



How governments can enable a thriving AI-enabled economy

Laying the foundation today for the AI-augmented future is critical to fostering public value and unlocking growth.



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1

Governments around the world are taking different approaches to shaping the emergence of new technologies such as artificial intelligence (AI).

2

Unlocking the full potential of AI, while managing the risks, requires a knowledge-intensive ecosystem that can support responsible adoption and integration into the economy.

3

Government leaders are in a unique position to foster an enabling environment for the development of a thriving AI-enabled economy.

Between US\$1.7 trillion and US\$3.4 trillion – that’s how much AI investment could lift global gross domestic product (GDP) over the next decade, according to research from EY-Parthenon.¹ Unlocking that future growth sustainably, while building broad-based public benefits from AI, requires significant shifts in the economy that governments will need to foster.

The readiness of most economies for this shift is less clear, however. Many countries do not yet have the flourishing, knowledge-intensive ecosystem needed to adopt and unlock the

benefits promised by AI.² Public sector leaders, meanwhile, are under immense pressure to play simultaneous, sometimes conflicting, roles to enable this readiness.

At once, governments must be architects of responsible and interoperable AI safeguards, champions of innovation, exemplars in adoption, builders of attractive investment environments, and shapers of emerging international codes of practice and AI standards. They must address critical issues such as data privacy, cybersecurity and the cultivation of a digitally skilled workforce across the economy, all while fostering an ecosystem that supports cutting-edge research and equitable access to AI resources for all.

Government leaders who can balance the drive for technological breakthroughs with the imperatives of ethical governance and public confidence can position their countries as leaders in AI and influencers of the global digital landscape for years to come.



So, how can government leaders nurture the transition to a thriving AI-enabled economy?



Four avenues for fostering a thriving AI-enabled economy

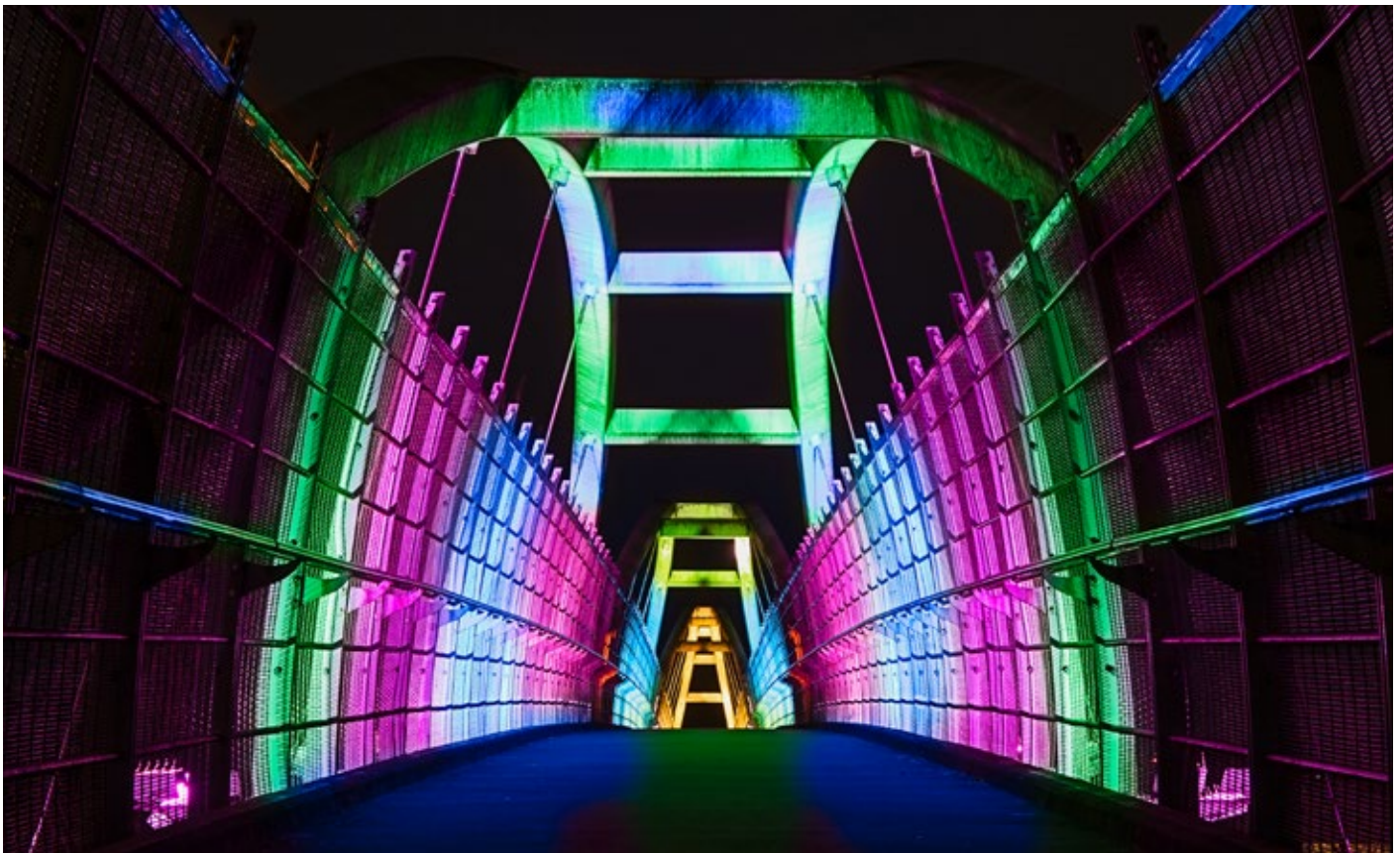
A public sector strategy to enable the transition to an AI-enhanced economy will be multifaceted and cross-sectoral. While a sector-by-sector analysis is outside the current scope of this brief, we have identified four avenues for government leaders to advance the knowledge-intensive ecosystem needed for future economic success:

1 Setting the table for responsible AI development and use

What governments do now on AI will set the basis for future development. From enabling knowledge sharing and R&D to defining safeguards, the public sector can be a driving force for the adoption of responsible AI systems. Here are two ways governments can lay this foundation:

- **Defining AI governance and safeguards.** Beyond vital multilateral cooperation to safeguard against AI risks,^{3,4,5,6} governments are taking steps at the national level to define AI governance and its role in society. Singapore's updated National AI Strategy 2.0 (NAIS 2.0), for example, sets a macro view of what a responsible AI ecosystem looks like and how it can stimulate growth by fostering innovation and an understanding of AI among people and businesses.⁷ Japan's Ministry of Economy, Trade and Industry, on the other hand, created voluntary Governance Guidelines for the Practice of AI Principles to guide private sector AI development and use, based on international AI safeguards and the views of consumer protection and other stakeholders.⁸

- **Establishing center of excellence partnerships with academia and business to develop and attract talent, expertise and R&D investment.** Governments are channeling substantial funds into establishing dedicated AI research centers, state-of-the-art computing facilities, and centers of excellence to facilitate knowledge transfer and expedite the progress of AI innovation and education by linking AI startups, corporations, investors, government and academia. The federal government of Germany, for example, established the Civic Coding - Innovation Network AI for the Common Good, a multi-ministry initiative that hosts ideation workshops, the Civic Data Lab and the Civic Innovation Platform, that offers a funding contest and long-term funding – all in support of civil society and private sector innovators developing AI use cases for the public good and sustainable development.⁹ Canada, meanwhile, announced a US\$2.4 billion package in April 2024¹⁰ to provide both startups and researchers access to advanced computing capabilities through an AI Compute Access Fund, and to establish Canadian-owned and located AI infrastructure as part of a new Canadian AI Sovereign Compute strategy.¹¹



2 Enabling responsible and sustainable innovation

Computing and AI systems are energy and resource intensive, making their development nonlinear, expensive and risky. These dynamics are why governments have long played a role in driving cutting-edge R&D where there may not otherwise be commercial incentives. Here are two ways governments can enable responsible and sustainable AI innovation:

- **Widening access to key innovation building blocks.**

Innovating with AI requires access to enhanced computing capabilities, cutting-edge server computer processing units (CPUs), and specialized computation accelerators such as chips and graphics processing units (GPUs), for example. While these assets are pivotal for handling complex computations required by AI systems, they can be hard for most organizations to access. To address such gaps, countries such as France are lending computing time from its classified defense-related supercomputer not only to the private defense sector but also to other government ministries and higher education institutions for innovation.¹² The government of India, meanwhile, is investing US\$599 million in

GPUs, to increase startup and researcher access to advanced computing infrastructure.¹³

- **Developing AI innovation sandboxes to support bleeding-edge innovation.** Governments are setting up AI regulatory sandboxes to facilitate cutting-edge innovation in a safe testing environment, which enables collaboration between regulators and innovators, and provides policymakers with data on potential benefits and risks. Spain, for example, put in place the EU's first AI Act regulatory sandbox, focused on testing high-risk and general-purpose AI in a controlled environment, offering a model for other countries on the continent.¹⁴ Enterprise Singapore and the Infocomm Media Development Authority (IMDA) of Singapore's Ministry of Digital Development and Information (MDDI) launched the GenAI Sandbox to help about 300 small to medium-sized enterprises (SMEs) explore integrating generative AI (GenAI) tools in sectors such as retail and hospitality, ultimately identifying and deploying 13 AI-enabled solutions.¹⁵

3 Equipping the workforce to capture AI's job creation and augmentation potential

EY-Parthenon research estimates that GenAI could meaningfully impact over half of the global workforce, creating new jobs and competencies across sectors as more mundane and repetitive tasks are automated.¹⁶ Although certain sectors and professions are more exposed to AI disruption than others, it is unlikely to lead to a wholesale replacement of human workers.¹⁷ Instead, AI presents a fundamental opportunity to augment the skills of the existing workforce and to refocus human resources on the most critical challenges. Here are two ways government leaders can help ready the national workforce for this transformation:

- **Investing in education, training and professional development across all ages of society.** The spread of AI has stimulated the demand for specialized skills in maths, computer and data science,¹⁸ and exposed a digital skills gap globally.¹⁹ Developing these capabilities

domestically requires a variety of educational approaches to reach across demographics – from developing frameworks and curricula for primary, secondary and continuing education in AI and advanced computing, to partnerships with tech firms to upskill public sector employees and accelerate adoption in public services. The UK, for example, announced a US\$143 million investment to bolster AI skills through 12 AI Centres for Doctoral Training in AI and a US\$1.3 million grant for a high school pilot program and scholarships in November 2023.²⁰ India built on the success of its 2020 initiative to upskill government students in responsible AI by launching a public-private partnership called Youth for Unnati and Vikas with AI (YUVAi) to educate students in grades 8 to 12 across India about AI use cases across agriculture, health care, education, transportation, environment and clean energy, among other sectors.²¹

- **Designing visa and immigration policies to attract and retain AI talent.** The surge in demand for computing and AI expertise has outpaced the number of trained professionals available, resulting in a transnational competition for AI and advanced computing talent, including students, technologists and entrepreneurs. As a result, some countries are implementing targeted immigration and visa policies to gain a competitive advantage in attracting and retaining AI talent. US President Joe Biden's Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, for example, included

measures to streamline application procedures for difficult-to-obtain, specialized talent immigration visas, and to provide a safe haven for foreign AI startup founders through the Department of Homeland Security's International Entrepreneur Rule (IER).²² The United Arab Emirates (UAE) took a different approach, creating a new 10-year Golden visa opportunity for employees of companies that obtain specialized AI and coding licenses through its Artificial Intelligence Office and the Dubai International Financial Centre (DIFC), a regional FinTech and innovation hub.²³

4 Demonstrating public benefits from an AI-enabled economy

Skepticism is a common reaction to new technologies and the disruption they bring, and AI is no different. To advance adoption, governments will need to building public confidence in AI's potential value. One option is to demonstrate the potential public value of AI through carefully scoped and tested use cases, and accessibly designed AI-enabled solutions that enhance effectiveness and constituents' experience of government. Here are two ways government leaders can begin to socialize AI for the public good:

- **Improving service delivery for citizens.** The integration of GenAI into government operations and public services can enhance constituent experience. Singapore's Municipal Services Office collaborated with the Smart Nation and Digital Government Group (SNDGG) to launch the WhatsApp- and Telegram-accessible OneService Chatbot that uses GenAI to intuitively assist users in navigating public services and registering their complaints with ease.²⁴ Meanwhile, the Government of South Africa has deployed a series of AI-enabled mobile applications to enhance public service access.²⁵ For example, providing 24/7 access to an AI-

connected network of specialized emergency response providers through the Namola app has successfully decreased emergency response times.²⁶

- **Enhancing public sector decision-making.** Governments are increasingly looking to AI to improve data-driven decision-making, with some estimates suggesting that 70% of government agencies will use AI to enhance human administrative decision-making by 2026.²⁷ Given the breadth of ways to use AI for better decision-making (and potential obstacles), the Government of Western Australia established the Artificial Intelligence for Decision Making Initiative 2022 to solicit internal proposals for funded pilot initiatives that address a series of challenges in leveraging AI for better government decision-making.²⁸ Other government institutions are using AI to improve city planning and management. In the US, for example, the Pacific Northwest National Laboratory developed an AI-enabled traffic management tool, TranSEC, to help city planners alleviate traffic congestion through both granular estimations of traffic flows and a comprehensive view of city-wide traffic dynamics.²⁹

Next steps for cultivating the AI ecosystem

To capture both the opportunities and manage the risks from AI, government leaders should embrace their pivotal role in shaping the future of the digital landscape. There are three practical steps all government leaders can take to begin readying the local economy for an AI-enabled future:

- **Invest in AI public literacy and skills development.** Prioritize educational initiatives, partnerships and training programs to equip the current and future workforce with AI competencies through school curricula, re-skilling programs and lifelong learning incentives.
- **Foster public-private partnerships for R&D, infrastructure development, and financing scale-ups and sector-specific innovation.** Encourage collaboration between government, academia and the private sector to share knowledge and align research and innovation with public needs, while investing in scale-ups and making additional supercomputing capacity, and GPUs where needed, available for innovators.
- Implement agile regulatory frameworks and safeguards. Develop regulations to be interoperable across technologies and national jurisdictions and seek to contribute to the development of multinational safeguards and standards for AI and other emerging technologies that keep pace with development.

Through strategic investments and agile leadership, governments can help unlock the full potential of AI, helping foster more productive, inclusive and human-centric economies.

Summary: By taking decisive steps to promote AI education, foster collaborative environments and establish flexible regulations, public sector leaders can help build a sustainable AI-enabled economy that nurtures inclusive growth.

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