Unlocking Southeast Asia's AI Potential

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BCG

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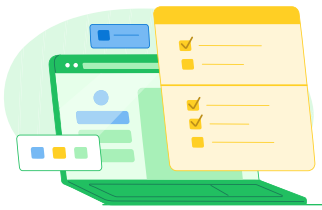

Surveys of ~200 companies conducted across ASEAN-6

20+ interviews with CXOs

AI Adopters | Investors | Consulting Firms | Infrastructure Providers | System Integrators (SIs) / Solution Providers

- BCG Digital Maturity Framework and Analysis
- In collaboration with IMDA and Temasek

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Preface

Southeast Asia stands at a digital crossroad, as the evolving global landscape of Artificial Intelligence (AI) is positioned to redefine innovation in the region and beyond. With its youthful, tech-savvy population, robust digital infrastructure, and growing openness to foreign investment, the region is uniquely positioned to leapfrog traditional development trajectories and establish itself as a global AI powerhouse.

Southeast Asia is poised to capture substantial value through both traditional predictive AI built on sprawling datasets, and the new kid on the block—generative AI (GenAI)—which can generate contextual and realistic content. The next-generation capabilities of agentic AI take this a step further, delivering actionable personalization at scale.

The AI opportunity is not without its challenges—limited talent and fragmented infrastructure being the most prominent. This report seeks to understand and assess the current landscape, drawing insight from surveys of ~200 companies and in-depth interviews with more than 20 senior executives across the 'ASEAN-6' countries (Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam). It provides a strategic overview of the unique regional opportunities, the views of decision-makers on how and where value can be created, the challenges that must be overcome, and actionable insights for stakeholders across the ecosystem.

What we reveal is the remarkable scope of this evolving opportunity. By addressing talent gaps, fostering regional partnerships, and embracing the potential of AI technologies, Southeast Asia is poised to capitalize on the transformative power of AI to position the region as a leader in global innovation.

Contents

More than just hype

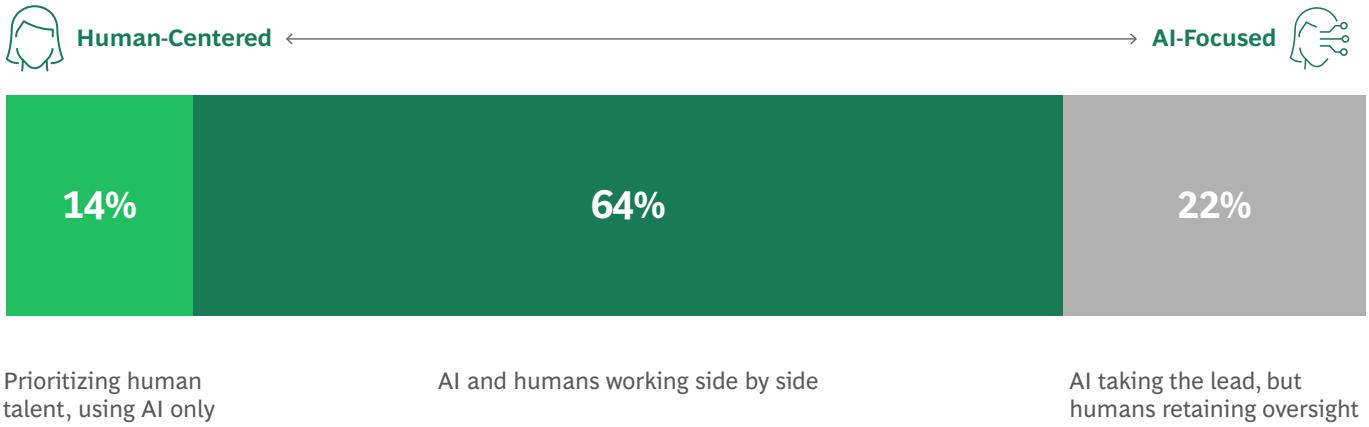
The AI boom could boost ASEAN-6 GDP by ~US$120 billion by 2027

The explosion of GenAI onto the global stage has been a headline story in recent years. Tools such as ChatGPT, Gemini, LLaMA, and DALL-E have delivered a breakthrough in how organizations operate in Southeast Asia and beyond, providing access to rapidly generated, high-quality content in text, images, music, and code. This is not just an incremental leap in technology—it marks a fundamental shift in human-AI interaction, redefining creativity, automation, and decision-making at scale.

AI has rapidly evolved since the first tentative forays into rule-based systems hit the tech scene in the 1980s. The 1990s saw the emergence of machine learning, as systems began to adapt and learn from data without explicit programming. AlexNet marked a major breakthrough in 2012, showcasing the potential of deep learning through its pioneering neural network. This was followed in 2017 by a landmark paper from Google researchers introducing the transformer architecture, which laid the foundation for today's large-scale language models (LLMs).

Now, GenAI is taking center stage, providing high-quality generated content at scale. It is also paving the way for 'agentic AI', where AI systems will not only generate content but also observe, plan, and autonomously execute tasks based on dynamic inputs. [Exhibit 1.] Two thirds of executives see AI and humans working side by side, and one in five already envisions a future of autonomous AI with human oversight. The rise of agentic AI means that instead of merely responding to prompts, AI can proactively perform actions, revolutionizing industries from customer service to autonomous robotics. This fusion of predictive AI, GenAI, and agentic AI is driving a new era of enterprise innovation, combining to create intelligent,hyper-personalized engagements at scale.

Exhibit 1: Executives see talent and AI as complementary



Source: BCG-AI Radar 2025 Survey (n=1803)

The value potential of AI's rapid expansion is evident in the recent rise of companies central to the GenAI movement. ChatGPT reached one million users within five days and surpassed 400 million weekly active users by February 2025. Nvidia, a key GPU provider for AI workloads, doubled its market cap in a year to reach ~US$3.3 trillion (as of March 2025), joining Apple and Microsoft among the world's most valuable companies.

The recent success of low-cost, open-source AI models launched in the East—beyond the traditional tech-hubs of North America—enables even resource-constrained entities to leverage advanced AI. The availability of these tools lowers barriers to entry for small and medium-sized enterprises (SMEs) and allows for cost controlled AI adoption.

It is our opinion that cost-per-token will continue to fall, with parallel training and inference innovations meaning LLMs will be cheaper to serve. We also expect significant advancements in algorithmic capabilities—such as 'reasoning' models—improving long-range planning for complex agentic AI workflows.

This innovation momentum is not confined to Silicon Valley. Southeast Asia is emerging as a key player in the global AI race, with industries from financial technology (fintech) to healthcare already integrating AI at scale. This report delves into the unique adoption parameters in Southeast Asia, and how the right strategic approach can deliver a step-change in economic activity both within nations and across the region as a whole.

The evolution and corporate democratization of AI usage is already apparent with the emergence of low-cost AI services and pre-trained APIs. Global (and select regional) providers offer AI-as-a-service—recognition, speech-to-text, translation and more—at usage-based pricing affordable to SMEs.

Businesses in Southeast Asia are already taking advantage of these model offerings - for instance, a local agritech startup leveraging cloud AI API to analyze crop images for pests, paying only for the images processed. The company doesn't need to hire a PhD in computer vision or invest in training infrastructure—simply plug into an existing model and unlock the benefits. We expect this building-block approach to accelerate AI deployment in all sectors.

As AI reshapes the global economy, Southeast Asia is positioning itself as an active participant in the future of AI-driven innovation. [Exhibit 2.]

1. 'ASEAN-6' countries - Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam

Exhibit 2: Each ASEAN-6 economy is forging its unique path in AI advancement

Thailand
AI-led urban transformation

- 36 smart cities across 25 provinces and aims to develop 100 smart cities across 77 provinces by 2040

Vietnam
Developing AI talent powerhouse

- Hotbed of >500,000 technical talent and IT professionals
- AI startups in Vietnam surged from 60 in 2021 to 278 in 2024 (4.5× increase)

Philippines
GenAI-powered BPO leadership

- IT & Business Process Association Philippines (IBPAP) targets industry-wide annual revenue of US$59B in 2028 through growth by AI

Malaysia
Emerging AI infrastructure leader

- Various investments of >US$10B from hyperscalers: Oracle, Google, Microsoft
- ~4GW data center capacity build planned and ~US$3.5B investments already deployed by 2024

Singapore
Pioneer for AI policies and innovation

- 1st in region and among 1st globally to launch a model AI governance framework
- #1 in Southeast Asia for AI startups, attracting US$4.6B in investments (2020-2024)
- Launched the Green Data Centre Roadmap to develop sustainable data centers and spur AI adoption

Indonesia
Catalyst for AI adoption and table stake market

- Large startup ecosystem of >2,400, including AI and deep tech
- 92% of knowledge workers are already using generative AI tools at work, surpassing global (75%) and Asia Pacific (83%) averages

Source: Press releases, Microsoft and LinkedIn Work Trend Index 2024, , BCG Analysis

Why Southeast Asia is Well Positioned to Capture AI's Potential

While Singapore stands out as a regional pioneer in AI innovation, countries across Southeast Asia are investing in strategic initiatives to accelerate AI adoption and promote regional leadership. There are several key factors which position the region as a prime candidate for AI and data adoption:

1 A youthful, digitally savvy population

With 325 million citizens under 30—nearly half the regional population—Southeast Asia is home to some of the most enthusiastic adopters of new technology. This is not just a consumer base—it is a talent pool to build, adapt, and scale AI-driven solutions.

2 High consumer excitement about AI

Southeast Asian consumers rank among the most enthusiastic globally for AI adoption. This generates a positive feedback loop—as consumers demand smarter, more personalized products, businesses are incentivized to invest in AI solutions.

3 Business agility and foreign investment

The region's openness to foreign investment and its nimble regulatory frameworks have created a businessfriendly environment. These factors make Southeast Asia attractive for global players seeking to innovate and scale AI solutions.

4 Advancing digital infrastructure

Cloud adoption in Southeast Asia is expanding at a compound annual growth rate (CAGR) of 20%, outpacing Europe and North America. The accessibility of cloud-based AI tools lowers barriers to AI integration, enabling both large corporations and SMEs to adopt cutting-edge technologies. The region is also expanding AI-ready data centers, supported by a diverse mix of international, regional, and local providers, meeting rising demand for data processing and storage.

Potential: AI and GenAI as catalysts for growth

The potential for AI and GenAI to redefine business processes and unlock new revenue streams could significantly impact the economic landscape of the ASEAN-6. By 2027, we project that AI and GenAI will contribute ~US$120 billion to Southeast Asia's GDP.

We assess this value based on revenue impact potential, estimating the economic impact of new offerings and business models, as well as improving customer acquisition and engagement. Drawing from BCG's proprietary database, experience, and research, we quantified sector-level and sub-sector level GDP contribution impact potential from AI.

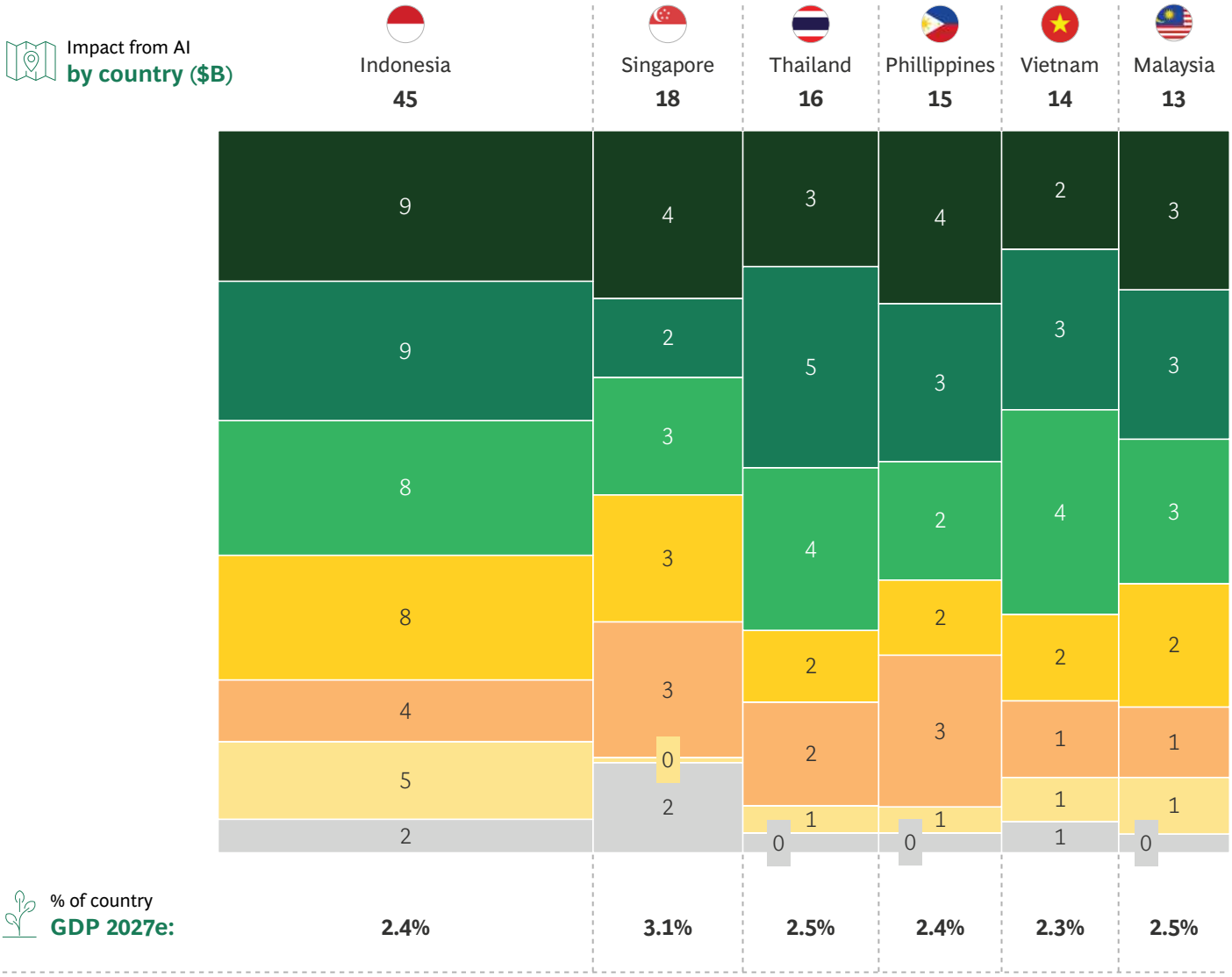
The ICT sector stands to gain the most value, driven by applications like personalized content generation and advanced data analytics. Financial services and broader service industries are also ripe for disruption, leveraging AI for fraud detection, predictive analytics, and tailored customer experiences.

But the impact isn't confined to high-tech industries. In manufacturing, AI-powered automation is streamlining production lines and boosting output. In agriculture, predictive maintenance tools and demand forecasting are reducing inefficiencies. Even traditionally low-tech sectors like construction are finding value in AI applications. Moreover, across sectors, early adopters of GenAI report substantial time savings.

At macroeconomic level, all markets in the ASEAN-6 are expected to enjoy material uplift from AI and GenAI impact [Exhibit 3]

Exhibit 3: Potential from AI/GenAI could be up to 2.5% of GDP by 2027

GDP impact from AI in 2027, by sector and by country (US$B)



Impact of AI
by sector ($B)

25 Wholesale and retail trade	24 Services (Professional services, food, accommodation, etc.)	24 Manufacturing and construction	18 Information and communication
15 Financial and insurance activities	8 Energy and resource extraction	6 Transportation and storage	

121
(2.5% of overall GDP 2027e)

Source: IMF, BCG Build For the Future 2024 global study, 2024 IMDA DAI Survey, BCG analysis

Singapore leads, but AI opportunities abound across the ASEAN-6

Singapore is on track to experience the highest percentage GDP uplift among ASEAN-6 countries, with a projected increase of 3.1% by 2027. This growth is fueled by the dominance of high-impact sectors like financial services and ICT, which make up a larger share of the economy compared to regional peers. At a sectoral level, the most significant contributions to Singapore's AI-driven growth will come from wholesale and retail trade, financial services, alongside information and communication.

Meanwhile, other ASEAN-6 nations are also positioned for substantial AI-driven gains, with GDP contributions ranging from 2.3% to 2.5%. Indonesia is projected to see the

highest absolute impact, with an estimated US$45 billion uplift. Vietnam stands at the cusp of transformation, with a strong emphasis on manufacturing and agriculture offering vast growth potential as AI adoption matures. Thailand's robust manufacturing sector (35% of GDP) and energy and resource industries (15% of GDP) present unique opportunities to integrate AI for increased efficiency and innovation.

Case Study 1

Top Indonesian telecommunications player

Context

A leading Indonesian telco is pursuing a comprehensive AI-driven transformation, expanding beyond its traditional operations to position itself as a technology company ('Telco to Techco'). It has the goal of doubling EBITDA by 2028, growing its total addressable market from US$18 billion to US$30 billion.

Strategy

The company's AI strategy is built on three key pillars. First, it aims to become an AI-native telco by embedding AI into core operations, including customer personalization, CapEx management, and productivity optimization. Second, it seeks to transform into an AI-native techco by establishing a sovereign cloud, enhancing security infrastructure, and driving data monetization across industries like banking and energy. Lastly, it aspires to be an AI nation-shaper by advancing human capital development through initiatives such as the AI Centre of Excellence and launching Indonesia's first LLM in Bahasa Indonesia.

Value

AI-driven network capacity planning has improved accuracy from 80% to nearly 98%, resulting in substantial cost savings and optimized resource allocation. Additionally, early findings from AI-powered modules have provided actionable insights, enabling targeted expansion and improving customer experience. While these are early results, they highlight an ability to leverage AI effectively to drive digital transformation.

This report unpacks the forces driving AI adoption in Southeast Asia through three lenses. Demand-side analysis highlights how consumers and industries are reshaping the need for AI applications, supply-side analysis explores the readiness of infrastructure, ecosystems, and talent, while strategic analysis provides recommendations for Southeast Asia's stakeholders to lead in AI adoption and innovation.

Southeast Asia's embrace of AI and GenAI is not just about numbers on a spreadsheet—it is about reshaping industries, creating opportunities, and elevating lives. By embracing this shift, Southeast Asia can position itself as a global AI leader, unlocking remarkable economic growth and meaningful societal progress.

We should be clear - potential alone won't secure success. Challenges remain, from building robust data ecosystems and modern infrastructure to upskilling talent and addressing workforce gaps. These enablers are essential for scaling AI and GenAI across industries while ensuring sustained and long-term impact.

The next chapter delves into the demand side of this equation, exploring how businesses and consumers across the region are driving the need for AI and GenAI. Understanding these dynamics is the first step towards tapping the significant ~US$120 billion opportunity for Southeast Asia.

Demand Analysis: Accelerating AI adoption

Unlocking Southeast Asia's significant AI potential will require a detailed understanding of adoption challenges, and mitigants. To interpret this, we assess AI maturity across five dimensions—challenges, ambition, adoption, enablers, and investments.

Through a blend of data insights from BCG's Build for the Future (BFF) diagnostic, and real-world case studies, we have captured the sentiments of key AI adopters in South-east Asia.

Our findings highlight the buoyant optimism across the region, the hurdles which adopters face, and the vision of a future where AI is not simply a competitive advantage but a cornerstone of innovation and growth.

More detailed study of the AI maturity of global economies can be found in BCG's report Which Economies Are Ready For AI?

Survey methodology

Leveraging BCG's Build for the Future (BFF) tool—a framework measuring 34 distinct capabilities across six dimensions to benchmark an organization's digital maturity—we gathered self-assessment insights from leaders across the region to measure AI and GenAI maturity. This approach allowed us to position organizations in one of four progressive stages of AI adoption: Starter (early stages); Literate (foundational understanding); Performer (integrated with demonstrable value creation); Leader (fully leveraging AI at scale).

A meticulous validation process was undertaken, blending follow-up interviews, rigorous cross-checks, and industry benchmarking. Select respondents were invited for in-depth interviews to pressure-test key data points and assess respondents' understanding of AI topics.

A total of 188 responses were collected, achieving a demographic balance across countries, sectors, and organizational sizes. Each of the ASEAN-6 countries had a blend of respondents from varied industry clusters, with insights collected from both large corporations and SMEs. This balanced sampling strengthens the reliability of our survey results, offering a comprehensive view of AI adoption across the region.

Southeast Asia's performance was then benchmarked against the extensive BFF database, which includes data from over 1,000 CXO survey respondents worldwide.

Dipstick Survey Content | 34 capabilities to baseline organization's AI maturity

AI adoption

1. Degree of predictive AI and GenAI adoption
2. % of AI/GenAI solutions moved beyond pilot phase
3. Responsible AI strategy
4. AI compliance

Ecosystem leveraged

1. How tech and data partners are selected
2. Top ranked challenges in vendor selection
3. Degree to which partnership ecosystem is leveraged

Challenges & catalysts in AI adoption

1. Types of AI solutions of interest
2. Top ranked challenges in adopting AI
3. Support measures needed

AI ambition

Strategy and commitment

1. Clear strategy for AI
2. Leadership commitment to AI
3. Well-defined approach & prioritization framework to realize value

Expected value impact

1. Estimated cost impact
2. Estimated revenue impact
3. Impact allocated by function
4. Focus on GenAI initiatives

AI-related investments

Capital investment

1. % of 2023 revenue invested into digital
2. Share of digital investment spend on AI
3. Dedicated budget for AI
4. Plan to increase AI investment

People investment

1. % of employees dedicated to digital (digital FTEs)
2. % of digital FTEs dedicated to AI roles
3. % of FTEs planned to be upskilled

State of enablers: tech, data and people

Technology

1. State of modern tech platforms
2. State of cloud usage
3. State of tech stack in supporting scalable deployment of AI applications

Data

1. State of data strategy
2. State of data management processes
3. State of data security
4. Ability to extract value from data using data analytics or AI

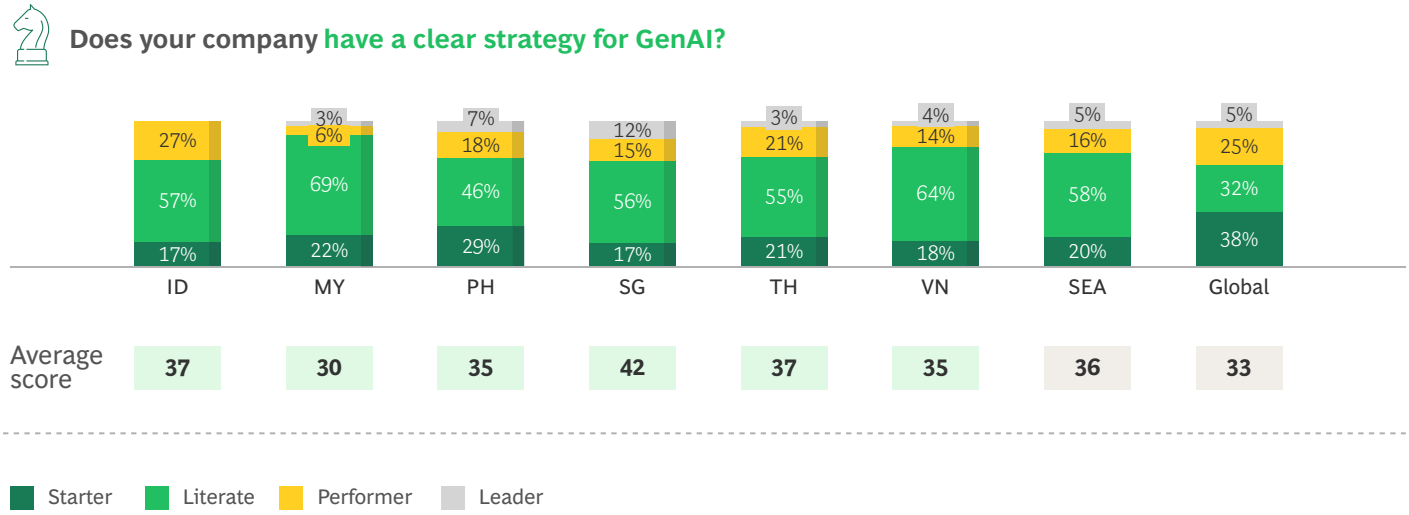
People

1. AI training for executives
2. State of talent sourcing plan
3. Availability of AI talent

Ambition: Laying the strategic groundwork

Southeast Asia's AI ambitions are apparent in the perceived importance of strategy-setting, scoring 36 on the digital maturity scale against the global average of 33. [Exhibit 4.] This foundational strength reflects a regional commitment to advancing digital economies and embracing transformative technologies.

Exhibit 4: Ambition | Southeast Asia respondents are setting clear strategies for AI/GenAI

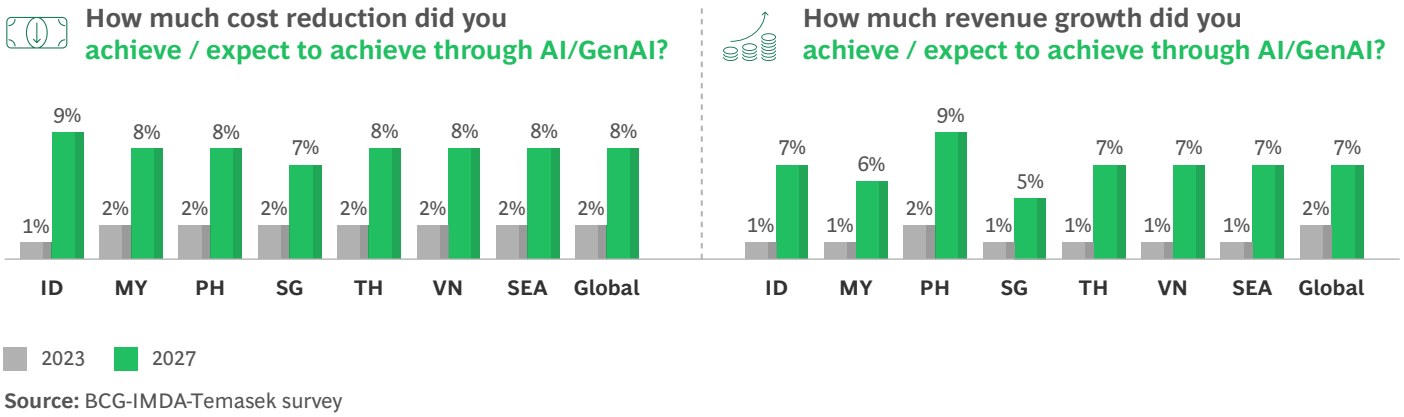


Note: Scores are calculated by assigning Starter = 0, Literate = 33, Performer = 67 and Leader = 100.
Source: BCG-IMDA-Temasek survey

Companies from Singapore, Indonesia, and Thailand scored themselves highly for AI strategy-setting within Southeast Asia, arguably reflecting the ongoing regional push for digital transformation. 21% of Southeast Asian companies categorize themselves as 'Performers' and 'Leaders', signaling a clear perceived alignment between strategy and execution.

An important accompaniment to this picture comes with the projected impacts of AI/GenAI. Southeast Asian companies admit optimistic expectations around the impact of these technologies by 2027, with expected cost reductions and revenue growth aligning with global averages. [Exhibit 5.]

Exhibit 5: Ambition | Southeast Asia companies are generally optimistic on the value potential of AI/GenAI



Source: BCG-IMDA-Temasek survey

Case Study 2

Prominent Filipino bank

Context

A prominent Filipino bank is strategically investing in AI to redefine its wealth management function, leveraging data-driven insights to improve revenue generation, optimize marketing efforts, and enhance client engagement. The bank is focusing on building solutions that enable sales teams to identify the right markets, understand client needs, and deliver targeted offerings to high-value customers.

Strategy

At the core of the bank's AI strategy is its ability to analyze customer profiles, behavioral patterns, and bank account activity to pinpoint cross-sell and upsell opportunities. "It definitely helps salespeople identify the correct markets and talk to the right clients," noted a vice-president from the bank. AI initiatives also address cost optimization, particularly in marketing—an area where budgets have historically focused on traditional advertising with limited precision. "We're trying to reduce spending on traditional advertisements that do not hit the target market. AI allows us to allocate those budgets more efficiently and meet our audience where they are."

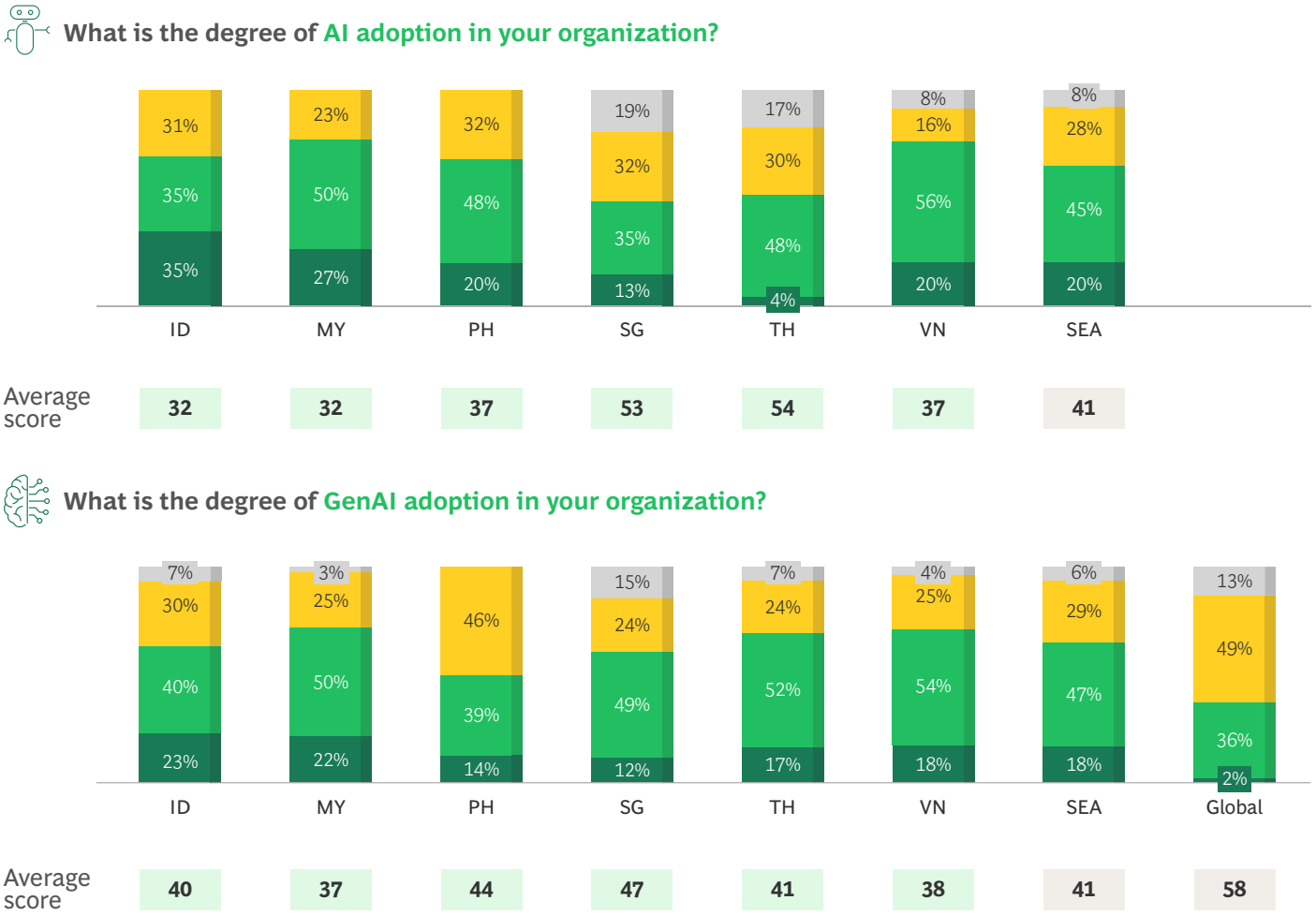
Value

While the long-term goal is to achieve a 20% to 25% increase in revenue and cost reduction, the bank remains realistic about the implementation curve, targeting gains of 10% or more in the initial years. This incremental yet strategic approach reflects the bank's commitment to sustainable AI adoption, ensuring measurable improvements while laying the groundwork for future scalability.

Adoption: advancing AI across industries

Southeast Asia has comparable levels of adoption for AI, reflecting a steady uptake of advanced technologies. [Exhibit 6.] However, GenAI adoption significantly lags global benchmarks, signaling untapped potential as AI technology continues to evolve.

Exhibit 6: Adoption | Southeast Asia countries lagging behind global peers on GenAI adoption



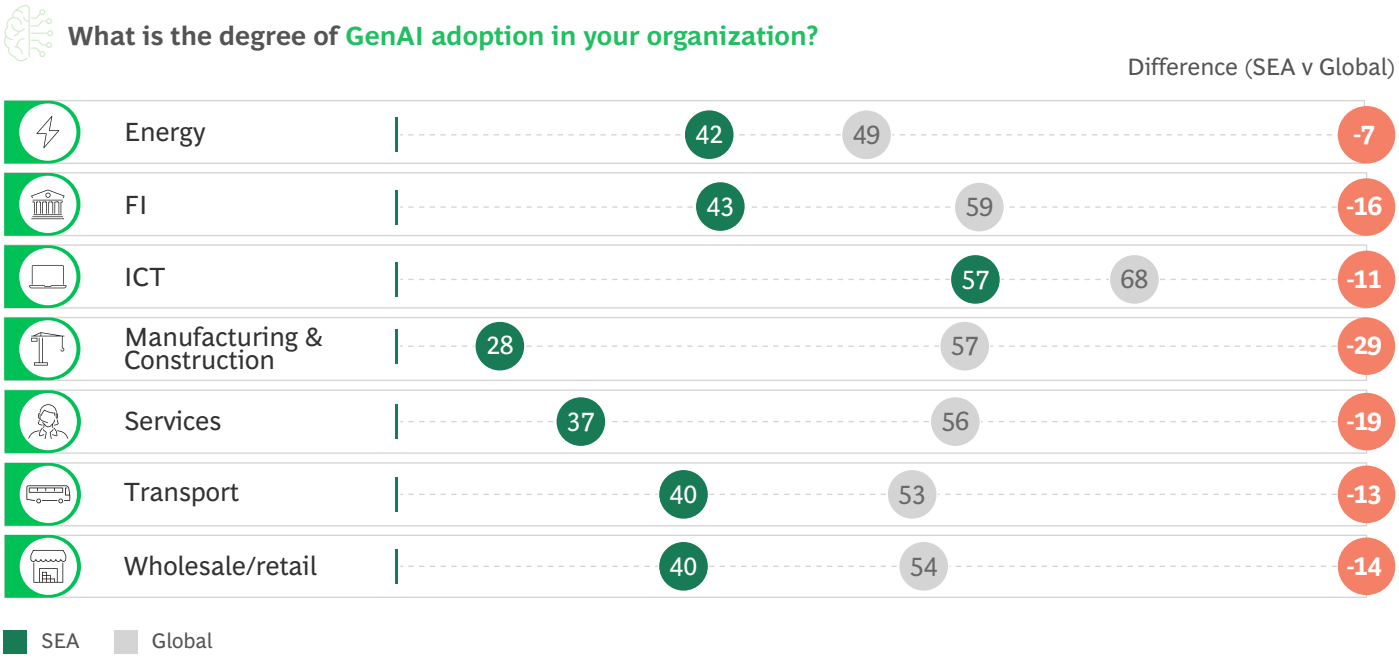
Note: Scores are calculated by assigning Starter = 0, Literate = 33, Performer = 67 and Leader = 100.
Source: BCG-IMDA-Temasek survey

Thailand and Singapore are emerging as regional front-runners in AI adoption, driven by clear strategies and rising investments in technology and talent. Thailand stands out for its strong alignment between vision and execution—especially in financial services and ICT sectors—backed by a solid tech foundation and growing AI expertise. Singapore and the Philippines demonstrate strong momentum in GenAI adoption, reflecting increasing readiness to embrace next-generation AI capabilities.

With strong digital infrastructure and mature data ecosystems, ICT and financial services are well-positioned to lead in GenAI adoption—applying it to personalized customer experiences, fraud detection, and operational efficiency. GenAI is also gaining ground in advanced manufacturing across the globe, enabling automation of complex design tasks and simulation of production workflows to boost efficiency.

By embracing advanced GenAI applications, Southeast Asian countries can achieve strategic and operational efficiencies, close the gap with global adoption rates, [Exhibit 7.] and drive transformative growth across the region.

Exhibit 7: Adoption | Manufacturing & Construction and Wholesale/ Retail trade showing the largest gaps for GenAI adoption



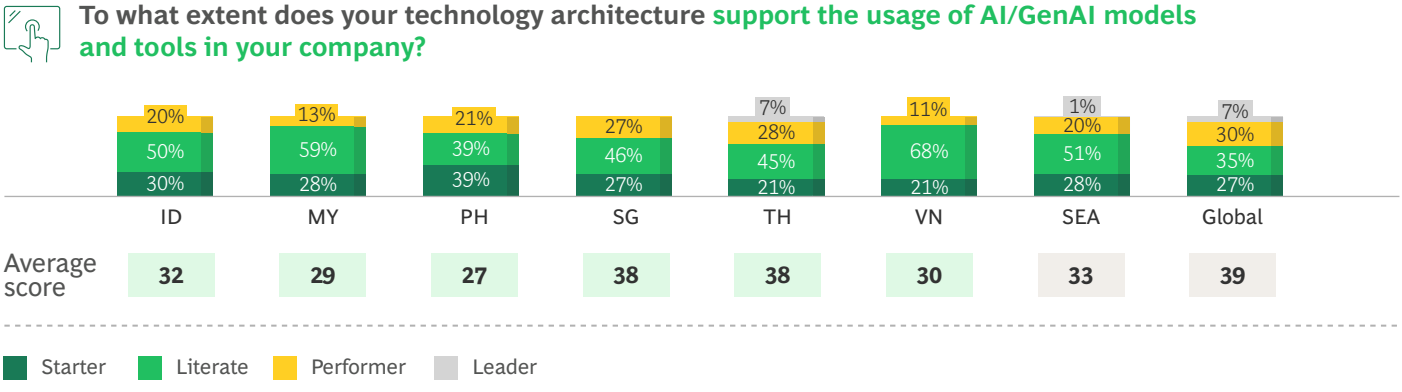
Note: Scores are calculated by assigning Starter = 0, Literate = 33, Performer = 67 and Leader = 100.
Source: BCG-IMDA-Temasek survey

Enablers: Building the foundations

The successful scaling of AI adoption in Southeast Asia hinges on three foundational enablers—technology infrastructure, data ecosystems, and availability of talent. While the region demonstrates pockets of strength, significant gaps persist that hinder widespread adoption and scalability.

Technology: Overcoming legacy systems. Southeast Asia's technology infrastructure lags behind global benchmarks. [Exhibit 8.] Legacy systems are a primary bottleneck, limiting the region's ability to implement modern AI architectures and scalable solutions. This challenge is particularly acute for industries reliant on outdated technologies.

Exhibit 8: Enablers - Tech | Adoption gaps potentially influenced by lower level of technology architecture maturity

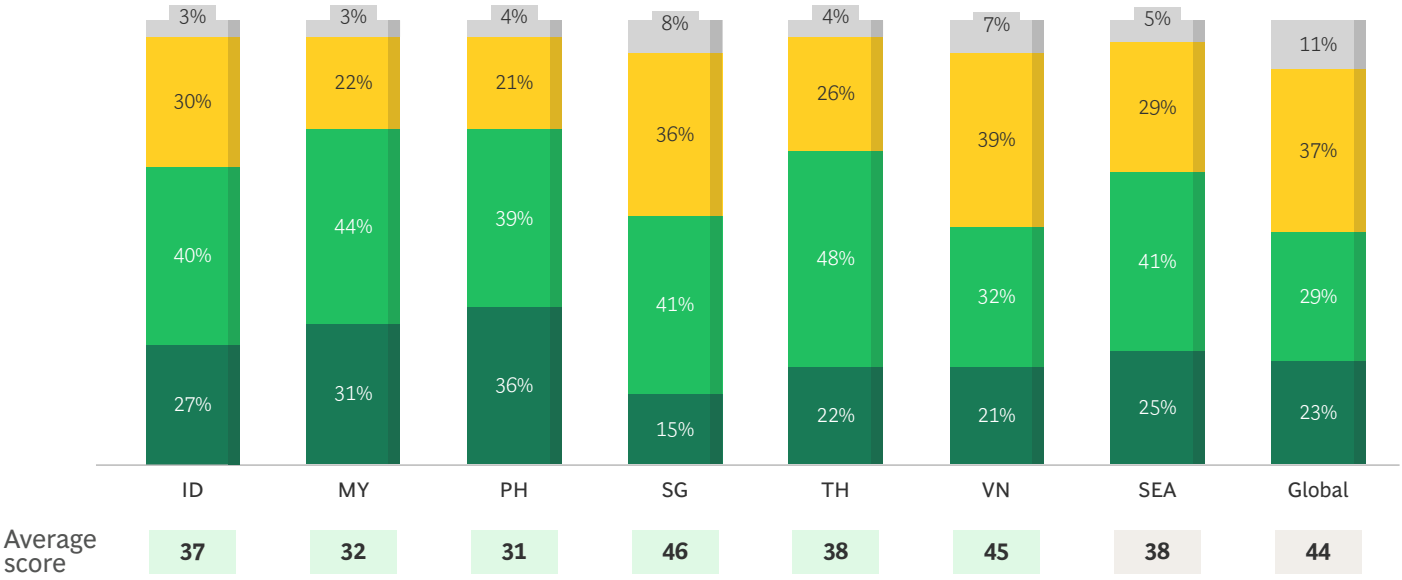


Note: Scores are calculated by assigning Starter = 0, Literate = 33, Performer = 67 and Leader = 100.
Source: BCG-IMDA-Temasek survey

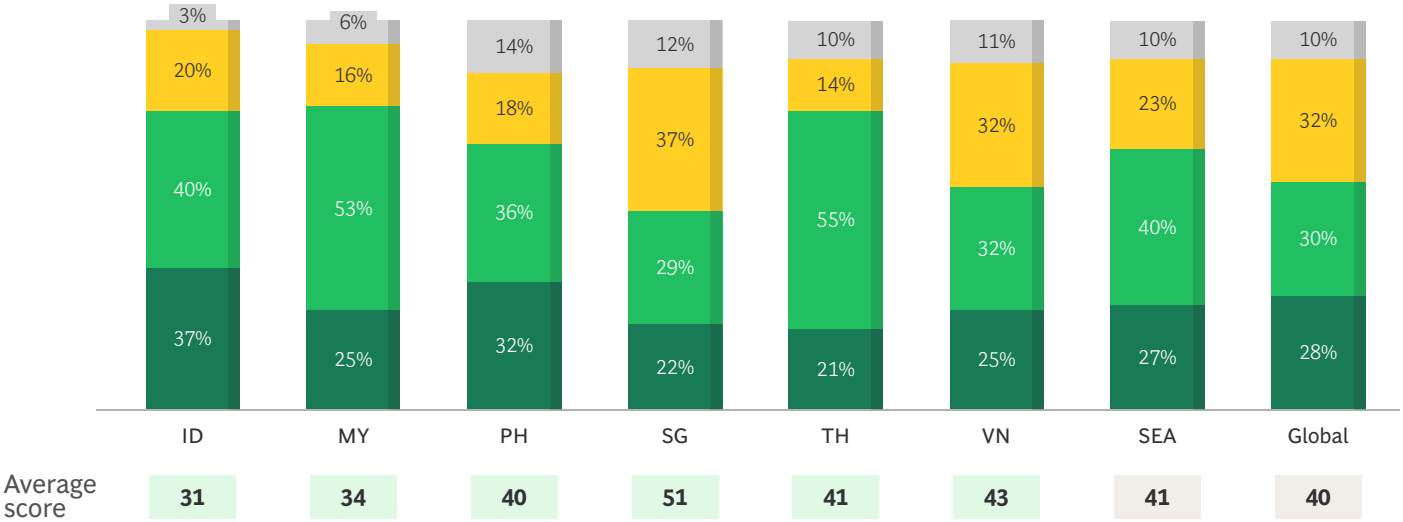
Data: Strong security, room for growth. Southeast Asia's performance is broadly on par with global benchmarks for data security, reflecting the region's commitment to safeguarding digital assets. However, its data management maturity lags behind, with underdeveloped frameworks hindering the full utilization of AI/GenAI solutions. [Exhibit 9.] Robust data management systems are crucial for scaling AI applications, particularly in sectors like financial services and ICT, where the volume and sensitivity of data require advanced capabilities.

Exhibit 9: Data | Data management remains a hurdle to effectively scale AI/GenAI

Does your company have data management processes in place to effectively source, publish, discover and monitor data?



How does your company approach data security and protection for AI/GenAI?



Starter Literate Performer Leader

Note: Scores are calculated by assigning Starter = 0, Literate = 33, Performer = 67 and Leader = 100.
Source: BCG-IMDA-Temasek survey

Case Study 3

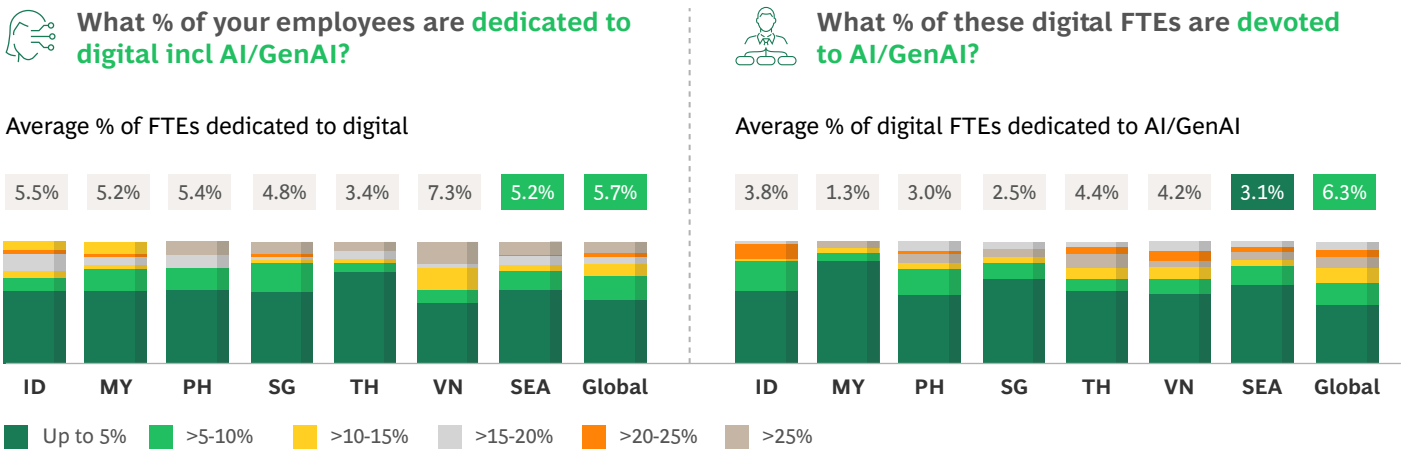
Southeast Asian national airline: harnessing data to achieve GenAI excellence

A Southeast Asian airline has positioned itself as a pioneer in AI and GenAI technologies, leveraging tools to elevate operational efficiency, customer satisfaction, and productivity. It has identified over 242 GenAI use cases, with 28 projects live. This includes an AI-powered Customer Insights Portal which achieves 90% time savings in feedback, AI in brand marketing which has reduced production time by half, and a purpose-built chatbot contributing to a 25-point increase in customer satisfaction (CSAT) scores. It is also using AI to enhance operational efficiency, with AI-driven training achieving over 30% improvements in flight-related scenario handling. Verification tools for flight approvals have also reduced reaction times by more than 50%, ensuring higher operational accuracy and compliance.

The airline's focus on general productivity is driven by tools such as an intelligent assistant that empowers learning. The assistant tool has achieved a 77.2% penetration rate among 5,600 ground staff, with over 4,300 weekly unique users, underscoring widespread adoption and tangible impact. The airline's approach demonstrates the power of aligning robust data systems with cutting-edge AI and GenAI technologies..

Talent: Bridging the skills gap. Businesses in Southeast Asia dedicate 5.2% of total full-time equivalent (FTE) workload to digital roles, slightly below the global average of 5.7% [Exhibit 10.]. On the other hand, only 3.1% of digital FTEs are focused on AI/GenAI, compared to 6.3% globally. Country-level disparities highlight both challenges and opportunities for maturing AI adoption. Vietnam leads the region, with 7.3% of its FTEs focused on digital roles, while Thailand has the greatest focus on AI/GenAI.

Exhibit 10: Investments | Opportunity for Southeast Asia companies to increase AI/GenAI talent numbers



Note: % are calculated by taking the lower bound of the ranges
Source: BCG-IMDA-Temasek survey

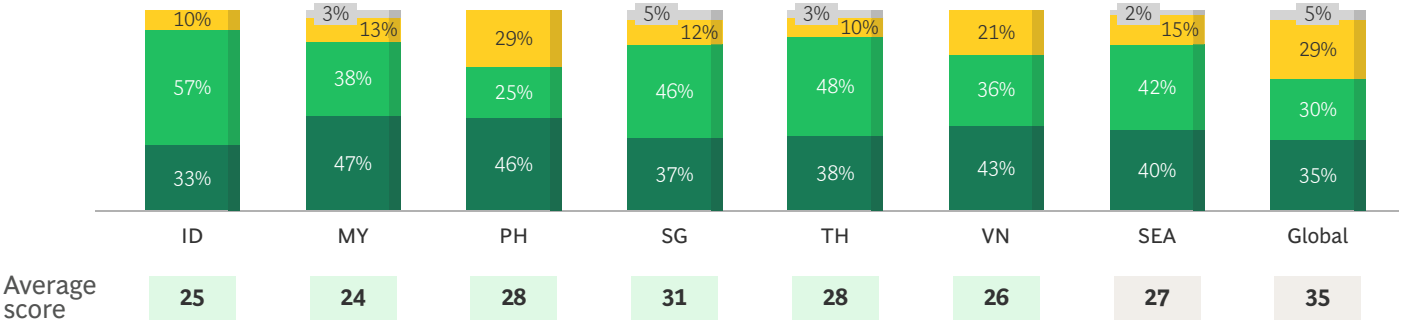
Regional players are not only building centralized AI teams but are also making deliberate, in-country investments to cultivate local AI talent. This dual approach reflects a commitment to integrating AI expertise across operations while addressing regional nuances, setting a benchmark for embedding AI capabilities at both the organizational and local levels.

Assessment of the region's talent readiness highlights clear shortcomings, with countries noticeably trailing global averages. [Exhibit 11.] This may pose a critical challenge for future regional development. These findings highlight the need for comprehensive efforts to address the skill gaps that constrain AI adoption and scalability. Shortages are particularly pronounced in mid- and senior-level AI roles, where expertise is essential for driving complex AI initiatives.

Exhibit 11: Enablers - Talent | Southeast Asia companies lag global peers on AI talent strategy

State of AI talent

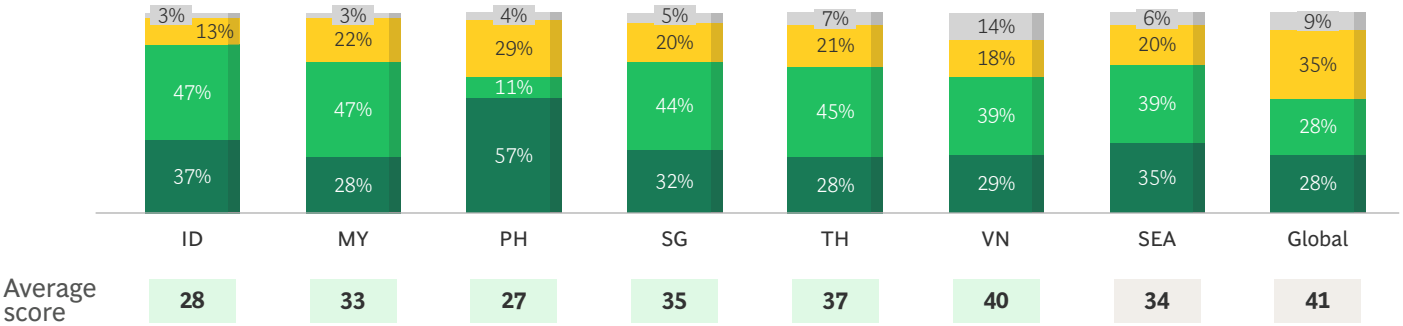
How would you describe your company's people, talent, and skill mix to especially deliver and manage AI/GenAI within your company?



Average score	ID	MY	PH	SG	TH	VN	SEA	Global
	25	24	28	31	28	26	27	35

Strategy to attract AI talent

Does your company have an effective strategy in place to attract and retain talent, and to tailor jobs to your staff?



Average score	ID	MY	PH	SG	TH	VN	SEA	Global
	28	33	27	35	37	40	34	41

Starter Literate Performer Leader

Note: Scores are calculated by assigning Starter = 0, Literate = 33, Performer = 67 and Leader = 100.
Source: BCG-IMDA-Temasek survey

By addressing these gaps in technology, data, and talent, Southeast Asia can unlock its full AI potential. Strategic investments in modernizing infrastructure, strengthening data management frameworks, and scaling talent development programs will be critical to ensure that the region not only keeps pace with global advancements, but is also positioned to set new benchmarks in AI innovation.

Capital allocation: Building the foundations for AI growth

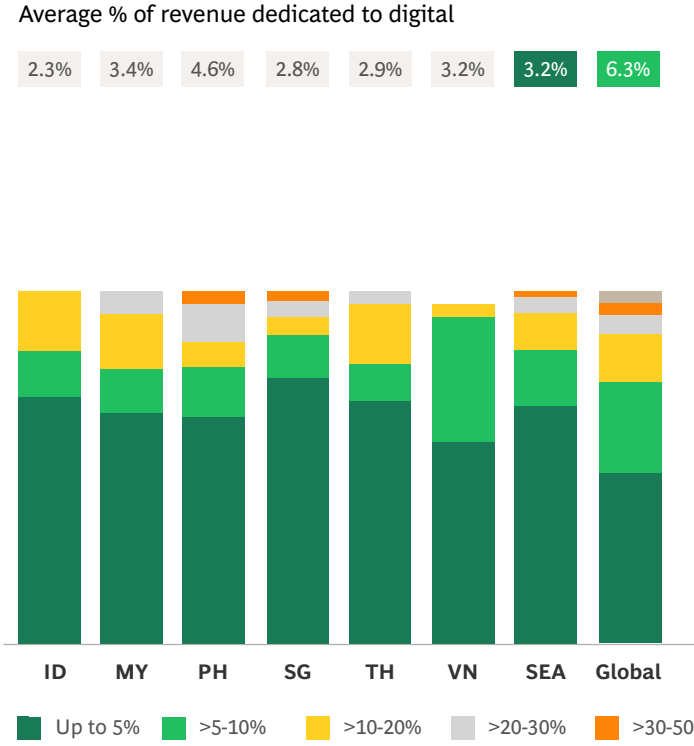
When it comes to new technologies, higher investment paves the way to unlock accelerated opportunities. But the reality is that levels of capital allocated to AI technologies in Southeast Asia currently trail global averages. [Exhibit 12.] Southeast Asian companies dedicate only 3.2% of revenue to digital initiatives, trailing the global average. Just 4.0% is allocated to AI/GenAI, compared to 7.0% globally.

Everyone is playing a waiting game to see if more powerful models will come out, or to see what best practices emerge from other markets.

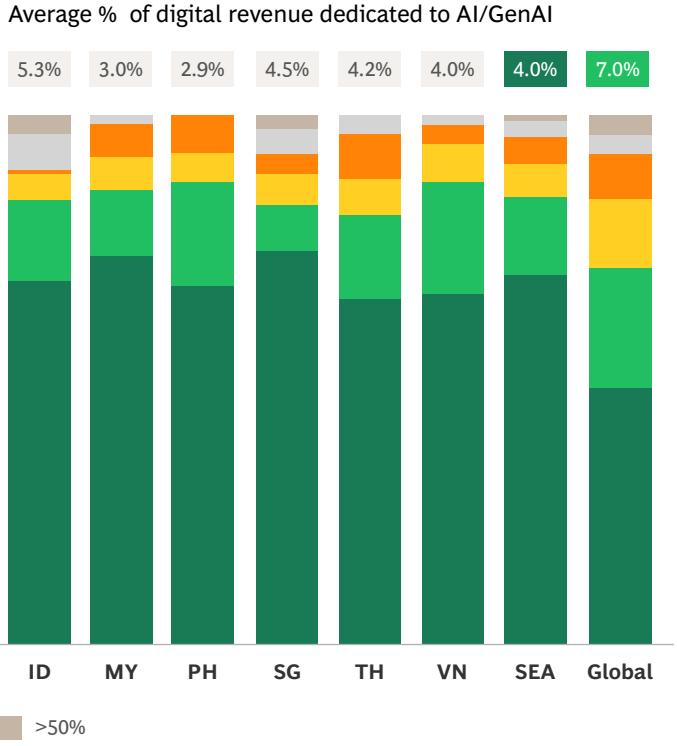
Stephanie Sy, *CEO of Thinking Machines*

Exhibit 12: Investments | Lower levels of AI/GenAI investments seen in Southeast Asia companies compared to global averages

What % of your 2023 revenue was invested into digital incl. AI/GenAI initiatives?



What % of aforementioned digital investments was spent on AI/GenAI?



Up to 5% >5-10% >10-20% >20-30% >30-50% >50%

Note: % are calculated by taking the lower bound of the ranges
Source: BCG-IMDA-Temasek survey

A notable shift is taking place in how companies allocate AI budgets: a higher percentage of digital revenue is now being allocated to GenAI (4.9%) compared to AI (3.9%). According to the CEO of a Singapore-based data center company, this trend reflects the newer, more dynamic nature of GenAI and the growing number of applications driving its adoption, in contrast to earlier waves of investment in traditional AI technologies.

Rising interest in GenAI is reflected in surging infrastructure demand, with client data center spending increasing fivefold over the past two years. Companies are ramping up investments in custom GenAI solutions. While individual success stories show the impact of targeted capital, broader regional investment in AI-focused infrastructure, tools, and use cases is crucial for scaling adoption and driving cross-sector value.

Challenges: Top barriers to AI adoption

Any successful digital transformation will have to overcome hurdles, and the path to greater predictive AI and GenAI adoption in Southeast Asia is no different. The journey is shaped by diverse challenges that reflect a cautious approach evidenced across the region.
Our findings show that integration complexities and skill gaps are consistent obstacles for predictive AI, alongside unclear value potential and cost constraints. [Exhibit 13.] These barriers highlight the need for robust infrastructure, focused upskilling, and well-defined strategies to unlock the full potential of AI in the region.

Exhibit 13: Challenges | Varied hurdles in Driving AI Adoption and Impact

Top 3 challenges with AI adoption
As your company adopts and creates value from AI and GenAI, what are the top challenges you are facing? Please rank the top 3 challenges for predictive AI.

Predictive AI

Indonesia	Malaysia	Phillippines	Singapore	Thailand	Vietnam
(19%) Cost	(18%) Skill gap	(16%) Integration challenges	(18%) Integration challenges	(14%) Unclear value	(20%) Skill gap
(12%) Integration challenges	(15%) No strategy	(15%) Cost	(14%) Skill gap	(13%) No strategy	(15%) Cost
(10%) Skill gap	(13%) Regulatory complexity	(12%) No top-down target	(12%) Cost	(12%) Integration challenges	(12%) New topic

Source: BCG-IMDA-Temasek survey

While offering transformative capabilities, GenAI's early stage of development and unclear value propositions means it faces additional skepticism. [Exhibit 14.] Like predictive AI, GenAI adoption is constrained by problems of inadequate infrastructure, strategic ambiguity, and proof of value.

Exhibit 14: Challenges | Similarly, nuanced differences across key challenges on GenAI adoption and value creation

Top 3 challenges with GenAI adoption

As your company adopts and creates value from AI and GenAI, what are the top challenges you are facing? Please rank the top 3 challenges for GenAI.

GenAI

Indonesia	Malaysia	Phillippines	Singapore	Thailand	Vietnam
(13%) Rapidly evolving topic	(18%) Skill gap	(21%) Cost	(18%) Integration challenges	(20%) Unclear value	(19%) Integration challenges
(13%) Skill gap	(15%) Cost	(13%) Unclear value	(16%) Skill gap	(13%) No strategy	(16%) Cost
(12%) Integration challenges	(15%) No strategy	(11%) Rapidly evolving topic	(11%) Cost	(12%) Cost	(15%) Skill gap

Source: BCG-IMDA-Temasek survey

Voice of Industry:
Senior C-Level Executive of a Thai Oil & Gas Company

"The energy crisis five/six years back was a wakeup call to ramp up efficiency... obviously, one thing that came up at the time was predictive AI or machine learning. It's something that we find could help boost our efficiency. On GenAI—we have not experimented with anything critical due to constraints about data security and robustness of GenAI in general."

Overall, Southeast Asia's AI adoption story is one of balancing progress with systemic barriers. The region's success will depend on addressing these foundational hurdles to enable both predictive AI and GenAI to fulfill their transformative potential.

Cost constraints. Cost remains a major obstacle to AI adoption, particularly in budget-constrained markets. Many organizations find it difficult to justify the high upfront investment in AI systems, especially in resource-limited environments.

Voice of Industry:
Major Indonesian Bank

"A big push for us is creating a more comprehensive data lake and validating AI use cases to determine which are hype and which are real. It's always a question of how much the incremental cost is versus the incremental benefit. We have an internal team within IT that consolidates all AI-related potential initiatives proposed by different business units. This team helps create potential use cases, evaluates costs and benefits, and prioritizes which ones to implement first."

Skills gaps. Talent shortage is a top challenge in both AI and GenAI adoption. The lack of trained professionals spans foundational roles like data scientists and advanced expertise in AI and GenAI engineering. These deficits not only delay implementation but also inhibit the scaling of existing initiatives.

Integration complexities. Integration challenges are a common hurdle for GenAI adoption. These issues are exacerbated by fragmented infrastructures, legacy systems, and siloed data, which collectively slow the deployment of scalable AI solutions.

Wishlist: Priorities for advancing AI adoption

As Southeast Asian companies aim to deepen their adoption of AI and unlock its full potential, their priorities reflect the diverse needs of the region. [Exhibit 15.]

Exhibit 15: Challenges & Catalysts | Similarly, nuanced differences across GenAI key challenges on adoption and value creation

Top 3 support measure wishlist
To expedite AI adoption at your company, which of these support measures would be most beneficial? Please rank the top 3 options.

Indonesia	Malaysia	Phillippines	Singapore	Thailand	Vietnam
(24%) Guidelines on AI adoptions	(19%) Upskilling programs	(23%) Upskilling programs	(19%) Govt incentives	(22%) Guidelines on AI adoptions	(19%) Guidelines on AI adoptions
(17%) Upskilling programs	(17%) Board and CXO education	(19%) Guidelines on AI adoptions	(13%) Upskilling programs	(14%) Upskilling programs	(17%) Board and CXO education
(12%) Regulatory clarity	(14%) Govt incentives	(13%) Pre-screened vendor network	(12%) Regulatory clarity	(12%) AI forums	(15%) Upskilling programs

Source: BCG-IMDA-Temasek survey

1 **Indonesia and Thailand:** Clear guidelines and frameworks for AI adoption are a priority. Companies desire clarity and consistency, enabling them to navigate AI integration with confidence.

- Regional pharmaceutical company: "There are a lot of grey areas that need to be better defined to allow more adoption. Progress is being made by government, but the pharmaceutical industry is lost in who is the owner of the data, especially with data security and privacy laws."
- Major Indonesian bank: "Personal data protection is limiting, it supports customer protection but not AI Should be midway to help customer and company."

2 **Malaysia and the Philippines:** Upskilling programs are essential to address talent shortages. Organizations in these countries highlight the need for comprehensive training initiatives to develop the workforce's AI capabilities and ensure sustainable adoption.

3 **Singapore:** Recent government guidelines engender hope for more robust incentives to support AI adoption, including a number of new or enhanced initiatives announced in Budget 2025. While some companies remain unaware of existing support, others emphasize the need for grants, subsidies, and tax benefits to lower barriers to AI implementation and innovation.

4 **Vietnam:** There is a strong demand for board-level and C-suite education on the strategic benefits of AI and GenAI. Companies recognize the importance of leadership in driving AI initiatives and seek programs that equip executives with the knowledge to make informed decisions.

By addressing the unique needs of each country, policymakers and industry leaders can craft targeted solutions that accelerate AI maturity and drive regional growth. However, achieving this vision also requires robust supply-side readiness—talent, infrastructure, and ecosystems—that align to meet Southeast Asia's growing demand for AI innovation.

Supply Analysis: Building the backbone

The AI supply landscape in Southeast Asia mirrors the region's vibrancy and complexity. It boasts a dynamic mix of global giants and homegrown startups, yet the absence of mid-sized innovators—often the engines of specialized innovation—leaves significant potential untapped.

Southeast Asia's AI ecosystem is growing rapidly, characterized by a blend of global and local players competing across various layers. Though still in its early stages, Southeast Asia's AI ecosystem offers opportunities for suppliers, supported by solid digital maturity and an increasingly AI-aligned business landscape.

Several jurisdictions within Southeast Asia are deemed as safe places for investment due to their geopolitical neutrality and innovation stance, and many countries in the region are witnessing an uptick of investment by hyperscalers and data center operators.

Jeth Lee, *Regional Director, Legal, APAC at Microsoft*

1 **Global players: Scale and expertise.** Global players are instrumental in shaping Southeast Asia's AI landscape, leveraging their economies of scale, advanced technologies, and vast talent pools to lead across infrastructure, applications, and services.

- Infrastructure: Global giants dominate foundational elements and infrastructure like cloud computing, GPUs, and LLMs, as high technical barriers limit local competition.
- Applications: The applications layer hosts a mix of global and regional players, with companies like Salesforce and SAP leveraging local partnerships to access large user bases and validate solutions within Southeast Asia's unique context.
- Services: Technical consulting leaders excel in delivering end-to-end AI solutions for large-scale projects, offering cross-market expertise and advanced capabilities.

While their strengths are clear, global players rely on local partnerships to adapt solutions to Southeast Asia. These global-local partnerships are pivotal in tailoring advanced solutions to meet the diverse needs of the Southeast Asian market.

2 **Local startups: Regional insights and agility.** Local players operate across layers at a smaller scale, with more localized market understanding and language capacity to meet niche demands compared to global giants. These local startups are most common in the application layer across all markets and sectors in the ASEAN-6, co-existing with global giants. However, local startups have limited presence in the infrastructure and service layers, potentially due to high barriers to entry resulting from significant capital requirements and technological complexity. There are some successful examples such as Tetmon (Singapore) and MII (Indonesia) offering service solutions addressing both big corporates and SME challenges. Despite their agility, local startups face challenges in scaling, often constrained by talent shortages and limited access to funding beyond Singapore.

3 **Mid-sized innovators: Southeast Asia's missing link.** Mid-sized innovators are underrepresented in Southeast Asia. However, the few firms operating hold immense potential as they combine the scale of global companies with the agility of startups, providing specialized and disruptive AI solutions for specific industries. Encouraging their participation could enhance ecosystem diversity and innovation. LeewayHertz is one example of such a firm operating in global markets, developing custom-built, on-demand AI solutions for clients based on tailored requirements.

Challenges faced by vendors

Given the nascent AI environment, Southeast Asia faces critical challenges that hinder its growth and potential, with suppliers also encountering multiple obstacles in the market.

- Limited AI and digital adoption among most end-users
- Fragmented markets complicating go-to-market strategies for global providers (creating opportunities for local players)
- Fragmented vendor landscape hindering development of comprehensive tech stacks
- Widespread AI talent shortages across all levels, from entry-level roles to senior leadership
- Inadequate data and IT foundations limiting AI and analytics potential
- Rapid AI advancements adding short-term complexity

Many end-users are still in the early stages of AI and digital adoption, which slows demand for advanced AI solutions and limits the ecosystem's maturity. Market fragmentation across the region complicates go-to-market (GTM) strategies for global providers due to diverse languages, regulations, and business environments, though this creates opportunities for local players to tailor solutions.

Companies often struggle to offer a comprehensive tech stack, as vendors are fragmented across infrastructure, applications, and services, resulting in inefficiencies and integration challenges. The region also suffers from a significant AI talent shortage, spanning entry-level positions to senior leadership, making it difficult for organizations to scale AI initiatives.

Data and IT foundations remain a challenge in companies in the region to adopt and deploy AI solutions at scale.

Stephanie Sy, *CEO of Thinking Machines*

Inadequate data quality and IT foundations, including poor data management practices and infrastructure limit the effectiveness of AI analytics. Finally, the rapid pace of development adds complexity, as organizations must continuously adapt to evolving technologies, making near-term adoption challenging.

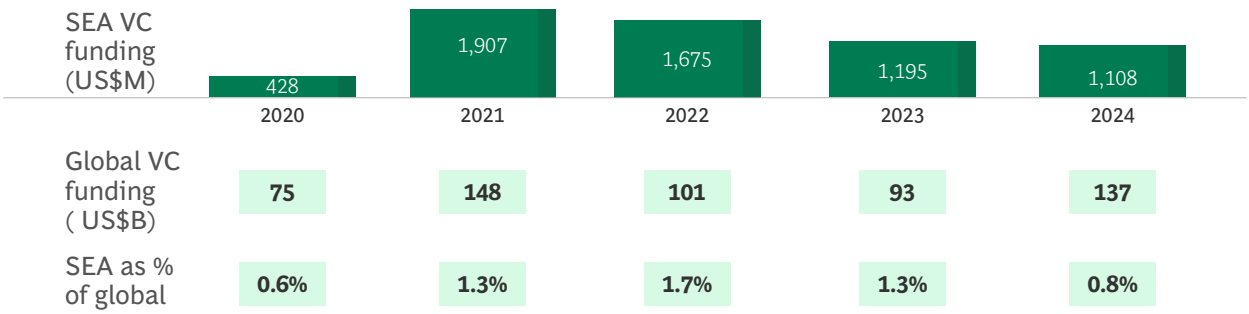
Addressing these challenges can help unlock the ecosystem's potential, enabling global players, mid-sized innovators, and local startups to participate more effectively in the region's AI transformation.

In navigating these challenges and tapping into new opportunities, three enablers—investment, partnership, and talent—will shape the supply landscape

Investment. VC Investment is a key driver of innovation, and Southeast Asia has seen encouraging numbers in AI-related funding over recent years—peaking at US$1.9 billion in 2021. Despite this, there are clear inter-regional disparities that need to be addressed. [Exhibit 16.] Despite a slowdown in 2024 due to high interest rates and a sluggish exit market, funding remains robust at US$1.1 billion.

Exhibit 16: Investments | Growth of local players further enhanced by surge of VC investments in the region (US$6B+ from 2020-2024)

VC funding for AI companies



- VC funding has slowed down from 2021-2024 due to sluggish exit market and high interest rates
- AI companies in SEA attracted US$1,108M of VC investments across 340 deals in 2024
- SEA GenAI startups saw 23 deals amounting to ~US$400M in 2024

Source: Pitchbook

Singapore accounted for over 70% of this investment, attracting 17 of the region's top 25 VC deals.
In contrast, countries like Thailand and Philippines remain underfunded, highlighting the need to encourage an ecosystem with more balanced investment distribution.

Drilling down by sector, we see the largest VC deals were concentrated in ICT (US$3.75 billion) and FI (US $2.31 billion) over the period from 2020 to 2024, reflecting strong investor confidence in these sectors. [Exhibit 17.]

Countries like Vietnam, Thailand, and the Philippines received some individual, large-ticket investments—for example Vietnam's VNLife secured US$250 million (2021)—but lack consistent funding streams.

Exhibit 17: Investments | Singapore companies accounted for 17 of the 25 largest AI deals in the past five years

Country	Sector	# of startups	Funding for Top-25 AI deals (USD)
Singapore	ICT	10	$1,111M
	FI	5	$513M
	Non-FI Services	2	$98M
Vietnam	FI	1	$250M
Indonesia	ICT	2	$130M
	Non-FI-Services	1	$139M
Thailand	FI	1	$58M
Malaysia	ICT	1	$200M
	FI	1	$73M
Philippines	FI	1	$32M

Singapore Leads in AI Startup Funding
Singapore dominates SEA's AI startup scene, attracting the highest number of top VC-funded startups and investment volumes

Top VC Deals Concentrated in ICT and FI
SEA's 25 largest VC deals are primarily in ICT ($1,441M) and Financial Services ($926M)

All deals involve AI Applications companies
Notable gap in large deal sizes in the Services and Infrastructure layers, denoting limited number of mid-sized innovators

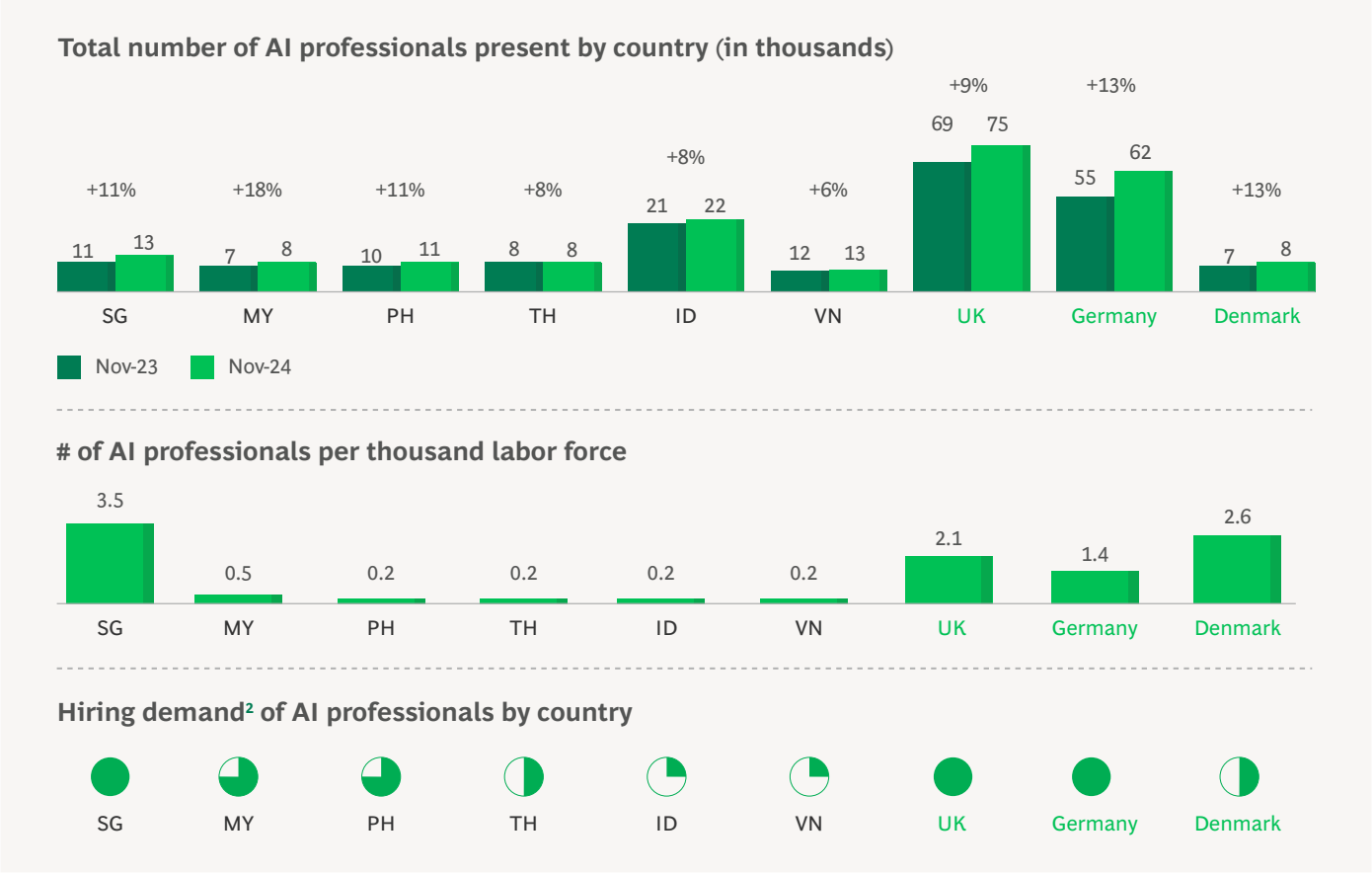
Source: Pitchbook

Partnership. Given the fragmented nature of Southeast Asia's AI ecosystem and the limited presence of mature local system integrators, partnerships have emerged as a critical enabler for delivering integrated AI solutions. These collaborations—often between global technology providers and local players—address key structural challenges, including disjointed solution layers and limited integration capabilities. By leveraging complementary strengths, such partnerships help bridge capability gaps, allowing businesses to more effectively adopt and scale AI across diverse use cases.

For example, the partnership between Hypotenuse AI (Content AI, Singapore) and Proofed (Editing Services, UK) combines AI-generated content creation with human-like editing services, enabling scalable, publication-ready outputs. Similarly, JurisTech (Fintech AI, Malaysia) and Wise (Credit Scoring, Malaysia) have collaborated to develop an end-to-end digital onboarding and credit scoring platform, showcasing how AI applications can be tailored to regional financial services needs. These cases illustrate how strategic partnerships can unlock greater value, enabling the development of comprehensive, locally relevant solutions that drive innovation and adoption in Southeast Asia's rapidly evolving AI landscape.

Talent. Southeast Asia is already witnessing rapid growth in AI talent, with an annual growth rate exceeding 10%. It is clear countries across the region are making significant strides to build their talent pipelines. [Exhibit 18.] However, the distribution and maturity of AI expertise vary greatly, reflecting differences in economic development, education systems, and hiring demands.

Exhibit 18: AI Talent | Significant growth in AI professionals observed across SEA



Source: LinkedIn Talent Insights as of November 2024

While Singapore hosts a balanced talent pool and research expertise, countries like Indonesia, Vietnam, and the Philippines excel in specific segments but face challenges utilizing growing talent bases.

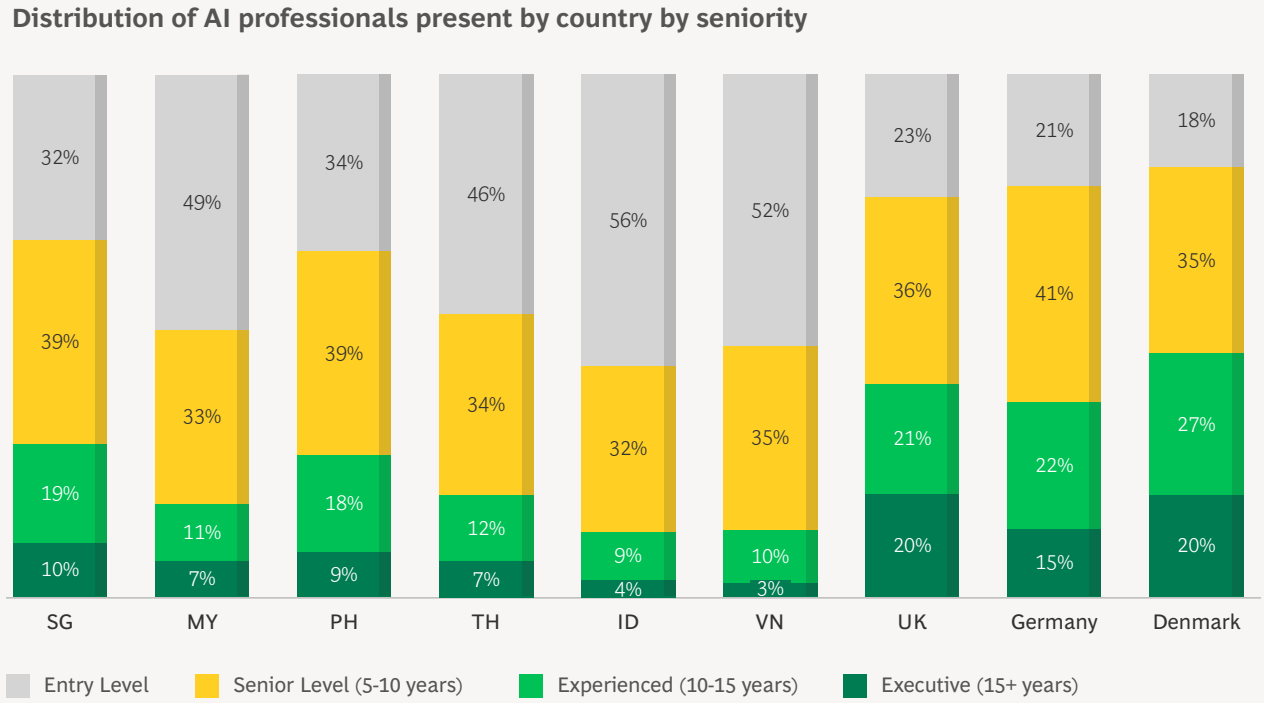
We see Singapore as a great place to invest in AI R&D talent, while in Vietnam and Indonesia, there is a large and affordable talent base, making it ideal for quick deployment and implementation.

Yuvanesh TS, *General Manager of Lauretta.io*

What's clear is that Southeast Asia's AI talent landscape faces gaps at all levels of expertise, presenting challenges for businesses looking to scale AI initiatives. [Exhibit 19.] At the entry level, there is often a disconnect between academic training and practical demands, leaving some graduates underprepared to meet genuine industry needs. Additionally, lower compensation at smaller or lesser-known firms can discourage young professionals from joining local players in the ecosystem.

Mid-level practitioners sometimes lack the combined expertise needed to align technical capabilities with business objectives, which can limit their ability to drive effective AI adoption. At the senior level, the limited availability of experienced CTOs and CIOs creates challenges for businesses seeking leaders who can strategically align AI investments with business goals and deliver measurable outcomes.

Exhibit 19: AI Talent | AI talent across most countries is predominantly junior, with the exception of Singapore



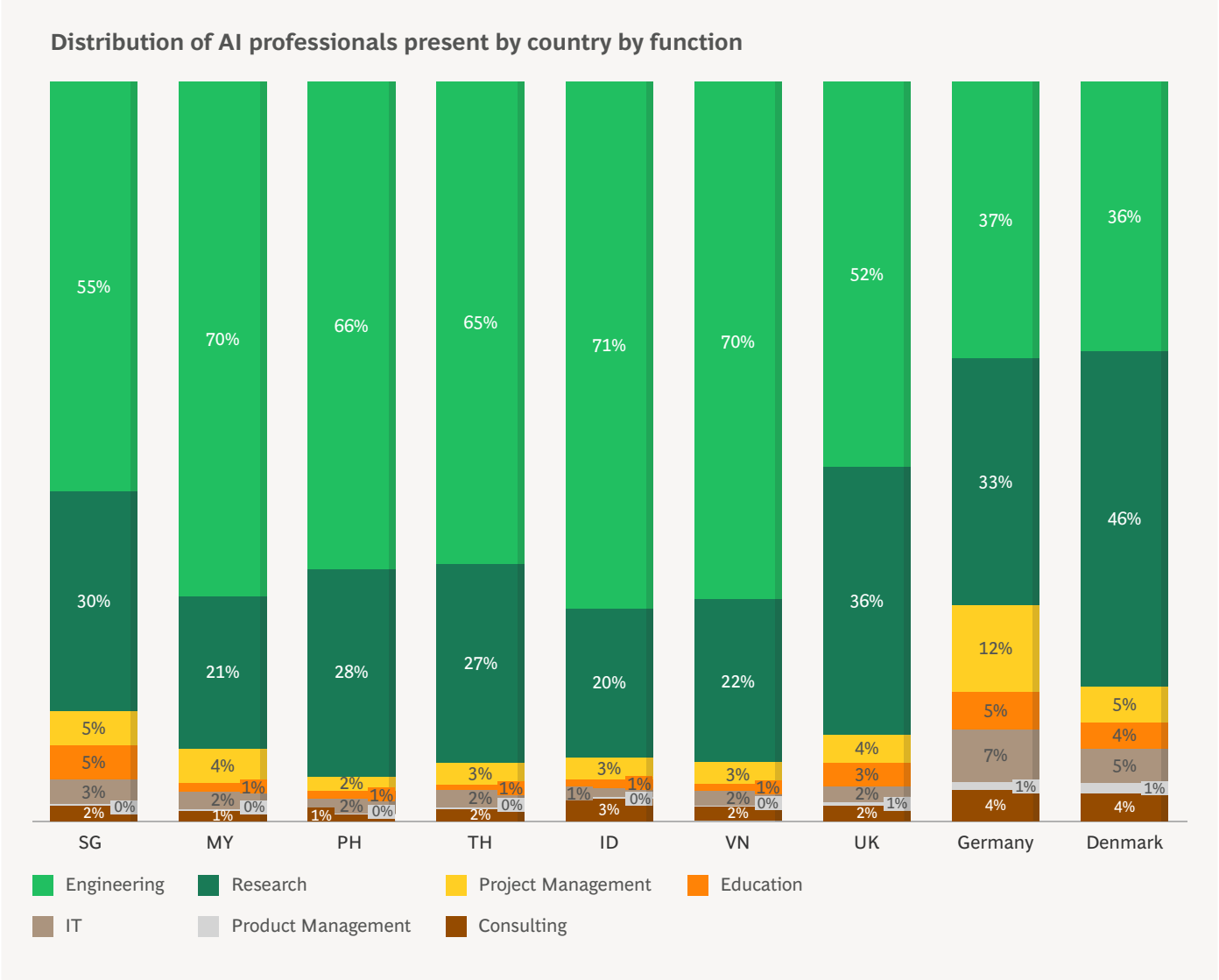
Source: LinkedIn Talent Insights as of November 2024

The mix of AI talent also varies significantly across Southeast Asian countries. Singapore stands out with the highest talent maturity in the region—almost 30% of its AI professionals have over a decade of experience, supported by strong government-led research and development (R&D) initiatives.

Malaysia and the Philippines show good depths of AI engineering talent, [Exhibit 20.] but their talent pools remain concentrated at the early-career level, with fewer professionals advancing to senior roles. Indonesia, Vietnam, and Thailand, meanwhile, boast large and affordable pools of entry-level talent, particularly for implementation-focused AI roles.

In advanced AI economies like the UK, Germany, and Denmark, AI talent is more evenly spread across functions such as research, project management, and product management. In Germany, engineering accounts for 37% of AI talent, with notable shares operating in research (33%) and project management (12%). In contrast, Southeast Asia's focus on engineering and IT signals an ecosystem in the early stages of growth, prioritizing technical implementation over strategic integration. This demonstrates the developmental gap between emerging and advanced AI economies, as well as Southeast Asia's potential to evolve by cultivating talent in diverse, value-adding functions.

Exhibit 20: AI Talent | Engineering roles highest in terms of AI professionals across all countries



Source: LinkedIn Talent Insights as of November 2024

Governments and enterprises across Southeast Asia are taking proactive steps to address the region's AI talent gaps by launching targeted initiatives aimed at developing a workforce equipped for the demands of an AI-driven economy. These programs focus on bridging the disconnect between traditional education systems and the evolving needs of the AI industry, ensuring that workers are prepared for roles across the talent spectrum—from entry-level engineers to senior AI strategists. [Exhibit 21.]

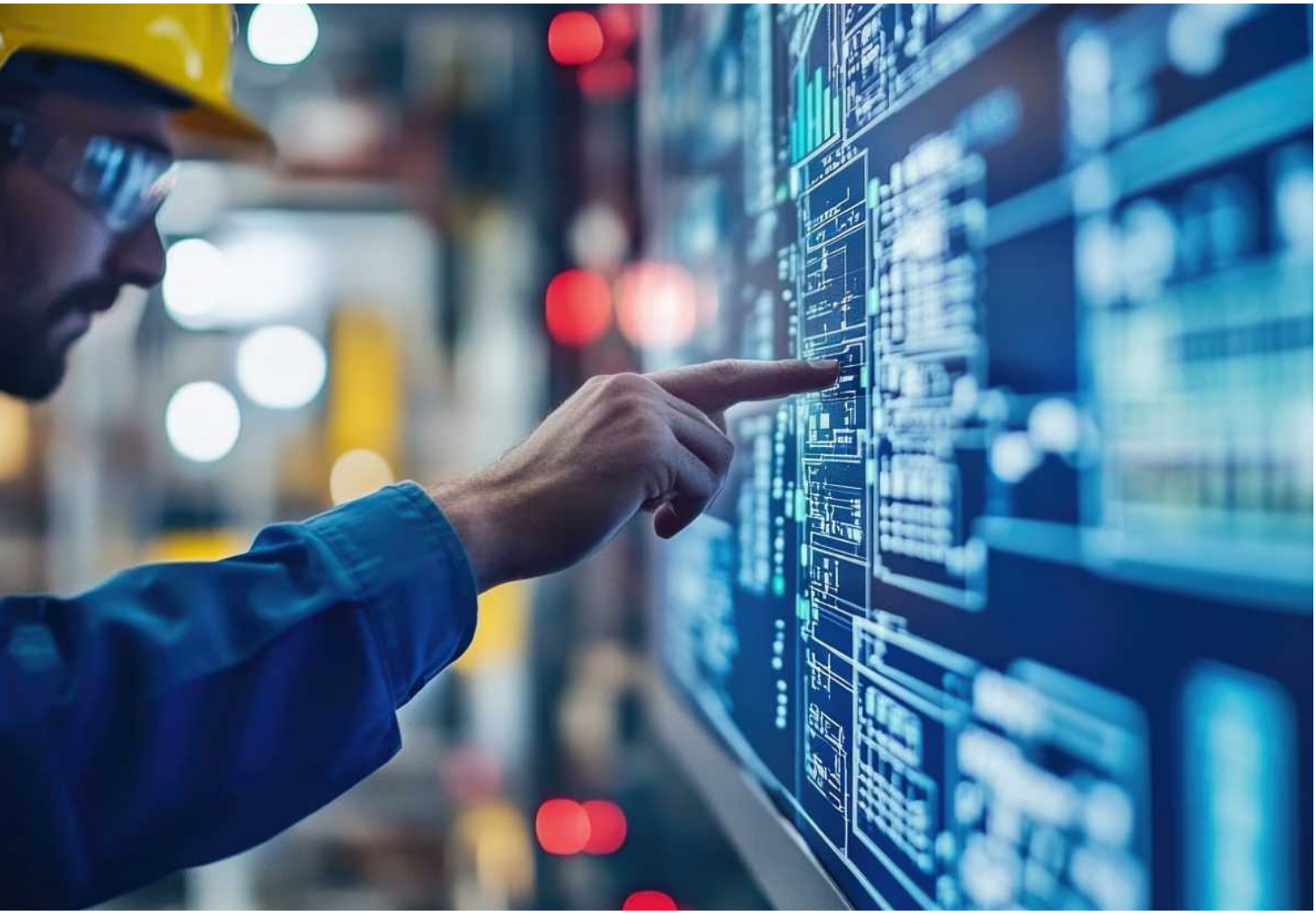
Exhibit 21: AI Talent | Initiatives currently underway across SEA to push for more AI talent

Non-exhaustive	Singapore	Malaysia	Indonesia
AI talent upskilling & attraction initiative	Plans to triple its pool of AI experts to 15,000 and reskill 18,000 talent; will invest >$20M to enhance AI training in next 3 years • Rapid & Intensive Skill Enhancement (RISE) program by BCG and SG government • AI Singapore LearnAI program • Digital Leaders Programme • AI Visiting Professorship	Initiatives designed to accelerate AI adoption by 900 AI start-ups and developing over 13,000 AI talent by 2026 MOSTI co-launched AI Talent Roadmap 2024-2033 with Ministry of Higher Education Malaysia Digital Economy Corporation (MDEC) Place & Train program to empower unemployed individuals	The Indonesia National Strategy for AI 2020-2045 • Digital Talent Scholarship • National Agency for R&D • Free AI courses offered by Indonesia Jobs Academy • Tech Giants' Training programs
Private-public partnerships on AI talent upskilling	Singapore and US governments co-introduced a new AI Talent Bridge initiative to bolster talent in emerging tech, including AI, focusing on youth and women	Microsoft invest US$2.2B to create AI skilling opportunities for 200,000 people	Microsoft commits to US$1.7B investment over 4 years for 840,000 people

Non-exhaustive	Thailand	Vietnam	Philippines
AI talent upskilling & attraction initiative	National Electronics and Computer Technology Center to invest ~THB1B to develop a 30,000-strong workforce with AI skills by 2027 • Digital Economy Promotion Agency to promote tax incentives to encourage AI upskilling • Global Digital Talent Visa seeks to attract 600 top graduates from worldwide for AI development	Target of being among top 4 in ASEAN and top 50 in the world in the field of AI research • National Innovation Center: Aims to train 7,000 AI experts and support approximately 500 AI startups by 2030 • Build for the AI future initiative to train both AI workforce and AI startups	Aims to increase its R&D budget from 0.3% to 1.0% of its GDP to support greater AI integration • DICT's Digital Workforce Training focusing on teacher, youth, and government employees • DTI's National AI Strategy Roadmap 2.0 emphasizes AI talent development via partnerships and certifications
Private-public partnerships on AI talent upskilling	• Google and government agencies on Samart Skillsproject (scholarship on GenAI) • Microsoft Thailand aims to provide AI skills to 1 million Thais	• Fulbright University Vietnam has received a US$1.5M grant from Google to advance AI research and education	• Google launches 'Gemini Academy' to train SMEs on AI • Microsoft committed to equip 1M learners with AI and Cybersecurity skills

Source: Press Release

Southeast Asia's AI supply ecosystem holds significant promise but requires targeted interventions to achieve its full potential. Tackling fragmentation, attracting mid-sized innovators, and prioritizing talent development are essential steps to unlock the value of AI. As we move into the next chapter, the focus shifts to actionable strategies that stakeholders can leverage to turn this vision into reality and accelerate AI adoption across Southeast Asia.



Call to action: Transforming Southeast Asia into an AI powerhouse

Seizing the opportunity for Southeast Asia to embark on meaningful AI-driven transformation demands coordinated efforts across enterprises, vendors, and governments to accelerate AI adoption and innovation.

Large enterprises & SMEs: Leveraging the full potential of AI

1 Set clear top-down ambition and targets

AI success demands strong leadership and clear direction. Executives must position AI as a multi-year strategic priority, with a bold, top-down vision that aligns with the company's business objectives. Leaders should rethink what's possible with AI—identifying transformative opportunities in core business functions and new revenue streams.

A recent BCG study found that among 1,800+ companies, only 24% rigorously set targets and track both operational and financial metrics. Without measurable goals, AI remains a fragmented effort rather than a true business driver. AI's transformational potential must be clearly communicated and deeply embedded across the organization.

2 Plan and build reusable GenAI capabilities

Leading AI companies invest 80%+ of their AI budgets into reshaping core functions and developing new products and services, rather than just deploying isolated productivity tools.

To maximize ROI, large enterprises must build scalable, reusable AI capabilities across business units and value chains. For instance, an AI-powered content summarization bot may be re-purposed across the value chain: from service operations to internal analytical workflows. Similarly, curated data sets may be used for several use cases, unlocking cost synergies and accelerating scale-up.

3 Strengthen foundational capabilities for future AI value

The transformative potential of AI hinges on a solid foundation—spanning robust data pipelines, scalable infrastructure, and responsible AI frameworks. Without these essentials, even the most advanced models struggle to generate meaningful business outcomes. As organizations look to harness AI more effectively, gaps in data governance, fragmented architectures, and underdeveloped infrastructure must be addressed.

With 85% of top global executives planning to increase AI and GenAI investments in 2024, the urgency to scale is clear. However, scaling doesn't require starting from scratch. Instead, organizations should focus on reinforcing foundational capabilities—such as building reliable data lakes, implementing strong governance, and optimizing existing systems—while advancing in-flight AI initiatives. This balanced approach enables faster deployment, improves efficiency, and ensures AI efforts translate into lasting impact.

4 Prioritize flexibility to prevent technology and vendor lock-ins

The AI and technology landscape is evolving rapidly, with low-cost, high-performance models and new data and cloud solutions emerging frequently. Locking into proprietary platforms—whether AI models, cloud providers, or data ecosystems—limits agility and increases long-term costs.

Enterprises must adopt a technology-agnostic strategy, leveraging open standards, API-driven architectures, and cloud-agnostic infrastructure. Governance frameworks should prioritize portability and scalability, ensuring businesses can seamlessly adopt better models, platforms, or computing solutions without major disruptions. Flexibility is key to long-term AI success.

5 Anticipate AI risks and build strong responsible AI (RAI) frameworks

AI's rapid adoption brings new risks, from cybersecurity threats to bias and ethical concerns. The speed of GenAI deployment makes responsible AI more critical than ever—companies must be proactive in mitigating risks before they escalate.

The starting point for responsible AI adoption has to be at the governance level. In Southeast Asia, the ASEAN Governance Framework serves as a foundational guide. For any jurisdiction aiming to move from governance to compliance or testing and implementation, the critical consideration is alignment with a global framework. This ensures businesses can seamlessly adopt and sell AI solutions across international markets, fostering interoperability and market access.

April Chin, *Managing Partner and CEO of Resaro*

BCG research shows that companies with CEO-led RAI strategies realize 58% more business benefits than those without executive involvement. Among firms investing US$50M+ in AI/GenAI in 2024, 27% have their CEO leading RAI efforts—nearly double the overall average (14%).

6 Focus on processes, people, and culture

The majority of AI value realization depends on transforming people, processes, and culture—not deploying new technology. AI adoption must be a business transformation, not just a tech upgrade.

Leadership must own this transformation, driving behavioral shifts and rethinking workflows instead of just layering AI onto existing structures. The next wave of AI-driven value will only be realized if organizations embed AI into their core ways of working—fostering human-AI collaboration, reskilling talent, evolving performance management, and breaking resistance through clear communication and cultural adaptability.

By focusing on these key enablers, enterprises can unlock sustained AI-driven impact and outpace competitors in the AI economy.

AI vendors: Fostering a thriving ecosystem

Global Giants and Innovators

1 Tailor offerings and go-to-market strategies through partnerships with local and regional players

Southeast Asia's diverse markets require global AI players to localize their strategies—tailoring go-to-market approaches to varying levels of AI readiness across industries and countries. Adapting to the region's cost sensitivity through flexible pricing models, such as pay-as-you-go or tiered subscriptions, is essential to broaden adoption and reach businesses of all sizes.

Partnerships play a critical role in Southeast Asia, where many local companies may lack the capability to manage multiple vendors effectively. Regional firms help bridge this gap by addressing local language, cultural, and operational nuances. For instance, Singtel and Nvidia are collaborating in Singapore to introduce GPU-as-a-service, while Proofed and Hypotenuse.AI support large-scale content production in Indonesia. These partnerships demonstrate how combining global expertise with local insight can drive practical, scalable AI adoption across the region.

2 Develop and scale disruptive, industry specific AI solutions in regional whitespaces

Mid-sized innovators are well-positioned to lead in Southeast Asia, where industries like manufacturing, retail, and financial services are actively scaling their AI investments. These sectors present clear opportunities for targeted applications—such as predictive maintenance in factories, personalized shopping experiences in retail, and automated risk assessment in finance—that address operational pain points and drive measurable impact.

Given the region's fragmented yet fast-growing markets, success hinges on delivering agile, locally relevant solutions. Innovators developing industry-specific tools—like AI-powered quality control systems or multilingual customer engagement platforms—can stand out by solving real, context-specific challenges. With a deep understanding of local needs and a focus on scalable execution, these companies are set to play a pivotal role in Southeast Asia's AI transformation..

3 Groom a diverse and mature talent ecosystem to make AI ambitions a reality

AI vendors must take the lead in shaping a diverse and mature talent ecosystem to turn Southeast Asia's AI potential into reality. Bridging the gap with leading AI economies will require growing a strong mix of local talent, especially senior practitioners who can drive real transformation.

Investing in upskilling, partnering with universities, and launching mentorship programs are key steps. By enabling advanced expertise and creating clear pathways to leadership, vendors can help scale AI adoption, spark innovation, and position Southeast Asia as a serious player in the global AI landscape.

Local Startups

1 Develop SI expertise to meet Southeast Asia's need for integrated AI offerings

AI adoption in Southeast Asia faces significant hurdles due to complex integration requirements, fragmented infrastructure, outdated legacy systems, and siloed data. The shortage of skilled local system integrators (SIs) further compounds the challenge, as many organizations lack the in-house capability to embed AI into their business processes.

To overcome this, a strong ecosystem of SI startups is needed to bridge the gap between tech providers and end-users. These players are critical for localizing AI solutions and adapting them to the region's diverse operational contexts. Expanding the pool of capable SIs will help businesses implement AI more effectively—from building robust data pipelines to integrating AI into everyday workflows..

2 Tap into public and private funding to drive scalable growth

Startups in Southeast Asia are pushing the envelope on AI innovation, supported by a combination of public and private funding. Government programs such as Malaysia's Budget 2025 offer incentives for R&D and market expansion, while Singapore's National AI Strategy 2.0 allocates over US$743 million to support talent development and provide SMEs with subsidies, grants, and consultancy services.

The Singapore Budget 2025 adds to this with targeted initiatives: the S$150-million Enterprise Compute Initiative to help businesses integrate AI into operations, a S$3-billion enhancement to the National Productivity Fund focused on AI and quantum computing, and a S$1-billion Private Credit Growth Fund to support enterprise growth. In parallel, increasing VC and CVC investment is providing startups with funding and strategic support to bring AI solutions to market. By tapping into these funding channels, startups can strengthen their capabilities and contribute to the region's growing AI ecosystem.

Private funding also plays a vital role, with increasing VC and CVC activity providing startups not only with capital but also access to expertise and networks to commercialize their innovations. By tapping into these diverse funding avenues, startups can reduce operational barriers, drive innovation, and strengthen Southeast Asia's AI ecosystem while positioning themselves for scalable success.

Investors: Catalyzing growth across the ecosystem

1 Establish AI-specific budgets to fund transformative opportunities

VC firms are increasingly focused on AI startups, and Southeast Asia is no exception—with significant investments made over the past few years in startups developing innovative solutions across a range of industries, reflecting the region's strong potential. For instance, Locad, an e-commerce logistics startup, raised US$9 million in pre-series B funding from Global Ventures, Reefknot Investments, and Sumitomo Equity Ventures. This funding reflects investors' confidence in Southeast Asia's ability to foster scalable, impactful solutions that address real-world challenges.

To capitalize on Southeast Asia's burgeoning AI ecosystem, investors should establish a presence in the region or partner with local players to unlock opportunities. Global AI-specialist funds like Alpha Intelligence Capital have already recognized the region's potential by establishing an office in Singapore, positioning itself at the forefront of Southeast Asia's innovation wave. By embedding itself within the ecosystem, investors gain access to high-growth startups and contribute to Southeast Asia's trajectory towards becoming a global AI powerhouse.

2 Target High-Impact Sectors with Focused AI Investment

Southeast Asia's accelerating AI adoption presents a timely opportunity for investors to shape the region's innovation landscape. From 2020 to 2024, financial services and ICT attracted more than 90% of AI-related VC funding—but momentum is building in sectors like agriculture and services, where AI is addressing region-specific challenges at scale.

By backing startups in these emerging spaces, investors can fuel solutions that not only drive commercial returns but also build critical AI infrastructure and talent. Focused capital allocation in high-potential sectors positions VC funds to unlock long-term value while supporting Southeast Asia's broader AI transformation.

Governments: Laying the foundations for AI leadership

1 Create and boost awareness of incentives to support startups and accelerate adoption

Southeast Asian governments have made progress in launching incentives to support local AI startups and to drive adoption of AI solutions across industries, often in collaboration with leading technology companies. However, in most countries these initiatives remain fragmented—with a heavy emphasis on financial assistance at the earliest stages—leaving critical gaps in talent development, ecosystem building, and market access.

Despite these advancements, a broader issue persists—awareness of AI-related incentives remains limited. While many governments have introduced grants, tax benefits, and subsidies, their impact is muted by low visibility and cumbersome application processes. This lack of clarity and outreach hampers adoption, leaving many businesses unsure of how to leverage these resources effectively.

Governments can invest in targeted outreach campaigns to spotlight available incentives, streamline application procedures, and collaborate with industry bodies to engage businesses of all sizes. By demonstrating how these programs reduce costs and mitigate risks, governments can catalyze widespread AI adoption, and foster innovation.

2 Support large-scale AI upskilling programs to close the talent gap

Governments can invest in large-scale upskilling programs to equip the workforce with future-ready skills and close the long-term talent gap. They can collaborate with educational institutions, tech companies, and industry leaders to develop targeted training initiatives, including certifications, bootcamps, and hands-on learning opportunities.

Southeast Asia is doing well to set guardrails rather than regulations on AI, as well as championing AI education and awareness… creates a more vibrant discussion by AI users who actively utilize the freedom to explore AI. At the same time, companies need to shift away from merely viewing AI as a technology to implement. To embrace AI, companies need to fundamentally redesign work and transform how things are being done.

Ng Lai Yee, *CEO of Temus*

Thailand introduced the Digital Skills Roadmap in September 2024 to upskill its 67 million citizens through a structured framework aimed at building foundational skills, fostering industry-wide innovation, and advancing competencies in technologies like AI, cloud, and block-chain through a collaborative, cross-sectoral approach. Such programs should be accessible and inclusive, ensuring they address immediate talent shortages while building a sustainable talent pipeline.

Singapore has introduced plans to advance its talent base, with the Skills Development and Workforce Transformation grant offering up to 70% funding support for job redesign initiatives, enabling companies to upskill employees effectively. In addition, a redesigned SkillsFuture Enterprise Credit will provide eligible companies with S$10,000 from the second half of 2026 to offset costs associated with workforce transformation projects.

In addition to upskilling, targeted visa systems can play a critical role in attracting mature AI practitioners from global talent pools.Malaysia's Tech Entrepreneur Programme is a prominent regional example, offering a one-year or five-year visa for qualifying talent. By allowing flexibility for experienced professionals, Southeast Asia can overcome its reliance on entry-level practitioners and cultivate a more balanced talent ecosystem.

3 Establish clear guardrails for responsible AI adoption

Southeast Asia's fragmented AI governance presents a challenge to consistent and responsible AI adoption. Governments can focus on setting clear guardrails for responsible AI use, rather than rigid guidelines that could stifle innovation. These guardrails should address critical areas such as data security, privacy, and accountability, while leaving room for exploration and engagement. Intra-regional cooperation is also key. In 2024, the ASEAN Guide on AI Governance and Ethics was published to promote trusted and responsible AI use across member states. This was subsequently expanded to address the governance of generative AI in 2025. The bloc also set up a working group on AI governance in 2024 to oversee AI governance initiatives in ASEAN. Such a unified approach helps harmonize standards in the region, making it easier for AI solutions built in one ASEAN country to be accepted in others.

Governments should consider establishing multistakeholder AI ethics councils or advisory boards including technologists, ethicists, industry leaders, and civil society to continuously monitor AI's societal impact and advise on policy adjustments.

The US government's regulatory framework for responsible AI diffusion, announced in January 2025, presents opportunities and challenges for Southeast Asia. The emphasis on trusted partnerships and ethical AI innovation underscores a critical moment for Southeast Asian governments to align with global AI leaders while preserving their strategic autonomy.

Evolving trade flows and potential restrictions may have global ripple effects—for example, new licensing requirements or quotas for AI hardware imports. In practice, this could raise costs or slow deliveries. Conversely, the region's push towards self-reliance may improve its local access to chip expertise by gaining a larger role in semiconductor production and assembly.

To remain competitive, Southeast Asia must prioritize aligning regional and national governance frameworks with global standards, ensuring that AI solutions are interoperable and compliant with international norms. This alignment would not only facilitate collaboration with global partners but also position Southeast Asia as a trusted player in the evolving AI ecosystem. Simultaneously, strengthening domestic AI capabilities—through investment in talent, infrastructure, and local innovation—will enable Southeast Asia to leverage global partnerships while maintaining regional resilience.

Southeast Asia's path forward will depend on its ability to strike a delicate balance—engaging openly with global stakeholders while safeguarding its own interests. In doing so, the region can navigate the complexities of global AI governance and assert itself as a central force in shaping the future of this transformative technology. Governments can lead by example by adopting AI ethically and effectively in the public sector.

As Southeast Asia accelerates AI adoption, it must prioritize long-term sustainability by establishing responsible AI practices, observatories, or task forces to monitor societal impact and adapt policies as trends evolve.

Call to Action: Summary

Large enterprises/ SMEs	1. Set clear top-down ambition, and direction to mobilize resources. 2. Plan and build reusable GenAI capabilities instead of focusing on siloed use cases. 3. Strengthen foundational capabilities (e.g., data, responsible AI) to deploy faster and scale efficiently. 4. Prioritize flexibility and adaptability to avoid technology and vendor lock-ins. 5. Anticipate AI risks and implement strong Responsible AI frameworks.
AI vendors	1. Global Giants and Innovators • Tailor go-to-market strategies and enhance partnerships with local and regional players. • Introduce and scale disruptive, industry-specific AI solutions in whitespaces. 2. Local Startups • Develop SI expertise to meet Southeast Asia's need for integrated AI offerings. • Tap into public and private funding across to drive scalable growth.
Investors	1. Establish AI-specific budgets to fund transformative opportunities 2. Capitalize on regional momentum by targeting high-potential sectors with dedicated AI investments.
Governments	1. Create and boost awareness of incentives to support startups and accelerate adoption. 2. Establish clear guardrails for responsible AI adoption. 3. Support large-scale AI upskilling programs to close the talent gap.

A collective vision of an AI-empowered future

Southeast Asia stands at a crossroads. In one direction is a future where AI acts as a transformative force that redefines the region's economic and social landscape, driving innovation, efficiency, and inclusion. In the other direction is a journey where persistent challenges see regional businesses falling behind an AI-empowered global business landscape.

In order to steer the region on the path to AI success, Southeast Asian business leaders and decision-makers should embrace bold strategies that integrate AI seamlessly into industries, build scalable and locally relevant solutions, and foster collaboration across ecosystems.

Now is the time for Southeast Asia to lead—not just participate—in shaping a future where technology empowers people, strengthens economies, and positions the region as a global hub for transformative and sustainable innovation.

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