ECONOMIST IMPACT

A smarter state

AI outlook in the public sector

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Introduction

Governments are embracing AI to tackle service backlogs and provide citizens with an Amazon-like customer experience. However, they have unique constraints and must tread cautiously, managing legacy and often disparate IT systems, mitigating risk in essential services and upholding data security and privacy. Governments also face a significant challenge in recruiting and hiring talent, given competition from commercial organisations with larger budgets and more lucrative benefits.

An Economist Impact survey, commissioned by Databricks, polled 715 technical executives and 385 data and AI technologists with titles such as data scientists, data engineers and enterprise architects. The survey included 125 respondents representing the public sector.

We found:

- **There is a surprisingly high rate of engagement, with 78% of public sector experts reporting using proprietary AI technology—more than any private sector industry surveyed. Policymakers are looking to AI to streamline public services at a time of high and rising demand, transforming cumbersome processes into leaner, more efficient systems.**
- **Risk reduction, particularly around identifying fraud and improving compliance, is a leading use case both now and in the coming three years.**
- **While the government is among the industries furthest behind on expanding and scaling AI in our survey, respondents reported an above-average optimism about expanding and scaling internal use cases within three years.**
- **That said, managing data security and privacy is the dominant worry about AI integration.**

We'd like to thank the following executives for participating in interviews and sharing insights:

- **Leonel Garciga**, chief information officer, **US Army**
- **Senthil Ramani**, global lead, data and AI, **Accenture**

Public pressure

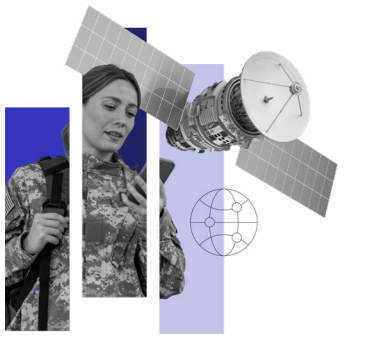
Public services are feeling the strain of limited budgets and soaring demand. Global public debt ballooned to US$97trn in 2023, up from US$51trn in 2010.[1] As fiscal pressures mount, AI and the potential cost savings it represents are increasingly seen as potential saviours.

Take healthcare. In England, 7.5 million patients—more than 10% of the population—are stuck in queues for appointments with consultants. The UK government, once hopeful it could eliminate waits longer than 65 weeks, has found itself short of its target.[2] AI solutions could help speed up scheduling, triage patients more efficiently and process paperwork in a fraction of the time it takes human clerks.

Visa processing is another government service struggling to keep up with demand. With tight labour markets and ageing populations in much of the world, higher rates of immigration are key to maintaining a viable workforce, but delays in visa processing are not only frustrating for aspiring immigrants but a headache for businesses starved of talent. In the US, the current processing time for immigration applications can stretch into years. Recognising this headache, US Citizenship and Immigration Services has enlisted AI-powered solutions to automate parts of the application process.[3] Machine learning (ML) models are now being deployed to fast-track visa applications, flagging errors and missing documents in a matter of seconds—a task that would take human reviewers much longer.

Improper payments greatly impact government organisations and often deplete funds that are needed to support critical defence and public safety programs.

Since 2020 the US Department of Defense has used AI-driven tools to process more than 10 million records and identify over US$12.7bn of true improper payments, allowing it to immediately take action to prevent or recover these funds.[4]



AI in public service: productivity gains, public trust and data gold mines

Although levels of technology adoption and implementation vary widely between governments, and even municipalities and regions within countries, it is particularly hard to generalise about public sector technology practices. Nevertheless, our survey suggests AI's presence in large government organisations is surprisingly high.

Seventy-eight percent of public sector experts report using proprietary AI technology—more than in any private sector industry—although its deployment has hit some snags.

[1] https://unctad.org/publication/world-of-debt
[2] https://www.bma.org.uk/advice-and-support/nhs-delivery-and-workforce/pressures/nhs-backlog-data-analysis
[3] https://www.boundless.com/blog/dhs-embraces-ai-for-faster-fairer-immigration-processes/
[4] https://storage.tradewindai.com/pdfs/Advana-Industry-Day.pdf

Legacy infrastructure and data quality concerns are the biggest challenges for the sector, according to more than half the experts in our survey. Yet, policymakers are captivated by AI's potential to streamline public services, transforming cumbersome processes into leaner, more efficient systems.

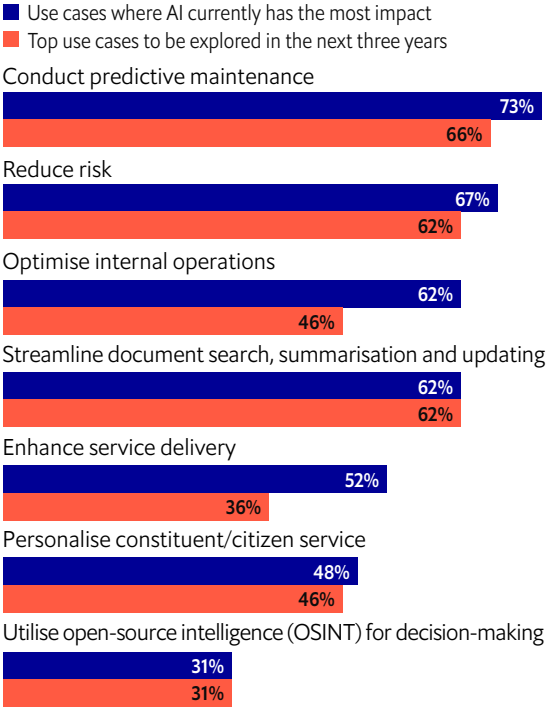
> **"AI can have a significant impact on citizen services. Governments are looking to move away from the drudgery of paperwork, and AI is a huge opportunity to enable them to go digital."**
>
> Senthil Ramani, global lead, data and AI, Accenture

Estimates suggest it could deliver a US$100bn impact, making services more agile and user-friendly.[5]

Risk reduction is a leading AI use case, our survey found, both now and in the future (see figure 1). Ironically, AI may help governments tackle outdated IT systems that are themselves a cyber risk. One report in the UK found that a single agency was using over 300 outdated core applications, many of which were no longer supported by their providers, leaving governments without technical help in the event of glitches and failures.[6]

Outdated and fragmented systems also lead to slower processing times, a potential danger for agencies charged with critical oversight in areas like public health monitoring or animal disease outbreaks. Tapping into AI to improve efficiency has therefore been a critical boon, with 62% of government respondents seeing high impacts from AI when it comes to optimising internal operations and streamlining document search, summarisation and updating.

Figure 1: Top use cases now and in the future



Source: Economist Impact

Service delivery is also a current high-impact use case, according to more than half of respondents. Citizens, increasingly accustomed to seamless digital interactions, are demanding more from their governments.[7] AI, if used correctly, could bolster trust in government institutions by fixing the very issues that frustrate citizens: delays, inefficiency and outdated interfaces.

[5] https://www.mckinsey.com/industries/public-sector/our-insights/unlocking-the-potential-of-generative-ai-three-key-questions-for-government-agencies
[6] https://www.newstatesman.com/spotlight/tech-regulation/public-sector-tech/2023/05/defras-outmoded-it-systems-leave-department-at-risk-of-cyberattack
[7] https://www2.deloitte.com/us/en/insights/industry/public-sector/government-trends/2021/public-trust-in-government.html

Pockets of innovation are emerging as some governments forge ahead with AI adoption. In Singapore, for example, the OneService Chatbot allows residents to report municipal issues via WhatsApp and Telegram.[8] Estonia's e-Residency programme has adopted AI, deploying chatbots to improve customer service response times without needing to expand staff.[9] Australia's collaboration with Capgemini has led to AI-based processing of welfare applications, cutting down processing times from weeks to seconds with a 95% accuracy rate.[10] In the US, the Department of Motor Vehicles is experimenting with chatbots that assist citizens in renewing licences and scheduling appointments. It's a move aimed at reducing endless hold times or clunky website navigation.[11]

AI also promises to help governments extract value from the vast troves of valuable data they preside over, which, if harnessed properly, could unlock an estimated US$3trn in economic value.[12]

"Public sector AI users are starting to see the silos of data that exist across organisations and departments and realising the potential of AI to bring that data together."

Senthil Ramani, global lead, data and AI, Accenture

Transport for London released data on timetables, service status and disruption, which led to the development of over 600 apps and delivered economic savings of up to £95m.[13]

However, concerns over data sovereignty and localisation are coming to the fore. Ensuring that sensitive government data stay within national borders—and is subject to local regulations—will be crucial as AI becomes a more integral part of public sector operations.

Digital sentries

Safety and security are other areas where AI is proving invaluable. Environmental agencies are leveraging AI-powered cameras and systems to enhance mapping and natural disaster identification. The US National Oceanic and Atmospheric Administration has developed the Next Generation Fire System, which processes satellite data to identify wildfires.[14] In Brazil, a trial is using AI to predict areas where deforestation is most likely to occur, with 75% accuracy.[15]

Defence departments have been quick to embrace AI. In the US, GenAI is being used to manage mountains of paperwork and optimise operations across the vast military machine.[16]

"Being in the Army is one of the few jobs where you get to oversee this many different verticals. I work for a company with its own Walmart and Amazon, its own healthcare system, and its own HR system larger than most Fortune 500 companies. It's a dynamic and vast enterprise."

AI's assistance is seen as crucial in orchestrating this complex ecosystem more efficiently.

Leonel Garciga, chief information officer, US Army

[8] https://www.smartnation.gov.sg/initiatives/oneservice-chatbot/
[9] https://chatbotsmagazine.com/how-e-residency-of-estonia-uses-ai-to-help-users-get-answers-instantly-and-increase-customer-e07e052beb4f
[10] https://www.computerweekly.com/news/252490630/Services-Australia-taps-AI-in-document-processing
[11] https://insider.govtech.com/california/news/vendors-ai-based-solution-for-dmv-a-living-organism
[12] https://www.mckinsey.com/industries/public-sector/our-insights/how-government-can-promote-open-data
[13] https://content.tfl.gov.uk/deloitte-report-tfl-open-data.pdf
[14] https://www.govtech.com/artificial-intelligence/feds-ai-wildfire-detection-program-tested-in-boulder-colo
[15] https://www.reuters.com/sustainability/land-use-biodiversity/forest-listening-advanced-remote-sensing-can-ai-turn-tide-deforestation-2024-01-16/
[16] https://www2.deloitte.com/us/en/insights/industry/public-sector/ai-adoption-in-public-sector.html

Slower is safer

But even as AI makes headway, governments are cautious adopters. Many have experienced technology transformation projects that overshot budgets, timelines or both. Public sector leaders are understandably nervous about spending taxpayer's cash on technology that might not work, or worse, compromise safety.

The public sector remains among the industries furthest behind on expanding and scaling GenAI, according to our survey, investing at a slower pace than the private sector in part due to concerns over data privacy, ethics and civil liberties.[17] However, public sector experts show significant optimism regarding expanding and scaling internal use cases during the next three years.

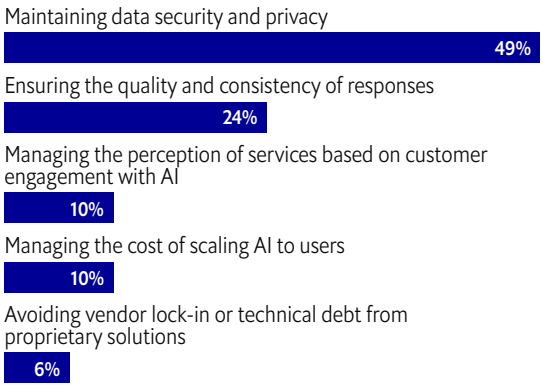
The issue of data security and privacy is 49% of experts' top concern about introducing AI, our survey found (see figure 2)—a sentiment shared by both practitioners and executives. For example, America's federal agencies, wary of AI's potential to disrupt industries and infringe on civil liberties, are applying the brakes with blocks placed on the use of certain AI tools.[18] Although security is extremely complex and public sector budgets and resources often limit investments, more attention is warranted, especially in pursuit of technical and strategic solutions.

To manage these risks, some governments are turning to AI sandboxes, allowing for experimentation without unleashing full-scale AI deployments. New Jersey's AI Assistant is one example, enabling government employees to safely explore how AI can improve public services.[19]

Governments also face other, more persistent challenges: limited funds, legacy systems and the simple fact that they don't move as nimbly as a start-up. On top of this, the public sector is struggling to attract tech talent, with 49% of respondents identifying the shortage of skilled personnel as one of the biggest challenges they're facing in scaling AI. Generous salaries in the private sector can leave public agencies short on the talent it needs to fully implement AI.

Figure 2: The public sector's paramount concern

Percentage of respondents who say the following is their biggest concern with introducing AI to their organisation



Source: Economist Impact

[17] https://www2.deloitte.com/us/en/insights/industry/public-sector/ai-adoption-in-public-sector.html
[18] https://fedscoop.com/more-federal-agencies-join-in-temporarily-blocking-or-banning-chatgpt/
[19] https://innovation.nj.gov/projects/ai-assistant/

Tapping AI potential

To fully harness the potential of AI, governments are learning that they need to invest in data literacy. Such training in the US Army, for instance, initially developed independently across sectors like intelligence, cyber and logistics.

Now, it's part of Army leadership programmes, with universities offering sessions on data literacy, analytics, AI and ML for senior leadership.

"Looking 48 months ahead, we expect a much more robust workforce with foundational knowledge in data protection, platform use and centralised data storage. This should start breaking down traditional barriers."

Leonel Garciga, chief information officer, US Army

In-house AI model development is another area of focus. While models like ChatGPT, Gemini and Claude have been influential, they are not always well suited to the specific needs of government agencies. "The public sector is concerned about data sovereignty regarding citizen data, which needs models with the right governance and principles in place to ensure privacy," says Mr Ramani at Accenture.

Although one in four experts across industries report using a commercial version of a public model, no public sector respondents reported using one. However, public sector respondents were more likely than average to report training a custom model based on data that is meaningful to the unique needs of the organisation. "Given our specialised lexicon and way of writing, we need to build our own models that better answer our questions," says Mr Garciga.

As the public sector continues to bring these AI tests and pilot programs into production—more than 70% plan to do so in the next three years—a brighter future is in store for government effectiveness, accountability and service provision.

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