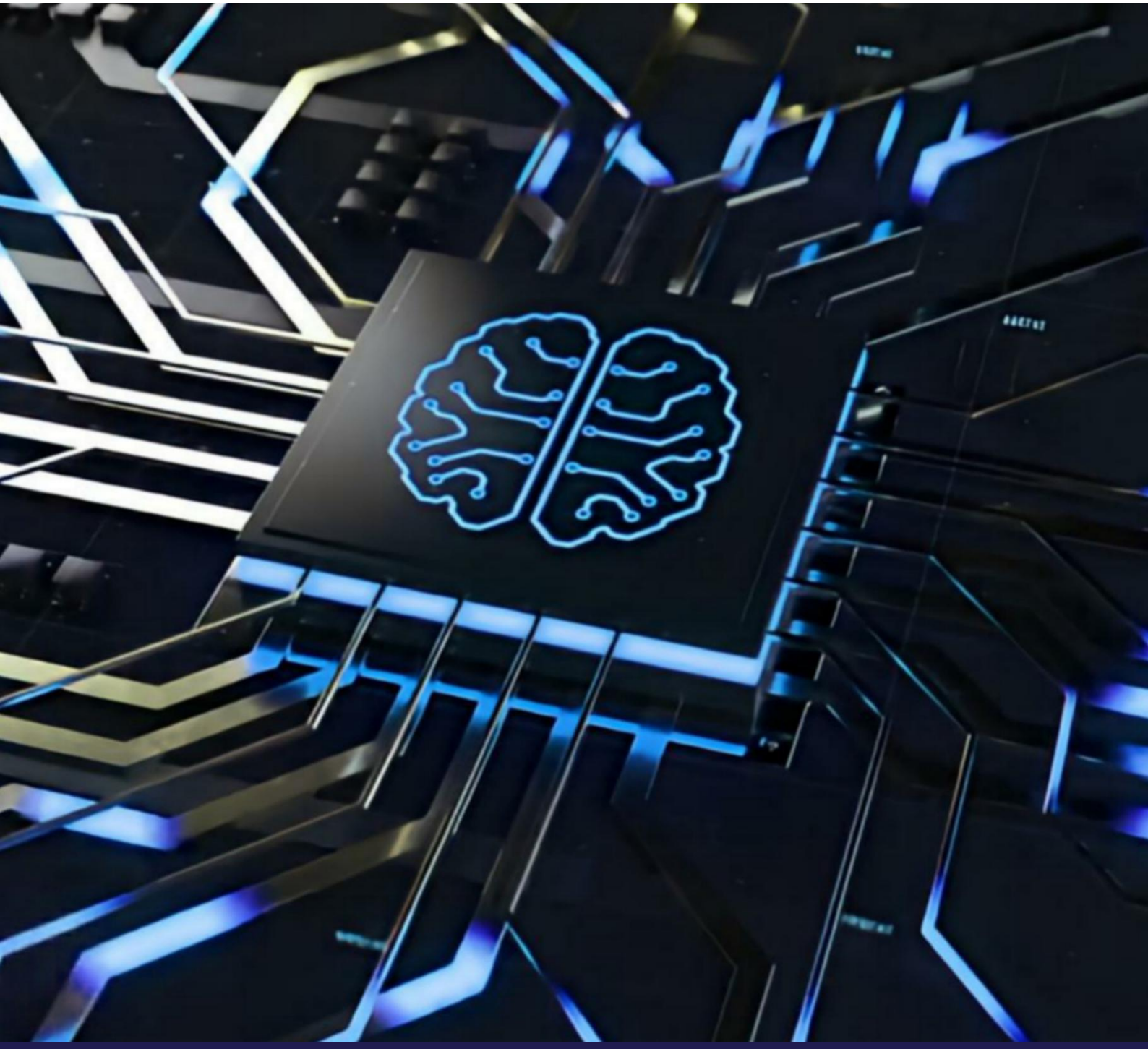
Southeast Asia Tech Stack Sovereignty

Paper 4: The AI Stack



November 2026

Southeast Asia
Public Policy Institute



Southeast Asia
Public Policy Institute

This report has been developed by the Southeast Asia Public Policy Institute to support stakeholders' understanding of the concept of technology stack sovereignty in Southeast Asia. The views expressed are those of the authors and do not necessarily reflect the views of any affiliated organizations or partners. It is also not intended to be an exhaustive review of policy, legislation, or regulation and should be used with due caution and consideration of its scope and limitations.

You can find out more about the Institute's work at seapublicpolicy.org

Table of Contents

Abbreviations **4**

Executive summary **1**

Introduction **3**

What is AI sovereignty and why does it matter? **5**

1.1 The AI stack and its layers 5

1.2 A working definition of AI sovereignty 7

1.3 Ranking methodology 10

Viewing sovereignty from a regional position **12**

2.1 Access sovereignty 12

2.2 Capability sovereignty 14

2.3 Governance sovereignty 15

Sovereignty scorecard **19**

3.1 Access sovereignty 20

3.2 Capability sovereignty 23

3.3 Governance sovereignty 25

Driving factors and challenges for Southeast Asia **29**

4.1 Driving factors for AI development in Southeast Asia 29

4.2 Key challenges shaping Southeast Asia's AI landscape 30

4.3 Southeast Asia's pathway toward AI sovereignty 32

Policy recommendations **34**

Appendix: Key country snapshots **37**

Appendix: Scoring evidence **49**

References **52**

Abbreviations

AI	Artificial intelligence
AIAP	AI Apprenticeship Programme (AI Singapore)
AIAT	Artificial Intelligence Association of Thailand
AIDA	Artificial Intelligence and Data Analytics (Monetary Authority of Singapore)
AIHGle	Artificial Intelligence in Healthcare Guidelines (Ministry of Health, Singapore)
AIIP	AI Internship Programme (AI Singapore)
AITF	AI Talent Factory (Indonesia)
ASEAN	Association of Southeast Asian Nations
ASEAN-6	Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, as used in this paper
AWS	Amazon Web Services
B.E.	Buddhist Era (Thai calendar; B.E. 2562 corresponds to 2019)
EBIT	Earnings before interest and taxes
EU	European Union
FEAT	Fairness, Ethics, Accountability, and Transparency (Monetary Authority of Singapore principles)
FiLLM	Filipino-optimized Large Language Model
GDP	Gross domestic product
GPU	Graphics processing unit
ILMU	Intelek Luhur Malaysia Untukmu (Malaysian large language model)
IMDA	Infocomm Media Development Authority (Singapore)
IT-BPM	Information technology–business process management
KOMINFO	Ministry of Communication and Informatics (Indonesia), now the Ministry of Communication and Digital Affairs
KORIKA	Kolaborasi Riset dan Inovasi Industri Kecerdasan Artifisial (Collaboration for Research and Innovation in the Artificial Intelligence Industry, Indonesia)
LADP	LLM Application Developer Programme (AI Singapore)
LLM	Large language model
MERaLiON	Multimodal Empathetic Reasoning and Learning in One Network (Singapore)
MHESI	Ministry of Higher Education, Science, Research and Innovation (Thailand)
NAICRI	National Artificial Intelligence Center for Research and Innovation (Philippines)
NAIO	National AI Office (Malaysia), now AI Malaysia Berhad
NAIS	National AI Strategy (Singapore)
ND-CP	Government decree (Vietnam)

OECD	Organisation for Economic Co-operation and Development
PDG	Princeton Digital Group
PDP	Personal data protection (as in UU PDP, Indonesia's Personal Data Protection Law)
QĐ-TTg	Decision of the Prime Minister (Vietnam)
QH15	15th National Assembly (Vietnam)
S$	Singapore dollar
SEA	Southeast Asia
SEA-LION	Southeast Asian Languages in One Network
SME	Small and medium-sized enterprise
Stranas KA	Strategi Nasional Kecerdasan Artifisial (National Strategy for Artificial Intelligence, Indonesia)
STT GDC	ST Telemedia Global Data Centres
TeSA	TechSkills Accelerator (Singapore)
ThaiLLM	Thai Large Language Model
UNESCO	United Nations Educational, Scientific and Cultural Organization
US	United States
US$	United States dollar
UU	Undang-Undang (law, Indonesia)

Executive summary

Southeast Asia is among the world's fastest-growing digital markets: its digital economy is projected to grow by 17 percent in 2026, to US$368 billion in gross merchandise value.[1] Yet much of the AI stack the region depends on is supplied and controlled from outside it, chiefly by the United States and China That stack spans the infrastructure on which AI runs, the data that feeds it, the foundation models built on both, and the applications and tools through which businesses and citizens use AI.

This paper examines what AI sovereignty can realistically mean under these conditions. It assesses six countries: Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

Full-stack AI sovereignty is out of reach for most countries. AI sovereignty in SEA should therefore be understood not as independence but as resilience: maintaining meaningful control over critical dependencies and preserving optionality, while continuing to benefit from access to global AI ecosystems.

Key findings:

- **Access is broad, but optionality is thin.** Infrastructure investment in the region is expanding, and users can access and switch between multiple models. However, the region remains structurally dependent on foreign providers: advanced chips, hyperscale infrastructure, and leading models remain concentrated in US- and China-centered ecosystems. ChatGPT alone holds between 68 and 85 percent of the AI chatbot market in each of the six countries,[2] and no country has yet put in place a mechanism to maintain access during disruptions.
- **Capability remains a major bottleneck.** Adoption is high but often shallow, with AI largely confined to general-purpose tasks and isolated pilots rather than systematically integrated into core operations. Talent remains a major constraint across the region, both in specialized AI skills and in the sector-level expertise needed to deploy AI. Malaysia, for example, has around 3,000 AI professionals against projected demand of 30,000 by 2030.[3]
- **Governance is advancing unevenly.** ASEAN has set a shared regional direction through voluntary guidance. National approaches, however, range from Singapore's flexible, sector-specific frameworks to Vietnam's standalone comprehensive AI law, in

---

[1] Google, Temasek, and Bain & Company, *e-Conomy SEA 2026: Building the Intelligent Economy*, October 21, 2026, https://www.bain.com/about/media-center/press-releases/sea/e-conomy-sea-2026/.

2 StatCounter Global Stats, "AI Chatbot Market Share," country pages for Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, July 2026, https://gs.statcounter.com/ai-chatbot-market-share.

3 Bernama, "Development Transformation, Technology Key to Malaysia's AI Nation Goal – Experts," April 12, 2026, citing World Bank estimates, https://www.bernama.com/en/news.php?id=2544117.

force since March 2026.[4] Indonesia, Malaysia, and Thailand are developing AI-specific regulation, while the Philippines is considering several bills.

- **Singapore leads the region in overall AI sovereignty,** with a score of 14 out of 15 across the three domains. It is followed by Malaysia (11), Vietnam (10), Thailand (9), Indonesia (8), and the Philippines (4). A lower score does not mean a country cannot benefit from AI. It indicates less control over how AI is accessed, adapted, and governed, and the domain scores show where each country's bottlenecks lie.

Recommendations

Southeast Asian countries should pursue selective sovereignty. Rather than seeking control over every layer of the AI stack, they should retain enough capability and bargaining power to access infrastructure on acceptable terms and to choose and switch between providers according to domestic needs. Priorities are to:

- Build resilience by preserving optionality across AI providers, including by mapping key dependencies of critical services and using public procurement to keep the flexibility to switch providers.
- Strengthen regional coordination on strategic-level programs, building on existing ASEAN frameworks to develop nonbinding, risk-based governance guidance.
- Develop AI talent and prepare the future workforce, combining specialized technical skills with sector-level implementation expertise.
- Prioritize localized AI solutions, meaning applications and tools built around local languages, sectors and use cases, rather than the localization of large language models alone.
- Strengthen governance, particularly for data use and protection, by ensuring data protection laws are effectively enforced without impeding the cross-border data flows on which AI models and services depend, and by refining ASEAN's Data Management Framework for the AI context.

4 Baker McKenzie, "Vietnam: Artificial Intelligence Law – Foundation and Outlook," February 24, 2026.

Introduction

Southeast Asia contains some of the world's fastest-growing digital markets, supported by a young and digitally active population, expanding digital infrastructure, rapid investment, and national ambitions to accelerate digital transformation. As elsewhere, governments across the region are grappling with the advent of AI: how it can drive growth, prosperity, and security; and how it can be governed, its fallout managed, and what power and control they can exert over it. Global discussions of AI sovereignty focus on the dominance of major powers, particularly the United States and China, which possess substantial technological leads in the development of frontier AI models and the ecosystems that support them. Given the cost and complexity, smaller and mid-sized countries appear to have limited prospects for achieving AI sovereignty.

But benefiting from the opportunities of AI requires more than frontier models. AI deployment depends on four interdependent layers: infrastructure, including data centers, cloud services, and advanced chips; data and the rules that govern it; foundation models; and the applications and software tools through which AI interfaces with users.

Achieving growth, prosperity, and security through AI therefore also depends on whether smaller and mid-sized countries can secure access, develop capabilities, and govern across the AI stack. As the first paper in this series explains, modern technologies operate as interdependent systems, where value, control, and dependency emerge across layers rather than within isolated sectors. Accordingly, AI sovereignty should be understood as the ability to recognize and manage existing dependencies and secure favorable conditions across the stack, rather than as the pursuit of technological autarky.

For Southeast Asia, this issue is particularly important because much of the AI stack remains externally supplied and controlled. The region relies substantially on external providers for scalable computing infrastructure, advanced AI chips, foundation and frontier models, and global digital platforms.

These dependencies do not prevent countries from benefiting from AI, but they do shape the extent to which governments and firms can control how AI is accessed, adapted, governed, and replaced.

AI sovereignty is therefore distinct from sovereignty in more tangible stacks such as critical minerals mining and processing explored in Paper 2 or the electric tech stack explored in Paper 3. In those sectors, sovereignty is often linked to ownership of physical resources, production assets, or manufacturing capacity.

For Southeast Asian countries, the key question is not whether countries can own every layer of the AI stack. It is whether they can participate in the AI ecosystem in ways that preserve

policy autonomy, strengthen domestic capability, and allow AI systems to be adapted to local economic, social, and institutional needs.

This paper examines how AI stack sovereignty can be understood under these conditions. It assesses how selected Southeast Asian countries are positioned across the AI stack and identifies structural dependencies. The findings aim to support a clearer understanding of Southeast Asia's current position in the AI stack and identify practical pathways for countries to strengthen competitiveness, preserve strategic autonomy, participate more effectively in the global AI economy and contribute to ongoing discussions about AI governance at the global level.

1 What is AI sovereignty and why does it matter?

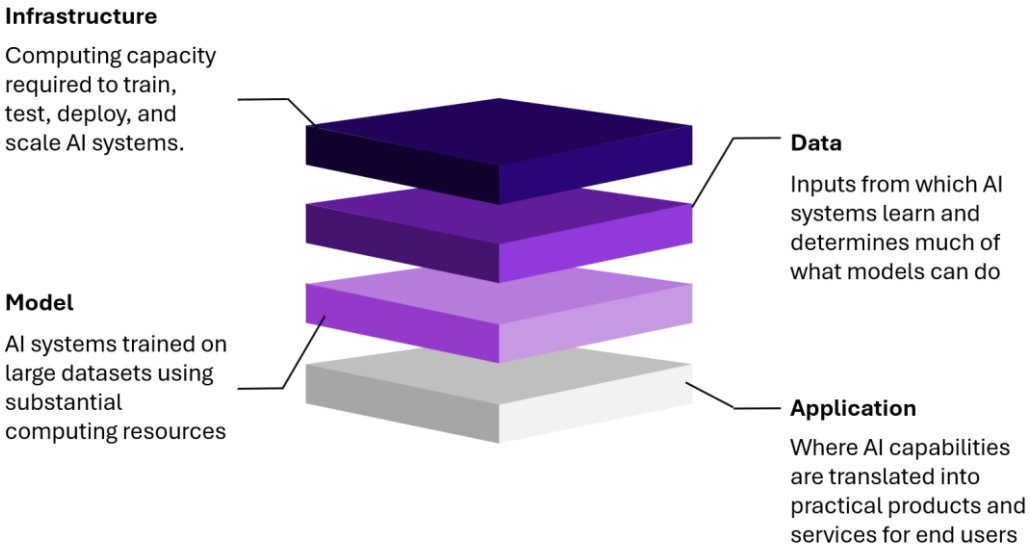
1.1 The AI stack and its layers

Technology sovereignty cannot be exercised through control over any single layer of the technology stack. Modern technology systems are highly interdependent, meaning that a country's degree of sovereignty depends on its position and control across multiple layers.

Conventional value chains are broadly linear, comprising a progression from upstream to downstream. The mining, refining, processing, and application of critical minerals, or the manufacture of electric vehicles from a component supply chain represent a complex but fundamentally linear value chain.

The AI stack does not work this way. Its layers are not stages in a sequence, each feeding the next. Infrastructure, data, models, and applications interact continuously, and AI and its allied industries shape one another, creating close links between the technology and the sectors that support and use it.

Figure 1. Layers of the AI stack



Source: Southeast Asia Public Policy Institute.

Because this structure is non-linear, the AI stack is better understood as four interconnected layers than as a linear value chain.

Infrastructure



Infrastructure forms the foundation of the AI stack. It includes data centers, GPUs, cloud platforms, and other computing resources that provide the compute needed to operate AI systems. Without adequate compute, AI capabilities cannot be trained, tested, deployed, or scaled effectively.

Data



Data forms another foundational layer. AI systems learn from data, and the volume, quality, and diversity of training data largely determine what a model can and cannot do. This layer includes the processes through which data is generated, collected, curated, labeled, and stored, as well as the legal and regulatory frameworks governing how data moves within and across national borders. In this sense, data is not only a technical input. It is a governance issue: the rules surrounding data determine who can use it, under what conditions, and for what purposes. Together, physical infrastructure provides the computing environment, while data supplies the inputs needed to train, develop, and deploy AI systems.

Models



The model layer builds on these foundations. It consists of AI systems trained on large datasets using substantial computing resources. Foundation models, including but not limited to large language models (LLMs), form the core systems that process inputs and generate outputs based on statistical patterns learned during training. While models are often the most visible symbol of AI capability, they depend heavily on the infrastructure and data layers beneath them.

Applications



The final layer is application and deployment, where model capabilities are integrated into products and services that reach end users. This includes AI-powered software, chatbots, and other interfaces that translate model outputs into practical tools. It is at this layer that AI becomes visible to users and can be adopted for a wide range of purposes across industries. The value of AI is therefore realized not only through the model itself, but through how its capabilities are adapted and applied to practical needs.

A further distinction is that AI itself is not a tangible, real-world product. Although it depends on physical infrastructure to function, its core processes take place through digital computing systems. Code, mathematical operations, data, and models work together through computing infrastructure to enable AI systems to perform their functions.

As a result, the value AI provides to other industries lies primarily in the capabilities that can be applied through products and services, rather than in AI as a physical output. This relationship also runs in both directions: inputs from other industries shape how AI is developed, creating a continuous feedback loop across the wider ecosystem.

Developing AI sovereignty does not necessarily require a country to develop its own foundation models. Rather, it depends on the extent to which a country can access and exercise meaningful control over the critical resources that AI development requires, including computing infrastructure, data, and other essential inputs. Markets with greater capabilities

across these areas are better positioned to capture the economic benefits of AI, support long-term growth, and strengthen their bargaining power within global technology ecosystems.

However, full-stack AI sovereignty remains out of reach for all but a handful of countries. Foundation models, the entry point for many AI applications, are concentrated in the United States and China. Southeast Asia has developed models of its own, but most are built by adapting US or Chinese base models rather than trained from scratch.

Computing infrastructure is equally important and is underpinned by advanced chips, access to which is increasingly contested. Control over these specialized capabilities also remains concentrated among a limited number of countries and companies.

Applying to AI the same sovereignty benchmarks used for other industries, which typically emphasize domestic ownership and control of physical assets, is of limited use. Most Southeast Asian countries are not at the frontier of AI development and face varying degrees of dependence on foreign technologies and resources. For these countries, developing AI sovereignty should therefore center less on technological self-sufficiency and more on strengthening resilience, maintaining meaningful control over critical dependencies, and preserving optionality: the ability to choose among, and switch between, providers, partners, and technologies while continuing to benefit from global AI ecosystems.

1.2 A working definition of AI sovereignty

In the current global AI landscape, many countries and smaller firms rely heavily on a narrow set of foundation models or dominant foreign providers, often adopting frontier models from the US or China based on what is available to them.[5] This concentration risk is particularly relevant in the financial sector, where reliance on a small number of AI model providers has raised concerns.[6] Such dependence can leave users vulnerable to changes in AI policies or commercial practices in the countries where these providers are based.

In June 2026, US Department of Commerce export controls led Anthropic to suspend access to its Claude Fable 5 and Claude Mythos 5 models. Although the controls were lifted at the end of the month, the episode prompted greater attention, particularly in Europe, to diversifying technology suppliers and using a mix of models to reduce dependence on any single provider.[7]

Southeast Asia faces a similar landscape, making AI sovereignty a growing concern for policymakers. As many AI models are developed abroad, countries should focus less on owning every component of the AI stack and more on building the capacity to develop, deploy, and operate AI systems while managing their dependence on foreign providers.

---

[5] CSAI Foundation, *AI Infrastructure Monoculture: Foundation-Layer Concentration Risk*, April 6, 2026, https://labs.cloudsecurityalliance.org/research/csa-whitepaper-ai-infrastructure-concentration-risk-v1-0-csa/.

[6] Finextra, "Banks Facing AI Concentration Risk," August 11, 2026.

[7] Reuters, "US Curbs on AI Spur European Firms to Spread the Risk," June 22, 2026, https://www.reuters.com/legal/litigation/us-curbs-ai-spur-european-firms-spread-risk-2026-06-22/.

To assess AI sovereignty in Southeast Asia, this paper adopts the framework set out in our foundational paper, "SEA Tech Stack Sovereignty: An Analytical Framework for Understanding Technology Sovereignty." Under this framework, sovereignty is evaluated across three core criteria applied to the functional domains of the modern technology stack: access sovereignty, capability sovereignty, and governance sovereignty.

Each sector, including AI, has its own configuration of sovereignty across these three domains. While the overarching framework remains consistent, the interpretation of each domain varies with the sectoral context. Applying the working definition above, the three domains of AI sovereignty are defined as follows:



Access sovereignty in the AI context refers to a country's ability to secure reliable and sufficiently diversified access to the essential inputs required to develop, deploy, and use AI systems. For Southeast Asian countries, this does not require domestic ownership of every layer of the AI stack. Rather, sovereignty depends on maintaining sufficient optionality across infrastructure and models so that access is not excessively dependent on a single foreign provider or technology ecosystem.

- **Foundational infrastructure:** AI development and deployment depend on foundational infrastructure, including data centers, GPU and computing services, cloud services, and data storage and management systems. Sovereignty in this area does not require every country to own or operate all of this infrastructure domestically. Where countries rely on foreign infrastructure and cloud providers, access sovereignty depends on maintaining sufficient optionality across providers and avoiding excessive dependence on a single company or a small group of companies.

- **AI models:** A similar principle applies to AI models. Leading foundation models remain concentrated among a limited number of providers, particularly from the US and China, while developing and training domestic models requires significant resources, technical expertise, and time. Countries therefore have different pathways. Where feasible, they may develop domestic or locally adapted large language models that better reflect local languages and contexts. Alternatively, they may rely on foreign foundation models while retaining access sovereignty by maintaining access to multiple models and providers, preserving the ability to switch between alternatives, and avoiding excessive dependence on a single foreign technology ecosystem.

Data remains a critical input across the AI stack, but it is treated differently in this framework. For many Southeast Asian countries that primarily use or adapt models developed elsewhere, sovereignty is less about obtaining access to the datasets used to train frontier models. The more relevant question concerns how domestic or sensitive data is assessed and governed before it is entered into AI systems. These issues will be considered under governance sovereignty.



Capability sovereignty in AI refers to a country's ability to translate available AI technologies into productive domestic use. Training a frontier model from scratch is not a prerequisite. The key question is whether domestic actors can use, adapt, and deploy available AI models and tools to develop localized solutions that respond to national needs, local contexts, and regulatory requirements. Capability also depends on whether these solutions can be sustained and deployed at scale, moving beyond general-purpose AI tools toward systems that deliver practical value across sectors.

- **Human capital and talent:** Talent is a central component of capability sovereignty. This includes AI engineers, data scientists, and domain experts who understand both the technology and the local context and can translate AI capabilities into usable systems. Sovereignty therefore depends on having a domestic workforce that can meet the needs of the AI ecosystem, or at least a credible pipeline for developing that workforce over time, and on the capacity to build and retain expertise.
- **Companies and institutions' ability to deploy AI:** Capability sovereignty also depends on whether domestic companies and institutions can use, adapt, test, deploy, and sustain AI systems in practice. This includes the capacity to evaluate model performance and risks, integrate AI into existing operations, support deployment over time, and develop solutions suited to local needs. Without a sustainable and supportive domestic AI ecosystem, countries may remain overly reliant on external capabilities.



Governance sovereignty refers to a country's capacity to determine how AI systems are developed, procured, deployed, and used within its jurisdiction. It encompasses the ability to set, implement, and enforce rules across the AI ecosystem, including those relating to safety, accountability, transparency, data use, procurement, interoperability, and responsible deployment. These rules may be expressed through national laws, standards, and guidelines that are coherent across the AI life cycle.

- **National strategy and direction:** Governance sovereignty begins with the ability to establish a clear national direction for AI development and use. This may be expressed through a national AI strategy, roadmap, vision, or equivalent policy framework that establishes boundaries for its development and deployment.
- **Legislation, policy, and data governance:** Countries also need an appropriate policy and regulatory basis for governing AI. This does not necessarily require a new comprehensive AI law. Some countries may introduce AI-specific legislation, standards, or guidelines, while others may determine that existing data protection, cybersecurity, consumer protection, procurement, or sectoral rules provide an appropriate foundation. An important component is the governance of data used in AI systems, including the

classification and assessment of data according to its sensitivity and risk before it is entered into AI systems.

- **Institutions and implementation capacity:** Effective governance also depends on the presence of institutions or responsible agencies that can translate policy into practice. These may include dedicated AI offices or designated coordinating bodies. Their role is to ensure that laws, standards, and guidelines are applied consistently across the full AI ecosystem.
- **International alignment:** Alignment with international standards and frameworks does not undermine governance sovereignty. Domestic laws, standards, and guidelines can and should remain compatible with international frameworks while retaining the capacity to protect against the misuse of data, establish obligations for AI use that reflect national circumstances, and limit excessive reliance on foreign technology companies or external control.

1.3 Ranking methodology

Sovereignty is difficult to measure. It is a matter of degree, spans several domains, and depends partly on factors that public data captures only imperfectly, such as actual capabilities, hidden dependencies and how well policies are implemented. The scoring framework used here is therefore deliberately simple. For each domain of sovereignty, this study sets four yes/no tests to distinguish varying degrees of sovereignty. Each country starts with a score of 1 in each domain and gains one point for every test it meets, which gives a domain score from 1 to 5 and an overall score out of 15. A higher score reflects a greater level of sovereignty in that domain. A national AI strategy and a data protection law are in place in all six countries assessed, so they form the baseline rather than a test. The tests are presented in Figure 2, and the evidence behind each country's results is set out in the appendix on scoring evidence.

Figure 2. Tests for AI sovereignty scores

Test	Access Sovereignty	Capability Sovereignty	Governance Sovereignty
1	**A1 Infrastructure choice** Live public cloud regions from at least two hyperscale providers in the country (announced regions do not count)	**C1 AI uptake** AI diffusion rate above the median of the six countries assessed	**G1 AI-specific guidance** AI ethics or governance guidance in force beyond the national strategy
2	**A2 Model diversification** The leading AI chatbot has less than 75 percent of chatbot traffic	**C2 Public-sector deployment** A national program gives public officers AI tools at scale	**G2 Lead body** A designated body coordinates national AI policy
3	**A3 National approach to models** The government partners with two or more frontier model providers, or funds a national model	**C3 Sector breadth** AI deployment documented in three or more leading sectors	**G3 AI-specific rules** A binding AI law or regulation, or a government AI testing framework, in force
4	**A4 Continuity** A policy or mechanism maintains access during a disruption, such as a provider outage or a change in terms	**C4 Talent pipeline** A quantified national AI talent target, backed by a named program	**G4 Sector guidance** AI guidance in force in at least two sectors

Each domain starts at a score of 1 and gains one point for each test met, giving a domain score from 1 to 5. The overall score is the sum of the three domain scores, out of 15.

Source: Southeast Asia Public Policy Institute.

2 Viewing sovereignty from a regional position

Southeast Asia is an increasingly important market for AI, and governments across the region now treat AI as a central policy priority and a strategic tool for driving future economic growth. While AI remains part of ASEAN's broader digital cooperation framework, regional efforts have become increasingly structured. Through the ASEAN Working Group on AI Governance[8] and the ASEAN AI Safety Network[9], ASEAN has expanded its work on voluntary governance guidance, regional coordination, and capacity building, with these efforts becoming broader and more developed in recent years.

Although countries across the region share a broadly similar direction in pursuing AI development, differences in their starting positions, policy approaches, and levels of technological readiness have placed them at different stages across the three sovereignty domains outlined in Section 1. At the same time, several common regional characteristics are evident. Southeast Asia is likely to remain a major user of AI technologies developed elsewhere, while also acting as a follower in the development of AI laws and regulations. These shared characteristics help shape how AI sovereignty is evolving across individual countries. The following section analyzes the region's position across the three sovereignty domains at the aggregate level.

2.1 Access sovereignty

Access to AI computing infrastructure is expanding across Southeast Asia. Global technology companies such as AWS, Microsoft, and Google have established cloud and data center footprints in Singapore, Malaysia, Indonesia, Thailand, and increasingly Vietnam. Chinese providers, including Alibaba Cloud, Tencent Cloud, and Huawei Cloud, also maintain a presence across the region. ASEAN's data center industry was valued at approximately US$14.07 billion in 2025 and is projected to reach US$19.46 billion by 2030.[10] This expansion can improve access to computing capacity, reduce latency, and support stronger domestic AI deployment.

Greater availability, however, does not remove the region's structural dependence on foreign firms. Hyperscale cloud capacity remains concentrated among a small number of foreign providers, mostly American: across growth corridors in East and Southeast Asia, expansion by

8 Infocomm Media Development Authority, "ASEAN Working Group on AI Governance," updated May 25, 2026, https://www.imda.gov.sg/about-imda/international-relations/asean-working-group-on-ai-governance.

9 ASEAN Secretariat, "Declaration on the Establishment of an ASEAN AI Safety Network (ASEAN AI SAFE)," October 26, 2025, https://asean.org/declaration-on-the-establishment-of-an-asean-ai-safety-network-asean-ai-safe.

10 Krungsri Research, "Opportunities and Challenges of Thai Data Centers in ASEAN," April 8, 2026, https://www.krungsri.com/en/research/research-intelligence/data-center-competitiveness-2026.

Western cloud providers accounts for around 70 percent of hyperscaler demand.[11] Dependence also extends beyond the ownership of data centers. Their development and operation rely on globally concentrated supply chains for rare earth minerals, GPUs and semiconductors, energy systems, and subsea cable networks. Many of these inputs remain shaped by foreign capital or trade relationships outside Southeast Asia. The region is therefore gaining access to infrastructure while retaining limited control over many of the underlying systems and supply chains.

Dependence is also visible at the model layer. AI use across Southeast Asia remains dominated by proprietary models from US developers, accessed through services such as ChatGPT, Google Gemini, and Anthropic's Claude. Chinese models play a smaller role in direct use, although some of the region's own models are built on Alibaba's Qwen. In July 2026, ChatGPT accounted for between 68 and 85 percent of AI chatbot traffic in each of the six countries assessed.[12]

Table 1. AI chatbot market shares by country, July 2026 [13]

Country	ChatGPT	Google Gemini	Perplexity	Claude	Microsoft Copilot	DeepSeek
Indonesia	85.43%	4.35%	7.76%	2.05%	0.4%	-
Malaysia	78.02%	12.9%	4.42%	1.38%	3.25%	0.03%
Philippines	75.23%	13.75%	5.34%	1.15%	4.52%	0.01%
Thailand	68.27%	22.55%	4.14%	3.14%	1.9%	-
Singapore	69.45%	14.94%	7.25%	4.2%	4.07%	0.06%
Vietnam	72.01%	20.98%	2.37%	2.93%	1.67%	0.03%

Note: While ChatGPT, Google Gemini, Claude, and DeepSeek primarily use foundation models from their own model families, Perplexity and Microsoft Copilot use a multi-model approach that includes models from OpenAI, Anthropic, and other providers.

Source: StatCounter Global Stats, July 2026.

While AI chatbot penetration primarily reflects access for general-purpose rather than advanced use, it still provides an indication of which AI providers and model ecosystems users in each market are most familiar with. In this context, the concentration of usage around a limited number of models suggests a degree of regional dependence on a small group of providers for model access.

However, switching costs between consumer-facing AI chatbots are generally low, giving users greater flexibility to try and adopt alternatives. This may differ for more advanced institutional

[11] McKinsey & Company, "Beyond the Spillover: Asia–Pacific, the Next Engine of Data Center Demand," June 22, 2026, https://www.mckinsey.com/featured-insights/future-of-asia/countries-and-regions/southeast-asia/southeast-asia-perspectives/beyond-the-spillover-asia-pacific-the-next-engine-of-data-center-demand.

[12] StatCounter Global Stats, "AI Chatbot Market Share."

[13] StatCounter Global Stats, "AI Chatbot Market Share."

or enterprise use, where organizations often integrate paid models into their systems and face higher technical, financial, and operational costs when switching providers.

Apart from adopting foreign models, many countries are also funding localized models that better reflect regional languages, cultural contexts, and data security requirements. These include models built on and fine-tuned from foreign open-weight foundation models (models whose trained weights are published for others to use under the developer's own license), as well as models pretrained domestically from scratch. In both cases, the development of local capabilities to fine-tune, adapt, and deploy AI can reduce dependence on foreign providers, although models built on foreign open-weight foundations remain tied to those base models for upgrades.

However, the development of domestically pretrained large language models remains limited, and localized models may not represent the primary source of AI use in most countries. Instead, they are often adopted as alternatives that complement leading global models.

Table 2. Development of LLMs in Southeast Asia

Country	Model Name
Indonesia	• Sahabat-AI
Malaysia	• ILMU (Intelek Luhur Malaysia Untukmu)
Philippines	• FiLLM (Filipino-optimized Large Language Model)
Thailand	• ThaiLLM (Thai Large Language Model)
Singapore	• SEA-LION (Southeast Asian Languages in One Network) • MERaLiON (Multimodal Empathetic Reasoning and Learning in One Network)
Vietnam	• GreenMind • CMC-AI-Legal-32B • PhoGPT

Note: Most of the LLMs listed in the table are built on and fine-tuned from existing open-weight AI models, such as Google Gemma, Alibaba Qwen, and Meta Llama. Only a small number of models, such as PhoGPT, were trained entirely from scratch.

Source: Compiled by Southeast Asia Public Policy Institute.

In this context, sovereignty at the model layer depends largely on whether countries can reduce reliance on a limited number of providers through greater diversification and by avoiding vendor lock-in to specific models or ecosystems.

2.2 Capability sovereignty

Access to AI technologies alone does not determine whether they can be converted into domestic value. Talent plays a central role in capability sovereignty, yet it remains a major constraint across Southeast Asia. Globally, jobs requiring specific AI skills are growing by 69 percent, almost eight times the 9 percent growth rate of the broader job market.[14] More than

[14] PwC, "AI Reshapes Global Labour Market into Two Distinct Paths, Rewarding Human Skills: PwC 2026 AI Jobs Barometer," July 31, 2026, https://www.pwc.com/th/en/press-room/press-release/2026/press-release-31-07-26-en.html.

90 percent of global enterprises are also expected to face critical skills shortages in 2026.[15] Southeast Asia faces the same pressure, even in more advanced digital economies such as Singapore.

Reskilling and upskilling have become central to workforce preparation, yet training provision remains limited. Across six Southeast Asian markets, only 14 to 29 percent of workers received employer-provided AI or digital skills training in the previous year. Self-funded training ranged from 14 to 29 percent. Meanwhile, 34 to 53 percent had received no training despite being interested in it.[16] The lack of technical skills among employees was consistently identified as one of the main barriers to AI adoption across these markets.

Insufficient talent limits a country's ability to build, fine-tune, and maintain AI systems. It also increases reliance on foreign expertise, constraining the development of domestic capability and widening the gap with leading technology economies.

The challenge extends beyond the number of AI specialists. Effective sectoral deployment also requires people who can connect AI tools with specific operational problems and understand the local context in which they are used. Training general AI users and developers without building domain-specific implementation skills may increase adoption, but it is less likely to produce localized solutions suited to the needs of individual sectors.

Capability also depends on institutional readiness, including the internal resources, competencies, data, and systems needed to acquire, deploy, and sustain AI-based innovation. Many Southeast Asian companies still apply AI to isolated use cases instead of end-to-end processes. Chatbots, predictive analytics, and recommendation systems often remain disconnected from core business workflows, creating a "pilot trap" in which experimentation does not lead to broader transformation. In a 2026 survey of 330 senior executives across six ASEAN markets, 46 percent of companies had moved from piloting AI to scaling it, and 60 percent attributed less than 5 percent of their operating profit (earnings before interest and taxes, or EBIT) to AI.[17] This pattern encourages reliance on ready-made solutions and limits the value created domestically. Without stronger organizational capacity to integrate AI into core operations, countries may expand adoption without developing the sustained ability to adapt and deploy AI without relying on external providers for each step.

2.3 Governance sovereignty

Governance sovereignty concerns the ability to set and enforce rules for how AI is developed, deployed, and used. Southeast Asian governments have begun building this foundation through AI strategies, investment in digital infrastructure, and an expanding set of laws and guidelines. Regional coordination has accelerated. ASEAN endorsed the ASEAN Guide on AI

---

[15] International Data Corporation, "IT Skills Shortage Expected to Impact Nine out of Ten Organizations by 2026 with a Cost of $5.5 Trillion in Delays, Quality Issues, and Revenue Loss, According to IDC," Business Wire, May 14, 2024, https://www.businesswire.com/news/home/20240514939927/en/.

[16] Milieu, "Workers Want AI Training, but Not Everyone Is Getting It," June 29, 2026, https://www.mili.eu/sg/insights/sea-ai-at-work-2026-training-gap.

[17] McKinsey & Company, Singapore Economic Development Board, and Tech in Asia, *AI in Southeast Asia: An Era of Opportunity*, February 2026, https://www.edb.gov.sg/en/market-and-industry-reports/ai-in-southeast-asia-an-era-of-opportunity.

Governance and Ethics at the fourth ASEAN Digital Ministers' Meeting in February 2024.[18] In January 2025, the fifth ASEAN Digital Ministers' Meeting endorsed the Expanded ASEAN Guide on AI Governance and Ethics - Generative AI, which supplements the 2024 guide with policy considerations for generative AI.[19] At the same meeting, ASEAN endorsed the ASEAN Responsible AI Roadmap (2025-2030), which provides step-by-step guidance for governments to operationalize responsible AI.[20] Together, these instruments establish a shared regional direction for responsible and interoperable AI governance.

Links to international governance have also strengthened. Several member states, including Indonesia, Malaysia, the Philippines, and Thailand, have undertaken UNESCO's AI Readiness Assessment Methodology to support alignment with international principles on ethical AI governance.[21] ASEAN has also represented the region in global AI policy forums, including the 2026 World Artificial Intelligence Conference and High-Level Meeting on Global AI Governance.[22] Together, these efforts place ASEAN more closely in line with international discussions on AI governance.

However, the ASEAN guides are voluntary and do not replace national law, while the roadmap depends on implementation by individual member states. Although most Southeast Asian countries share a common baseline in their data protection frameworks, national approaches to AI governance differ in scope, legal force, and enforcement capacity.

Table 3. Current data protection frameworks in the largest Southeast Asian economies

Country	Legislation
Indonesia	Personal Data Protection Law (UU PDP No. 27/2022)
Malaysia	Personal Data Protection Act 2010
Philippines	Data Privacy Act of 2012
Thailand	Personal Data Protection Act B.E. 2562 (2019)
Singapore	Personal Data Protection Act 2012
Vietnam	Law on Personal Data Protection (Law No. 91/2025/QH15)

Source: Compiled by Southeast Asia Public Policy Institute from national legislation.

[18] ASEAN Secretariat, *ASEAN Guide on AI Governance and Ethics* (Jakarta: ASEAN Secretariat, 2024), https://asean.org/wp-content/uploads/2024/02/ASEAN-Guide-on-AI-Governance-and-Ethics_beautified_201223_v2.pdf.

[19] ASEAN Secretariat, *Expanded ASEAN Guide on AI Governance and Ethics – Generative AI* (Jakarta: ASEAN Secretariat, 2025), https://asean.org/wp-content/uploads/2025/01/Expanded-ASEAN-Guide-on-AI-Governance-and-Ethics-Generative-AI.pdf.

[20] ASEAN Secretariat, *ASEAN Responsible AI Roadmap (2025–2030)* (Jakarta: ASEAN Secretariat, 2025), https://asean.org/book/asean-responsible-ai-roadmap-2025-2030.

[21] UNESCO, "Readiness Assessment Methodology for AI, Project 221RAS3002 (Indonesia, Malaysia, the Philippines, and Thailand)," 2024, https://core.unesco.org/en/project/221RAS3002.

[22] ASEAN Secretariat, "Secretary-General of ASEAN to Participate in the 2026 World Artificial Intelligence Conference and High-Level Meeting on Global AI Governance," July 15, 2026, https://asean.org/?p=248717.

Table 4. AI governance developments in the largest Southeast Asian economies

Country	Recent developments	Upcoming plans
Indonesia 	Indonesia is developing two presidential regulations covering the national AI roadmap and AI ethics. The proposed measures aim to provide a more structured framework for AI development and responsible use. Both regulations were reported to be awaiting presidential approval.	Formal issuance of the presidential regulations remains the next major milestone. Their final provisions will determine the scope of obligations, institutional responsibilities, and requirements for subsequent implementing and sector-specific measures. The timeline for issuance and implementation remains unconfirmed.
Malaysia 	Malaysia is advancing an AI Governance Bill through the Ministry of Digital, with AI Malaysia Berhad preparing its enforcement structure. Following public consultation launched in July 2026, the Digital Minister reported in September that drafting had been completed. The proposed risk-based bill seeks to establish common AI governance principles across sectors, complementing existing laws.	The government intends submit the bill to Cabinet and table it in Parliament in early 2027. Cabinet and parliamentary consideration will determine its final scope and passage. This timetable represents a target for introduction rather than a confirmed enactment date.
Philippines 	The Philippines is considering multiple AI legislative proposals, including Senate Bill No. 25, the Artificial Intelligence Regulation Act. The bill proposes a national regulatory framework and a National AI Commission and a consolidated House bill, the proposed Artificial Intelligence Development and Regulation Act. Existing data protection requirements already apply to AI systems processing personal data, as clarified by National Privacy Commission Advisory No. 2024-04.	Legislative deliberations will determine the scope of a broader AI framework, including institutional oversight and compliance requirements. The timing of enactment and any consolidation of existing proposals remain uncertain.
Thailand 	Thailand released a draft Artificial Intelligence Act for public consultation in July 2026, with consultation closing in August 2026. The draft proposes a risk-based governance framework covering prohibited and high-risk AI, responsibilities for providers and deployers, and regulatory oversight. It remains proposed legislation.	The next stage involves reviewing consultation feedback and advancing the draft through the legislative process. Key areas include the scope of high-risk AI, compliance and liability requirements, and coordination with sectoral regulators. These provisions remain subject to revision before enactment.
Singapore 	Singapore's AI governance approach combines practical frameworks, technical testing, and sector-specific oversight. IMDA introduced the Model AI Governance Framework for Agentic AI in January 2026 and updated it in May, strengthening guidance on human accountability, risk management, and responsible deployment. These measures complement existing governance frameworks and assurance tools, including AI Verify.	Further development centers on implementation and assurance. In October 2026, IMDA released a Starter Kit for Testing Agentic Systems, and the AI Verify Foundation launched an accreditation programme for third-party AI testers. IMDA continues to refine its governance guidance as agentic AI deployment matures.
Vietnam 	Vietnam's standalone Law on Artificial Intelligence took effect on March 1, 2026, establishing a risk-based framework that distinguishes high-, medium-, and low-risk AI systems. Decree No. 142/2026/ND-CP, effective May 1, provides implementing requirements, including risk classification and conformity assessment. Decision	Implementation now centers on applying risk classifications, transparency and labeling requirements, incident reporting, and conformity assessments for high-risk systems. Operational guidance and

Country	Recent developments	Upcoming plans
	No. 33/2026/QD-TTg, effective August 15, lists 46 high-risk AI systems across six sectors.	coordination across sectors will shape how these obligations are applied in practice.

Source: Compiled by Southeast Asia Public Policy Institute.

Vietnam, for example, adopted a dedicated Law on Artificial Intelligence in December 2025, which took effect on March 1, 2026, while approaches elsewhere in the region continue to rely to varying degrees on strategies, voluntary guidelines, and existing sectoral or cross-cutting laws. This variation reflects both the momentum behind each country's AI governance agenda and the fragmentation that limits its effectiveness. ASEAN has established a common reference point, but implementation still depends largely on domestic institutions.

The existence of a law or strategy is not, by itself, evidence of governance sovereignty. The more important test is whether institutions can translate policy ambition into practical rules, technical standards, oversight, and enforcement. As institutional arrangements matter, some countries have established dedicated bodies responsible for coordinating and implementing national AI policy. Malaysia, for example, has established AI Malaysia Berhad, formerly the National AI Office, as the lead agency for implementing its AI action plan and developing national AI capabilities. The presence and mandate of such institutions provide an indication of how far a country has progressed from setting policy direction toward sustained implementation.

Governance sovereignty therefore depends on member states' capacity to develop, adopt, implement, and enforce workable frameworks, supported by the technical expertise and institutional resources needed to hold AI developers and providers accountable.

3 Sovereignty scorecard

While AI has become a national priority for most countries in Southeast Asia, their current positions and development pathways continue to vary. Differences in supply chains, regulations, policies, and national strategies have resulted in varying levels of AI sovereignty across countries. In this report, six Southeast Asian countries are selected for detailed analysis.

This section applies the scoring methodology set out in Part 1 to the six countries assessed. Each country receives a score from 1 to 5 in each domain, based on how many of the four tests in Figure 2 it meets, for an overall score out of 15. As noted in Part 1, the results offer an indicative picture of sovereignty across the region rather than a precise ranking.

Table 5. Country overview: AI infrastructure, talent, and policy

Country	Data Center and Cloud[23]	Talent Development	Leading Sector Implications	Policies and Regulations
Indonesia 	• No. of listed data centers: 212 • Key investors: Microsoft, AWS, Google Cloud, Digital Edge, STT GDC, PDG	• AI Talent Factory (AITF) and private-sector partnerships	Financial services, telecoms, retail and wholesale	• The National Strategy for Artificial Intelligence 2020–2045 • Circular 9/2023 on the Ethics of AI Use • OJK AI code of ethics for fintech (2023) • AI Governance for Indonesian Banks (2025) • Presidential regulations on the AI roadmap and AI ethics (in progress)
Malaysia 	• No. of listed data centers: 135 • Key investors: Microsoft, NVIDIA, Google, ByteDance	• AI Talent Roadmap 2024–2030 • Ministry of Digital target of 200,000 AI-skilled individuals (Budget 2027) • MY AI Nexus	Financial services, manufacturing, public administration	• National AI Roadmap 2021-2025 (predecessor of the Action Plan) • National Guidelines on AI Governance and Ethics in 2024 • National AI Action Plan 2026-2030 • AI Governance Bill (in progress)
Philippines 	• No. of listed data centers: 45 • Key investors: ST Telemedia Global Data	• AI training for government executives by the Development	Information technology-business process	• National AI Strategy for the Philippines (NAIS-PH), 2025 • National AI Strategy Roadmap 2.0

[23] Data Center Map, "Data Centers," accessed 23 November 2026, https://www.datacentermap.com/.

Country	Data Center and Cloud[23]	Talent Development	Leading Sector Implications	Policies and Regulations
	Centres, NTT (via ePLDT), Digital Edge	Academy of the Philippines (DAP)	management (IT-BPM)	• NPC Advisory No. 2024-04 on AI and data privacy • AI regulation bills in Congress (in progress)
Thailand 	• No. of listed data centers: 71 • Key investors: Microsoft, AWS, Google Cloud, ByteDance	• AI for All Thais by MHESI, True and Google • Super AI Engineer by AIAT	Financial services, telecom	• Thailand National AI Strategy and Action Plan (2022–2027) • Thailand's AI ethics framework • Draft Artificial Intelligence Act (in progress)
Singapore 	• No. of listed data centers: 65 • Key investors: Google, AWS, Microsoft, NTT Global Data Centers	• AI Singapore's schemes such as AI Apprenticeship Programme (AIAP), AI Internship Programme (AIIP), and LLM Application Developer Programme (LADP) • TechSkills Accelerator (TeSA) • AIDA Talent Development Programme	Financial and insurance services, Infocomm, Healthcare, public administration	• Singapore National AI Strategy (NAIS) 2.0 • Model AI Governance Framework • Model AI Governance Framework for Generative AI • Model AI Governance Framework for Agentic AI • AI Verify • FEAT principles for the financial sector • AI in Healthcare Guidelines • MAS Guidelines on AI Risk Management (2026)
Vietnam 	• No. of listed data centers: 48 • Key investors: NTT Global Data Centers, ST Telemedia Global Data Centres.	• Decision No. 1528/QĐ-TTg (National Programme on AI Human Resources Development) • Programme targets: basic AI skills for 10 million workers and 10,000 highly qualified AI professionals by 2030	Finance and insurance, startups	• Law on Artificial Intelligence (No. 134/2025/QH15) • National Strategy on Artificial Intelligence to 2030, with a vision to 2045 (Decision No. 1671/QĐ-TTg, August 2026) • Decree No. 142/2026/ND-CP • Decision No. 33/2026/QĐ-TTg

Source: Compiled by Southeast Asia Public Policy Institute

3.1 Access sovereignty

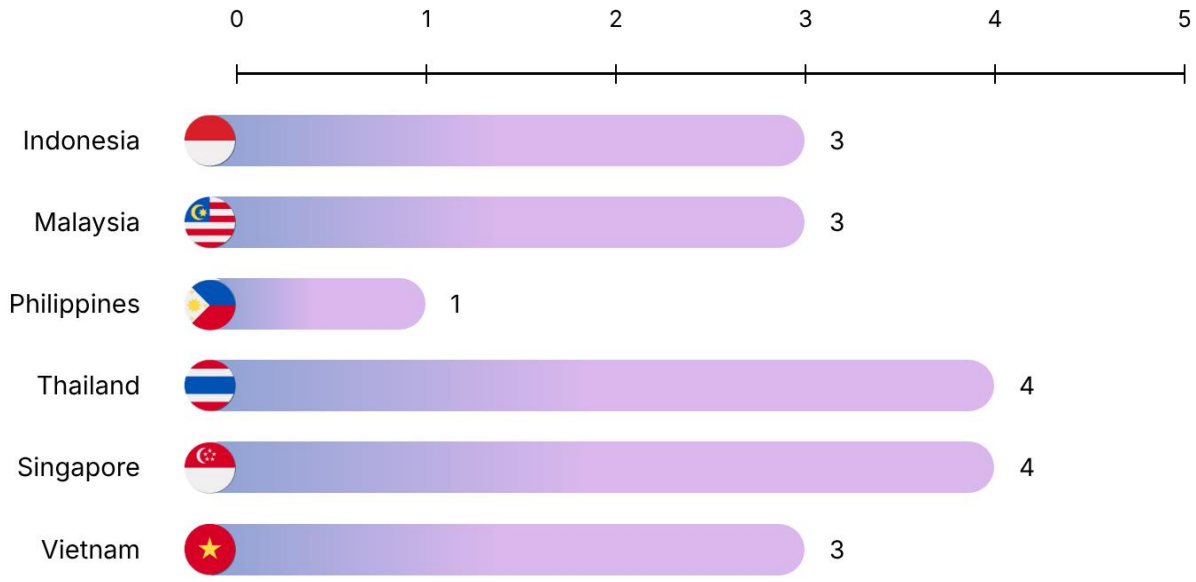
In terms of access sovereignty, Southeast Asian countries are in a broadly similar position on infrastructure access, with two exceptions. The region has become home to a growing number of data centers and cloud service providers, and countries increasingly rely on a mix of global technology companies and strong local providers rather than a single dominant firm. The region also has prominent homegrown players, such as Singapore-based ST Telemedia Global Data Centres. This diversity of providers helps reduce overreliance on a limited number of companies. Singapore, Indonesia, Malaysia, and Thailand each host live cloud regions from at least two hyperscale providers.[24] The exceptions are Vietnam, which has an AWS Local Zone

[24] Amazon Web Services, "Document History for AWS Regions and Availability Zones," accessed November 16, 2026, https://docs.aws.amazon.com/global-infrastructure/latest/regions/doc-history.html; Alibaba Cloud, "Alibaba Cloud Regions and Zones Selection Guide," accessed November 16, 2026, https://www.alibabacloud.com/help/en/doc-detail/40654.htm.

but no full cloud region,[25] and the Philippines, which hosts a region from only one hyperscale provider, Alibaba Cloud, while AWS explores a region there.[26]

Access to AI models follows a similar pattern. Although general usage is concentrated around a small number of services, such as ChatGPT, the availability of other frontier models gives users the flexibility to switch according to their needs, including domestic LLMs. In practice, users across the region can access multiple models without significant restrictions. Despite this similar landscape, countries differ in their level of access sovereignty.

Figure 3. Access sovereignty scores



Source: Southeast Asia Public Policy Institute assessment.

Differences in access sovereignty are largely determined by the range of infrastructure providers, the degree of model diversification, and the clarity of each country's strategy for managing external dependence. While many Southeast Asian countries are building partnerships with multiple AI providers, no country has yet established a formal mandate requiring a multi-provider approach, or a mechanism to maintain access during disruptions. As a result, no country reaches the highest access score under the methodology set out in Part 1 (see Figure 2).

Among them, Singapore has taken a comparatively clear path. The country has partnered with major providers such as Google and OpenAI to support its National AI Strategy,[27] while also investing in regional models such as SEA-LION, which is designed for Southeast Asian

[25] Amazon Web Services, "Announcing the General Availability of a New AWS Local Zone in Hanoi, Vietnam," June 19, 2026, https://aws.amazon.com/about-aws/whats-new/2026/06/aws-local-zones-hanoi-vietnam/.

[26] Context.ph, "AWS Eyes Up to $5B Philippine Cloud Investment," July 8, 2026, https://context.ph/2026/07/08/aws-eyes-up-to-5b-philippine-cloud-investment/.

[27] Economic Development Board (Singapore), "Singapore Updates National AI Strategy, Partners Google and OpenAI," May 20, 2026, https://www.edb.gov.sg/en/news-and-insights/singapore-updates-national-ai-strategy-partners-google-and-openai.

languages and contexts. This combination of access to multiple frontier models and support for a regional alternative provides an additional layer of resilience in model access.

Indonesia is following a somewhat different pathway at the model layer. Rather than placing the same emphasis on balancing access across multiple foreign frontier models, it has focused more strongly on developing localized models. Sahabat-AI, launched by Indosat Ooredoo Hutchison and GoTo in November 2024 and developed through continued pretraining and fine-tuning of open models, is intended to provide a local alternative for future AI adoption.[28] The government has now backed the model: In February 2026, the Ministry of Communication and Digital Affairs co-launched a Sahabat-AI app with Indosat.[29] This reflect Indonesia's broader ambition to become a more active AI player rather than just a primary user.[30] Such models widen the range of options available to users, but because they build on foreign open-weight models, access remains significantly influenced by foreign technology providers. Usage, meanwhile, remains dominated by a single foreign provider: Indonesia's AI chatbot market is the most concentrated among the six countries, with ChatGPT accounting for around 85 percent of traffic.[32]

Vietnam is following a similar path to Indonesia by prioritizing localized AI models trained on domestic data while maintaining access to multiple foreign models. Viettel, the state-owned telecommunications group, is working with NVIDIA to develop a national legal AI application using NVIDIA's open-model infrastructure, illustrating the country's approach to building more domestic capabilities.[33]

Thailand has taken a different but comparatively clear path. It hosts cloud regions from several hyperscale providers, most recently Google, which launched its Thailand region in January 2026.[34] Its AI chatbot market is the least concentrated among the six countries,[35] and in April 2026 the National Science and Technology Development Agency launched ThaiLLM, a Thai-language model developed as national AI infrastructure.[36] This combination places Thailand level with Singapore on access sovereignty.

Other Southeast Asian countries also have access to multiple foreign models and, in some cases, locally developed alternatives. Malaysia has also backed a national model, but by a different route: ILMU, developed by YTL AI Labs and launched in August 2025, is presented by the government as the country's sovereign AI model and, according to its developers, was

---

[28] Indosat Ooredoo Hutchison and GoTo, "Indosat Ooredoo Hutchison and GoTo Launch Sahabat-AI: Indonesia's Open-Source LLM for Empowering Digital Sovereignty," November 14, 2024, https://www.gotocompany.com/en/news/press/indosat-ooredoo-hutchison-and-goto-launch-sahabat-ai-indonesias-open-source-llm-for-empowering-digital-sovereignty.

[29] MARKETECH APAC, "Komdigi and Indosat Introduce Sahabat-AI to Strengthen Indonesia's Digital Sovereignty," February 27, 2026, https://marketech-apac.com/komdigi-and-indosat-introduce-sahabat-ai-to-strengthen-indonesias-digital-sovereignty/.

30 Antara, "Indonesia Aims to Become Global AI Player, Not Just User: Ministry," August 14, 2026, https://en.antaranews.com/news/426963/indonesia-aims-to-become-global-ai-player-not-just-user-ministry.

[32] StatCounter Global Stats, "AI Chatbot Market Share."

[33] TNGlobal, "Vietnam's Tech Giant FPT, Viettel Join Nvidia's Sovereign AI Push," June 3, 2026, https://technode.global/?p=124145.

[34] Google, "Google Cloud Launches New Cloud Region in Thailand, Bolstering Its Commitment to Advancing the Country's AI-Driven Digital Economy," January 21, 2026, https://www.googlecloudpresscorner.com/2026-01-21-Google-Cloud-Launches-New-Cloud-Region-in-Thailand,-Bolstering-its-Commitment-to-Advancing-the-Countrys-AI-Driven-Digital-Economy.

[35] StatCounter Global Stats, "AI Chatbot Market Share."

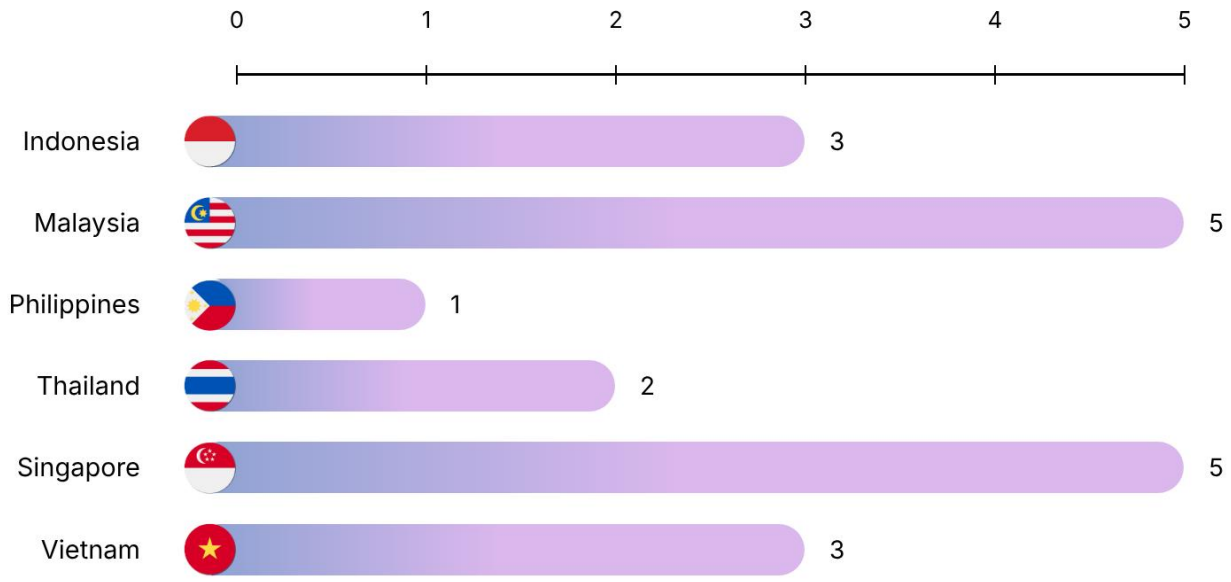
[36] The Nation, "ThaiLLM Launched to Strengthen Thailand's National AI Capacity," April 20, 2026, https://www.nationthailand.com/business/tech/40065259.

trained from scratch rather than adapted from a foreign base model.[37] The Philippines, by contrast, has neither a choice of hyperscale cloud providers nor a government-backed model, which gives it the lowest access score in the region. Local models count toward access because they add an option alongside foreign providers, not because they remove dependence on them: most still run on foreign chips and cloud infrastructure, and many build on foreign base models.

3.2 Capability sovereignty

Capability is the area where Southeast Asia most needs to concentrate its efforts. The region is emerging as an important market for AI, reflected in high adoption rates and growing use of AI across sectors. However, capability should go beyond widespread or basic use. Unless high adoption can be translated into deeper deployment and integration into business processes and organizational workflows, countries will continue to face limitations in building and maintaining capability sovereignty. This helps explain why a high level of access does not necessarily translate into a similarly high capability score.

Figure 4. Capability sovereignty scores



Source: Southeast Asia Public Policy Institute assessment.

Singapore and Malaysia lead the region in capability sovereignty. Singapore's AI ecosystem is among the most developed in the region and is competitive at the global level, with AI increasingly moving beyond basic use to become a practical solution supporting economic transformation. In the private sector, AI is being deployed across finance, logistics, healthcare, manufacturing, and research. Adoption is also extending beyond large companies to SMEs. The role of AI in the public sector is similarly expanding. Initiatives such as Pair are helping integrate AI into public services and government workflows, improving both service quality

[37] Bernama, "Nvidia-YTL Power's AI Infra Progress Boosts Malaysia's AI Drive – PM Anwar," October 31, 2025, https://www.bernama.com/en/news.php?id=2485728.

and productivity.[38] However, the country still faces a shortage of AI talent relative to demand, which requires various talent development programs and initiatives to help maintain a pipeline of workers entering the AI ecosystem.

Malaysia shows a similar trajectory to Singapore, with deployment concentrated in selected key sectors. AI deployment is increasingly evident across the private sector, particularly in finance and manufacturing, including the semiconductor industry. Malaysia's financial sector is particularly notable, ranking among the top three markets globally for AI adoption in consumer finance and wealth management and demonstrating its ability to translate AI into practical solutions for customers. In the public sector, the government has launched AI at Work 2.0 to provide government officials with access to AI tools. Although current use remains concentrated on day-to-day functions, the initiative provides a foundation for public agencies to integrate AI more systematically and in more sophisticated ways into their operations. For Malaysia, talent availability remains a concern. The existing pool of around 3,000 AI professionals is insufficient to meet growing demand, highlighting the need for further programs and initiatives to expand the country's AI workforce.

Indonesia, Thailand, and Vietnam are at a mid-level stage of capability sovereignty, with Thailand slightly behind because of its low AI diffusion rate and narrower sector coverage. AI adoption is growing rapidly, businesses generally have a positive view of the technology, and some degree of deployment is already taking place. However, deeper implementation remains concentrated in selected sectors, such as finance in Indonesia and Thailand and the startup ecosystem in Vietnam. Across many other sectors, adoption remains uneven between large and small businesses, with AI still used primarily for general-purpose and everyday tasks. Unlike Singapore and Malaysia, which have introduced specific initiatives to encourage AI adoption in the public sector, these three countries continue to rely heavily on voluntary use by individual officials or agencies, without sufficiently clear direction or guidance for broader institutional deployment. This limits their ability to integrate AI at scale. Although all three countries have introduced talent development initiatives, their available AI workforce remains well below the level needed to support deeper and more widespread deployment.

The Philippines presents a somewhat different case. Despite relatively widespread AI use, the Philippines has not yet translated this usage into deep deployment across either the private or public sectors.

In a 2026 survey of 62 firms, only around 2 percent of organizations have advanced toward deeper integration of AI into their systems,[39] suggesting that adoption remains relatively shallow. This limitation is particularly evident among local governments, where gaps in institutional capacity, infrastructure, and budgets constrain more advanced deployment. A

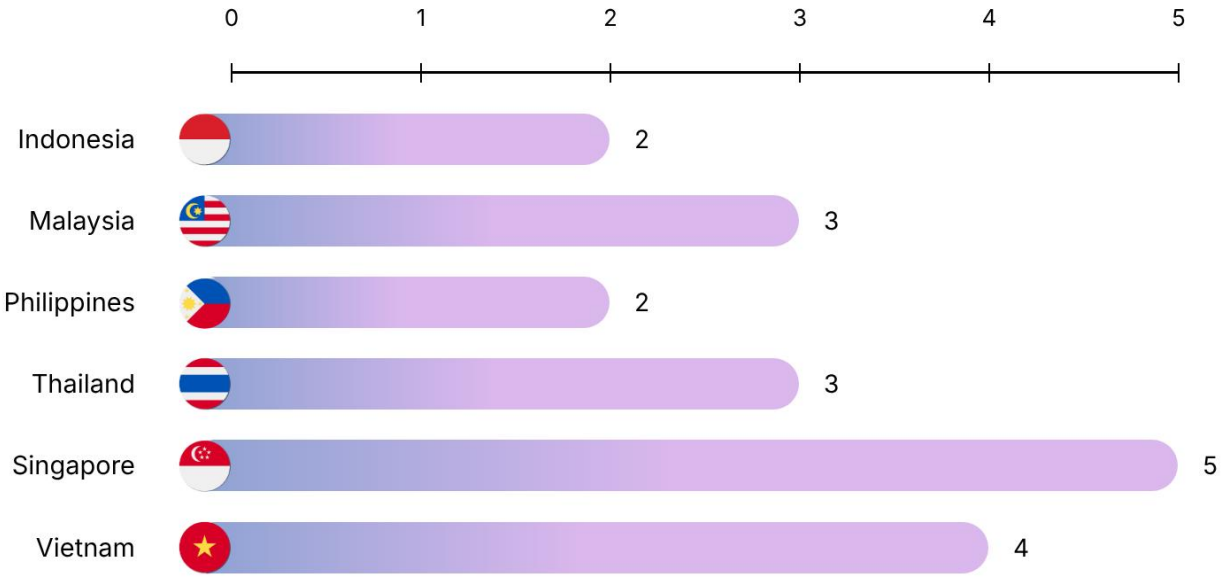
[38] United Nations Development Programme, "Pairing with AI for Public Sector Impact in Singapore," September 26, 2024, https://www.undp.org/policy-centre/singapore/blog/pairing-ai-public-sector-impact-singapore.
[39] InsiderPH, "Philippine Firms Facing AI Ceiling as Infra, Talent Gaps Widen," April 24, 2026, https://insiderph.com/philippine-firms-facing-ai-ceiling-as-infra-talent-gaps-widen.

significant talent shortage further limits the country's ability to move from widespread AI use toward stronger capability sovereignty.

3.3 Governance sovereignty

Governance sovereignty adds another important layer to AI sovereignty by creating an enabling environment for AI development and deployment while ensuring that activities across the AI ecosystem are guided by clear rules, standards, and internationally recognized practices. Regional efforts have begun through initiatives such as the ASEAN Guide on AI Governance and Ethics and the ASEAN Responsible AI Roadmap 2025-2030. However, individual countries have moved beyond these regional foundations at different speeds and with different approaches, resulting in varying levels of governance sovereignty across Southeast Asia.

Figure 5. Governance sovereignty scores



Source: Southeast Asia Public Policy Institute assessment.

Singapore's approach differs from that of many global counterparts that place greater emphasis on binding regulation. The country illustrates how a flexible, voluntary, and sector-specific approach can support AI innovation just without economy-wide AI legislation.

At the strategic level, the National AI Strategy 2.0 sets the direction for Singapore to strengthen its position as a trusted global AI hub. Nonbinding frameworks such as the Model AI Governance Framework help AI developers and organizations address accountability, ethics, and consumer transparency, while AI Verify provides a framework for testing and validating AI systems before deployment. Together with sector-specific guidelines in areas such as finance and healthcare, these initiatives have helped create a supportive governance environment for the development and real-world deployment of AI.

Vietnam has taken a different approach. Rather than relying primarily on voluntary frameworks, the country has introduced Southeast Asia's first standalone comprehensive AI law, covering key issues such as risk-based classification, prohibited practices, and transparency

requirements. The framework requires compliance across sectors, and its basic principles prioritize human-centered AI that safeguards human rights, privacy, and national interests and security. Although the current framework does not yet extend to the sectoral level, which limits its degree of governance sovereignty compared with Singapore, this state-led regulatory approach still gives Vietnam binding, economy-wide rules for AI.

Beyond Singapore and Vietnam, no other country in the region has yet implemented a similarly comprehensive AI law or governance framework. While all countries have developed national AI roadmaps or strategies, several are now pursuing more formal regulatory approaches. Indonesia has finalized two presidential regulations, both awaiting the President's signature as of September 2026: one on AI ethics, transparency, and risk classification, and another formalizing its national AI roadmap for 2026–2029. Malaysia completed drafting its proposed AI Governance Bill in September 2026, following a public consultation launched in July, and plans to table it in Parliament in early 2027. The bill seeks to balance rapid digital innovation with safety, ethics, and protection for affected individuals.

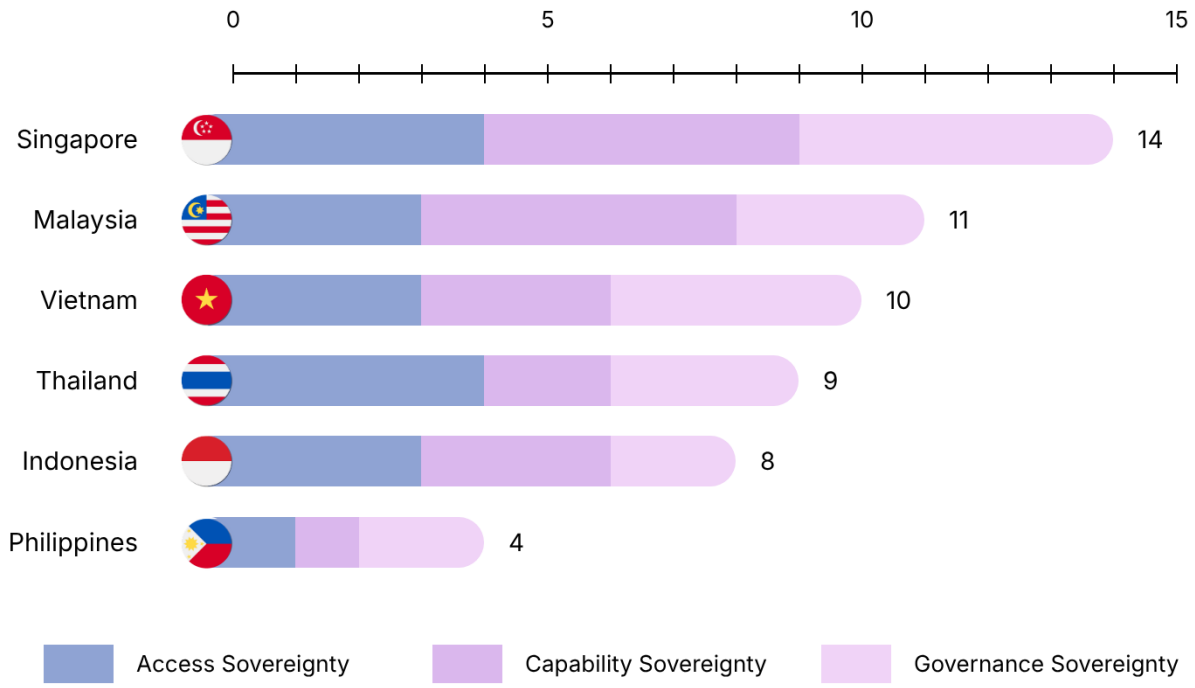
Thailand is similarly developing its first AI law : a draft AI Act, released for public consultation in July 2026, focuses on high-risk AI, rights protection, accountability, and standards. Together with national AI strategies, sector-specific guidelines, and other supporting policies, these efforts provide these countries with a modest foundation for governance sovereignty, even though their frameworks remain under development. Indonesia is less advanced institutionally on implementation, however: its main AI coordination platform, KORIKA, is an open multi-stakeholder forum rather than a body that coordinates national AI policy,[40] and the AI coordination task force set up by the communications ministry awaits a formal mandate under the pending roadmap regulation. This places its governance score level with that of the Philippines.

The Philippines has also established an important starting point through the launch of the National AI Strategy Roadmap 2.0. However, the country has not yet introduced comprehensive regulations, legislation, or detailed guidelines addressing AI-specific governance issues. As a result, its governance framework remains less developed than those of several neighboring countries, placing the Philippines at a comparatively lower level of governance sovereignty.

When the scores across the three domains are considered together, the combined results provide an overall picture of AI sovereignty among Southeast Asian countries. Singapore clearly leads the region with the highest level of sovereignty. Its strong access to infrastructure and AI models, well-established data protection framework, ability to develop and deploy AI solutions, and supportive regulatory and policy environment all contribute to the country's strong position.

[40] GovInsider, "How Indonesia's New National Strategy Aims to Accelerate the Growth of Southeast Asia's Largest AI Ecosystem," n.d., https://govinsider.asia/intl-en/article/how-indonesias-new-national-strategy-aims-to-accelerate-the-growth-southeast-asias-largest-ai-ecosystem.

Figure 6. Overall sovereignty scores (out of 15)



Source: Southeast Asia Public Policy Institute assessment.

Malaysia ranks second, reflecting its efforts to advance its AI ambitions under the AI Nation 2030 agenda, and it matches Singapore on capability sovereignty. While the country benefits from favorable conditions, including strong investment in AI infrastructure and continued efforts in talent development, it still needs to strengthen access and governance sovereignty.

Vietnam follows in third place in Southeast Asia. This reflects the country's ambition to pursue national AI models and establish a comprehensive AI law, although talent shortages and the lack of a full hyperscale cloud region may constrain its ability to achieve a higher degree of sovereignty.

Thailand ranks fourth and Indonesia fifth. Indonesia has a solid foundation for AI growth but still requires clearer direction and more dedicated policies and regulations to strengthen its sovereignty and remain competitive with neighboring countries. Thailand can build on its relatively well-rounded development of AI policies and its strong access sovereignty, but greater attention should be given to wider AI adoption, talent development, and the establishment of a more comprehensive governance framework across the AI ecosystem.

The Philippines lags behind other countries in the region. Strengthening its position will require more focused efforts across key areas, particularly talent development and institutional capacity, to translate AI adoption into practical solutions. Greater attention should also be given to regulations and guidelines to ensure that AI deployment is appropriately risk-managed and aligned with accepted standards.

Overall, Southeast Asian countries have been relatively successful in attracting infrastructure investment and maintaining access to global technologies, but they have been less successful in diversifying that access and in converting it into deep, repeatable domestic capability and clear, operational governance. A lower sovereignty score does not mean that a country cannot benefit from AI or participate competitively in AI-enabled value chains. Rather, the domain scores show where each country's bottlenecks lie and can help guide efforts toward greater strategic autonomy, by maintaining control over critical dependencies and preserving optionality across providers and technology ecosystems.

4 Driving factors and challenges for Southeast Asia

Artificial intelligence is emerging as a strategic layer of Southeast Asia's digital economy and a key driver of industrial transformation. The region has substantial opportunities to capture economic and public value from AI, but sovereignty concerns remain over whether countries can strengthen the capabilities needed to retain that value and manage associated risks while remaining connected to global technology ecosystems. As national capabilities and governance frameworks vary widely across the region, regional cooperation can play an important role in translating rapid AI adoption into productivity gains, local innovation, and stronger institutional control.

4.1 Driving factors for AI development in Southeast Asia

AI adoption is accelerating across Southeast Asia. In a 2024 Deloitte survey, the region ranked second among nine Asia-Pacific locations for generative AI use, reflecting broad uptake among users.[41] This momentum rests on the rapid expansion of the digital economy. AI deployment depends on reliable connectivity, computing capacity, and the wider digital systems through which businesses and consumers access technology. Southeast Asia's digital economy was projected to grow by approximately 15 percent year on year in 2025,[42] supported by continued investment in mobile broadband, cloud regions, subsea cables, and data centers. Together, these assets provide the infrastructure needed to deploy AI applications at scale and extend them across sectors.

Demand from users provides a second catalyst. With approximately 500 million internet users, Southeast Asia accounts for close to 10 percent of the global online population and offers a large, digitally engaged consumer base.[43] Interest in general AI and multimodal AI is three times and 1.7 times the global average, respectively,[44] while attitudes toward AI are also more positive than the global norm. Adoption is particularly strong among younger, mobile-first users. Around 77 percent of people under 35 report using generative AI weekly at work.[45] This combination of scale, interest, and routine use is drawing AI tools into daily workflows and creating a receptive market for new applications.

[41] Deloitte, *Generative AI in Asia Pacific: Young Employees Lead as Employers Play Catch-Up*, May 12, 2024, https://www2.deloitte.com/southeast-asia/en/Industries/technology/research/generative-ai-asia-pacific.html.
[42] Google, Temasek, and Bain & Company, *e-Conomy SEA 2025*.
[43] Google, Temasek, and Bain & Company, *e-Conomy SEA 2025*, 53.
[44] Google, Temasek, and Bain & Company, *e-Conomy SEA 2025*, 53.
[45] Public First, *The AI Opportunity in Southeast Asia*, commissioned by Google, n.d., https://aiopportunity.publicfirst.co/?p=7119.

Business and institutional demand reinforces this consumer-led adoption. In the survey of 330 senior executives cited in section 2.2, 46 percent of companies had moved from piloting AI to scaling it.[46] Firms increasingly view AI as a means to raise productivity, improve output quality, shorten processes, and reduce logistics and transaction costs. Rapid improvements in large language models from major global developers such as Anthropic, OpenAI, Google, Microsoft, Cohere, Meta, and Mistral have also expanded the range and sophistication of possible applications. These now extend across sectors, including faster drug discovery, smarter farming and higher agricultural productivity, compliance and fraud detection in financial services, and lower-cost document processing in public administration. As these use cases demonstrate practical value, AI adoption can move from isolated experiments toward deeper integration into core operations. However, this momentum remains uneven and is still driven largely by larger enterprises, while only a limited number of small and medium-sized enterprises are able to adopt AI at scale. In Singapore, for example, around 14.5 percent of SMEs adopted AI, compared with 62.5 percent of non-SMEs.[47] In Indonesia, an AWS-commissioned survey found that 28 percent of businesses had adopted AI, compared with 41 percent of large enterprises, pointing to significant room for broader adoption.[48]

Both individual- and institutional-level demand are also shaping national policy. Governments across Southeast Asia increasingly treat AI as a source of economic and public value, as well as a capability that can strengthen national competitiveness. For developing economies, AI is often viewed as a potential means to raise productivity, narrow capability gaps, and participate more effectively in technology-intensive growth. AI preparedness has therefore become a strategic priority, with countries seeking to build the infrastructure, skills, institutions, and regulatory conditions needed to capture its benefits while avoiding deeper dependence or falling behind as global competition intensifies.

4.2 Key challenges shaping Southeast Asia's AI landscape

The opportunities created by AI in Southeast Asia are accompanied by significant risks that could constrain the region's long-term AI development. If left unaddressed, these constraints could limit the region's ability to convert rapid adoption into durable economic and social value.

One of the most significant challenges is the region's dependence on major AI powers. The global AI ecosystem remains highly concentrated. In 2025, organizations based in the US produced 59 notable AI models, while China produced 35. South Korea followed with eight, significantly fewer than the two leading countries.[49]

---

[46] McKinsey & Company, Singapore Economic Development Board, and Tech in Asia, *AI in Southeast Asia*.

[47] Infocomm Media Development Authority, "Singapore's Digital Economy at 18.6% of GDP, up from 14.9% in 2019; Growth Fuelled by Accelerating Digitalisation and AI Adoption across Sectors and Firms," October 6, 2025.

[48] Amazon Web Services, "New AWS Research Shows Strong AI Adoption Momentum in Indonesia," August 7, 2025, https://press.aboutamazon.com/sg/aws/2025/8/new-aws-research-shows-strong-ai-adoption-momentum-in-indonesia.

[49] Stanford Institute for Human-Centered Artificial Intelligence, *The 2026 AI Index Report* (Stanford, CA: Stanford University, April 13, 2026), https://hai.stanford.edu/ai-index/2026-ai-index-report.

Although several Southeast Asian countries have sought to develop domestic large language models, these efforts do not fundamentally alter the region's dependence on external ecosystems. Advanced accelerators, enabling platforms, developer tools, and frontier research remain concentrated primarily within US- and China-centered technology ecosystems.

Competition among major technology providers can lower costs, expand access to advanced technologies, and attract investment into the region. However, excessive dependence on a limited number of providers can also create vendor lock-in, incompatible technology standards, and exposure to geopolitical pressure. The June 2026 export controls on Anthropic's frontier models, followed by moves in some European countries to diversify their AI models and suppliers, underline the growing risks of overreliance.[50]

These risks extend across the AI stack, from physical infrastructure to software and services. Access to advanced AI chips is increasingly shaped by US-China strategic competition and export controls. Dependence on cloud platforms, foundation models, and enterprise software can also limit countries' ability to switch providers. Diversification is therefore important for preserving technological optionality and reducing exposure to external disruptions.

A second challenge concerns the growing resource demands associated with AI infrastructure. Data centers require substantial amounts of electricity, water, and land, creating additional pressure on national energy and infrastructure systems. The International Energy Agency projects that global data center electricity consumption will grow by around 15 percent annually through 2030, more than four times faster than electricity demand from all other sectors.[51] Data centers also generate significant heat and can require substantial volumes of water for cooling. These pressures are particularly relevant for Southeast Asia, which accounts for about half of the data center capacity under construction in the Asia-Pacific region.[52]

The ASEAN Guide for Sustainable Data Centre Development also notes that increasing rack density is intensifying cooling and grid requirements across the region.[53] In Southeast Asia's hot and humid climate, these resource constraints may become particularly acute. These environmental pressures also raise broader questions about the economic value generated by data center investment. Data centers are highly capital-intensive and require substantial land, electricity, and supporting infrastructure, while their permanent operating workforces can be relatively small compared with the scale of initial investment.

Workforce readiness represents another critical challenge and has two related dimensions. The first is a shortage of specialized AI talent. Southeast Asia needs more AI researchers, engineers, developers, and other technical specialists to support the

---

[50] Reuters, "US Curbs on AI."

[51] International Energy Agency, "Energy Demand from AI," April 10, 2025, https://www.iea.org/reports/energy-and-ai/energy-demand-from-ai.

[52] Cushman & Wakefield, "Asia Pacific's Data Centre Development Pipeline Reaches Record 26.5GW in H1 2026," August 5, 2026, https://www.cushmanwakefield.com/en/singapore/news/2026/08/apac-dc-h1-2026.

[53] ASEAN Secretariat, *ASEAN Guide for Sustainable Data Centre Development* (Jakarta: ASEAN Secretariat, January 2026), https://asean.org/wp-content/uploads/2026/01/2.-ASEAN-Guide-for-Sustainable-Data-Centre-Development_Dec-2025-Final.pdf.

development and deployment of AI systems. At the same time, the region requires a much broader workforce capable of using AI effectively, critically, and responsibly within existing occupations.

The second dimension concerns the potential disruption of existing jobs. While AI can create new occupations and improve productivity, it can also transform or displace existing roles. The International Labour Organization estimates that generative AI could affect nearly 80 million jobs across ASEAN, with approximately 21 to 28 percent of employment exposed to the technology.[54] Addressing these two dimensions together will therefore be essential. Countries need to expand the pipeline of specialized AI talent while simultaneously equipping the existing workforce with the skills required to adapt to changing tasks, transition into emerging roles, and work effectively alongside AI.

Finally, unclear governance can constrain AI adoption even where businesses and public agencies have access to the necessary technologies. Companies require practical guidance on how AI can be developed and deployed transparently, responsibly, and with clear accountability. Without such guidance, regulatory uncertainty may discourage investment or lead firms to limit AI applications because of concerns over compliance and risk.

The same challenge applies to the public sector. Without clear institutional leadership, procurement standards, data-sharing rules, and accountability mechanisms, AI adoption may remain fragmented and depend largely on individual officials or agencies experimenting with tools rather than integrating AI systematically into government workflows. OECD analysis identifies uncertainty over guidance and governance arrangements as one of the barriers holding back the strategic use of AI in government.[55] Establishing clear and practical governance frameworks will therefore be important for enabling AI adoption while ensuring that its associated risks remain manageable.

4.3 Southeast Asia's pathway toward AI sovereignty

Southeast Asian countries are unlikely to achieve technological independence across the full AI stack, nor is it necessary for them to do so. Developing frontier AI capabilities requires substantial computing infrastructure, capital, specialized talent, data, and sustained research investment that most countries in the region cannot independently provide.

At the same time, remaining primarily passive users of technologies developed elsewhere may limit opportunities for domestic value creation and reduce the region's influence over how AI is deployed within its economies and societies. A realistic pathway toward AI sovereignty therefore lies between these two positions.

[54] International Labour Organization, "AI May Affect Nearly 80 Million Workers in the ASEAN Region, but Large-Scale Job Disruption Not Yet Seen," July 8, 2026.
[55] OECD, *Governing with Artificial Intelligence* (Paris: OECD Publishing, September 18, 2025), https://www.oecd.org/en/publications/governing-with-artificial-intelligence_795de142-en.html.

Strategic nonalignment provides a useful organizing principle for this approach.[56] Southeast Asian governments can maintain constructive relationships with leading AI developers across different technology ecosystems while avoiding excessive dependence on any single provider or country. In practice, this means pursuing selective sovereignty across the AI stack. Countries do not need to own or produce every component domestically, but they should maintain sufficient capability and bargaining power to access infrastructure on acceptable terms, choose among different technology providers, and adopt or switch between AI models according to domestic needs.

AI adoption should also move beyond general-purpose productivity tools toward applications that generate tangible economic and social value. Countries should strengthen the wider ecosystem, including talent, institutional capacity, data infrastructure, technical expertise, and effective governance, to develop AI solutions in response to local needs. Without the capacity to deploy AI strategically, greater access to advanced technologies alone will not translate into stronger AI sovereignty.

Regional cooperation can reinforce these national efforts. ASEAN does not need to replicate the European Union's binding regulatory model, particularly given substantial differences among member states in market structure, technological readiness, legal systems, and regulatory capacity. Regional cooperation should instead focus on areas such as common principles, standards, capacity building, talent development, and mechanisms that reduce unnecessary barriers to broader AI deployment.

ASEAN should also use its collective market scale to strengthen engagement with external technology partners. Cooperation can involve US, Chinese, European, Japanese, Korean, and other global technology providers while continuing to strengthen domestic and regional AI ecosystems. Greater coordination would allow Southeast Asian countries to negotiate from a stronger collective position, promote compatible standards, and preserve access to multiple technology ecosystems.

[56] Nikkei Asia, "The AI Cold War Needs a Nonaligned Movement," June 26, 2026.

5 Policy recommendations

AI sovereignty will not be achieved by attempting to build every component of the AI ecosystem within national borders or by disengaging from the world's leading AI powers. Instead, Southeast Asian countries should strengthen their ability to adapt, deploy, and govern AI technologies while maintaining strategic flexibility and sufficient domestic capability.

Southeast Asian governments can act across the following areas, at both the regional and national levels:

- **Build resilience by preserving optionality across AI providers:** Most Southeast Asian countries will continue to rely on foreign infrastructure and models for the foreseeable future. The priority is therefore not to replace this reliance but to make it resilient. This means keeping it diversified, reversible, and on acceptable terms, so that services can withstand disruptions such as outages, changes in provider terms, or export controls. None of the six countries assessed yet has a formal mechanism to maintain access during such disruptions. The first step is for governments to map the AI dependencies of critical public services, identifying which providers, models, and facilities they rely on. As governments have the potential to be major buyers of AI and cloud services, they can require that data and systems be moved to another provider without excessive cost or disruption. Essential public services that rely on AI can be designed so that they are not tied to a single model. This will allow them to keep running if a provider becomes unavailable. Contracts can also set clear terms for ending or transferring a service. Sector regulators, particularly in finance, can require firms to manage their reliance on AI providers as they would any other critical supplier so that problems at one provider do not disrupt an entire sector. At the regional level, ASEAN can use its collective market scale to agree on common procurement principles and engage providers jointly, allowing smaller markets to negotiate from a stronger position while preserving access to multiple technology ecosystems. Because these measures build resilience through redundancy rather than self-sufficiency, they do not depend on data localization mandates or preferences for domestic providers, which can raise costs and deter the investment on which the region's AI infrastructure depends.

- **Strengthen regional coordination on strategic-level programs:** Southeast Asia does not need to build new institutions or frameworks from scratch, but can build on existing ASEAN bodies and frameworks. The ASEAN Guide on AI Governance and Ethics and the Responsible AI Roadmap provide a practical foundation for such coordination. A priority should be governance, particularly the development of risk management protocols.

ASEAN, as the central coordinating body, can assess and evaluate frameworks that are appropriate for the regional context while remaining consistent with international standards. A multi-tiered risk framework similar to the EU approach could be developed as high-level, nonbinding guidance rather than as a binding regulatory framework. Successful initiatives from countries within the region, such as Singapore's AI Verify toolkit, could also serve as examples for other member states. In this context, ASEAN bodies can play an advisory role in developing collaborative strategies. They can also support capacity building for AI research, development, and deployment in countries where expertise remains limited. Successful use cases from individual countries can also be shared regionally for other member states to learn from and adapt to their own contexts.

- **Develop AI talent and prepare the future workforce:** Talent policy is essential across several layers of AI capability. Countries need not only broad AI literacy but also more advanced capabilities among AI developers, data engineers, technical specialists, and cybersecurity professionals. At the sector level, they also need professionals who understand public and private sector needs and can integrate AI into operations and workflows. Governments can take the lead in addressing these talent gaps by supporting the talent pipeline through scholarships, grants, reskilling and upskilling programs, curriculum development, and certification programs co-designed with industry.

  Beyond this, partnerships with global firms can support train-the-trainer programs and the transfer of curricula, tools, and management knowledge. However, these partnerships should remain flexible and be spread across providers, in line with the principle of preserving optionality as set out in the recommendation above. ASEAN can also support collaborative regional initiatives that pool resources to help narrow digital skills gaps among member states.

- **Prioritize localized AI solutions rather than model localization alone:** Domestic large language models can benefit countries when they are successfully developed and deployed, but they should not become the primary measure of sovereignty given the substantial resources required. An alternative pathway is to adapt existing foreign-developed models while strengthening the capacity to select, fine-tune, evaluate, integrate, and maintain AI solutions that are tailored to local needs. Governments can provide support at multiple levels. They can establish centers of excellence to develop and deploy AI in strategic sectors, leveraging frontier models to build context-specific systems that create value for the economy. Governments can also support AI developers through financial incentives and grants, as well as enabling frameworks in priority sectors that encourage research institutions, universities, and private firms to strengthen their deployment capabilities. Open-weight models can also be considered as an option to provide greater flexibility to adapt, fine-tune, and deploy AI systems for local languages, sectors, and contexts. Where appropriate, they can complement proprietary models by expanding the range of available options and supporting the development of more locally relevant AI solutions.

- **Strengthen governance, particularly for data use and protection:** Data is the operational foundation of AI and a central element of sovereignty. Countries should ensure that personal data protection laws are appropriately adopted and effectively enforced to support the use of data in AI development. Data protection should be complemented by mechanisms that enable responsible data use while maintaining sufficient flexibility for firms and public agencies to develop and deploy AI applications. At the regional level, ASEAN's Data Management Framework can provide a foundation, but it should be refined to better fit the AI context. A well-established regional framework would strengthen governance by translating high-level principles into operational practices, while still allowing individual countries to determine how these principles are implemented and preserve sufficient room for innovation.

Taken together, these priorities would allow Southeast Asia to move from broad access and fragmented experimentation toward a more durable form of AI sovereignty. The objective is a region that remains open to global technology while retaining the choice, competence, and authority to determine how AI serves its economic and social goals.

Appendix: Key country snapshots



Indonesia

Indonesia's AI market is expanding, supported by a large digital economy, a young and increasingly connected population, and rapid growth in business adoption. However, Indonesia's AI development remains uneven, with strong private sector momentum but slower institutional readiness, fragmented public sector use, and persistent gaps in digital skills and infrastructure.

Indonesia's main AI policy framework is the National Strategy for Artificial Intelligence 2020–2045, known as Stranas KA, which was launched in August 2020.[57] The strategy sets out the country's long-term vision for AI development and identifies priority sectors for deployment. A distinctive feature of this strategy is its quadruple-helix collaboration model, which brings together government, academia, industry, and civil society. To support this coordination, KORIKA, or Kolaborasi Riset dan Inovasi Industri Kecerdasan Artifisial, was established by the Agency for the Assessment and Application of Technology to serve as an orchestrator across stakeholders.[58]

Indonesia does not yet have a dedicated, legally binding AI law. Instead, its current governance approach relies on strategy documents, ethical guidance, and related digital regulations. Circular 9/2023 on the Ethics of AI Use introduced ethical principles for AI deployment, while existing laws such as the Personal Data Protection Law 27/2022 and KOMINFO Regulation 20/2016 provide a framework for personal data protection and data processing. Sector-specific guidance is more advanced in financial services, where the Financial Services Authority has issued AI guidelines for fintech and banking.[59] A more comprehensive AI framework is also in the pipeline, with two draft presidential regulations under preparation. One covers the national AI roadmap, including infrastructure, talent, research, and financing; the other sets ethical requirements across the AI life cycle.[60]

AI adoption in the private sector is growing quickly. According to an AWS-commissioned survey, around 28 percent of Indonesian businesses, or approximately 18 million firms, have

[57] KORIKA, *Strategi Nasional Kecerdasan Artifisial Indonesia 2020–2045*, July 14, 2024.

[58] UNESCO, *Indonesia: Artificial Intelligence Readiness Assessment Report* (Paris: UNESCO, October 4, 2024).

[59] Otoritas Jasa Keuangan, *Indonesia Artificial Intelligence Governance for Banking*, April 29, 2025, https://ojk.go.id/en/Publikasi/Roadmap-dan-Pedoman/Perbankan/Pages/Indonesia-Artificial-Intelligence-Governance-for-Banking.aspx.

[60] Detik, "Komdigi Ajukan 2 Rancangan Perpres tentang AI, Target Segera Terbit" [Komdigi submits two draft presidential regulations on AI, targets early issuance], April 7, 2026, https://news.detik.com/berita/d-8433227/komdigi-ajukan-2-rancangan-perpres-tentang-ai-target-segera-terbit.

adopted AI. This represents a 47 percent year-on-year increase, with around 5.9 million new business adopters in 2024 alone.

In Microsoft and LinkedIn's 2024 Work Trend Index, 92 percent of Indonesian knowledge workers reported using generative AI at work, above both the global average of 75 percent and the Asia-Pacific average of 83 percent.[61] However, this adoption remains concentrated in common productivity uses, including writing emails, content creation, research, coding, and data analysis. It is also clustered in major urban centers, meaning that AI benefits are not yet evenly distributed across the country.

Indonesia has also begun investing in localized AI capabilities. One example is Sahabat-AI, an open-weight large language model ecosystem developed by Indosat Ooredoo Hutchison and GoTo. The latest model, launched in June 2025, supports Bahasa Indonesia and four major regional languages: Javanese, Sundanese, Balinese, and Bataknese, alongside several international languages. This initiative reflects Indonesia's ambition to strengthen digital sovereignty by developing AI tools that better reflect its language diversity, cultural context, and local needs.

Public sector AI adoption remains less advanced than private sector use. While some agencies are experimenting with AI, adoption is still fragmented and often focused on drafting, administrative support, and routine productivity tasks rather than more sophisticated public service delivery or decision-support applications.

Several barriers continue to limit deeper AI adoption. The most important is the digital skills gap. Around 57 percent of Indonesian businesses cite lack of digital skills as the main barrier to deeper AI use.[62] Infrastructure is another major constraint. Although Indonesia has more listed data center facilities than any other Southeast Asian country and has attracted significant foreign investment in cloud services, basic internet access remains uneven. The urban-rural divide continues to limit AI access for a significant share of the population.

[61] Microsoft, "Microsoft and LinkedIn Release the 2024 Work Trend Index on the State of AI at Work in Indonesia," June 11, 2024, https://news.microsoft.com/id-id/2024/06/11/microsoft-and-linkedin-release-the-2024-work-trend-index-on-the-state-of-ai-at-work-in-indonesia/.

[62] Amazon Web Services, "New AWS Research."



Malaysia

Malaysia has set an ambition to become an AI Nation by 2030. This direction began with the National AI Roadmap 2021-2025, which identified priority sectors for AI deployment and introduced a coordination approach involving government, industry, academia, and civil society. The policy foundation has since become more structured. In 2024, Malaysia developed the National Guidelines on AI Governance and Ethics, followed by the establishment of the National AI Office (NAIO) in December 2024 to coordinate national AI strategy and implementation. In July 2026, NAIO was institutionalized as AI Malaysia Berhad, under the Ministry of Digital.

The office marks an important shift in Malaysia's AI governance approach. Its early mandates include developing an AI Code of Ethics, the National AI Action Plan 2026-2030, and an AI Adoption Regulatory Framework.[63] Malaysia is also developing an AI Governance Bill, which would establish centralized institutional oversight and a principles-based, risk-based governance framework for AI. A public consultation on the bill was launched in July 2026. This initiative is intended to form the basis of the country's first cross-sector artificial intelligence law.[64]

Malaysia's infrastructure base gives the country a strong foundation for AI development. The country has attracted major investments from Microsoft, NVIDIA, Google, and ByteDance as demand for cloud services, AI computing, and data centers has accelerated. Johor and Cyberjaya are emerging as important data center clusters, strengthening Malaysia's role as a regional hub for digital infrastructure. This infrastructure growth is also supported by Malaysia's existing semiconductor and electronics ecosystem, which provides a broader industrial base for AI-related investment.

AI adoption is expanding across both the private and public sectors. In an AWS-commissioned survey, 38 percent of Malaysian businesses reported consistently using at least one AI tool in 2026, up from 27 percent a year earlier.[65] Malaysia is now leading in AI adoption across many sectors, including finance and manufacturing, particularly semiconductors. The financial sector ranks among the top three markets globally for AI adoption in consumer finance and wealth management.[66] However, adoption in other sectors remains concentrated in basic use cases. Two-thirds of AI adopters still rely mainly on basic applications, such as daily productivity tasks, rather than advanced or sector-transforming deployment.[67]

---

[63] AI Malaysia Berhad, "FAQ," n.d., https://ai.gov.my/faq/ai-malaysia-berhad/.

[64] Ministry of Digital (Malaysia), "Ministry of Digital Initiates Engagement on Proposed Artificial Intelligence (AI) Governance Bill," July 10, 2026.

[65] Business Today, "Malaysia AI Adoption Rises to 38% of Businesses, Study Finds," September 4, 2026, https://www.businesstoday.com.my/2026/09/04/malaysia-ai-adoption-rises-to-38-of-businesses-study-finds/.

[66] The Asian Banker, "Malaysia Ranks among Top Three Markets for AI Adoption in Finance, HSBC Survey Finds," August 10, 2026, https://www.theasianbanker.com/press-releases/malaysia-ranks-among-top-three-markets-for-ai-adoption-in-finance-hsbc-survey-finds.

[67] Business Today, "Malaysia AI Adoption Rises to 38%."

In the public sector, Malaysia has taken a more active role through AI at Work 2.0, launched by NAIO in partnership with Google Cloud. The initiative is designed to equip up to 445,000 public officers with generative AI tools through Google Workspace. This can help build practical AI familiarity across government, although its current focus remains largely on improving day-to-day administrative productivity.

The key constraint for Malaysia is talent. The World Bank estimates that the country currently has around 3,000 AI professionals, compared with projected demand of 30,000 by 2030.[68] To narrow this gap, the government has introduced programs such as AI untuk Rakyat to improve public AI literacy. Malaysia has also partnered with AWS to provide 140,000 students with access to cloud and AI courses, supporting the development of a future workforce.[69]

[68] Bernama, "Development Transformation."

[69] Amazon Web Services, "AWS Collaborates with Malaysia Ministry of Higher Education's JPPKK to Build Next-Generation AI Workforce," October 29, 2024, https://aws.amazon.com/blogs/publicsector/aws-collaborates-with-malaysia-ministry-of-higher-educations-jppkk-to-build-next-generation-ai-workforce/.



Philippines

The Philippines' main AI policy framework, the National AI Strategy Roadmap 2.0, was officially launched in July 2024 by the Department of Trade and Industry. The roadmap forms part of the government's effort to strengthen national AI capabilities, support innovation, and guide the responsible use of AI across the economy. In February 2026, the government also established the National Artificial Intelligence Center for Research and Innovation, or NAICRI, as a central hub for AI research and applied solutions.

The center is expected to focus on practical use cases for national development, including AI-powered chatbots, weather forecasting, and improvements to the Philippine education curriculum.[70]

However, AI governance in the Philippines remains at an early stage. The country has not yet enacted a legally binding AI law or comprehensive AI regulatory framework. Several bills are pending in Congress. Senate Bill No. 25, the Artificial Intelligence Regulation Act, would create a National AI Commission within the Department of Science and Technology,[71] while House Bill No. 5158 would establish a Philippine Council on Artificial Intelligence under the Department of Information and Communications Technology.[72] At present, AI-related governance relies mainly on broader laws and frameworks, such as the Data Privacy Act and the Cybercrime Prevention Act, rather than AI-specific regulation. This creates a foundation for data protection and cyber governance but leaves gaps in areas such as AI risk classification, accountability, transparency, and sector-specific oversight.

The Philippines is investing in digital infrastructure to support AI growth. The country is seeing a surge in hyperscale data center construction, with major projects concentrated in Metro Manila, Cavite, and Laguna. In addition, a 4,000-acre property in New Clark City has been designated as a planned AI hub to attract global investment and strengthen the country's position in the regional AI economy.[73]

AI adoption is already visible in the private sector. According to Microsoft's report Global AI Adoption in 2025, the Philippines recorded an AI diffusion rate of 18.3 percent, above Thailand's 10.7 percent but well below Singapore's 60.9 percent.[74] More than one-quarter of employment in the country is exposed to generative AI, suggesting that the technology could have a significant impact on work patterns, productivity, and skills demand.[75] The same STT

---

[70] Philippine Information Agency, "DOST to Launch NAICRI – the PH Central Hub for AI Research, Advanced Computing, and Innovation," February 23, 2026.
71 Senate of the Philippines, Senate Bill No. 25, Artificial Intelligence Regulation Act, filed by Senator Pia S. Cayetano, 20th Congress.
72 House of Representatives of the Philippines, House Bill No. 5158, filed by Representative Yedda Marie K. Romualdez, 20th Congress, https://docs.congress.hrep.online/legisdocs/basic_20/HB05158.pdf.

[73] W.Media, "Philippines Earmarks 4,000-Acre Land as AI Hub under US-Led Pax Silica," April 28, 2026, https://w.media/philippines-earmarks-4000-acre-land-as-ai-hub-under-us-led-pax-silica/.

[74] Microsoft, "Global AI Adoption in 2025—A Widening Digital Divide," January 8, 2026, https://blogs.microsoft.com/on-the-issues/2026/01/08/global-ai-adoption-in-2025/.

[75] International Labour Organization, *Generative AI and Jobs in the Philippines: Labour Market Exposure and Policy Implications*, February 5, 2026, https://www.ilo.org/publications/generative-ai-and-jobs-philippines-labour-market-exposure-and-policy.

GDC survey found that 79 percent of the organizations surveyed are already deploying early AI solutions.

However, only 2 percent have advanced to more integrated, enterprise-wide AI use, indicating that adoption remains broad but shallow.[76]

The public sector is also beginning to integrate AI. In April 2024, the Department of Information and Communications Technology partnered with the Civil Service Commission to draft a Joint Memorandum Circular on the principles and guidelines for ethical and trustworthy AI in government. This is an important step toward public sector AI governance, but implementation remains uneven. Local government units often lag behind due to limited skills, budget constraints, and infrastructure gaps.[77]

Several barriers continue to shape the Philippines' AI trajectory. Regulatory uncertainty and limited institutional capacity may also slow broader deployment if organizations lack clear guidance on responsible AI use. Talent is another critical challenge, with 76 percent of organizations in the same survey reporting critical AI talent gaps.[78] The country also continues to underinvest in research and development, limiting its ability to build local AI capabilities and move beyond adoption toward innovation. Public trust is another important factor, with concerns around job displacement, explainability, transparency, regulatory compliance, and data misuse.[79]

[76] InsiderPH, "Philippine Firms Facing AI Ceiling."
[77] Philippine Institute for Development Studies, "How Ready Are LGUs for AI Adoption?" December 23, 2025, https://pids.gov.ph/publication/discussion-papers/how-ready-are-lgus-for-ai-adoption.
[78] Manila Bulletin, "PH Firms Hit Infrastructure Ceiling as AI Adoption Grows — Study," April 26, 2026, https://mb.com.ph/2026/04/26/ph-firms-hit-infrastructure-ceiling-as-ai-adoption-grows-study.
[79] UNESCO, "UNESCO AI Readiness Assessment Report: Anchoring Ethics in AI Governance in the Philippines," December 8, 2025.



Thailand

Thailand's AI development is guided by the National AI Strategy and Action Plan (2022–2027), which provides the country's main policy framework for artificial intelligence. The plan focuses on promoting AI ethics, strengthening AI infrastructure, developing talent, supporting research and innovation, and raising public awareness. To steer implementation, the government has established the National AI Committee, which has set ambitious targets, including AI literacy for 10 million people, the training of 90,000 AI professionals, and the development of 50,000 AI developers within two years.[80]

Since the launch of the action plan, Thailand's AI governance ecosystem has gradually expanded. Several organizations have introduced guidelines to support responsible AI adoption. These include the Digital Thailand AI Ethics Guideline developed by the Ministry of Digital Economy and Society, the AI Governance Guideline for Executives developed by the Electronic Transactions Development Agency, and the Generative AI Governance Guideline for Organisations developed by the AI Governance Clinic. These initiatives show growing policy attention to AI ethics and governance. At the same time, they also point to fragmented coordination, as multiple agencies and organizations are developing guidance across overlapping areas.

Thailand still lacks AI-specific legislation and a risk-based regulatory mechanism. Existing related frameworks include the Personal Data Protection Act and the Cybersecurity Standards for Cloud Systems B.E. 2567, but these do not provide a comprehensive AI governance regime. The country is now drafting its first artificial intelligence law, which focuses on high-risk AI, rights protection, accountability, and standards. The law aims to support AI adoption while regulating AI technologies in ways that strengthen business competitiveness and economic development.[81] This marks an important step toward a more structured governance framework, but the current system remains largely voluntary.

Thailand has made more progress on infrastructure than on adoption. The government has introduced a Cloud First policy to encourage the use of cloud services among government agencies, regulators, and critical information infrastructure organizations. This policy direction aligns with rising private investment in data centers and cloud services. Major investors include Microsoft, which announced that Thailand will host its lead regional data center;[82] AWS, which announced in 2022 that it plans to invest more than 190 billion baht, or about US$5 billion, over 15 years;[83] and Google, which announced a US$1 billion investment for a

[80] Public Relations Department (Thailand), "Government Aims to Develop Thailand into AI Regional Hub," May 2, 2025, https://thailand.prd.go.th/en/content/category/detail/id/48/iid/386482.
[81] Bangkok Post, "Premier Touts Draft AI Regulation," February 14, 2025.
[82] Reuters, "Microsoft to Open First Regional Data Centre in Thailand," *The Star*, May 1, 2024, https://www.thestar.com.my/tech/tech-news/2024/05/01/microsoft-to-open-first-regional-data-centre-in-thailand.
[83] Amazon Web Services, "Amazon Web Services Announces 190 Billion Baht Investment to Drive Thailand's Digital Future," October 18, 2022, https://aboutamazon.sg/news/company-news/amazon-web-services-announces-190-billion-baht-investment-to-drive-thailands-digital-future.

data center region.[84] These projects strengthen Thailand's position as an emerging digital infrastructure hub and create a stronger foundation for AI deployment.

Despite these infrastructure gains, AI adoption remains relatively modest. According to Microsoft's report Global AI Adoption in 2025, Thailand's AI diffusion rate was around 10.7 percent, lagging behind other ASEAN-6 countries.[85] Adoption also remains concentrated in a limited number of sectors, particularly financial services and telecommunications. The gap reflects not only readiness challenges but also the absence of strong policy mechanisms to encourage AI use across the public and private sectors. At present, adoption depends largely on individual organizational decisions rather than a coordinated national push. In a 2025 survey, around 40 percent of Thai SMEs reported using AI in some form, but usage remains limited in depth and uneven across the country.[86]

A major barrier is the shortage of digital skills. Thailand has responded through several talent development initiatives. In addition to the targets set by the National AI Committee, programs such as the THAI Academy, developed through collaboration between Microsoft and the Ministry of Labour, aim to expand AI-related skills.[87]

[84] Google, "Google Announces Plans to Invest US$1 Billion to Build Data Center and Cloud Region in Thailand," September 30, 2024, https://www.googlecloudpresscorner.com/2024-09-30-Google-Announces-Plans-to-Invest-US-1-Billion-to-Build-Data-Center-and-Cloud-Region-in-Thailand,-Support-Initiatives-to-Expand-AI-Opportunities-for-Thais.

[85] Microsoft, "Global AI Adoption in 2025."

[86] The Nation, "AI Era Dawns: 40% of Thai SMEs Embrace AI for Competitiveness," May 15, 2025, https://www.nationthailand.com/business/tech/40050024.

[87] Department of Skill Development (Thailand), "Department of Skill Development Collaborates with Microsoft to Upskill Thai Workforce in AI through THAI Academy Initiative," May 6, 2025, https://news.microsoft.com/source/asia/2025/05/06/department-of-skill-development-collaborates-with-microsoft-to-upskill-thai-workforce-in-ai-through-thai-academy-initiative/.



Singapore

Singapore holds one of the strongest AI positions in Southeast Asia, supported by clear national strategies and strong institutional coordination. The country has treated AI as a long-term national priority, beginning with the National AI Strategy in 2019 and followed by the National AI Strategy 2.0 in 2023. This continuity has allowed Singapore to move from strategic ambition to practical implementation, with AI positioned as a core driver of productivity, competitiveness, and public sector transformation.

Singapore's governance approach is distinct from jurisdictions that rely heavily on binding AI regulation. It has pursued a standards- and assurance-based model designed to support innovation while providing practical guidance for safe and responsible deployment. Key instruments include the Model AI Governance Framework, the Model AI Governance Framework for Generative AI, and AI Verify. In January 2026, Singapore also launched a Model AI Governance Framework for Agentic AI, extending its governance approach to systems capable of more autonomous planning and action. These tools are complemented by sector-specific guidance and technical testing initiatives.

The country has also developed sector-specific governance frameworks. In financial services, the Monetary Authority of Singapore has introduced AI governance frameworks and committed funding to support the use of AI in areas such as fraud detection and cyber defense. In healthcare, the Ministry of Health has promoted the AI in Healthcare Guidelines, or AIHGle, to support the responsible adoption of AI in clinical and healthcare settings. These measures show that Singapore's AI governance model is not limited to broad principles. It is increasingly being translated into practical guidance for high-impact sectors.

Singapore has also backed its AI strategy with significant public investment. Under the National AI Research and Development Plan, announced in January 2026, the government is investing more than S$1 billion over five years from 2025 to 2030. The plan supports the objectives of National AI Strategy 2.0 by strengthening public AI research, accelerating industry adoption, and developing local talent.[88] In 2026, Singapore also announced the establishment of a National AI Council, chaired by Prime Minister Lawrence Wong, to lead the national AI agenda and drive adoption across manufacturing, finance, healthcare, and logistics.[89]

[88] Ministry of Digital Development and Information (Singapore), "Singapore Invests over S$1 Billion in National AI Research and Development Plan to Strengthen AI Research Capabilities and Our Position as Global AI Hub," January 24, 2026, https://www.mddi.gov.sg/newsroom/singapore-invests-over-s-1-billion-in-national-ai-research-and-development-plan-to-strengthen-ai-research-capabilities-and-our-position-as-global-ai-hub/.

[89] Ministry of Finance (Singapore), *Budget Statement 2026*, February 12, 2026, https://www.gov.sg/budget2026/.

AI infrastructure is another major pillar of Singapore's strategy. Although the country faces tight land and energy constraints, its data center and cloud market continues to attract major investment. Recent developments include Bridge Data Centres' plan to invest S$3 billion to S$5 billion[90] and Digital Realty's S$7 billion expansion.[91] At the same time, the rise of AI factories has increased demand for computing power, prompting Singapore to introduce a Green Data Centre Roadmap to balance AI infrastructure growth with sustainability objectives.[92]

These efforts are reflected in Singapore's high AI adoption rate. According to Microsoft's report Global AI Adoption in 2025, Singapore ranks first in Southeast Asia and second globally in AI adoption, with 60.9 percent of its working-age population using AI tools.[93] Enterprise adoption is also rising quickly. Under Budget 2025, the government introduced a S$150 million Enterprise Compute initiative to help businesses access AI tools, computing power, and consultancy services through partnerships with major cloud providers.[94] IMDA's 2025 digital economy release shows strong enterprise uptake, with AI adoption among SMEs tripling to 14.5 percent and adoption among non-SMEs rising to 62.5 percent.[95] Financial institutions remain among the most mature users of AI.

The public sector has also become an important AI adopter. Through the AI for the Public Good initiative under National AI Strategy 2.0, Singapore is deploying AI to improve public services, raise administrative productivity, and deliver wider social benefits. One example is Pair, an AI chatbot assistant for public officers, which has reached more than 11,000 users across over 100 agencies.[96]

Singapore's talent base further reinforces its AI leadership. While current talent capacity still falls short of actual demand, the country has built a strong concentration of AI-related skills and continues to expand its domestic talent pipeline through public research funding, education, reskilling, and industry partnerships. Under National AI Strategy 2.0, Singapore has set a target to more than triple its pool of AI practitioners to 15,000, supported by initiatives such as the AI Apprenticeship Programme and wider workforce training.[97] The National AI Research and Development Plan announced in January 2026 also includes talent development as one of its three main investment areas.

---

[90] CNA, "Bridge Data Centres to Invest up to S$5 Billion in Singapore's AI Infrastructure," March 25, 2026.

[91] Data Centre Dynamics, "Digital Realty Pledges S$7 Billion Investment in Singapore, Including New Data Centers," April 9, 2026, https://www.datacenterdynamics.com/en/news/digital-realty-pledges-s7-billion-investment-in-singapore-including-new-data-centers.

[92] Infocomm Media Development Authority, "About the Green Data Centre (DC) Roadmap," n.d., https://imda.gov.sg/how-we-can-help/green-dc-roadmap.

[93] Microsoft, "Global AI Adoption in 2025."

[94] Digital Industry Singapore, "Enterprise Compute Initiative," n.d., https://www.disg.gov.sg/enterprise-compute-initiative/.

[95] Infocomm Media Development Authority, "Singapore's Digital Economy."

[96] Pair, "Empowering Singapore's Public Officers with AI," n.d., https://pair.gov.sg/.

[97] Ministry of Digital Development and Information (Singapore), "Launch of Singapore's Second National AI Strategy," December 4, 2023, https://www.mddi.gov.sg/newsroom/041223/.



Vietnam

Vietnam is emerging as one of Southeast Asia's most advanced AI policymakers, supported by strong legal reform, rising adoption, and a fast-growing AI startup ecosystem. The country has moved beyond broad digital policy and is now building a more dedicated AI governance framework. A major milestone was the passage of the Law on Artificial Intelligence in December 2025, which took effect in March 2026. This made Vietnam the first country in Southeast Asia to introduce a standalone AI law.[98]

The law replaces the general AI provisions under the Law on Digital Technology Industry and creates a clearer legal basis for AI development, deployment, and oversight.

The new AI law introduces several important mechanisms. It establishes a three-tier risk classification system to guide how AI systems should be assessed and regulated. It also creates a National AI Development Fund and a regulatory sandbox for testing AI products. These measures are designed to reduce uncertainty for businesses, encourage experimentation, and support responsible AI innovation. Vietnam has also strengthened its data governance framework. The Personal Data Protection Law and implementing Decree 356/2025/ND-CP both took effect on January 1, 2026, replacing the earlier decree-level regime and providing a stronger legal foundation for personal data protection.[99]

Vietnam's AI ambition predates the new law. Since 2021, the government has implemented the National Strategy on Research, Development, and Application of Artificial Intelligence to 2030, which aims to position the country as a center for AI innovation, solutions, and applications in ASEAN and globally. The 2021 strategy sets targets for 2030, including building 10 reputable AI brands, establishing three national big data centers, and training 7,000 AI experts.[100] A separate program approved in August 2026 (Decision No. 1528/QĐ-TTg) adds broader workforce targets: basic AI skills for 10 million workers and 10,000 highly qualified AI professionals by 2030.[101] These goals are intended to place Vietnam among the top four countries in ASEAN and the top 50 globally in AI readiness and development. More recently, the government approved the National AI Development Fund for 2026-2027 to support implementation of both the AI law and the national AI strategy.

This policy environment is helping accelerate AI adoption. Vietnam is moving from early experimentation toward mainstream organizational use. By 2025, 73 percent of Vietnamese companies had adopted AI, while 13.8 percent had deployed AI at scale.[102] The country had 765 AI and machine learning startups in 2025, the second-largest number in Southeast Asia

[98] Law on Artificial Intelligence No. 134/2025/QH15; Baker McKenzie, "Vietnam: Artificial Intelligence Law."
[99] Law on Personal Data Protection No. 91/2025/QH15; Decree No. 356/2025/ND-CP, both effective January 1, 2026.
[100] Decision No. 127/QĐ-TTg of January 26, 2021, approving the National Strategy on Research, Development and Application of Artificial Intelligence until 2030.
[101] Voice of Vietnam, "National Programme on AI Human Resources Development Approved," August 12, 2026, https://english.vov.vn/en/society/national-programme-on-ai-human-resources-development-approved-post1323412.vov.
[102] B&C Company, "Vietnam AI Market: Updates to 2025," January 22, 2026, https://b-company.jp/vietnam-ai-market-update-to-2025/.

after Singapore. These companies account for around 25 percent of Vietnam's total tech startups.[103]

This shows significant economic opportunity for the country. AI is projected to add up to US$130 billion to Vietnam's GDP by 2040, equivalent to roughly 25 percent of the country's current economy.[104]

Vietnam's AI infrastructure is also expanding. Data centers and cloud services are growing quickly, supported by rising demand for data security and lower operating costs. Vietnam is becoming an emerging AI data center hub, with projects such as Vietnam Data Gen aiming to develop a nationwide network of AI-focused data centers through an investment of around US$1 billion.[105]

Despite this momentum, Vietnam still faces important constraints. Many companies need more time and experience to integrate AI into core business strategies, rather than using it only for limited operational improvements. Talent shortages, infrastructure gaps, and limited late-stage funding remain barriers to scaling AI innovation.[106] Vietnam's next challenge is to turn its strong legal and adoption momentum into deeper capability, stronger firms, and wider deployment across the economy.

[103] B&C Company, "Vietnam AI Landscape 2025: Government Policy, Key Players and Startup Ecosystem," December 22, 2025, https://b-company.jp/vietnam-ai-landscape-2025-government-policy-key-players-and-startup-ecosystem/.

[104] VietnamPlus, "Vietnam Sees Ample Opportunities in AI-Powered Economy," April 8, 2026, https://en.vietnamplus.vn/vietnam-sees-ample-opportunities-in-ai-powered-economy-post340702.vnp.

[105] Tech in Asia, "Vietnam to Set Up National AI Development Fund," March 4, 2026.

[106] B&C Company, "Vietnam AI Landscape 2025."

Appendix: Scoring evidence

This appendix sets out the result of each scoring test for each country and the evidence behind it. The tests are defined in Figure 2. A country gains one point for each test it meets, added to a base score of 1.

Table 6. Access sovereignty tests by country

Country	A1 Infrastructure choice	A2 Model diversification	A3 National approach to models	A4 Continuity	Score
Indonesia	**Yes**: AWS, Alibaba Cloud, and others	**No**: ChatGPT 85.4%	**Yes**: Sahabat-AI, with an app co-launched by the Ministry of Communication and Digital Affairs (2026)	**No**	**3**
Malaysia	**Yes**: AWS, Alibaba Cloud, and others	**No**: ChatGPT 78.0%	**Yes**: ILMU, launched in 2025 and presented by the government as Malaysia's sovereign AI model	**No**	**3**
Philippines	**No**: Alibaba Cloud only; AWS exploring a region	**No**: ChatGPT 75.2%	**No**: FiLLM is a research model with no government funding identified	**No**	**1**
Singapore	**Yes**: AWS, Alibaba Cloud, and others	**Yes**: ChatGPT 69.5%	**Yes**: partnerships with Google and OpenAI; SEA-LION	**No**	**4**
Thailand	**Yes**: AWS, Google, Alibaba Cloud, and others	**Yes**: ChatGPT 68.3%	**Yes**: ThaiLLM, launched as national AI infrastructure in April 2026	**No**	**4**
Vietnam	**No**: AWS Local Zone only, no full cloud region	**Yes**: ChatGPT 72.0%	**Yes**: state-owned Viettel with NVIDIA on a national legal AI application	**No**	**3**

Note: A1 counts live public cloud regions only. A2 uses AI chatbot traffic shares for July 2026 (Table 1), with a cut-off of 75 percent. A3 counts privately developed models when the government launched or officially backs them.

Source: Southeast Asia Public Policy Institute assessment, based on the sources cited in this paper.

Table 7. Capability sovereignty tests by country

Country	C1 AI uptake	C2 Public-sector deployment	C3 Sector breadth	C4 Talent pipeline	Score
Indonesia	**No**: 12.7%	**No**	**Yes**: financial services, telecoms, retail and wholesale	**Yes**: 12 million AI talent by 2030; AI Talent Factory (AITF)[107]	**3**
Malaysia	**Yes**: 19.7%	**Yes**: AI at Work 2.0, up to 445,000 public officers	**Yes**: financial services, manufacturing, public administration	**Yes**: Talent Roadmap, 200,000 skilled workers	**5**
Philippines	**No**: 18.3%	**No**	**No**: IT-BPM only	**No**: no quantified target	**1**
Singapore	**Yes**: 60.9%	**Yes**: Pair, more than 11,000 users	**Yes**: financial and insurance services, infocomm, healthcare, public administration	**Yes**: 15,000 AI practitioners (NAIS 2.0)	**5**
Thailand	**No**: 10.7%	**No**	**No**: financial services, telecoms	**Yes**: 90,000 AI professionals and 50,000 AI developers	**2**
Vietnam	**Yes**: 23.5%	**No**	**No**: finance and insurance, startups	**Yes**: 10,000 AI professionals by 2030 (Decision No. 1528/QĐ-TTg)	**3**

Note: C1 uses Microsoft's AI diffusion rates for the second half of 2025; the median of the six countries is 19.0 percent. C3 uses the leading sectors in Table 5.

Source: Southeast Asia Public Policy Institute assessment, based on the sources cited in this paper.

Table 8. Governance sovereignty tests by country

Country	G1 AI-specific guidance	G2 Lead body	G3 AI-specific rules	G4 Sector guidance	Score
Indonesia	**Yes**: Circular 9/2023 on the Ethics of AI Use	**No**: KORIKA is a multi-stakeholder forum, not a policy-coordinating body	**No**: presidential regulations in progress	**No**: finance only	**2**
Malaysia	**Yes**: National Guidelines on AI Governance and Ethics (2024)	**Yes**: AI Malaysia Berhad	**No**: AI Governance Bill in progress	**No**	**3**
Philippines	**Yes**: National Privacy Commission Advisory No. 2024-04	**No**	**No**: bills pending	**No**	**2**
Singapore	**Yes**: Model AI Governance Framework	**Yes**: IMDA	**Yes**: AI Verify testing framework	**Yes**: finance (FEAT), healthcare (AIHGle)	**5**
Thailand	**Yes**: Thailand's AI ethics framework	**Yes**: National AI Committee	**No**: draft AI Act in progress	**No**	**3**

[107] Investortrust, "Wamenkomdigi: Talenta AI Indonesia Baru Capai 30% dari Target 12 Juta di 2030" [Deputy minister: Indonesia's AI talent reaches only 30 percent of the 12 million target for 2030], August 10, 2026, https://investortrust.id/national/112336/wamenkomdigi-talenta-ai-indonesia-baru-capai-30-dari-target-12-juta-di-2030.

Country	G1 AI-specific guidance	G2 Lead body	G3 AI-specific rules	G4 Sector guidance	Score
Vietnam	**Yes**: Law on Artificial Intelligence	**Yes**: Ministry of Science and Technology, focal agency under the AI law[108]	**Yes**: Law on Artificial Intelligence, in force since March 2026	**No**	**4**

Source: Southeast Asia Public Policy Institute assessment, based on the sources cited in this paper.

[108] Law on Artificial Intelligence, No. 134/2025/QH15, art. 30(2); English text in Vietnam News, "Law on Artificial Intelligence (Part 3)," n.d., https://vietnamnews.vn/politics-laws/1798131/law-on-artificial-intelligence-part-3.html.

References

AI Malaysia Berhad. “FAQ.” n.d. https://ai.gov.my/faq/ai-malaysia-berhad/.

Alibaba Cloud. “Alibaba Cloud Regions and Zones Selection Guide.” Accessed November 16, 2026. https://www.alibabacloud.com/help/en/doc-detail/40654.htm.

Amazon Web Services. “Amazon Web Services Announces 190 Billion Baht Investment to Drive Thailand’s Digital Future.” October 18, 2022. https://aboutamazon.sg/news/company-news/amazon-web-services-announces-190-billion-baht-investment-to-drive-thailands-digital-future.

Amazon Web Services. “Announcing the General Availability of a New AWS Local Zone in Hanoi, Vietnam.” June 19, 2026. https://aws.amazon.com/about-aws/whats-new/2026/06/aws-local-zones-hanoi-vietnam/.

Amazon Web Services. “AWS Collaborates with Malaysia Ministry of Higher Education’s JPPKK to Build Next-Generation AI Workforce.” October 29, 2024. https://aws.amazon.com/blogs/publicsector/aws-collaborates-with-malaysia-ministry-of-higher-educations-jppkk-to-build-next-generation-ai-workforce/.

Amazon Web Services. “Document History for AWS Regions and Availability Zones.” Accessed November 16, 2026. https://docs.aws.amazon.com/global-infrastructure/latest/regions/doc-history.html.

Amazon Web Services. “New AWS Research Shows Strong AI Adoption Momentum in Indonesia.” August 7, 2025. https://press.aboutamazon.com/sg/aws/2025/8/new-aws-research-shows-strong-ai-adoption-momentum-in-indonesia.

Antara. “Indonesia Aims to Become Global AI Player, Not Just User: Ministry.” August 14, 2026. https://en.antaranews.com/news/426963/indonesia-aims-to-become-global-ai-player-not-just-user-ministry.

ASEAN Secretariat. *ASEAN Guide for Sustainable Data Centre Development*. Jakarta: ASEAN Secretariat, January 2026. https://asean.org/wp-content/uploads/2026/01/2.-ASEAN-Guide-for-Sustainable-Data-Centre-Development_Dec-2025-Final.pdf.

ASEAN Secretariat. *ASEAN Guide on AI Governance and Ethics*. Jakarta: ASEAN Secretariat, 2024. https://asean.org/wp-content/uploads/2024/02/ASEAN-Guide-on-AI-Governance-and-Ethics_beautified_201223_v2.pdf.

ASEAN Secretariat. *ASEAN Responsible AI Roadmap (2025–2030)*. Jakarta: ASEAN Secretariat, 2025. https://asean.org/book/asean-responsible-ai-roadmap-2025-2030.

ASEAN Secretariat. “Declaration on the Establishment of an ASEAN AI Safety Network (ASEAN AI SAFE).” October 26, 2025. https://asean.org/declaration-on-the-establishment-of-an-asean-ai-safety-network-asean-ai-safe.

ASEAN Secretariat. *Expanded ASEAN Guide on AI Governance and Ethics – Generative AI*. Jakarta: ASEAN Secretariat, 2025. https://asean.org/wp-content/uploads/2025/01/Expanded-ASEAN-Guide-on-AI-Governance-and-Ethics-Generative-AI.pdf.

ASEAN Secretariat. "Secretary-General of ASEAN to Participate in the 2026 World Artificial Intelligence Conference and High-Level Meeting on Global AI Governance." July 15, 2026. https://asean.org/?p=248717.

The Asian Banker. "Malaysia Ranks among Top Three Markets for AI Adoption in Finance, HSBC Survey Finds." August 10, 2026. https://www.theasianbanker.com/press-releases/malaysia-ranks-among-top-three-markets-for-ai-adoption-in-finance-hsbc-survey-finds.

B&C Company. "Vietnam AI Landscape 2025: Government Policy, Key Players and Startup Ecosystem." December 22, 2025. https://b-company.jp/vietnam-ai-landscape-2025-government-policy-key-players-and-startup-ecosystem/.

B&C Company. "Vietnam AI Market: Updates to 2025." January 22, 2026. https://b-company.jp/vietnam-ai-market-update-to-2025/.

Baker McKenzie. "Vietnam: Artificial Intelligence Law – Foundation and Outlook." February 24, 2026.

Bangkok Post. "Premier Touts Draft AI Regulation." February 14, 2025.

Bernama. "Development Transformation, Technology Key to Malaysia's AI Nation Goal – Experts." April 12, 2026. https://www.bernama.com/en/news.php?id=2544117.

Bernama. "Nvidia-YTL Power's AI Infra Progress Boosts Malaysia's AI Drive – PM Anwar." October 31, 2025. https://www.bernama.com/en/news.php?id=2485728.

Business Today. "Malaysia AI Adoption Rises to 38% of Businesses, Study Finds." September 4, 2026. https://www.businesstoday.com.my/2026/09/04/malaysia-ai-adoption-rises-to-38-of-businesses-study-finds/.

CNA. "Bridge Data Centres to Invest up to S$5 Billion in Singapore's AI Infrastructure." March 25, 2026.

Context.ph. "AWS Eyes Up to $5B Philippine Cloud Investment." July 8, 2026. https://context.ph/2026/07/08/aws-eyes-up-to-5b-philippine-cloud-investment/.

CSAI Foundation. *AI Infrastructure Monoculture: Foundation-Layer Concentration Risk*. April 6, 2026. https://labs.cloudsecurityalliance.org/research/csa-whitepaper-ai-infrastructure-concentration-risk-v1-0-csa/.

Cushman & Wakefield. "Asia Pacific's Data Centre Development Pipeline Reaches Record 26.5GW in H1 2026." August 5, 2026. https://www.cushmanwakefield.com/en/singapore/news/2026/08/apac-dc-h1-2026.

Data Center Map. "Data Centers." Accessed August 18, 2026. https://www.datacentermap.com/.

Data Centre Dynamics. “Digital Realty Pledges S$7 Billion Investment in Singapore, Including New Data Centers.” April 9, 2026. https://www.datacenterdynamics.com/en/news/digital-realty-pledges-s7-billion-investment-in-singapore-including-new-data-centers.

Deloitte. *Generative AI in Asia Pacific: Young Employees Lead as Employers Play Catch-Up*. May 12, 2024. https://www2.deloitte.com/southeast-asia/en/Industries/technology/research/generative-ai-asia-pacific.html.

Detik. “Komdigi Ajukan 2 Rancangan Perpres tentang AI, Target Segera Terbit.” [Komdigi submits two draft presidential regulations on AI, targets early issuance]. April 7, 2026. https://news.detik.com/berita/d-8433227/komdigi-ajukan-2-rancangan-perpres-tentang-ai-target-segera-terbit.

Digital Industry Singapore. “Enterprise Compute Initiative.” n.d. https://www.disg.gov.sg/enterprise-compute-initiative/.

Economic Development Board (Singapore). “Singapore Updates National AI Strategy, Partners Google and OpenAI.” May 20, 2026. https://www.edb.gov.sg/en/news-and-insights/singapore-updates-national-ai-strategy-partners-google-and-openai.

Finextra. “Banks Facing AI Concentration Risk.” August 11, 2026.

Google. “Google Announces Plans to Invest US$1 Billion to Build Data Center and Cloud Region in Thailand.” September 30, 2024. https://www.googlecloudpresscorner.com/2024-09-30-Google-Announces-Plans-to-Invest-US-1-Billion-to-Build-Data-Center-and-Cloud-Region-in-Thailand,-Support-Initiatives-to-Expand-AI-Opportunities-for-Thais.

Google, Temasek, and Bain & Company. *e-Conomy SEA 2025*. November 11, 2025. https://www.bain.com/insights/e-conomy-sea-2025.

Google. “Google Cloud Launches New Cloud Region in Thailand, Bolstering Its Commitment to Advancing the Country’s AI-Driven Digital Economy.” January 21, 2026. https://www.googlecloudpresscorner.com/2026-01-21-Google-Cloud-Launches-New-Cloud-Region-in-Thailand,-Bolstering-its-Commitment-to-Advancing-the-Countrys-AI-Driven-Digital-Economy.

GovInsider. “How Indonesia’s New National Strategy Aims to Accelerate the Growth of Southeast Asia’s Largest AI Ecosystem.” n.d. https://govinsider.asia/intl-en/article/how-indonesias-new-national-strategy-aims-to-accelerate-the-growth-southeast-asias-largest-ai-ecosystem.

Indosat Ooredoo Hutchison and GoTo. “Indosat Ooredoo Hutchison and GoTo Launch Sahabat-AI: Indonesia’s Open-Source LLM for Empowering Digital Sovereignty.” November 14, 2024. https://www.gotocompany.com/en/news/press/indosat-ooredoo-hutchison-and-goto-launch-sahabat-ai-indonesias-open-source-llm-for-empowering-digital-sovereignty.

Infocomm Media Development Authority. “About the Green Data Centre (DC) Roadmap.” n.d. https://imda.gov.sg/how-we-can-help/green-dc-roadmap.

Infocomm Media Development Authority. “ASEAN Working Group on AI Governance.” Updated May 25, 2026. https://www.imda.gov.sg/about-imda/international-relations/asean-working-group-on-ai-governance.

Infocomm Media Development Authority. “Singapore’s Digital Economy at 18.6% of GDP, up from 14.9% in 2019; Growth Fuelled by Accelerating Digitalisation and AI Adoption across Sectors and Firms.” October 6, 2025.

InsiderPH. “Philippine Firms Facing AI Ceiling as Infra, Talent Gaps Widen.” April 24, 2026. https://insiderph.com/philippine-firms-facing-ai-ceiling-as-infra-talent-gaps-widen.

International Data Corporation. “IT Skills Shortage Expected to Impact Nine out of Ten Organizations by 2026 with a Cost of $5.5 Trillion in Delays, Quality Issues, and Revenue Loss, According to IDC.” Business Wire, May 14, 2024. https://www.businesswire.com/news/home/20240514939927/en/.

International Energy Agency. “Energy Demand from AI.” April 10, 2025. https://www.iea.org/reports/energy-and-ai/energy-demand-from-ai.

International Labour Organization. “AI May Affect Nearly 80 Million Workers in the ASEAN Region, but Large-Scale Job Disruption Not Yet Seen.” July 8, 2026.

International Labour Organization. *Generative AI and Jobs in the Philippines: Labour Market Exposure and Policy Implications*. February 5, 2026. https://www.ilo.org/publications/generative-ai-and-jobs-philippines-labour-market-exposure-and-policy.

Investortrust. “Wamenkomdigi: Talenta AI Indonesia Baru Capai 30% dari Target 12 Juta di 2030.” [Deputy minister: Indonesia’s AI talent reaches only 30 percent of the 12 million target for 2030]. August 10, 2026. https://investortrust.id/national/112336/wamenkomdigi-talenta-ai-indonesia-baru-capai-30-dari-target-12-juta-di-2030.

KORIKA. *Strategi Nasional Kecerdasan Artifisial Indonesia 2020–2045*. July 14, 2024.

Krungsri Research. “Opportunities and Challenges of Thai Data Centers in ASEAN.” April 8, 2026. https://www.krungsri.com/en/research/research-intelligence/data-center-competitiveness-2026.

Malaysia, Ministry of Digital. “Ministry of Digital Initiates Engagement on Proposed Artificial Intelligence (AI) Governance Bill.” July 10, 2026.

Manila Bulletin. “PH Firms Hit Infrastructure Ceiling as AI Adoption Grows — Study.” April 26, 2026. https://mb.com.ph/2026/04/26/ph-firms-hit-infrastructure-ceiling-as-ai-adoption-grows-study.

MARKETECH APAC. “Komdigi and Indosat Introduce Sahabat-AI to Strengthen Indonesia’s Digital Sovereignty.” February 27, 2026. https://marketech-apac.com/komdigi-and-indosat-introduce-sahabat-ai-to-strengthen-indonesias-digital-sovereignty/.

McKinsey & Company. “Beyond the Spillover: Asia–Pacific, the Next Engine of Data Center Demand.” June 22, 2026. https://www.mckinsey.com/featured-insights/future-of-asia/countries-and-regions/southeast-asia/southeast-asia-perspectives/beyond-the-spillover-asia-pacific-the-next-engine-of-data-center-demand.

McKinsey & Company, Singapore Economic Development Board, and Tech in Asia. *AI in Southeast Asia: An Era of Opportunity*. February 2026. https://www.edb.gov.sg/en/market-and-industry-reports/ai-in-southeast-asia-an-era-of-opportunity.

Microsoft. “Global AI Adoption in 2025—A Widening Digital Divide.” January 8, 2026. https://blogs.microsoft.com/on-the-issues/2026/01/08/global-ai-adoption-in-2025/.

Microsoft. “Microsoft and LinkedIn Release the 2024 Work Trend Index on the State of AI at Work in Indonesia.” June 11, 2024. https://news.microsoft.com/id-id/2024/06/11/microsoft-and-linkedin-release-the-2024-work-trend-index-on-the-state-of-ai-at-work-in-indonesia/.

Milieu. “Workers Want AI Training, but Not Everyone Is Getting It.” June 29, 2026. https://www.mili.eu/sg/insights/sea-ai-at-work-2026-training-gap.

The Nation. “AI Era Dawns: 40% of Thai SMEs Embrace AI for Competitiveness.” May 15, 2025. https://www.nationthailand.com/business/tech/40050024.

The Nation. “ThaiLLM Launched to Strengthen Thailand’s National AI Capacity.” April 20, 2026. https://www.nationthailand.com/business/tech/40065259.

Nikkei Asia. “The AI Cold War Needs a Nonaligned Movement.” June 26, 2026.

OECD. *Governing with Artificial Intelligence*. Paris: OECD Publishing, September 18, 2025. https://www.oecd.org/en/publications/governing-with-artificial-intelligence_795de142-en.html.

Otoritas Jasa Keuangan. *Indonesia Artificial Intelligence Governance for Banking*. April 29, 2025. https://ojk.go.id/en/Publikasi/Roadmap-dan-Pedoman/Perbankan/Pages/Indonesia-Artificial-Intelligence-Governance-for-Banking.aspx.

Pair. “Empowering Singapore’s Public Officers with AI.” n.d. https://pair.gov.sg/.

Philippine Information Agency. “DOST to Launch NAICRI – the PH Central Hub for AI Research, Advanced Computing, and Innovation.” February 23, 2026.

Philippine Institute for Development Studies. “How Ready Are LGUs for AI Adoption?” December 23, 2025. https://pids.gov.ph/publication/discussion-papers/how-ready-are-lgus-for-ai-adoption.

Philippines, House of Representatives. House Bill No. 5158. Filed by Representative Yedda Marie K. Romualdez. 20th Congress. https://docs.congress.hrep.online/legisdocs/basic_20/HB05158.pdf.

Philippines, Senate. Senate Bill No. 25, Artificial Intelligence Regulation Act. Filed by Senator Pia S. Cayetano. 20th Congress.

Public First. *The AI Opportunity in Southeast Asia*. Commissioned by Google. n.d. https://aiopportunity.publicfirst.co/?p=7119.

PwC. "AI Reshapes Global Labour Market into Two Distinct Paths, Rewarding Human Skills: PwC 2026 AI Jobs Barometer." July 31, 2026. https://www.pwc.com/th/en/press-room/press-release/2026/press-release-31-07-26-en.html.

Reuters. "Microsoft to Open First Regional Data Centre in Thailand." The Star, May 1, 2024. https://www.thestar.com.my/tech/tech-news/2024/05/01/microsoft-to-open-first-regional-data-centre-in-thailand.

Reuters. "US Curbs on AI Spur European Firms to Spread the Risk." June 22, 2026. https://www.reuters.com/legal/litigation/us-curbs-ai-spur-european-firms-spread-risk-2026-06-22/.

Singapore, Ministry of Digital Development and Information. "Launch of Singapore's Second National AI Strategy." December 4, 2023. https://www.mddi.gov.sg/newsroom/041223/.

Singapore, Ministry of Digital Development and Information. "Singapore Invests over S$1 Billion in National AI Research and Development Plan to Strengthen AI Research Capabilities and Our Position as Global AI Hub." January 24, 2026. https://www.mddi.gov.sg/newsroom/singapore-invests-over-s-1-billion-in-national-ai-research-and-development-plan-to-strengthen-ai-research-capabilities-and-our-position-as-global-ai-hub/.

Singapore, Ministry of Finance. *Budget Statement 2026*. February 12, 2026. https://www.gov.sg/budget2026/.

Stanford Institute for Human-Centered Artificial Intelligence. *The 2026 AI Index Report*. Stanford, CA: Stanford University, April 13, 2026. https://hai.stanford.edu/ai-index/2026-ai-index-report.

StatCounter Global Stats. "AI Chatbot Market Share." Country pages for Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, July 2026. https://gs.statcounter.com/ai-chatbot-market-share.

Tech in Asia. "Vietnam to Set Up National AI Development Fund." March 4, 2026.

Thailand, Department of Skill Development. "Department of Skill Development Collaborates with Microsoft to Upskill Thai Workforce in AI through THAI Academy Initiative." May 6, 2025. https://news.microsoft.com/source/asia/2025/05/06/department-of-skill-development-collaborates-with-microsoft-to-upskill-thai-workforce-in-ai-through-thai-academy-initiative/.

Thailand, Public Relations Department. “Government Aims to Develop Thailand into AI Regional Hub.” May 2, 2025. https://thailand.prd.go.th/en/content/category/detail/id/48/iid/386482.

TNGlobal. “Vietnam’s Tech Giant FPT, Viettel Join Nvidia’s Sovereign AI Push.” June 3, 2026. https://technode.global/?p=124145.

UNESCO. *Indonesia: Artificial Intelligence Readiness Assessment Report*. Paris: UNESCO, October 4, 2024.

UNESCO. “Readiness Assessment Methodology for AI, Project 221RAS3002 (Indonesia, Malaysia, the Philippines, and Thailand).” 2024. https://core.unesco.org/en/project/221RAS3002.

UNESCO. “UNESCO AI Readiness Assessment Report: Anchoring Ethics in AI Governance in the Philippines.” December 8, 2025.

United Nations Development Programme. “Pairing with AI for Public Sector Impact in Singapore.” September 26, 2024. https://www.undp.org/policy-centre/singapore/blog/pairing-ai-public-sector-impact-singapore.

Vietnam News. “Law on Artificial Intelligence (Part 3).” n.d. https://vietnamnews.vn/politics-laws/1798131/law-on-artificial-intelligence-part-3.html.

Vietnam, Government. Decision No. 127/QĐ-TTg of January 26, 2021, Approving the National Strategy on Research, Development and Application of Artificial Intelligence until 2030.

Vietnam, Government. Decree No. 356/2025/ND-CP. Effective January 1, 2026.

Vietnam, National Assembly. Law on Artificial Intelligence No. 134/2025/QH15. Effective March 1, 2026.

Vietnam, National Assembly. Law on Personal Data Protection No. 91/2025/QH15. Effective January 1, 2026.

VietnamPlus. “Vietnam Sees Ample Opportunities in AI-Powered Economy.” April 8, 2026. https://en.vietnamplus.vn/vietnam-sees-ample-opportunities-in-ai-powered-economy-post340702.vnp.

Voice of Vietnam. “National Programme on AI Human Resources Development Approved.” August 12, 2026. https://english.vov.vn/en/society/national-programme-on-ai-human-resources-development-approved-post1323412.vov.

W.Media. “Philippines Earmarks 4,000-Acre Land as AI Hub under US-Led Pax Silica.” April 28, 2026. https://w.media/philippines-earmarks-4000-acre-land-as-ai-hub-under-us-led-pax-silica/.



www.seapublicpolicy.org