Government Gets Down to Business With AI

A GOVLOOP GUIDE



Introduction

Artificial intelligence (AI) is still one of the most important topics in government and technology. Agencies are experimenting with what it can do and finding the places where it can significantly improve services and extend existing resources.

In this guide, we're sharing examples of how AI is helping agencies improve productivity, enhance public safety, fight fraud and abuse, and take on tasks that would otherwise be impossible. And, to show how generative AI (GenAI) can digest and summarize complex documents, we've even included an article GenAI helped write.

We also talked to Sybil Gurney, Alameda County, Calif. Assistant Chief Information Officer, on how the county is using GenAI to "reimagine our services and operations and make them more efficient and modern."

This is the first installment of three AI guides planned for 2025. Future guides will focus on using AI for the public good, and assessing the road ahead. We hope you'll join us on the AI journey.

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What We Learned About AI in 2024 (According to AI)

Here at GovLoop, we spent a lot of time in 2024 thinking about AI. We produced a three-part AI Guide series (as we are doing this year) and hosted numerous AI-focused virtual events and roundtables. Plus, the topic came up in many articles and events that weren't intended to be about AI. Which got us wondering: What insights might we take away from all that discussion of the state of AI in government?

Given the volume of material — e.g., event and interview transcripts, guide articles, and news roundups — we couldn't possibly hope to do the analysis manually. So, in the spirit of the day, we turned to GenAI, offering it three prompts: ***What are the primary benefits of AI for government? What are the top use cases in government? And what are some of the biggest challenges?*** Here is what AI told us.

What are the primary benefits of AI for government?

Enhanced productivity and job satisfaction: AI provides powerful tools that support government workers, making them more effective and their jobs more enjoyable.

Data analysis and evidence-based policymaking: AI offers advanced capabilities for analyzing and making sense of data, which is crucial for driving evidence-based policymaking.

Cybersecurity: AI is highly effective in cybersecurity, where it can spot anomalies, automate incident responses and predict likely threats.

Large-scale data processing: AI can handle large-scale data processing tasks that are beyond human capabilities.

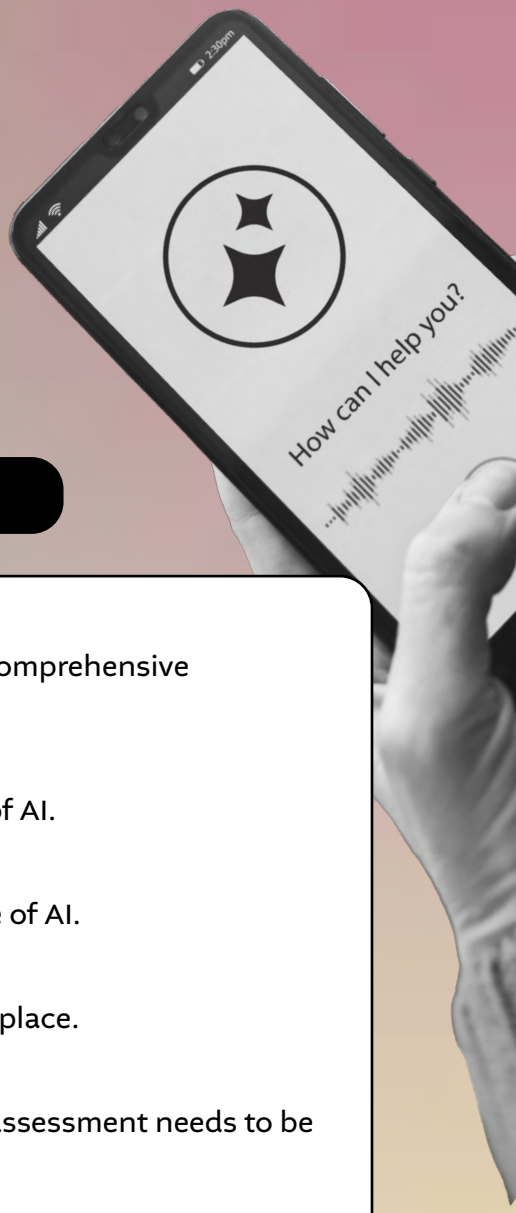
Cyber incident response and remediation: AI can suggest or implement remediation steps quickly, fixing vulnerabilities faster than traditional methods.

Improved decision-making: By providing high-quality detections and insights, AI helps government agencies make better decisions.

Support for complex projects: AI supports complex government projects by providing advanced natural language processing, computer vision and other machine learning (ML) capabilities. These technologies enable the government to undertake projects that involve significant data analysis and processing.

What are the top use cases for AI in government?

- Call center support
- Investigative support
- Disaster risk identification and mitigation
- Training and skill enhancement
- Language translation
- Transportation and traffic management
- Emergency response

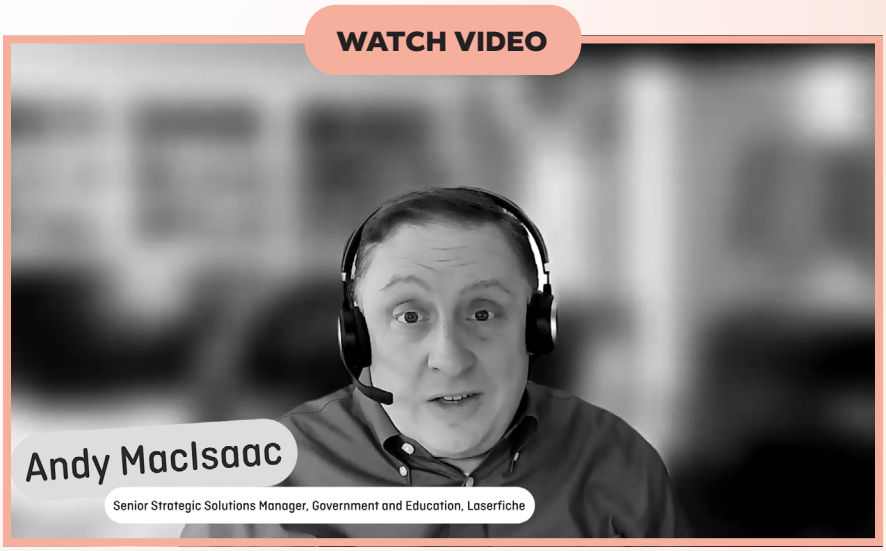


What are some best practices for using AI?

1. **Include All Stakeholders in Planning**
   Involve both business and technical teams to provide a comprehensive perspective on AI implementation.
2. **Use Good Data Governance**
   Proper data management is crucial for the effective use of AI.
3. **Assess AI Algorithms for Privacy and Bias**
   This helps maintain ethical standards and ensure fair use of AI.
4. **Do Not Depend Solely on Vendors**
   Agencies should have their own measures and checks in place.
5. **Conduct Ongoing Evaluation and Make Adjustments**
   AI technologies and their applications evolve rapidly, so assessment needs to be ongoing to keep up with changes and improvements.
6. **Use Test Environments**
   "Sandboxes" can help identify and resolve potential issues while protecting live systems from disruption.
7. **Use AI Ethically and Responsibly**
   Adhering to executive orders and policies promotes safe, secure, and trustworthy AI development and deployment.
8. **Implement Training and Skill Development**
   As AI technologies evolve, it is important for staff to get the latest skills and knowledge.

Industry Spotlight

How Agencies Achieve Better Outcomes Through Digital-First Services



Modernizing constituent services is no longer an option. That's because constituents, when interacting with government agencies, expect the same kind of seamless, digital-first experience they have with other service providers and with retailers. And it's because agencies can't afford to waste time and money maintaining outdated, manual processes that result in fragmented data and cumbersome security and compliance efforts.

The challenge is not just to digitize forms, but to modernize and streamline processes from start to finish. That is the goal of enterprise content management, said Andy MacIsaac, Senior Strategic Solutions Manager for Government and Education at Laserfiche.

In this video interview, MacIsaac discusses the path to digital transformation. Topics include:

- Using AI to accelerate data-driven decision-making
- Improving the accessibility of data through digitization
- Fostering greater collaboration around data across offices and departments

"Government agencies not only can improve their internal processes and their internal collaboration, but also turn around and improve the engagement they're having with constituents because they're providing a higher level of service."

— Andy MacIsaac, Laserfiche

About Laserfiche

Laserfiche is a leading enterprise platform that helps organizations digitally transform operations and manage their content with AI-powered solutions. Through scalable workflows, customizable forms, no-code templates and AI-enabled capabilities, the Laserfiche® document management platform accelerates how business gets done. Trusted by organizations of all sizes, Laserfiche empowers teams to boost productivity, foster collaboration, and deliver superior customer experience at scale.

Learn more about Laserfiche

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AI Case Study #1

Veterans Affairs: Increasing Productivity

Some of AI's most promising applications help employees do their jobs better. Customizing training with chatbots, combining information from multiple documents into comprehensive answers and processing paperwork are just some of the duties AI can perform, leaving employees to do what they do best — serving the public.

On the Crisis Line

At the Veterans Affairs Department (VA), AI has helped train and support responders on the Veterans Crisis Line (VCL), a suicide-prevention hotline that veterans can access through the national 988 suicide phone line, or by text or online chat.

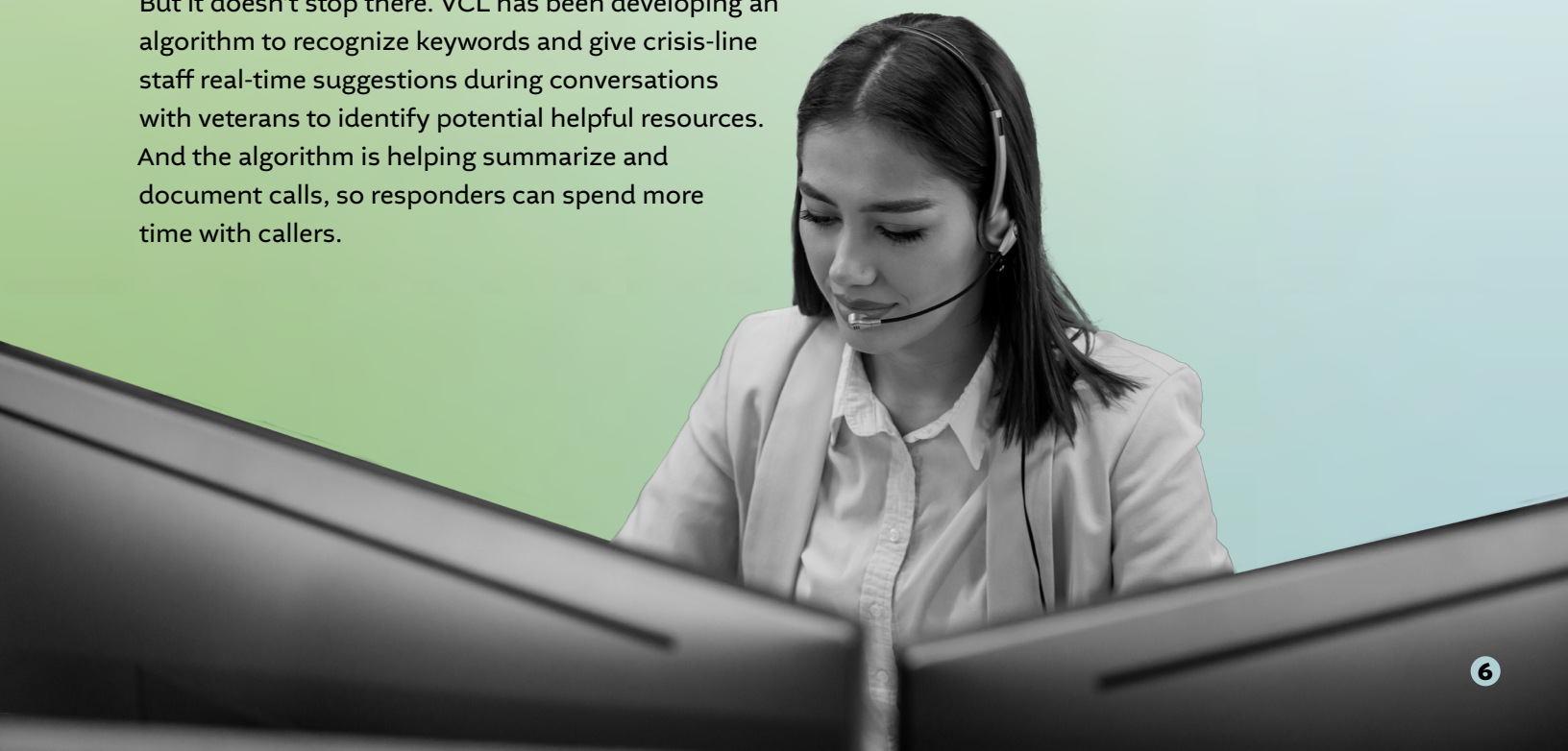
In the past, certified trainers taught VCL responders using one-on-one role-playing, but that approach could be inconsistent, time-consuming and emotionally taxing. It also exacerbated employee turnover.

Now, VA is using a training chatbot to help VCL staffers improve their skills. The bot's eight simulated personas reflect the diverse demographics and experiences of veterans who access the hotline. The personas replicate a variety of motivations and crises, giving the responders practice in coping with multiple scenarios. In addition, the AI tool provides consistent, high-quality, repeatable training, and it gives trainees instant feedback after each simulation.

But it doesn't stop there. VCL has been developing an algorithm to recognize keywords and give crisis-line staff real-time suggestions during conversations with veterans to identify potential helpful resources. And the algorithm is helping summarize and document calls, so responders can spend more time with callers.

"VA believes AI holds significant opportunity to meaningfully improve how Veterans receive their benefits, reduce VA's administrative burden ... and increase the quality of care provided to Veterans."

— The VA AI Use Case Inventory website



Industry Spotlight

How Autonomous Agents Could Ramp Up Government Efficiency



One of the hottest developments in AI is the emergence of the autonomous agent, an advanced form of AI that is tailored to execute specific tasks and to improve on its own performance as it goes. And unlike GenAI, an agent can carry out its work with minimal human intervention.

Think about autonomous agents as digital employees that work alongside human employees, said Paul Tatum, Executive Vice President for Solution Engineering at Salesforce, which recently launched a solution called Agentforce.

The benefits of AI extend beyond the workforce, said Dominic Delmolino, Vice President of Field Technology and Engineering for Amazon Web Services Worldwide Public Sector. The technology also can be used to guide constituents through government services and information.

In this video interview, Tatum and Delmolino provide insights into how agencies can turn AI and autonomous agents into force-multipliers. Topics addressed include:

- Examples of how autonomous agents work
- Common use cases for autonomous agents in government
- Best practices for building public trust in AI

"Think about government and everything that agencies have on their plate to do: If you could add 10, 100, 1,000 digital employees to help you with your task, why wouldn't you do that?"

— Paul Tatum, Salesforce

About Salesforce

Salesforce is the #1 AI CRM, empowering the public sector with proactive agents to build trust and connection. Its solutions accelerate digital service delivery, unlock enterprise data and drive mission success — all in a secure, compliant cloud. Salesforce leads with trust, innovation and equality, earning recognition for culture and philanthropy.

Learn more about Salesforce

About AWS

Since 2006, Amazon Web Services has been the world's most comprehensive and broadly adopted cloud. AWS is continually expanding its services to support virtually any workload, and it has many featured services including analytics, machine learning and artificial intelligence. Millions of customers — including leading government agencies — trust AWS to power their infrastructure, become more agile and lower costs.

Learn more about AWS

AI Case Study #2

Santa Clara County: Doing Tasks That Humans Can't

Sometimes AI's advantage is that it works faster than humans and can do things humans can't. Whether it's summarizing large documents, analyzing huge databases or detecting system anomalies in real-time, AI can break down big jobs.

Removing Legacies of Racism

The Supreme Court ruled in 1948 that restrictive covenants — clauses in property deeds that historically barred people from purchasing homes based on their race — were unconstitutional. But many remained in local property records. To correct this, California mandated in 2021 that counties find and remove such covenants from recorded deeds.

In Santa Clara County, officials would need to go through 24 million documents — 84 million pages dating back to 1850 — to comply. Faced with the magnitude of the assignment, the county joined forces with researchers from Stanford and Princeton universities to find a way to use a large language model (LLM) instead.

To save money, the team opted to fine-tune an open LLM rather than build or use a proprietary version. The LLM was trained to "detect racial covenants with high precision and recall" and could review and revise the deeds in just a few days, according to the researchers' report. They estimated that doing the work manually would have required 1.4 million staff hours — nearly 160 years of work for a single person. Using AI saved about 86,500 person hours and cost less than 2% of a commercially available closed model.

The LLM was also able to link the deeds to historical maps of the properties, something Assistant County Clerk-Recorder Louis Chiaramonte said could have been "nearly impossible" for staff.

"Our solution offer[ed] an accurate, fast, and cost-effective path for Santa Clara County – and other jurisdictions – to best utilize limited human resources, meet legislative requirements, and preserve important historical records for further study."

— AI for Scaling Legal Reform: Mapping and Redacting Racial Covenants in Santa Clara County



Industry Spotlight

How to Bolster Your Endpoint Defenses



For government cyber professionals, the challenge is not just that malicious actors have become sophisticated and their tactics more lethal. It's also that the IT environment has become increasingly complex.

Employees are accessing data and applications using multiple devices, including laptops, tablets and smart phones, each with its own operating systems and software versions. And sometimes they are on site and sometimes remote. All of this complexity adds up to more vulnerabilities that malicious actors know how to exploit, said Jared Vichengrad, Head of Public Sector, Check Point Software Technologies.

In this video interview, Vichengrad discusses how agencies can take a more comprehensive approach to endpoint security. Topics addressed include:

» Common vulnerabilities in the government cyber workspace

» The key ingredients of an endpoint security strategy

» Three use cases for using AI to bolster cyber defenses

"Addressing all these [current] challenges requires a comprehensive endpoint protection strategy that includes robust policies, advanced security tools and the continuous monitoring of the environment."

–Jared Vichengrad, Check Point Software Technologies

About Check Point Software Technologies

Check Point is a leading cybersecurity innovator, using AI to autonomously predict and prevent attacks across networks, clouds, endpoints, and devices for the public sector. It delivers an AI-powered, cloud-based cybersecurity platform with 99.9% malware blocking, 99.7% phishing prevention, and 98% defense against critical intrusions.

Learn more about Check Point

CHECK POINT™
PUBLIC SECTOR

AI Case Study #3

Tennessee: Keeping the Public Safe

AI's ability to juggle multiple inputs, recognize patterns and respond quickly makes it useful in a variety of public safety applications. From screening 911 calls, checking the air for signs of fire, predicting where ambulances might be needed to filling out police reports, AI can help protect the public.

Keeping Traffic Moving...Safely

In Tennessee, AI is helping control speed and reduce congestion on a 17-mile stretch of Interstate 24 that runs between Murfreesboro and Nashville, preventing secondary crashes and stop-and-go traffic patterns.

The Tennessee Department of Transportation's I-24 Mobility Technology Interstate Observation Network (MOTION) is a first-of-its-kind testbed to understand how all types of vehicles interact with one another and the state's infrastructure, to improve congestion management statewide, according to the project website.

The project allows staff to test advanced traffic-management and automated-vehicle technologies in real freeway traffic.

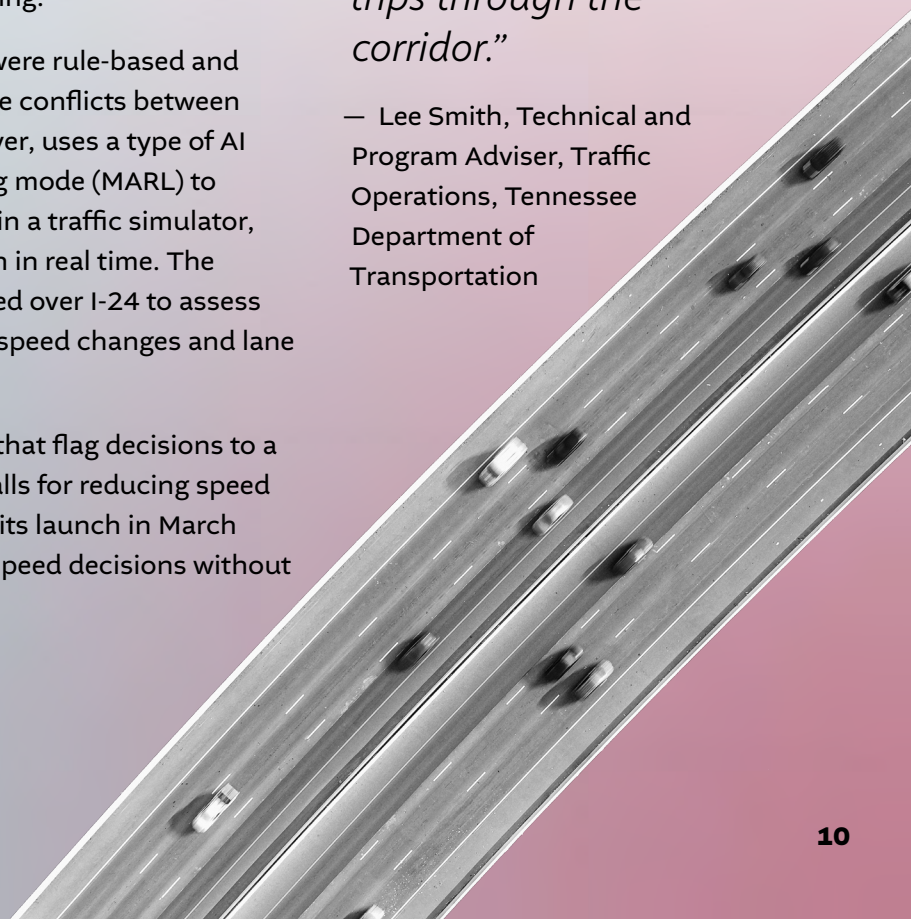
In addition, a complementary I-24 SMART Corridor project uses AI to adjust traffic speeds to changing conditions. That helps prevent rear-end and other collisions and keeps traffic moving.

Early on, variable speed limit (VSL) programs were rule-based and unable to adapt to unforeseen issues or resolve conflicts between traffic flow and safety. SMART Corridor, however, uses a type of AI known as a multi-agent reinforcement learning mode (MARL) to respond in real time. MARL agents are trained in a traffic simulator, then deploy strategies based on the simulation in real time. The system coordinates 67 VSL controllers mounted over I-24 to assess traffic data. Electronic message boards signal speed changes and lane closings.

The MARL system is equipped with guardrails that flag decisions to a human controller, for instance if the system calls for reducing speed by more than 10 mph between sensors. Since its launch in March 2024, the system has made 98% of the traffic speed decisions without the need for human intervention.

"Since its initial deployment on March 8, 2024, the MARL-based VSL control system has operated continuously, making decisions at 30-second intervals, 24 hours a day. It has generated over 10 million control decisions, impacting more than 8 million trips through the corridor."

— Lee Smith, Technical and Program Adviser, Traffic Operations, Tennessee Department of Transportation



Industry Spotlight

How Automation and AI Can Transform Your Agency Operations



Agency processes often are slow and cumbersome and overly reliant on manual, paper-based requirements. Such inefficiency affects even simple interactions with consumers, vendors, contractors, and various internal departments — and although staff know intuitively that there's a better way, modernization can seem confusing.

But automating your operations is actually straightforward. You begin by identifying the systems that are ripe for automation, and then working with a trusted partner to digitize those processes. Eventually, you look for ways to optimize your new system's performance over time, using AI technology.

In this video interview, Niranjan Vijayaragavan, Chief Product Officer at Nintex, explores the benefits and "how to" of process automation. Topics include:

- Why agencies should involve non-IT staff in process automation
- How AI specifically impacts this field of automation technology
- Tips for overcoming paper-based, manual systems

nintex carahsoft

"There's a confluence between AI and automation that is a very natural fit, and so we see a lot of innovation happening in this space already — but a lot more to come."

– Niranjan Vijayaragavan, Nintex

About Nintex

Nintex helps companies unlock the power of endless possibilities. We believe that by placing intelligent automation in the hands of many, organizations can remove friction from work and inspire teams to build a culture of efficiency that accelerates business success. Efficiency creates momentum: propelling people, work, and business forward.

Learn more about Nintex

About Carahsoft

As the Master Government Aggregator® for our vendor and reseller partners, Carahsoft delivers a portfolio of secure IT solutions that enable the public sector to implement telework and online learning initiatives, support collaboration, ensure seamless operations, scale communications, and more.

Learn more about Carahsoft

AI Case Study #4

Treasury: Fighting Fraud and Waste

Reducing fraud, waste and abuse is a high priority in government — and AI can help. With its ability to flag anomalies and process vast amounts of data, AI is uniquely equipped to help track down problems.

Preventing Check Fraud and Improper Payments

In fiscal 2024, AI helped the Treasury Department prevent and recover more than $4 billion in fraudulent and improper payments. That included stopping $154.9 million in improper disbursements and recovering $346.2 million. And in this case, the type of AI used wasn't sophisticated GenAI, but well-established ML.

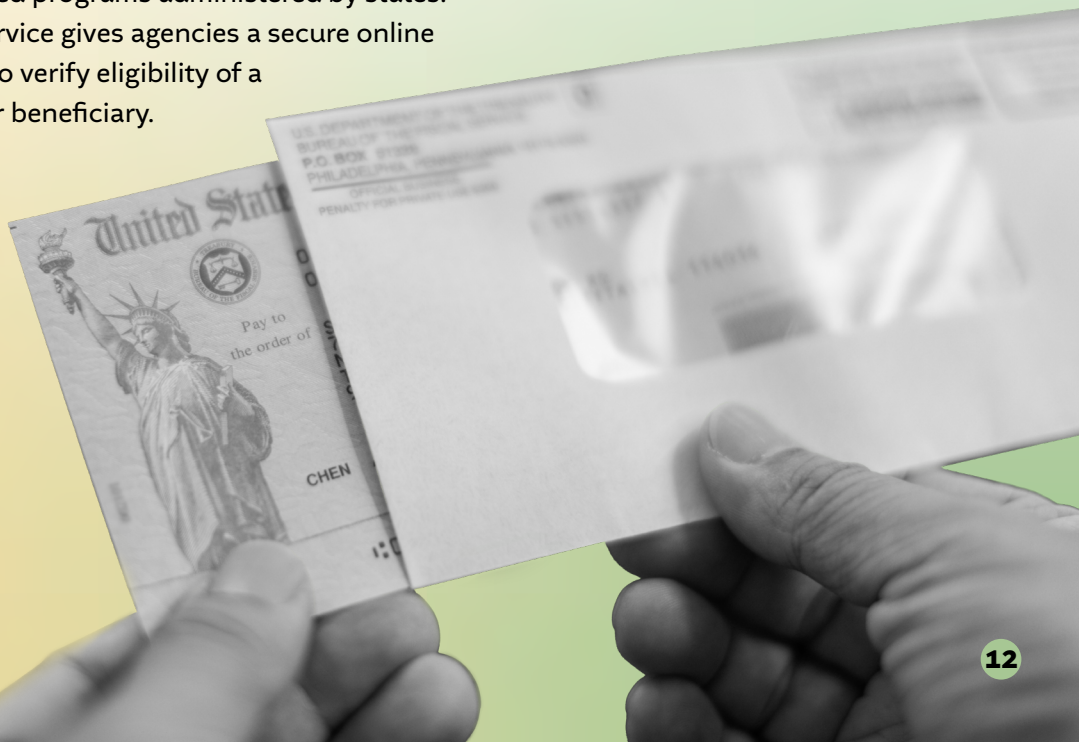
Improper payments are not always fraud; many are the result of mistakes, such as sending a payment to the wrong person or sending the wrong amount. Treasury's AI can compare databases — for instance, the Social Security Administration's Death Master File — to help verify recipients' identities and confirm amounts.

There has been a big uptick in fraud since the Covid epidemic began in 2020, and AI has proved its mettle in addressing it. Treasury's program looks for unusual transaction patterns that reveal potentially fraudulent activity almost in real time, allowing the agency to contact banks and stop payments before checks can be cashed. The system even has led to some arrests.

Treasury's Office of Payment Integrity has shared tools with other agencies and with federally funded programs administered by states. For example, its "Do Not Pay" service gives agencies a secure online interface to check data sources to verify eligibility of a vendor, grantee, loan recipient or beneficiary.

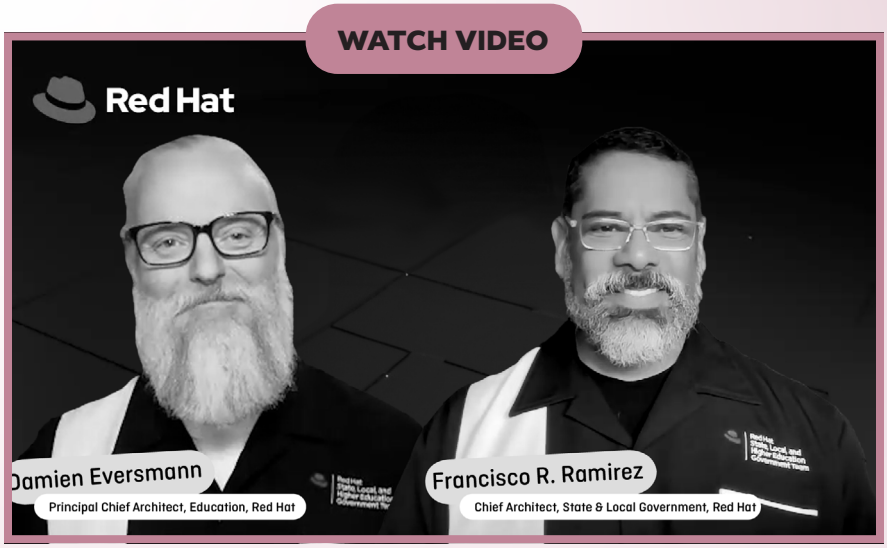
"We are using the latest technological advances to enhance our fraud-detection process, and AI has allowed us to expedite the detection of fraud and recovery of tax dollars."

— Wally Adeyemo, Former Deputy Secretary of the Treasury



Industry Spotlight

How AI and Automation Can Drive Continuous Modernization



With the advent of artificial intelligence (AI) and related automation tools, the concept of modernization is quickly becoming outdated. "Modernization" once meant a distinct, all-hands-on-deck project with fixed requirements and a pre-determined, multi-year schedule. But with the acceleration in technology innovation, agencies often find that their once-modern technologies have become just the latest legacy solutions.

A better approach, said Damien Eversmann, Principal Chief Architect for Education at Red Hat, is continuous modernization, in which an agency is incorporating new technologies and work processes on an iterative basis.

That approach also helps agencies align their operations more easily with technological developments, said Francisco R. Ramirez, Chief Architect for State and Local Government at Red Hat.

In this video interview, Eversmann and Ramirez discuss how AI and automation can help agencies both modernize and streamline their operations. Topics addressed include:

- Building AI-based processes for managing institutional knowledge
- Best practices in continuous modernization
- Driving efficiencies with an automation platform

"We need to always be looking for the next change to make the next improvement, the next small step that we can make in order to make ourselves just a little bit more modern. If we're constantly iterating, then we can start thinking more about everything as a single platform that works together."

— Damien Eversmann, Red Hat

About Red Hat

The US government demands performance, transparency, and value — exactly what Red Hat and open source offer. Red Hat is the standard choice for Linux in governments worldwide. Our cloud, virtualization, storage, platform and service-oriented solutions bring real freedom and collaboration to federal, state, local, and academic programs.

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Government Spotlight

How Alameda County Is Embracing AI



Sybil Gurney, Assistant CIO for Alameda County, California, is enthusiastic about AI's potential. As she wrote in the National Association of Counties (NACo) newsletter in 2024, "we were very excited about how Generative AI (GenAI) could reimagine our services and operations and make them more efficient and modern. We soon realized the real challenge: Figuring out how to learn, use and make this technology a part of our journey."

When we spoke to her earlier this year, she was, if anything, more impressed with AI — and more convinced that workforce education is the key to using it advantageously. "It's a great productivity tool, but [agencies] need to use it responsibly. There are aspects and guidelines that staff needs to be aware of so that they can be productive using AI," she said.

Why GenAI Is Making a Difference

GenAI is a significant step up from older types of AI, Gurney noted. "Straight AI is rules-based, so it's only as good as the information you feed it." For instance, a rules-based chatbot is limited by the specifics of a query. Misspell a word, she said, "and you're not going to get an answer."

With GenAI, "it's going to do research for you. It can find things you might not be able to find [with a simple search]. It can digest data and present it. It can go out to the website and say, 'Oh, here, I found this document.'"

Alameda County is preparing to launch a new GenAI-based search of its board of supervisors meeting agendas — a resource Gurney said "goes back to the beginning of time." A conventional search doesn't make the best use of those records. "Say I want to search for something that happened related to homelessness in 2003. It's just the worst, most cumbersome, impossible research ever," she said.

Now those agendas have been loaded into an AI system, and the search is much more productive. "We can ask questions, go back and forth, and have that conversation to find exactly what you need," explained Gurney.

Updating Legacy Systems

Alameda is using AI to update its property records that rely on COBOL, a little-supported programming language designed in 1959, and for which the pool of developers is rapidly diminishing. The system also is so rigid that multiple tax bills sometimes go to a single company. "Our [form] fields aren't long enough to hold the dollar amount," she said. "In our system, you can't modify that. And it would be a 20- to 40- year project to rewrite [all the code]."

So, the county is using AI to convert the COBOL to a .Net platform. "We hope within two years, the whole thing will be converted, and it will be in a language that people can support," Gurney said.



What Employees Need to Know

Education is fundamental to the successful implementation of AI. "You need to know it's safe. You can't be putting confidential information out there. You have to make sure that the data you provide isn't being used to educate [outside] models," Gurney said. And many people must be trained, from more general staff to executive leadership.

The county recently received signoff from its employee union on a set of AI guidelines. "They're all developed, not to deter from using AI, but to promote using it responsibly," she said. But the work doesn't end with the guidelines. "We also need to send them tips and tricks. What's a good prompt? How do you secure yourself and make sure the data is valid? Because it's still up to you to make sure."

Most important, Gurney said, is that training must be ongoing. "I really want to stress it is continuous. Because it changes so much, and we keep learning more and more about what it can do."

Learning From Peers

Gurney is a strong proponent of programs such as NACo's AI Leadership Academy, offered in conjunction with the Professional Development Academy, which also gives courses in enterprise cybersecurity and high-performance leadership. "I've sent all my managers either to the cybersecurity course or the leadership course. And now that we have an AI course, I've sent managers to that," she said.

"I do this is because my teams get to meet other people in other counties, and they get to share skills. When I asked [them] what they liked about the course, across the board they said the most important thing to them is working with others in other counties and getting to know what they do."

AI is not going away, and the more people can learn about it, the more effectively agencies can deploy it, she added. "I think we're going to get smarter and smarter and better and better," she said. "Once we can figure out how to use the tools appropriately for our business, it's going to help us be more efficient, it's going to help us look more modern and it's going to provide a great end-user experience."



Industry Spotlight

The Emergence of an AI Factory Model



Across the federal government, agencies are exploring how they can use artificial intelligence (AI) to solve long-standing problems and to discover innovative ways to manage operations and deliver services. By necessity, most agencies have focused on tactical objectives, limiting their risk while they learn about the technology and build out their use cases.

Their challenge now is to lay the foundation for more strategic initiatives by adopting a set of repeated practices that produce consistent results, making it easier to scale those operations.

In this video interview, Winston Chang, Chief Technology Officer for Global Public Sector at Snowflake, describes what he calls the AI factory model.

Topics addressed include:

- The three phases of an AI factory model
- How this approach makes it possible for non-experts to start building models
- The importance of incorporating interdisciplinary teams in the process

"If you're a data domain expert now, you don't necessarily need to be [a machine learning] expert to start building ML models. And that democratizes it, which means the people who know the mission and the data best can now be the ones initially coming in and saying, 'hey, this would work.'"

– Winston Chang, Snowflake

About Snowflake

Snowflake for public sector makes it easy to modernize and accelerate cloud migration, share data securely, and ensure data governance for improved resiliency and enhanced mission outcomes. Snowflake's AI Data Cloud enables organizations to enable a data-informed government. Leverage the Snowflake AI Data Cloud and platform to power IT modernization, improve citizen services, and drive innovation and efficiency. Snowflake delivers a FedRAMP-authorized, seamless experience across multiple public clouds.

Learn more about Snowflake

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Conclusion

AI's potential continues to evolve, and it's fair to say that agencies are evolving with it. In this guide, we explore how AI is helping them be more productive and better able to address public safety and fraud and abuse, among other challenges. Without question, AI is changing the way we live, work and interact with the public.

Preregister for the next guides in our 2025 AI Series

About GovLoop

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.

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