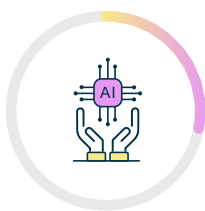




# UNLOCKING INDONESIA'S AI POTENTIAL 2025

## Introduction

Businesses across Indonesia are accelerating their use of artificial intelligence<sup>1</sup> at an unprecedented pace. In the past year alone, 5.9 million businesses in Indonesia began using AI — equivalent to over ten a minute on average in 2024.



This brings the total percentage of AI-adopting firms to **28%**



Up from **19%** a year ago



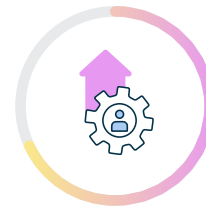
Representing a growth rate of **47%**

Today, over 18 million<sup>2</sup> businesses in Indonesia — or more than a quarter of all companies — have adopted AI.

The benefits of AI adoption across the Indonesian business landscape are being realised:



**59%** of businesses that have adopted AI report increased revenue, with an average increase of **16%**.



Meanwhile, **68%** say they have already seen significant productivity improvements.

These gains are enabling businesses to redirect their focus toward enhancing customer service and relationships (**41%**), investing in employee training (**35%**), and developing new products and services (**29%**). Optimism remains strong.



**72%** of those who have adopted AI say the technology is likely to increase their growth in the next year, and



**64%** expect cost savings thanks to AI, at an average of **29%** savings.

However, while over a quarter of businesses in Indonesia have taken the crucial first step in their AI journey of initial adoption, across the business landscape, integration remains in the early stages. **76%** of Indonesian businesses currently using AI remain in the early stages of implementation, without yet translating these capabilities into deeper innovation or business transformation.

The Indonesian government has taken important steps to drive its digital and AI transformation. In July 2025, the [government announced](#) a plan to outline an AI Roadmap to attract foreign investment. This follows the issuance of a Circular Letter on AI Ethics in 2023. The government has also recognised the importance of leading the way with digitalisation. [The 2020–2024 National Medium-Term Plan \(RPJMN\)](#) emphasises that digital transformation is a crucial aspect in boosting economic productivity across sectors. Indonesia also launched its landmark [National Strategy for Artificial Intelligence in 2020](#), envisioning a plan until 2045 that focuses on Ethics and Policy; Talent Development; Infrastructure and Data; Research and Industrial Innovation.

While AI adoption in Indonesia has gained remarkable momentum, with millions of businesses already embracing the technology and reporting tangible benefits, the journey toward fully harnessing its transformative potential is still underway. Continued progress will depend not only on sustained government support and strategic investment, but also on the ability of businesses to move beyond basic adoption and embed AI more deeply into their operations. As Indonesia builds on its strong foundation, the coming years will be critical in shaping an AI-powered economy that is innovative, inclusive, and globally competitive.

## Key findings from this study:

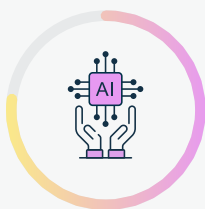
- AI adoption among businesses in Indonesia is growing rapidly – with a growth rate of **47%**.
- Now, over 18 million businesses in Indonesia are using AI.
- **75%** of businesses believe that AI will transform their industry in the next five years.
- A lack of digital skills is the highest reported barrier, with well over half (**57%**) saying it is restricting their AI adoption and expansion.
- **59%** of Indonesian businesses have seen an increase in revenue from AI, reporting an average **16%** revenue growth. **68%** of AI adopters say they have already seen significant productivity improvements.
- Among AI-adopting businesses, only **10%** of businesses have reached the most transformative stage of AI integration.



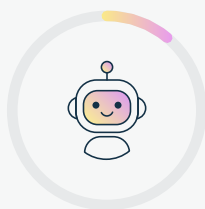


## The growing digital divide

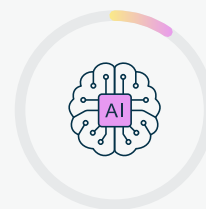
Indonesia's AI adoption is surging at an impressive **47%** year-over-year growth between 2024 and 2025. This rapid expansion across the economy demonstrates AI's growing momentum and accessibility to businesses of all sizes. However, celebrating adoption figures and rapid growth alone masks an underlying trend: looking deeper into how businesses are implementing AI, most Indonesian organisations remain at basic levels of AI adoption.



Over three-quarters (**76%**) of AI-adopting businesses remain focused primarily on more basic uses of AI and focus on incremental gains (e.g., driving efficiencies and streamlining processes), rather than innovation (e.g., developing new products or disrupting industries). These businesses are using publicly available chatbots for routine tasks, such as scheduling assistants and purchasing ready-made AI solutions.



**11%** have advanced to the intermediate stage of AI adoption. These companies are moving beyond isolated applications and integrating AI across various business functions, resulting in efficiency improvements and more innovative approaches to customer experience.



Only **10%** of Indonesian businesses have reached the most transformative stage of AI integration, where they are using AI for its most advanced purposes. These organisations are combining multiple AI tools or models for complex tasks and creating custom AI systems, which are transforming their operations comprehensively.

This underscores a critical divide in AI adoption. While AI is increasingly being widely used across businesses in Indonesia, only a small segment of organisations is harnessing the technology for its most transformative potential. Most companies are still exploring AI's surface-level benefits, missing out on the deeper strategic advantages it can offer. To fully realise AI's promise, more businesses will need to move beyond experimentation and efficiency gains, and toward deeper integration and innovation.

## Indonesian startups: Driving AI innovation

Startups<sup>3</sup> aren't just using AI – they're beginning to build entirely new products and business models around it that would have been impossible just years ago. **52%** of startups say they are leveraging AI in some way throughout their business. Among these startups that have adopted AI, a further **52%** of them are at the most basic stage of AI use, while **31%** are leveraging AI for its most advanced uses.



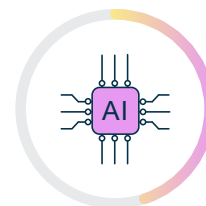
**34%** of startups are developing new AI-driven products and services.



**45%** of startups employ AI-specific talent, indicating a strong commitment to building and nurturing in-house AI expertise, ensuring businesses can develop, deploy, and refine AI-driven strategies.



**84%** of startups believe AI will transform their industry in the next five years, making Indonesia's fast-moving startups key to innovation and competitiveness on the continent.



**45%** of startups have placed AI at the core of their business proposition, recognising its value as a key driver of growth and competitive advantage.

These figures point to a powerful movement: a dynamic segment of Indonesian startups is not only embracing AI but redefining what's possible with it. Their success underscores the transformative potential of AI when combined with the agility and innovation typical of startups. With the right support in talent development, infrastructure, and investment, these forward-looking businesses could lead Indonesia into a new era of tech-driven growth.

### Case Study: Halodoc enhances claims processing time with generative AI on AWS



Indonesia-based health technology company [Halodoc](#) provides online patient services to more than 20 million monthly active users.

Halodoc is transforming claims processing with Amazon Nova Pro, a powerful foundation model on Amazon Bedrock, to achieve faster claims processing time with the supervision of our medical experts. Traditional claims processing has relied on manual reviews, often leading to delays and inefficiencies. Amazon Nova Pro delivered the best combinations of accuracy, speed, and cost, enabling fully automated claim extraction, validation, fraud detection, and decision-making with minimal manual intervention. This has helped Halodoc cut claims processing time by **50%** while boosting medical staff productivity by **45%**, enhancing efficiency, reliability, and speed while seamlessly integrating with Halodoc's existing ecosystem; and helped Halodoc to streamline operations, optimise resources, and deliver a faster, more reliable, and secure claims experience.



## Large enterprises prioritise efficiency ahead of innovation

While **41%** of large enterprises<sup>4</sup> have adopted AI technologies, significantly greater than the national average (**28%**), their AI adoption is in the early stages; most are currently not harnessing as advanced a form of AI as deeply as startups, resulting in an emerging ‘two-tier’ economy.



If not addressed, this ‘two-tier’ AI economy—with tech-driven startups outpacing larger, established enterprises in AI innovation—can impact Indonesia’s AI-driven growth and innovation in the years to come.

By empowering businesses of all sizes to adopt and scale advanced AI solutions, Indonesia can accelerate productivity growth and digital progress across much of its business landscape, and unlock the full benefits of AI for Indonesia’s economy and society. Recent [research](#) by the Telecoms Advisory Service, on behalf of AWS, found that cloud and AI added over US\$4.2 billion to Indonesia’s GDP in 2023. The research also found that cloud as a whole is set to add US\$2.8 trillion to the Asia-Pacific region’s GDP by 2030, with nearly US\$203 billion alone coming from cloud-enabled AI.



## Case Study: Telkomsel improves incident analysis efficiency with AWS generative AI solutions



Telkomsel, Indonesia's largest telecommunications provider serving over 159 million customers, has transformed its incident analysis system into a proactive, intelligent problem resolution system to accelerate response times, improve system reliability, and optimize resource allocations across its hybrid cloud infrastructure. Called CELYNA, it uses AWS Generative AI (Gen AI) solutions and large language models (LLMs), including Amazon Bedrock and Amazon Nova Pro.

CELYNA's Gen AI-powered system has helped minimize service disruption for Telkomsel's customers while optimizing resource allocation across operations teams, allowing Telkomsel to maintain its high-quality service and drive operational efficiency across its mission-critical digital infrastructure. Results include an impressive **83%** faster resolution time per incident through self-healing capabilities and **21%** faster incident case analysis compared to traditional methods.

"CELYNA has fundamentally changed our operational approach, allowing our teams to maintain superior service reliability while optimizing resources. Our customers benefit from more consistent service availability, and our engineering teams can focus on innovation rather than reactive troubleshooting. With AWS, this intelligent automation represents the future of how we deliver excellence to Indonesia's telecommunications market," said Doddy Kristianto, Expert Engineer – IT Cloud, IT Corporate Solutions and Cloud CoE, at Telkomsel.

## Building the momentum: Barriers to AI integration

To ensure all businesses can confidently adopt AI and capitalise on its full potential, Indonesia must address key obstacles:

### The skills gap:

- Businesses across Indonesia identify that the skills gap is a crucial challenge to their AI adoption. A lack of digital skills was the highest reported barrier, with **57%** of businesses saying it prevents them from adopting or expanding their AI use.
- Businesses expect that AI literacy will be important for **48%** of jobs in the next three years, but only **21%** of businesses feel prepared with their current skillset.
- Approximately one-in-four (**26%**) of employees have participated in digital training or upskilling in the past year.

### Compliance costs:

- Indonesian businesses are facing increasing compliance costs, estimating that \$25 out of every \$100 they spend on tech goes towards compliance-related costs.
- Nearly two-thirds (**62%**) of Indonesian businesses expect these compliance costs to increase further in the next three years.

### Regulatory uncertainty:

- Across the world, businesses are facing growing regulatory uncertainty as new rules are considered for emerging technologies like AI.
- When considering the positive impact new regulation might have on their business, the number one reported hope was that new AI regulation would provide increased confidence among customers (**51%**) and a stable regulatory environment (**47%**).
- Similarly, regarding concerns around the introduction of new regulation, businesses express worries about an increase in compliance costs (**51%**) and a slowing down of AI innovation and adoption (**45%**). This demonstrates the critical importance of taking a pro-innovation approach and providing regulatory certainty to businesses as they consider these next technologies.

### Perceived costs:

- Over a third (**36%**) of Indonesian businesses cite perceived upfront costs as a key barrier to AI adoption.
- **27%** of businesses say they need a clearer understanding of AI's return on investment. However, AI-adopting businesses are seeing returns: **59%** of Indonesian businesses have seen an increase in revenue from AI, reporting an average **16%** revenue growth.
- **41%** of startups report that facilitated access to venture capital and funding pathways is crucial to their ability to scale.

These barriers risk acting as a brake on the pace of digital transformation across Indonesia. Addressing them will be essential to establishing Indonesia's leadership in AI adoption and innovation.

### Case Study: Krom Bank is accelerating digital banking across Indonesia



By building on AWS, [Krom Bank](#) gains agility to rapidly experiment and iterate, producing innovative new services for underbanked Indonesians to improve their financial well-being using managed services and generative artificial intelligence (Gen AI). Krom Bank is the first Indonesian bank to utilise the AWS Asia Pacific (Jakarta) Region to meet data residency regulatory requirements.

The Bank built its database using Amazon Aurora, a fully managed and highly scalable database service that ensures uninterrupted application access for its fast-growing customer base. Krom Bank's services, built on AWS, allow customers to open a bank account through the application 10 to 20 times faster than the manual process in a physical branch, and also enable customers to submit documents digitally to open an account in under three minutes from anywhere with mobile reception.

## AWS is committed to supporting businesses in Indonesia

In 2021, AWS launched its [AWS Asia Pacific \(Jakarta\) Region](#), allowing AWS customers to run workloads and securely store data in Indonesia by leveraging advanced AWS technologies.

Through an investment of US\$5 billion in the country, AWS estimates the new AWS Asia Pacific (Jakarta) Region will create 24,700 jobs annually and contribute US\$10.9 billion to Indonesia's GDP from 2021 to 2036. According to AWS's [economic impact study](#), the construction and operation of data centres in Indonesia will create jobs that will be part of AWS's local supply chain, including construction, facility maintenance, electricity, telecommunications, and other roles in the broader Indonesian economy.

AWS is dedicated to closing the skills gap in Indonesia through its skills initiatives. In 2019, AWS committed to empowering hundreds of thousands of Indonesians from all backgrounds with cloud proficiency by 2025, in support of the "Freedom of Learning" (Merdeka Belajar) national initiative.

To date, AWS has trained one million people in Indonesia on cloud skills since 2017. AWS is committed to providing people of varying backgrounds and experiences with the technology skills they need to prepare for the technologically-skilled, high-paying, and in-demand jobs of the future. We provide a variety of training modules to meet learners where they are, including programs done in collaboration with the Indonesian government, public sector agencies, and education institutions. For example, AWS's Terampil di Awan is a strategic cloud skilling program by AWS for students, educators, and underserved groups across 26 provinces in Indonesia.



## Unlocking the full potential of AI through three crucial actions

Indonesia has the right tools and the ambition to lead in AI, not only in a more diffuse adoption of technology, but also in development. AWS urges policymakers and industry leaders to take action to unlock AI's full potential across both start-ups and larger enterprises:

### 1. Accelerate private sector digital adoption through boosted skills efforts

Provide government funding, and build industry-specific digital skills programs.



52% see AI literacy as crucial



...only 21% feel prepared

This mismatch highlights the need for targeted upskilling initiatives, including partnerships between government, industry, and educational institutions. Closing this gap is key to unlocking Indonesia's next wave of innovation, productivity, and growth.



## 2. Foster confident investment in AI

Accelerate AI-driven innovation by maintaining a clear and streamlined regulatory environment. This environment should define a shared responsibility framework for AI safety, clearly distinguishing between developers, deployers, and users. Additionally, aligning with international standards and frameworks, such as the OECD AI definition, will ensure interoperability, regulatory consistency, and reduce friction for cross-border innovation. Regulations should also be proportionate to the risk and tailored to different stages of the AI lifecycle, avoiding overly prescriptive regulations that could increase compliance costs and stifle innovation.



Businesses in Indonesia are facing rising compliance costs on technologies, spending **25%** of their tech spend on compliance.



**62%** anticipate this figure to rise, acting as a barrier to increased AI adoption, which risks missing out on key opportunities for growth and innovation throughout Indonesia.

## 3. Increase public sector adoption of AI

Prioritise digital transformation in healthcare and education to drive innovation, and create test-beds and cross-border exploratory projects using AI to deliver new services.



**65%** of Indonesian businesses say they are more likely to adopt and expand their AI use when the public sector leads



**72%** of startups say that public sector adoption is crucial to their ability to scale

Attesting that the public sector adoption of new technologies is crucial to increasing trust in these technologies.

## Conclusion

Indonesia stands at a defining moment in its AI-driven digital transformation. With adoption rates surging and businesses recognising AI's potential to enhance productivity, innovation, and economic growth, the nation is positioning itself as a digital leader. However, to maintain this momentum and unlock AI's full potential, Indonesian businesses must transition from experimentation to deep, strategic integration. With proactive policymaking, a commitment to fostering digital skills, and expanded support of its innovative startups, Indonesia can bridge the two-tier AI economy and sustain long-term competitiveness.

The direction is clear, and the momentum is undeniable. By embracing AI across business functions within businesses of all sizes, and by accelerating digital transformation, Indonesia can secure its place as a global AI leader, driving innovation, economic resilience, and shared prosperity in the years ahead.

# Appendix

## Methodology

The fieldwork for this study was undertaken by Strand Partners' research team for AWS. This research has followed the guidance set forth by the UK Market Research Society and ESOMAR. For the purposes of this study, business leaders are defined as founders, CEOs, or members of the C-suite in organisations.

'Citizens' are nationally representative members of the public based on the latest available census.

For inquiries regarding our methodology, please direct your questions to: [polling@strandpartners.com](mailto:polling@strandpartners.com).

## In Indonesia:

- We conducted a survey targeting 1,000 nationally representative members of the public, ensured representation based on age, gender, and region.
- Additionally, we surveyed 1,000 business leaders, representative by their business size, sector, and region. Our national figures were weighted to reflect Indonesia's actual business population by size, where SMEs comprise 99% of all enterprises. Consequently, 99% of our survey results represent SME perspectives. 6% of our sample are startups.

## Sampling:

Our sampling process used a mix of online panels that are recognised for their validity and reliability. These panels are carefully curated to ensure diverse representation across various demographics. For the business leaders, the panels are selected with a consideration for organisational size, sector, and position within the company. Our objective with the sampling strategy is to achieve an optimal mix that mirrors the actual distribution of our target populations in the respective markets.

## Weighting Techniques:

Post-data collection, we applied iterative proportional weight to correct any discrepancies or over-representations in the sample.

## Survey:

- Usage Patterns: This survey gauges the evolving patterns of digital technology usage. We are particularly interested in examining the adoption and implementation levels of technologies, focusing on cloud computing and artificial intelligence.
- Perceptions and Attitudes: The survey seeks to unearth the prevailing perceptions and attitudes towards digital technologies, understanding the perceived benefits, challenges, and potential ramifications of both present and emerging tech solutions.
- Barriers and Opportunities: The survey scrutinises the predicted challenges and potential avenues that both businesses and individuals anticipate on their digital trajectory. This involves pinpointing challenges, from skill deficits to regulatory complications, and recognising opportunities for growth, innovation, and market development.
- 'Size of the Prize': The survey shed light on the economic repercussions and growth prospects linked with digital transformation. By elucidating the 'size of the prize', we aspire to stress the importance of digital transformation and foster further investments and technology adoption.

## References

1. "Adopted AI" or "consistently use AI": a business that consistently uses at least one AI tool. This would not include businesses that experimented with AI once or twice, or ran a temporary pilot programme, for instance.
2. Calculated based on a recent approximation of businesses in Indonesia, which is over 65 million: <https://www.ekon.go.id/publikasi/detail/5318/dorong-umkm-naik-kelas-dan-go-export-pemerintah-siapkan-ekosistem-pembiayaan-yang-terintegrasi>
3. A startup is a business founded in the last 2 years which provides a new product/service or innovation and is aiming for rapid growth in terms of employees and turnover.
4. A large enterprise is a business with 500 or more employees, founded 10 years ago or more.