at intelligent places."

AI governance for use of LLMs

The combination of experts embedded in the process and layering the LLMs over text analytics also helps contribute to the overall governance of the AI models. AI governance is a collaborative effort involving multiple teams and stakeholders from across the organization.

That's why SAS offers flexible workflows to ensure transparency and governance, providing a system of record to document all activities, updates and use of models and to identify associated risks. From that, an agency can generate reporting frameworks and enable audit capabilities that are configurable for different needs.

"For government officials at the Senior Executive Service level, we're really interested in providing capabilities that could give technical insight without being overly difficult to use, because many senior executives are not technical experts," Sabo said. "The idea here is to empower folks who are leading change. We want to provide capabilities to them which they can use to monitor what's going on related to AI at an organization, validate what's going on and build internal coalitions around the use of new technologies. That is AI governance." 

[Learn more about how SAS and Intel partner on AI:](#) Successful analytics initiatives require alignment between hardware and software to support of organizational goals. Together, we know how to deliver practical solutions that deliver real, measurable results — at any scale.

Air Force unveils new generative AI platform

BY ANASTASIA OBIS

The Department of the Air Force has launched a ChatGPT-like tool that will assist airmen, Guardians and civilian employees with tasks such as coding, correspondence and content summarization — all on the service's unclassified networks.

The Non-classified Internet Protocol Generative Pre-training Transformer, or NIPRGPT, is part of the Dark Saber software platform, an ecosystem where airmen experiment, develop and deploy their own applications and capabilities.

The platform is not the end tool or the final solution, said Air Force officials, but rather a testing ground that will let the service better understand practical applications of generative AI, run experiments, take note of problems and gather feedback.

There are multiple modernization efforts going on right now across the federal government and within the DAF to get tools in the hands of the workforce.

— Venice Goodwine,
Chief Information Officer,
Air Force



The Air Force Research Laboratory, which developed the tool, used publicly available AI models. The service has yet to commit to a particular vendor or set of vendors. But as commercial AI tools become available, the platform will help the service to gauge the best approach to buying those tools.

"We're not committing to any single model or tech vendor — it is too early in the process for that," said Chandra Donelson, the Air Force's acting chief data and artificial intelligence officer. "However, we are leveraging this effort to inform future [policy](#), acquisition and investment decisions."

"We aim to partner with the best models from government, industry and academia to identify which models perform better on our specific tasks, domains, as well as use cases to meet the needs of tomorrow's warfighter."

Air Force starts with AI in unclassified arena

Although NIPRGPT is only available on unclassified networks, the service is considering expanding it to higher classification levels depending on demand and interest from airmen and guardians.

"The research will absolutely follow demand. We have already had people signal that there's interest there — working with different and

appropriate groups,” said Alexis Bonnel, chief information officer at the Air Force Research Lab. “That’s why we’re starting intentionally and clearly, so we can learn any of those guardrails. But, as you can imagine, people want relationships with knowledge at all levels. And so that has absolutely been considered.”

DoD evaluating range of AI use cases

As uses of generative AI have exploded in the commercial sector, the Defense Department has been carefully exploring how it can leverage the technology to improve intelligence, operational planning, administrative, business processes and tactical operations. The Pentagon’s Task Force Lima, for example, is evaluating a wide range of use cases and working to synchronize and employ generative AI capabilities across the military services.

In the interim, the service’s Office of the CIO along with the Chief Data And Artificial Intelligence Office held a [series of roundtables](#) with industry and academia to explore the potential applications and best practices for adopting GenAI across the service.

Air Force CIO Venice Goodwine said the roundtables showed how fast the field of generative AI is growing.

“Now is the time to give our airmen and Guardians the flexibility to develop the necessary skills in parallel,” Goodwine said. “There are multiple modernization efforts going on right now across the federal government and within the DAF to get tools in the hands of the workforce. This tool is another one of those efforts. 🚀

We’re not committing to any single model or tech vendor — it is too early in the process for that. However, we are leveraging this effort to inform future policy, acquisition and investment decisions.

— Chandra Donelson,
Acting Chief Data and
Artificial Intelligence
Officer, Air Force



How to meet top 3 challenges of implementing the zero trust data pillar

As federal agencies push to complete their adoption of zero trust architectures before September, many are running into one particular challenge: the data pillar.

On-premise legacy implementations usually don't meet the requirements, leaving agencies turning to cloud solutions instead. But the lift and shift process is time-consuming and expensive. Many are still too far back in the discovery process to accomplish this in time, while others are trapped between the rock of unfunded requirements and the hard place of a years-long budget cycle.

The requirements include both in-flight and at-rest data encryption, as well as the ability to authenticate and control access to data. That

Leveraging attribute-based access control is a crucial aspect of the implementation, necessitating data labeling. This implies that agencies must comprehend their data thoroughly. Categorizing data forms an integral part of the labeling process.

— Carmelo McCutcheon,
Public Sector Chief Technology
Officer, VAST Data Federal



includes a new requirement, which Carmelo McCutcheon, public sector chief technology officer at [VAST Data Federal](#), said no one has had to meet before: attribute-based access control (ABAC) for unstructured data.

"Most traditional storage capabilities today do not support that. That is an object store feature that usually only lives in the cloud," McCutcheon said. "Leveraging attribute-based access control is a crucial aspect of the implementation, necessitating data labeling. This implies that agencies must comprehend their data thoroughly. Categorizing data forms an integral part of the labeling process."

For example, is your data classified or unclassified? Does it contain sensitive information like personally identifiable information? Is all of that data disclosed? But the biggest challenge here is categorizing that data independently of how it's stored. That requires automated data labeling, which is why it is a prerequisite for ABAC.

Separating encryption keys from data

Traditional storage devices store encryption keys alongside the data, which includes a certain amount of known risk around exposure.

VAST, by comparison, stores the encryption keys in the memory, separate from the data, turning the enterprise key manager into the key vault.

By doing so, agencies can grant access independent of their storage systems. It also provides cryptographic erasure that meets the requirements of the National Institute of Standards and Technology's [Special Publication 800-88 Rev. 1](#), by purging the key content from memory in a validated way, followed by the now-unrecoverable data itself from the system.

This also allows different kinds of data to be separated through different encryption keys. Sensitive data like PII can be encrypted with a separate key from related engineering data, allowing more granular access control, McCutcheon explained. People then will be able to access only the data they need based on their authorities without affecting any related data. This physical and logical separation through encryption will let agencies store related data of different sensitivities on the same system, he said.

"Agencies still have the ability to physically control the network path you use to get to your data or create data and then logically isolate that data with encryption," McCutcheon said.

Implementing ABAC for AI using active directory attributes

VAST also works closely with Microsoft to leverage attributes in Active Directory to achieve the required level of access control. If someone tries to view PII data, for example, VAST will check Active Directory to ensure they've got the PII attribute before granting access.

This also allows agencies to create zero trust-compliant storage capabilities for artificial intelligence. By enabling its ABAC implementation to operate on GPU Direct, a feature required to train AIs on large amounts of data, VAST can restrict AI's access to just the

With our ability to expose these datasets through GPU Direct to AI capabilities in a high-performance manner, while still implementing ABAC and controlling access from machines in the same way as for users, agencies can extend their zero trust architecture posture to all aspects of their data lifecycle.

— VAST Data Federal's Carmelo McCutcheon

data with specific labels. That saves agencies the hassle of creating separate copies of their day-to-day data to put in separate storage for AI to access.

"With our ability to expose these datasets through GPU Direct to AI capabilities in a high-performance manner, while still implementing ABAC and controlling access from machines in the same way as for users, agencies can extend their zero trust architecture posture to all aspects of their data lifecycle," McCutcheon said.

Controlling granular access through automated data labeling

To accomplish this granular level of access control, however, requires automated data labeling. Currently, when employees place data on shared storage, there's no way to add attributes to that data, labeling it — for example — as PII, human resources or classified data. Legacy systems just aren't equipped for that, he said.

But VAST automatically creates those labels alongside the shared storage and will recognize different types of data by format, such as a Social Security number, or by its placement on a form. Those data labels then become the basis for the granular access control enabled by the differentiated encryption and Active Directory access management. That satisfies the necessary requirements for ABAC without changing the user experience or adding more manual labor around the creation or sharing of data.

"These are the three main things that you have to accomplish because, in the end, you can't change how people consume data," McCutcheon said. "But you have to do all these other things to control what they consume, when they access it and what they access specifically." 🏗️



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Can AI reduce workforce burdens at VA, anticipate vets' needs?

BY JORY HECKMAN

The Department of Veterans Affairs is looking at artificial intelligence tools to prevent burnout among its employees.

VA in early summer concluded a 90-day AI Tech Sprint. The department recognized six finalist teams — out of 150 teams that participated in the pilot — for projects focused on reducing administrative burdens for employees.

The projects include “ambient dictation,” or AI-powered notetaking that would take place during and after a veteran’s appointment with a VA clinician.

The department also highlighted AI tools that can automatically summarize hundreds of pages of outside medical records anytime a veteran comes into a VA clinic for the first time.

VA plans use of ambient dictation technology

Kaeli Yuen, AI product lead for VA’s Office of the Chief Technology Officer, said the ambient dictation tool records a veteran’s appointment with a medical provider and summarizes the appointment as a note for the provider to input in the patient’s electronic health record.

“Every time they have an interaction with the patient, they have to document it in the electronic health record. This is causing high levels of burnout and is also kind of using a lot of time,” Yuen said during a panel discussion hosted by ACT-IAC.

In our minds, all data is CX data, so how do we pull that data together so we can build the predictive models and move from being reactive, from a customer experience perspective, and being much more predictive and even prescriptive.

— Denise Kitts,
Executive Director, Veterans
Experience Office



Yuen said the ambient dictation tool doesn’t provide a direct transcription of the patient’s appointment and isn’t used for clinical decision-making.

The physician is required to review the AI-generative summary and sign off on it, as well as make any required edits.

Susan Kirsh, deputy undersecretary for health for discovery education and affiliated networks, said the ambient dictation tool is meant to give clinicians more time treating patients and reduce time spent taking notes behind a computer screen.

"We want to spend all of our time taking care of the patient, and the documentation, over the years, has gotten to be pretty high," Kirsh said.

Creating better veteran patient experiences

Denise Kitts, executive director of VA's Veterans Experience Office, said she sees AI tools as the key to providing a higher level of customer experience to veterans, as well as "putting actionable data in front of people that are making decisions."

"Surveys are great, but it's a lagging indicator," Kitts said. "From a data perspective, we're pivoting, and we're really looking at all the data the VA has. In our minds, all data is CX data. How do we pull that data together so we can build the predictive models and move from being reactive, from a customer experience perspective, and being much more predictive and even prescriptive, and tailoring that experience?"

Kitts said VA built an AI model on operational and clinical data — such as the last time a veteran came into the VA for an appointment, and if there were any "no-show" appointments.

"We modeled it until we could get much more predictive, in terms of, who are the people that medical [centers] really need to reach out to and make sure they stay tethered?" Kitts said. "That's an example of using all our data to predict who are the people that we really need to do outreach to."

Yuen said VA is also experimenting with generative AI to tackle administrative burdens.

"There's a lot of excitement around these tools. Folks from all over VA are coming to our office, asking if they can pilot a generative AI


Folks from all over VA are coming to our office, asking if they can pilot a generative AI to do things like write emails, summarize policy documents, draft contracting packages and summarize veteran user experience survey data. People from all over VA want this.

— Kaeli Yuen, AI Product Lead for Office of the Chief Technology Officer, VA



to do things like write emails, summarize policy documents, draft contracting packages and summarize veteran user experience survey data. People from all over VA want this," Yuen said.

As VA's Office of Information and Technology launches genAI pilots, Yuen said the team is rethinking success metrics.

"How are we going to know if this pilot was successful? Should we expand it? Should we invest in it more? And I think this is one area we're struggling a little bit," she said. "We tend to land on 'time saved' — it used to take us 10 hours to analyze a survey, now it takes us two hours to analyze the survey. But I feel like there's something more we're leaving on the table here. What we're doing is applying the tools to a process that is built without those tools in mind, and maybe there's a different way we should be doing things." 

How agencies can supplement GenAI efforts with retrieval-augmented generation

The past two administrations have made the adoption of artificial intelligence a governmentwide priority, but that push isn't just coming from the top down.

Federal employees see the power of AI in their personal lives, and they recognize the promise of these technologies to improve their work experience as well. That has driven leaders across forward-looking agencies — not just IT leaders and program managers, but financial and legal executives as well — to reinvent themselves as experts on the potential applications of AI in their agencies. They recognize that while barriers still exist — like mitigating the risks of hallucinations and biases — those are falling rapidly, and generative AI is more accessible now than ever.

One branch of AI known as retrieval-augmented generation (RAG) has the potential to deliver efficiencies to agencies while avoiding many of the potential downsides of GenAI, such as false responses known as hallucinations. RAG vectorizes an agency's trusted information, allowing for secure retrieval from defined repositories. In other words, it securely accesses information from within the enterprise but does not pull from or share information external to the agency said Jeremy Hogg, vice president of federal sales at [Pryon](#).

"RAG is not an entirely new concept, but it's hitting its heyday right now. As generative AI took off around 18 months ago, it became a very popular topic. People were excited about GenAI's potential, but they were also concerned because generative AI on its own pulls in

When you think about the efficiency gains, in some cases, there could be 50 or 100 people in a large DoD command that are involved in these situational reporting briefings that happen on a daily and weekly basis. And if you can take that and save 40% to 50% of the time by getting the content pulled into a standard format, and let the human do the review and the understanding versus all the collection and the formatting, dramatic efficiency gains can be achieved.

— Jeremy Hogg, Vice President of Federal Sales, Pryon



as much information as possible so the model can learn from it," Hogg said. "And the model continues to take in more and more information so it can try to understand what you are asking and to anticipate what a result may be. Retrieval-augmented generative instead focuses on the secure retrieval of information without the need for constant retraining."


How to use RAG

Like mainstream generative AI, RAG has semantic understanding. It recognizes intent without forcing someone to use exact keywords. But what makes RAG different is that it doesn't attempt to anticipate, Hogg said. Rather, it uses the vectorization of the content to retrieve the most closely related information. Once the information is retrieved, GenAI can be layered on top, enabling users to receive smooth, conversational answers.

For example, the Defense Department often produces after-action reports to convey lessons learned after major operations. Those reports are then stored in a repository. But as leadership turns over, that institutional knowledge can be lost because the repository is simply too large for anyone to easily become an expert in it. Different semantic understandings and tagging

methodology can also be barriers to retrieving relevant information from within the repository. But with RAG, vast amounts of unstructured data like this can be quickly searched and understood, and the relevant information retrieved, Hogg said.

"We are already deploying prototypes around this, which is exciting. When you think about the efficiency gains RAG can deliver, it can be dramatic. In some cases, there could be 50 or 100 people in a large DoD command that are involved in these situational reporting briefings that happen on a daily and weekly basis," he said. "And if you can take that and save 40% to 50% of the time by getting the content pulled into a standard format, and let the human do the review and the understanding versus all the collection and the formatting, dramatic efficiency gains can be achieved."



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Overcoming barriers to RAG's adoption


RAG has the potential to profoundly improve the ways that work is done throughout government. The same process outlined above can be applied to everything from agencies with large SOP and policy documents to processing benefits for and providing information to constituents, Hogg said.

However, the biggest barrier to adopting this kind of capability is a lack of understanding of what it is and what it can mean, he added. Fears about AI replacing workers abound, while knowledge gaps can make it difficult to understand what exactly the technologies are doing and how. That means adoption efforts will require a significant amount of change management.

"First, you have to get to the information securely. Then you have to start making it available as part of workflows," Hogg said. "Making the knowledge accessible and building that trust is the first part of the process for driving change."

Agency leadership looking to implement this kind of change shouldn't go after an entire process all at once, he advised. Instead, agencies should

look for low-hanging fruit where RAG can be easily and effectively applied, Hogg said.

For example, implementing a combination of RAG and a chatbot for IT systems support can allow employees to access more information on their own, reducing the number of help desk tickets and freeing up IT personnel for other, more critical tasks, he shared. Those early successes will lead to increased trust in the capabilities of GenAI, Hogg said, and a willingness to apply it to other friction points in business workflows. 

Q&A with USPTO Chief AI Officer Jerry Ma

Examiners at the U.S. Patent and Trademark Office typically reviewed thousands of documents to determine the validity of an application. Now, examiners use artificial intelligence tools to help them work faster and more accurately. Jerry Ma, director of emerging technology and chief AI officer at USPTO, talked with Federal Drive Host Tom Temin about how the agency has evolved its use of AI.

Federal News Network: How does artificial intelligence come to bear on patent examinations?

Ma: It's helpful to start with the fact and the realization that we at the USPTO, our America's innovation agency. It's our statutory function and our constitutional mission. We help incentivize and foster innovation across all fields of technology and science, including artificial intelligence.

A lot of my portfolio is about trying to figure out how we leverage the innovations of today to serve the innovators and entrepreneurs of tomorrow. And if we look at the AI community, especially sort of our post 2022 with the latest boom in generative AI, there's a whole world of potential out there to harness and to leverage in serving our internal stakeholders, that is our personnel and our expert examiners, as well as our outside stakeholders, that is the general public who relies on us for patent- and trademark-related services.

There's an opportunity to serve all of these communities through emerging, modern technology that helps them contend with the increasing complexity of each of their roles within the overall intellectual property ecosystem and help them work more efficiently or work in a higher-quality manner, empowered with more information and context, and overall contribute to a sounder IP ecosystem.

So a lot of the individual tools that we develop at the USPTO are directed to furthering one of those aims within the context of a specific use case and user community — whether it's our patent examiners who rely on world class services to trawl through, without exaggeration, tens if not hundreds of millions of documents spread across multiple databases.

Federal News Network: With hundreds of thousands of applications a year and you say perhaps millions of documents, tell us how you've revved that up so that it's even doable. It sounds like the task could be getting beyond the range of possible without some of these new tools.

Ma: Indeed. So this, like many things at the USPTO, has been a gradual progression from what I'll say is a very analog process — or had been a very analog process — to what we see today and what we're aiming for tomorrow.

Thinking back to before the age of computers, there is still a need for patent examiners ... to examine any given application against the universe of what has done before. And certainly before the age of computers, there was already sort of a voluminous collection of prior art in many technical fields, and they had to figure out some way to trawl through that.

Before computers, we had this intricate filing system — decades before my time, but I hear

stories from our veteran examiners. ... We had a lot of data but not much in the way of effective ways to trawl through that data. So a lot of our examiners' time was spent just on sorting through shoes*, trying to build this muscle memory of which document existed in which shoe.

Sometimes when you took the document out, another examiner who was relying on that document then wouldn't be able to get to it. So our first phase of modernization and innovation, as it were, was actually well before my time. We digitized these archives and went from this sort of shoe-based manual searching system to a computerized search. That was sort of a huge sea change for our examiners being able to do their jobs and how easy we're making it for them to access everything they need in order to perform their duties effectively. That was sort of Stage 1 of innovation.

However, Stage 1 still left a lot of things to be desired, because you think about the state of the art in information retrieval back when we made this first transition, it was by and large all sort of keyword-based. And if you think about sort of the revolution in information retrieval back a few decades ago when things like Google were coming out, those were fundamentally keyword-based technologies. Google's key innovation, of course, was figuring out how to rank the results that were retrieved via this keyword-based retrieval. And they did it very well. And that explains why they're such a big deal now.

But keywords can only take you so far, because if it's too difficult to operationalize a concept in your mind or a concept that you see in a patent document with one single keyword or even a collection of keywords, then you're just not going to be able to retrieve everything that you need to make a sound determination. If you know there are five different ways of referring to a concept, and I can only think of three of those ways in my head, then those two other ways are just not going to be accessible to me. If there are

any prior art documents that talk about the same technology or same concept, but they use the two words that I forgot about, I'm out of luck as either an examiner or a public searcher.

That's where AI comes in. One of the things that today's modern AI technologies are super great at — although not perfect; we have issues and other sorts of errors still certainly — but one thing that they are much better than the technologies of last generation at is this idea of semantic document representation, sort of semantic representations of meaning.

Now with AI, I can either type in a concept or even refer to a concept using other documents that sort of contain or embody that concept. I can turn that into, what we call in the AI world, "embeddings." These are points in a super-high-dimensional space — sometimes 512 or 1,024 dimensions, so not your typical 3D or 4D movie.

You put all these documents in these 1,024-dimensional points. And then by virtue of the way in which you train these models, documents that are similar in meaning —

By virtue of the way in which you train these models, documents that are similar in meaning — paragraphs, documents, words that are similar in meaning — will be grouped together in the space. Documents that are less similar in meaning will be grouped far away.

— Jerry Ma, Director of Emerging Technology and Chief AI Officer, USPTO



paragraphs, documents, words that are similar in meaning — will be grouped together in the space. Documents that are less similar in meaning will be grouped far away. And it's through this way that even if I'm searching for the concept of a "computer" and this other document is referring to a "laptop" or a "mobile processing device," with AI I'm going to be able to make those connections in a way that keywords would not have allowed me to.

* "Shoes" are the drawers in which USPTO at one time stored paper application documents and related materials. [*The term "shoes" has a mythical connection to Thomas Jefferson, the first head of USPTO.*](#)

Federal News Network: How do you operationalize that, such that the examiner doesn't have to be an AI programmer or even necessarily a prompt expert?

Ma: That's a great question. It goes to the heart of how we develop AI products at USPTO. So when you think about AI at USPTO, it's not just about the models and about these high-dimensional embeddings. We're not just thinking about the under-the-hood engine.

We're realizing that around the engine you actually have to construct the whole end-to-end vehicle that someone can actually use to accomplish their job and do their tasks effectively. So we've invested a ton of effort in making this technology as accessible to end users as possible and in a variety of different user interfaces.

We have one tool where you can just pull up a document and with a click of a button — and I'm not exaggerating, literally a click of a button — instantly draw these connections between that document to other documents in our database that are judged to be similar. So if you're looking at a pending patent application and being able to make that connection between, again, the application, which might refer to a "computer," and that other thing over

There's not going to be a single examiner who needs to run a script or program to make use of these AI capabilities.

— USPTO's Jerry Ma

there in our database, which might refer to a "laptop" or "mobile processing device," you can draw that connection without even thinking about how to do inference on that AI model.

We have basically created the user interface, created the scaffolding above this very powerful technology, such that users are able to make use of it in a way that really doesn't go far beyond the user interfaces and the modes of interaction that they're already accustomed to and capable of.

Federal News Network: So basically, you've abstracted all of this complexity of the AI deployment and design underneath the interface for the examiners.

Ma: Indeed. There's not going to be a single examiner who needs to run a script or program to make use of these AI capabilities. That's not to say there are no transition hurdles because there certainly are.

It's still going to be a bit of a paradigm shift to go from thinking about documents in terms of purely keywords to this messier concept of semantic meaning, but it's certainly something that we're trying to make as smooth as possible — and really opening people's eyes to the fact that semantic meaning, semantic presentations, are going to be the technologies of tomorrow and gradually are going to be how we think about this thorny problem of information retrieval, whether in the IP space or anywhere else. 🌐

Federal agencies have opportunity to modernize data analytics through AI

There are veritable armies of federal employees across the government doing data analyses, mostly on Excel spreadsheets.

With the current potential for data modernization, that manual process is unnecessarily time-consuming and risk-prone, to say nothing of the fact that much of the data is trapped in silos, said Steve Harris, president of public sector for [Alteryx](#).

The government has a huge opportunity to upskill its data analysts, increase operational efficiency, introduce more robust data governance and accelerate the generation of insights through technologies like generative artificial intelligence, Harris said.

The current state of data analysis in government is largely representative of technical debt. Agencies' longstanding efforts to build capabilities have left them with a slew of

proprietary systems that mostly don't talk to one another. In the past, that siloed state was more desirable for operational security and risk mitigation. And while those are important, they have to be balanced against progress, Harris said. In the past, the scales mostly tipped firmly toward the former.

But now there's an opportunity to rebalance the scales.

"There are no-code platforms that allow people to operate at the level of capability of a citizen data scientist, while possessing a baseline skill set of somebody who's capable with an Excel spreadsheet. To go from somebody who's good with Excel and to give them the ability to produce advanced analytics without having to learn how to code is beyond evolutionary. It's revolutionary," Harris said. "And these technologies are not only robust and hardened, they're also easy to learn and affordable. So the barrier to adoption should be very, very low."

To go from somebody who's good with Excel and to give them the ability to produce advanced analytics without having to learn how to code is beyond evolutionary. It's revolutionary.

— Steve Harris, President, Alteryx Public Sector



Generative AI speeds AI advanced analytics

For example, generative AI can allow an analyst to do advanced analytics — such as predictive diagnostics — on large, complex datasets that have never before been assembled and would take weeks, at a minimum, to analyze manually, Harris said. And even if someone or a team of analysts could do it manually, there's no guarantee that they would actually be able to understand the results.

But a tool like [Alteryx Auto Insights](#) would be able to not only rapidly analyze that data but



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ALL SYSTEMS
ALL DECISIONS

explain in plain English how it arrived at its conclusions, Harris said. And that is the key to unlocking genAI's opportunity: Although the creation of these technologies is still the sole provenance of data or computer scientists, virtually anyone can be a consumer.

The barrier to interaction with these genAI models has lowered to the point that becoming a producer of advanced data analytics requires only very generalized knowledge about the data itself, he said.

Operational efficiencies derives from AI applications

But the elimination of manual processes and democratization of data analysis also has implications for operational efficiency. Things like robotic process automation and software as

a service platforms create massive amounts of data, free of human error and potentially chock-full of valuable insights.

"Take a manual process like a complex audit. Once that workflow is built, something that may have taken 10 employees six weeks can now be run in a matter of minutes, and it can be run on a daily basis. So if you're doing compliance audits on a quarterly basis, not only are you spending a lot of time on it, you can only afford to invest that time once a quarter," Harris said. "If you have automated that workflow in a platform like Alteryx, you can run those audits every day and start treating them as preventative audits and shape the behaviors of the organization so that at the end of the quarter, the outcome is in line with exactly what you want it to be."

While compliance reporting is necessary, all it does is prove compliance, he said. Automating

the reporting fulfills its function without requiring hundreds or thousands of hours of labor, and as a bonus, the data can be used for other purposes as well. As long as the data is

clean, current, reliable and accurate, it's ready to have AI applied to it for an agency's purposes.


Data governance — an AI necessity

Ensuring the data is clean is just one side of data governance. The other side is making sure the data — especially in federal environments where it may contain personally identifiable information, health care data or even information classified for national security purposes — is secure. While there's value in being able to work freely with more datasets, that's balanced by a potential increase in the risk profile.

"Alteryx provides the ability to access unlimited data sources under the existing cyber and data governance architectures, wrangle and clean this new multisource dataset and deliver complex analytics. Enabling more people means it is also very important to be able to see who's doing what on a real-time basis. We enable enormous upskilling while providing the visibility to who is doing what, allowing the agency to understand multidomain value potential and to manage risk," Harris said.

Take a manual process like a complex audit. Once that workflow is built, something that may have taken 10 employees six weeks can now be run in a matter of minutes, and it can be run on a daily basis.

— Alteryx's Steve Harris

"With a tool that's easy to oversee and administer like Alteryx, the ability to integrate with other technologies that deliver controls where people have access to only the datasets they should, and they do not have access to datasets with PII or other restricted information, is critical." 

White House looks to add 500 AI experts to federal workforce by 2025

BY JORY HECKMAN

President Joe Biden is [calling for an AI talent surge](#) across the federal government. And by the numbers, prospective hires are showing interest in the jobs agencies are trying to fill.

New data from the White House shows applications for artificial intelligence roles across the government more than doubled between January and March 2024, compared to the same period in recent years.

Agencies have hired over 150 AI experts and are on track to hire hundreds more by the fall of 2024, according to a [new report from the White House-led AI and Tech Talent Task Force](#).

The White House-led task force said 94 AI hires are expected to join government service through tech talent programs such as the U.S. Digital Corps, the Presidential Innovation Fellows program and the U.S. Digital Service.

"The message is clear: The public is ready and motivated to join the federal government to work on AI priorities," the task force noted in its report.

Uncle Sam wants you, AI technologists

Agencies are expected to bring on at least 500 AI hires between now and the end of fiscal 2025. That doesn't include the 2,500 AI hires the Defense Department is looking to make in 2024 and the more than 9,000 new hires it plans on making next year.

Working in the federal government is one of the most challenging but incredibly rewarding and fun things that I have ever done. It is just an incredible opportunity to serve your country but also to do work that really matters and is incredibly important for people.

— Mina Hsiang, Administrator,
U.S. Digital Service



Since Biden's [executive order on AI in government came out last fall](#), over 15 agencies have onboarded at least one new AI or AI-enabling employee.

"AI talent joining the government will be — and have already started — delivering on our AI agenda," the task force report said. "These new federal employees have written policy for the safe and trustworthy use of AI in government, and they are informing efforts to use AI to improve electrical grid resilience and to expedite permitting. They will be ensuring powerful AI models are safe for the public and working with our international partners to align our AI efforts across the world."

Federal, state and local government agencies, since last year, have held several [Tech to Gov](#) virtual hiring fairs, with the goal of getting private sector technology workers interested in public service careers.

After one of these hiring fairs in the fall of 2023, 32 agencies made about 100 new hires. More than 4,500 prospective applicants participated in the virtual job fair.

Agencies held another Tech to Gov job fair in the spring with a focus on hiring AI experts. About 800 prospective applicants signed up.

“Tech to Gov events enable agencies to take advantage of collective recruitment and branding power to hire more effectively, efficiently and from a higher-quality technical talent pool,” the task force said.

At a spring Tech to Gov event, Robin Carnahan, administrator of the General Services Administration, said AI will help agencies deliver public-facing benefits and services more quickly. But first, agencies need the right talent to get the work done.

When the president signed that executive order, one of the things he asked the most about — as he was going through it — was its provisions about talent and making sure that we could get the people into the federal government to do this work.

— Ben Buchanan, Special Advisor for AI, White House



“We need your talent. We need your innovative ideas, whether it’s AI automation that simplifies repetitive tasks and processes, better design and security, or better integration with legacy systems. We need folks just like you to make sure government effectively delivers for our people,” she said.

New guidance available on hiring AI workers

The Office of Personnel Management also has released a slew of new policies for agencies to follow when hiring AI professionals, including [skill-based hiring guidance](#).

“The model empowers agencies to shift toward a skills-centric paradigm that emphasizes practical skills over educational pedigrees or past titles and prioritizes talent with AI proficiencies tailored to organizational objectives,” OPM said. “For new or rapidly evolving fields, such as those associated with AI, data and technology, it is crucial that agencies adopt this skills-based hiring approach.

The Biden administration also announced plans to shift the government’s primary IT job series — about [100,000 total jobs](#) — away from relying on college degree requirements to skills-based hiring by mid-2025.

OPM’s guidance also includes a competency model to help agency human resources offices identify qualified candidates for AI positions. OPM has identified more than 40 general competencies and 14 technical competencies that are important to perform AI work.

In addition, OPM also [released guidance](#) on how agencies should classify federal AI positions, and best practices to recruit, hire and retain AI experts. OPM finds AI work covers nearly 30 federal occupational series.

OPM is also giving federal employees guidance on [how to use generative AI in the workplace](#) and what to avoid when using this emerging technology.

The White House AI task force, in a pulse survey of more than 160 federal employees at 36 agencies, found that more than half of the respondents said they did not have access to, or were not aware of, generative AI tools for use at their agencies.

About half of respondents also said they did not have access to the datasets, software or resources needed to build, test or audit AI, and that there was no clear process for requesting those resources.

USDS looks to continue growth

The White House's U.S. Digital Service, in particular, has seen a surge in job applications. The AI task force's report finds that USDS has seen a more than 2000% increase in job applications for AI-related positions. USDS Administrator Mina Hsiang told prospective hires at the spring Tech to Gov hiring fair that a job in public sector IT gives tech workers a unique opportunity to tackle projects that impact millions of Americans.

"I can sincerely say that working in the federal government here is one of the most challenging but incredibly rewarding and fun things that I have ever done," Hsiang said. "It is just an incredible opportunity to serve your country but also to do work that really matters and is incredibly important for people, while also bringing your rare set of skills to an environment that desperately needs them."

USDS, over the past 10 years, has worked with about 30 agencies on hundreds of projects.


Ben Buchanan, White House special advisor for AI, said Biden made the federal workforce a particular focus in his recent AI executive order.

"When the president signed that executive order, one of the things he asked the most about — as he was going through it — was its provisions about talent and making sure that we could get the people into the federal government to do this work," Buchanan said.

DHS adopts USDS hiring approach on AI

The Homeland Security Department is looking to replicate the U.S. Digital Service model. DHS this year [stood up an AI Corps](#) and aims to bring on 50 AI experts who will help lead projects across its agencies.

Christopher Kraft, deputy chief technology officer for AI and emerging technology, said DHS is giving its workforce the opportunity to experiment with AI, including generative AI tools like ChatGPT.

"It's really going to help DHS continue to evolve and deliver leading-edge artificial intelligence solutions. And this is where we need experts," Kraft said. 

Transforming government operations with agentic AI

BY KEVIN TUPPER

Large language models (LLMs) have dramatically reshaped the AI landscape, laying the groundwork for the next significant advancement: agentic AI.

These sophisticated systems promise to revolutionize government operations by enhancing efficiency, planning and decision-making processes. For instance, agentic AI can streamline bureaucratic procedures and enhance data-driven policymaking.

Agentic AI integrates LLMs with memory, knowledge, planning and tools to perform complex tasks autonomously or alongside users. In the context of government, these intelligent systems can streamline workflows, address common challenges and improve productivity. By automating routine tasks, managing data more effectively and providing advanced analytical capabilities, agentic AI holds the promise of transforming public sector operations.

There are numerous practical applications for agentic AI to enhance government operations, support policy development and improve citizen services, potentially reshaping how public sector functions are managed and delivered.

What is agentic AI?

Agentic AI refers to cutting-edge autonomous systems that combine large language models with memory, knowledge bases, planning capabilities and various tools to perform complex

tasks with minimal human intervention. Unlike conventional AI systems that operate within predefined parameters, agentic AI demonstrates a higher level of autonomy and adaptability. These systems can understand context, set goals, formulate plans and choose appropriate tools to achieve objectives, much like a human agent would.

Agentic AI encompasses a range of AI entities such as assistants, copilots and fully autonomous agents. These systems can operate independently or collaboratively with users, offering versatile applications across various domains, including government operations.

There are three types of agentic AI:

- **Assistants:** In a government setting, an AI assistant might handle the routine management of emails for a public official, efficiently schedule meetings, or generate detailed reports based on specific commands, thereby freeing up valuable time for more strategic activities.
- **Agents:** Agents possess higher levels of autonomy compared to assistants. They can set goals, plan actions, and choose the appropriate tools to achieve these goals. For instance, a government agent could analyze large datasets to identify trends and recommend policy changes, autonomously preparing and presenting findings.
- **Copilots:** Copilots are a form of assistants or agents integrated into applications to

work alongside users. They provide proactive suggestions and support within the context of the application, enhancing user experience and productivity. In a government context, a copilot might assist policy analysts by providing real-time data insights, suggesting relevant regulations and helping draft policy documents based on current legislative trends.

In the context of government, these intelligent systems can streamline workflows, address common challenges and improve productivity.

Here are four key features and capabilities of agentic AI systems:

- **Autonomy:** Agentic AI systems can perform tasks independently, making decisions and taking actions without constant human oversight. This autonomy allows them to handle repetitive tasks and respond to dynamic environments effectively. For example, they can automate the processing of citizen requests, freeing up human resources for more complex tasks.
- **Adaptability:** These systems continuously learn from new data and experiences, enhancing their performance over time. For example, in government, they can swiftly adjust to new regulations or policy changes, ensuring compliance and up-to-date operations.
- **Integration with tools:** Agentic AI can access various tools such as databases, APIs and other software to gather information and execute tasks. This integration allows for efficient data management and execution of complex operations. For instance, they can integrate with national databases to provide comprehensive reports for policymakers.
- **Memory and knowledge management:** They store and utilize data from past interactions to inform future decisions and actions. This capability ensures that the system can provide contextually relevant responses and maintain continuity in interactions. In government, this can mean maintaining a

history of legislative changes and using that to inform future decisions.

Current capabilities and future potential

While the current capabilities of agentic AI are still nascent, they are rapidly improving. Today, these systems may not yet be fully adept at planning and learning autonomously, as frameworks and methodologies are still being developed. However, significant advancements are being made daily, enhancing the planning, adaptability and overall capabilities of these intelligent systems.

For example, an agentic AI can analyze regulatory documents, suggest an outline for analysis, access previous rules and draft documents autonomously. By understanding these features, we can appreciate how agentic AI can be applied effectively in government operations, providing significant improvements in efficiency and decision-making processes. Here are a few possible practical applications in government:

- **Streamlining administrative tasks:** Agentic AI can automate routine administrative tasks such as processing citizen requests, managing correspondence and scheduling meetings. By automating these processes, government employees can focus on more complex and strategic tasks.

For instance, an AI system could handle the scheduling of appointments for a public health office, ensuring optimal time management and reducing the workload on administrative staff.

- **Enhancing data-driven policymaking:** By analyzing large datasets and identifying trends, agentic AI can provide valuable insights for policy development. These insights can help policymakers understand the impacts of existing regulations and forecast the outcomes of proposed changes, leading to more informed and effective policy decisions.

For example, an agentic AI could analyze economic data to predict the impact of a new tax policy, providing legislators with a detailed report of potential outcomes.

- **Improving citizen services:** AI-powered chatbots and virtual assistants can enhance citizen engagement by providing timely and accurate information. These systems can handle a wide range of inquiries, from answering common questions to guiding citizens through complex processes, thereby improving the overall citizen experience.

For example, a virtual assistant could help citizens navigate the process of applying for social services, providing step-by-step instructions and answering any questions along the way.

- **Augmenting decision-making:** Agentic AI can assist government officials in making informed decisions by synthesizing vast amounts of data and presenting key insights.

For instance, an AI system could analyze public health data to identify early warning signs of disease outbreaks, enabling proactive measures to mitigate their effects.

This capability can significantly enhance the ability of government agencies to respond to public health crises.

Addressing limitations and ensuring responsible AI use

While the potential of agentic AI is immense, it is crucial to address current limitations, such as the risk of generating incorrect or nonfactual results (hallucinations) and the possibility of overreliance on these systems.

To mitigate these risks, governments should adopt best practices for AI implementation:

- **Narrow the domain and ground with your own data:** Focusing AI models on specific, well-defined tasks reduces the likelihood of errors and enhances performance. Additionally, grounding the AI's actions and analysis with internal data, policies, processes and datastores ensures that the outputs are relevant and accurate.

AI systems are fundamentally good at predicting the next word based on their training data but do not have access to specific internal information unless explicitly provided. For example, an AI system dedicated to drafting requests for proposals should be grounded on the organization's specific guidelines and historical data to ensure accuracy and relevance.

By strategically implementing these advanced AI systems and grounding their actions in internal data, governments can not only improve service delivery but also adapt more dynamically to the evolving needs of their citizens.

- **Layer AI agents:** Using multiple smaller AI agents, each specialized in a particular task, can effectively handle complex operations. This approach allows for better management of tasks and improves overall system efficiency.
- **Ensure data security and fairness:** Governments must prioritize data security, fairness and transparency in AI applications. This involves implementing robust data protection measures and ensuring that AI decisions are unbiased and accountable.
- **Start with pilot projects:** Launching small-scale pilot projects allows governments to test and refine AI applications before scaling up. This approach helps identify potential issues and ensures that the systems are effective and reliable.

Agentic AI has the potential to revolutionize government operations by significantly enhancing efficiency, planning and decision-making. By strategically implementing these advanced AI systems and grounding their actions in internal data, governments can not only improve service delivery but also adapt more dynamically to the evolving needs of their citizens. Embracing agentic AI will pave the way for a smarter, more responsive public sector that benefits society as a whole. 🤖



Kevin Tupper is the federal AI evangelist for [Microsoft](#) public sector





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