

Imagination and Innovation

Generative AI in the Public Sector



Introduction

As the public sector continues to explore and embrace the possibilities of artificial intelligence, generative AI is emerging as a powerful tool. This technology, which has the power of not only pattern recognition and analysis but creation of new content, have already had revolutionary impacts across nearly every sector, from [screening babies](#) for rare genetic diseases to [detecting wildfires](#), and even [improving air travel](#).

With so much attention paid to what generative AI could do and become, how do public sector employees see those possibilities within their own organizations? To explore how public servants feel about generative AI's place in their ecosystem, AWS partnered with Market Connections to design an online survey of 839 public servants across the federal government, education, nonprofit and healthcare sectors.

Integrating generative AI: unlocking new capabilities

The increase of publicly available generative AI tools has led to a significant rise in public consciousness around its capabilities. It is therefore unsurprising that 87% of survey respondents are somewhat or very familiar with generative AI (and no respondent was wholly unfamiliar with it). More than just familiarity, the overwhelming majority of respondents (89%) think it is important for their organization to adopt generative AI, with a quarter reporting that they believe it is critical.

Respondents' expectations of exactly where generative AI will make the most impact, however, vary. Forty-three percent of respondents think their organization is primarily interested in leveraging generative AI to improve operational efficiency, followed by enhancing communications (29%), education and workforce development (28%), and enhancing citizen services (21%). These responses vary across sectors – half of education respondents, for example, naturally see educational development as a primary area, compared with 17% of healthcare respondents, and nonprofits are more likely to appreciate aid in communications. However, operational efficiencies remain top of mind for all.

Respondents' views of generative AI's primary benefits vary, but generally align with two major themes:

- **Enhancing information analysis:** 39% believe generative AI will enhance data analysis and insights, 31% think it will enable better decision-making, and 26% think it will enable faster decision-making.
- **Automation:** 36% think it will automate repetitive tasks, 29% think it will automate report creation and communication.

Respondents see generative AI as a powerful tool to help them better understand and act on their data, relieve tedious administrative burdens, and improve their service delivery and communication. Taken together, these data points sketch a portrait of public organizations who see generative AI as a potentially transformative and exciting technology.

Taking the first steps

Despite overwhelming consensus that generative AI can power their mission, levels of adoption vary across organizations. Nearly two thirds (64%) have found it difficult for their organization to adopt generative AI. Over a third (38%) of respondents are just starting to evaluate opportunities, while 20% are running pilot projects.

Tentative approaches are not universal – some organizations have already hit the ground running. Twenty-eight percent report that generative AI is already integrated or broadly used across their organization. In terms of timeline, 12% say they have already adopted generative AI technologies, while 30% expect to within the next 1-2 years, and 16% expect to even sooner. This still leaves, however, a considerable percentage who see generative AI adoption as a longer process.

Respondents are curious about generative AI, but they need to know how it makes sense in their agency's context. Four in five (82%) of respondents agree that generative AI will be useful for their organization but aren't sure yet of specific applications or use cases. This, combined with cost concerns, are serious considerations (86% believe that integrating generative AI with legacy systems will be costly). Agencies need to know that they are investing wisely in systems that address their needs.

Trust and security

Public sector organizations often handle some of Americans' most sensitive data and are keenly aware that the public expects them to handle that data responsibly and securely. Over eight in ten (83%) respondents agree that their organization is concerned with public trust in generative AI technology, and nearly half (48%) are most concerned about data security and privacy (seventeen percentage points higher than the second largest concern, cost). Public trust is a crucial concern.

Previous [data breaches](#) and other misuses of public data have exposed billions of Americans' personal information, including patient files, voter registrations, social security numbers, and more. As public organizations look increasingly toward data unification and de-siloing, crucial steps that will provide AI tools more complete and robust data sets and allow them to make better, more nuanced decisions, demonstrating secure stewardship of public data is more critical than ever.

As recipients of public trust, it is unsurprising that public sector organizations express the need to trust the generative AI models they use. Ninety-four percent of respondents think that it is essential to have the ability to explain how their generative AI application arrived at a given outcome. Transparency around how these models are designed to work is critical for building trust - both for public servants to understand and evaluate a model for their use case and to have confidence that their organization is using them responsibly.

Responsible generative AI use will, by necessity, look different for each organization according to their specific use cases. There are multiple efforts in the public sector space aimed at helping public sector organizations determine how to adopt generative AI responsibly, such as the [Executive Order on the Safe, Secure and Trustworthy Development and Use of AI](#), [OPM guidance on responsible use of generative AI](#), and the [GSA acquisition resource guide](#) along with guidance from NIST and CISA. Ultimately, each public sector organization must make its own decisions about how to leverage generative AI responsibly based on risk assessments of their specific use cases.

"The fact half of the survey respondents are concerned about data security and privacy aligns with what our clients tell us," says Dave Levy, Vice President of Amazon Web Services, Worldwide Public Sector. "Keeping America's data safe is an immense responsibility, which is why it is crucial to have the highest security standards possible." AWS understands that trust is earned – through world class technology, proven ability to navigate unprecedented challenges, and, most importantly, an uncompromising security posture.

Addressing organizational needs

No public sector problem is one-solution-fits-all, and their needs can be as complex and varied as the public they serve. Half (49%) of respondents say their organization is looking for pre-built applications with generative AI. Thirty-eight percent would build their own applications with publicly available models, 35% are training or fine-tuning a custom model, and 31% are combining more than one of these approaches.

These varied approaches demonstrate an overarching need for flexibility in choosing a model. At the same time, an overwhelming majority (88%) agree that access to purpose-built infrastructure optimized for generative AI workloads is important, and even more (93%) say it's somewhat

important or critical to have access to multiple foundation models from different providers.

Powering the people

Respondents across the board see generative AI as an important, if not critical, potential asset. But the same sweeping possibilities that make generative AI exciting can also make it daunting. For organizations who may be spread thin, trying to do the most with what they have, joining forces with a trusted, expert partner can save time and money – and empower their own people along the way. More than eight in ten (85%) respondents say they need a trusted partner to help them explore where generative AI could be most effective within their organization, and a similar majority (84%) are interested in working with AI/ML experts to explore possibilities for generative AI through use cases, proof of concepts, and production planning.

“The survey shows what AWS already knows to be true: 85% of public sector respondents need a trusted partner in generative AI by their side,” says Levy.

This choice in partner matters. Seven in ten respondents (68%) agree their organization has requirements that influence their choice of generative AI provider, from compliance to security. Organizations need to be selective about the partner they choose for their journey.

Beyond a trusted partner, organizations want to be sure that they also have in-house expertise. Two thirds of respondents (63%) believe that their organization already has the technical expertise required to implement and manage AI systems effectively. Building up technical expertise is crucial for adoption, and initiatives like the federal government’s [AI talent](#) surge are working to bring in new and talented blood to support their AI adoption strategies. At the same time, 90% of respondents are interested in comprehensive training resources to upskill their workforce. Upskilling current workers improves institutional knowledge, marrying experience with new skills that will better inform how and where generative AI is deployed within an organization’s mission.

Best Practices

The AI revolution has already begun. New capabilities are emerging [as fast as the data allows](#), and possibilities are limited only by imagination. The time to take steps is now. How can public sector organizations effectively take advantage of generative AI?

- **Take stock of the possibilities and current use cases.** Evaluating organizational gaps and requirements is essential, from mission to personnel. What problems might be solved by faster information analysis or automation? Resources like the [AI Use Case Inventory](#) can provide insight into how other public sector organizations are conceptualizing their AI solutions and journeys.

- **Take advantage of funding opportunities** like the [Technology Modernization](#) Fund to fund projects outside of the usual budget cycle.
- **Evaluate skills gaps** and make plans to upskill current employees or hire new talent.
- **Look for partners** both internally and externally.
- **Be curious.** The possibilities offered by generative AI have the potential to be revolutionary, leading to better data-driven outcomes, more efficient processes, and better service to the public.

Generating the Future of the Public Sector

The public sector is overwhelming enthusiastic about generative AI's potential. The General Services Administration, for example, is running [150 artificial intelligence pilots](#) with 132 different generative AI tools, through "buying best-in-class AI technologies," according to GSA Administrator Robin Carnahan. Leaders throughout the public sector are eyeing opportunities to leverage generative AI to boost their people and their mission. They are looking for partners to help them. But before anything else, they are looking to ensure security and trust.

"More than 80% of those surveyed believe their organization is concerned with the public's trust in generative AI technology," says David Appel, Vice President of U.S. Federal, Amazon Web Services. "This is why it is important to choose a partner with a proven history with meeting the government's security needs." Public sector organizations can harness the immense potential of generative AI tools to shape, inform and strengthen their missions by working with a partner that has the highest security standards possible.



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