Digital Transformation
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AI in Government

AI Beyond Business: Improving Governments and Governance

Governments worldwide are using Artificial Intelligence (AI), machine learning (ML), and digital twins to do everything from cutting waiting times at the Department of Motor Vehicles to protecting small businesses from cybercrime. In October 2023, President Biden issued an Executive Order (EO) on AI, which set out a blueprint for the US, including government entities, to realize the myriad benefits of AI while mitigating the risks.

Exceptionally for this series, this report focuses purely on AI, rather than other aspects of digital transformation. Many government digital solutions are already up and running. AI is a natural next step. In December 2023, the US Government Accountability Office (GAO) reviewed the implementation of AI at federal agencies and found hundreds of deployments, from analyzing camera data at border crossings to guiding National Aeronautics and Space Administration's (NASA) planetary rovers. They also found much work to be done.

Technology companies worldwide offer a range of commercially available and scalable AI solutions to improve citizens' lives, at federal, national, state, and local levels. This report explores how governments are using AI to meet citizens' high expectations of online services, at three different levels:

SECTION 1 National: Large Solutions for Challenges at Scale

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Governments and agencies worldwide are therefore at a critical moment; [Accenture notes,](#)[1] "as AI redefines processes, those who fail to make decisions will find themselves playing by someone else's rules." Strong national laws help give businesses, the government, and consumers greater confidence to adopt responsible AI-enabled tools.

AI, ML, and cloud technologies empower organizations of all kinds. Making greater use of commercially available solutions could go further to improving government services for the public. There are [currently eight different regulatory efforts underway](#) affecting how the federal government can make use of enterprise technology, including AI and cybersecurity products.

One current barrier is ensuring employees have AI skills, and retaining those that do, an issue explored in this [report about the Department of Defense](#). AI can power a skills-based approach to talent at a time when the federal government faces significant workforce challenges, including recruiting, attracting, and retaining talent and reducing the government's dependency on outdated, legacy technology.

With the right people in place, the next challenge is deciding on the correct use cases. At [Federal Tech Day 2023](#), CIOs discussed how AI can help achieve their goals. "We are thinking about the opportunity—the dirty and dangerous work, the mundane work—that can be accomplished using AI," said Clare Martorana, Federal CIO at the Office of Management and Budget. From fighting forest fires to enabling [fighter pilots to practice mid-air refueling](#), AI can prepare humans for extreme situations without actual peril.

The will is there, as is the commitment to funding. In the US, the President's fiscal year 2023 budget request included $1.8 billion for nondefense research and development (R&D) investment in AI, according to the GAO. In the 2024 edition, the Executive Branch has requested billions of dollars across agencies to pursue AI.

SECTION 1

National: Large Solutions for Challenges at Scale

AI can do tasks we can't. In its 2021 report,[2] the temporary, independent, National Security Commission on Artificial Intelligence (NSCAI) noted that AI's increasing ability to outperform human intelligence was "world altering." The way AI could "perceive, evaluate, and act more quickly and accurately than a human represents a competitive advantage in any field—civilian or military." Governments are at the stage of using so-called narrow AI[3] to simplify tasks, but the results can still be useful on a planetary scale.

Government use of AI isn't limited to our planet. The GAO report named NASA as the agency making the most of AI, with 390 use cases in fiscal year 2022. Governments have a duty to keep citizens safe, and AI can be a useful tool for everything from keeping track of drones[4] to predicting earthquakes[5]—tasks that make more sense at a cross-border level.

Countries worldwide are now using AI to manage services at a federal level. For many, the first step is embracing the cloud. There's no AI without cloud, and no cloud without AI; the decisions in the optimization processes that make cloud storage and computing so efficient could never be undertaken by a human. Data must be digitized in order to be accessed by AI systems; happily, government-specific cloud solutions are available with appropriate levels of privacy and security. This facilitates building citizens' trust.

For most of us, our online identity is as "real" as our flesh-and-blood one. Yet today, nearly one billion people are unable to prove who they are. The UN Sustainable Development Goals (SDGs) provide the ambitious target that all people will be able to obtain a "legal identity" by 2030.[6] Public and private sectors alike are working to fix this; people are more likely to participate in the digital economy if they know their digital identity is secure, and their privacy is respected.

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Off the Shelf, Into the Ocean

Canada's Department of Fisheries and Oceans (DFO) comprises several agencies that provide services including dredging and ice breaking, hydrographic mapping, selling fishing licenses and maintaining the coastguard service. After 20 years, its existing financial management solution needed an overhaul. **SAP**'s scalability, robust functionality, and experience with Public Sector digital transformation programs made shifting to SAP Cloud services simple.[7]

Benefits for the DFO included SAP's preconfigured processes, which were already aligned to the needs of public sector organizations. Therefore, 80 percent of the DFO's standard needs could be adopted "out of the box." This was critical because the DFO project was part of a wider program of additional shared services clusters, all using the same templated approach. The cloud platform kept infrastructure costs low, and the modular rollout approach resulted in quick wins early on—often self-funding the organizational change.

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Microsoft

Kia Ora World! Digital ID for New Zealand

In 2006, the New Zealand's Department of Internal Affairs (DIA) created a centralized online platform called RealMe for residents to affirm their legal identities and access 163 government services across 56 public agencies. This voluntary system had a fairly high adoption rate across 4.9 million residents, but as services grew, it needed an upgrade.

DIA wanted to move the whole system to a new cloud. They chose **Microsoft** Azure Active Directory B2C,[8] part of Microsoft Entra, because of its built-in security, scalability, and ease of integration with apps and databases. Azure Sentinel uses AI to enable a monitoring and alert system that cuts down on false positives. "There's been a huge cost drop from the previous on-premises platform to the current Microsoft cloud solution," says Venkat Maddali, Identity and RealMe Architect at the DIA. "Also, we can implement enhancements faster while providing a better user experience."

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Keeping the Arts Alive Across Germany

When the COVID-19 pandemic struck, the finance ministry of the city state of Hamburg was entrusted with creating a platform for artists to receive funding from a €2.5 billion federal special fund for cancelled cultural events. As a pioneer in e-government, the City of Hamburg is well equipped to implement unique initiatives; they worked with **SAP** S/4HANA to bring the entire project together[9] in just three weeks.

The whole process from initial aid request to payout needed to be digital. It also needed to be applicable in all 16 German federal states and across different regulations. The authorities could rely on an AI-based and highly automated process to evaluate aid applications. These services can check if uploaded data, such as proof of event cost and revenue or identity, matches information on the aid application. They also integrated the German federal tax office authentication service, via an API, to help ensure fraud prevention.

State: Streamlining Citizen Services With AI

"Generative AI will help transform how systems and individuals function and interact,"[10] notes Bryan Rich, Accenture's Global AI & Data Lead for Health & Public Service. "It's a co-evolutionary step change in the human-machine relationship, with important implications for public sector." Citizens expect tailored, convenient, and secure digital services—and these routine services are often delivered at a state or regional level.

Supporting employees with AI-powered processes can minimize administrative burdens, burnout, and silos across departments, and enable employees to concentrate on more complex tasks. Using AI can also empower the public and save people time by providing fast access to self-service tasks, transactions, and commonly requested information; chatbots are a great way to get questions answered quickly and easily. And when the pandemic struck, governments were able to use AI to assist teams with everything from deploying test kits and vaccines to ensuring financial aid was implemented quickly.

For state governments unsure about how to begin their AI journey, many BSA members offer support. For example, Kyndryl has a Public Sector Grants Program, where they partner with state, local, tribal, and territorial governments to leverage funding from government sources, such as the American Rescue Plan Act (ARPA) and the Infrastructure Investment and Jobs Act (IIJA), to modernize and improve national infrastructure.

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Driving Change: AI at the MVD

The Arizona Motor Vehicle Division (AZ MVD) envisioned a customer experience that delivers fast, efficient, and friendly service in-person or online while also providing a rewarding place to work for its employees. The agency needed a partner to help them modernize systems, technology, processes, and networks.

Kyndryl worked with them to create an AI-powered virtual assistant[11] who could help serve customers at busy times, and more than 60 services are available online. MAX, the system they created, enables customers to see all their information in one place. They are also modernizing AZ MVD physical offices. In modernizing offices, Kyndryl collaborates with Microsoft, their strategic partner, to integrate each office with the new cloud-first architecture.

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Artificial Intelligence, Real Support

Wyoming Department of Family Services (DFS) works with the community to build stable, nurturing families. They support people, whose needs are varied and changing, across a large rural state. "We realized that we needed to provide a consistent, easy-to-access way for people to both apply for programs and ensure that they are connected across the range of services available to them," said Roxanne O'Connor, Senior Administrator at Wyoming DFS. With the pandemic highlighting the urgency for change, the team moved to put their vision into action to keep meeting the needs of Wyoming families: they turned to the cloud.

The team deployed Salesforce's Public Sector Solutions for Grants Management[12] on FedRAMP-authorized **Salesforce** Government Cloud Plus, providing a single, customer-first access point to DFS. The system is designed to streamline the process both for individuals seeking assistance and for those within DFS who are providing it.

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workday

The Right Stuff

AI can take the guesswork out of workforce development for AI readiness and facilitate data-driven reskilling. Career Hub is a one-stop shop on the **Workday** platform[13] where incumbent workers can find AI-enabled personalized recommendations, such as learning content and short-term projects. For example, a program manager at the Department of Energy interested in management can discover a leadership role in another program office and take suggested learning courses to prepare them for that opportunity. The result is a win-win for workers and employers: the program manager can pursue growth opportunities that align with their career goals, and the federal government can benefit from and support their incumbent workforce.

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You Can't Spell Capitol Without "A" and "I"

The Washington Metropolitan Area Transit Authority (WMATA) serves more than 430,000 daily riders across Washington, DC, and adjacent areas of Maryland and Virginia. In mid-2022, it embarked on a transformative journey to modernize its digital infrastructure by migrating to the cloud.[14] Maintaining a network of rail and bus services with aging IT systems was contributing to high maintenance costs and service disruptions.

Within six months, WMATA moved critical infrastructure operations, such as fare collection, to a more secure network on **Microsoft** Azure with help from Microsoft partner Presidio. WMATA's digital transformation aims to deliver an excellent transit experience, and its business culture is embracing ongoing innovation. The authority can use the ML analytic capabilities of Azure Synapse Analytics to quickly see bus, rail, and safety system performance, and the visualization tools in Microsoft Power BI to share metrics and provide leadership with the data they need to make more informed decisions.

Local: Building Tomorrow, Forging Communities With AI

Since the turn of the century, online customer experiences have transformed, and residents love to share their feedback online. The challenge for governments, councils, and municipalities worldwide is that, unlike the private sector, they provide essential services in which residents are effectively locked in. Sorting "life laundry" such as trash removal and broken street lighting will never be anyone's favorite task—but AI can smooth the path, keeping mayors and citizens alike happy.

AI can smooth existing workflows, but it can also go further and work upstream. Buildings that are designed using AI can check if they comply with building safety codes before a single brick is laid; predictive maintenance saves time and money, and citizens can access more reliable Wi-Fi access.

Services such as Microsoft's Public Sector Center of Expertise offer extensive support to public sector bodies that want to use AI to deliver services to citizens. AI is more accessible than many think: most agencies begin with an off-the-shelf large language model, feed in their proprietary data, and integrate it with internal systems to deliver customized results.

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AI Creates Email Gold in a Gold Rush Capital
Sacramento, the capital of California, has a population of just over 500,000 people—and they have high expectations of their digital City Hall. The city used enterprise scale communication software to reach more than 200,000 subscribers, which they used for everything from parking restriction notices to public health updates and beyond. But they knew they could do better.

Sacramento's IT experts decided to use **Adobe** Campaign[15] to overhaul their email. AI, powered by Adobe Sensei, helped predict the best send times and the customers most likely to engage. Within a few months of switching, the city's list skyrocketed by 60,000 subscribers. Adobe's system helped the city create better-looking emails that attracted positive attention, prompting engagement and sharing. About 98 percent of emails are now delivered to inboxes instead of junk folders.

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An AI Guardian for the City of Angels

Cyber criminals are increasingly targeting high-profile public institutions: the British Library is currently subject to a months-long ransomware attack.[16] The city of Los Angeles holds public records, permit and license applications, and education, infrastructure, health documents galore. Home to large corporations and famous worldwide, it is an attractive target.

The Los Angeles Cyber Lab[17] is the first of its kind. An online community that shares threat intelligence from private industry, government organizations, and local citizens, it is supported by the city authorities and the **IBM** Security X-Force Threat Intelligence team. They use an innovative cloud-based platform, known as the Threat Intelligence Sharing Platform (TISP) that functions as a digital neighborhood watch.

TISP anonymously collects threat intelligence and other security information from volunteer organizations. The platform uses AI to analyze this data, along with extensive security information from IBM and generates threat intelligence and trend analysis for every member of the LA Cyber Lab. The public-private partnership enables city authorities to use AI to protect residents and businesses while gaining insights into threats to both government and community.

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Betting Big on Data-Driven Insights

Las Vegas wants to take the guesswork out of running the city. "We want to move our city toward a data-driven culture, giving our C-suite the ability to make decisions based on data, not just their gut or whim," says manager of enterprise data and analytics Al Pitts.

Las Vegas is using **Oracle** business intelligence (BI)[18] to bring together geographic information system (GIS) data, operational data, and more to create executive dashboards. For example, the chief public safety officer is combining public safety information, fire and police data, and Internet of Things (IoT) sensor data to more quickly respond to emergencies.

The authorities can get an automatic alert when an airbag is deployed, enabling them to dispatch fire and rescue immediately without any human intervention. At the back end, analytics are used to examine trends over time, for example looking at a particular intersection to see if there's something wrong with the timing of the signal, checking the lighting, and making sure systems are operating correctly.

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Signed, Sealed, Delivered... Online

Governments have many internal processes that depend on forms and signatures—such as employee onboarding, travel and reimbursements, audits, and benefits and retirements programs—and external processes for citizens to do everything from register a birth to apply for planning permission for buildings. Many require multiple forms to be completed, signed, routed, and archived.

DocuSign streamlines every step of this process[19] by taking it online. It has both FedRAMP Moderate and StateRAMP authorizations for some products, enabling it to provide federal, state, and local governments with seamless and secure agreement experiences. "State and local governments need technology solutions that help them serve their constituents quickly and efficiently while also maintaining a strong security posture that protects their data," said Kurt Sauer, Chief Information Security Officer at DocuSign. "We're thrilled to have two of our core products be StateRAMP Authorized to help state and local governments provide vital services in a seamless and trusted way."

The State of North Carolina implemented DocuSign for travel authorization and reimbursement, reducing processing time for expense reimbursements by 80 percent, cutting error rates by 50 percent, and saving $325,000 annually in printing, storage, and processing costs.

Conclusion

As set out in President Biden's EO, "responsible AI use has the potential to help solve urgent challenges while making our world more prosperous, productive, innovative, and secure" for the public and private sectors alike. The government should therefore leverage systems such as multi-cloud environments, AI and ML tools—where effective, affordable commercial solutions are already available.

Establishing requirements for commercial and technology-neutral solutions will empower governments to meet the needs of their citizens, while taking advantage of new technologies. Investing in AI will improve citizens' lives, government efficiency, and global outcomes.

Endnotes

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