The Global Landscape of National AI Strategies

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Abstract

This paper explores how governments around the world are steering the adoption and development of artificial intelligence (AI) through their national strategies. Between January 2017 and June 2025, more than 80 countries published their national AI strategies,[1] reflecting the rise of AI as a public policy and economic development priority. While early adopters such as Canada and Japan have already updated their national strategies, more recent adopters benefit from mature debates on AI risks and opportunities, as well as early regulatory initiatives. From sovereign AI to hybrid governance, there is significant variation in how governments adopt this new technology and address its key challenges such as workforce transformation and environmental impact. Using qualitative analysis, this study shows the breadth and the depth of public action shaping AI's future in two steps. First, it maps the global landscape of AI strategies and zooms in on public and private investments in supercomputers around the world. Second, it provides an in-depth comparative analysis of specific cases across income groups, covering public investment trends, business environment approaches, regulatory orientations, and international cooperation. The paper concludes with a summary of findings and future strategic avenues.

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Introduction

Context and rationale: The rise of AI as a policy priority

Since 2017, artificial intelligence (AI) has moved rapidly from the margins of technological debate to the center of global policy agendas. Long before the introduction of generative AI, governments already recognized that advances in machine learning and automation carried both significant opportunities and risks. AI has been viewed not only as a driver of economic transformation, but also as a source of strategic concern—capable of enabling breakthroughs in healthcare, industry, and public services, while simultaneously raising concerns over malicious applications, labor market disruption, and gaps in governance (Auld et al., 2022; Taeihagh, 2021).

The first wave of national AI strategies, published between 2017 and 2019, reflected this duality. Canada's 2017 Pan-Canadian Artificial Intelligence Strategy was the earliest attempt to articulate a comprehensive national vision. Other national strategies developed during that period emphasized two priorities: using AI to modernize public administration and fostering national innovation ecosystems (Radu, 2021; Struet et al., 2023). Complementing these national efforts, international organizations and civil society groups worked to codify ethical principles for AI, laying the groundwork for more formal governance frameworks (Wagner, 2018; Jobin et al., 2018; Radu, 2021; Schiff, 2022). Between 2016 and 2022, more than 250 AI-related documents were produced by international organizations or multi-stakeholder initiatives (CoE, 2024). While the initial emphasis was on ethics and soft law (Kind, 2020), attention has gradually shifted toward regulation and binding rules, both at the national level and regionally, most notably with the European Union's AI Act (European Parliament & Council of the European Union, 2024). As of June 2025, numerous laws and regulations directly regulating AI have been debated at the national level, yet very few have been implemented[2]. For this reason, the analysis of national AI strategies remains highly pertinent.

As AI capabilities have matured, so has the recognition that this technology is reshaping the distribution of economic, military, and political power at the global level (Fischer & Wenger, 2021). The rapid diffusion of large language models (LLMs) has accelerated this process. On one hand, the scale of resources required to develop and deploy frontier models—data, computational capacity, and technical expertise—has concentrated capabilities within a limited set of states and firms, reinforcing existing asymmetries (Tamkin et al., 2021; Bender et al., 2021; Whittaker 2021). On the other hand, the accessibility of LLMs through open-source releases and commercial platforms has lowered access barriers for a broader range of actors, expanding opportunities for adoption and strategic use (Luitse & Denkena, 2021; Shashidhar et al., 2023). These competing dynamics have influenced how governments design their approaches to AI and position themselves in international debates. By 2024, nearly half of all countries had either drafted or formally adopted a national AI strategy, often backed by dedicated resources to promote AI development and adoption.

National AI strategies serve as instruments of *meta-governance*, covering everything from immediate policy objectives to long-term visions for AI leadership (Djeffal et al., 2022). They set overarching priorities, coordinating responsibilities across government, and signal long-term commitments to industry, academia, and civil society. These strategies are not stand-alone documents; they form the foundation on which national priorities, investment programs, and regulatory frameworks are built. The first AI strategies reflected a conscious preference

for “hybrid governance”, combining the participation of non-state actors with market-enabling approaches (Radu, 2021). Many of the countries that have revised their strategies since 2020 have continued to emphasize the pro-innovation thrust, while stating a preference for narrower, values-based international collaboration (Radu, 2026).[3]

Updates to national AI strategies are not unusual – they reflect the dynamic space in which technology and policy reinforce each other. Current AI debates are largely driven by two concerns: strategic competition among states, and the growing role of the private sector leadership. First, states are increasingly viewing AI as a source of economic and military advantage, leading to national strategies that prioritize technological leadership and control. The intense competition between the United States and China has been characterized as a “race to the bottom” (Meacham, 2023) or a “geopolitical innovation race” (Schmid et al., 2025), has constrained international cooperation, as both nations have prioritized technological superiority. The United States draws on its dynamic private sector while imposing export controls to limit AI technology transfer to competitors like China (White House, 2022; White House 2025). In contrast, China is investing heavily in building a self-reliant AI ecosystem, reducing its dependence on Western technologies through local production and supply chains (Allen, 2022; Jiang, 2025), while expanding international partnerships through initiatives such as the Group of Friends for International Cooperation on AI Capacity Building and the China-BRICS AI Development and Cooperation Center (Ministry of Foreign Affairs of the People's Republic of China, 2025).

On the other hand, national strategies must also contend with a rapidly advancing private sector, whose innovation and concentration of services drive much of AI’s development worldwide. A small number of US- and China-based tech companies dominate cloud services and the infrastructure essential for AI, enabling them to shape standards, control key technologies, and influence the pace and direction of research and deployment (Lehdonvirta et al. 2024; Ulnicane et al., 2021; Whittaker, 2021). These companies have adopted an “engage and push” approach to secure first-mover advantages and path-dependent control over AI ecosystems (Auld et al., 2022). Scaling AI relies on access to computational power, data, and skilled labor, yet the computational infrastructure—ranging from semiconductors to data management platforms—remains highly concentrated at strategic points in the global supply chain (Sastry et al., 2024; Vipra & Myers West, 2023).

In their quantitative analysis of cloud computing infrastructure, Lehdonvirta et al. (2025) find that roughly 70% of the market is controlled by US hyperscalers (Amazon Web Services, Microsoft Azure and Google Cloud), while the remaining 30% is held by large Chinese tech companies such as Alibaba, Huawei, and Tencent. To explain why other countries connect to US or Chinese network hubs, they test three hypotheses and find that import relations and security cooperation with either the United States or China are the key determining factors. This points to a dynamic of strategic choice by other countries, rather than a straightforward great-power rivalry.

To understand the global AI landscape, the following sub-section briefly examines emerging regional policy and regulatory frameworks, discussing the European Union Artificial Intelligence Act (referred to as “EU AI Act”) and the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law (referred to as “Council of Europe’s Framework Convention on AI”).

Emerging regulatory frameworks at the supranational level

At the international level, non-binding instruments—including voluntary guidance, recommendations, and ethical principles—have been the primary anchors for AI governance. More recently, however, these soft-law frameworks are being supplemented, and in some cases superseded—by legally binding agreement that impose enforceable obligations on states and market participants. Early normative frameworks such as the OECD Principles on AI (2019) and the UNESCO Recommendation on the Ethics of AI (drafted in 2019, adopted in 2021) have remained highly influential, as they are often explicitly referenced in national AI strategies. Their impact has been reinforced by a range of additional soft-law initiatives, such as the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems, the World Economic Forum's AI Governance Framework**,** and the Partnership on AI's Responsible AI Framework.

So far, binding supranational rules have been introduced only in the European region. In 2024, two AI-specific frameworks were adopted: the EU AI Act (European Parliament & Council of the European Union, 2024) and the Council of Europe's Framework Convention on AI (Council of Europe, 2024). Both frameworks attracted significant attention throughout their multi-year negotiations, including from a wide range of non-state actors who voiced opinions, proposed amendments, and observed drafting process in accordance with specific engagement procedures. Negotiated concurrently, the two frameworks draw from the revised OECD definition of an AI system and share a similar approach to risk and impact management.[4] Both also expressly exclude applications of AI in military and national security domains. Nevertheless, there are substantive differences between these instruments.

The EU AI Act establishes binding obligations for entities operating within the EU and is modelled on principles of product safety regulation, which enables differentiated oversight according to the level of risk posed by specific AI applications. Risk is defined as the combination of the likelihood of harm occurring and its severity (European Parliament & Council of the European Union, 2024). Certain AI practices are considered unacceptable and are therefore prohibited outright, including, for example, social scoring by governments (Chapter II). Other systems are classified as "high-risk" because of their potential to adversely affect the health, safety, or fundamental rights of individuals, particularly in sectors such as healthcare, transportation, and critical infrastructure (Chapter III). High-risk systems may only enter the European market if they satisfy mandatory requirements, which are verified through conformity assessments, transparency obligations, and risk management procedures based on harmonized standards developed by recognized standard-setting bodies. By contrast, lower-risk applications are subject to lighter regulatory obligations. The Act was the product of extensive negotiations involving the European Commission, the European Parliament, and the Council of the European Union.

The Council of Europe advanced its work on AI by establishing the Committee on Artificial Intelligence (CAI) to negotiate a comprehensive international legal framework aligned with the UN sustainable development goals (CAI, 2021). In 2023, the CAI issued a Revised Zero Draft of the *Framework Convention on Artificial Intelligence, Human Rights, Democracy, and the Rule of Law,* which formed the basis for the final text that was adopted by the Council of Europe as a binding treaty (Council of Europe, 2024). The Convention sets out general provisions and obligations, principles governing all stages of AI system lifecycles, mechanisms for remedies, procedures for assessing and mitigating risks and adverse impacts (Council of Europe, 2024). As a treaty, the Council of Europe

Convention has a broader geographical scope than the EU AI Act and it allows member states flexibility in how they implement it. The Convention places strong emphasis on protecting democratic processes and upholding the rule of law, while explicitly requiring public consultation and the involvement of multiple stakeholders in AI governance.

By codifying requirements for risk-based classification, these initiatives provide a baseline for international AI discussions and create a common vocabulary for understanding AI-related harms. They also create direct incentives for other governments to align their own rules with these standards, helping to avoid market fragmentation, legal uncertainty, and compliance costs. Several non-European governments across Asia and South America have already referenced these frameworks when drafting their own legislation.

Different generations of national strategies

National AI strategies can be grouped into successive generations, each reflecting shifts in approaches over time. The first wave, emerging between 2016 and 2020, marked the initial stage of government engagement with AI, largely focused on fostering innovation, competitiveness, and early ethical governance frameworks. From 2021 onwards, however, the acceleration of digitalization following the COVID-19 pandemic, combined with the public release of OpenAI's ChatGPT, introduced a new phase of AI strategy-making. This second generation is defined by two parallel trends: the revision and updating of existing strategies and action plans to incorporate new technical and societal realities; and the diversification of policy instruments to address emerging dimensions of AI, including compute capacity, workforce transformation, and, most prominently, AI sovereignty.

Early adopters

The first national strategies dedicated to AI – covering both sectoral and comprehensive approaches – emerged between 2016 and 2019, at a time when industry actors were producing the largest number of ethical AI guidance and self-regulation documents, many of which lacked actionable implementation steps (Fatima et al., 2020; Jobin et al., 2019; Kind, 2020; Saheb & Saheb, 2023). In this early stage, governments mostly viewed AI as a tool for economic growth and social progress, favoring a hybrid form of governance that combined public and private authority, both in shaping strategies and in building institutions (Radu, 2021). This first wave of national AI strategies leaned toward a pro-innovation stance, often promoting self-regulation, as shown by Djeffal et al. (2022) in their study of 22 countries and the European Union. AI was frequently presented as the main answer to ongoing policy challenges (Ulnicane & Erkkilä, 2023), framed as both inevitable and progressive, and closely linked to prevailing ideas of national development and democratic improvement (Bareis & Katzenbach, 2022; Palteli, 2021).

This orientation produced strategies that were broadly market-oriented and ethically grounded, yet often vague in their operational detail. Governments signaled commitments to creating enabling environments for AI innovation and fostering "ethical AI", while avoiding specificity on what ethical deployment required in practice, or how technical safeguards and standards should be designed (Radu, 2021; Saheb & Saheb, 2023). In this phase, national AI strategies focused largely on data-related issues, such as access and sharing, while overlooking other critical considerations, including the environmental sustainability of computational resources, algorithmic

accountability across the AI lifecycle, and the systemic risks associated with large-scale deployment (Schiff, 2022; Ulnicane, 2025).

Second generation strategies

Since 2020, more than 12 countries updated their national AI strategies in order to address emerging technological, societal, and economic developments (see table 1 below on the first 10 countries). These revised strategies provide insights into how governments recalibrate domestic priorities, industry pressures, and regulatory initiatives in response to major technological advances and geopolitical tensions. These documents reveal that national strategies are not only responding to internal policy goals but are also actively shaping shared global agendas, illustrating the increasingly interwoven nature of national and international AI governance. These updated strategies, often labelled as "second phase," "update," or "2.0 version," are typically adopted by high-income countries (World Bank, 2024) with strong technological infrastructures, established research ecosystems, and significant public investment in AI.

Table 1. First national AI strategies (2016-2019) and their corresponding updates (2020-2024)

Country	Release	Name of strategy	Issued by	Updates	Name of strategy	Issued by
Korea, Rep.	2016	*Artificial Intelligence Information Industry Development Strategy*	Korean Ministry of Science, ICT and Future Planning	2020	*South Korea's National Strategy for Artificial Intelligence*	Ministry of Science and ICT
Canada	2017	*Pan-Canadian Artificial Intelligence Strategy*	CIFAR, a Canadian-based charitable organization	2022	*second phase - Pan-Canadian Artificial Intelligence Strategy*	Ministry of Innovation, Science and Industry
Japan	2017	*AI Technology Strategy*	Artificial Intelligence Technology Strategy Council, established by the Japanese Prime Minister Shinzō Abe	2022	*Japan AI Strategy 2022*	Not specified
Singapore	2017	*AI Singapore*	Smart Nation and Digital Government Office	2023	*Singapore National AI Strategy 2.0*	Not specified, foreword written by the Deputy Prime Minister and Minister for Finance
Finland	2017	*Artificial Intelligence Programme*	Steering group appointed by the Minister of Economic Affairs and Employment	2022	*Finland Artificial Intelligence 4.0 Program*	Ministry of Economic Affairs and Employment Enterprises
France	2018	*AI for Humanity: French Strategy for Artificial Intelligence*	French government appointed Cédric Villani to lead the process	2024	*Second phase - La stratégie nationale pour l'intelligence artificielle*	Ministère de l'Économie, des Finances et de la Souveraineté industrielle et numérique

United Kingdom	2018	*AI Sector Deal*	Department for Business, Energy and Industrial Strategy & Department for Digital, Culture, Media and Sport	2021	*National AI Strategy (2021-2031)*	Department for Business, Energy & Industrial Strategy, Department for Digital, Culture, Media & Sport, Department for Science, Innovation & Technology, and Office for Artificial Intelligence
Germany	2018	*Federal Government's Artificial Intelligence Strategy*	Federal Ministry for Economic Affairs and Energy, Federal Ministry of Education and Research & Federal Ministry of Labour and Social Affairs	2020	*Artificial Intelligence Strategy of the German Federal Government - Update 2020*	Federal Government
Australia	2019	*AI Technology Roadmap*	Department of Industry, Innovation, and Science	2021	Artificial Intelligence Action Plan	Department of Industry, Science and Resources
Estonia	2019	*Estonia's National AI Strategy*	Ministry of Economic Affairs and Communications and the Government Office	2021	*Estonia's National Artificial Intelligence Strategy for 2022-2023*	Ministry of Economic Affairs and Communications, Ministry of Justice, Ministry of Education and Research

Source: Original table for the *World Development Report 2026*.
Note: AI = artificial intelligence.

When governments refresh their AI strategies, they often use the opportunity to address earlier shortcomings. The motivations for revising national visions typically fall into three, sometimes overlapping, categories: first, existing public commitments to periodic updates— as seen in the United Kingdom, Australia, and Chile; second, major technological breakthroughs that reshape the landscape, such as those driving Singapore's revisions; and third, worldwide poly-crises like the COVID-19 pandemic and climate change, which have prompted Japan to act. India offers yet another distinct pathway for strategic renewal. Although its 2018 AI-Strategy vision remains formally in force, the country's approach and policy priorities have gradually shifted through a series of institutional mechanisms— including expert committees and task forces, extensive consultations with sectoral regulators, and ministerial guidelines—culminating in the launch of the India AI Mission in March 2024 (Press Information Bureau, 2024). In the case of Chile, the addition of new objectives expanded the strategy's scope to cover international cooperation, climate change mitigation, inclusion and non-discrimination, safeguards for children and adolescents, and the preservation of cultural heritage.

Inward turn – between openness and sovereignty

Beyond the maturation of the national approaches, the second phase in the development of national AI strategies has also been marked by the growing prominence of the concept of *AI sovereignty*. This refers to a nation's (or Union's) capacity to build and govern AI systems through its own infrastructure, datasets, and skilled workforce (Belli, 2023; Jiang & Belli, 2025; Mügge, 2024). Although definitions of AI sovereignty differ considerably across contexts (World Economic Forum, 2024), they generally converge on themes of technological autonomy, control

over critical resources, and the protection of national security interests (Belli, 2023). In recent years, governments have been simultaneously calling for "strengthened digital sovereignty over AI and deeper international cooperation on AI governance" (Roberts et al., 2023). These contrasting realities result in significant variation in what AI sovereignty means in practice – ranging from alignment with national laws and values (Kraley et al., 2024) to the development of a country's own infrastructure, data, workforce and business networks (Lee, 2024).

The advent of powerful generative models has shifted attention toward strategic competition, reinforcing concerns over dependency on foreign technologies, the risks of digital colonialism, and the geopolitical value of AI capabilities (Nothias, 2025). In response, many countries have started pursuing "compute sovereignty" through targeted industrial and public-sector policies aimed at securing domestic control over critical components of the AI supply chain (Hawkins et al., 2025). In the United States, the CHIPS Act (CHIPS and Science Act, 2022) authorized $39 billion in grants and loans, alongside tax incentives and research investments, to strengthen domestic semiconductor manufacturing. Similarly, the 2023 European Chips Act (Regulation (EU) 2023/1781, 2023) proposes €43 billion in public investment through 2030 to ensure Europe's "strategic autonomy". This centering of industrial policy around AI – in Europe and beyond – marks a notable shift in how governments approach the technology.

Beyond semiconductors, countries are also investing in supercomputing infrastructure to expand domestic capacity. The United Kingdom, under its 2025 AI Opportunities Action Plan, established a Sovereign AI Unit within the Department for Science, Innovation and Technology to leverage AI for economic growth and national security, in partnership with the private sector (Department for Science, Innovation and Technology, 2025). Canada's 2025 Sovereign AI Compute Strategy (Innovation, Science and Economic Development Canada, 2025), along with initiatives in Japan and the Republic of Korea, similarly prioritizes domestic high-performance computing resources. Korea, in particular, has introduced a full-stack "sovereign AI" approach, elevating AI investment to a top policy priority (Lee, 2025). In Europe, the EuroStack framework has been proposed as a comprehensive alternative for technological autonomy, with core components that include, among others, SovereignAI (AI-as-a-Service), SovereignCloud and EuroChips (Bria et al., 2025). Since March 2024, major tech companies including Nvidia, Oracle, and Microsoft have announced commitments to support sovereign AI, emphasizing national control over AI infrastructure and data sovereignty (Althoff, 2025; Nvidia, 2024).

Building on the discussion of compute sovereignty and strategic AI investments, aligning technological visions with national priorities remains a central and dynamic challenge for all governments (Bareis & Katzenbach, 2022). National AI strategies serve as a critical "middle ground" between geopolitical pressures and private-sector innovation, enabling governments to mobilize domestic resources, shape strategic priorities, and articulate a vision for the country's AI future. While analyses of national strategies are plentiful, the framing of strategies as a "middle ground" has received limited attention in the existing AI scholarship. Much of the current literature remains focused on single-country case studies or comparative analyses of first-generation strategies, often overlooking how national strategies evolve and interact with broader global governance dynamics. This paper addresses that gap by taking into account developments across the various phases of AI governance.

Methodological approach

Data collection

The research for this study was conducted in two steps. In the first step, existing repositories of national AI strategies were examined and their limitations were established. Building on these repositories, a new data collection process was developed to include up-to-date information on national AI strategies from around the world[5]. Data collection took place between March and June 2025. The inclusion criteria focused on AI-specific strategies, excluding broader emerging technology or digitalization strategies. Similarly, the United States Executive Orders on AI (2019, 2023)[6] were not included in the analysis, since they were not the result of broad national consultations and had a relatively limited lifespan. European Union member states were also excluded, as their AI governance falls within the scope of the EU AI Act.

In the second step, cases were selected for in-depth qualitative analysis, taking into account income levels, geographical diversity, and the availability of the national AI strategy in a language accessible to the research team.[7] Further details on the case selection are provided below (see table 2).

Table 2. National AI strategies by income level, with sub-set selected for in-depth analysis

WB categorization	Total	With a national AI strategy published (as of June 2025)	% with national AI strategy published (out of total)	Included in the analysis	% included in the analysis (of those with AI strategy)
Low-income economies ($1,145 or less)	26	1	3.8%	1	100%
Lower-middle income economies ($1,146 to $4,515)	51	19	37%	8	42%
Upper-middle income economies ($4,516 to $14,005)	54	24	44%	9	37%
High-income economies ($14,006 or more)	86	45	52%	7	15%
TOTAL number of economies	**217**	**89**	**41%**	**25**	**28%**

Source: Original table for the World Development Report 2026.
Note: AI = artificial intelligence.

The documents retained for in-depth analysis are presented in table 3, which lists strategic documents articulating each nation's AI vision—regardless of whether they are labeled "strategy," "plan," or "policy framework" [8]. Interestingly, these variations in terminology do not appear to influence the depth or precision of the content. Across these different labels, documents vary more in their level of specificity – ranging from broad aspirational objectives to precise key performance indicators – than in the designation used in the title.

Table 3. National strategic documents included in the analysis

Geographical region	WB income category	Country	NAIS publication year	Strategy
Latin America and The Caribbean	upper-middle income	Argentina	2019	National AI Plan
	upper-middle income	Brazil	2021	Brazilian AI Strategy
	high-income	Chile	2024	National AI Policy: 2024 Update*
	high-income	Uruguay	2024	National AI Strategy 2024-2030*
	upper-middle income	Colombia	2019	National AI Policy
	upper-middle income	Peru	2021	National AI Strategy
	upper-middle income	Costa Rica	2024	National AI Strategy
	upper-middle income	Dominican Republic	2023	National AI Strategy
Western Europe	high-income	United Kingdom	2021	National AI Strategy*
Eastern Europe	upper-middle income	Moldova	2024	White Book on AI and Data Governance
East Asia	high-income	Singapore	2023	National AI Strategy (2.0)*
	high-income	Japan	2022	AI Strategy 2022*
	lower-middle income	Viet Nam	2021	National Strategy on Research, Development and Application of AI
Middle East and North Africa	high-income	Qatar	2019	National AI Strategy
	lower-middle income	Jordan	2023	AI Strategy and Implementation Plan
	lower-middle income	Egypt, Arab Rep.	2025	Egypt National AI Strategy - Second Edition (2025-2030)*
South and Central Asia	upper-middle income	Türkiye	2021	National AI Strategy (2021-2025)
	lower-middle income	Uzbekistan	2024	Strategy for the Development of AI Technologies until 2030
	lower-middle income	Bangladesh	2020	National AI Strategy
	lower-middle income	India	2018	National Strategy for AI
Pacific	high-income	Australia	2021	AI Action Plan*
Africa	upper-middle income	South Africa	2024	National AI Policy Framework
	low income	Rwanda	2023	National AI Policy
	lower-middle income	Kenya	2025	National AI Strategy
	lower-middle income	Ghana	2022	National AI Strategy

Source: Original table for the World Development Report 2026
Note: Income classifications are as of 2025. AI = artificial intelligence.
*Denotes a second-generation strategy.

Qualitative analysis

Having selected 25 countries for in-depth study, the qualitative thematic analysis was structured around directional pillars and implementation vectors, which were subsequently divided into eight dimensions, as explained below.

Table 4. Overview of the themes analyzed

Dimension	Theme	Description
Vision and positioning	*Public-sector adoption objectives*	Targets and roadmaps for integrating AI into government services, improving public-service delivery, and enhancing administrative efficiency
	Ethical concerns and responsible AI development/adoption	Guidelines, accountability mechanisms, and normative principles that ensure AI is deployed in a trustworthy and socially acceptable manner
	Regulatory orientation	The legal and policy framework encompassing standards, compliance requirements, and oversight bodies.
	Environmental sustainability considerations	Policies that align AI initiatives with climate goals, energy efficiency, and broader ecological stewardship.
	International cooperation approaches	Collaborative mechanisms, multilateral standards-setting, and cross-border partnerships that enable shared learning and coordinated governance across nations
Resource mobilization	*Public investment and funding mechanisms*	Means of financing to sustain AI research and deployment
	Business environment strategies	Measures to cultivate the AI ecosystem, such as tax incentives, incubators, and partnership models with industry
	Workforce transformation and skills-development measures	Programs for reskilling, upskilling, and expanding the talent pipeline to meet AI-related labor demands.

Source: Original table for World Development Report 2026.
Note: AI = artificial intelligence.

Analyzing each national strategy against these eight dimensions resulted in a comparative matrix that enabled the identification of common patterns, gaps, and divergent emphases across jurisdictions.

Secondary data analysis

The development of AI infrastructure and high-performance computing (HPC) emerged as a central priority across the subset of strategies examined in-depth. Because the funding mechanisms for these initiatives were not clearly defined in the source material, a secondary analysis was conducted using the data gathered by EpochAI, which is publicly available in the "AI Supercomputers" dataset (Pilz et al., 2025). The dataset was downloaded in June 2025 and analyzed separately to assess the source and magnitude of investments in AI-related computational differences between existing and planned HPC projects, and their geographical distribution.

Findings

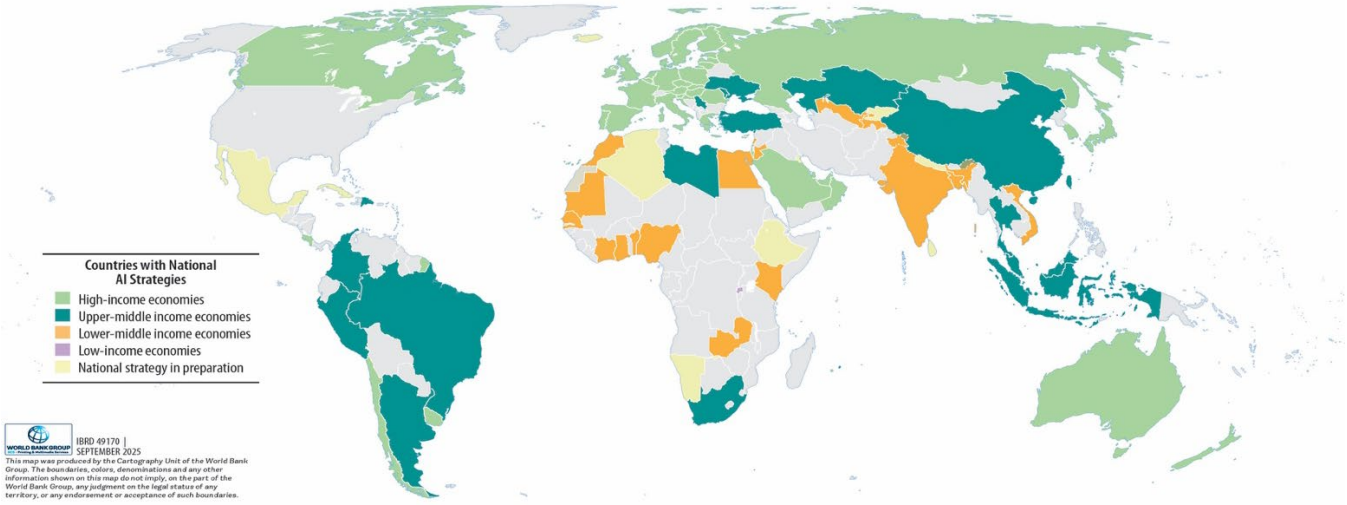
The findings of this analysis are presented into two parts. The first part presents overarching observations that emerged from the review of the entire sample of national AI strategies, alongside insights from the secondary analysis of the AI Supercomputer investment dataset. The second part delves into a comparative matrix that disaggregates the results based on 25 strategies analyzed in depth, noting areas of convergence and divergence among low-, middle-, and high-income countries represented in the dataset.

Key observations – global landscape

Chronologically, most national AI strategies were published after 2020, after the surge of generative AI. As governments have developed a more sophisticated understanding of AI technologies and learned from one another, newer documents tend to be more comprehensive and precise. In higher income countries, the overarching AI framework is usually augmented with a suite of sector-specific policies and industrial-strategy instruments. By contrast, many middle- and lower-income countries still depend mainly on a single foundational national AI strategy document – a key distinction in how they approach learning and adaptation. Learning from the experience of other countries is often mentioned. The Arab Republic of Egypt's second AI strategy, for example, states that it will be "guided by benchmarking criteria as well as by the experience of a number of countries, including China, Brazil, Korea, Saudi Arabia, Türkiye, and the United Arab Emirates" (National Council for Artificial Intelligence, 2025, p. 14). Similarly, Uzbekistan pledges to establish a robust legal framework for AI by studying research outcomes and the practices of advanced nations, while Rwanda and Ghana aim to participate actively in global AI forums to share perspectives and learn from international experience. Ghana further intends to engage in peer learning through the Africa-Asia AI Policymaker Network (Ministry of Communications and Digitalisation, 2023, p. 25).

The initial mapping of national AI strategies (see map 1) reveals significant gaps in geographic distribution, with Africa remaining noticeably underrepresented. Approximately half of African nations are still in the early stages of formulating AI roadmaps, even as the African Union's 2024 Continental AI Strategy urged member states to craft comprehensive national AI strategies and governance frameworks and to elevate AI to a national priority (African Union, 2024). The core focus areas in the AU Strategy include building member states' capacity in infrastructure and AI talent, and stimulating public and private investment in AI at both the national and regional levels – objectives that are often reflected in the existing national strategies across the continent.

Map 1. Global landscape of national AI strategies

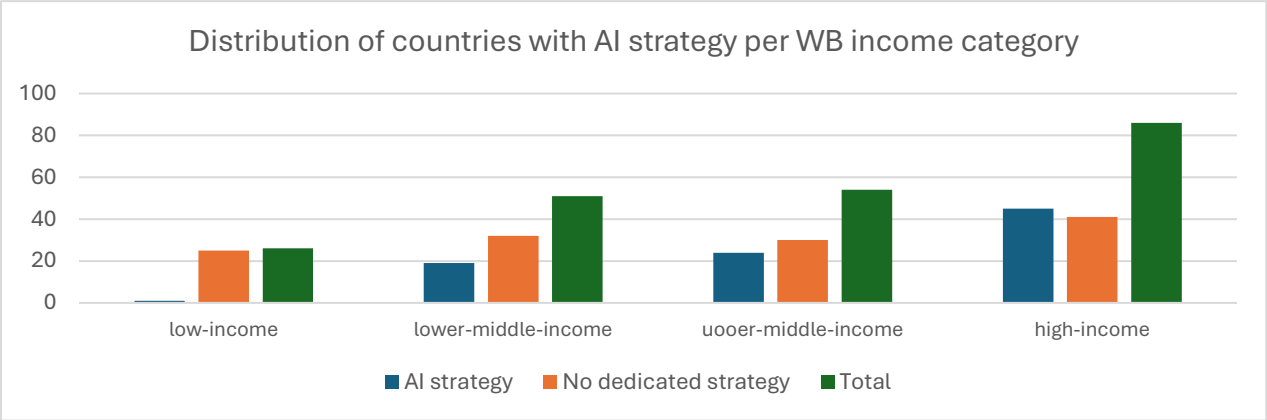


Source: Author's own research.
Note: Data were collected between March and June 2025. The sample includes published strategies for which the full text could be found online.

An initial classification using the World Bank's income classification (see figure 1) shows a strong correlation between a country's level of economic development and its likelihood of having a national AI strategy. There are stark differences in the maturity of AI discussions and vision between the lowest and the highest income levels: as of June 2025, Rwanda was the only low-income country among 26 countries that had published a dedicated AI strategy, compared to more than half of all high-income countries. Among high-income countries, some, such as Switzerland,[9] have integrated their AI visions into broader digital transformation strategies, while others have already updated their plans (e.g. Singapore and Germany). Notably, revisions and updates of national AI strategies are no longer exclusive to higher-income countries – many middle-income countries, such as Egypt, have followed suit.

Among low-income countries, Ethiopia and South Sudan have started national discussions to identify priorities for a national AI strategy. Proportionally, lower-middle-income countries are less likely than upper-middle-income countries to have published an AI strategy. However, the strategies examined in depth in this paper (see Section II) rarely acknowledge the need to support emerging economies on AI-related matters, despite a shared commitment to international cooperation. This finding suggests that advancing AI governance in lower-income countries may require focused international assistance, dedicated capacity-building initiatives, and collaborative frameworks that enable these countries to engage meaningfully in global AI governance discussions.

Figure 1. Distribution of national AI strategies by income level



Source: Original calculations based on author's review of national strategies.
Note: AI = artificial intelligence; WB = World Bank.

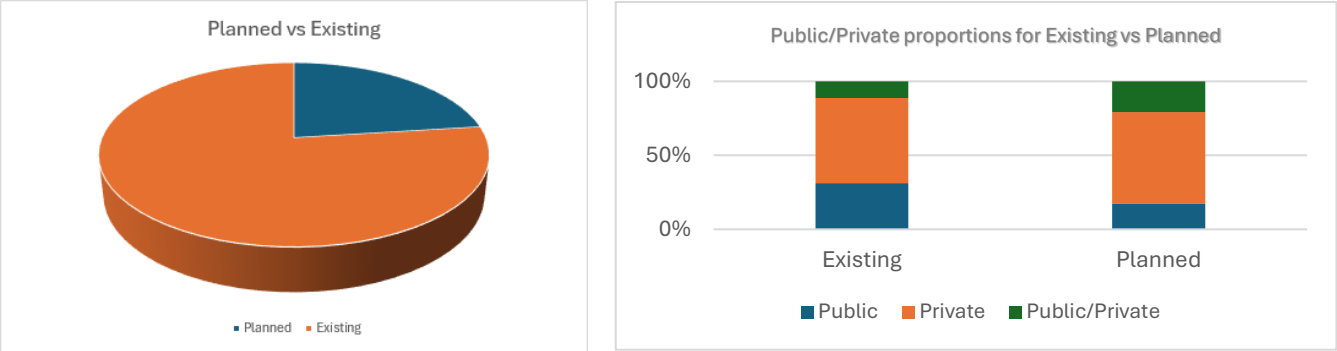
The divide between lower-income and higher-income countries is also visible in investments in infrastructure. The secondary data analysis using the EpochAI dataset reveals a rapidly expanding supercomputing ecosystem (Pilz et al., 2025). In terms of AI-hardware spending, this dataset only provides a snapshot of reported entries per country, rather than a definitive measure of worldwide investment. Within this limited scope, the United States dominates the sample, contributing about three-quarters of the total hardware costs recorded. Although China is a major player in AI hardware development, it accounts for only about 3% of the same pool. The remaining approximately 21% covers a heterogeneous mix of European countries, as well as Brazil, Japan, India, Saudi Arabia, and others. Given these limitations, this study deliberately shifts from precise monetary totals to the direction of investment – whether funds are being allocated toward new planned capacity or reinforcing existing infrastructure, and whether those allocations are driven primarily by public or private actors.

As of the latest inventory, 469 systems are already operational, while 140 HPC facilities are planned by 2030, bringing the worldwide total to 609. Funding patterns differ slightly between existing and planned supercomputer projects, confirming a market-driven model in which the big tech leads in building today's high-performance computing infrastructure. Currently, roughly three-quarters of the capital behind the 469 active supercomputers comes from the private sector (approximately 60%) and mixed public-private partnerships (approximately 10%), with only about 30% sourced from public investments.

Looking ahead, the financing mix for the 140 forthcoming supercomputers shifts even further toward private dominance (see Figure 2). Public contributions are projected to fall below 20%, while private capital remains steady at around 60%. Notably, the share of mixed public-private arrangements rises to about 20%, suggesting that future projects may rely more heavily on collaborative funding schemes that require governmental involvement. Overall, these figures indicate two complementary trends: a substantial increase in overall compute capacity, driven largely by private sector investment; and a gradual rebalancing of funding sources for new builds, with mixed partnerships playing a modest but growing role.

Figure 2. Global distribution of supercomputers (author's compilation, based on Pilz et al, 2025)

Panel A **Panel B**



Sources: Original calculations based on Pilz et al. (2025)
Note: In Panel A, *Planned (till 2030): 140; Existing: 469; Total: 609*

Overlaying the financing structure, the distribution of supercomputers is sharply skewed toward a few regions. About 90% of the world's supercomputing capacity resides in advanced economies, with only a handful of facilities in developing countries (Pilz et al., 2025). Lehdonvirta et al. (2024) reached a similar conclusion, mapping the "compute north" and finding that the vast majority of data-center sites and the ownership of graphics processing unit (GPU)-rich infrastructure are clustered in the United States, Europe, Japan, Korea and China, while "compute south" regions—Latin America, Africa and much of Southeast Asia—host only a small fraction of the total AI compute footprint. This asymmetry matters for several reasons. First, it reinforces existing power imbalances: countries that control the bulk of high-performance hardware also dominate AI research, talent pipelines, and the economic benefits that flow from advanced models. Second, this concentration raises geopolitical risks, as strategic compute becomes a contested resource in international security debates. Finally, the scarcity of compute in developing countries limits local innovation and creates dependency on foreign cloud providers. Addressing these disparities will depend on incentives to build regional supercomputing hubs and open-access compute.

National strategies under the magnifying glass

The in-depth analysis of the 25 strategies selected for the qualitative analysis reveals that they fulfil two principal functions**.** In the absence of a binding global framework for AI governance, these strategies set the direction at the national level, influencing diplomatic leverage, trade negotiations, and security postures in a world where AI capabilities increasingly define strategic advantage. Since 2021, the parallel development of regional approaches, regulatory frameworks and guidelines – in the European Union, the Organization of American States, ASEAN, and the African Union – has is frequently been referenced in national strategies and reflects shared aspirations: fostering inclusive economic growth, ensuring sustainable development, and embedding human-centered values.

Beyond the external dimension, national AI strategies also serve as instruments for domestic consensus-building, offering a structured venue for stakeholders to discuss strengths, vulnerabilities, and priority areas. Through consultation processes engaging various sectors, these documents crystallize a collective understanding of where a country excels, where it lags, and where focused investment or regulation might be needed – aligning public

expectations with policy action. Multi-stakeholder participation is embedded through different mechanisms, from actively promoting involvement of the private sector, academia, and civil-society in global venues where technical standards for AI governance are formulated – as in Uruguay – to establishing bodies with diverse membership, such as Moldova's Sub-Council on AI and Data Governance, Jordan's Steering Committee, and Argentina's Multisectoral Committee on AI.

To move from vision to implementation, an integrated, government-wide approach to AI governance has replaced the sector-based model that characterized the 2016-2018 period. This shift is reflected in the institutional frameworks for each of the countries analyzed, which tend to fall into three categories: lead ministry in change of implementing the national strategy and related action plans; a coordinating agency with inter-ministerial mandate; or a new agency in charge of AI (see table 5). Countries analyzed in this study predominantly fall within the first category.

Table 5. Lead agency for AI strategy/action plan implementation

Geographic region	Country	Lead ministry	Existing agency for interministerial coordination	New agency in charge of AI
Latin America and The Caribbean	Argentina			AI Scientific Committee + AI Innovation Lab
	Brazil	Ministério da Ciência, Tecnologia e Inovação		
	Chile	MinCiencia		
	Uruguay		Agency for Electronic Government and Information Society (AGESIC)	Strategic Committee of the Public Sector for AI and Data
	Colombia	Ministerio de Tecnologías de la Información y las Comunicaciones		
	Peru		Secretariat of Government and Digital Transformation - under the Presidency of the Council of Ministers	
	Costa Rica	Ministry of Science, Innovation, Technology and Telecommunications		
	Dominican Republic			Dirección General de Innovación y Desarrollo Digital
Western Europe	United Kingdom	Department for Science, Innovation and Technology – hosts Central AI Risk Function and AI Security Institute		
Eastern Europe	Moldova	Ministry of Economic Development and Digitisation		
East Asia	Singapore	Ministry of Digital Development and Information		
	Japan			AI Strategic Headquarters (Cabinet Office)
	Viet Nam	Ministry of Science and Technology		

Middle East and North Africa	Qatar	Ministry of Communications and Information Technology		
	Jordan	Ministry of Digital Economy and Entrepreneurship		
	Egypt, Arab Rep.			National Council for Artificial Intelligence, chaired by the ICT Minister
South and Central Asia	Türkiye	Ministry of Industry and Technology	Presidency Digital Transformation Office	
	Uzbekistan	Ministry of Digital Technologies		
	Bangladesh	ICT Division		
	India	Ministry of Electronics and Information Technology		
Pacific	Australia	Department of Industry, Science and Resources – hosts the National Artificial Intelligence Centre	Digital Transformation Agency	
Africa	South Africa	Department of Communications and Digital Technologies – hosts the AI Institute of South Africa		
	Rwanda	Ministry of ICT and Innovation		
	Kenya	Ministry of Information, Communications and The Digital Economy		
	Ghana	Ministry of Communications and Digitalisation		

Source: Original table for World Development Report 2026.
Note: AI = artificial intelligence.

Alongside a centralized function for strategic coordination and stewardship, horizontal integration of AI into various ministerial mandates is common. Vietnam's strategy delineates explicit functions and responsibilities for each ministry, from the Ministry of Science and Technology to the Ministry of Labor. Singapore's updated strategy stipulates that every government agency heading a whole-of-government functional domain must identify AI-enabled business lines, refine them, and develop internal capabilities to generate tangible outcomes. Rwanda's roadmap incorporates "AI Ethics" duties into the mandates of Chief Digital Office units and analogous departments within ministries and agencies.

Risk-based approaches are common among the countries included in the study, with a growing number of jurisdictions being influenced by the risk classification used by the EU AI Act. Examples include countries across Latin America –Brazil, Chile, Colombia, Costa Rica, Peru- and Asia, including Bangladesh, Egypt, Qatar. In states that prefer targeted interventions, sector-specific regulations addressing AI development have recently been adopted. Singapore is a notable example, having passed the Elections (Integrity of Online Advertising) (Amendment) Act 2024 (Government of Singapore 2024), the Online Safety (Relief and Accountability) Bill 2025 (Parliament of Singapore 2025), and the Workplace Fairness Bill 2025 (Government of Singapore 2025).

To manage emerging risks, AI sandboxes are commonly referenced across countries, irrespective of income level. Kenya's roadmap anticipates the enactment of an AI and Other Emerging Technologies Act, the deployment of flexible sandbox environments to inform the formulation of standards, and continuous updates to policy and

regulatory frameworks to foster an investment-friendly climate. For Costa Rica, the regulatory sandbox must span the entire AI lifecycle, enabling the identification of risk-critical elements that warrant formal regulation. Finally, Türkiye is preparing legislation that formalizes the creation and use of a regulatory sandbox for innovative AI applications, accompanied by the publication of guiding documents to support deployment.

Across the national strategies examined, aspirations align more closely than they diverge, regardless of each jurisdiction's level of AI maturity. This convergence is also visible in the legislative landscape surrounding national strategies, which is generally anchored by data protection statutes that empower dedicated agencies to enforce AI data protection and privacy compliance. Data-governance reforms—particularly updates to privacy legislation and access to open data— represent a key component of national strategies, signaling a consensus that robust data frameworks are a prerequisite for AI deployment.

Areas of convergence

Among the 25 countries examined in depth, a pronounced pro-innovation stance dominates the national AI agendas. Fostering an enabling environment for AI markets emerges as a priority across the board, as countries pursue different approaches: financial incentives, infrastructure integration, dedicated institutional support, and regulatory certainty. Measures range from broad-based interventions, such as South Africa's provision of financial support and incentives for AI research, to highly targeted interventions, exemplified by Japan's plan to interlink its digital data platform with systems like India Stack to unlock larger markets and scale businesses, or Kenya's AI Special Economic Zones. Similarly, Qatar is pursuing a stable regulatory and incentive regime to attract AI-driven firms, Türkiye plans to introduce regulations stimulating venture-capital investment in AI, and Australia's proposal for a National AI Centre specifically tasked with removing barriers faced by small and medium-size enterprises.

Start-ups receive special attention in many of the national AI strategies analyzed. Eight documents specifically earmark support for AI-focused startups, while others pursue public-private funding avenues and incubation hubs. Egypt, for example, has pledged to launch more than 250 successful AI companies and to fill niche market gaps by building AI applications for specialized sectors such as public services. Singapore plans to partner with private sector players to fortify its AI start-up ecosystem by actively courting accelerator programs that can accelerate experimentation. Brazil's 2021 calls for new public-private partnerships (PPPs) designed to spark the creation of Brazilian AI start-ups. Kenya aims to leverage public-private partnerships—particularly collaborations between government, private firms, and venture-capital investors—to drive investment in localized AI and technology solutions, and proposes a national AI and emerging technology innovation fund financed from the National Research Foundation's Research and Development (R&D) allocation (2% of GDP) to support AI development.

The present analysis shows that most AI strategies direct the largest share of funding and incentives toward research, with roughly half of the documents explicitly targeting R&D, innovation, or broader scientific goals. Across the sample, the most frequently cited interventions target the creation or strengthening of research institutions, channeled through institutional arrangements such as Centres of Excellence, innovation laboratories, and multi-sectoral research networks. These are frequently tied to international cooperation goals, particularly

where strategies emphasize strengthening research collaborations and easing talent acquisition through streamlined visa regimes. Illustrative cases from Latin America include Peru's National Center for Innovation and Artificial Intelligence, which aims to serve as an accelerator, promoter, and facilitator of AI research, development, and deployment throughout the country, as well as Argentina's AI Network and AI Innovation Lab and Brazil's Artificial Intelligence Observatory. By contrast, direct investment in talent development is very scattered, ranging from dedicated financing for scholarships, student placements, or capacity-building programs to Kenya's ambition to develop and implement an AI and emerging tech diplomacy program. Despite the varying levels of international commitment, all countries included in the study express an intention to participate in the global AI governance discussions.

Ethical considerations are universally acknowledged, often with reference to international frameworks – primarily OECD and UNESCO – or to bespoke national frameworks, such as Australia's AI Ethics Framework and Rwanda's Guidelines on the Ethical Development and Implementation of AI. In India, defining standards and overseeing adoption was the responsibility of a consortium of Ethics Councils under the 2018 strategy. In other cases, the rollout of AI is explicitly coupled with cybersecurity imperatives, as seen in Japan and Singapore. A vast majority of countries—among them Uzbekistan and Moldova—are currently developing country-specific ethical guidance for AI. Qatar proposes an "AI Ethics and Governance" framework to address public-policy and moral questions; Jordan plans to introduce a National AI Code of Ethics together with a compliance monitoring system; Egypt calls for a comprehensive responsible AI framework; and South Africa outlines both guidelines for ethical and effective AI deployment in government operations and mechanisms to identify and mitigate AI-related risks.

Public-sector adoption objectives – present in all strategies – coalesce around two recurring objectives: enhancing public-service delivery through AI and providing dedicated training for civil servants. Alongside revisions to public-procurement regulations, many governments are developing systematic inventories of AI-ready assets that can be leveraged by the public sector. For example, Moldova proposes the creation of a monitoring system and a publicly accessible metadata catalog that aggregates the public-private datasets required for national AI initiatives.

Open data promotion underpins all strategies examined. Peru goes a step further with a rewards and penalties program for public and private organizations to publish high-quality data in an open, reusable format on the government's open data platform (datosabierto.gob.pe). Drawing on what has worked, Uruguay plans to consolidate State AI Observatory as a tool to promote transparency in the government's use of AI. For Argentina, the National Observatory of Artificial Intelligence would function as an advisory and audit entity for AI-related public policies and automated processes. Similar granular measures include Kenya's mandate that all public-sector AI deployments undergo a compulsory ethical impact assessment, and Rwanda's establishment of a shared risk fund that allocates budgetary support for AI-focused research and development within ministries and agencies.

Workforce readiness receives uniform attention: every strategy calls for upskilling existing workers and integrating AI into school curricula. Many countries articulate quantitative graduation targets or expand existing training pipelines. Japan specifies the number of AI-qualified graduates it expects to produce in the near future, Singapore seeks to enlarge its "AI Practitioner" pool, and Ghana's "AI-Ready" program aims to deliver AI instruction from the first year of secondary school through tertiary studies. Other jurisdictions focus on formal credentialing and

standards: India intends to align AI and data science training with its National Skills Qualification Framework and accredit training providers, Egypt proposes an AI-practitioner qualification and certification scheme, and Kenya plans a tiered “AI Trainers” program to develop instructional capacity at multiple levels. Several strategies also integrate applied learning pathways, such as designing degree programs that incorporate apprenticeships or problem-solving approaches (e.g. Qatar).

Areas of divergence

The comparative review of 25 national AI strategies shows convergence in overarching objectives: fostering a vibrant AI ecosystem, establishing research hubs and partnerships, preparing an AI-ready workforce, and embedding normative and ethical safeguards. Nevertheless, important gaps and differences exist. Although every strategy discusses state funding, the majority provides only generic affirmations of “public support” without specifying budgetary allocations, fiscal timelines, or disbursement mechanisms. Where public resources are complemented by private capital and PPP arrangement, no explicit sources are identified in the strategy. Nine strategies—spanning Latin America (Argentina, Brazil, Chile, Costa Rica), South Asia (Bangladesh, India), Southeast Asia (Viet Nam), and Sub-Saharan Africa (Kenya, Rwanda)—explicitly endorse public-private collaboration, either through joint ventures or co-funding schemes. In low- and middle-income contexts, the role of foreign direct investment, development aid, and multilateral donors in bridging financing gaps is often mentioned.

On the compute front, roughly half of the strategies call for the development of data center and cloud infrastructure or HPC facilities. The development of domestic AI hardware manufacturing appears in Kenya’s strategy, which also includes a discussion of 5G rollout - a critical enabler for latency-sensitive AI use cases that has been politically contested– a topic also present in the Bangladeshi and South African strategies[10] . While almost all the countries prioritize data availability and sharing, only a minority explicitly commit to constructing local-language corpora, an indispensable foundation for natural-language-processing (NLP) applications. Notable exceptions include India’s initiative to build advanced NLP infrastructure for Indian languages with sentiment and semantic analysis capabilities and Egypt’s plan to develop a large Arabic language model. Other jurisdictions are tailoring data resources to local contexts: Uruguay is generating and releasing training datasets that reflect its linguistic and cultural specificities; Kenya seeks to position itself as a regional hub for locally adapted AI models; and South Africa commits to training AI systems on datasets that represent all demographics. Moreover, the most recent strategies are beginning to address ancillary issues such as intellectual property protection, as discussed by Egypt.

Major differences exist in regulatory orientation, revealing a spectrum of governmental approaches ranging from soft law to hard law. As the strategies focus on an AI-enabled economy and consumer trust, there is an emphasis on responsible AI development and deployment, though institutional avenues to achieve that vary from the creation of a national committee to evaluate and promote AI regulatory sandboxes, as in the Dominican Republic, to the development of a national AI risk and safety institute, as in Kenya. In terms of scope, strategies range from sector-specific actions, as in India, to broad exploratory actions, as in Costa Rica and Dominican Republic. In Colombia, a multi-layered regulatory framework is proposed, spanning technical standards and fair spectrum compensation to tailored rules to foster AI-driven Internet of Things (IoT) and private network innovation.

Singapore combines a case-centric, agile approach with regulatory sandboxes[11] for privacy-enhancing technologies and commits to periodic revisions of its Model AI Governance Framework and AI Verify to accommodate generative-AI developments. Regular legislative and regulatory reviews are also mentioned by Jordan. For the United Kingdom, blanket AI-specific legislation would be premature, and existing sectoral regulators are best placed to assess impacts; its 2021 strategy therefore articulates five cross-sectoral principles, an AI-assurance system, and a focus on industry-led innovation and talent attraction. Egypt's "National Regulatory System" is conceived as a comprehensive mechanism that steers the strategic expansion of AI capabilities while guaranteeing transparency, responsibility, and conformity with international benchmarks.

As governments adjust domestic policy and international posture to mitigate AI-related risks, capacity building is a major need identified by middle-income countries such as Jordan and Bangladesh, and specifically by Rwanda among low-income countries. For that reason, Rwanda is establishing a policy and regulatory capacity-building initiative aimed at equipping its authorities with the expertise needed to align national oversight with emerging global standards and best practices. In higher-income countries, there is greater emphasis on regional exchanges and international technical standards, with a focus on data-exchange mechanisms, harmonized certification schemes, and joint standard-setting bodies. Leadership in setting international technical standards has traditionally been dominated by a handful of high-income economies (Hennessy et al., 2026), yet emerging regions are carving out their own pathways. Egypt is championing a Unified Arab AI Standards initiative, which reflect shared cultural values across the region. Costa Rica seeks to develop and publish advanced technical standards that incorporate sustainability criteria such as energy efficiency, minimized environmental impact, and system resilience.

Although environmental considerations were once peripheral, newer AI strategies increasingly emphasize energy-efficient models and investments focused on sustainability. High-income countries tend to integrate climate-friendly criteria, circular-economy targets, and green-technology incentives more thoroughly into their national frameworks than lower-income countries, where sustainability concerns are often mentioned only in passing, as seen in Viet Nam's strategy. There are growing instances of countries tailoring environmentally conscious priorities to their own context, such as Chile, Colombia, and Egypt. Japan takes an expansive view, positioning AI as a tool to confront planetary crises and promote broader environmental resilience. Other countries are adopting complementary diplomatic and talent policy measures to deepen their regional and international ties. Qatar pledges to spearhead multilateral diplomatic initiatives that facilitate data-sharing among small-population states, thereby strengthening collective intelligence resources. Kenya aims to shape talent flows through visa changes and to launch an AI and emerging technology diplomacy program, while Ghana builds on partnerships such as Smart Africa and GIZ FAIR Forward to join the Africa-Asia AI Policymaker Network for peer learning and joint policy development across continents. While these initiatives reflect each country's assessment of its own strengths and vulnerabilities, they also reveal a fragmented landscape for governing AI at the national level.

Conclusion

This paper has provided a comparative overview of national AI strategies, identifying priorities and limitations across income levels. By systematically analyzing the existing roadmaps, it becomes clear that all governments are grappling with the cross-cutting dimensions of AI—ranging from workforce reskilling to the environmental ramifications of deploying this technology. The paths crafted at the national level reveal differences in regulatory approaches and institutional frameworks, as well as varying investment strategies.

The emergence of whole-of-government approaches has produced several notable shifts. First, ministries that traditionally operated in silos—such as education, industry, environment, and justice—are now coordinating through inter-agency task forces or dedicated AI agencies, thereby fostering coherence in the implementation of the overarching goals. Second, the integration of ethical and sustainability criteria into national AI visions reflects a growing awareness that the long-term success of AI deployment hinges on public trust and ecological stewardship. Third, many countries have begun to align their domestic initiatives with regional efforts and internationally recognized processes, which helps to facilitate cross-border collaboration and creates a common language for governance.

The analysis shows a prioritization of research capacity development and computational infrastructure investment to accelerate AI adoption. In most jurisdictions, PPPs serve as the primary vehicle for delivering these research-centric investments, while direct public budgeting for AI initiatives and talent-development programs often remain underspecified.

Despite these shared priorities, notable differences exist. First, the extent to which demand-side incentives—such as subsidies for AI adoption, procurement mandates, or tax credits for small and medium-sized enterprises and startups—are incorporated varies widely, with some countries embedding extensive market stimulus measures and others mentioning them in general terms. Second, approaches to standardization and hardware localization differ: a few countries explicitly outline leadership ambitions, whereas many others leave these aspects undefined or rely on existing international frameworks. Third, attention to environmental sustainability is inconsistent: some strategies include dedicated subsections addressing green AI practices, whereas others focus almost entirely on AI deployment without discussing its environmental impact.

Looking ahead, the journey is far from complete. Since data collection for this study ended in June 2025, New Zealand and Ethiopia have also released their first national strategies. As more governments take active steps toward positioning AI domestically and internationally, important gaps remain in areas such as capacity building for policymakers, equitable access to HPC resources, local language models and AI competence and skills programs. It is encouraging to see that many countries are looking to one another for inspiration: the most recent, and sometimes revised, AI strategies often incorporate lessons learned elsewhere, allowing countries to “leapfrog” over earlier stages of development, which is particularly valuable when AI technologies are a moving target. At the same time, wealthier nations have started diversifying their approach to AI, with separate strategies and regulatory approaches for priority areas, whereas many lower-income countries still lack the institutional capacity and political momentum needed to address the same set of challenges.

Notes

[1] Author's data, coupled with information from Our World in Data, 2024; OECD AI Dashboard, 2025.
[2] While specific AI regulations are pending, many countries have discussed how existing technology-agnostic laws, primarily rules on data protection and copyright, apply to AI.
[3] While NAIS often reflect the political culture and institutional norms of the countries that develop them (Ulnicane & Erkkilä, 2023; Kazim et al., 2021; Bareis & Katzenbach, 2022; Fatima et al., 2020), their influence goes beyond national borders. By defining values, priorities, and regulatory approaches, these strategies guide cross-border cooperation, partnerships, and international standard-setting.
[4] Explanatory Report to the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law (Vilnius 5 September 2024).
[5] Including the OECD AI Policy dashboard and the Digital Watch observatory data.
[6] Executive Order on Maintaining American Leadership in Artificial Intelligence/American AI Initiative (signed by President Trump in February 2019); Executive Order 14110 "Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence" (signed by President Biden in October 2023 and repelled by President Trump in January 2025).
[7] This included English, Spanish, French, Romanian, Italian.
[8] This analysis excludes European Union member states, as they fall within the scope of the EU AI Act.
[9] The revised Digital Switzerland Strategy identifies AI as one of the three key priority areas.
[10] For an in-depth discussion, see Radu & Amon (2021).
[11] A regulatory sandbox is "a controlled environment, established to understand the opportunities and risks associated with specific innovations and to develop an appropriate regulatory environment to accommodate them effectively" (Organisation for Economic Co-operation and Development, 2022).

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