



AI Infrastructure: A Strategic Opportunity for Thailand

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Executive Summary

Artificial Intelligence (AI) is reshaping the global economy on a scale comparable to the First Industrial Revolution. As the era of AI agents takes hold and token consumption accelerates, the infrastructure powering it—and where it is built—will shape economic outcomes for decades.

Thailand has set a clear ambition to become ‘the AI hub of Southeast Asia’, and data centers are the foundational infrastructure that will deliver on this promise. They serve at once as a strategic asset facilitating low-latency and physical AI applications across Thailand’s key industries, a revenue anchor, and a sovereignty shield.

Singapore and Malaysia have each demonstrated that building domestic data center capacity is achievable. Both anchored their positions on the same foundation: governance with head-of-state sponsorship channeled through a dedicated executing authority, infrastructure pre-positioned ahead of demand, and bankable demand signals. Partnerships across the full AI stack and data governance certainty complete the formula.

Thailand holds the structural advantages that make it a credible destination for investment—competitive power tariffs, land availability and cost, fiscal incentives, and geopolitical neutrality that allows simultaneous engagement with both US and Chinese AI majors. The investment pipeline reflects this. The Thailand Board of Investment (BOI) received US\$23 billion in data center investment applications in 2025, and Chinese tech giant ByteDance committed US\$25 billion in 2026.

The window, however, is narrowing. Today’s global data center shortage—and the upfront hyperscaler commitments and favorable economics it creates for operators—will not persist as supply and demand converge. Competition is intensifying across Southeast Asia and beyond, and commitments that flow to other markets are difficult to redirect.

Establishing 3 gigawatts (GW) to 4 GW of data center capacity by 2030 would position Thailand to serve growing domestic compute demand while capturing a share of regional workloads. **Getting there requires building 1.6 GW to 2.4 GW of new capacity** beyond what is currently operational or under construction in Thailand through coordinated action across seven fronts.

Governance is the key prerequisite. That will involve cross-ministry accountability, published capacity targets, and a single coordinating authority to streamline approvals. Two execution priorities follow. The first is partnerships across the full AI stack—hyperscalers, chip suppliers, frontier large language models (LLMs), and neo-clouds. The second is converting the Cloud First Policy and regional ambition into a bankable demand signal. Three supporting levers run alongside: (1) a clear cross-border data regime and sovereign cloud certification; (2) a Long-Term Resident (LTR) visa that draws in foreign AI specialists alongside a domestic engineering pipeline; and (3) structured pathways for Thai players to participate in the build-out.

The prize justifies the ambition. Direct returns from the data centers themselves are estimated at US\$25 billion to US\$35 billion in capital investment alongside US\$70 billion to US\$100 billion in cumulative GDP contribution over 15 years. At the same time, this industry growth could create between 60,000 to 95,000 jobs. The larger opportunity lies in the AI economy this infrastructure unlocks—an estimated US\$80 billion to US\$120 billion in cumulative GDP uplift by 2030, as productivity gains compound across Thailand’s key industries. Beyond the economics, Thailand’s AI build-out can provide a powerful platform to energize Thailand’s 2050 carbon-neutral commitment while securing Thai sovereignty over the data and compute that will underpin national growth for decades.



PART 1: Why Thailand must invest in AI infrastructure now to become an AI-forward economy

Thailand must localize its data center capacity to unlock its full AI potential

The world has entered an era of **economic transformation as consequential as the First Industrial Revolution**. AI use cases are reshaping how industries and governments operate, and the returns are measurable. Every dollar spent on AI is estimated to generate an additional US\$4.90 in economic benefit. As investment continues to scale, the cumulative global impact is projected to reach US\$22.3 trillion by 2030.

The advent of autonomous AI agents is set to further accelerate this economic impact. Agents can execute complex tasks with minimal human intervention but consume up to

1,000 times more tokens per interaction than conversational AI, driving a step-change in compute demand.

The cost dynamics of AI are also undergoing drastic realignment. The cost of running AI has fallen roughly 10x per year since 2023. AI is within reach of more users and more use cases than ever before, with adoption accelerating at an unprecedented pace.

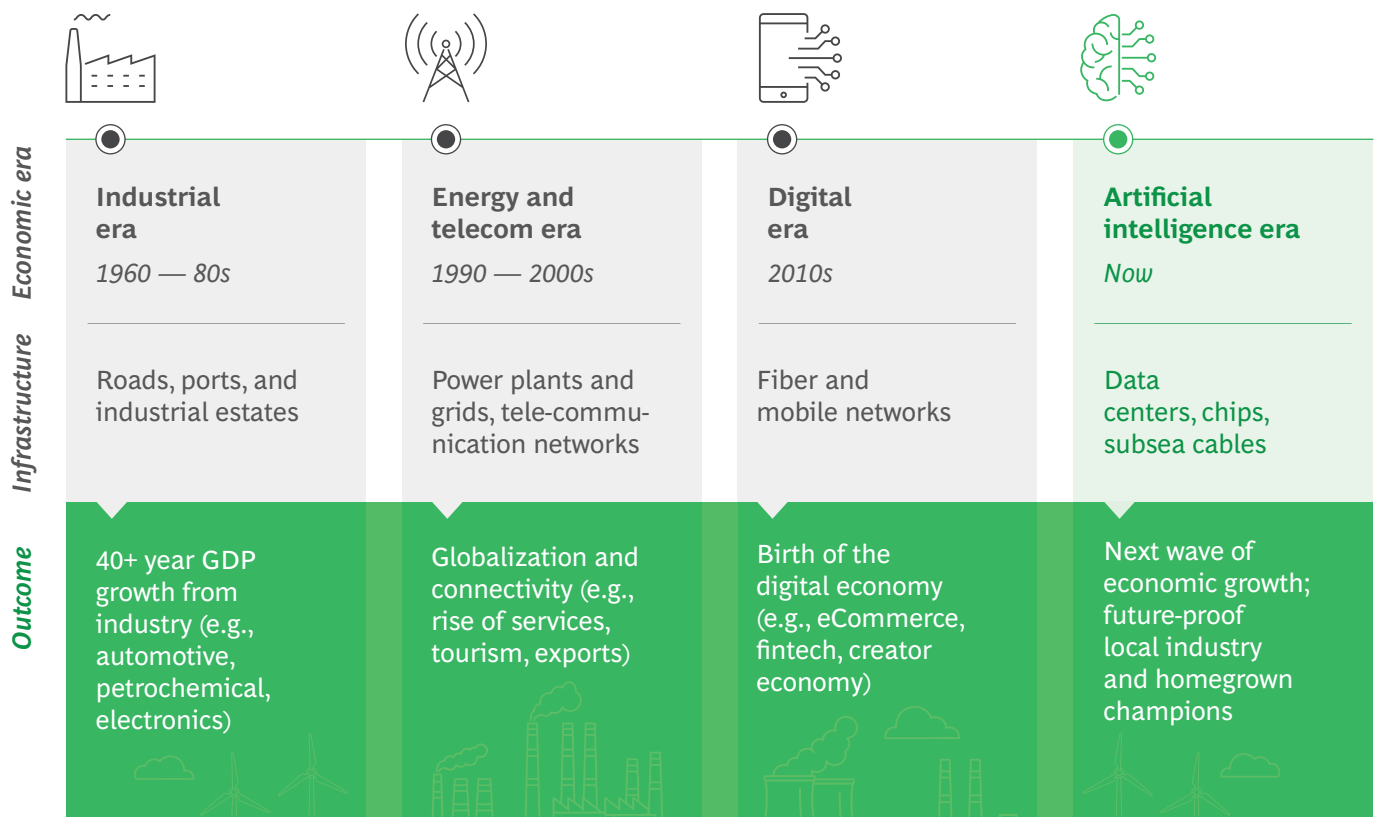
Thai enterprises and government are already acting on this shift. Enterprises are moving from pilots to full-scale deployment. The Cloud First Policy mandates migration of public sector workloads to cloud infrastructure. Thailand's National AI Strategy sets a clear ambition: **'to become the artificial intelligence hub of Southeast Asia'**.

Delivering on that ambition requires the right infrastructure. For AI, that infrastructure is the data center. **(Exhibit 1.)** AI-era data centers are not simply larger versions of what came before. Higher power densities, purpose-built cooling systems, and networking speeds that conventional facilities cannot

support make them an entirely new asset class. They are larger in footprint, longer in build cycle, and more capital-intensive. Where this infrastructure lands is a strategic decision in its own right.

EXHIBIT 1

Data centers are the foundational infrastructure for AI, as critical as roads & electricity were to industry



Source: BCG analysis

For Thailand, the case for building domestic data center capacity rests on four imperatives:

1. Unlocking the impact of AI for the full Thai economy
2. Stemming economic leakage
3. Securing data sovereignty
4. Safeguarding national resilience

IMPERATIVE 1: UNLOCKING THE IMPACT OF AI FOR THE FULL THAI ECONOMY

AI is moving off screens and into the physical world—into machines, vehicles, and production lines. These applications require sub-10 millisecond (ms) response times that only local compute can deliver. This has important implications for AI

expansion in Thailand given existing industry dynamics, with the ~1,400 km round-trip from Bangkok to data-center hub Singapore requiring 15ms to 20ms before any data compute occurs.

The considerations for Thailand's major economic sectors are clear. Manufacturing alone accounts for more than a quarter (27%) of Thailand's GDP. **BCG research** reveals that end-to-end AI implementation—combining virtual and physical AI—could unlock more than 30% productivity gains for manufacturers, if the right data ecosystem is in place.

The same shift is playing out across global manufacturing, as AI adoption increasingly represents a competitive baseline for cost, product quality, and speed to market. In Thailand, early applications such as vision systems for quality control are already taking hold, and manufacturers are setting their sights

on higher-impact use cases including zero-stop production lines and autonomous assembly. Domestic data center capacity provides the compute foundation for these use cases and could give rise to a generation of Thai AI-powered local champions. [\(Exhibit 2.\)](#)

IMPERATIVE 2: STEMMING ECONOMIC LEAKAGE

A large share of Thai spending on AI and data centers flows offshore. Repatriating that spend would generate direct GDP contribution, high-skilled employment, and a growing tax base. Onshoring AI capabilities will convert Thailand from a customer to owner within the AI economy.

IMPERATIVE 3: SECURING DATA SOVEREIGNTY

Thailand's most sensitive citizen records, corporate IP, and government data face growing cyber risks as cloud migration accelerates with AI adoption. Without control over where data sits, Thailand cannot fully govern who accesses it or remedy a breach. Thailand's Personal Data Protection Act and Cloud Government Guidelines already mandate that sensitive data remain onshore—domestic data center capacity is what gives those mandates practical force.

IMPERATIVE 4: SAFEGUARDING NATIONAL RESILIENCE

Reliance on foreign-owned infrastructure creates a structural vulnerability. In the era of rising geopolitical uncertainty, that dependency exposes Thailand to unilateral allocation decisions, commercially driven price changes, and potential service disruptions.

EXHIBIT 2

Local data centers unlock the next AI wave:

	 Automotive	 Electronics	 Heavy industry/ petrochemical	 Logistics	 Other sectors
 Importance to Thailand	Largest SEA auto producer (~11% of GDP, ~15% of exports)	World's #2 HDD ¹ producer and E&E ² hub (~15% of exports)	~10% of GDP contribution ³	SEA key logistics hub	...
 AI use cases	AI-powered robotic welding and assembly, to maintain cost advantage	Automated precision assembly and real-time defect detection, to safeguard quality	Autonomous drone and robot inspection, real-time leak detection to improve site safety	Autonomous vehicles and smart port/warehouse operations, to prevent collisions	E.g., fraud screening and trading (BFSI ⁴), patient-monitoring and diagnostics (Health)
 Why localization is required	Latency delays halt production lines and amplify production cost	High-speed lines with narrow defect detection window	Risks escalate in seconds, delays trigger safety incidents	Moving assets require split-second responses, delays create legal exposure	Time-critical decision-making and data sensitivity

1. Hard disk drive; 2. Electrical and electronics; 3. Including refining; 4. Banking, Financial Services, Insurance

Source: Ministry of Commerce Thailand; NESDC Thailand

Building domestic capacity also creates an opportunity that extends beyond Thailand's borders.

Tier-1 hyperscalers and colocation providers are rapidly expanding across Southeast Asia, investing in regional hubs that can offer

the required scale and operating conditions. At the right scale and with the right governance, domestic capacity could anchor a self-sufficient Thai AI economy while positioning Thailand as a credible Southeast Asian hub for regional AI workloads. Peer

markets across the region are navigating the same opportunity, as Southeast Asia's data center landscape adapts to this third wave of growth.

Thailand is not alone: peers are localizing, and their playbook shows what it takes

Southeast Asia's data center market has grown substantially over the past decade across two distinct waves of investment—and is now entering a third wave of energized growth. The third wave is expected to surpass what came before, underpinned by AI compute demands. This new expansion is also projected to be more geographically distributed across established and emerging data center providers. Markets that were previously on the periphery are building infrastructure and opening their regulatory frameworks to compete for their share.

The first wave of growth took place from 2014–2018 and gave rise to Singapore as the Southeast Asian hub. Singapore assembled an investment-grade combination of connectivity, talent, anchor demand, and regulatory stability when hyperscalers first entered the region. By 2016, seventeen subsea cables provided direct routes to the US, Europe, and across Asia.

AI Singapore launched in 2017 with SG\$150 million committed to AI research, industry adoption, and talent development. It rapidly established a domestic engineering pipeline before hyperscalers needed to staff at scale. Demand signals were established by 2018, with 80 of the world's top 100 technology companies already headquartered in the market, and a cloud-first policy pushing government cloud migration. Regulatory clarity completed the picture. Policies allowing 100% foreign ownership, a Personal Data Protection Act enacted in 2012, and sovereign cloud certification in 2013 gave operators the certainty they needed to commit. Singapore has since sustained its position with AI partnerships beyond infrastructure—securing OpenAI's APAC headquarters in November 2024 and a US\$5.5 billion commitment from Microsoft announced in 2026, among others.

Malaysia anchored the second wave of growth from 2019–2024. When Singapore imposed a moratorium on data center expansion, Malaysia was positioned to absorb the overflow. Its proximity to Singapore, ready infrastructure, and supportive policy made it an ideal location.

Malaysia had already laid important infrastructure foundations. Telekom Malaysia (TM) connected to around 20 subsea cable systems and extended its reach by joining SEA-ME-WE 6 (SMW 6) in 2022, linking to Europe via the Middle East, and the Asia Link Cable (ALC) in 2023, connecting to Hong Kong and across Southeast Asia.

On power, Malaysia moved equally early to solve the grid constraint standing between its generation surplus and reliable power delivery. Between 2018 and 2020, Tenaga Nasional Berhad (TNB) committed MYR18.8 billion to expand transmission networks and deploy grid automation—growing lines and substations by 21% and 16% respectively and delivering a 65% improvement in transmission reliability—including a dedicated Main Intake Substation directly supporting Johor's data center corridor. This public backbone was paired with private investment at the connection layer, with TNB funding the transmission network, while operators funded their own dedicated connections to it.

Alongside power, Malaysia also committed the necessary land infrastructure, with over 1,200 acres across Nusajaya and Sedenak Tech Parks pre-packaged as investment-ready sites.

With the infrastructure in place, Malaysia turned its focus to policy—compressing time-to-market, attracting talent, and reducing the financial burden on investors. Two parallel tracks for permitting were introduced to accelerate approvals. The Green Lane Pathway, launched in 2023, cut grid connection timelines from three to four years to as little as 12 months. The One Stop Centre (OSC) 3.0 Plus initiative, operational since 2019, helped accelerate construction-permit approvals to 22–29 days for qualifying projects.

Coordination was later consolidated under the Data Center Task Force, established in 2025, which subsequently appointed Malaysia Investment Development Authority (MIDA) as the single approval window for all investment applications.

Talent was also a key consideration, with the Foreign Knowledge Worker (FKW) and the Malaysia My Second Home (MM2H) immigration programs both creating pathways for foreign talent to fill near-term gaps.

Investment incentives were also introduced to stimulate growth. The Digital Ecosystem Acceleration Scheme (DESAC), announced under Budget 2022, provides duty-free equipment imports alongside a choice of investment tax allowances (ITAs) or concessionary corporate income tax (CIT) rates to ease tax burdens through the first critical decade of operations.

Singapore and Malaysia proved that building domestic data center capacity at scale is achievable. Now **the region is entering a third wave where growth is spreading more widely across markets.** Each market is carving out its position through a combination of policy, infrastructure, and demand levers.

Indonesia created a hard onshoring pull by combining strict localization mandates with investment-ready infrastructure and incentives in Batam's Special Economic Zone. Vietnam addressed the barriers that had held it back—removing foreign ownership caps and streamlining permitting—to draw in hyperscaler commitments.

Thailand, meanwhile, is charting its own path with structural advantages in resources, incentives, and geopolitical neutrality—key points we will touch on in the following section.

Similar dynamics are playing out beyond Southeast Asia. In the UAE, Dubai anchored the first wave of enterprise and hyperscaler colocation demand as the region's established finance and business hub. The next wave of growth in the region is increasingly flowing to Abu Dhabi, with local AI and cloud technology company G42 anchoring sovereign compute to draw in hyperscalers.

The growth trajectories of these markets, while distinct, highlight five consistent strategies to deliver successful AI growth:

- 1. Elevating AI infrastructure to a national priority, championed at the highest level**
- 2. Pre-positioning enabling infrastructure ahead of demand**
- 3. Securing partnerships across the full AI stack**
- 4. Providing data governance certainty**
- 5. Anchoring demand to make investment bankable**

STRATEGY 1: ELEVATING AI INFRASTRUCTURE TO A NATIONAL PRIORITY, CHAMPIONED AT THE HEAD-OF-STATE LEVEL AND DELIVERED THROUGH A DEDICATED AUTHORITY

The markets that moved fastest had political ownership at the highest level. AI partnerships are increasingly tied to geopolitical alignment—securing them requires the personal engagement and commitment signal that head-of-state or senior-minister level can provide. Backing at this level also confers the internal authority to align the full machinery of government behind a single agenda. A dedicated coordinating authority converts that agenda into delivery.

STRATEGY 2: PRE-POSITIONING ENABLING INFRASTRUCTURE AHEAD OF DEMAND

The fastest-growing markets target 12 to 18 months from commitment to operation. This is achievable only when power, grid, and subsea cables are pre-positioned at the point of investor engagement. These requirements have structural lead times that cannot be negotiated away—markets that fail to close them lose investment to those that have. Government leadership is the catalyst. Committing the first tranches of public and utility capital de-risks the infrastructure build and crowds in private co-investment.

STRATEGY 3: SECURING PARTNERSHIPS ACROSS THE FULL AI STACK

Tier-1 capacity is concentrated among fewer than 20 global players simultaneously assessing markets for investment. Winning commitment requires proactive engagement at the top of government, supported by import-duty and corporate income tax (CIT) exemptions that reduce the cost of entering a new market. Two further partner categories particularly matter beyond hyperscalers and colocation providers. The first is chip suppliers, who resolve what is otherwise a binding capex constraint. The second is frontier LLM developers, who are anchor tenants that pull compute demand with them.

STRATEGY 4: PROVIDING DATA GOVERNANCE CERTAINTY

Regulatory certainty is a necessity for long-duration infrastructure commitments. Operators need clarity across three dimensions: (1) data residency rules with sector-specific granularity; (2) blanket adequacy frameworks for cross-border transfer over case-by-case approvals; and (3) tiered sovereign cloud certification which gives operators a clear compliance target and a pre-qualification route to bid for government workloads. Tiered sovereign cloud certification classifies cloud providers by the sensitivity of government data they are cleared to handle. Ordinary commercial data sits at the lowest tier and classified or sensitive government data at the highest.

STRATEGY 5: ANCHORING DEMAND, DOMESTIC AND REGIONAL, TO MAKE INVESTMENT BANKABLE

Infrastructure investment at this scale requires a demand signal that investors can underwrite. Domestic demand becomes bankable through three signals: (1) quantified public sector cloud migration targets; (2) centralized procurement; and (3) enterprise subsidies that pull forward private adoption. Regional demand extends the pool through two further mechanisms, namely hyperscaler routing agreements that make the host country the contractual home for region-bound inference and multinational regional headquarters whose workloads follow their operations.



Thailand must build on its advantages and close remaining gaps to deliver the 3 GW to 4 GW ambition

Thailand already has several winning conditions and a large pipeline in place

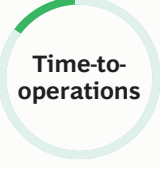
Across the conditions that matter most to hyperscalers and colocation providers, Thailand holds a compelling combination of structural advantages. ([Exhibit 3.](#))

- Contiguous land to justify GW-scale investments, and competitive land acquisition and construction costs, at a time when peer markets are approaching capacity constraints.

- Attractive power tariffs, abundant supply, and a credible path to carbon-free energy underpinned by solar potential ([Exhibit 4.](#))
- Among the most competitive incentive packages in Southeast Asia, accessible with relatively limited friction through BOI's investment promotion framework.
- A balanced foreign policy to engage both US and Chinese AI majors. This positioning necessitates active management of chip traceability, end-use certification, and physical facility segregation between US and Chinese-aligned workloads—particularly to preserve frontier chip access from both blocs.

EXHIBIT 3

Thailand has several winning factors in place and is closing the gaps on the rest

Factor	Description	Recent trajectory
 Land availability and cost	- Large, contiguous land available in EEC - Competitive land and construction costs (US\$9.1 million per MW¹), approximately 10% below Malaysia	Stable
 Geo-political neutrality	Balanced foreign policy enables partnerships with US and China hyperscalers, chip suppliers, and foundation model developers	Stable
 Power availability and tariffs	- Attractive tariffs vs. Singapore and Malaysia, 25+% national reserve capacity supply - Plan in place to scale up transmission and green energy capacity (solar, EGAT upgrade, DPPA)	Stable
 Demand bank-ability	- Onshoring mandate for critical government and personal data in place - Gaps remain in cross-border data transfer, cloud operator certification, migration targets	Improving
 Inter-national connectivity	- Strong APAC and Middle East connectivity; TalayLink extends direct reach to Australia - Limited capacity on high-bandwidth systems connecting to US and Europe (e.g., SEA-ME-WE 6)	Improving
 Incentives and talent	- Competitive fiscal incentives: 100% CIT exemption up to 8 yrs., duty-free equipment imports - Visa pathways for engineering talent relatively limited; room to develop structured training	Improving
 Time-to-operations	- FastPass coordinates across agencies but stops short of single-window submission & approval - FastPass formally launched by the Prime Minister in June 2026—impact on permitting timelines expected to emerge as implementation progresses	Improving

Thailand positioning in SEA

High right-to-win



Low right-to-win

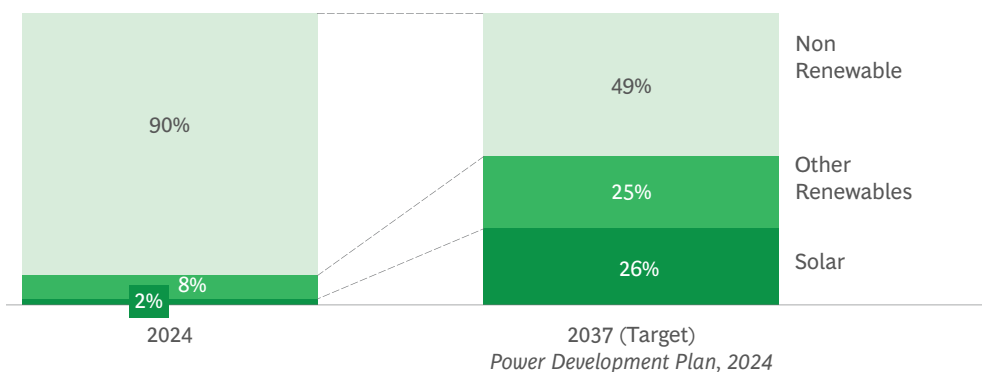
1. Sourced from Cushman & Wakefield report, under mid-specification build, low-rise 50MW data center (EEC site).

Source: Cushman & Wakefield APAC Data Center Construction Cost Guide (March 2026); Wood Mackenzie; Government websites; Press search; BCG analysis.

EXHIBIT 4

Thailand targets a 51% renewable mix in the next decade, anchored by the country's strong solar potential

Share of electricity generation (%)



Source: Ministry of Energy; PDP

Thailand's operational base and pipeline reflect this strong foundation. Thailand already has approximately 400 megawatts (MW) of data centers in operation. A meaningful share of AI compute still flows offshore and represents recoverable demand that domestic infrastructure could capture.

Leading hyperscalers and colocation providers are committing to Thailand. BOI received approximately US\$23 billion in data center investment applications in 2025, and approved a US\$25 billion expansion by ByteDance in 2026.

Thailand has approximately 12 to 24 months to act, with three forces defining the urgency of its data center transformation:

1 A time-limited window of opportunity. The shortage in global data center capacity provides a window of opportunity for Thailand, but one that must be rapidly addressed. Hyperscalers are actively securing capacity ahead of construction, offering favorable economics in any market that can credibly demonstrate readiness. This dynamic will not persist as supply and demand converge towards parity.

2 Expanding geographical competition. More markets are entering the race, and those already taking part are not standing still. Southeast Asian markets that were on the sidelines five years ago are actively building and localizing capacity at scale. Those already ahead are reinforcing their position. Singapore has set aside 20 hectares on Jurong Island to address its land ceiling. Malaysia's state utility has committed MYR42.8 billion in capital expenditure through end-2027—more than double the previous regulatory period—to keep pace with Johor's data center pipeline.

3 Commitments lock in capacity. Data center commitments lock in for decades and are difficult to reverse. The capital committed to purpose-built facilities is tied up once construction begins, and long-term agreements with power providers, connectivity suppliers, and tenants carry obligations that cannot be unwound without significant disruption. Hyperscalers are cementing regional and country allocations in the next 12 to 18 months, and a market passed over in this cycle is unlikely to see another window in the foreseeable future.

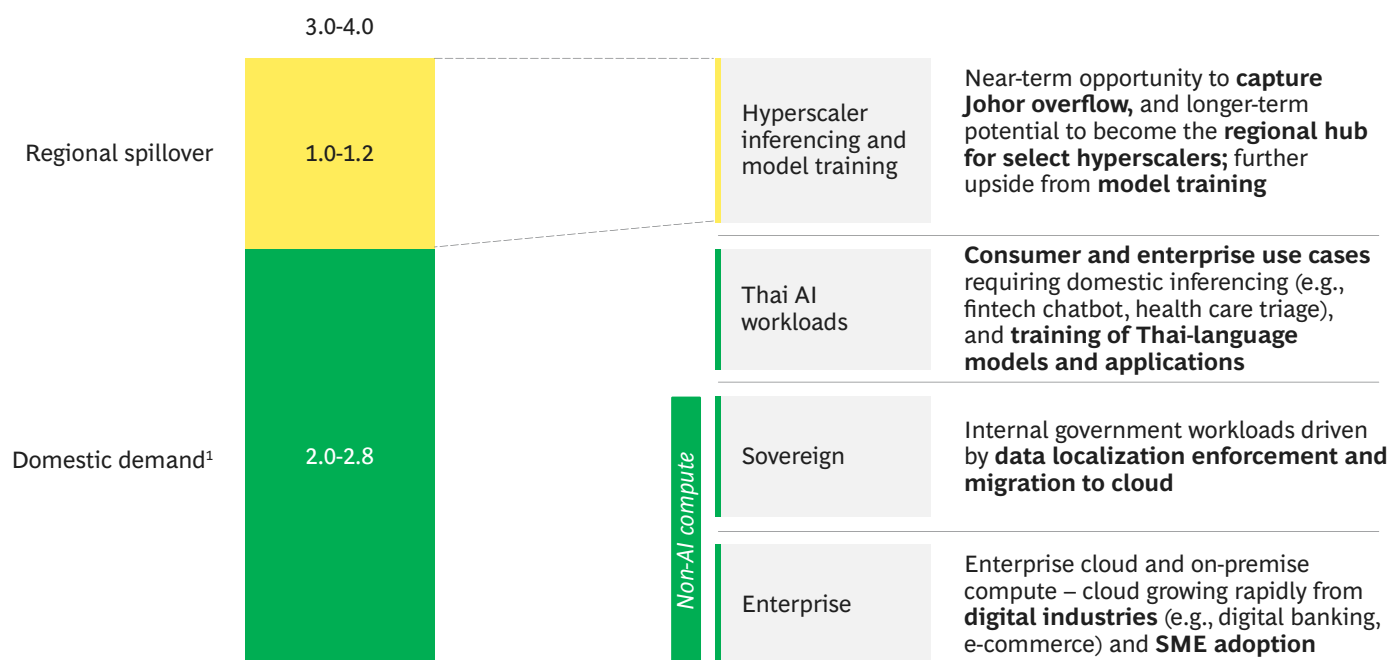
Seven levers for Thailand to deliver the ambition

Thailand has an opportunity to build 3 GW to 4 GW of data center capacity by 2030, serving domestic demand while capturing a share of regional workloads. ([Exhibit 5.](#))

EXHIBIT 5

Thailand can set a 3.0 GW to 4.0 GW ambition by 2030, anchored by growing domestic demand and regional spillover opportunity

Projected Thailand compute demand (GW, 2030)



1. Includes total compute demand from Thai-based enterprise, government, and consumers, with workloads currently served overseas assumed to be fully repatriated

Source: Expert input; Press search; BCG analysis

The domestic floor starts with non-AI compute—enterprise and sovereign workloads migrating from colocation and on-premise infrastructure to cloud. This rides the added momentum generated by the Thai government’s Cloud First Policy as well as rising private sector cloud spend. Thai AI workloads layer further potential on top, with demand split between inferencing and training.

Inferencing is the fastest-growing segment, reflecting the use of pretrained models to generate insights and predictions. The latency requirements and data residency mandates tie these workloads to local compute, creating new domestic demand and pulling back Thai workloads currently directed offshore. Training of AI models, while episodic and smaller in scale, anchors domestic AI capability development. This opportunity stretches from Thai language models to domain-specific AI applications.

Regional spillover also offers a compelling additional opportunity. Southeast Asia’s compute requirements are outpacing capacity, and Thailand’s competitive power costs and central position make it a credible routing hub for regional hyperscaler inferencing.

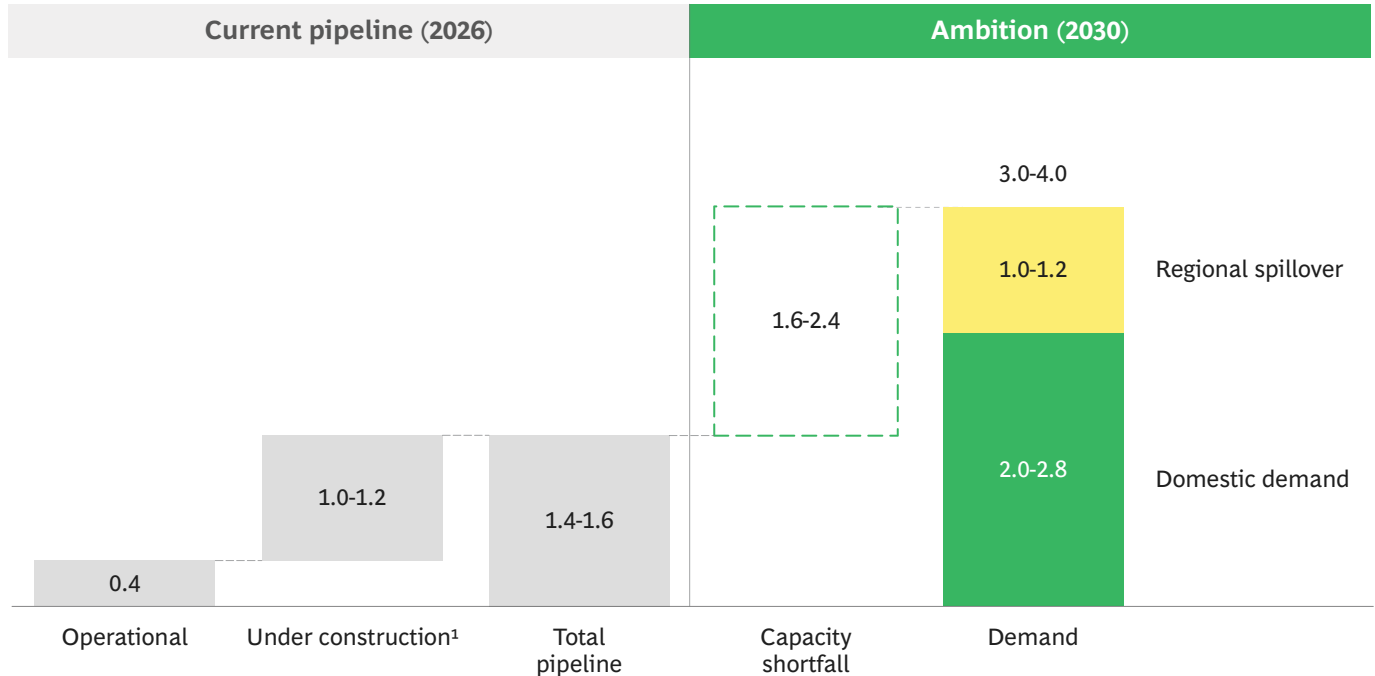
Thailand also has an opportunity to serve Southeast Asia’s training needs. Training of regional language models such as SEA-LION is naturally anchored in the region given its dependence on local language data and expertise.

Global foundation model training is the hardest layer to compete for. These workloads are largely location-agnostic and will follow wherever infrastructure quality and market conditions are most favorable.

EXHIBIT 6

Thailand needs to build an additional 1.6 GW to 2.4 GW of data center capacity beyond its current pipeline to fully capture the 3.0 to 4.0 GW ambition

Thailand data center supply-demand bridge (GW)



1. Probability-weighted capacity expected to be operational in 2030
Source: Press search; Expert input; BCG analysis

Reaching Thailand's 3 GW to 4 GW ambition requires building an additional 1.6 GW to 2.4 GW of data center capacity beyond what is currently operational or under construction. (Exhibit 6.) Achieving this target requires coordinated action across government and local players through seven key levers:

1. Unified national orchestration
2. Infrastructure readiness
3. Demand anchoring
4. AI partnerships
5. Data governance
6. Talent
7. Local champions

Unified national orchestration: Head-of-state drive and delivery authority

Top-level government sponsorship is the foundation.

A unified steering body—chaired at head-of-state level and empowered to align decision-making across ministries and stakeholders—could translate political will into a credible national program. This could be similar in form to Thailand's National AI Committee. The steering body would define ambitions by publishing capacity targets, milestones, and trackable objectives across government.

Delivering on that mandate requires a separate delivery authority with the remit to orchestrate the full investor journey from engagement to operations. This includes proactive outreach to investors and packaging land with pre-staged infrastructure into investor-ready propositions, consolidating permitting into a single point of clearance with transparent SLAs, and active debottlenecking and cross-ministry escalation as issues arise.

Infrastructure readiness: Pre-position the physical foundations ahead of commitment

Reliable power access is the most immediate priority.

Thailand's power generation is not a constraint at this stage, but transmission and distribution networks are aging and reaching capacity. Accelerating transmission upgrades from state utility Electricity Generating Authority of Thailand (EGAT) is critical to ensure grid capacity keeps pace with committed demand.

In addition, as hyperscalers advance their carbon-free commitments, green power credentials are becoming increasingly important. Finalizing the Direct Power Purchase Agreement (DPPA) framework—building on a pilot which allows BOI-promoted data centers to procure power directly from renewable energy producers—could give operators the long-term procurement certainty they need. This will require a single delivery owner across EGAT, Provincial Electricity Authority (PEA), and Metropolitan Electricity Authority (MEA) to convert it from policy to practice. The 2 GW pilot cap could then scale dynamically to ensure green power supply keeps pace with the operator pipeline.

Regional-grade connectivity is critical to Thailand's positioning as a Southeast Asian hub. Thailand hosts approximately 10 active international subsea cable systems but faces a gap in western connectivity. AAG—the sole direct US link—and AAE-1 and SMW 4 on the Europe route are aging systems with limited capacity. A significant share of Thailand's international traffic routes through Singapore as a result.

By contrast, Malaysia's four or five subsea cables serving the US and Europe—including major Asia–Europe systems SMW 5 and the upcoming SMW 6, and MYUS to the US—are modern, high-capacity systems that position it as a key routing point for trans-Pacific and Asia–Europe traffic. Thailand could close this gap by proactively engaging with US and European subsea cable consortia to secure capacity on newer systems and position Thailand for the next wave of direct landings, supported by fast-track landing permits and designated landing sites. Upgrading Internet exchange point infrastructure with higher port speeds, a point of presence extended into the Eastern Economic Corridor (EEC), and denser international peering could convert landings into genuine regional routing capability.

Water and cooling infrastructure round out the critical path. AI-era data centers consume 10 to 50 times more cooling water than traditional facilities, and Thailand's tropical climate combined with EEC seasonal water stress makes this a

binding constraint. Two complementary moves could address this hurdle. First, embedding a tiered water usage effectiveness (WUE) target into BOI promotion criteria, in line with Singapore's Green Data Centre Roadmap. Second, developing partnerships between operators and provincial water utilities to establish recycled-water schemes for non-potable cooling, as Malaysia has done with AirTrunk and Johor Special Water.

Demand anchoring: Convert latent domestic and regional demand into a bankable signal

On the domestic side, the most immediate priority is converting the existing government cloud mandate into a measurable migration program—one that sets sector-by-sector, year-by-year targets to form a forward-looking capacity schedule that operators can plan against. Consolidating procurement across ministries into a single sovereign vehicle could amplify this signal. Fragmented agency-by-agency contracting obscures the true scale of government demand, and a unified mechanism makes it commercially legible. Extending this momentum into the private sector through subsidized cloud credits, AI capability building, and hands-on advisory support would pull forward adoption in industries with sustained inferencing workloads.

On the regional side, two mechanisms can draw in regional workloads. Bilateral negotiations with hyperscalers to route Southeast-Asian-bound inference through Thai infrastructure—making Thailand the contractual host rather than a transit point—could convert regional expansion strategies already underway into committed demand. Attracting multinational regional headquarters adds a second layer. Companies with high digital and AI maturity bring not just headcount but workloads, and anchoring their regional operations in Thailand could pull that compute demand onshore.

AI partnerships: Build a domestic AI ecosystem

Proactive outreach across partner categories could build both the data center capacity and the broader ecosystem needed to position Thailand as a functioning AI hub. Thailand has already attracted significant inbound commitments, but still has the opportunity to attract additional Tier-1 colocation providers and hyperscalers with limited or no in-country presence.

Securing chip access is equally critical. AI graphics processing units (GPUs) are concentrated among a small number of suppliers, and demand is outpacing supply. Hyperscalers typically secure their own chips through forward commitments, but colocation tenants face lengthening queues. Peer markets have addressed this by securing priority allocations. Malaysia,

for example, secured NVIDIA chips through government-to-government (G2G) engagement at the prime-ministerial level. Thailand could pursue a similar approach to ensure Thai enterprises and local AI companies can access supply.

Other partners broaden the ecosystem beyond infrastructure. Frontier LLM developers pull compute demand with them. Neo-cloud operators—providers offering on-demand GPU compute for training and compute-heavy workloads—present a distinct first-mover opportunity across Southeast Asia. Leading neo-clouds are in active global expansion mode and have yet to establish a Southeast Asian foothold. Thailand's proposition is particularly sharp for this segment. Competitive power costs flow downstream into data center lease rates, lowering operating costs and protecting margins.

Data governance: Provide regulatory certainty on cross-border flows and sovereign workloads

Thailand's Personal Data Protection Act (PDPA) and Cloud First Policy anchor the foundation of onshore data residency. Thailand could also consider codifying the regulatory certainty that hyperscalers price into commitments. The current approach for cross-border data transfers requires entity-by-entity approvals. An adequacy whitelist for trusted jurisdictions could replace this with a blanket framework. A tiered sovereign cloud certification standard could give cloud providers a clear compliance target to work toward in bidding for government workloads.

Talent: Attract specialists while building the domestic pipeline

Thailand's LTR visa provides the foundation for attracting foreign specialists. Several reinforcements could be considered to strengthen the uptake. Broadening eligibility to cover the roles Thailand needs most urgently—particularly data center construction engineers—could close the pipeline gap. Consolidating issuance authority under a clear legal anchor could reduce friction for applicants. Periodic benchmarking of the LTR proposition against peer schemes—including Singapore's Tech.Pass, Malaysia's DE Rantau, and the UAE Golden Visa—could ensure Thailand remains competitive as peer markets continue to strengthen their propositions. Beyond uptake, extending property ownership rights and fixed capital access could lift retention meaningfully, positioning Thailand as a long-term base rather than a short-term posting.

Inbound talent, however, forms only one pillar of the talent strategy. A parallel investment in the domestic AI engineering pipeline through university AI curricula and sector-specific apprenticeships could ensure the domestic talent base grows in step with the build-out.

Local champions: Anchor Thai players in the build-out

Thailand's build-out presents a tangible opportunity for local players including land developers, infrastructure owners, data center operators, and the broader ecosystem to participate across the value chain alongside incoming hyperscalers and AI partners. The Thai government can play a direct role in facilitating this through structured pathways such as power and land allocation, sovereign cloud offtake, and a seat at the table in G2G partnerships. This could position Thai players to develop lasting capability in data center development and operations, while retaining a larger share of the economic value generated from the build-out.

Malaysian conglomerate YTL offers the clearest precedent, benefitting from grid power from the national utility, priority NVIDIA chip access secured through G2G engagement, and captive demand from government-directed sovereign AI workloads. YTL now operates its self-developed 600 MW Green Data Center Park in Johor, with full capacity targeted by 2027. With the right facilitation, Thai land developers and infrastructure owners could occupy a similar role.

Getting this right unlocks significant economic and strategic upside for Thailand, including US\$70 billion to \$100 billion in GDP contribution and 60,000 to 95,000 jobs

Achieving the ambition of 3 GW to 4 GW capacity by 2030 would generate returns that extend well beyond the data center itself. These gains will compound across the broader AI economy, as supporting infrastructure delivers a step-change in Thailand's strategic position.

Direct economic impact from the data centers themselves

Capital investment and GDP contribution form the first layer of direct returns. A program of this scale could draw US\$25 to US\$35 billion¹ in capital investment into data center construction. This excludes IT equipment, which analysis indicates could account for up to half of total program costs. It could also generate a projected cumulative GDP contribution of US\$70 to US\$100 billion² over 15 years according to industry analysis, as capital expenditure and sustained operational spending compound across the economy.

The employment impact spans construction and operations, with an estimated 60,000 to 95,000³ jobs supported in total. During construction, 45,000 to 65,000 roles could be supported across civil works, fiber, power infrastructure, and mechanical, electrical, and plumbing (MEP) installation. Once operational, a further 15,000 to 30,000 permanent high-skill roles in IT, engineering, network management, and facility operations could follow, with wider employment generated across the supply chain and local economy. A portion of roles will be filled by high-skilled international specialists, with knowledge transfer to domestic talent over time.

The fiscal contribution extends beyond GDP and employment. Personal income tax from construction and operational roles, and VAT and CIT from contractors and equipment suppliers serving the build-out accrue from the outset. Standard CIT from the data center operators follows once the BOI exemption period lapses.

Beyond the financial returns, Thailand gains direct control over the data, infrastructure, and compute capacity that will underpin its digital economy for decades. This represents a sovereignty dividend that offshore infrastructure cannot replicate.

Indirect economic impact:

The AI economy this infrastructure enables

Domestic data center capacity is the entry point. The larger prize is the AI economy it enables. AI adoption could lift GDP by 13% to 18% by 2030⁴, with productivity gains and new revenue streams compounding across every sector that adopts AI at scale. This could translate into a cumulative GDP uplift for Thailand of US\$80 billion to US\$120 billion by 2030.

Securing hyperscaler commitments also transforms the investment case for enabling infrastructure beyond the data center itself. Power grid, subsea cable, and connectivity upgrades all carry demand risk. AI infrastructure buildout can nudge these developments towards commercial viability for private investors and Thailand's state enterprises, mobilizing capital into critical infrastructure at a pace and scale that government spending alone could not achieve.

The same demand signal has the potential to accelerate Thailand's energy transition. High-volume, long-duration offtake would give EGAT, independent power producers, and renewable developers the bankable commitment needed to accelerate green generation and grid investment. This in turn converts the data center build-out into a catalyst for Thailand's 2050 carbon-neutral commitment.

The investment also builds human capital over time. Greater domestic compute capacity drives broader AI adoption across Thai enterprises, government, and households, deepening digital literacy and AI fluency across the workforce. Hyperscalers have consistently amplified this effect by co-investing in AI enablement programs alongside their infrastructure commitments.

In Singapore, Microsoft's Elevate program has committed free AI training and access to its AI-integrated productivity suite to more than 200,000 tertiary students, educators, and nonprofit leaders. Meanwhile, AWS's AI Springboard extends up to US\$470,000 each in cloud credits, training, and co-funded consultancy to 300 enterprises to accelerate enterprise-level AI adoption. Thailand could consider embedding similar commitments into its hyperscaler partnerships from the outset.

The key takeaway is clear: Achieving Thailand's 3 GW to 4 GW ambition can deliver a powerful platform for economic growth, and in doing so catalyze the transformation of the data ecosystem to deliver widespread benefits for the nation and its businesses.

1. Estimated based on low-rise land and construction cost benchmarks for an Eastern Economic Corridor (EEC) site from Cushman & Wakefield's Asia Pacific Data Center Construction Cost Guide.
2. Estimated based on GDP impact multipliers derived from publicly announced data center investment commitments in Thailand; multipliers range from 2x to 4x of committed investment, with the stated GDP contribution range reflecting the midpoint of this band.
3. Estimated based on published industry benchmarks for data center construction and operational job creation.
4. Range derived from published industry analyses of GDP uplift potential from AI adoption and integration, including the US-ASEAN Business Council's AI Governance in Southeast Asia report.

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