pwc

AI works for governments

A digital sprinters report

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Executive summary

The opportunity presented by artificial intelligence (AI) is particularly profound for governments in emerging markets. Here demographic momentum, rapid digital adoption, and the absence of legacy constraints converge to create a unique position, enabling these markets to leapfrog traditional development pathways — if emerging market government leaders act decisively and strategically.

Building on this foundation, this report provides, for the first time, a quantification of AI's public-sector-specific economic potential in emerging markets. These gains are grounded in dynamic modeling that quantifies both direct productivity improvements and the wider spillovers generated by government AI adoption.

AI can help deliver value for governments through three main pathways.

1. **Government efficiency and fiscal health:** Improving how resources are raised, allocated and spent; reducing fraud leakage, and duplication; and strengthening long-term fiscal sustainability.
2. **Public good and service delivery:** Enhancing the reach, quality and fairness of public services in areas such as health, education, infrastructure and citizen engagement, while building public trust and institutional resilience.
3. **Economic growth and prosperity:** Contributing directly to gross domestic product (GDP) growth, productivity and household income by driving efficiency, creating new jobs and leading by example private-sector adoption.

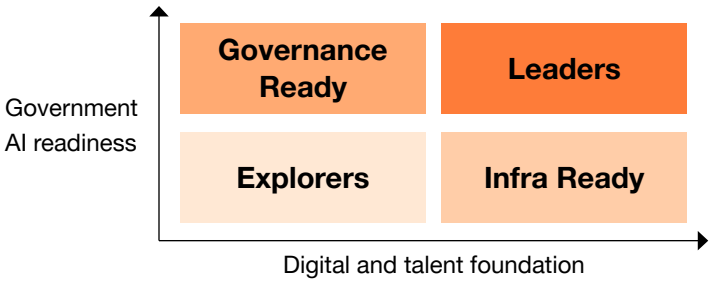
Our modeling suggests that widespread AI adoption within the public sector could increase public administration productivity by up to 3%. This would increase real GDP by up to 4%, reduce government deficit by as much as 22%, reduce unemployment by as much as 1.5 percentage points, and increase household incomes by 2% by 2035 when compared to the baseline scenario in 2035.

↑ 4% **gross domestic product**

↓ 22% **government fiscal deficit**

These benefits of AI in the public sector are deeply interconnected and mutually reinforcing. A more capable tax authority funds better infrastructure. Streamlined licensing encourages small business growth. Improved agricultural extension services connect farmers with information and technology, which can boost rural incomes. Smarter healthcare systems keep citizens healthier and more productive. Together, AI-supported services can help create a more efficient, adaptive, equitable, and trusted government—driving further downstream adoption and compounding benefits.

Four archetypes of AI readiness



Explorers

Early in adoption; building national AI strategies and foundational mobile-first AI services.

Countries early in AI adoption, typically without cloud first policies and a national AI strategy; need to focus on establishing these foundations and closing gaps in basic infrastructure and digital capabilities.

Infra Ready

Strong connectivity; developing governance capacity; targeting sector-specific AI use cases.

Countries with strong connectivity and cloud infrastructure but limited institutional readiness; well placed to deploy operations-focused AI and agentic solutions while building cohesive AI governance and a cross ministry task force.

Governance Ready

Infrastructure limited but strong on policy and oversight frameworks; leveraging public cloud.

Countries with robust policy and oversight frameworks but infrastructure constraints; prioritize lightweight AI/agent deployments and leverage public cloud, while fostering private investment in infrastructure and talent.

Leaders

Strong policy, infrastructure, and talent; focusing on new government AI solutions.

Countries with national AI strategies with upskilling commitments, strong talent pools, and advanced digital infrastructure; positioned to scale high impact, cross agency (including multi agent) use cases under centralized governance.

The realization of these benefits depends on several key enablers as outlined in **Google's AI Sprinters Framework.**

- **A cloud-first, AI-forward policy:** Reliable access to secure, scalable computing resources—whether through regional or global public cloud—accelerates time-to-value and encourages private investment.
- **Skilling at scale:** Broad-based literacy, implementer capacity and selective innovator pipelines should be developed in line with country realities.
- **Modern data systems:** High-quality, representative datasets and trusted data flows are essential for relevant, unbiased AI solutions.
- **Enabling policies:** A clear national strategy, central coordination and continuous feedback loops are necessary to track progress and build public trust.

Our research identified four archetypes of AI readiness. This report introduces a four-archetype framework that benchmarks public sector AI readiness in emerging markets which can be used to guide the sequencing of investments and use cases.

This framework is a self assessment starting point—not a ranking—to help governments prioritize feasible use cases now while laying the groundwork for longer-term scaling.

Effective implementation of these enablers has already shown that AI can be transformative across multiple government domains. Here are a few notable public sector use cases.

- **Public finance and revenue:** Fraud detection, smarter audits and procurement analytics strengthen fiscal stewardship.
- **Citizen services and administration:** Digital assistants, workflow automation and multilingual platforms improve efficiency and accessibility.
- **Healthcare:** AI-powered diagnostics and triage expand access and improve outcomes amid clinician shortages.
- **Education:** Adaptive learning and teacher augmentation address capacity gaps and promote equity.
- **Infrastructure and mobility:** Predictive maintenance and traffic optimization reduce costs and emissions.
- **Environment and disaster management:** Early-warning systems and geospatial analytics enhance resilience.
- **Justice and security:** AI-assisted evidence review and targeted analytics streamline case management.

To capture the full promise of AI, governments should treat it as a foundational capability across ministries—not as a collection of isolated pilots. Success requires quick wins to build momentum combined with investments in infrastructure, data and skills to enable more complex, cross-agency solutions. Progress should be tracked to sustain momentum and public trust.

Skills are critical for successful public-sector AI adoption. This report also sets out a practical framework to build AI capability at scale. The **Google AI Sprinters Framework** identifies three broad tiers of AI roles that governments should cultivate across their workforces:

AI Learners
Broad literacy for all civil servants (e.g., end users and leaders)

AI Implementers
Practitioners who adapt tools to ministry workflows (e.g., business and product, governance)

AI Innovators
Specialists who design, build, and evaluate systems (e.g., builders)

We outline a structured skills framework that spans core technical and human-centric competencies across five distinct public personas—leaders, business and product, builders, governance, and end users. This framework enables governments to help align employees to critical roles, target proficiencies to baseline their workforce's current state and design tailored talent strategies aligned with their AI needs.

Our framework provides a sequenced implementation plan that prioritizes literacy and implementer capacity first while developing innovator pipelines, and defines six actions to operationalize skills:

1. Develop a workforce AI skills taxonomy;
2. Assign proficiency targets by persona;
3. Baseline and validate skill proficiencies;
4. Build a talent action plan including hiring, redeployment, upskilling and accessing external experts;
5. Deploy right fit upskilling program including digital, experimental and on the job learning;
6. Measure progress and refine talent and learning programs as required.

Together, this skills framework converts policy and infrastructure into sustained capability across the civil service. The path forward is clear. Governments in emerging markets have a unique window to harness AI for fiscal resilience, improved public services and inclusive growth. By acting strategically—anchoring efforts in robust policy, modern infrastructure, and a skilled workforce—leaders can deliver transformative results for their citizens and economies.

Google

This report was commissioned by Google and developed by PwC US. In preparing this analysis, PwC supplemented its research with select use cases and examples that were provided by Google. These contributions helped enrich this report with real-world applications of artificial intelligence in the public sector.

Introduction

Artificial intelligence (AI) and Cloud technologies hold tremendous promise for governments across the globe. Yet while awareness of AI's transformative potential is growing, many governments in emerging markets remain at the early stages of operationalizing AI in ways that generate measurable public value.

To help bridge this gap, PwC and Google collaborated on a comprehensive study to examine the direct and indirect economic impacts of AI adoption by governments in Emerging Markets—including Latin America, Sub-Saharan Africa, the Middle East and North Africa, Türkiye, the Caucasus, Central Asia, Asia and the Pacific. Drawing upon Google's AI Sprinters Framework, this report aims to move the conversation from aspiration to execution—outlining practical steps that governments can take to harness AI for public good.

This report offers three key contributions. First, it quantifies the potential efficiency gains and economic benefits that AI-enabled governance can deliver—particularly in areas such as public service delivery, data-driven policy-making, and sectoral innovation across education, healthcare, and defense. Second, it provides a set of actionable, tiered recommendations tailored to the varying levels of digital maturity across governments. These recommendations are designed to help countries prioritize low-risk, high-impact AI applications while building readiness for more complex deployments. Third, the report envisions the future of public service in an AI-driven world, highlighting the evolving skills and institutional capacities needed to govern responsibly in the digital age.

The study also features illustrative cases of AI and Cloud solutions deployed by governments around the world, including examples from Google's public sector engagements. These serve not only as evidence of impact but also as inspiration for what is possible.

Ultimately, this work is intended to support government leaders, policymakers, and institutional partners as they navigate the evolving landscape of AI governance. It also serves as a foundation for further dialogue, partnership, and investment in the responsible scaling of AI in the public sector. We hope that the findings and recommendations herein accelerate progress toward more agile, data-informed, and citizen-centric governance across Emerging Markets.

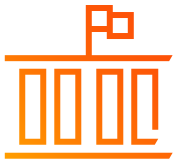
The AI-driven socioeconomic opportunity for governments

Introduction: AI's economic and social promise for governments

Few innovations in recent memory carry as much potential to reshape government as artificial intelligence. For emerging markets, AI is not only a potential engine of market growth but a tool that can rewire how public institutions deliver services, manage resources and build citizen trust. Too often, however, the conversation around AI in emerging markets is framed narrowly in terms of an economic boost or GDP contributions. While these are important, they capture only part of the story.

For governments worldwide, particularly those in emerging markets, AI adoption represents a broad opportunity to transform the public sector—one that touches fiscal responsibility, the quality of public services and the prosperity of households and economies. This section explores those three interrelated benefits.

1. Government efficiency and fiscal health: Improving how resources are raised, allocated, and spent; reducing fraud, leakage and duplication; and strengthening long-term fiscal sustainability.



2. Public good and service delivery: Enhancing the reach, quality, and equity of public services in areas such as health, education, infrastructure, and citizen engagement while building public trust and institutional resilience.

3. Economic growth and prosperity: Contributing directly to GDP growth, productivity, and household income by driving efficiency, creating new jobs, and leading by example for private-sector adoption.

Taken together, these three pillars show that AI is not just an economic lever. It's also a tool for governance renewal, for building greater citizen confidence and trust in government, and for making them more capable and better positioned to meet citizen expectations. The following section explores these impacts and describes the methods used to quantify some of their benefits.

Quantitative impacts of AI in government

To understand the potential scale of public sector AI adoption in emerging markets, we applied two complementary quantitative approaches.[1] Together, they serve as a bottom up and top down approach to measure AI's impact on emerging market governments. Approach 1 (dynamic input-output macroeconomic model) provides a detailed, forward-looking projection on how public sector AI use could reshape economies and government efficiency in select countries. Approach 2 (translating productivity gains into GDP impact) provides a high-level estimate of the opportunity across the focus companies of this report. For more detailed information on the methodology used, refer to Appendix 1: Modeling the Economic Benefit of AI Adoption.

Approach 1: Dynamic input-output (I/O) macroeconomic model

For the first approach, we ran dynamic input-output models for five emerging markets (Brazil, Mexico, Nigeria, Saudi Arabia, and Türkiye). Unlike static estimates, these models capture how productivity shocks ripple across sectors and households over time, reflecting both direct savings and secondary effects such as energy demand, infrastructure investments, and household consumption.

We modeled the economic impact of widespread adoption of AI in the public sector for these five countries over a 10-year time period—from 2025 through 2035. Compared to the baseline scenario for 2035, we observed the following results.

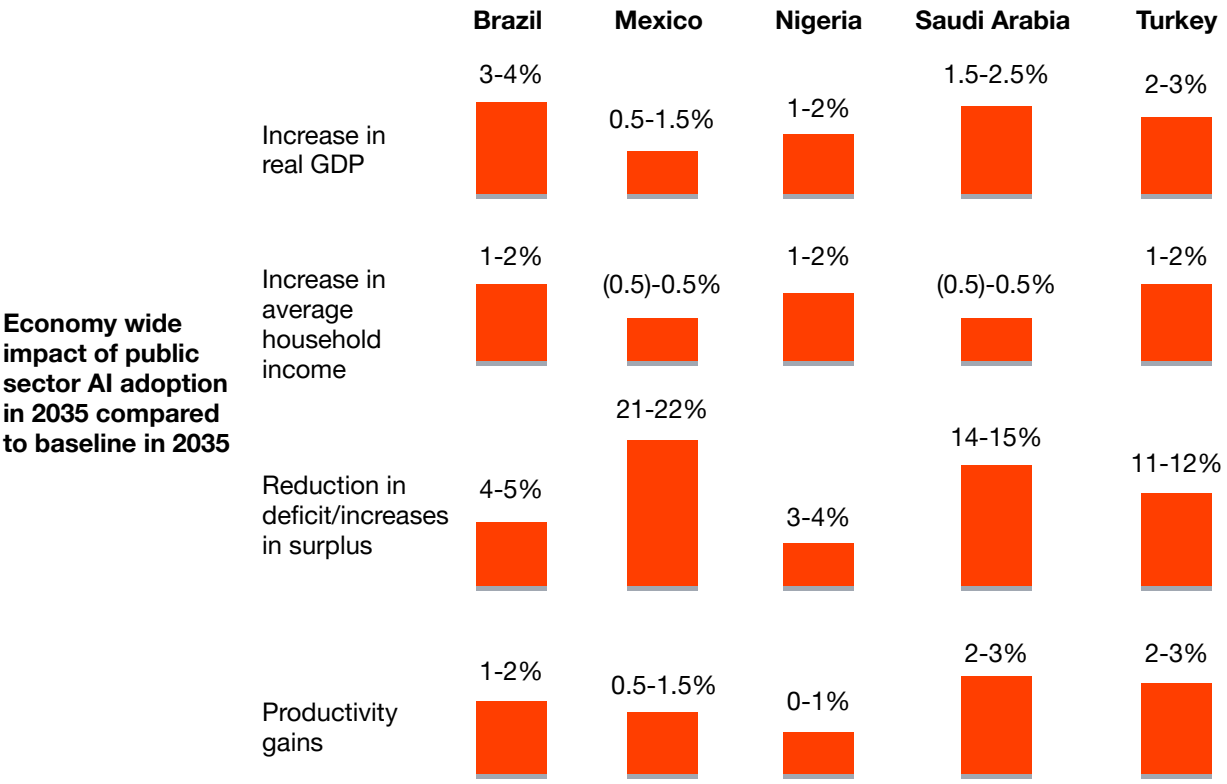
- **Productivity:** Gains of up to 3% across public administration and related services.
- **Real GDP:** Increases of up to 4%, depending on readiness and adoption speed.
- **Household income:** Increases of up to 2%.
- **Fiscal health:** Government deficit reductions of up to 22%.
- **Unemployment:** Reduction by as much as 1.5 percentage points.

Exhibit 2.1 presents modeled results of the economic impact from 2025 through 2035 of AI adoption in the public sector for these five emerging market countries. We chose Brazil, Mexico, Nigeria, Saudi Arabia, and Türkiye to capture a wide spectrum of emerging-market conditions—spanning Latin America, the Middle East, and Africa—with diverse economic structures and markedly different public-sector footprints. These countries vary in income levels, digital readiness, and AI policy maturity, useful for testing how government adoption of AI transmits through input-output linkages under different starting points. Their governments manage sizable procurement and service delivery portfolios, so modeled effects are economically meaningful. Finally, each country has accessible national accounts and input-output data, enabling methodologically consistent comparisons across contrasting contexts.

The results underscore a correlation between digital infrastructure, AI policy, and potential economic and productivity gains. Every country can start wherever they are, and countries that are still in the early stages of IT and cloud infrastructure can still make significant strides with AI and even leapfrog more developed countries.

1 We assessed five priority countries - Brazil, Mexico, Türkiye, Saudi Arabia, and Nigeria - using dynamic input-output (I/O) macroeconomic models (Approach 1). Additionally, we also considered other emerging markets in a top down economic analysis (Approach 2). The full list of countries included on Approach 2 can be found within Exhibit 2.2.

Exhibit 2.1: Bottom up economic impact from public sector AI adoption



Methodology leveraged for Approach 1

This methodology rests on three key assumptions.

1. **Country-specific adoption curves** calibrated to each country's readiness, institutional capacity and political commitment. Slower adoption could produce smaller effects than implied by Approach 2, which models the effects over a 10-year period that starts after roughly half of businesses that adopt generative AI.
2. **Productivity gains** in administrative and service tasks, reflecting real-world evidence of AI's efficiency impact.
3. **Spillover effects** from expanded demand for information and communication technology (ICT) infrastructure, electricity and workforce training as AI scales. Spillover effects could produce larger effects than implied by Approach 2.

Consider a tax officer using AI to flag anomalies in invoices automatically. What once took hours now takes minutes, reducing fraud as more instances are identified and ultimately saving the government money. In Approach 1's model, this is a productivity shock: the same output delivered with fewer inputs. Freed resources are reallocated: staff time is redirected to higher-value tasks, improved compliance raises revenues, and lower costs ripple through supply chains. Higher incomes as a result of the initial productivity shock generate additional spending in an aftershock that further increases economic activity. In turn, these savings and this productivity can be used to pay down debt, invest in other public services or optimize taxes. The cumulative effect is stronger fiscal health, higher household income and expanded GDP.

Approach 2: Top-down translating productivity gains into GDP impact

As a reference point, we compared our estimates from Approach 1 with a simplified, less data-intensive method based on a 2023 analysis by Goldman Sachs (Approach 2). In its analysis, Goldman Sachs projected that widespread generative AI adoption could increase global GDP by 7% and accelerate annual labor productivity growth by roughly 1.4% percentage points in a decade. Widespread adoption of AI means that roughly half of businesses have adopted generative AI. We adapted these projections for emerging markets by applying country-specific productivity estimates—using Goldman Sachs figures where available and the average for other emerging markets where not—to calculate potential GDP uplift.[2]

Each country included in Exhibit 2.2 is at a different point of its AI journey and will reach widespread adoption at different points of time. The point at which they reach widespread adoption will depend on where they are today and how quickly they can scale cloud and AI technologies.

To isolate the public sector's contribution, we then applied each country's government expenditure as a share of GDP (as reported by the IMF).[3] Our findings confirm the opportunity: the GDP impact attributable to public sector productivity averages 1.82% across the countries included in our analysis in a decade following widespread AI adoption. Exhibit 2.2 summarizes these results across a sample set of emerging markets.

Exhibit 2.2: Top-down economic impact from public sector AI adoption using Approach 2[4]

Region	Country	Estimated public sector GDP uplift 10 years after widespread adoption
Emerging Market Average		1.82%
LATAM	Argentina	3.00%
	Brazil	3.30%
	Chile	2.10%
	Colombia	2.20%
	Ecuador	2.40%
	El Salvador	1.80%
	Mexico	1.90%
	Paraguay	1.30%
MENA-T	Kuwait	2.90%
	Qatar	1.60%
	Saudi Arabia	1.90%
	Türkiye	2.10%
	UAE	1.40%
SSA	Nigeria	0.60%
	South Africa	2.20%
APAC	India	1.10%
	Indonesia	0.90%
	Malaysia	1.70%
	Pakistan	1.10%
	Philippines	1.50%
	Thailand	1.20%

2 Goldman Sachs. (2023, April 5). Generative AI could raise global GDP by 7%. GS Publishing. https://www.gspublishing.com/content/research/en/reports/2023/03/27/d64e052b-0f6e-45d7-967b-d7be35fabd16.pdf (Accessed 4 October 2025). The average productivity gain for emerging markets was calculated from Exhibit 14 as 1.2%.

3 International Monetary Fund. (2025, April 2). General Government expenditure as a Percentage of GDP in 2023. IMF Data Mapper https://ourworldindata.org/grapher/historical-gov-spending-gdp (Accessed 4 October 2025)

4 It is important to note that the Goldman Sachs methodology applies a relative timeline of "ten years from widespread adoption," rather than a fixed target year such as 2035, which is used in Approach 2. The purpose of presenting both methodologies is not to generate directly comparable results, but rather to provide an indicative sense of the order of magnitude of benefits that AI adoption in the public sector could yield.

Both approaches demonstrate the significant, multivariate benefits AI could catalyze if implemented correctly and at scale across governments in emerging markets, with Approach 2 further underscoring the importance of pairing robust infrastructure and talent with AI- and cloud-forward policy frameworks.

These numbers, however, tell only part of the story. To appreciate AI's promise for governments more fully, we turn to the previously outlined three pillars of impact—efficiency and fiscal health, public good and economic prosperity.

Interconnected benefits

These public good benefits are mutually reinforcing. A more capable tax authority funds better infrastructure. Streamlined licensing encourages small business growth. Improved agricultural extension raises rural incomes. Smarter healthcare systems keep citizens healthier and more productive. Together, AI-supported services create a more efficient, adaptive, equitable and trusted government—driving further downstream adoption and compounding benefits.

Benefit 1: Government efficiency and fiscal health

Strengthening fiscal health

Public finances in many emerging markets are under strain. Growing populations, rising service expectations and heavy debt burdens leave limited fiscal space for new investments. AI can help alleviate these pressures. In our modeled scenarios, public-sector AI adoption translated into **fiscal deficit reductions of up to 22% by 2035 when compared to the baseline scenario in 2035**. This can be achieved through a combination of efficiency savings, improved compliance and better targeting of expenditures (an improved economy, and the higher citizen incomes that come along with it, also produces more revenue for governments).

AI can also bolster the revenue side of the fiscal equation. Tax authorities can use machine learning to analyze filings, detect anomalies and flag potential fraud. These systems not only speed up compliance checks but also increase fairness by ensuring similar taxpayers are treated consistently.

- **Brazil's Belo Horizonte Municipal Finance Office** deployed AI to verify taxpayer invoice classifications, improving accuracy and increasing collections.[5]
- **Mexico's Superior Federal Audit** uses AI to strengthen accountability in public spending by improving the audit of federalized spending of state and local governments.[6]
- **AI risk scoring for audits in Estonia**: Estonia's Tax and Customs Board uses AI to risk-score VAT returns, enabling auditors to focus on high-risk anomalies. This reduces false positives, lowers compliance costs and strengthens fiscal integrity, proof that back-office efficiency gains can be as impactful as citizen-facing applications.[7]

5 Rocha, K., Porto, K., & Fabel, V. (2024, December 23). AI is Enhancing Fiscal Transparency in Brazil. IMF PFM Blog. https://blog-pfm.imf.org/en/pfmblog/2024/12/ai-is-enhancing-fiscal-transparency-in-brazil (Accessed 4 October 2025)

6 OECD (2022) Strengthening analytics in Mexico's Supreme Audit Institution. OECD Publishing. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/10/strengthening-analytics-in-mexico-s-supreme-audit-institution_ae05f9d6/d4f685b7-en.pdf (Accessed 10 September 2025)

7 e-Estonia. (2023, January 25). Digitising taxation secures Estonia's #1 position in Tax Competitiveness Index. https://e-estonia.com/digitising-taxation-secures-estonias-nr-1-position-in-tax-competitiveness-index/ (Accessed 17 September 2025)

Unlike politically more difficult measures like raising taxes or cutting benefits, these fiscal gains arise from **doing more with less**, delivering the same or higher-quality services with fewer wasted inputs. Fiscal efficiency is not just an accounting matter—it's a matter of public interest. Citizens who see their governments reduce waste, collect revenues fairly and deliver services more efficiently are more likely to view institutions as trustworthy. Thus, AI-enabled fiscal stewardship can deliver both **hard savings and soft legitimacy**, strengthening the social contract that underpins governance. For governments seeking sustainable budgets, AI becomes a form of fiscal multiplier.

Enhancing productivity and value added

The real engine of these fiscal gains lies in productivity improvements across core government functions. High-volume areas such as licensing, permitting, inspections, benefits administration and call center triage—among others—are often bogged down by paperwork and bottlenecks. AI can streamline these workflows by predicting patterns, automating manual tasks and improving targeting. Over time, this translates into **higher public value per unit of input**, more robust delivery pipelines and reduced burden on overextended civil servants. Indeed, our modeling indicates that widespread implementation of AI in the public sector could yield **productivity gains of up to 3% in 2035 compared to its baseline in 2035**.

AI in practice: AI cloud pilot to accelerate infrastructure permits in Chile[8]

Chile's government faces a significant hurdle: lengthy and unpredictable approval times for large-scale infrastructure projects. Often exceeding official deadlines, these delays introduce uncertainty that impacts project planning, profitability and overall economic viability. The core reasons for these bottlenecks include overwhelmed Municipal Construction Directorates (DOM), inconsistent interpretations of regulations and vague feedback that makes it difficult for applicants to remediate processes.

To address this critical issue, the Chilean Chamber of Construction and the National Center for Artificial Intelligence (CENIA), in partnership with Google Cloud, will develop an AI-driven assistant to support DOM's reviewers to identify and clearly formulate observations within blueprints and construction permit files. The assistant will not only accelerate reviews and improve feedback quality but will also resolve questions about regulations and automatically integrate new updates. It will be made open-source, allowing other public services to customize it for their own needs.

AI in practice: Using AI to streamline administrative workflows in Malaysia[9]

Malaysia's government faces mounting pressure to improve efficiency and service quality. Public officers spend significant time on routine tasks, including drafting documents, preparing reports and managing communications. These repetitive manual workflows limit their ability to focus on strategic and citizen-facing work, and this manual process has led to slower decision making and service delivery over time.

To address this, the Ministry of Digital and Google Cloud launched AI at Work 2.0. This program provided Gen AI tools in Google Workspace to 445,000 public officers. Using these tools, officers can draft, summarize, translate and analyze information faster. Their work is now supported by AI assistants like Gemini and NotebookLM. Early pilots have shown that 97% of users save time, on average **3.25 hours per week**, which has improved the quality of their work while fostering a digitally empowered civil service.

8 Google Cloud (2025). AI Use Cases for Public Sector in Chile. Proprietary Briefing.

9 Google Cloud. (2025, February 5). 445,000 public officers in Malaysia to benefit from generative AI under the AI at Work 2.0 initiative by the Ministry of Digital and Google Cloud. https://www.googlecloudpresscorner.com/2025-02-05-445,000-Public-Officers-in-Malaysia-to-Benefit-from-Generative-AI-Under-the-AI-at-Work-2-0-Initiative-by-the-Ministry-of-Digital-and-Google-Cloud (Accessed 5 October 2025)

Better targeting of subsidies and procurement

AI systems can cross-reference multiple datasets to reduce duplication in subsidy programs, ensuring benefits reach only intended recipients. Similarly, procurement monitoring systems can flag unusual bidding patterns or cost anomalies, reducing waste and corruption risks.

- Chile has transformed ChileCompra, the country's central purchasing body, over the past few years, through the integration of AI to modernize its procurement practices. It introduced standardized bidding templates for AI and data science projects. Additionally, ChileCompra's Public Contracting Observatory uses AI tools to analyze procurement data for monitoring compliance and fraud.[10]

Agentic AI in government

The rise of **agentic AI**, which makes AI more effective by expanding its scope across applications, datasets and workflows, facilitates additional opportunities and can act as a force multiplier on its value to governments. Agentic solutions like Google Agentspace have the potential to multiply the impact of every civil servant and department that implements it.

- The Saudi National Center for Government Resources deployed **AgentSpace (Gemini-based)** to evaluate public-sector RFP submissions. The tool flags missing or conflicting information, summarizes proposals and streamlines committee decision-making. This reduces evaluation time, ensures higher-quality reviews and standardizes procurement oversight across government.[11]
- The **Government of Singapore** is collaborating with Google Cloud to test AI agents for a range of public sector use cases. These may include helping social workers with the administrative burden of aid applications, freeing them to focus on counseling and case management, and assisting businesses in navigating the complex licensing processes that involve multiple agencies.[12]

Benefit 2: Public good and service delivery

Today, AI is breaking new ground that can make governments **stronger, safer and more competitive**. Public administrations are already starting to leverage AI to operate more effectively across the full spectrum of their work, from delivering essential daily services to addressing complex challenges like handling extreme weather events, driving economic growth, and keeping communities safe.

Governments around the world are unlocking AI's potential to:

- **Optimize operations**: Streamlining services and making them more agile and user-friendly for public servants.
- **Enhance engagement**: Connecting constituents with services in real time, in their preferred languages and through mobile-first channels.

These broad benefits play out in critical sectors that directly shape citizen well-being.

10 OECD. (2025, September 15). AI in public procurement. In Governing with Artificial Intelligence. OECD Publishing. https://www.oecd.org/en/publications/2025/06/governing-with-artificial-intelligence_398fa287/full-report/ai-in-public-procurement_2e095543.html#boxsection-d1e26141-6f09aca72d (Accessed 4 October 2025)

11 Google Cloud. (2025). AI Use Cases for Public Sector in KSA. Proprietary briefing.

12 Boo, K. (2025, August 28). Singapore to test autonomous AI agents for the delivery of public services. The Straits Times. https://www.straitstimes.com/singapore/spore-to-test-autonomous-ai-agents-for-the-delivery-of-public-services (Accessed 10 September 2025)

Healthcare service delivery

Healthcare systems in emerging markets across the globe face acute challenges. An estimated **4.5 billion people lack access to essential services**,[13] and there's a projected shortage of **11 million health workers by 2030**.[14] AI can help close these gaps by supporting diagnostics, triage and care delivery. Here are a few examples.

- **Breast cancer detection in Taiwan**: Google partnered with Chang Gung Memorial Hospital to explore whether AI models can detect breast cancer using ultrasound. In 2023, the partnership launched a first-of-its-kind study, with the potential to expand screening access dramatically.[15]
- **Diabetic retinopathy screening**: In collaboration with Aravind Eye Hospital (India) and Rajavithi Hospital (Thailand), Google developed an AI model that has already supported over **600,000 screenings**. Licensing agreements now aim to deliver **6 million free AI-supported screenings** over the next decade in underserved communities.[16]
- Google DeepMind's **AlphaFold** is an AI system that predicts the 3D structures of proteins with remarkable accuracy, helping to unlock new insights into disease mechanisms and accelerate drug discovery. Importantly, AlphaFold has already made over 200 million protein 3D structures freely available to the global scientific community [17], which has saved an estimated 1 billion years of research and supports more than 2.0 million [18] scientists worldwide. By reducing the time and cost of biomedical research, AlphaFold has the potential to advance healthcare globally, particularly in emerging markets where access to cutting-edge laboratory infrastructure is limited. Governments and public health systems can leverage such tools to strengthen disease surveillance, develop more affordable therapies and support local biotech innovation.

By reducing diagnostic delays and extending the reach of limited health professionals, AI improves both outcomes for patients and efficiency for systems.

Disaster response

In emerging markets, AI can become a critical tool for governments to mitigate the devasting impact of natural disasters trhough advanced forecasting and response coordination.

- **Flood hub:** Developed with Google Research, Flood Hub integrates satellite imagery and physics-informed ML to forecast floods up to a week in advance. Pilots in India and Indonesia have given communities hours and even days of added lead time, with World Bank analysis showing potential to reduce flood-related damage by 30%.[19, 20, 21]

13 Torkington, S. (2024, August 16). 3 ways the world can move from 'health crisis' to 'care for all'. World Economic Forum. https://www.weforum.org/stories/2024/08/3-ways-the-world-can-improve-healthcare-for-all/ (Accessed: 18 September 2025)

14 World Health Organization (WHO) (n.d.) Health Workforce. https://www.who.int/health-topics/health-workforce#tab=tab_1 (Accessed: 18 September 2025)

15 Google (2023, March 14) Our latest health AI research updates. Google Blog. https://blog.google/technology/health/ai-llm-medpalm-research-thecheckup/ (Accessed 4 October 2025)

16 Sawhney, R. (2024, October 17). How AI is making eyesight-saving care more accessible in resource-constrained settings. Google Blog. https://blog.google/around-the-globe/google-asia/arda-diabetic-retinopathy-india-thailand/ (Accessed 4 October 2025)

17 DeepMind. (n.d.). AlphaFold. DeepMind. https://deepmind.google/science/alphafold/ (Accessed 13 October 2025)

18 DeepMind. (n.d.). AlphaFold impact stories. DeepMind. https://deepmind.google/science/alphafold/impact-stories/ (Accessed 13 October 2025)

19 Matias, Y. (2024, November 11). How we're helping partners with improved and expanded AI-based flood forecasting. Google Blog. https://blog.google/technology/ai/expanding-flood-forecasting-coverage-helping-partners/ (Accessed 13 October 2025)

20 Office for the Coordination of Humanitarian Affairs. (2025). Anticipatory action framework: Nigeria – Floods. https://www.unocha.org/publications/report/nigeria/anticipatory-action-framework-nigeria-floods-29-july-2025/ (Accessed 13 October 2025)

21 World Bank. (2024, June 21). Building resilience in the face of uncertainty: IDA's multi-faceted approach to crisis preparedness saves lives. https://www.worldbank.org/en/news/immersive-story/2024/06/21/building-resilience-in-the-face-of-uncertainty/ (Accessed 13 October 2025)

Equitable and accessible education

AI can also transform education by providing p**ersonalized learning pathways**, automating administrative tasks for teachers and offering real-time insights into student progress.

- **Raspberry Pi Foundation**: In 2022, the Raspberry Pi Foundation and DeepMind announced a partnership to inspire the next generation of AI leaders. Raspberry Pi's mission is to enable young people to realize their full potential through the power of computing and digital technologies. In 2024, the Experience AI program announced its intention to reach more than 2 million students over three years. The program's resources have been downloaded 100,000 times across 130 countries, and an estimated 750,000 young people have taken part in an Experience AI lesson so far.[22]
- **Infinity Learn (India)**: In partnership with Google Cloud, the platform uses Gemini- and Vertex AI-powered tutoring to enhance exam preparation. Students develop deeper comprehension, critical reasoning and problem-solving skills across subjects from physics to botany.[23]
- **EIDU (Kenya)**: EIDU employs Gen AI for personalized tutoring services in low- and middle-income countries through tailored learning exercises. EIDU was one of two beneficiaries from Africa to join Google's Gen AI Cohort, a Google.org's Accelerator.[24]
- **Jotit (Israel)**: Jotit, an education platform helping streamline learning for students and boost productivity for teachers, leverages Google's latest Gen AI models and several Google integrations to power its technology. Capabilities include spelling and contextual checks, homework hints, tutoring, content generation, summarization and question answering.[25]

In emerging markets, where teacher shortages are common, such tools can help expand capacity in underserved areas and enable more equitable access to quality education.

Infrastructure and trade

AI adoption is also reshaping infrastructure and trade systems. The exponential growth of AI globally drives higher demand for energy, computational infrastructure and digital services. Governments with **cloud-first policies, skilled talent, and expanded energy capacity** can attract significant foreign investment while building domestic foundations for digital growth. Corporate players have a significant role to play in filing this demand. For instance, Google recently announced a significant investment in subsea cable hubs to build new digital corridors for Africa, coupling infrastructure with skills for the continent's AI future.[26]

The World Trade Organization estimates that lower trade costs and enhanced productivity from AI adoption could increase trade and GDP, with global trade projected to rise 34-37% and global GDP projected to see a 12-13% increase across different scenarios by 2040.[27]

22 Colligan, P. (2024, September 5). Experience AI expands to reach over 2 million students. Raspberry Pi Foundation. https://www.raspberrypi.org/blog/experience-ai-expands-to-reach-over-2-million-students/ (Accessed 4 October 2025)

23 Sakarwal, A., & Bansal, A. (2025, May 13). Inside Infinity Learn's AI Tutor, powered by Google Cloud. Google Cloud Blog. https://cloud.google.com/blog/products/ai-machine-learning/how-ai-can-redefine-education-for-students (Accessed 4 October 2025)

24 CIO Africa. (2024, May 3). Kenyan startups picked for Google's AI accelerator program. CIO Africa. https://cioafrica.co/kenyan-startups-picked-for-googles-ai-accelerator-program/ (Accessed 4 October 2025)

25 Google for Startups. (n.d.). Jotit: Jotit's AI-powered tool transforms learning outcomes [Startup story]. https://startup.google.com/alumni/stories/jotit/ (Accessed 4 October 2025)

26 Manyika, J. (2025, July). We're investing in connectivity, products and skills for Africa's AI future. Google Blog. https://blog.google/around-the-globe/google-africa/africas-ai-future/ (Accessed 5 October 2025)

27 World Trade Organization. (2025, September 15). 'World Trade Report 2025: AI to boost trade by nearly 40% by 2040 if gaps are bridged.' WTO News. https://www.wto.org/english/news_e/news25_e/wtr_15sep25_e.htm (Accessed 1 October 2025)

AI-enabled customs clearance, smart logistics and trade documentation processes can reduce border delays, lower costs and improve national competitiveness. These downstream efficiencies can ripple across economies, enabling faster trade flows and greater integration into global markets.

- **AI-Customs (Brazil)**: Brazil's federal tax authority used Gemini on the Google Cloud Platform to automate airport customs inspections. This resulted in lower wait times and improved detection accuracy and it enabled officers to focus on high-risk cases while maintaining oversight.[28]

Reputation, talent attraction and public sector morale

Beyond measurable gains, early and visible AI adoption strengthens the public sector's reputation as an **innovative and forward-looking employer**. Governments that lead in deploying AI can send strong signals to skilled professionals—domestically and abroad—that they offer stimulating career opportunities.

The introduction of and access to these cutting-edge tools both helps attract and retain top talent while boosting morale and skillsets among existing civil servants. Studies of digital transformation in the workplace show positive correlations between employee engagement, talent attraction and retention, and when new technologies are introduced in ways which support workers' skills and roles.[29] As citizens experience more responsive services, their confidence in their government may grow. This creates a **multiplier effect**. The more a government is seen as modern and trusted, the easier it can become to recruit talent, mobilize partnerships and sustain reforms.

An example of this can be seen in Uruguay. Uruguay's early and visible commitment to AI—in particular through its National AI Strategy (2019), updated to 2024-2030, and its AI Observatory—has not only improved its government's capacity to deploy AI ethically and responsibly but boosted its reputation regionally as a trustworthy, modernizing state. Importantly, the strategy includes:

- Capacity-building for public servants, including technical, legal and ethical training
- Multi-stakeholder design (government, academia, civil society) and public consultation
- Institutional oversight (AI observatory) to ensure transparency, fairness and accountability

These investments have helped Uruguay attract talent, foster trust among citizens and build partnerships. Because civil servants are themselves upskilled, morale rises; because the state is seen as responsible and competent, recruitment and collaboration become easier; and because ethical governance is integral, reforms are more sustainable.[30]

28 Google Cloud. (2025, September 10). Google Cloud brings a new era of AI innovation to Brazil [Press release]. https://www.googlecloudpresscorner.com/2025-09-10-Google-Cloud-Brings-a-New-Era-of-AI-Innovation-to-Brazil (Accessed September 10, 2025)

29 Al-Hakim, L. & Lu, W. (2023) 'The impact of digital transformation on talent management: A systemic literature review". Technological Forecasting and Social Change. https://www.researchgate.net/publication/366682192_The_impact_of_digital_transformation_on_talent_management

30 Iida, K. (2023, May 30). Driving AI adoption in the public sector: Uruguay's efforts on capacity-building, trust, and AI ethics. Oxford Insights. https://oxfordinsights.com/insights/spotlight-series-uruguay/ (Accessed: 10 September 2025)

Benefit 3: Economic growth and prosperity

The third benefit of government AI adoption is macroeconomic. By raising productivity in public administration, AI can indirectly stimulate the broader economy. Fiscal savings expand fiscal space, improved services boost human capital, and demonstration effects encourage private-sector adoption.

GDP growth

Our modeling suggests that public-sector AI adoption could contribute up to **4% additional real GDP by 2035 compared to its baseline in 2035**. Gains are most significant where governments are large employers and service providers—characteristic of many emerging markets.

Household income and consumption

By reducing service friction (shorter wait times, simpler documentation, mobile-first access), households regain both time and unnecessary costs. These gains can translate into higher effective income—the resources families have to spend after accounting for hidden costs of accessing services. This in turn can expand consumption, particularly among lower-income households where marginal increases in disposable income translate quickly into higher spending on goods and services. Expanded access to reliable government services also strengthens household confidence, which translates to greater participation in the economy and stimulates private-sector demand. All of this could lead up to **2% increase in household income in 2035 when compared to the baseline in 2035**.

Employment and labor market effects

Over the past century, rapid advancements in technology fueled job creation. Technology can augment human labor and generate new activities that create an increased demand for new roles. In an MIT study, more than 60% of US workers are in jobs in 2018 that didn't exist in 1940.[31] Goldman Sachs expands on this further, noting that 85% of employment growth over the past 80 years is explained by technology-driven creation in new positions.[32]

Our modeling indicates that **the widespread adoption of AI can reduce unemployment by as much as 1.5 percentage points in 2035 when compared to its baseline in 2035**. Indeed, while some routine roles may be automated, AI also creates demand for new roles in digital service management, data governance and oversight. Public programs supported by AI—such as improved job placement platforms—can further boost labor force participation.

- **Brazil's National Confederation of Industry (CNI)** leveraged Google Cloud's AI to better align workforce training with industrial demand, strengthening employability.[33]
- **Qatar's Ouqoul platform**, developed by the Ministry of Labour, uses AI to connect expat graduates with employers.[34]

These examples show AI's role in improving both supply (training alignment) and demand (job placement), contributing to healthier labor markets.

AI-enabled tourism: A growth engine for emerging markets

Tourism is one of the most significant drivers of economic growth for many emerging markets, and AI can amplify its impact. Governments can harness AI to personalize traveler experiences through itinerary assistants and real-time disruption management, streamline on-ground services like smart check-in and live translation, and improve sustainability via predictive tourism-flow management.

- Workforce training initiatives, such as **Google's Maharat for Tourism program in MENA**, are equipping local talent with AI and digital skills.

In parallel, AI-powered marketing accelerates content production, surfaces consumer insights and boosts advertising efficiency, helping destinations reach global audiences more effectively and maximize return on investment. A MENA-based tourism board, for example, was able to drive 67% more engaged sessions at 67% lower cost per click (CPC) by scaling its adoption of AI-powered solution Performance Max.[35]

Conclusion: Intertwined impacts and the road ahead

While the contributions of AI in the public sector to higher output are meaningful, AI's potential impacts on governments span far beyond GDP figures. Fiscal responsibility, stronger public services and inclusive economic growth are **mutually reinforcing pillars** of national development.

Emerging market governments have a unique opportunity to leapfrog legacy barriers by embedding AI into their operations. But realizing these benefits depends on each country's unique starting point—the strength of its infrastructure, institutions and workforce readiness.

To explore this further, the next section introduces a four-archetype framework to benchmark **AI readiness across the variety of emerging market governments**. This framework enables governments to assess their starting point, prioritize feasible use cases and sequence investments for maximum impact.

31 Autor, D., Chin, C., Salomons, A., & Seegmiller, B. (2022, August 14). New frontiers: The origins and content of new work, 1940–2018 (Working Paper). MIT / NBER. https://economics.mit.edu/sites/default/files/2022-11/ACSS-NewFrontiers-20220814.pdf

32 Goldman Sachs. (2023, April 5). Generative AI could raise global GDP by 7%. https://www.goldmansachs.com/insights/articles/generative-ai-could-raise-global-gdp-by-7-percent (Accessed 4 October 2025)

33 Google Cloud. (2025, April 9). 601 real-world generative AI use cases from industry leaders. https://cloud.google.com/transform/101-real-world-generative-ai-use-cases-from-industry-leaders (Accessed: 9 September 2025)

34 Ministry of Labour, State of Qatar. (2024, August 4). News details [News release]. https://www.mol.gov.qa/En/mediacenter/Pages/NewsDetails.aspx?itemid=441/ Accessed 13 October 2025

35 Google. (2025). AI Use Cases for Ads. Proprietary briefing.

Four country archetypes: Benchmarking AI readiness

Overview

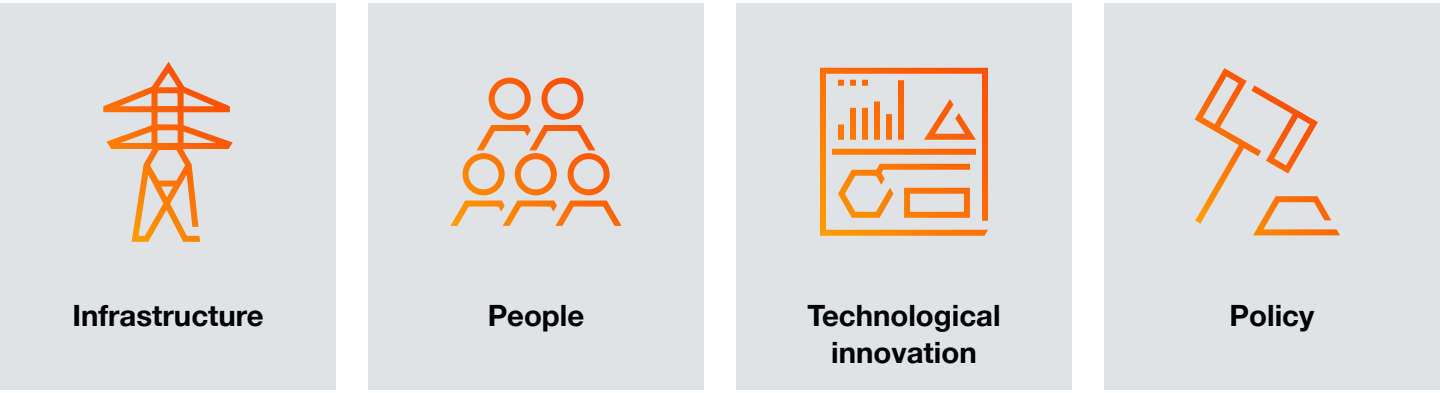
While the potential impact of public sector AI adoption on economic growth and quality of citizen-facing services is significant and makes a compelling case for its widespread use, it's critical that public officials understand their country's AI maturity posture within the emerging market landscape before planning (or implementing) use cases.

Indeed, only **27%** of people in low-income countries are online and just **4%** in low-income countries have 5G access, compared with **93%** in high-income nations.[36] This reflects what we see in our research. Countries vary widely in digital maturity, cloud- and digital-forward policy makeup, infrastructure capacity and workforce readiness. No two countries are the same and each government (and each institution, team and organization within that government) will need to tailor its particular AI strategy to the unique needs of its workforce, constituents, sector coverage and current capabilities.

This chapter introduces **four common archetypes of AI readiness** and offers a framework for public officials to benchmark their country, define near-term priorities, and shape a long-term investment strategy. It builds upon **Google's AI Sprinters Framework**, originally launched in 2020 and refreshed in 2024, which highlights four pillars to accelerate adoption in emerging markets—infrastructure, people, technological innovation and policy.

36 International Telecommunication Union. (2024, November 27). Global Internet use continues to rise but disparities remain, especially in low-income regions. https://www.itu.int/en/mediacentre/Pages/PR-2024-11-27-facts-and-figures.aspx

Exhibit 3.1: Google AI Sprinters four pillars



Infrastructure

AI adoption in emerging markets will depend on fast, secure, and sustainable cloud infrastructure, underpinned by cloud first[37] policies and access to regional or global public cloud services where local facilities are not viable. Multi-cloud interoperability and regional hubs help ensure inclusivity and avoid lock in.

People: National AI skill initiatives

Building an AI-ready workforce requires national initiatives that span foundational literacy to advanced expertise. Equipping citizens as "AI Learners" who develop basic AI literacy, "AI Implementers" who adopt AI solutions in the workplace and "AI Innovators" who create new tools and systems tailored to local needs.

Technological innovation: Modernizing national data systems for the AI era

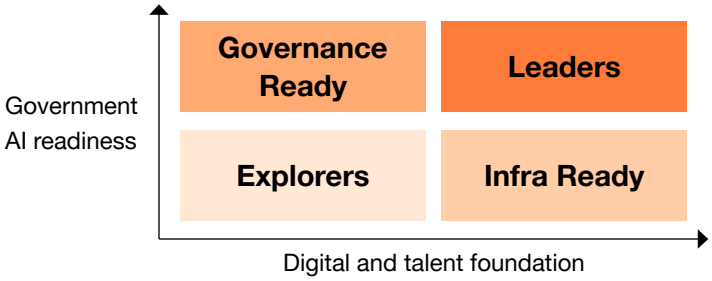
Effective AI requires high-quality, timely and representative data, yet many countries lack the policies, institutions and infrastructure to manage it at scale. Modernizing data systems—through open data pipelines, trusted cross-border flows and robust digital infrastructure—minimizes bias and helps ensure AI is relevant to local contexts. It can also fuel innovation, evidence-based policymaking and AI-driven solutions.

Enabling policies: Promoting innovation and deployment through enabling regulation

A supportive policy environment is essential for safe, inclusive and widespread AI adoption, especially in emerging markets where the potential is significant. Frameworks, such as **Google's AI Policy Gold Standard**, help nations balance innovation with risk management by fostering enabling regulation, ensuring responsible use and alignment with international standards.

37 Cloud-first refers to an IT strategy where governments prioritize cloud-based solutions for new or updated IT systems over on-premise alternatives

Exhibit 3.2: Four archetypes of AI readiness across emerging markets



Explorers

Early in adoption; building national AI strategies and foundational mobile-first AI services.

Countries early in AI adoption, typically without cloud first policies and a national AI strategy; need to focus on establishing these foundations and closing gaps in basic infrastructure and digital capabilities.

Infra Ready

Strong connectivity; developing governance capacity; targeting sector-specific AI use cases.

Countries with strong connectivity and cloud infrastructure but limited institutional readiness; well placed to deploy operations-focused AI and agentic solutions while building cohesive AI governance and a cross ministry task force.

Governance Ready

Infrastructure limited but strong on policy and oversight frameworks; leveraging public cloud.

Countries with robust policy and oversight frameworks but infrastructure constraints; prioritize lightweight AI/agent deployments and leverage public cloud, while fostering private investment in infrastructure and talent.

Leaders

Strong policy, infrastructure, and talent; focusing on new government AI solutions.

Countries with national AI strategies with upskilling commitments, strong talent pools, and advanced digital infrastructure; positioned to scale high impact, cross agency (including multi agent) use cases under centralized governance.

The four archetypes

Our analysis of a globally representative sample set of emerging markets revealed four distinct archetypes of AI readiness.[38]

1. **Explorers**: Countries in the early stages of the journey toward full-scale AI adoption. They typically lack a cloud-first policy and a national AI strategy, operate under constrained resources, and face gaps in foundational infrastructure and digital capabilities. For these governments, the goal should be to establish a cloud-first policy, leverage existing regulatory frameworks and adopt a national AI strategy as a foundation for broader digital transformation.
2. **Infra Ready**: Countries where digital infrastructure development has outpaced institutional readiness. These countries have invested heavily in connectivity, broadband and cloud infrastructure. Infrastructure-rich governments can deploy operations-focused AI and agentic solutions for predictive maintenance of utilities, document-processing agents to digitize records across ministries, or knowledge agents that can unify siloed datasets into interactive, searchable interfaces for public officials. Those within this archetype should prioritize building a more cohesive governance model for AI and deploy a cross-ministry task force.
3. **Governance Ready**: Countries that have made significant progress on policy and governance of AI, but face infrastructure gaps that limit their capacity to deploy the most advanced AI use cases at scale. Governance Ready countries can bridge their infrastructure constraints by deploying lightweight AI solutions or agents that support the ministries directly while also leveraging public cloud-supported solutions where feasible. These countries should prioritize fostering a market environment that encourages private investment in infrastructure and talent to support their AI ambitions.
4. **Leaders**: Countries that combine strong government commitment, adopt national AI strategies with upskilling commitments, superior talent pools and advanced digital infrastructure. Most countries within this archetype have cross-ministry AI taskforces and are already adopting GenAI tools at some scale today. They are poised to further scale the most advanced, high-impact AI use cases (including multi-agent systems) that can enable cross-agency coordination at scale, with centralized governance to help ensure trust, security and compliance.

38 Our methodology evaluates countries on two equally weighted axes derived from the four AI Sprinters pillars. The **Government AI Readiness** axis measures institutional capacity, national strategies, and regulatory frameworks. The **Digital and Talent Foundation** axis assesses digital infrastructure, cloud access, and STEM talent. Each country's archetype is determined by a composite score calculated from over twenty metrics from sources including the World Bank, UN, and OECD.

Using this framework, public sector officials can score and categorize their country based on more than twenty metrics from globally recognized sources, including the World Bank, UN, OECD, and others. We have included our rubric in Appendix Exhibit A2.1. Each country receives a composite score in both dimensions, which is used to align them with one of the four AI maturity archetypes discussed above. We have also included a step-by-step guide on how to use the archetype and self assessment frameworks of this report to evaluate a country's readiness in Appendix Exhibit A2.3.

It's important to note that a country's archetype alignment is not a ranking but a self-assessment starting point, helping governments understand their readiness, identify priority investments and select the most feasible use cases.

Having a clear view on the baseline is an important step towards progress and creating practical planning. The next section outlines how countries can leverage their archetype alignments to identify the most feasible and high-value AI use cases.

AI in action: Public sector AI use case strategy

Once governments understand where they fall on the AI readiness matrix and their archetype alignment, the next question is, how does that translate into an AI use case strategy?

An “AI-first” government is one in which every ministry, agency and service line sees AI not as an add-on but as a foundational capability. This section is designed as a playbook for how governments can get started by identifying, prioritizing and scaling AI use cases in ways that build momentum. For emerging markets, the stakes are especially high. With younger populations, fewer legacy systems, and the ability to build modern digital systems from the ground up, they are uniquely positioned to leapfrog traditional development pathways by embedding AI directly into public administration. Done right, this allows governments to set benchmarks for how AI can deliver better services, fiscal strength and inclusive growth.

Many governments have already started to realize this over the past half-decade, and the depth and breadth of public-sector AI applications has exploded as a result. Within the UN’s network alone, the inventory of AI projects grew from ~260 in 2020 to 408 in 2023—a 57% jump across 46 agencies.[39]

AI use case patterns by archetype

While there are myriad use cases for AI that have been explored within the public sector (see Exhibit A2.4 in the appendix for a longer list), not all are equally feasible and deliver the same value for all countries.

We’ve highlighted some of that difference—at the level of our previously defined archetypes—by mapping some of the most feasible and impactful AI use cases across said categories. These recommendations reflect both structural constraints (infrastructure maturity, workforce capabilities, governance readiness) and strategic preferences that shape which applications are most viable for different readiness and infrastructure profiles. Government leaders may use these recommendations as a starting point in building an AI-first public administration.

39 United Nations Activities on Artificial Intelligence (AI) (2023) UN Activities on AI Report: 2023 Report. Available at: https://www.itu.int/dms_pub/itu-s/opb/gen/S-GEN-UNACT-2023-PDF-E.pdf (Accessed: 19 August 2025)

Explorers (low readiness, low infrastructure)

These countries often face significant resource constraints and lack the formal AI strategies, workforce readiness and digital infrastructure necessary for scaled AI adoption. Governments are typically in the early stages of digitization and often focus on foundational applications of AI technology to deliver immediate results. These governments can begin with projects like digitizing vital records, deploying mobile-first learning content and introducing basic workflow automation within a single ministry. This will lay the groundwork for more sophisticated AI use cases when digital maturity and institutional readiness has improved.

Common high-priority patterns

- **Citizen services and administration**: AI-enabled phone-driven citizen service access, virtual queues and reminders, business-registration assistant, grievance tracking
- **Education**: AI teacher's aide, structured exam scoring, syllabus-aligned content translation and localization, attendance/result notifications
- **Public records and administration:** Entry-level form digitization, document OCR, simple analytics for registry data
- **Public finance and revenue**: Basic financial forecasting; Social beneficiary eligibility analytics
- **Agriculture**: Mobile image recognition for pest/disease detection, SMS crop advice, basic weather forecasting

AI Math Tutor via Messaging (Nigeria[40])

What was implemented:
The Lagos State Ministry of Education partnered with a nonprofit to introduce an AI-powered math tutor accessible via SMS for junior secondary students. The system delivers curriculum-aligned practice questions on low-bandwidth phones and provides teachers with dashboards highlighting student progress and learning gaps. Over a 15-month pilot, the program was deployed in approximately 100 public schools.

Impact:
More than 100,000 students have used the tool, collectively solving over 5 million math problems during the 2023/24 academic year. The state government has announced plans for broader rollout, while program-linked math challenges have attracted participation from tens of thousands of students.

Why it fits:
This initiative showcases lightweight, mobile-first AI that leverages existing messaging platforms and school workflows. It delivers rapid, measurable value without requiring major IT upgrades or needing to be underpinned by robust AI policy frameworks, while remaining highly scalable across the country.

40 PM News Nigeria. (2024, July 27). Lagos public school students rewarded for using technology to solve mathematics. https://pmnewsnigeria.com/2024/07/27/lagos-public-school-students-rewarded-for-using-technology-to-solve-mathematics/ (Accessed 4 October 2025)

Infra Ready (low readiness, high infrastructure)

These countries often benefit from significant investment in connectivity, regional or public cloud infrastructure, and compute power (sometimes donor- or partner-driven), but lack central national AI strategies and regulatory frameworks or workforce capacity to operationalize AI at scale. As a result, AI adoption tends to focus on targeted ministries rather than large-scale cross-ministry programs. These countries can prioritize solutions like AI-based asset inspection, AI-facilitated record digitization and retrieval/search, or predictive maintenance of public infrastructure. Infra Ready countries can leverage their strong infrastructure footprint while building institutional readiness and talent before taking on more complex AI use cases.

Common high-priority patterns

- **Infrastructure and mobility**: Predictive maintenance; road/utility fault detection; fleet/route optimization
- **Public records and administration**: Mass record digitization for automated indexing and retrieval, data validation systems
- **Environment and land management**: Geospatial planning and zoning enforcement; air/water/deforestation monitoring; automated environmental infraction case reviews
- **Public finance and revenue**: Procurement anomaly detection; spend analytics; targeted compliance sweeps
- **Health care delivery**: Integrated health information (data stitching); healthcare request triage/tele-triage pilots where data is ready

Field-boundary AI for crop booking and advisory (India[41])

The problem: Farmers in this country often lack clear, up-to-date information about their land boundaries and water resources. Extension workers (who help farmers access loans, subsidies and technical advice) traditionally had to draw these maps by hand, a time-consuming and error-prone process. This slowed down services and reduced the accuracy of farmer support programs.

What was implemented:
Department of Agriculture worked with local partners to embed Google's Agricultural Understanding API directly into its crop-booking mobile app. This AI tool automatically identifies farm field boundaries and overlays information about minor irrigation systems. Instead of extension workers manually digitizing fields, the AI provides geospatial data straight into their workflow.

Impact:
In pilot villages, the AI system was more accurate in mapping farm plots. This cut the need for manual field mapping, sped up crop-booking and gave extension workers better tools for providing advice. The data also helps administrators more reliably process farmer loans and subsidies, making services faster and more equitable.

Why it fits:
This case shows how strong infrastructure can support ministry-specific AI applications, even without the backing of a full national strategy. By embedding geospatial AI into existing agricultural workflows, India reduced manual effort, improved record-keeping and made farmer services more efficient, demonstrating how infrastructure can enable practical, data-first use cases while readiness develops.

41 de Andrés-Clavera, M., & Sukthankar, R. (2023, January 30). How AI is improving agriculture sustainability in India. Google Blog. https://blog.google/technology/ai/how-ai-is-improving-agriculture-sustainability-in-india/ (Accessed 4 October 2025)

Governance Ready (high readiness, low infrastructure)

These countries have strong policy and governance frameworks but face connectivity, compute and scaling constraints. They can prioritize lower-data-footprint, modular AI solutions that deliver quick wins while building digital foundations. The mix often favors ministry-specific deployments with visible public service benefits. Access to advanced compute power via public cloud providers can also allow these governments to scale national use cases without the cost of building dedicated domestic facilities. Getting to a high infrastructure readiness level may take a significant amount of work. While cloud services can offset some data infrastructure gaps, countries with a lower infrastructure readiness may still face barriers such as limited connectivity, affordability challenges and data sovereignty concerns. This makes it harder for countries with low infrastructure to depend on cloud services alone.

Common high-priority patterns

- **Education**: Teacher augmentation (lesson planning, grading), multilingual learning content, adaptive skill assessments
- **Justice and security**: Targeted traffic enforcement (video analytics); AI-assisted evidence/document review
- **Citizen services and administration**: Business registration and licensing assistants; e-filing triage; multilingual policy/sign-language accessibility
- **Public finance and revenue**: Expenditure variance alerts; beneficiary de-duplication and subsidy targeting; explainable revenue forecasting
- **Environment and land management**: Change-detection for shore erosion/water encroachment; permit screening; zoning/land-use decision support

Fully digital courts (Kuwait[42])

What was implemented:
The Ministry of Justice is undergoing a nationwide digital judiciary platform. This transformation includes end-to-end digital services, including electronic filing and registration of cases (including document uploads), online fee payments, digital notifications, streamlined court procedures, secure remote hearings and automatic enforcement of court rulings once issued.

Impact:
The initiative is expected to reduce bureaucracy and procedural delays significantly, offer faster case processing, eliminate many physical visits by citizens and legal professionals, improve transparency via real-time status updates, enhance accessibility to justice for residents and citizens alike, and improve overall user satisfaction with judicial services.

Why it fits:
This use case exemplifies a government's ability to digitally transform one of its core institutions—hampered by bureaucracy—in a use case that aims to increase speed-to-service, accessibility and fairness within the justice system without the need for comparatively advanced or widespread compute infrastructure.

42 MSN. (n.d.). Kuwait's courts to go fully digital with Google and Microsoft, nationwide launch within weeks. https://www.msn.com/en-in/news/world/kuwait-s-courts-to-go-fully-digital-with-google-and-microsoft-nationwide-launch-within-weeks/ar-AA1K4f2U#:~:text=To%20guarantee%20world%2Dclass%20standards,administrative%20layers%2C%20and%20physical%20visits (Accessed 4 October 2025)

Leaders (high government readiness, high market maturity)

These governments can execute national-scale, complex, cross-agency, data-intensive use cases. They pair strong institutional capacity and national AI strategies with talent and advanced cloud and compute access (via public cloud and local infrastructure), enabling high-value, real-time and predictive capabilities. The balance here skews toward integrated, multi-ministry platforms with substantial citizen-facing impact. For Leaders, governments can begin to experiment and implement agentic AI and can facilitate next-gen coordination across ministries. Multi-agent systems that can improve disaster response through the connection of health, transport and emergency systems, as an example. These countries are positioned to pioneer secure agent ecosystems that complement individual service capabilities to deliver government at scale.

Common high-priority patterns

- **Healthcare**: Predictive and preventive care (disease forecasting, diagnostics), AI-driven health resource optimization
- **Infrastructure and mobility**: Digital twins and simulation for urban power systems, climate risk simulation, real-time mobility optimization and grid forecasting
- **Public finance and revenue**: Tax fraud detection; automated compliance monitoring, procurement risk analytics, fiscal nowcasting
- **Environment and land management**: Disaster early warning and climate risk modeling; housing allocation optimization; land-use and zoning analytics
- **Citizen services and administration**: Citizen service knowledge hubs; citizen-facing service copilots and chatbots; Guided digital forms
- **Justice and security**: Crowd and border-flow monitoring; targeted corridor enforcement for border crossing; AI-assisted evidence review as part of court proceedings and investigations

Transforming customs operations with AI (Brazil[43])

What was implemented:
Brazil's federal tax authority implemented an AI-driven customs inspection capability at an international airport using Gemini on Google Cloud. The solution integrates advanced models with imaging and customs data to automate baggage screening, accelerate clearance processes and identify suspicious or restricted items in real time. By embedding AI into the inspection workflow, customs agents are supported with consistent, automated detection while retaining human oversight for high-risk decisions.

Impact:
This use case improves a country's customs clearance by reducing reliance on manual inspection and accelerating processing for travelers, resulting in shorter wait times and improved efficiency across airport operations. At the same time, AI has enhanced detection accuracy, enabling the federal tax authority to identify contraband and undeclared items with greater consistency. Customs officers are able to concentrate their attention on high-risk cases rather than routine checks, enabling resources to be used more strategically.

Why it fits:
This case illustrates how a government agency can operationalize AI to modernize mission-critical processes and deliver better outcomes for citizens. By applying Gemini's real-time analytic capabilities to a high-volume environment like baggage inspection, the government agency has demonstrated how AI can increase efficiency, improve accuracy and augment human expertise without compromising oversight.

43 Google Cloud. (2025, September 10). Google Cloud brings a new era of AI innovation to Brazil. https://www.googlecloudpresscorner.com/2025-09-10-Google-Cloud-Brings-a-New-Era-of-AI-Innovation-to-Brazil (Accessed 4 October 2025)

Systematic AI use case identification and prioritization

As underscored by the archetype models, determining the use cases that make the most sense for a given country takes significant analysis and consideration of that country's capacities, priorities and desired impacts. Selecting the right AI use cases requires matching national priorities with institutional capacity. Ad hoc pilots may deliver short-term wins, but sustained benefits depend on a structured, repeatable process that ensures feasibility, alignment and measurable impact. Please refer to Appendix 3 for a practical, step-by-step framework on AI use case development, organization, and feasibility analysis and organization.

A well-organized, regularly updated AI use case library becomes a critical decision-support tool for public sector leaders. By aligning adoption with national priorities, institutional capacity and measurable public value, governments can ensure that early successes build momentum toward transformative change.

Conclusion and next steps

The patterns emerging from our analysis highlight that while the range of potential public sector AI applications is vast, their feasibility and impact are shaped by a country's current infrastructure, policy environment, workforce and institutional readiness. Some governments are well-positioned to deploy complex, cross-agency systems immediately. Others will gain the most from targeted, lower-complexity pilots that demonstrate value and build momentum. In all cases, aligning use case selection with a country's archetype and sequencing deployments for both early wins and longer-term initiatives is essential to build credibility, foster trust and lay the groundwork for transformative change.

These patterns not only shape where governments should consider starting, but also what skills, infrastructure investments, and partnerships are most urgently needed to unlock broader use case deployment. We explore this further in the following section on AI skills.

AI skills: Equipping governments for the AI era

AI benefits don't materialize automatically. They depend critically on whether people have the skills to design, deploy and sustain AI responsibly. For emerging market governments, this dependency is especially pronounced. Policy and access to cloud infrastructure may open the door, but it's skill that determines whether AI can actually enter and thrive within public administration.

Governments are at once major employers, regulators and service providers. This gives them a pivotal role in setting the direction for skills development. Public servants don't only deliver services, they also signal to citizens, schools and businesses what capabilities matter in a changing economy. By investing in AI skills, governments can simultaneously improve their own operations and catalyze broader societal readiness for an AI-driven era.

Why skills matter in emerging markets

The urgency of building skills becomes clear when considering the structure of emerging market workforces. A large proportion of employment remains in agriculture, construction and basic services, sectors where digital literacy is limited. According to the IMF, only about 40% of jobs in emerging economies are "AI-exposed," compared to 60% in advanced economies (IMF, Generative AI and the Future of Work, 2024).[44] This doesn't mean emerging markets are less capable of using AI, just that their path should be more deliberate.

Skill building can also have a multiplier effect. Civil service upskilling can create a demonstration effect. When ministries adopt AI literacy campaigns or digital training, schools, universities and private firms are more likely to follow. Conversely, neglecting workforce capabilities risks slowing adoption and reinforcing divides between those able to use AI effectively and those left behind.

44 Cazzaniga, M., Jaumotte, F., Li, L., Melina, G., Panton, A. J., Pizzinelli, C., Rockall, E. J., & Mendes Tavares, M. (2024, January 14). Gen-AI: Artificial Intelligence and the Future of Work (IMF Staff Discussion Note No. SDN/2024/001). International Monetary Fund. https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2024/01/14/Gen-AI-Artificial-Intelligence-and-the-Future-of-Work-542379 (Accessed 4 October 2025)

Three tiers of AI fluency

The **Google AI Sprinters Framework** identifies three broad tiers of AI roles that governments should cultivate across their workforces.

AI Learners

Broad-based literacy for all civil servants, ensuring they understand what AI is, where it can be applied and how to use simple tools responsibly. This includes end users and leaders.

AI Implementers

Professionals who adapt AI tools to their ministry-specific functions, whether managing citizen-facing chatbots, applying predictive analytics in healthcare or embedding AI in regulatory workflows. This includes business and product roles and governance roles.

AI Innovators

Advanced technical experts who design, build and evaluate AI systems, often in partnership with academia or the private sector. This includes the builder roles.

Sequencing is key. Early emphasis should fall on raising broad literacy and building implementer capacity, while innovator pipelines can be cultivated selectively through scholarships, partnerships and targeted programs.

From principle to practice: A structured framework

High-level visions of a digitally fluent workforce are essential, but governments also need practical steps to move from aspiration to execution. We propose a structured framework.

1. Develop workforce AI skills taxonomy (a structured list of technical, core and human-centric skills required for public sector roles) tailored to a group's specific needs.
2. Assign target proficiencies across core, technical and human-centric skills across an archetypal set of personas.
3. Assess and evaluate workforce skills using surveys, manager validation and observed performance.
4. Develop a talent action plan that sequences investments to priority roles linked to high-impact use cases.
5. Deploy learning modalities that match both skill type and local resource constraints from broad digital microlearning to in-depth workshops, sandbox pilots and advanced degree programs.
6. Regularly seek feedback from the workforce on whether the training materials for each persona are supporting learners in building skills to use AI, both in their everyday work and when addressing complex problems.

This framework ensures skill development is not an abstract goal but a tangible roadmap with measurable outcomes. For more details on this step-by-step framework, please refer to Appendix 4, AI Skills Practitioner's Guide.

What skills matter

Our consolidated taxonomy **classifies AI-related skills into three categories** (see Exhibit (5.1), leveraging frameworks published by World Economic Forum, OECD, Lightcast, and AI4 GOV (see Appendix 4 for further details)).

- **Core skills**: Foundational knowledge like AI literacy, data literacy and risk/ethics awareness, which all civil servants should possess.
- **Technical skills**: Capabilities such as data infrastructure, system performance management and leveraging large language models, most relevant for implementers and innovators.
- **Human-centric skills**: Design thinking, critical thinking, creativity and change management, essential for ensuring that AI is applied inclusively and responsibly.

While the taxonomy is broad, not all roles require all skills at the same level of proficiency. The practitioner's guide in the appendix provides suggested proficiency targets by persona, helping governments align training investments with role-specific responsibilities.

Exhibit 5.1: AI Skills Taxonomy

Category	Skill	Definition
Core skills	Business acumen	Understanding of the operating model and value chain of a particular public sector in the context of AI, including roles and responsibilities, needs, goals, resource constraints, industry drivers
	Data literacy	Understanding how data is sourced, governed, interpreted and used in AI, including ethical, security, and compliance implications
	Digital acumen	Awareness of key digital systems, platforms and technologies
	AI risk and ethics	Recognizing risks of bias, misuse and privacy breaches in AI systems and applying safeguards and mitigation strategies
	AI literacy	Understanding what AI (including GenAI and agentic systems) is, how it works, capabilities and limitations of GenAI, and where it can be applied
	Use of LLM's and prompt engineering	Awareness of how LLMs like Gemini work, how to use them and what they can and cannot do. Includes crafting, refining and testing structured inputs that guide AI to produce useful, safe and relevant outputs
Technical skills	System performance and life-cycle mgmt.	Assessing and validating AI performance, outputs and deployment reliability
	Data infrastructure and quality	Designing, maintaining and securing reliable and secure data pipelines and systems for AI
	AI tools and platforms	Using and evaluating platforms and tools to interact with and manage AI solutions
	AI engineering and building	Designing and maintaining AI systems and tools though the build-test-deploy-monitor life cycle
	LLM technical skill	Knowledge of prompt engineering, fine-tuning and parameter-efficient training approaches, retrieval-augmented generation (RAG) and integration of LLMs into existing enterprise systems and workflows
Human-centric skills	Creativity and innovation	Employ a human-centered approach to ideate, prototype and iteratively refine AI solutions while incorporating user feedback
	Critical thinking	Evaluating AI claims, outputs, or insights with logic, evidence and skepticism
	Vision and managing change	Leading teams and organizations through tech change, uncertainty and workforce transformation. This includes setting an AI adoption vision, aligning stakeholders, and driving cultural readiness
	Design thinking	Applying iterative, human-centered approaches to solve public service challenges

Lessons from early movers

Some governments have already demonstrated that scaling AI skills is possible.

- **Chile**: In 2024, the National AI Research Center (CENIA), with support from Google.org, launched Hazlo con IA, a program that trained 35,000 public officials in AI fundamentals, ethics and applied use for public services. This effort showed how partnerships and targeted investment can rapidly raise AI literacy across a wide base of civil servants.[45]
- **UAE**: In 2023, the UAE government partnered with the Apolitical Government AI Campus to mandate AI training for civil servants. The program, backed by Google.org, aimed to boost digital literacy and equip officials with practical AI skills. It established a global precedent, embedding AI fluency into public administration to improve policy design and citizen service delivery.[46]
- **Estonia**: Building on its long-standing digital governance strategy, Estonia embedded AI training to build AI capacity at an advanced level in (building a generation of AI innovators) the public sector after launching its national AI strategy in 2019. Ministries formed interdisciplinary AI teams, partnered with universities for applied training and built capacity to design and oversee solutions in-house. By 2025, Estonia had launched over 130 AI projects across the government, supported directly by trained public servants rather than outsourced vendors.[47]

These examples demonstrate that even resource-constrained or smaller governments can succeed at scale when there is political will, structured planning and strong partnerships.

Policy levers for governments

Governments in emerging markets can accelerate AI skills through deliberate policy choices.

- **Integrate AI into education systems**. Embedding digital and AI literacy in schools and vocational curricula helps prepare future workforces. Kenya's national competency-based curriculum is an example of mainstreaming technical skills.[48]
- **Leverage the civil service as a proving ground.** Training public officials first can create models for broader society. India's iGOT Karmayogi platform, an online learning portal designed to train millions of civil servants with digital, management and AI-related modules, is one of the largest such efforts globally.[49]
- **Forge public-private partnerships.** Programs like the UAE's executive AI training in collaboration with Google Cloud show how advanced training can be accelerated.[50]
- **Enable inclusivity.** Women, rural populations and marginalized communities should be intentionally targeted to close rather than widen digital divides.

45 Hazlo con IA. (n.d.). Cursos. https://hazloconia.cl/cursos/ (Accessed: 15 August 2025)

46 Swayne, M. (2024, June 19). Apolitical receives $5 million grant from Google.org to train one million civil servants in AI. The AI Insider. https://theaiinsider.tech/2024/06/19/apolitical-receives-5-million-grant-from-google-org-to-train-one-million-civil-servants-in-ai/ (Accessed 4 October 2025)

47 e-Estonia. (n.d.). Factsheet: AI strategy [PDF]. https://e-estonia.com/wp-content/uploads/factsheet-ai-strategy.pdf (Accessed 4 October 2025)

48 Korir, R. C., Njogu, P. G., & Karanja, F. M. (2024). Advancing AI education: Assessing Kenyan in-service teachers' preparedness for integrating artificial intelligence in competence-based curriculum. Discover Education, 3(1), Article https://www.sciencedirect.com/science/article/pii/S2451958824000459

49 Digital India. (n.d.). Mission Karmayogi https://www.digitalindia.gov.in/initiative/mission-karmayogi/

50 WAM. (2025, June 1). UAE Government launches Chief AI Officers' Training Programme to enhance future tech leadership. https://www.wam.ae/en/article/bjyv3xh-uae-government-launches-chief-officers%E2%80%99-training (Accessed 4 October 2025)

Implications for labor markets and competitiveness

Investing in AI skills has effects that extend beyond government operations.

- **Boost labor market resilience**: While AI may automate some tasks, it also creates demand for new roles in oversight, digital service delivery and data governance.
- **Shape global competitiveness**: Countries with broad-based AI skills will be better positioned to attract investment and participate in digital trade. The World Economic Forum's Future of Jobs Report (2025) found that 63% of employers cited skills gaps as a barrier to adoption between 2025–2030.[51]
- **Build citizen trust**: A skilled public workforce reduces risks of misuse or exclusion and fosters confidence that AI is being deployed responsibly and ethically.

AI in practice: Methodical assessment for targeted AI upskilling in Latvia's public sector

In a comprehensive effort to integrate AI into its public administration strategically, Latvia deployed a survey-based methodology to baseline its public sector's AI capabilities. This research, detailed in a 2024 scientific study, involved 1,557 public employees to evaluate self-assessed competence across 10 distinct AI functionalities from basic information retrieval to complex predictive modeling. This method provided a granular and evidence-based map of the existing skill gaps.

The methodology also yielded several key outcomes crucial for policy. It confirmed that overall AI competence was limited, particularly concerning advanced functions, with a significant portion of employees reporting a lack of prior workplace AI training. Critically, the data established a positive correlation between AI training and higher perceived competence, justifying targeted upskilling initiatives. This robust evidence, including insights on employee trust in AI, allowed Latvia to develop training programs that are not only strategic and targeted to specific needs but also instill trust and confidence in the workforce.[52]

Conclusion: Investing in people, not just platforms

For governments in emerging markets, the most powerful investments in AI are not in hardware or even in policy—they're in people. Skills are the bridge between ambition and achievement. A workforce that is AI-ready ensures that infrastructure and strategies translate into real service improvements.

Governments that act decisively to baseline their workforce, assign clear skill targets and roll out structured training can expect to reap a "double dividend" of more effective service delivery for citizens, and stronger career opportunities for individuals. The risk of inaction is stark. Without adequate skills, even the most promising AI pilots will stall, potentially leaving emerging economies behind as others accelerate ahead.

The path forward is clear. Embed AI skills into national strategies to enable comprehensive citizen-wide AI skills development while using the civil service as a proving ground, leveraging partnerships and prioritizing inclusivity. By doing so, governments can not only adopt AI but also lead their societies into the AI age with confidence, equity and purpose.

51 World Economic Forum. (2025, January 7). The future of jobs report 2025 [PDF].

52 Lāma, G., & Lastovska, A. (2025). Exploring public sector workforce attitudes toward AI competence and its impact on AI competence self-assessment. Social Sciences & Humanities Open, 12, 101809. https://www.sciencedirect.com/science/article/pii/S2590291125005376 (Accessed: 29 August 202)

Recap and conclusion

Governments in emerging markets face increasing pressure to deliver improved public services more efficiently. Artificial intelligence (AI) represents a powerful tool to address this challenge by enabling governments to become more adaptive, responsive and inclusive.

As detailed in this report, the potential benefits of AI are substantial. Over the next decade, AI adoption can significantly boost fiscal resilience, public-sector efficiency, GDP and household income. It can streamline how governments work, making them stronger and safer. It can increase access to services and connection with communities, cut through complexity to support decision making and help leaders make decisions with immediate impact and plan.

But these outcomes will not occur automatically. To achieve the economic and institutional benefits of AI, governments should adopt a phased, pragmatic approach tailored to their existing capabilities. While no single implementation model applies universally, a defined set of strategic actions aligned with a country's AI maturity archetype and underpinned by the four major pillars of the **Google AI Sprinters Framework** can help governments identify appropriate starting points, concentrating resources where potential returns on investment are greatest and progressively developing the institutional capacity required to scale effectively.

Here is a high-level synthesis of some of those steps that governments can take.

1. Conduct an initial AI readiness assessment

A crucial initial step is evaluating a nation's position on the AI readiness spectrum. By utilizing a structured diagnostic framework—covering public-sector digital maturity, existing infrastructure and institutional enablers—governments can classify themselves into one of four AI readiness archetypes. This assessment provides valuable insights to inform strategic ambition levels and prioritize investment areas. Countries with robust digital infrastructure can immediately pursue high-impact AI applications, while those with less-developed foundations may initially prioritize connectivity improvements, cloud infrastructure or workforce training.

2. Prioritize contextually appropriate use cases

AI applications should be selected based on practical feasibility, compatibility with existing systems and potential visibility and benefit to citizens. Governments may initially target lower-risk yet highly visible solutions such as public-facing chatbots or automated document classification to demonstrate immediate value. More complex use cases, including benefit targeting or predictive analytics, can be pursued later. A balanced portfolio approach, integrating short-term pilot projects with long-term institutional strengthening, typically yields optimal results. Four archetype-specific use case recommendations can serve as a starting point in this exercise.

3. Develop talent and foster partnerships

Successful government adoption of AI involves substantial human factors alongside technical considerations and requires a holistic approach to skills development. Governments can adopt a three-tiered AI skilling model:

- **AI Learners**: Citizens and civil servants with basic AI literacy, able to understand and responsibly use AI tools.
- **AI Implementers**: Workers who adapt and apply AI in their roles across sectors such as healthcare, agriculture and administration.
- **AI Innovators**: Specialists and researchers who advance AI capabilities and tailor solutions to local needs.

Embedding this framework in national skilling strategies (through school curricula, workforce development programs and targeted training for underserved communities) can help ensure that citizens and public officials alike participate fully in the AI economy.

Moreover, developing strategic partnerships with academic institutions, private-sector entities and international organizations can provide access to specialized expertise and infrastructure not readily available within government.

4. Establish institutional AI frameworks and strategies, policy foundations and enablers

Achieving meaningful, scalable results from AI technologies requires robust institutional support. Governments may establish dedicated national AI units or taskforces within existing digital transformation or planning ministries to coordinate AI initiatives, develop technical standards and drive capacity-building efforts. Additionally, proactively embedding ethical and accountability frameworks such as AI benefit assessments and internal auditing protocols can mitigate risks and foster public trust.

Governments can reinforce readiness by adopting cloud-first procurement and infrastructure policies modernizing acquisition rules to prioritize scalable, service-based solutions delivered through public cloud platforms (while leveraging local or regional infrastructure where necessary); establishing clear, risk-based AI regulations that enable innovation while safeguarding the public interest; and aligning with international technical standards to ensure interoperability and trust. Coupling these measures with nationwide digital literacy programs helps ensure citizens and civil servants alike are prepared to use AI responsibly and effectively.

5. Demonstrate progress through clearly defined, measurable outcomes

Early, demonstrable successes—through pilots or even AI sandboxes[53]—contribute significantly to momentum and stakeholder buy-in. Governments should select initial projects characterized by technical feasibility, clear political relevance and measurable outcomes within a 6- to 12-month timeframe. Establishing explicit performance metrics—such as service-processing efficiency, fraud detection accuracy or citizen engagement rates—at the outset helps ensure transparency and accountability. Achieving these measurable successes can facilitate broader governmental support and sustained investment in AI capabilities.

53 An AI sandbox is a secure, isolated controlled environment for developing, testing, and experimenting with AI technologies

Fortunately, many foundational components for AI adoption are already available. Governments do not need to develop entirely new technologies. Instead, they can effectively adapt existing solutions tailored to their unique national contexts. Deploying the right AI application at the appropriate time, supported by a skilled workforce and clear governance frameworks, can yield measurable outcomes within months.

Ultimately, success will not be defined merely by successful pilot projects. The governments best positioned to lead over the next decade will view cloud and AI as critical instruments for modernizing public administration. They will leverage AI to streamline workflows, enhance the capabilities of civil servants and substantially improve citizen interactions with government services. Additionally, these governments will cultivate the institutional agility necessary to adapt continuously as AI technology evolves.

AI may not be a cure-all, but it can serve as a powerful catalyst for progress. For governments aiming to expand economic opportunities, enhance equity, build public trust and strengthen their global economic competitiveness, this is a critical moment for decisive action.

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The analysis and recommendations presented herein reflect a collective commitment to shaping a more inclusive, innovative and AI-ready future for public service worldwide.

Google

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Appendix 1

Modeling the economic benefit of AI adoption

Approach 1 Methodology

To quantify the potential economic benefit of AI adoption in the public sector, we employ an interindustry input-output macroeconomic model sourced from the INFORUM family of macroeconomic models.[54] Their models are used by both government and private-sector researchers in the US and abroad.

For this study, detailed 45-sector input-output tables from the OECD for five emerging economies were combined with each country's macroeconomic accounts, ensuring consistency with national GDP and its components. This analysis aimed to simulate a range of realistic scenarios grounded in current economic data, sector-level analysis, and country-specific AI adoption patterns across the five countries. The intuition behind the models involves a shock to productivity caused by AI adoption that increases economic activity 1) directly by freeing up resources for other productivity activity and 2) indirectly as increased incomes from the primary shock ripple through the economy in the form of higher electricity demand to support AI and increased consumer spending due to higher incomes. The resulting output offers a view of how AI could affect GDP, public sector labor productivity, household income and fiscal performance between 2025 through 2035. Relative to prior work, the use of country-specific adoption patterns combined with country-specific data and models allows for estimates of the economic effects of AI adoption that to our knowledge are novel in the field.

The model is structured into five core blocks (final demand, supply, factor income, price and accounting) which interact to determine output, income and prices as the system reaches equilibrium following productivity shocks. Each block is outlined below and includes the key equations and mechanisms leveraged in our analysis.

Final demand block

The final demand block determines aggregate expenditures in the economy. It projects the main components of real final demand—namely household consumption, investment (gross fixed capital formation), government expenditure, exports and imports—typically using econometric equations or exogenous growth paths. These components can be further disaggregated into detailed categories (e.g., consumption by product, investment by asset type) for greater granularity. In the baseline calibration, final demand by category is aligned with a country's System of National Accounts (SNA) data for the base year, and growth in each component reflects expected trends absent AI. In the AI-adoption scenario, certain final demand elements are adjusted to reflect AI-related spending and savings—for example, higher investment in information and communication technology (ICT) equipment, or shifts in government spending due to efficiency gains. The final demand block thus provides the exogenous demand drivers (denoted by f in the input-output identity) that initiate economic activity in the model.

54 Inforum, short for Interindustry Forecasting at the University of Maryland, was founded in 1967 by Professor Emeritus Clopper Almon. As one of the pioneers in building large-scale, dynamic input–output models of the US economy, Inforum combines traditional national income accounting with detailed industry relationships. Unlike many macroeconomic models, Inforum emphasizes the interconnectedness of industries, trade flows, and labor markets, providing a more realistic simulation of how policy and market changes ripple across sectors. Inforum input-output models are also distinguished from others for their suitability not only for historical economic analysis but also for forecasting purposes. Over the decades, Inforum expanded internationally, collaborating with researchers and institutions worldwide to build similar models for other economies, and it remains influential in applied economic forecasting, policy analysis, and long-term planning. For more information, see: https://inforumecon.com/about-us/

Supply block

The supply block represents the interindustry production network and uses the input–output identity to link sectoral outputs to demand. This core equation is:

$$\mathbf{q=Aq+f}$$

where:

- q is the vector of gross output for each of the 45 OECD sectors
- A is the matrix of the input-output coefficients (each aij representing the input from sector i required per unit output of sector j)
- f is the vector of final demands by sector

This equation states that gross output in each sector equals the sum of intermediate inputs demanded by all sectors plus final demand. In matrix terms, it can be rearranged as $q=(I–A)^{-1}f$, so that any change in final demand propagates through the Leontief inverse $(I–A)^{-1}$ to yield the necessary gross output in each sector.

The model solves the input-output system iteratively (using a Gauss–Seidel algorithm) to accommodate time-varying or scenario-specific coefficients. This allows us to update the input-output matrix A under the AI-adoption scenario—for instance, to reflect industries using more of certain inputs (cloud services, electricity) or less of others (labor, routine materials) per unit of output. By recomputing the equilibrium q with an updated A or f, we capture how intermediate demand adjustments and technology-driven efficiency changes alter the sectoral output levels. The supply block thereby ensures that intermediate demand requirements are met consistently across the economy for any given final demand shock or productivity improvement.

Factor income block

The factor income block (sometimes called the value-added block) computes the generation and distribution of income across sectors once gross output is determined. For each industry, value added (e.g., comprising labor income (employee compensation and proprietors' income), capital earnings (operating surplus or profits), and indirect taxes/subsidies) is estimated based on the sector's output and productivity. Industry-specific econometric equations or parameters determine, for example, employee compensation as a function of employment and wage rates, which in turn depend on labor market conditions. In our model, higher output in a sector increases its demand for labor (unless offset by productivity gains) and raises wage bills, profits, and tax revenues accordingly. The factor income block thus ensures that GDP from the income side (sum of wages, profits, taxes across all sectors) equals the value added implied by the output (supply) block's results. It also links to household income (wage income feeds into household disposable income and profits feed into enterprise income or government revenue) creating a bridge back to final demand (consumption, etc.). This captures one propagation channel of value-added: When output rises in a scenario, incomes rise, which can induce higher consumption demand in a feedback loop.

Importantly, the model allows productivity-driven decoupling of output and employment. If AI raises labor productivity in a sector, the same output can be produced with fewer workers (lower employment per unit output). The factor income equations account for this by projecting employment or labor cost based on the new, lower labor requirement. As a result, value added may shift towards capital income (if wages don't fully adjust) or allow resources to be reallocated to other sectors. We discuss these productivity effects in detail in the scenario section below.

Price block

The price block ensures that sectoral price indices adjust consistently with input costs and productivity changes. It implements the cost-price equation:

$$\mathbf{p}=\mathbf{pA}+\mathbf{v}$$

where **p** is the vector of output prices by sector and **v** is the vector of **unit value added** (value added per real output unit) in each sector. In other words, the price of each sector's output is a weighted sum of the prices of its intermediate inputs (given by pA) plus the primary inputs (i.e., labor and capital) per unit of output. This equation ensures the consistency of accounting between costs and prices. For example, if productivity improvements or cheaper prices reduce unit costs in a sector, then (absent any markups) its output price p will fall proportionally. Conversely, rising input prices (e.g., higher energy costs) push up output prices through this linkage. All prices in the model are calibrated to 1.0 in the base year (note for our model we used 2023 as the base year) and the subsequent price changes are expressed as indices relative to the base.

By connecting to the factor income block (via v), the price block also captures how wage dynamics or efficiency gains affect prices. For instance, a reduction in unit labor requirements due to AI lowers the unit value added (if wages are unchanged), leading to a decline in output prices which improves competitiveness and can stimulate additional demand. The price block thus plays a key role in translating the productivity shocks from the adoption of AI into real output effects through inflation and competitiveness channels.

Accounting block

This block links the detailed results for the 45 sectors back to the aggregate national accounts to ensure consistency with the official GDP, income, and trade figures. This block will adjust for any discrepancies between the input-output data and national account definitions.

If the raw input-output tables differ from the national accounts in how certain government services or imputed rents are measured, for example, the accounting block applies add-factors or scaling to reconcile these differences. It also tracks macroeconomic factors like government budget balance and the external balance, ensuring that constraints such as trade balance and fiscal deficit are respected in a way consistent with the scenario assumptions.

In summary, the accounting block serves as a check that all industry flows are balanced. Industry outputs aggregate to total GDP, income generated equals income spent, and the model's detailed results can be presented in a comparable SNA format.

Key assumptions

We implement the economic impacts of AI adoption as a set of exogenous shocks and parameter changes applied to the baseline model described above. In this study, the focus is on public sector AI adoption, meaning the primary productivity shocks are applied to government and related sectors, though spillovers affect the whole economy. The scenario is defined over a 10-year horizon from 2025 through 2035 and considers public sector-specific AI adoption curves when determining the timing of productivity and demand shocks.

Exhibit 2.1 represents a summary of the inputs leveraged within this analysis. Our approach is anchored in data drawn from globally recognized sources including the Organization for Economic Cooperation and Development (OECD), IMF, World Bank, International Labour Organization (ILO) and national statistical sources.

Exhibit A1.1: Country-level inputs leveraged in modeling

Input	How it was modeled
AI adoption curves by sector	Each country's AI adoption curve was modeled from 2023 to 2035 using sector-level adoption curves. These forward-looking curves were calibrated to reflect the different pace of AI adoption across sectors. As noted in the archetype section of this report, we benchmarked 25 countries' readiness (including the five countries selected for an economic impact analysis) across 24 quantitative metrics. Sources for this benchmarking analysis include the IMF, ITU, World Bank and the UN. Scenario curves were adjusted to reflect the country's institutional readiness, infrastructure readiness and political willingness to invest in cloud and AI technology as determined by said archetype analysis. Our approach includes the speed at which adoption can realistically occur within each country's public sector, drawing on published AI adoption curves including those described in Tony Blair Institute's "Potential Impact of AI on the Public-Sector Workforce." This report outlines an adoption scenario for the United Kingdom public sector, in which their public sector completes widespread AI adoption by 2035.[55] In our analysis, we created more moderate and conservative scenarios for each of the five countries based on their cloud and AI readiness as discussed above. We believe AI adoption curves within emerging markets will rise more gradually, with adoption further behind by 2035 when compared to the UK, US and other advanced countries. These moderate forward-looking adoption curves were adjusted to create different scenarios based on the market conditions and incorporated sectoral weighting to determine which sectors would adopt AI more quickly in a specific country compared to others. During this analysis, we analyzed how each of the five countries would prioritize deploying a list of ~180 possible AI use cases by the public sector. This use case prioritization was also leveraged to inform which sectors would have more accelerated adoption curves over others for each of the five countries. This calibrated approach enables the model to simulate how varying political, institutional, and infrastructural contexts influence both the timing and magnitude of AI-driven productivity gains in the public sector across different countries and sectors.
Public vs. private sector ratios	Publicly available third-party labor data from the International Labor Organization (ILO) was leveraged to estimate the relative size of the public sector when compared to the private sector.[56] Within this ILO database, we leveraged historical detail on the number of public employees for each economic activity as defined by the International Standard Industrial Classification (ISIC) Rev 4.[57] It's important to note that the ILO data leveraged for this assumption refers to all employment of the general government sector as defined in 2008 System of National Accounts (SNA) plus employment of public corporations. General government includes central, state and local levels of the government (i.e., all government units, social security funds and nonmarket nonprofit institutions that are controlled by a public authority). Public corporations include those producing goods or services for the market and are controlled and mainly owned by the government.

55 Tony Blair Institute for Global Change (2024, July) The potential impact of AI on the public-sector workforce. Tony Blair Institute for Global Change. https://assets.ctfassets.net/75ila1cntaeh/5lQnxbf9GVYWmqdPuDgfla/72253fa2e00ee15b0887d2690891e42d/Tony_Blair_Institute_for_Global_Change__The_Potential_Impact_of_AI_on_the_Public-Sector_Workforce__July_2024.pdf

56 International Labour Organization (n.d.) Worker and Sector Profiles (PROFILES database): Concepts and definitions. ILOSTAT. https://ilostat.ilo.org/methods/concepts-and-definitions/description-worker-and-sector-profiles

57 United Nations Statistics Division. (2008). International standard industrial classification of all economic activities (ISIC), Revision 4 (Statistical Papers, Series M, No. 4, Rev. 4). https://unstats.un.org/unsd/publication/seriesm/seriesm_4rev4e.pdf

Input	How it was modeled
YoY productivity gains	The adoption of AI enables a higher output per worker in many activities, particularly in administrative and service functions where automation and decision support can save labor hours. For example, if public administration were to achieve a 10% productivity gain from AI in 2035 when compared to the baseline, then that real output for that sector would require 10% fewer labor hours all else equal. In our analysis, annual productivity increases were estimated using role-specific time savings data from AI exposure studies mapped to sector-level tasks. The estimates included in our analysis were based off of the following sources: • The Tony Blair report discussed above estimated that around 40% of tasks performed in the UK public sector could be done by AI. The analysis estimated that around 20% of public sector workers' time could be saved using AI tools. Furthermore, this analysis included a breakdown of the estimated time savings by public-sector occupations as time savings is expected to vary widely by profession.[58] • An Alan Turing Institute report estimated around 41% of time spent on activities that could be supported through the use of generative AI within the UK public sector. This analysis also highlighted there is a range between public sectors, with education most impacted (49%) and healthcare the least impacted (33%).[59] • Goldman Sachs estimates in the US and other developed markets will see a 15% increase in labor productivity when AI is fully adopted and incorporated into regulator production.[60] We then mapped these sectoral task-based exposure values into annual productivity gains by aligning them with our country-specific AI adoption curves. In practice, this meant spreading the total potential productivity improvement (e.g., a 15% time-saving potential in a given sector) across the 2023–2035 horizon in proportion to the sector's adoption path. The result is a set of annual productivity gains ranging from 1.5% to 4% in 2035. We triangulated these results with other estimated productivity gains below: • Daron Acemoglu found that generative AI would add 0.1% of annual labor productivity growth under a task-based modeling approach.[61] • A recent OECD study estimated 0.4-0.9% of annual growth in labor productivity over a 10-year time horizon for the US.[62] • The Federal Reserve Bank of Richmond performed an analysis on the annual labor productivity gains for the next 10 years and found the range between 0.1% to 2.0%.[63] • Economists at Goldman Sachs project widespread adoption of GenAI could boost US labor productivity rates on the order of 1.5% over a 10-year period following widespread adoption.[64] • Under a high adoption scenario, an IMF Working Paper found that productivity would rise globally by 2.4% over 10 years.[65]

58 Atkinson, I., & Browne, J. (2024, July). The potential impact of AI on the public-sector workforce: A companion to The Economic Case for Reimagining the State (Report). Tony Blair Institute for Global Change. https://assets.ctfassets.net/75ila1cntaeh/5lQnxbf9GVYWmqdPuDgfla/72253fa2e00ee15b0887d2690891e42d/Tony_Blair_Institute_for_Global_Change__The_Potential_Impact_of_AI_on_the_Public-Sector_Workforce__July_2024.pdf

59 Hashem, Y., Bright, J., Chakraborty, S., Onslow, K., Poletaev, A., Francis, J., & Esnaashari, S. (2025). Mapping the potential: Generative AI and public sector work—Using time use data to identify opportunities for AI adoption in Great Britain's public sector (ONS TUS final report). The Alan Turing Institute. https://www.turing.ac.uk/sites/default/files/2025-05/ons_tus_final_report.pdf

60 Goldman Sachs.(2025, August 13) How will AI affect the global workforce?. Available at: https://www.goldmansachs.com/insights/articles/how-will-ai-affect-the-global-workforce

61 Acemoglu, D. (2024, April 5) The simple macroeconomics of AI. Massachusetts Institute of Technology. https://economics.mit.edu/sites/default/files/2024-04/The%20Simple%20Macroeconomics%20of%20AI.pdf

62 OECD. (2025). Policy memo: AI for public finance. OECD Publishing. https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/fiscal-federalism-network/policy-memo-ai-for-public-finance.pdf

63 Hornstein, A. (2024, June) Aggregate Effects of the Adoption of AI. Richmond Fed Economic Brief, No. 24-19. Federal Reserve Bank of Richmond. https://www.richmondfed.org/publications/research/economic_brief/2024/eb_24-19

64 Goldman Sachs (2023, March 27) The Potentially Large Effects of Artificial Intelligence on Economic Growth. https://www.gspublishing.com/content/research/en/reports/2023/03/27/d64e052b-0f6e-45d7-967b-d7be35fabd16.html

65 Cerutti, E., Garcia Pascual, A., Kido, Y., Li, L., Melina, G., Tavares, M. M. and Wingender, P. (2025, May 31) The global impact of AI: Mind the gap. VoxEU / CEPR.: https://cepr.org/voxeu/columns/global-impact-ai-mind-gap

Input	How it was modeled
AI-driven infrastructure demand	A notable portion of the economic impact of AI adoption in the public sector comes from increased demand for ICT-sector output, specifically the production of hardware, software and the related services needed to develop and deploy AI. We model this by raising the demand for the ICT sector for each of the five countries. To model the increase in digital infrastructure required to support public sector AI, forecasted growth rates were applied to baseline ICT spending using global third-party sources and publicly available market research reports. The growth rates used include rising demand for computer, data storage, connectivity and cloud architecture to enable AI deployment in the public sector. The AI adoption scenario shows a shift toward increased demand for the ICT sector, as reflected in their higher contribution to GDP and employment by 2035 relative to the baseline.
Electricity demand	AI technologies are very energy intensive and will require an increase in energy supply as the public sector adopts AI for each of the five countries. This includes the energy needed to support large-scale cloud computing, data centers and widespread use of AI devices. Projected energy demand from the use of AI was determined using industry benchmarks including the International Energy Agency (IEA). Sector-specific proxies were leveraged to estimate the rising demand of electricity from compute, data storage, connectivity and cloud architecture to enable AI deployment in the public sector. In our scenario, we assume that necessary investments in the electricity sector are made so that supply increases in pace with demand. The net impact is that energy-sector output and employment will increase relative to the baseline.
Investment fund mix (e.g., internal revenue vs. FDI)	Through publicly available information, multi-year publicly available government investment flows were compiled, including from domestic private firms and foreign investment (e.g., cloud hyperscalers). These were amortized based on the period provided in news releases. This input was used to quantify fiscal exposure and the role of financing sources when emerging markets scale AI and cloud capabilities.

With these inputs in place, the macroeconomic effect of AI public sector adoption in a country was modeled using an IO model for that country. In the analysis, AI reduces the input requirements needed for each sector while increasing the value-added per unit of output. Labor and intermediate cost improvements translate into lower prices, which in turn influence consumer demand, trade patterns and job creation.

Unlike many traditional economic models, the framework does not assume full employment. This allows the model to account for both the short-term labor displacement risks associated with automation and the offsetting demand growth that AI can stimulate through increased service quality, public investment and the emergence of new AI-aligned roles. Over time, the dynamic model enables governments to shift labor toward higher-value, citizen-facing or judgment-intensive functions.

The output of that analysis includes directional estimates of economic benefits under a 10-year AI adoption scenario. The AI use cases discussed here represent examples of the ways in which AI adoption could increase labor productivity and serve to motivate the economic shocks that are modeled in this exercise.

Limitations of economic impact analysis

While the interindustry macro model provides a structured framework for assessing the economic benefits of AI adoption and the use cases below, several limitations necessitate caution when interpreting results of the analysis. Crucially, the model's scope is confined to public sector adoption, meaning its findings are not additive to economy-wide estimates and abstract from complex public-private sector interactions. Furthermore, measuring government output poses conceptual challenges, as public services are valued at input cost, requiring subjective judgments on productivity gains. The underlying productivity shocks themselves are also based on uncertain assumptions, extrapolated from empirical studies using simplified adoption curves and varying inclusion of multifactor productivity improvements.

Additional caveats stem from the model's assumptions, data quality and unmodeled external factors. The labor market assumptions, which allow for output growth as displaced labor is reabsorbed, may understate the social costs and transitional friction, particularly in economies with rigid labor markets. Data quality, especially for emerging markets, varies significantly, impacting the precision of projections due to less timely or reliable underlying statistics. The analysis also assumes timely investment in energy and grid infrastructure to meet increased electricity demand at stable prices and entirely abstracts from political economy factors like corruption or institutional weaknesses. Consequently, the quantitative results should be considered directional estimates of potential magnitude rather than precise forecasts, heavily contingent on policy choices, institutional readiness and broader economic conditions.

Modeling the economic benefit of AI adoption—Approach 2 Methodology & Results

Exhibit A1.2: Economic impact from public sector AI adoption using Approach 2[66]

Region	Country	Estimated productivity gains 10 years after widespread adoption per Goldman Sachs	Estimated cumulative GDP growth 10 years after widespread adoption	Government expenditures as % of GDP in 2023, per IMF	Estimated public sector GDP uplift 10 years after widespread adoption
LATAM	Argentina	1.60%	7.80%	37.80%	3.00%
	Brazil	1.50%	7.30%	45.50%	3.30%
	Chile	1.50%	7.50%	27.40%	2.10%
	Colombia	1.20%	6.20%	35.00%	2.20%
	Ecuador	1.20%	5.90%	40.20%	2.40%
	El Salvador	1.20%	5.90%	30.80%	1.80%
	Mexico	1.30%	6.50%	28.70%	1.90%
	Paraguay	1.20%	5.90%	21.60%	1.30%
MENA-T	Kuwait	1.20%	5.90%	48.70%	2.90%
	Qatar	1.20%	5.90%	27.30%	1.60%
	Saudi Arabia	1.20%	5.90%	32.30%	1.90%
	Türkiye	1.20%	6.20%	33.20%	2.10%
	UAE	1.20%	5.90%	23.30%	1.40%
SSA	Nigeria	0.90%	4.60%	13.60%	0.60%
	South Africa	1.30%	6.70%	32.60%	2.20%
APAC	India	0.80%	3.80%	29.10%	1.10%
	Indonesia	1.10%	5.40%	16.70%	0.90%
	Malaysia	1.40%	7.00%	24.20%	1.70%
	Pakistan	1.20%	5.90%	19.20%	1.10%
	Philippines	1.20%	5.90%	24.70%	1.50%
	Thailand	1.00%	5.10%	22.90%	1.20%

66 It is important to note that the Goldman Sachs methodology applies a relative timeline of "ten years from widespread adoption," rather than a fixed target year such as 2035, which is used in Approach 1. The purpose of presenting both methodologies is not to generate directly comparable results, but rather to provide an indicative sense of the order of magnitude of benefits that AI adoption in the public sector could yield.

Appendix 2: Four archetype methodology

Our methodology

We aggregated four AI Sprinters pillars into two critical components.

1. **Government AI readiness:** Represents a country's institutional capacity to adopt, govern and scale trusted AI within the public sector. This includes the presence of national AI strategies, legal and regulatory frameworks including cloud and AI-first policies, central coordinating bodies, cybersecurity safeguards, governmental fiscal resources and the government's openness to innovation.
2. **Digital and talent foundation**: Represents a country's digital, economic and talent ecosystem that supports AI adoption. This includes the availability and quality of internet and mobile connectivity, cloud accessibility and the depth of science, technology, engineering and mathematics (STEM) talent. It also considers the country's overall technology readiness, innovation ecosystem and the presence of digital public infrastructure—or ability to access public cloud—that can serve as a platform for AI-enabled services.

These two components draw directly from Google's AI Sprinters pillars. Government AI readiness primarily reflects a country's progress on **policy** (national AI strategies, regulatory frameworks) and **technological innovation** (governance capacity, data, adoption of AI-forward approaches). Digital and talent foundation reflects the strength of **infrastructure** (connectivity, cloud access, data centers) and **people** (STEM talent, digital literacy and workforce readiness). While the mapping is not one-to-one—for example, cloud-first policies sit within readiness though they're also part of the infrastructure pillar—together these axes provide a practical way to operationalize the four pillars in assessing a country's AI maturity.

We treat these two axes as equally weighted, as both are critical to unlocking the benefits of AI in the public sector for emerging markets. A country may boast excellent infrastructure with robust talent, a thriving AI-native business ecosystem buttressed by strong compute and internet capacity (or access to public cloud) but, without effective policies, stable institutions and a propulsive national AI strategy, even that excellent infrastructure may not be effective. Conversely, a strong national AI strategy—underpinned by united regulatory bodies and digital government programs—may have limited benefits without the supporting infrastructure and talent to execute against those digital ambitions.

Using this two-axis framework, public sector officials can score and categorize their country based on more than 20 metrics from globally recognized sources, including the World Bank, UN and OECD, among others. Each country receives a composite score in both dimensions, which is used to assign it to one of the four AI maturity archetypes discussed below.

Steps to build your own readiness score

After consideration of the archetypes, the key question becomes, how can public sector officials best leverage this information for their own benefit? Here are some practical steps country leaders and public officials can take to begin to assess their own country's maturity.

1. **Collect country-level data**: Leverage the rubric in Exhibit A2.1 in the Appendix to gather the requisite data. A list of publicly available sources for each metric that is leveraged in the analysis is included.
2. **Score each metric on a five-point scale**: For each metric, assign a scale from 1 (very limited capability) to 5 (global best practice) using Exhibit A2.1.
3. **Weight and aggregate scores**: Each dimension found in step 1 is weighted based on its contribution to AI readiness (also found in Exhibit A2.1). Multiply each score by its weight, then sum the score to produce both a government AI readiness score (out of 5) and an infrastructure and market enablement score (out of 5). These two scores should be used to place the country into one of the four archetypes on the map seen in Exhibit A2.2 below.
4. **Assign your archetype**: Based on the two scores, place your country into one of the archetypes using Exhibit A2.2 in the appendix. As a reminder, the archetype designation is a diagnostic tool to inform use case prioritization, guide investment decisions and facilitate next steps for a country's AI strategy.

Exhibit A2.1: Detailed archetype scoring rubric

Axis	Dimension	Weighting (dimension)	Metric	Weighting of metric	Question answered	Scoring guide	Sources
Government AI readiness	AI policy and governance	25%	National AI strategy	60%	Does a comprehensive national AI strategy exist? When was it launched? When was it last updated?	Yes = 5 Partial = 3 (strategy exists, but limited scope / adopted before 2018.) No = 1	Country govt. websites
			Central AI authority	40%	Is there a government-designed entity or taskforce responsible for AI policy and coordination and implementation?	Centralized = 5 Decentralized = 3 Not Present = 1	Country govt. websites
	Legal and regulatory fit	35%	Rule of law	25%	Is there consistent, predictable enforcement of laws and regulations?	1.5 to 2.5 = 5 0.5 to 1.5 = 4 - 0.5 to 0.5 = 3 - 1.5 to -0.5 = 2 - 2.5 to -1.5 = 1	World Bank WGI
			Political stability and absence of violence / terrorism	20%	How stable is the country's political landscape? How safe is the country from disruptive and violent events / terrorism?	1.5 to 2.5 = 5 0.5 to 1.5 = 4 - 0.5 to 0.5 = 3 - 1.5 to -0.5 = 2 - 2.5 to -1.5 = 1	World Bank WGI
			Cybersecurity readiness	15%	What is the country's level cybersecurity maturity?	Tier 1 = 5 Tier 2 = 4 Tier 3 = 3 Tier 4 = 2 Tier 5 = 1	ITU Global Cybersecurity Index 2024
			Cross-border data flow vs. localization	10%	How strict are the country's laws around data localization, cross-border data-flows and data classification?	Unrestricted = 5 Conditional = 4 Conditional with gatekeeper = 3 Default Localization = 2 Total Cross-Border Ban = 1	DLA Piper Data Protection Database
			Cloud-first policy	10%	Does the country have a cloud-first policy? Has the country shown interest in cloud adoption?	Dedicated cloud-first policy = 5 Cloud promoted but no policy = 3 No policy / no discussion = 1	Country govt. websites
			Government openness to foreign vendors	20%	How much does the country allow foreign players sell services to government?	Open = 5 Restricted / Conditional = 3 Closed = 1	Country govt. websites

Axis	Dimension	Weighting (dimension)	Metric	Weighting of metric	Question answered	Scoring guide	Sources
Government AI readiness	Digital government capability	20%	GovTech maturity	40%	Has the government demonstrated the ability to digitize services based on global indices?	0.8 to 1.0 = 5 0.6 to 0.8 = 4 0.4 to 0.6 = 3 0.2 to 0.4 = 2 0.0 to 0.2 = 1	World Bank GTMI Dashboard, IMF
			E-government development index	40%	Has the government deployed functional digital public services accessible to most citizens?	0.8 to 1.0 = 5 0.6 to 0.8 = 4 0.4 to 0.6 = 3 0.2 to 0.4 = 2 0.0 to 0.2 = 1	UN EGDI 2024
			Government e-Procurement Capabilities	20%	How capable is country's digital infra to support online e-procurement process making it transparent?	Full Digital Procurement = 5 Partial Digital Procurement = 3 No Meaningful Digital Procurement = 1	Country govt. websites
	Government fiscal strength	20%	Internal revenue per capita	50%	Is the country fiscally strong and generates sufficient revenue to be able to fund AI programs at scale?	>$15000 = 5 $6000–$14999 = 4 $2500–$5999 = 3 $1000–$2499 = 2 <$1000 = 1	IMF
			GDP per capita	20%	How is the country's overall output level? Is there sufficient economic activity to justify substantial AI investments?	>$45000 = 5 $15000–$44999 = 4 $6000–$14999 = 3 $3000–$5999 = 2 <$3000 = 1	IMF
			Government IT spending per capita	30%	To what extent does the government invest in IT improvement?	>$75 = 5 $23–$75 = 4 $14–$23 = 3 $5–$14 = 2 <$5 = 1	Country govt. websites, IMF
Digital and talent foundation	Internet maturity	30%	Internet penetration	50%	Does the majority of the population have access to the internet, enabling digital engagement at scale?	>90% = 5 75–89% = 4 60–74% = 3 40–59% = 2 <40% = 1	World Bank, ITU
			Broadband coverage (5G)	25%	Is mobile broadband (5G) coverage available to most of the population, including rural areas?	≥ 95% = 5 80–94% =4 60–79% = 3 40–59% = 2 < 40% = 1	GSMA Intelligence 5G Index
			Broadband coverage (wireless)	25%	Is wired broadband coverage available to most of the population, including rural areas?	≥ 35% = 5 25–34% = 4 15–24% = 3 5–14% = 2 < 5% = 1	World Bank Development Indicators

Axis	Dimension	Weighting (dimension)	Metric	Weighting of metric	Question answered	Scoring guide	Sources
Digital and talent foundation	Data and compute infra-structure	40%	Technology network readiness	50%	Is the country broadly equipped (technologically, socially, institutionally) to adopt and benefit from AI?	>=67.90 = 5 53.56–67.89 = 4 39.22–53.55 = 3 24.88–39.21 = 2 0–24.87 = 1	Portulan's Network Readiness Index
			Data center presence	30%	Do data centers exist in the country? How much is the reliance on cross-border data flows?	>= 76 = 5 51–75 = 4 22–50 = 3 6–21 = 2 0–6 = 1	Data center map
			Open data score	20%	Does the country have enough data availability to fuel training, evaluation and fine tuning of public AI?	>72 = 5 64-72 = 4 54-63 = 3 48-53 = 2 <48 =1	ODIN
	Talent and innovation base	30%	Talent pool indicator	25%	Does the country have sufficient tech workforce to address future AI and digital workforce needs?	>4.4 = 5 3.4–4.4 = 4 2.4–3.4 = 3 1.4–2.4 = 2 0–1.4 = 1	UNESCO UIS, World Bank, ILOSTAT
			AI-related research output	25%	Is the country producing recognized AI research output that could support academic partnerships or coalitions?	>15000 = 5 7000–14999 = 4 3000–6999 = 3 1000–2999 = 2 <1000 = 1	Scopus
			Startup ecosystem index	35%	Is there a growing or active ecosystem of startups focused on AI innovation?	>16 = 5 6–16 = 4 3–6 = 3 1–3 = 2 <1 = 1	Startup Blink
			AI upskilling	20%	Is the country focused on upskilling its workforce in AI? Is the focus limited to general public or government employees also?	Focus on gov't employees clearly mentioned = 5 Focus on general public but not govt employees = 3 No strategy, or no focus on upskilling in strategy = 1	National AI Strategy Documents for each country

Exhibit A2.2: Archetype scoring benchmarks

Archetype	Government AI readiness score	Digital and talent foundation score
Leader	Greater than ~3.4	Greater than ~3.0
Infra ready	Less than ~3.4	Greater than ~3.0
Governance ready	Greater than ~3.4	Less than ~3.0
Explorer	Less than ~3.4	Less than ~3.0

Exhibit A2.3: Putting the archetype framework into practice: Day in the life

Meet Amira, a Director of Digital Transformation in a national ministry. Amira is assessing her country's AI readiness to guide decisions on where and how to deploy AI in government. Instead of starting from scratch, she uses the archetype and self-assessment frameworks from this report to evaluate readiness across two axes: **Government AI Readiness** and **Digital and Talent Foundation**.

Step 1: Collect data
Amira gathers publicly available data from a list of 20+ metrics and recommended sources. For AI Readiness, she checks for a national AI strategy, a central AI authority, and a cloud-first policy, alongside scores for rule of law, political stability, cybersecurity readiness and digital government maturity (e.g., World Bank, OECD, UN). For Infrastructure and Market Enablement, she reviews internet penetration, broadband coverage, 5G rollout (ITU), Tier 3+ data center presence, open data policies, STEM education levels, AI research output and startup ecosystem strength.

Step 2: Score metrics
Using the framework's 5-point rubric, Amira assigns scores based on thresholds. She logs raw values, scores and sources to ensure transparency.

Step 3: Aggregate scores
Applying the framework's weightings, she calculates separate scores: **2.5 for Infrastructure and Market Enablement** and **3.6 for Government AI Readiness**.

Step 4: Identify archetype
Plotting these scores on the 2x2 archetype grid, Amira determines her country is **Governance Ready**.

With this evidence-based profile, she pinpoints feasible AI use cases to deploy now and identifies priority investments—in this case, strengthening infrastructure and talent—to scale AI adoption in the future. The archetype framework transforms a broad policy question into a clear, data-driven roadmap for action.

Exhibit A2.4: Select Google-driven public sector AI use cases

Use Case	Description	Citation
Global—AI cough-based disease detection	Google's AI researchers built models that analyze cough audio recordings on smartphones to detect illnesses like tuberculosis. This low-cost, scalable diagnostic method offers promise for resource-constrained health systems by enabling early detection and intervention for highly prevalent respiratory diseases.	Google AI, 2024. AI model uses cough sounds to detect disease. Available at: https://blog.google/technology/health/ai-model-cough-disease-detection [Accessed 17 Sept 2025].
Indonesia—MedLM healthcare pilots	Indonesia is piloting Google Cloud's MedLM, a large language model fine-tuned for clinical data. Used in hospitals, it assists with summarization of records and triaging information. The tool aims to address clinician shortages and improve efficiency in overstretched health systems.	Google Cloud, 2023. Introducing MedLM for the healthcare industry. Available at: https://cloud.google.com/blog/topics/healthcare-life-sciences/introducing-medlm-for-the-healthcare-industry [Accessed 17 Sept 2025].
Global—AI for sustainable agriculture	At COP28, Google Earth Engine highlighted AI applications for sustainable agriculture, including monitoring crop conditions and climate stressors. By providing near-real-time geospatial insights, these tools help governments and farmers adapt practices, conserve water, and improve yields in climate-vulnerable regions.	Google Cloud, 2023. AI and Earth Engine for sustainable agriculture. Available at: https://cloud.google.com/blog/topics/sustainability/cop28-google-earth-engine-and-sustainable-agriculture [Accessed 17 Sept 2025].
Global—Plant disease detection via AI	Google AI developed smartphone-based models that let farmers photograph crops to detect diseases early. By democratizing agronomic expertise, this tool reduces crop losses, boosts yields and helps smallholder farmers in developing economies secure more stable livelihoods.	Google AI, 2019. AI helps farmers identify diseased plants. Available at: https://blog.google/technology/ai/ai-takes-root-helping-farmers-identity-diseased-plants/ [Accessed 17 Sept 2025].
Global—Google DocAI for governments	Google's Document AI (DocAI) automates extraction of structured information from unstructured files like forms and permits. Public agencies use it to speed up approvals, reduce manual error and deliver citizen services more efficiently.	Google Cloud, 2021. Get more value from your documents with DocAI. Available at: https://cloud.google.com/blog/products/ai-machine-learning/get-more-value-from-your-documents-with-docai-and-industry-solutions [Accessed 17 Sept 2025].

Use Case	Description	Citation
Global—Circular economy marketplace	Google built a digital marketplace using AI to connect companies with recycled materials. By improving supply chain transparency and reuse, this platform promotes circular economy practices and reduces waste, supporting municipal and private sustainability goals.	Google Sustainability, 2022. Circular Economy Marketplace. Available at: https://sustainability.google/stories/circular-economy-marketplace/ [Accessed 17 Sept 2025].
Global South—Flood forecasting expansion	Google's Flood Hub now provides AI-driven flood forecasts to over 80 countries, including across Asia, Africa, and Latin America. By integrating satellite and weather data, it gives communities days of warning to reduce casualties and economic damage.	Google Research, 2023. Expanding coverage of our AI flood forecasting system. Available at: https://blog.google/technology/ai/expanding-flood-forecasting-coverage-helping-partners/ [Accessed 17 Sept 2025].
Africa—Open Buildings dataset	Google's AI-based Open Buildings dataset maps previously unmapped structures across Sub-Saharan Africa. Health ministries and NGOs use it to plan services, extend electricity, and deliver vaccines to remote communities, filling data gaps in planning.	Google, 2021. How Open Buildings is enabling healthcare delivery in Africa. Available at: https://blog.google/intl/en-africa/company-news/technology/how-open-buildings-is-enabling-healthcare-delivery-in-africa/ [Accessed 17 Sept 2025].
Sub-Saharan Africa—Google.org AI Accelerator	The Google.org Generative AI Accelerator supports nonprofits tackling challenges in SSA, such as health outreach and education. Projects include tools to expand maternal health messaging and education content, leveraging GenAI for scale and inclusivity	Google.org, 2024. Generative AI Accelerator welcomes 5 new orgs in SSA. Available at: https://blog.google/intl/en-africa/company-news/outreach-and-initiatives/the-googleorg-accelerator-generative-ai-welcomes-5-new-organizations-having-impact-in-ssa/ [Accessed 17 Sept 2025].

Appendix 3: AI use case development, organization, feasibility analysis and prioritization

Building a comprehensive AI use case library

The first step in this process is to understand "the art of the possible" when it comes to AI use cases in the public sector. Researching, generating and refining a wide array of use cases in a structured way is foundational to determining what your government or team should prioritize first.

Governments can generate their own use case libraries by:

- **Mapping primary processes**: Understanding the baseline processes and procedures of particular public sector departments, organizations or teams—and determining where the most time is spent across those processes—allows for pinpointing of the areas where AI can drive the greatest impact.
- **Identifying critical pain points by sector to design impactful use cases**: Identifying chronic public sector challenges (e.g., hospital wait times, fraud leakage, teacher shortages) allows government officials to align AI technologies with high-impact areas.
- **Performing secondary research scans for success stories**: Reviewing global reports, peer-reviewed studies and vendor case notes will surface proven and scalable public sector AI deployments.
- **Researching aspirational use cases**: Officials can perform additional secondary research on pilots happening across the globe to better understand where the bleeding edge of AI is heading, and if it could be applied to their country's situation.

We recommend organizing use cases by the following parameters:

1. **Sectoral/functional domain** (e.g., education, healthcare, tax and revenue, environment and utilities) helps governments evaluate relevance to their national agenda and pain points and align use cases to department-level transformational goals. Additionally, tagging all core functions (Finance, HR, IT) will help ensure use case libraries are comprehensive in their end-to-end reimagining of governmental processes.

2. **Primary AI capability** leveraged in the use case enables governments to track and categorize the technical complexity involved. AI capabilities include:
    i. Natural language processing (NLP)
    ii. Computer vision
    iii. Speech and audio processing
    iv. Machine learning (ML)
    v. Simulation and digital twins
    vi. Agentic AI and autonomous agents
    vii. Robotics
    viii. Edge and embedded AI (IoT ML)

3. **Primary AI functionality** leveraged in the use case provides additional context in regards to the sophistication of the technology involved. This functionality should be considered in conjunction with the use case's primary AI capability. Some AI functionalities include:
    i. Recognition
    ii. Conversation
    iii. Prediction / forecast
    iv. Goal-driven / planning
    v. Anomaly detection
    vi. Hypothesis generation
    vii. Automation / robotics
    viii. Simulation
    ix. Agentic AI

4. **Clear outcome metrics or performance objectives** ensure that, for the use cases that are implemented, governments can track results, measure progress and demonstrate public value-supporting prioritization, accountability and scale across diverse operating environments. Example impact metrics / objectives include:
    i. % reduction in service delivery time (e.g., permit processing)
    ii. Increase in citizen satisfaction or engagement scores
    iii. $ savings from fraud detection or automation

This structured system of tagging will help governments quickly evaluate technical feasibility and governance needs in line with their archetype scoring. A well-organized and categorized use case library that is updated regularly enables governments to:

- **Take stock in proven AI applications.** By collecting examples of what has already been deployed, governments can build confidence in the underlying technology and identify promising use cases that have already demonstrated real-world value.
- **Match challenges and developmental goals.** Each unique country has its own unique set of priorities, challenges and service delivery expectations. We recommend that leaders and executives curate their use case library based on immediate technical feasibility and expected ability of the solution to address material pain points.
- **Evaluate feasibility.** We recommend governments include descriptive parameters (e.g., AI technology leveraged, sector alignment) to their list of use cases. The next sub-section discusses how governments can leverage these parameters to compare a use case against their own baseline readiness.
- **Sequence implementation.** Some use cases will yield a higher value but require significant coordination and investment. Others (e.g., chatbot deployment, document processing) are quickly implementable and are quick wins for any government. A well-structured library enables governments to prioritize and sequence use cases on economic impact, social benefit, and technological feasibility.

Governments can look to a variety of resources to build their library of AI use cases, including international case studies from multilateral institutions (e.g., World Bank, OECD), peer countries' national AI strategy reports, private sector partnerships, pilot programs underway in their own ministries and research publications.

Gauging use cases against archetypes

Once governments have developed a use case library, the next step is to determine which use cases are most feasible and impactful for a given country. As outlined in the archetype methodology section, not all countries are prepared to pursue the full spectrum of AI use cases today. Likewise, not all AI use cases require the same level of government AI readiness or infrastructure needs to be successful.

To bridge this gap, governments should leverage their archetype classification as a means to (begin to) gauge the feasibility of the AI use cases they've generated. Each archetype has its own threshold for government AI readiness and infrastructure capability. It's also important to note that archetype alignment is not static, and every Explorer has the opportunity to become a Leader by leveraging the AI Sprinters framework and this report and determining where best to allocate resources in the future.

Based on the parameters laid out above, public officials can run a quick, structured assessment to check the feasibility of the use cases by stacking them against their country's archetype.

An example, simplified rubric has been laid out in the exhibit below as a potential starting point, designed to quickly gauge a use case's level of technological complexity, resource need and policy burden, among other critical factors, to allow for quick comparison against a country's capacity across those same parameters.

It is important to note that each country or organization should leverage the below rubric only as a starting point. Depending on the analysis and research it performs on potential use cases, this rubric could be built on or refined to more precisely determine a particular use case's infrastructure and governmental requirements.

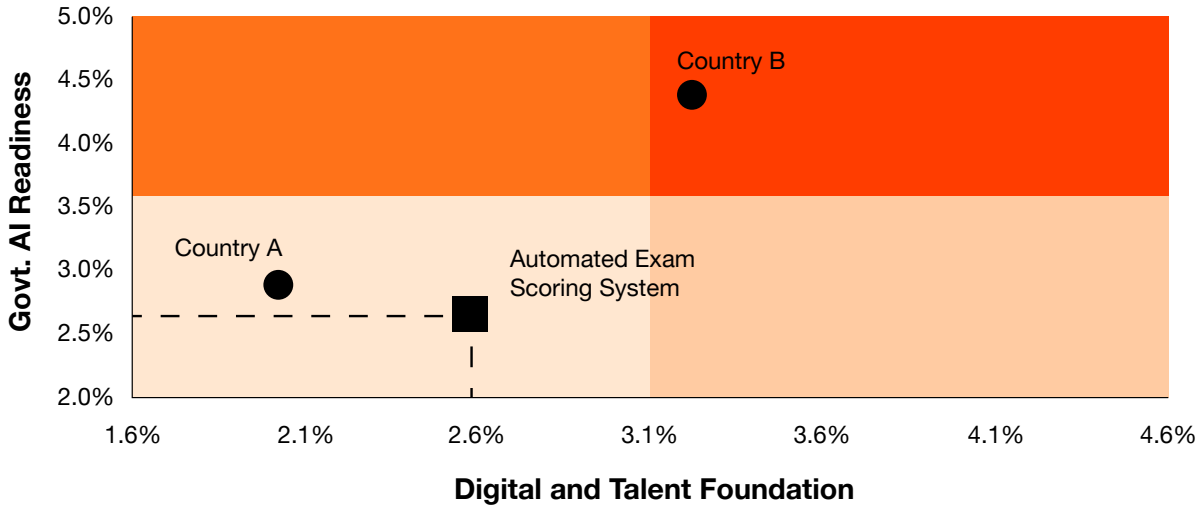
Exhibit A3.1: Example simplified use case scoring rubric

Axis	Category	Sub-metric	Assessment questions	Score
Infrastructure required	Sector	IoT sensor need	Does the sector have a high dependence on sensors or IoT devices?	1 = No dependence 3 = Some dependence 5 = High dependence
		System modernization	Level of integration with existing infra needed?	1 = Standalone 3 = Some connections 5 = Fully integrated
		Data complexity	Does this sector need real time data flow?	1= Not needed 3 = Sometimes 5 = Always
	Capability	Data scale	How large must the data infra be to support the capability?	1 = Small data set 3 = Moderate size 5 = Extensive
		Compute need	Does the capability require advanced compute power for cloud, GPUS, others?	1 = Not required 3 = Moderate 5 = Extensive, high demand
		IoT sensor need	Does capability require deploying/maintaining hardware?	1 = No 3 = Occasional 5 = At all sites, ongoing
	Patterns	Data dependency	How complex must the data infra be to support the capability?	1 = Small data set 3 = Moderate complexity 5 = High end complexity
		Processing complexity	How many distinct processing steps or functions transfers are required in execution?	1 = Single pattern (less steps) 3 = 2 patterns (moderate steps) 5 = More than 2 patterns (Multiple steps)
		Integration overhead	How many different systems, platforms or business processes does the function need to interface with for deployment?	1 = No integration needed; standalone 2 = Integrate with 1 system 3 = Integrates 2-3 systems process 4 = 4-5 systems integrations required 5 = 6+ external systems/ processes; high complexity

Axis	Category	Sub-metric	Assessment questions	Score
Government readiness requirements	Sector	Policy sensitivity	Are new or high complexity rules needed?	1 = No new rules 3 = Some clarification 5 = Major regulatory change
		Coordination load	How many agencies must work together?	1 = Only one 3 = 2-3 agencies 5 = More than 3 agencies
		Citizen sensitivity	Is public engagement essential for this sector?	1 = Not sensitive 3 = Moderate sensitive 5 = High sensitivity
	Capability	Upskilling need	Will new talent, major upskilling, be needed for this capability?	1 = No 3 = Some upskilling is required 5 = Extensive upskilling/hiring
		AI governance/ legal risk	Do we have broad policies, trainings and controls for ethical deployment of this capability?	1 = No policy/awareness 3 = Some policy/training 5 = Fully institutionalized, routine audits
		Multi-agency coordination	Have we successfully coordinated between agencies on the capability?	1 = Never, each agency does its own thing 3 = Occasionally 5 = Routine, seamless inter agency projects
	AI functions	Audit/transparency requirements	Are audit/tracking/oversight mechanisms required?	1 = Little/ no need 3 = Useful/beneficial 5 = Essential constant oversight
		AI governance/ legal risk	Does the function introduce new regulatory, privacy or ethical risks?	1 = No risk 3 = Some risk 5 = Critical risk
		Multi-agency coordination	Does the AI function demand more complex collaboration? (data sharing, response protocols)	1 = No coordination 3 = Require data sharing from 2-3 agencies 5 = Need real time, multi-agency coordination at scale

With a rubric like the one laid out above, use case scores (it's "needs / requirements") can be compared against a country's composite scores across the two axes from Section 3 (Digital and talent foundation; Government AI readiness) to gauge the viability of each use case.

Exhibit A3.2: Hypothetical feasibility case



In the above hypothetical example the automated exam scoring system use case is feasible for country B but only potentially feasible for country A.

The simple comparison rules are as follows:

- **Good fit** [Feasible] (√) – Country score ≥ use case need in both axes.
- **Stretch fit** [Potentially feasible] (Δ) – Country score trails use case need on any one axis.
- **Potentially not yet feasible with current capability** (X) – Country score trails on both axes.

The output is a traffic-light matrix (see Exhibit A3.3 below) that gives officials a quick, directional estimate as to which kinds of use cases are feasible, potentially feasible and likely not feasible for their archetype.

Exhibit A3.3

Use Case	Sector	Country 1	Country 2	Country 3	Country X
Virtual queue management chatbot	Home / int'l affairs and general services	Potentially feasible	Feasible	Feasible	Not feasible
Biometric ID verification system	Home / int'l affairs and general services	Feasible	Feasible	Feasible	Not feasible
AI-assisted border surveillance	Defense and national security	Potentially feasible	Potentially feasible	Potentially feasible	Not feasible
Automated business registration assistant	Home / int'l affairs and general services	Feasible	Feasible	Feasible	Potentially feasible
Fraud analytics for beneficiary eligibility	Social protection and welfare	Feasible	Feasible	Feasible	Not feasible
Biometric verification kiosks	Home / int'l affairs and general services	Feasible	Feasible	Feasible	Not feasible
Predictive outreach for social relief	Social protection and welfare	Feasible	Feasible	Feasible	Not feasible
Social welfare chatbot and IVR assistant	Social protection and welfare	Potentially feasible	Feasible	Feasible	Not feasible
Predictive maintenance for equipment	Public transport and mobility	Potentially feasible	Potentially feasible	Potentially feasible	Not feasible
Autonomous border watch (drone + AI)	Defense and national security	Potentially feasible	Feasible	Potentially feasible	Not feasible
Cyber threat anomaly detection	Defense and national security	Potentially feasible	Potentially feasible	Potentially feasible	Not feasible

It is again important to note that these ratings are a conceptual starting point—a shorthand to allow for the expedient development and feasibility assessment of a long list of use cases within a particular public sector scope. When deciding to greenlight and ultimately implement use cases, further research should be performed to gauge the specific key success factors (e.g., data availability, interagency coordination, regulatory fit) to ensure alignment of projects with governmental capabilities, resource realities and policy environments.

Narrowing down to a use case short list

Once officials have compared their archetypal scores to a comparable score for each use case, the next step is to narrow down the use case library to a short list of prioritized use cases. This focused set of use cases should reflect each country's unique needs, challenges and the relative size of each public sector.

We recommend governments evaluate each feasible use case across three parameters.

1. **Sectoral relevance**: Governments should evaluate which sectors are strategic for AI adoption based on service delivery, public sector spend or sector's effect on broader country economic performance (e.g., GDP, unemployment). Priority should be given to use cases with sectors that receive significant public investment and have widely adopted cloud as an enabling technology.
2. **Institutional readiness**: Not all agencies are equally prepared for AI adoption for a given country. Governments should assess where the strongest public sector foundations exist, including internal digital talent, experience with cloud-enabled digital transformation, motivated leaders and policy readiness / openness to piloting new technologies. Where readiness is more limited, governments should prioritize simpler uses for quick wins to build buy-in.
3. **Tangible impact:** Governments should evaluate both use cases that can deliver visible, near-term results and more transformative, high-savings use cases that will take longer to implement. Use cases that are easy to pilot, require minimal cross-agency coordination and offer clear metrics for success are most valuable in the early stages of AI adoption. We believe that early wins and the value of public-private partnerships can help build momentum across both the public and private sectors and secure broader buy-in for more complex institutions over time.

A prioritized short list enables governments to coordinate digital infrastructure and investment needed, align implementation with national development goals and focus upskilling on specific groups of public sector employees.

Prioritizing use cases based on sequencing

Once countries have an initial sense of which use cases are technically feasible and should be prioritized into their short list, the next step is to consider the sequence in which these use cases should be pursued. Not all technically feasible use cases are equal in terms of complexity, investment required and institutional readiness. To guide implementation of AI use cases, we recommend governments categorize and sequence AI use cases across three tiers that reflect increasing levels of institutional complexity, scope and impact.

- **Foundational catalysts:** These are low-complexity, high-visibility pilots that demonstrate value and build public confidence. Examples include help-desk chatbots, scheduling automation and document summarization. We believe these quick wins can signal momentum to both the private and public sector and the government's overall commitment to innovation and digital transformation.
- **Capability builders:** These are moderate-complexity projects that strengthen institutional processes. They may involve more integrated data governance, enable workflow redesign or involve the application of predictive analysis in specific programs. These initiatives help establish the systems and capabilities needed for sustained digital transformation.
- **Transformational bets:** These are high-complexity projects with a long-time horizon that require significant investment but would unlock transformational value for the government. Examples include agentic AI, AI-enhanced fraud detection across ministries, service delivery optimization and smart infrastructure planning.

This tiered framework enables governments to design a roadmap that balances its ambition with a pragmatic strategy, which will allow them to build credibility through early success while laying the groundwork for more ambitious digital transformation in the future.

Day in the life: Luis sets the stage

To understand how governments can use this framework in practice, meet Luis, the director of AI projects at the Ministry of Education. To identify the most promising AI applications for the national school system, Luis needs to build a short list of high-impact, technically feasible use cases that align with his country's current digital maturity.

He begins by anchoring his approach in the archetype mapping conducted by Amira, a peer official leading the national AI readiness assessment. The ministry's composite scores place the country as a Governance Ready. This alignment means his country is strong on policy alignment and digital government momentum, but that there is room to improve the country's digital infrastructure—and potentially its talent base.

Step 1: Uncover existing sector pain points
Luis starts by consulting operational leaders and reviewing delivery gaps in the school system. There are two significant pain points that emerge through his interviews. First, teachers are overburdened in rural regions with high student-to-teacher ratios. Second, there's a general lack of multilingual support for students from minority groups. To address these challenges, he drafts a candidate use case—an AI teaching assistant chatbot that can support lesson delivery and student questions in multiple languages.

Step 2: Tag the use case parameters
To ensure the use case is properly scored, Luis tags it with the necessary attributes which can be found below:

Axis	Director's entry
Sector	Education
AI capability	Natural language processing (NLP)
Function	Conversation and predictive analytics
Success metric	Student test scores

Step 3: Scoring feasibility
He uses the **use case scoring rubric** to assess implementation feasibility.

Infrastructure need = 3. The solution requires moderate compute, mobile connectivity and cloud access.

Government readiness need = 3. This score is dependent on a working digital curriculum, language policy coordination and moderate data governance.

Step 4: Overlaying the archetype profile
Luis then overlays these requirements onto the national archetype scores.

- Digital and talent foundation = **2.5**
- Government AI readiness = **3.6**

Based on the comparison of the archetype score to the use case scores, the AI chatbot use case is classified as a stretch fit. This means the use case score was above the infrastructure threshold but just below the current readiness benchmark. This use case is feasible with some targeted policy and capability investments.

Step 5: Building for full AI use case matrix
Encouraged by the process, Luis expands his scope. He and his team compile over 20 candidate AI use cases across different education functions and include use cases from automated grading to dropout risk prediction. Each is tagged, scored and plotted in a feasibility matrix.

The final result using this methodology is a list of seven quick-wins, 10 stretch goals, and five not-yet feasible use cases.

Step 6: Prioritizing the short list
To turn this matrix into an actionable roadmap, Luis ranks the feasible use cases by:

1. Sectoral relevance: Is it tied to a national education reform priority?
2. Institutional readiness: Does the ministry already have digital pilots or leadership in place?
3. Tangible results: Can it show measurable results within 12 months?

By the end of the week, Luis produces a prioritized short list of 10 AI use cases. There are three prioritized quick wins for immediate piloting, five stretch fits with two to three years of planning, and two long-term bets that would deliver significant innovation in his sector across all regions.

Step 7: Sequencing priority list of use cases
With the short list in hand, Luis now turns to sequencing. He categorizes each use case into one of three tiers based on complexity and institutional lift.

- **Foundational catalysts:** Simple, high-visibility pilots like automated scheduling or chatbot pilots to build internal momentum and external trust.
- **Capability builders:** Moderate-complexity projects such as predictive dropout analytics or curriculum tagging tools that align with the ministry's medium-term transformation goals.
- **Transformational bets:** High-stakes projects, including national-level AI tutors or multilingual adaptive learning platforms, that require cross-ministerial data coordination and significant investment.

This sequencing framework helps Luis chart a realistic implementation roadmap—launch pilots today, build capacity over time and lay the groundwork for more complex solutions tomorrow. With a prioritized, sequenced roadmap grounded in feasibility and aligned with institutional maturity in hand, Luis is now ready to present a credible, phased investment case to his ministry's leadership.

Navigating the use case life cycle

Once governments understand which kinds of AI use cases to prioritize, public sector officials will need an integrated, end-to-end delivery approach that spans strategy, execution, governance and continuous improvement. Governments should anticipate needing to address all phases of the AI use case life cycle in order for a use case to be a success.

Exhibit A3.4 highlights some major steps within the AI use case life cycle that governments can take.

Exhibit A3.4: Sample AI use case life cycle

1. **Strategy and scope:** This first phase focuses on aligning AI initiatives around public sector priorities and the specific pain points they alleviate. Governments should identify high-value use cases and validate that AI is the right solution based on their government readiness, digital infrastructure and workforce skills readiness. This phase includes setting quantifiable success metrics, clarifying roles and ensuring inter-agency alignment as necessary.
2. **Design and model:** In this phase, governments translate the high-level strategy into functional system designs. This includes engineers engaging with end users to ensure that the solution is human-centered, meets the data and governance requirements, integrates with existing digital platforms and leverages the appropriate AI technology.
3. **Test and validate:** Before the use case is deployed, AI use cases should be piloted under controlled environments and tested thoroughly. This phase includes A/B testing, stress-testing model performance, auditing for bias and unintended outcomes and ensuring reliability under real-world conditions. Governments should leverage sandbox environments and consider pilot programs to refine functionality, ensure technical readiness and validate results against the original strategy.
4. **Deploy and operate:** Once all testing and validation is complete, the system can move into production. Deployment should follow a phased, monitored approach. This stage focuses on ensuring that systems have enough resources, are secure and are integrated into the broader workflows of the end users.
5. **Monitor and govern:** AI systems must be continuously monitored to ensure performance meets expectations, is safe and meets ethical guidelines. Technical workers and managers should expect to track key metrics, gather end-user feedback and conduct recurring audits of the systems.
6. **Scale and sustain:** Successful AI pilots should be well documented and institutionalized within the public sector. The final phase focuses on expanding adoption beyond an initial pilot department, and embedding the use case into broader applications. Governments should reinvest what they have learned to improve future use case development.

Appendix 4: AI skills practitioner's guide

Defining an AI skills taxonomy

Before public sector officials and teams can develop talent strategies, they need a clear understanding of what AI skills matter.

To ensure robustness and alignment with industry standards, skills from leading research and advisory organizations including Lightcast, AI4Gov, World Economic Forum, OECD and Stanford's AI Index have been aggregated and upleveled into a broadly applicable list of skills, organized into three categories.

1. **Core skills:** Foundational knowledge that all employees (regardless of their role) should develop to understand how AI will affect their work, where AI will be applicable and what risks and opportunities arise.
2. **Technical skills:** Capabilities required for roles in designing, developing, implementing and maintaining AI systems.
3. **Human-centric skills:** Essential nontechnical skills that ensure AI use cases are designed, implemented and governed with empathy, transparency and real-world effect in mind.

That list is as follows in Exhibit A4.1:

Exhibit A4.1: AI skills taxonomy

Category	Skill	Definition	Sub-skills / knowledge areas
Core skills	Business acumen	Understanding of the operating model and value chain of a particular public sector in the context of AI, including roles and responsibilities, needs, goals, resource constraints, industry drivers	Organization model development, sector market dynamics, service delivery awareness, public finance and budgeting
	Data literacy	Understanding how data is sourced, governed, interpreted and used in AI, including ethical, security, and compliance implications	Data governance, data security, data sourcing, data cleaning, data types, reading visualizations, data ethics, data lineage, synthetic data practices, data sharing practices
	Digital acumen	Awareness of key digital systems, platforms and technologies	Digital platforms, cloud technology, cybersecurity basics, automation tools, IoT awareness, digital identity systems
	AI risk and ethics	Recognizing risks of bias, misuse and privacy breaches in AI systems and applying safeguards and mitigation strategies	Trust-enhancing AI practices, AI legal acumen, privacy protection, risk identification, regulatory awareness, environmental risk and reporting awareness
	AI literacy	Understanding what AI (including GenAI and agentic systems) is, how it works, capabilities and limitations of GenAI, and where it can be applied	Types of AI applications, use case identification, AI benefits and limitations, AI and ML concepts, agentic systems, model capabilities and limits, environmental impact of AI
	Use of LLM's and prompt engineering	Awareness of how LLMs like Gemini work, how to use them and what they can and cannot do. Includes crafting, refining and testing structured inputs that guide AI to produce useful, safe and relevant outputs	Prompt structures, prompt refinement, output evaluation, prompt debugging, role-playing
Technical skills	System performance and life-cycle mgmt.	Assessing and validating AI performance, outputs and deployment reliability	Accuracy and prediction recall, monitoring pipelines, deployment testing, logging and auditing
	Data infra-structure and quality infra-structure and quality	Designing, maintaining and securing reliable and secure data pipelines and systems for AI	Data pipelines, scalable storage, quality checks, data engineering
	AI tools and platforms	Using and evaluating platforms and tools to interact with and manage AI solutions	Integrating AI tools into digital systems, use of AI-enabled workflow and orchestration tools, working with application programming interfaces
	AI engineering and building	Designing and maintaining AI systems and tools though the build-test-deploy-monitor life cycle	Development operations and machine learning operations practices, version control, security assessment, continuous development and continuing implementation for AI
	LLM technical skill	Knowledge of prompt engineering, fine-tuning and parameter-efficient training approaches, retrieval-augmented generation (RAG) and integration of LLMs into existing enterprise systems and workflows	LLM structure, fine-tuning, retrieval augmented generation, hallucination risks, token budgeting, LLM guardrails

Category	Skill	Definition	Sub-skills / knowledge areas
Human-centric skills	Creativity and innovation	Employ a human-centered approach to ideate, prototype and iteratively refine AI solutions while incorporating user feedback	Ideation, brainstorming, iterative thinking, user empathy, innovation framing, GenAI-augmented ideation
	Critical thinking	Evaluating AI claims, outputs, or insights with logic, evidence and skepticism	Logical reasoning, professional skepticism, problem solving, analytical thinking, bias detection, validation of AI outputs
	Vision and managing change	Leading teams and organizations through tech change, uncertainty and workforce transformation. This includes setting an AI adoption vision, aligning stakeholders, and driving cultural readiness	Adaptability, stakeholder alignment, organizational change, strategic communications, reskilling strategy, ai adoption strategy
	Design thinking	Applying iterative, human-centered approaches to solve public service challenges	Design principles, prototyping, user testing, iterative feedback, equitable design

This taxonomy can be leveraged to define baseline and target proficiency levels for a given workforce.

Align roles to personas

The AI skills required to lead national AI strategy are different from those needed to oversee ethical implementation, configuring a chatbot or interpreting the output from a large language model. For this reason, we believe officials should assess AI skills based on a set of fundamental personas that reflect the most common types of roles found across emerging markets, laid out below in Exhibit A4.2:

Exhibit A4.2: Fundamental personas

Persona	Core role	Example roles	Key AI context
Leaders	Set national digital agendas and AI policy direction	Ministers, secretaries, CIOs, heads of government	Shape strategy, governance and investment priorities
Business / product	Translate AI strategy into public sector delivery	Program directors, digital transformation leads, procurement managers	Bridge policy to implementation, oversee programs and procurement
Builders	Design, integrate and maintain tech and program structures	Data scientists, cloud engineers, ML engineers, systems architects	Execute technical delivery aligned to strategy
Governance	Ensure legal, ethical and regulatory compliance for AI	Risk officers, policy experts, legal counsel, ethics committees, compliance officers	Oversee responsible AI use and adherence to standards
End users / operators	Use AI tools to enhance service delivery	Civil servants, case workers, inspectors, tax officials, health and education staff	Apply AI in day-to-day tasks to improve efficiency and outcomes

A public sector official looking to baseline their workforce should try to slot team member roles into each of these personas.

Assigning target skill proficiency by persona

For each of these personas, the public sector official overseeing the workforce in question should define target proficiency levels by persona by skill (using across the AI taxonomy introduced earlier). This target proficiency expectation accounts for the complexity of the skill, the importance to the role and the role's level of responsibility.

First, this approach will enable teams with a realistic, role-specific benchmark to assess against their current workforce capabilities. Second, it will allow them to prioritize upskilling investments by identifying which roles within their groups require more development across specific skills.

Here is a set of generalized proficiency levels to set proficiency targets. Time and resources permitting, however, it may be useful to customize this rubric as needed based on the AI use case that a given workforce needs to be upskilled to support.

Exhibit A4.3: Generalized AI Skills Proficiency Descriptions

Rating	Proficiency level name	Proficiency level description
0	Not applicable	This skill is not required for this role or persona. Proficiency in this area is not necessary to fulfill responsibilities and upskilling is not a priority. Exposure or development in this skill area is optional.
1	Novice	Individuals demonstrate basic understanding of what the skill (and what AI is in the context of the skill) and its potential benefit. They can engage in general conversations about it but do not use it directly in their day-to-day roles.
2	Foundational	Individuals with a foundational understanding of the concepts and can interact by leveraging them (e.g., simple AI tools) in a limited capacity. They can follow somewhat in-depth discussions around this skill and apply structured guidance.
3	Operational	Individuals that can use these skills, tools and methods to execute tasks or manage projects in a basic way. They can understand the design, risk and limitations of a particular skill or AI application within their domain.
4	Advanced	Individuals capable of designing, leading or advising AI-related policies, systems or strategic implementations. They can apply domain expertise to ensure AI solutions are ethical and responsible.
5	Expert	Individuals recognized as subject-matter experts or technical leaders for their domain. They successfully coach and lead teams in their domain. They are capable of developing or critically evaluating systems, architectures or policies at scale within the context of AI.

With these skills, personas and proficiency definitions in mind, Exhibit 4.3 represents our perspective on target proficiency levels required to adopt most AI use cases across sectors. The targets are aspirational only for public sector workers involved in teams implementing AI use cases and represent the expected proficiency levels for individuals driving AI adoption, implementation and oversight. Officials can tailor these targets based on use case complexity, local workforce capabilities and their unique strategic priorities.

Exhibit A4.4: Target skills proficiency by persona

Category	Skill	Leader	Business / product	Builders	Governance	End users / operators
Core skills	Business acumen	Expert	Expert	Operational	Operational	Foundational
	Data literacy	Operational	Advanced	Expert	Operational	Operational
	Digital acumen	Operational	Advanced	Expert	Operational	Foundational
	AI risk and ethics	Expert	Advanced	Advanced	Expert	Operational
	AI literacy	Expert	Advanced	Expert	Expert	Operational
	Use of LLM's and prompt engineering	Foundational	Operational	Expert	Foundational	Advanced
Technical skills	System performance and life-cycle mgmt.	Novice	Operational	Expert	Foundational	Foundational
	Data infrastructure and quality	Novice	Operational	Expert	Foundational	Foundational
	AI tools and platforms	Foundational	Operational	Expert	Operational	Operational
	AI engineering and building	Novice	Operational	Expert	Foundational	Foundational
	LLM technical skill	Novice	Operational	Expert	Foundational	Foundational
Human-centric skills	Creativity and innovation	Advanced	Advanced	Operational	Foundational	Operational
	Critical thinking	Expert	Advanced	Advanced	Expert	Operational
	Vision and managing change	Expert	Expert	Operational	Advanced	Operational
	Design thinking	Operational	Expert	Operational	Operational	Foundational

These should be leveraged as a foundation for a more tailored set of target proficiencies by team, but it's grounded in several principles developed around the responsibilities each persona will generally have within the context of setting AI strategy or deploying AI use cases.

Leaders need strong capabilities in AI risk and ethics, AI literacy, business acumen, critical thinking and change management. While not system managers, they need to grasp the implications of data governance, connectivity and national digital readiness. A basic understanding of AI tooling enables credible engagement with stakeholders.

Business/product roles translate policy into execution. They require advanced AI literacy and business acumen to scope viable projects plus operational fluency in AI tools, life cycle management and data infrastructure to oversee development and quality assurance. Strong human skills are essential to lead stakeholder engagement and service delivery.

Builders need deep expertise in infrastructure, engineering and performance optimization along with advanced data literacy, digital acumen and prompt engineering skills for model configuration and tuning. While their focus is technical, they also need to understand risk, ethics and user-centered design, especially in sensitive sectors like justice and healthcare.

Governance roles audit performance, assess risks and set policy. They require a working knowledge of system functions, advanced critical thinking and sound judgment to ensure responsible oversight.

End users/operators interact with AI directly, requiring foundational technical knowledge to use systems safely and escalate issues appropriately. Since they often manage citizen-facing interactions, operational-level human skills are equally important.

Below, we'll outline how these personas, skills and proficiency targets can be used to guide a structured self-assessment based on their workforce capabilities today.

Developing a skills self-assessment

1. **Refine skills taxonomy**
   Before launching an assessment, refine the skills list to fit your country, sector and functional needs. Adjust terminology, combine or add skills, and consider capturing relevant certifications to ensure the framework reflects local priorities.
2. **Define target respondents and assign personas**
   Identify the roles needed to implement AI across ministries and agencies and then map each role to one of the five core personas (leaders, business/product, builders, governance, end users/operators). This ensures each role is assessed against the most relevant skills.
3. **Set target proficiencies by persona**
   Use the proposed target proficiency matrix as a baseline, customizing for national strategy, sector priorities and specific AI applications.
4. **Design the survey**
   For each skill, create questions using a 5-point self-rating scale. Phrase and randomize response options to encourage thoughtful answers. Consider manager validation of responses to ensure consistency. Clearly separate the assessment from performance reviews and compensation, and schedule it outside formal review cycles.
5. **Compare scores to targets**
   Match validated scores against target proficiencies for each persona to identify gaps.
6. **Aggregate and visualize results**
   Analyze results at the individual, department or organizational level. Use insights to create targeted training plans, identify high-potential AI innovators and align upskilling investments with priority roles and functions.

Once officials have identified AI skills proficiency level gaps across personas, the next step is to develop a practical, phased action plan to close these gaps.

Determining a talent action plan

Governments should combine multiple learning approaches, tailored to skill type, learning objectives, persona and local resources. Here's a menu of adaptable modalities.

1. **Instructor-led training**
   Workshops, bootcamps, train-the-trainer programs and executive briefings build peer learning, leadership buy-in and rapid skill acquisition. Best for talent needing contextual learning to deepen proficiency.
2. **Digital and self-guided platforms**
   E-learning, case-based simulations and microlearning support scalable, cost-effective, self-paced learning—ideal for foundational or broadly applicable AI skills.
3. **On-the-job and experiential learning**
   AI sandboxes, pilots, coaching and role rotations reinforce skills through real use cases, helping operational staff advance to higher proficiency.
4. **Credentialing and formal education**
   From short-form certifications to advanced degrees, this modality supports deep technical specialization.
5. **Public-private partnerships**
   Collaborations with tech companies, multilaterals and universities provide access to cutting-edge tools and expertise, particularly for advanced skills.

In addition to upskilling, governments should look at consultants, vendors and contractors who can quickly deliver AI capabilities where in-country talent is scarce. They should also develop robust talent pipelines across all personas and skillsets, either through partnerships and engagements with local universities or via large-scale recruiting efforts in the broader workforce, hosting targeted career fairs and developing easy-access, AI-focused governmental job boards.

Building an AI-ready workforce is as much a challenge as building the digital infrastructure needed to facilitate the adoption of AI. While there is no one-size-fits-all solution when it comes to upskilling or augmenting a workforce, governments in emerging markets are well positioned to lead by example.

When implementing talent strategies, we recommend starting small and piloting upskilling pathways for a subset of the workforce tied to the most value-accretive use cases. By doing this—whether through foundational literacy campaigns, hands-on sandbox training or partnerships with the private sector—every country can begin building the talent base needed to ensure AI is deployed ethically, inclusively and effectively.

Day in the life: Nia's AI rollout

Meet Nia, a regional education officer. She's rolling out a new AI-enabled teaching assistant chatbot across 50 rural schools, designed by her colleague Luis in the Ministry of Education. Before scaling the tool, she **should** ensure local public sector staff have the skills to use, oversee and give feedback on it. Short on time and budget, she turns to the persona-based AI skills framework in this report.

Step 1: Mapping roles and skills
Nia classifies her regional team into the framework's five public sector personas.

1. **100+ teachers:** End users, using the chatbot in daily instruction.
2. **5 digital coordinators:** Business/product, managing rollout and curriculum alignment.
3. **2 IT staffers:** Builders handling infrastructure and integration.
4. **1 policy advisor:** Governance, ensuring compliance with data, ethics and safety policy.
5. **Nia:** Strategic leader, setting adoption direction and coordinating resources.

Using the skills matrix, she sets proficiency targets across core, technical, and human skills to pinpoint gaps.

Step 2–4: Assessing and comparing skills
Nia launches a mobile-friendly self-assessment tailored to each persona. Results show teachers are strong in AI literacy but weaker in prompt engineering and AI ethics—critical for the chatbot's success. Comparing these scores with use case requirements reveals that 60% fall short in prompt engineering and 45% in ethics.

Step 5: Targeted upskilling
Nia designs a blended plan.

- Foundational AI awareness via mobile, self-paced modules (e.g., Grow with Google).
- Prompt engineering workshops using real chatbot scenarios.
- Ethics coaching integrated into regional meetings.

Step 6: Monitoring and scaling
Nia tracks progress through a dashboard of post-training scores and workshop attendance, flagging 10 high performers as future AI implementors and peer trainers.

By term's end, Nia has a clear, data-driven readiness plan, positioning her schools for a successful, ethical and scalable AI deployment.

Authors

Dr. Timothy Persons
Principal and AI Leader, PwC United States

Dr. Karl Russo
Principal, National Economics and Statistics Leader, PwC United States

Mr. Bhushan Sethi
Principal, PwC United States

Contributors

Rahul Kapoor
Principal, PwC United States

Dr. Qiang Ma
Managing Director, National Economics and Statistics, PwC United States

Brett Davidson
Director, PwC United States

Lindsey Phillips
Senior Associate, PwC United States

Kevin Joyce
Manager, PwC United States