

AC Ventures + **BCG** + **BCGX**

Harnessing the Power of (Gen)AI in Indonesian Financial Services

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Foreword

Unlocking New Ventures & Financial Empowerment in a Booming Economy

When we set out to build this report, we sought to explore the strategic impact of Generative AI (GenAI) on the financial services sector in Indonesia. We wanted to understand its potential to drive significant sector-wide transformation and deliver a new generation of investment and venture opportunities in an economy growing at 5% annually and projected to reach US\$1.47 trillion this year.

The report was motivated by a global shift toward GenAI, which is rapidly altering the competitive landscape across many industries. In local financial services, this technology offers not just incremental improvements, but foundational shifts that enable new business models and enhance operational efficiencies.

AI has the potential to increase access to financial services across broader demographics and underserved markets. In particular, it can help rural and remote communities access services such as credit, insurance, and savings, thus stimulating economic engagement at multiple levels.

For global institutional investors, there is a robust and multifaceted opportunity in Indonesia as we speak. AI and GenAI promise great applicability in sectors such as healthcare and education, two spaces that tie directly into financial services via insurance and credit.

Meanwhile, as the government seeks to establish a regulatory framework for this new tech, the concept of “Sovereign AI” has become top-of-mind for the incoming administration. In a cascading fashion, this

is leading to fast-paced investment discussions about how to multiply and bolster local data centers for domestic GenAI development. Because data centers consume so much power, public and private sector stakeholders are having serious discussions related to Indonesia’s energy infrastructure, the clear role that renewables must play, and how to finance it all.

This report provides an in-depth analysis of Predictive AI and GenAI adoption within Indonesian financial services. It outlines emerging opportunities, highlights fascinating case studies, and discusses ways to address key challenges. It also offers actionable insights for companies seeking to enter the market as well as established entities aiming to integrate new technologies.

As we release this report, we urge policymakers, business leaders, and investors to consider its contents and insights. The integration of GenAI presents a unique opportunity to redefine financial services in Indonesia, enhancing both economic efficiency and empowerment.



Pandu Sjahrir

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Executive Summary

AI and GenAI are transforming the financial sector, reducing barriers to entry and enabling new players to compete in the market against established institutions. In Indonesia, these technologies are enhancing financial education, credit scoring, customer service, and more.

How Financial Institutions View GenAI:

- **85% of global financial institutions view GenAI as highly disruptive or transformational, yet only 18% have a clear strategy and are implementing it.**
- **58% of GenAI users globally are saving at least five hours a week, shifting focus to using this extra time for value creation and customer joy.**
- **Global worker confidence in GenAI has increased by 16 percentage points to 42% since 2023, but fear of job loss has also risen by 5 percentage points to 17%.**
- **51% of Indonesian financial institutions are focusing on deploying GenAI for everyday tasks, and an additional 27% see great opportunity in inventing new products and services.**
- **49% of business leaders in Indonesia's financial sector prioritize GenAI to enhance customer service, with 34% already seeing tangible benefits from its deployment.**
- **61% of Indonesian financial institutions are confident they have strong technological readiness with established data and tech stacks for GenAI.**

3 Strategic Plays for AI Integration



Deploy

GenAI in everyday tasks for broad enterprise productivity



Reshape

critical functions end-to-end for radical efficiency and effectiveness



Invent

new experiences, offerings, and business models powered by GenAI

Financial institutions in Indonesia can successfully integrate AI and GenAI into their operations using the proven strategic plays of **Deploy**, **Reshape**, and **Invent**.

This involves deploying enhancements to everyday use cases, both internally and on the customer-facing side; reshaping in-house processes and skills for greater efficiency; and inventing completely new products to achieve greater savings and create new revenue streams.

GenAI pilots are in progress across all major Indonesian financial institutions, with many already transitioning these initiatives into scalable projects. These efforts aim to democratize financial access and inclusion, especially for underserved communities, aligning with the stringent compliance requirements of Indonesia's Personal Data Protection (PDP) Law. The government is also enhancing AI and GenAI regulatory frameworks.

Advice for Business Leaders

The potential of GenAI in Indonesia's financial sector is evident—it **can expand financial access, enhance customer experiences, enable rapid service scaling**, and more.

Our research indicates that both major **financial institutions and fintech startups have quickly adopted this technology. But many of these initiatives are still in the pilot stage and have not yet delivered substantial business value at scale.**

Financial institutions need a strategic framework for AI that includes governance, operations, and talent management to align with business objectives. This report reveals that neglecting the business perspective can cause AI implementations to fail. It is crucial to ensure AI projects match actual business needs, emphasizing data security and regulatory compliance, while also focusing on goal setting, responsible AI development, and staff training. This approach balances technological readiness with business and ethical considerations, integrating AI effectively within organizational practices.



Kadin Indonesia's Advice to Policymakers

AI and GenAI have clear potential to boost Indonesia's economic growth and global competitiveness by transforming the way state-owned enterprises and government agencies operate. With this in mind, the local administration could prioritize the creation of trusted AI within its overarching strategy.

The strategic development of sovereign AI offers promise across various sectors, from financial services to clean energy, commerce, and beyond. Developing this technology under the oversight of the incoming administration has the potential to bolster national security and ensure Indonesia's technological independence for future generations.

To realize this, Indonesia may strategically invest in robust, sustainable data center infrastructure enhanced by renewable energy sources, and underpinned by stringent legal frameworks for data privacy and autonomy. Emphasizing public-private partnerships and collaborations could accelerate the process, while strict cybersecurity measures can safeguard the country's critical data assets.

While this report highlights private-sector strategies for AI and GenAI implementation, government leaders may want to observe, adapt, and modify these approaches for their own initiatives while also considering three core strategies:

1 Establishing a National AI Research & Development Fund

Central to a potential sovereign AI initiative could be the creation of a National AI Research and Development Fund. This fund would focus on spurring AI innovation in critical economic sectors such as healthcare, agriculture, and manufacturing. Government agencies would need to allocate appropriate resources to this fund, sourced or redirected from Indonesia's existing technology-related investment funds and programs.

Cost-Benefit Outlook: The primary expenditures would involve initial funding for research and key infrastructure, such as data centers. The future benefits may include but are not necessarily limited to enhanced sector efficiencies, job creation in AI and GenAI development, and improved international business competitiveness, all of which are relevant to annual GDP growth due to productivity improvements and new business opportunities.

2 Implementing AI Education & Training Programs

Integrating AI and GenAI into Indonesia's state-owned digital ecosystem—and society at large—would require a strong emphasis on education and training. These initiatives could span all educational levels, incorporating academic and vocational training to prepare a workforce skilled in AI technologies. Significant annual investments may need to be made to develop curricula, train educators, and establish AI-equipped learning centers for government agencies, as well as Indonesia's secondary and tertiary schools.

Cost-Benefit Outlook: Costs on this frontier involve the operational expenses of education programs. The anticipated benefits are a skilled workforce, reduced unemployment, and increased average income levels. Such educational initiatives may reduce skill gaps relative to Indonesia's global peers, enhance employment rates in the technology sector, and boost median salaries due to an influx of skilled labor.

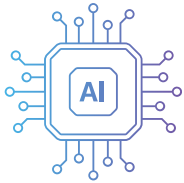
3 Incentivizing AI Startups & Foreign Investment

For a thriving sovereign AI ecosystem, the Indonesian government could also support AI startups and attract direct foreign investment with favorable policies and incentives. A specific portion of the annual budget could be allocated for tax incentives, direct subsidies, and support services for AI companies licensed to operate in Indonesia.

Cost-Benefit Outlook: While administrative costs of managing these drives may be clear and present, such incentives could spur more domestic and international investments in Indonesia, driving technological advancements and further economic expansion. A few key potential impacts may include an increase in foreign direct investment, the creation of high-tech jobs, and a more competitive market environment driven by innovation.



The Role of **AI & GenAI** in Transforming Indonesian Financial Services



The Basics: Predictive AI vs GenAI

In the context of financial services, the use of AI is not a particularly new trend. However, it is crucial to differentiate between Predictive AI and GenAI. Predictive AI excels not just at automating routine tasks such as transaction processing and

compliance checks, but also at making consistent and accurate inferences—often surpassing human capability—from vast data sets, particularly in areas like risk and fraud detection. [Exhibit 1]

GenAI complements and co-exists with previous Predictive AI efforts, enabling new and broader applications [Exhibit 1]

Predictive AI

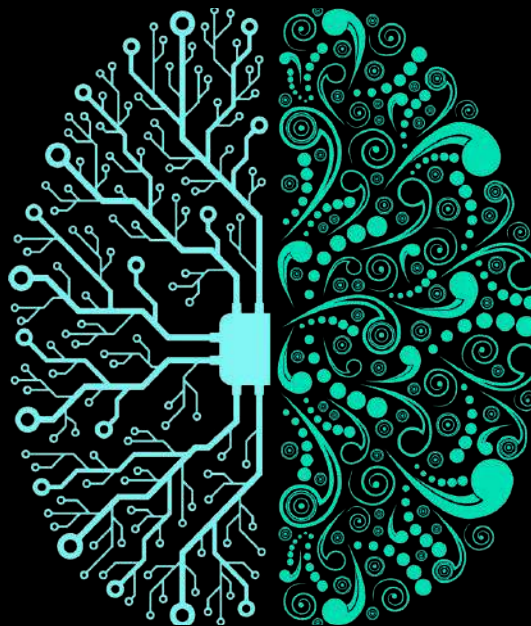
“Left brain”

Decision-making and optimization

Each algorithm constrained to specific problem space

Limited range of possible outputs

Impact: 5% of employee tasks and workflows; focuses on key decisions



Generative AI

“Right brain”

Content creation, qualitative reasoning, orchestration of other systems

Multi-applications

Unlimited range of possible outputs

Impact: 50% of employee tasks and workflows; complemented with impact by Predictive AI

Exhibit 1

In contrast, GenAI, as a newer technology, takes a significant leap forward by not only understanding the user's context—including who they are and why they are requesting information—but also by communicating in a more flexible, fluid, and natural manner compared to the more algorithmic, rules-based interactions typical of Predictive AI. This capability allows GenAI to generate new, context-aware content on demand, rather than simply retrieving existing information.

This capability not only saves time and energy but also **broadens the use cases from very specific applications with Predictive AI to a wider range of applications with GenAI.**

GenAI's conversation, summarization, and knowledge extraction capabilities may help create broader access to loans and working capital for Indonesians. This could noticeably influence the nation's economic landscape and potentially support financial inclusion. [Exhibit 2]

Main capabilities of GenAI that drive value [Exhibit 2]

Tech capabilities							
	Conversation	Content generation/transcription	Summarization	Ideation	Knowledge extraction	Problem solving & Insights	AI agents
Description	Interactive & dynamic engagement of information, ideas, or questions between humans & AI systems, responding to questions and generating appropriate responses	The creation of specific types of content (e.g., text, images, videos, audio, code)	Summarization of large amounts of information or text into shorter, more concise versions, that capture the key points of the content	Generation of new & innovative ideas, concepts or designs (e.g., unique product solutions, exploration of uncharted territories in scientific fields)	Extraction of structured knowledge from unstructured or semi-structured data sources	Logical & reasoning process to make inferences, draw conclusions, make informed judgments, and derive new insights based on available information, data, or knowledge	The solving of complex tasks by planning and executing a set of actions using a suite of tools

Exhibit 2

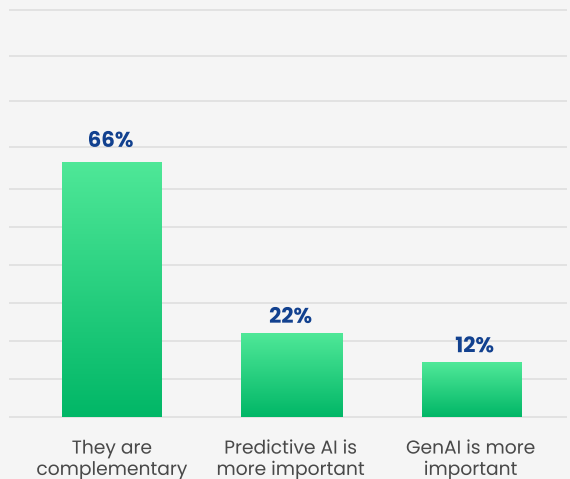
BCG and ACV conducted a survey of 41 business leaders from traditional financial institutions in Indonesia for this report. The majority of leaders view Predictive AI and GenAI as complementary technologies. However, nearly a quarter of the leaders consider Predictive AI more crucial, particularly due to its role in core financial products like credit scoring and credit limit calculations. Despite this, it is evident that GenAI has quickly established itself as a legitimate and valuable tool for the financial sector within just two years.

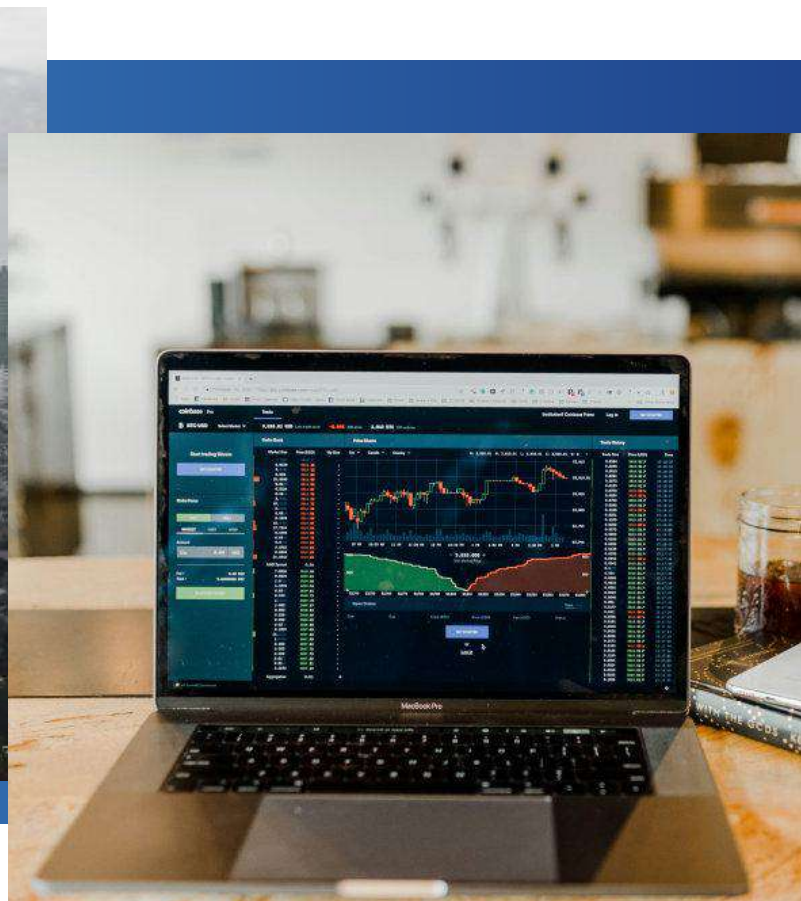
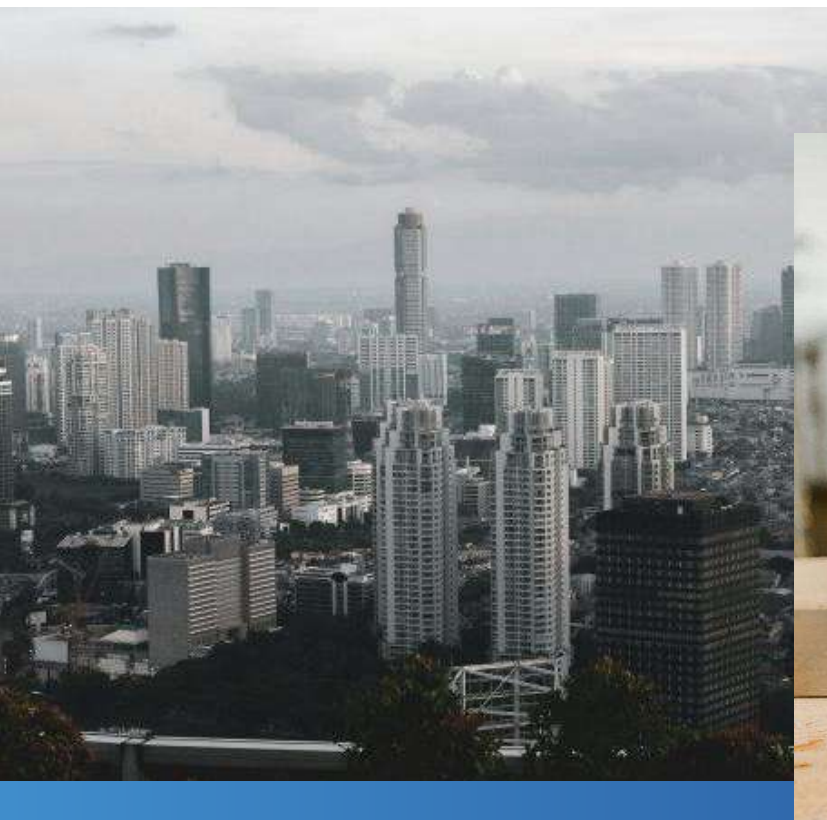
[Exhibit 3]

A majority of business leaders see Predictive AI and GenAI as complementary [Exhibit 3]

Organizational perspectives on Predictive vs GenAI

Exhibit 3





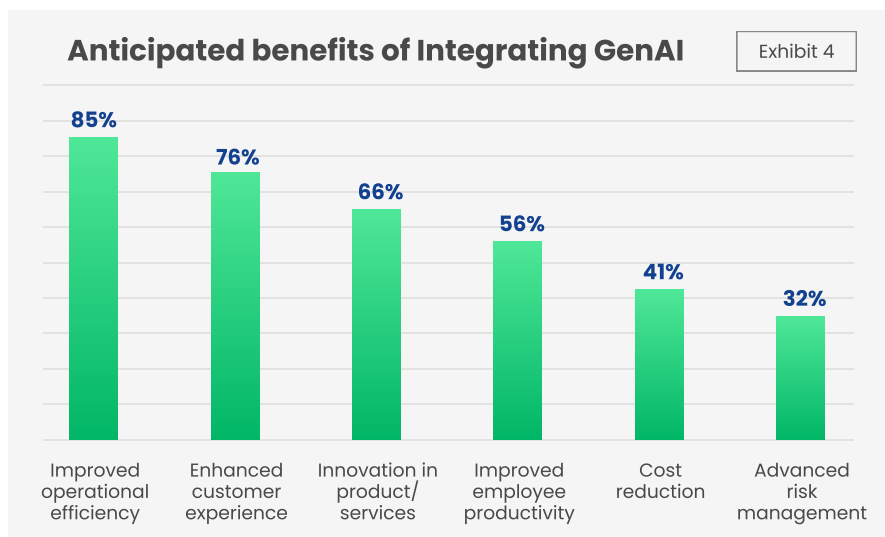
Economic Impact & Growth Projections

The economic impact of AI and GenAI in Southeast Asia is poised to be significant, with projections indicating a substantial US\$1 trillion GDP uplift by 2030.

In our survey, we found that business leaders' top three expectations from GenAI include improving operational efficiency within their organizations, enhancing customer experience, and spurring innovation in financial products and services. [Exhibit 4].

The most significant anticipated benefit of GenAI is the **improvement of operational efficiency, such as the automation of basic tasks.**

[Exhibit 4]



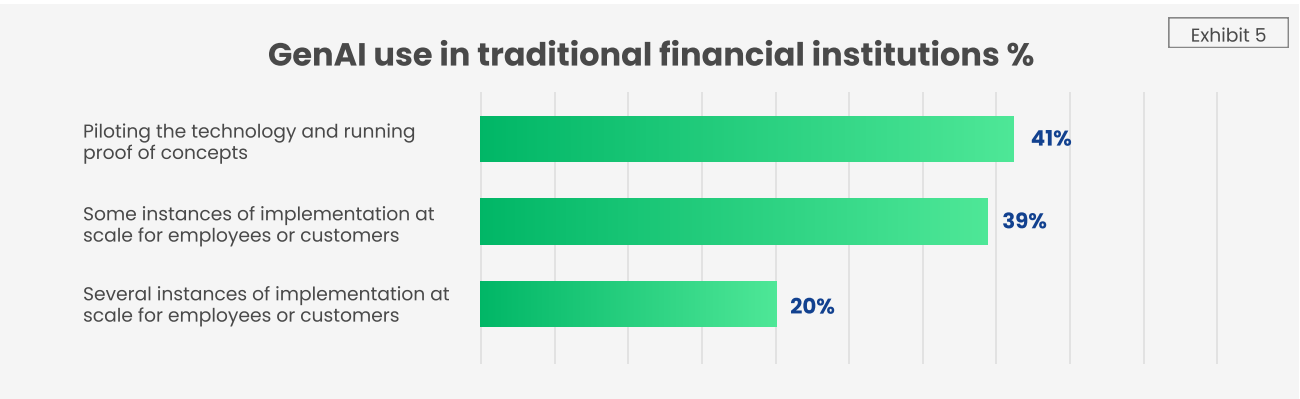
Impact on Traditional Financial Institutions & Fintech Startups

Traditional Financial Institutions

GenAI adoption by banks has been surprisingly rapid. All mid to large-sized financial institutions surveyed in Indonesia are at the minimum running pilots and proof of concepts with GenAI, with a majority having implemented a few use cases at scale for customers or employees. Considering GenAI has only been on the market for two years, its rapid adoption by traditional financial institutions, even within a highly regulated industry, underscores how seriously these businesses are taking the technology. [Exhibit 5]

All mid to large-sized financial institutions surveyed are at least piloting GenAI, with a majority having implemented a few use cases at scale for customers or employees.

[Exhibit 5]



Fintech Startups

The AI and GenAI boom is lowering barriers to entry in Indonesia's financial services sector, enabling fintech startups to challenge traditional banks more effectively. This shift also encourages strategic partnerships that merge fintech innovation with the robust infrastructure and operations of conventional banks, enhancing operational efficiencies and expanding service offerings.

The rise of fintech companies, empowered by AI and GenAI, is transforming Indonesia's credit services sector by offering personalized, accessible, and efficient credit solutions—tasks that previously required large departments and specialized expertise. These AI-driven innovations enable fintech firms to gain significant market share, challenging the dominance of traditional financial institutions and forcing them to innovate.

Innovative Dynamics in the Financial Landscape

AI and GenAI are blurring the lines within the fintech ecosystem, enabling SaaS companies to move into fintech, fostering partnerships between fintechs and banks, and pushing banks to adopt fintech-like strategies.

For example, ESB has transitioned from a restaurant SaaS platform to facilitating loans by leveraging transaction data to assess SME credit risks more effectively.

Many of Indonesia's large banks have introduced signature digital banking apps, allowing users to manage their financial lives fully online—from opening accounts to making investments—without ever visiting a bank branch.

Mid to large-sized banks are increasingly exploring microfinance. Our data shows that 51% of surveyed entities are testing or have implemented GenAI to simplify lending and loan disbursement in this area, but long-term benefits have yet to be realized (Exhibit 9). 12% of respondents see significant potential in GenAI for microfinance, as it enhances credit assessment with unstructured data sources.



3 Strategic Plays for **GenAI** **Integration**

Both established institutions and early-stage fintech startups recognize the importance of a diversified set of strategic plays when integrating AI and GenAI into their existing technology stacks and operational procedures. Based on our findings, companies successfully capturing outsized upside engage in one or more of the following strategic plays. We've broken them down into three key categories: Deploy, Reshape, and Invent.

Through our survey results, we found that financial institutions are prioritizing the integration of GenAI into everyday tasks (Deploy) to enhance specific operations, such as customer service. This is followed by a focus on the creation of new products and services (Invent), indicating that companies are addressing immediate needs while also aiming to leverage GenAI for the development of entirely new products and services. [Exhibit 7]

There are 3 strategic plays to leverage when considering integrating GenAI into products, services, and systems [Exhibit 6]



Deploy

GenAI in everyday tasks for broad enterprise productivity



Reshape

critical functions end-to-end for radical efficiency and effectiveness



Invent

new experiences, offerings, and business models powered by GenAI

This refers to the use of AI and GenAI for everyday tasks, typically involving an existing product. Examples include employees using GenAI to summarize meetings and calls in seconds, highlight key takeaways from lengthy reports, and quickly create first drafts of communications. Additionally, GenAI can assist with more technical and specific aspects of workflows, such as data labeling and analysis. This approach dramatically saves time and also increases the quality of outputs.

Reshape involves the reimagination of specific in-house processes, for radical operational efficiency changes. Examples could include GenAI-powered chatbots that handle customer inquiries with speed and precision, tools that detect fraudulent activities by analyzing patterns in real time. This requires a holistic, centrally coordinated effort to transform work and workforce dynamics with responsible AI enablers where possible, rather than a set of isolated use cases with limited scalability and decentralized rollout.

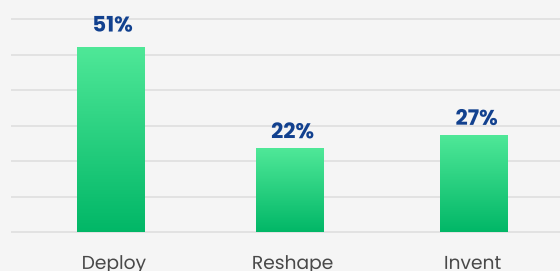
Invent is the practice of leveraging GenAI to pioneer new experiences, offerings, and business models. Firms create hyper-personalized financial products and services that meet the unique needs of Indonesia's diverse population. GenAI also facilitates the rapid testing and deployment of innovative business models, such as mobile-first banking solutions and micro-financing tailored to rural communities. New products enhance customer engagement but also expand financial inclusion across the archipelago.

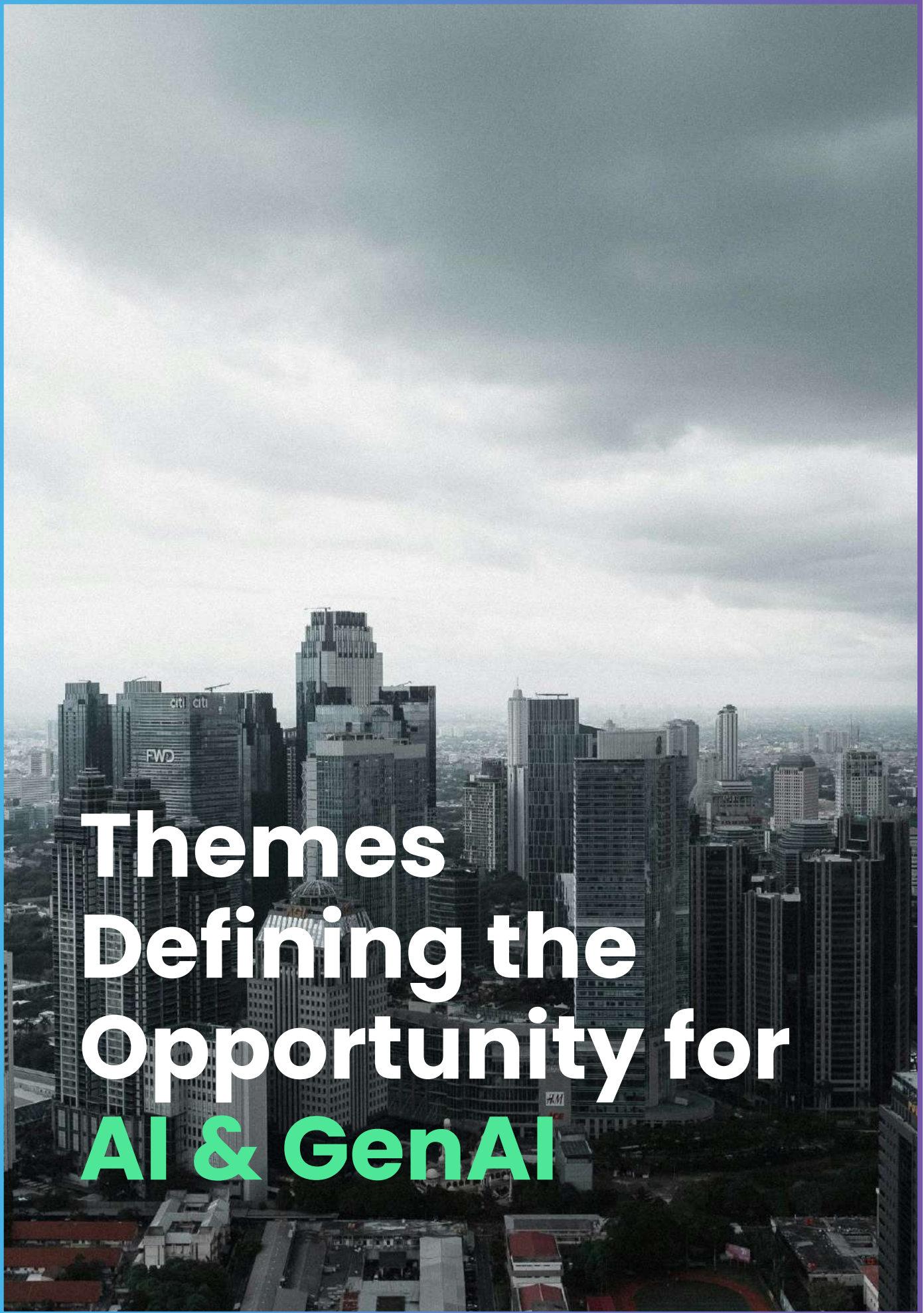
Traditional financial institutions are focusing on deploying GenAI for everyday tasks, and see great opportunity in inventing entirely new products and services.

[Exhibit 7]

GenAI strategic priorities for financial institutions in Indonesia

Exhibit 7





Themes Defining the Opportunity for **AI & GenAI**

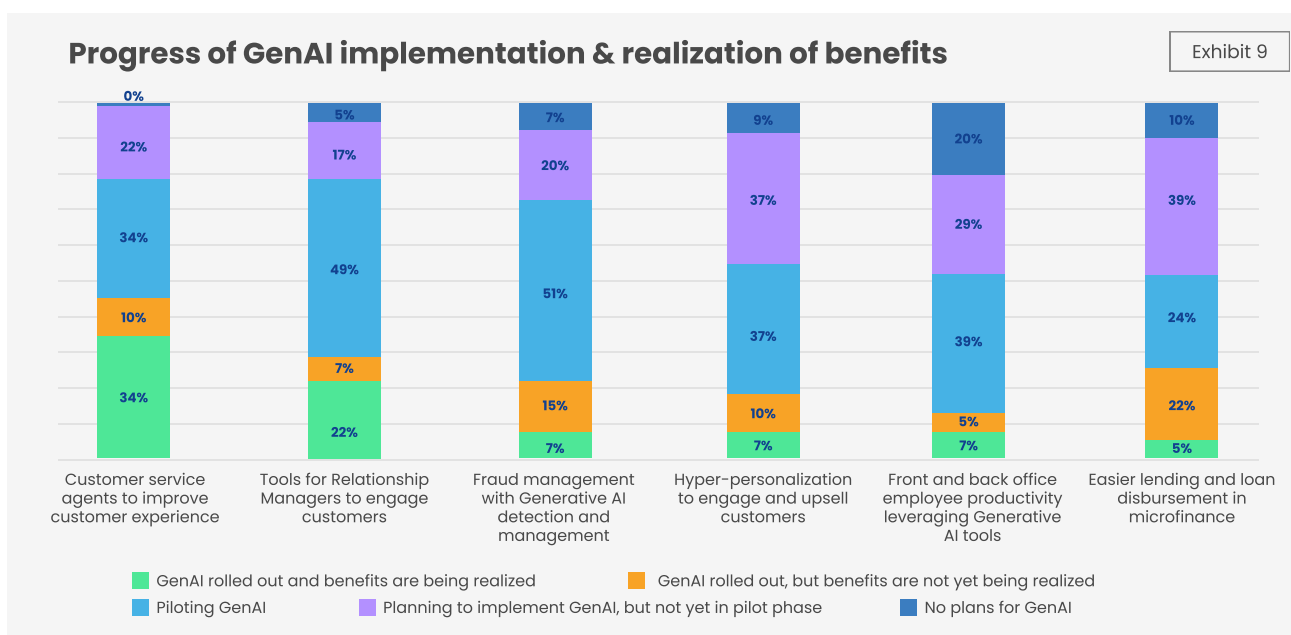
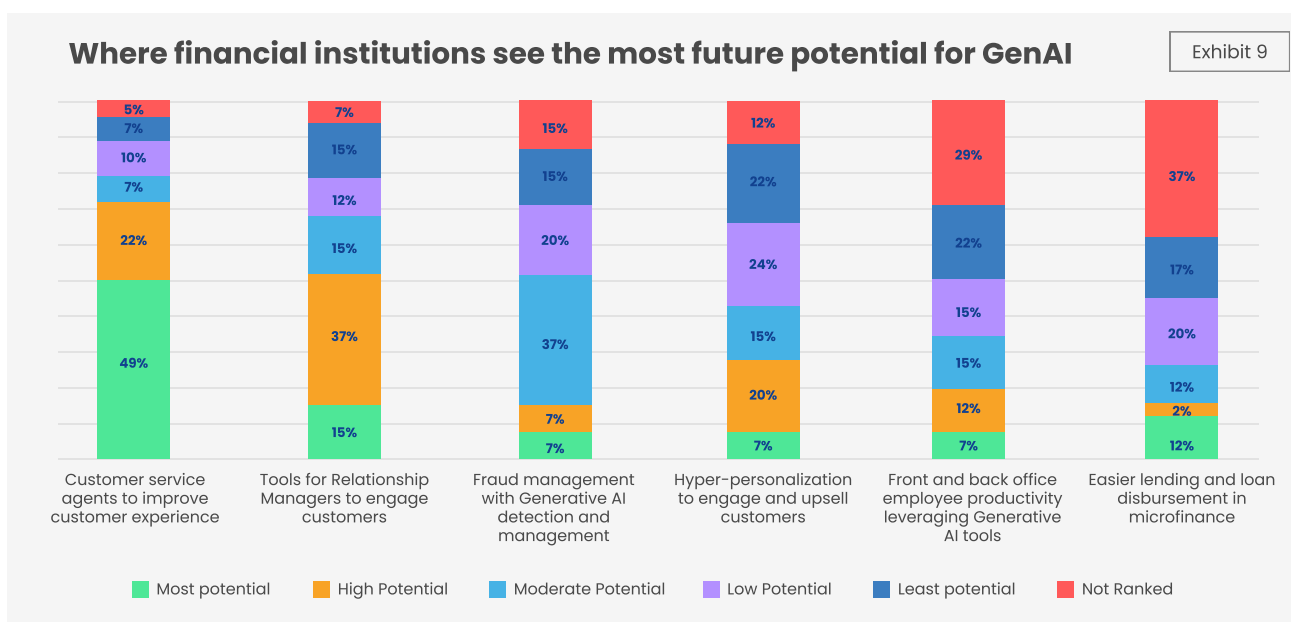
In addition to surveying 41 business leaders from traditional financial institutions in Indonesia, we also conducted interviews with five fintech startups in the country's financial services sector. These executives are integrating AI and GenAI into their operations, and we've identified six recurring themes of opportunities across a range of company types, from emerging micro-fintech firms to well-established financial institutions.

Per our survey, nearly half (49%) of business leaders see customer service as the primary application for GenAI, with a third (34%) of companies already reaping benefits from its implementation. The next promising area for is enhancing tools for

relationship managers (RM) to better engage with customers. About one-fifth (22%) of companies have introduced such RM tools and are now seeing positive outcomes.

Hyper-personalization and fraud management are identified as areas with significant potential, though they are still in the nascent stages of implementation, with only 7% of companies having launched related products and seen gains. There is a notable opportunity for organizations to explore hyper-personalization further, which, if effectively implemented, can lead to successful upselling and cross-selling on financial platforms. [Exhibit 9]

GenAI leads in customer service among business leaders, with 49% identifying it as the primary application for the technology. 34% are already seeing benefits, while relationship management, hyper-personalization, and fraud prevention show potential. [Exhibit 9]



1 Customer Success of the Future



AI-driven customer service improves customer experiences by efficiently handling inquiries through natural language processing, enhancing both customer satisfaction and operational efficiency.

Fintech Startups

Customer service is pivotal in helping fintech startups scale by reducing costs and maintaining the necessary 24/7 support for sensitive products like credit cards. With government caps on credit lending profits, minimizing non-core operating expenses is essential. Utilizing GenAI as the primary interface in customer service ensures consistent support at significantly reduced staffing costs. This strategy not only enhances customer experience but also lowers non-core expenses.

Traditional Financial Institutions

Banks are not just focusing on enhancing customer service with GenAI but are aiming for a comprehensive service transformation across multiple touchpoints. They are employing GenAI-enabled tools and processes to quickly respond to customer inquiries, build stronger relationships between clients and relationship managers, and shift conversations from service to sales.

Fintech Case Study

SkorLife, an Indonesian credit builder, aimed to reduce customer service costs by 50%.

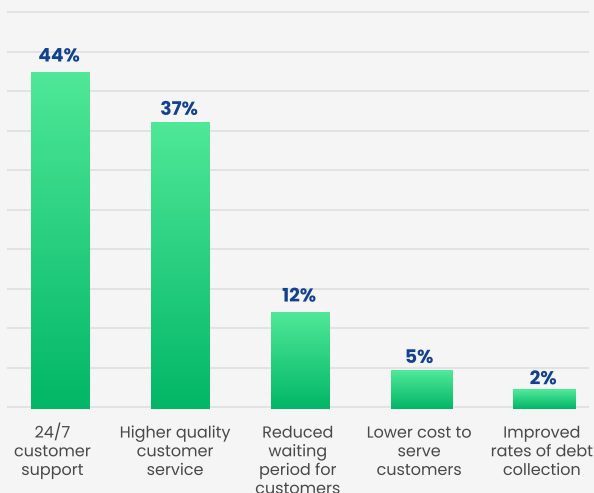
As customer service constitutes 40% of its operating expenses, the team implemented GenAI assistance to provide consistent, 24/7 support. Recognizing that such use cases are applicable across industries, SkorLife chose to partner with a vendor to develop its GenAI customer service capabilities instead of building them in-house.



Ongki Kurniawan
Co-founder & CEO

Largest benefits of using GenAI customer service

Exhibit 10



44% of business leaders stated that their primary goal for implementing GenAI in customer service is to establish 24/7 support, crucial for addressing urgent issues like credit card fraud and loss that demand immediate action. Additionally, 37% aim to use GenAI to enhance the quality of customer service. Only 5% of traditional financial institution respondents consider cost reduction as a goal for adopting GenAI, highlighting a significant difference from the priorities of smaller fintech companies. [Exhibit 10]

Prioritizing 24/7 customer support with GenAI in traditional financial institutions: A key strategy beyond cost reduction. [Exhibit 10]

2 Productivity Co-Pilot

GenAI is transforming employee productivity. A recent BCG survey on AI usage in the workplace identified Asia Pacific (APAC) as one of only two regions globally where a majority of frontline workers utilize GenAI tools. Furthermore, nearly a third of APAC employees have received training on how GenAI will impact their roles, a figure that surpasses the global average.

Fintech Startups

Enterprise-grade instances of GenAI remain too costly to deploy across entire companies. Instead of adopting a broad use case approach, leaders are first assessing the costs and benefits to ensure that their employees can effectively utilize the technology. This strategy focuses on addressing time-intensive, low-value tasks within specific teams and processes.

Traditional Financial Institutions

The potential productivity gains for banks in Indonesia are immense at scale. With thousands of employees spread across various branches, the implementation of GenAI could revolutionize operations, streamlining tasks that previously took hours into mere minutes. This results in significant time savings across the board. GenAI users report saving at least five hours a week using these tools. Additionally, there is a significant opportunity to invest in upskilling employees to effectively interact with GenAI tools.

Fintech Case Study

JULO, a credit lending app, has its data analytics team utilizing GitHub Co-Pilot to boost coding productivity, resulting in a 2x increase in engineer efficiency.

For data warehouse queries in BigQuery, the team employs Gemini, which accelerates query responses by 2x to 3x, significantly reducing the time to gain insights. Additionally, mundane tasks like data classification are managed by GenAI, which automates the tagging and labeling of data, minimizing the need for manual intervention.

JULO

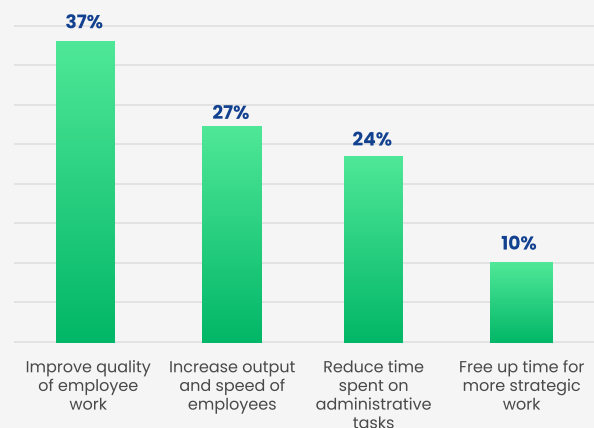


Martijn Wieriks
Chief Data Officer

37% of business leaders are leveraging GenAI to improve the quality of their employees' work, while 27% are prioritizing its use to increase employee productivity through capabilities in content generation, summarization, and flexible task completion. Notably, leaders aim for employees to enhance the quality and speed of their core tasks rather than freeing up time for more strategic work. [Exhibit 11]

Business leaders are looking to improve the quality and speed of employees' core work rather than to free up time for more strategic work. [Exhibit 11]

Largest benefits of using GenAI for employee productivity



3 Rapid Lending with Reduced Risk



Predictive AI and machine learning have been crucial in analyzing borrower profiles, accelerating decision-making, and reducing non-performing loans. Among other things, Predictive AI can deliver deterministic outcomes with explainability for the underlying rationale—a capability that GenAI has yet to fully develop. However, GenAI excels at utilizing unstructured data sources that contain quality data, providing additional data points to enhance models.

Fintech Startups

While GenAI shows promise, leaders are not yet prepared to replace Predictive AI for mission-critical tasks. Instead, they are using it to enhance supporting functions with capabilities where it excels.

Traditional Financial Institutions

With the abundance of unstructured data in large companies, it can be easy to overlook valuable data sources that have not yet been integrated into models. GenAI has the ability to enhance Predictive AI credit models by incorporating supplementary information from unstructured data sources, such as rejected applications, to improve the models' understanding.

Fintech Case Study

Broom is a company that provides an end-to-end financial solution for auto dealer inventories in Indonesia. It leverages AI to expedite credit approvals.

Users may submit their applications before mid-day and receive funds within a few hours. AI reduces underwriting time from an hour to just 10 minutes. An employee then double-checks to ensure 100% accuracy, serving as the final checkpoint and demonstrating the effectiveness of a bionic process.



Pandu Adi Laras
Co-founder & CEO, Broom



Reinaldo Tendean
Co-Founder, Finku

Finku, a personal finance application that helps Indonesian consumers manage their finances and provides them loans, initially underwrote loans using credit bureau data.

Over time, the firm incorporated deep learning and machine learning into its underwriting process as the basis of its credit lending model, significantly cutting down non-performing loans by 50%.



4 Next-Gen Fraud Detection

Financial fraud is a constantly evolving battle, with AI being deployed by both fraudsters and fraud management services. Due to advanced tactics such as masked caller voices, real-time face and gender filters, and sophisticated KYC fraud, fraud rates are on the rise. This severely impacts profitability for enterprises of all kinds, with 1-2% of margins lost to fraud across the board. KYC AI features must continuously advance and improve to counter these threats. Companies that fail to adopt cutting-edge AI tools risk being increasingly vulnerable to these evolving threats.

Fintech Startups

Fintech startups are partnering with KYC vendors to combat fraud, taking advantage of their expertise and advanced technology. Understanding that this industry-wide use case isn't central to their competitive edge, fintechs opt to collaborate with KYC specialists instead of developing solutions in-house.

Traditional Financial Institutions

There is a growing focus on technology resilience within banks. Larger institutions are deploying "Red Teams" to test products for vulnerabilities, from fraud to cybersecurity, ensuring that there are no loopholes. Additionally, external entities are aiming to offer comprehensive services to mid-sized banks, providing KYC, fraud, AML, and cybersecurity as a service to remain competitive in a rapidly evolving landscape.

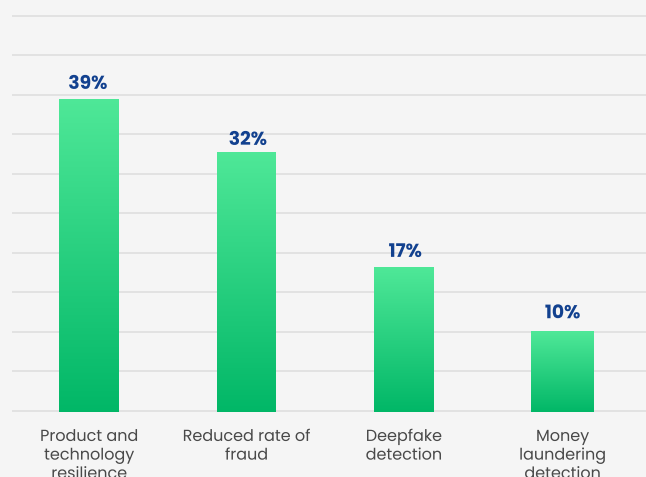
Ensuring product and technology resilience is the highest-ranked benefit in the Fraud Management space in a rapidly evolving landscape. Following this, leaders aim to use GenAI to enhance fraud detection, including identifying regular and AI-generated anomalies such as deepfakes.

[Exhibit 12]

Ensuring product and technology resilience against evolving fraud techniques is the top priority for 39% of business leaders. [Exhibit 12]

Largest benefits of using GenAI for fraud management

Exhibit 12



5 Hyper-personalization for Better Financial Outcomes



Fundamentally, GenAI is trained on unstructured data through unsupervised methods, making it particularly adept at recognizing broader behavioral patterns and unstructured data points. When applied to user behaviors and actions on platforms, it can deliver personalized insights and advice efficiently, without requiring extensive development and tuning.

Fintech Startups

For consumer-facing products, GenAI can provide advice to foster good financial habits, enhance financial literacy, and recommend additional financial products. In the context of business-facing products, like SME lending, GenAI can provide insights for businesses, leading to increased sales and optimized operations, such as inventory management.

Traditional Financial Institutions

Banks are already familiar with utilizing data science and machine learning to present offers to customers and to guide them toward suitable products. They view the conversational capabilities of GenAI as a significant advantage for educating customers about new offerings and enhancing financial literacy early in the sales funnel, specifically during the awareness and consideration stages.

Fintech Case Study



SkorLife has begun harnessing GenAI to enhance personalization for its users, **aiming to foster better financial habits and improve their credit scores.**

By analyzing transaction data, spending categories, patterns, and other customer-specific usage, SkorLife employs a conversational AI interface to provide users with tailored insights and recommendations to enhance their credit profiles.



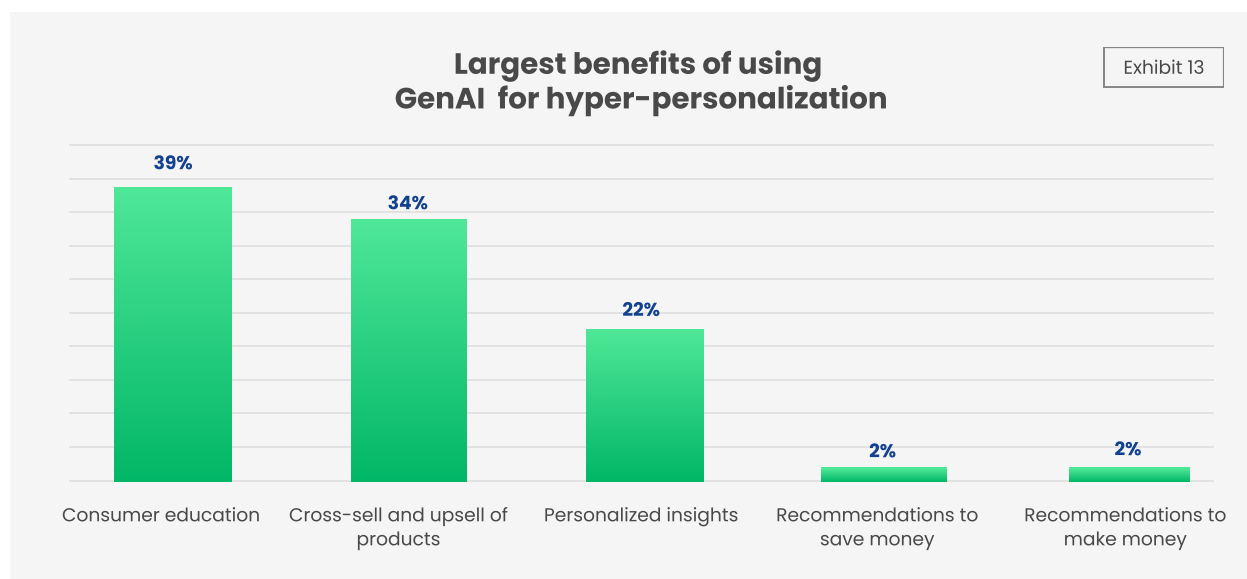
Finku is exploring ways to **transition GenAI from being a cost center that bolsters the customer experience, to a revenue-generating asset.**

This involves utilizing GenAI to recommend new financial products through an affiliate and lead generation model, thereby creating new revenue streams with third-party partnerships.

Business leaders have identified consumer education as the top use case for GenAI in hyper-personalization.

Leveraging GenAI's conversational capabilities, consumer education is viewed as a crucial initial step in the awareness, consideration, and purchase process for financial and insurance products through financial institution channels. This focus on education sets the stage for the next major priority: cross-selling and upselling products at opportune times based on individual behaviors and life stages. [Exhibit 13]

39% of business leaders prioritize using GenAI for consumer education, which facilitates awareness, consideration, and purchase of adjacent products. [Exhibit 13]



6 Closing the Banking Gap

Fintech startups and traditional banks are exploring innovative approaches to improve their lending processes and tap into new revenue streams.

Fintech Startups Both fintech and non-fintech startups are viewing microfinance as a potential revenue stream. They cater to industry-specific use cases with high credit potential, such as working capital loans and inventory loans. By leveraging rich customer data and credit-worthy transactions, smaller tech players can either compete with traditional banks or partner with them to carve out a share of the credit market.	Traditional Financial Institutions Traditional banks are utilizing GenAI to expedite the underwriting of smaller loans and credit, thereby enhancing the efficiency of their microfinance processes. This improvement allows them to serve previously untapped market segments that were hindered by manual processes. 51% of these institutions are either experimenting with or have implemented this technology, though its full benefits are yet to be determined. Notably, 12% of respondents believe this application has the most potential in the banking sector.
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51% of these institutions are either experimenting with or have implemented this technology, though its full benefits are yet to be determined. Notably, 12% of respondents believe this application has the most potential in the banking sector.

Fintech Case Study

Digital lender JULO uses AI to **quickly profile customers using alternative data sources**, such as their online purchase history, the types of apps installed on their smartphones, and other seemingly unrelated behavior stats.

This is important in a market where large swathes of the population remain unbanked, underbanked, or otherwise without formal credit histories. JULO can approve and disburse loans quickly to borrowers that would otherwise be unserved by traditional banks and financial institutions. JULO recently announced its plan to transform into a full-fledged neobank after having disbursed more than US\$1 billion in total since its 2016 inception.

ESB, an Indonesian restaurant management SaaS platform, **utilizes AI and GenAI to develop innovative credit scoring models for F&B businesses.**

With its AI product OLIN, ESB enhances SMEs' sales forecasting with up to 90% accuracy. OLIN also advises on menu adjustments and promotional campaigns to increase annual sales by up to 40%.

The company is expanding into the fintech sector by leveraging AI and GenAI to develop novel credit scoring models for F&B enterprises, enhancing their access to working capital from traditional financial institutions. These innovations highlight the transformative impact of AI analysis and recommendations when effectively implemented.



“There is a huge gap between financial institutions and those who need funding. We can close that gap”

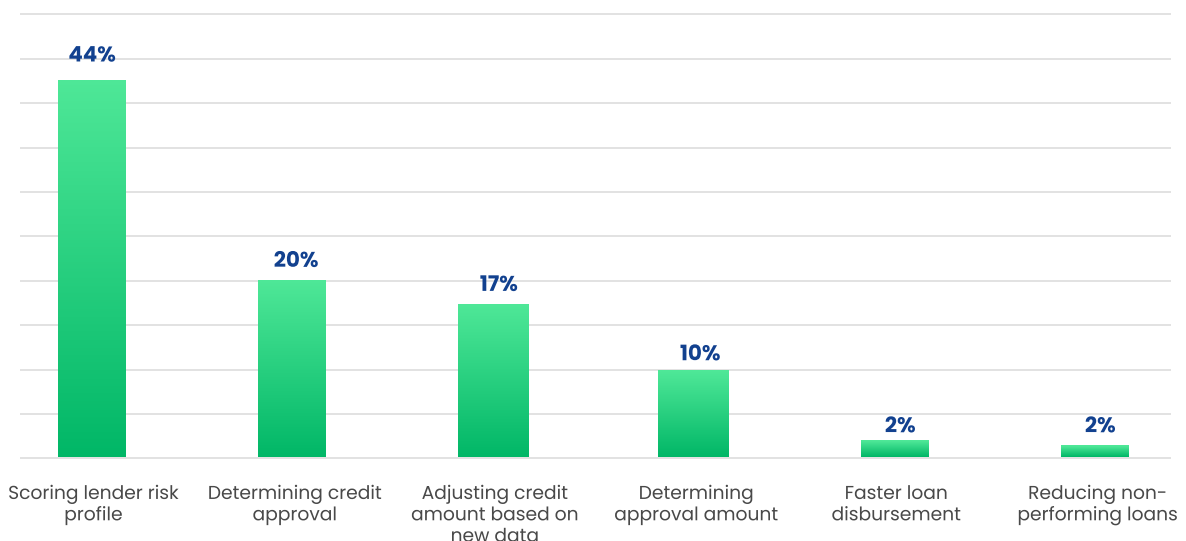
Gunawan Woen
Co-Founder & CEO, ESB

44% of traditional financial institutions plan to use GenAI to assess lenders' risk profiles, supplementing traditional predictive AI. GenAI can scrape unstructured data such as previously unused denied credit applications, thereby enhancing credit risk models. It complements traditional AI in this respect, proving particularly useful in microlending where data is limited. [Exhibit 14]

Business leaders are looking to GenAI to assess lenders' risk profiles in microlending, potentially using alternative and flexible data sources or benefiting from model improvements over time. [Exhibit 14]

Top reasons for using GenAI in microlending

Exhibit 14





Inherent Risks & New Challenges in the Age of GenAI



As GenAI gains traction in Indonesia's financial services sector, institutions face a growing spectrum of existing risks and new challenges. Understanding how these entities can capitalize on GenAI's potential while mitigating associated risks is important.

Hallucinations

A significant inherent risk with GenAI in financial services is its tendency to generate convincing but factually incorrect outputs, commonly referred to as "hallucinations."

If left unnoticed, these inaccuracies can mislead clients and stakeholders to great detriment and – in extreme cases – financial loss. As companies in Indonesia increasingly adopt GenAI, any lack of rigorous testing and adequate safeguards exposes them to risk stemming from unreliable outputs.

Harmful Biases

GenAI systems may also perpetuate biases present in their training data, leading to unfair or harmful outputs (such as a qualified borrower being denied a loan, overly stringent repayment terms, financial exclusion, etc).

This could include content outputs indicative of biased worldviews (such as gender assumptions associated with certain jobs, etc).

This may also create an opportunity for malicious actors within a company to do systemic damage and reputational harm at full scale (such as outputs including racist, sexist, or otherwise harmful content).

Recommendations

- Test AI against real-life scenarios.
- Use both automated and manual monitoring.
- Educate stakeholders about AI's limits.
- Adhere to regulatory standards.
- Set up fail-safes and clear error protocols.

Recommendations

- **Implementing bias monitoring guardrails and diversifying training datasets** can help reduce the propagation of stereotypical or discriminatory content.
- Regular audits and human oversight are essential to mitigate risks associated with hallucinations.
Financial institutions need to define ownership clauses clearly in contracts with solution providers.



Imminent Regulations

The Indonesian government is actively working to establish regulations for AI and GenAI, with significant implications for local financial institutions, which must stay informed and adaptable for swift compliance.

In a recent move, Indonesia partnered with a non-profit headed by a former UK Prime Minister to create a regulatory framework for GenAI. This initiative aims to:

- ▶ Ensure data security, privacy, and ethical AI usage amid widespread adoption
- ▶ Utilize workshops and dialogues with tech experts and policymakers to develop transparent, accountable regulations
- ▶ Protect citizens' rights through stringent regulatory measures
- ▶ Encourage ethical AI practices to boost socio-economic development
- ▶ Position Indonesia as a global frontrunner in AI policy and implementation

Meanwhile, Indonesia's Personal Data Protection Law (PDP Law), enacted on October 17, 2022, sets rules for how businesses should handle personal data. It applies to anyone dealing with the data of Indonesian citizens, whether they operate inside or outside of the country. The law defines roles clearly, making sure those in charge of using the data and those processing it on behalf of others know their responsibilities.

Data controllers must process data legally and protect it from unauthorized access while ensuring individuals can view, correct, or request deletion of their data. Data processors must follow the controller's guidelines strictly.

Local financial institutions using AI and GenAI solutions that do not fully comply with the PDP Law may face harsh legal penalties – such as fines or moratoriums – that can in turn lead to catastrophic business hindrances, shutdowns, and criminal liability.

Data protection and cybersecurity for GenAI were ranked as the second highest priority by business leaders, highlighting the significant concern and importance of these issues in the industry. Concurrently, it was cited as the third biggest challenge by companies, reflecting the difficulties in continuously staying ahead of the rapidly evolving data privacy and security landscape in the financial sector.

Recommendations



- **Conduct audits and enhance security for AI and GenAI** to ensure full compliance with Indonesia's PDP Law.
- Engage in policy development discussions with regulators and **maintain ongoing legal consultations** to stay ahead of regulatory changes.
- Establish a monitoring team and a clear communication strategy to promote **transparency and trust** with stakeholders.

Strategic & Operational Considerations

To effectively integrate GenAI, Indonesia's financial institutions should embrace in-house upskilling initiatives to enhance workforce capabilities.

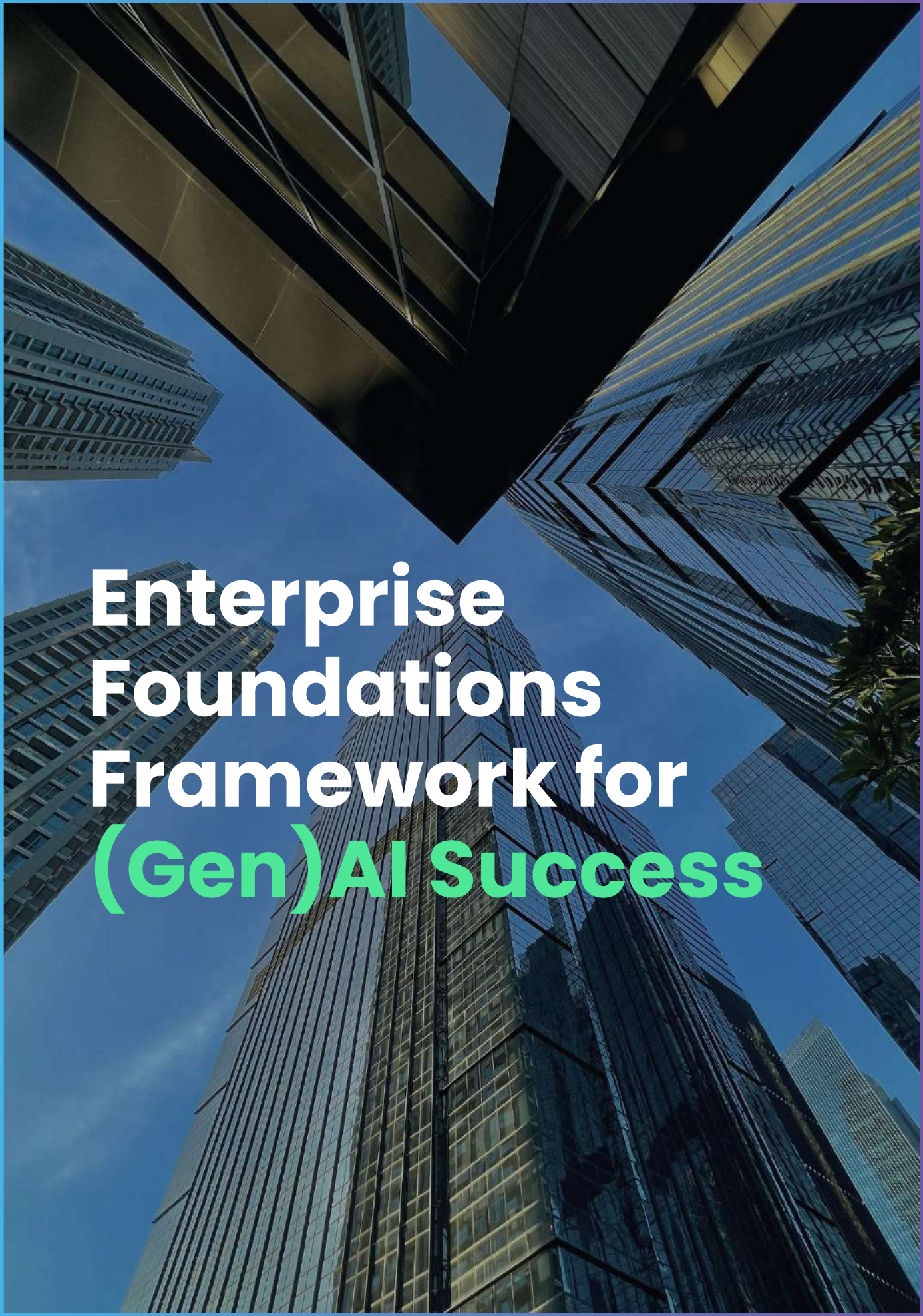
It is crucial not just to focus on specific GenAI applications but also to consider strategic transformations of core functions. With the local regulatory environment in mind and Indonesia's interest in "sovereign AI," expanding local data center capacity will be crucial to support the imminent need for intensive data processing of GenAI applications.

Failure to Adopt is a Risk in Itself

In the rapidly evolving financial services industry, failing to adopt new technologies like GenAI is likely to result in competitive disadvantages and potential obsolescence. To remain competitive over the next ten years, local financial institutions and fintech companies alike must integrate AI and GenAI into their processes and products – for employees and customers.

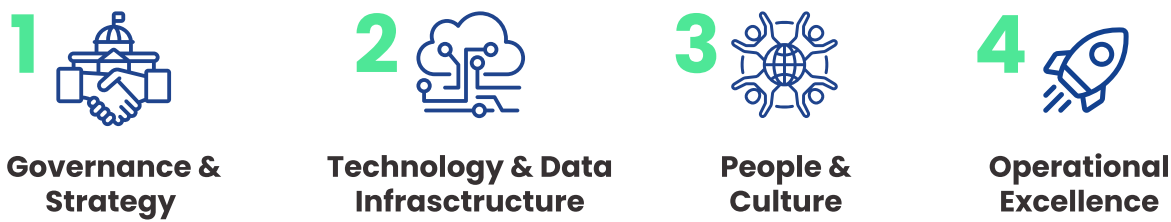
However, successfully harnessing GenAI in Indonesia's financial services requires a balanced approach that leverages the technology's capabilities while addressing the associated risks. Financial institutions can thrive in this new era of technology-driven finance by staying ahead of regulatory changes, investing in both technological and human capital, and adopting a strategic mindset.





Enterprise Foundations Framework for (Gen)AI Success

To succeed with GenAI as a business leader, it is crucial to establish a strong foundation. This foundation can be categorized into four key areas:



Each category encompasses specific elements that ensure a thorough approach to GenAI integration and success. Exhibit 14 details these categories and their respective elements.

4 pillars define the foundations for GenAI readiness [Exhibit 14]

 Governance & Strategy	 Technology & Data Infrastructure	 People & Culture	 Operational Excellence
Establishing an AI strategy and leadership structure for your company	Building a secure data and AI platform to support compliant AI products and services	Upskilling employees and hiring specialized AI and data science talent	Ensuring AI projects developed are executed with high standards and with responsible model use
GOVERNANCE Structures and processes to provide overall direction to GenAI	DATA & (GEN)AI PLATFORM Data capabilities, technology stack, and models	TALENT & SKILLS Upskilling, reskilling, & hiring to meet need for GenAI talent	AI DELIVERY OFFICE Project management, target setting, & performance tracking
OPERATING MODEL Work, role, and organization redesign to run and sustain the AI transformation	CYBERSECURITY Solutions & practices to mitigate information security & privacy risks	CHANGE MANAGEMENT Behaviors associated with responsible and effective AI use	RISK+ RESPONSIBLE AI PRACTICES & TOOLS Solutions & practices to ensure responsible model use

Exhibit 14

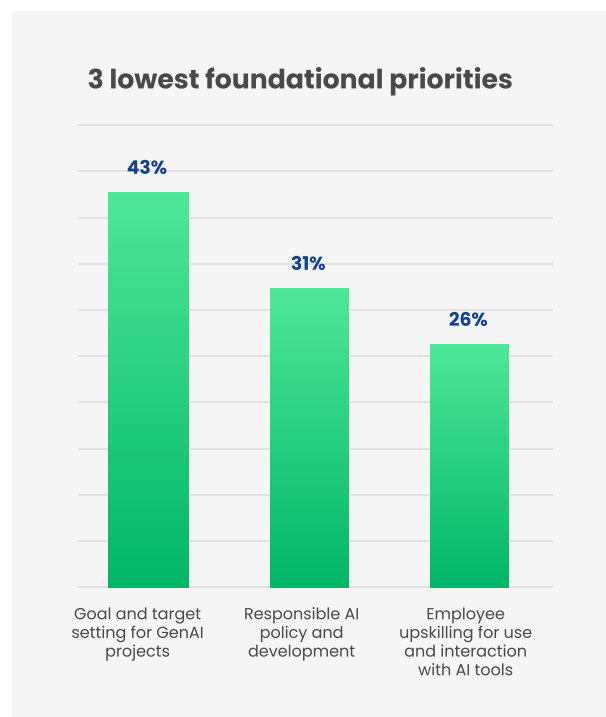
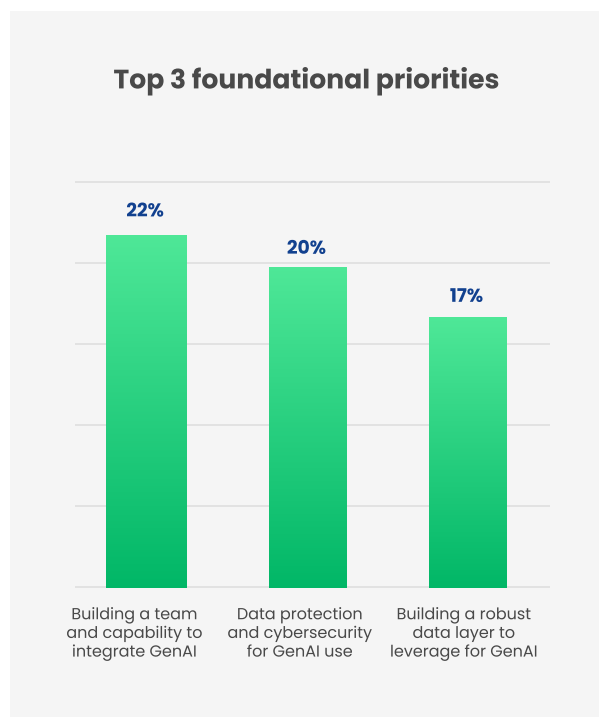
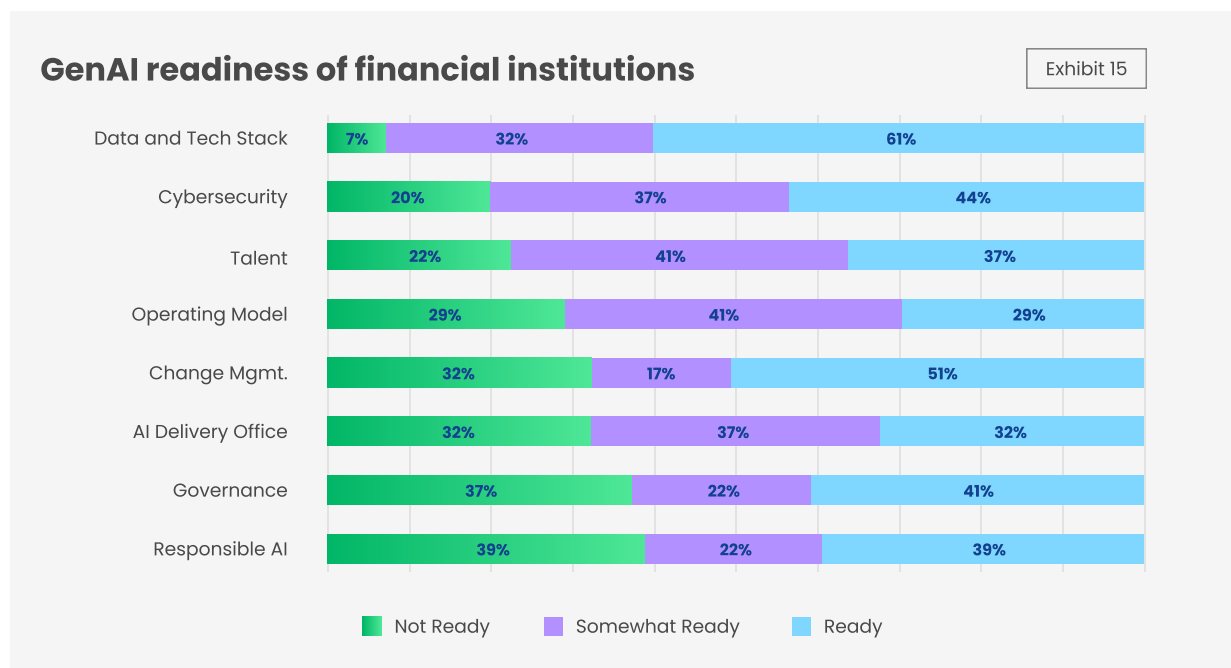
When assessing how prepared companies are for implementing GenAI, it is clear that technology is at the forefront. Data and technology infrastructures show the highest readiness, with a 61% preparation level, demonstrating a strong tech-first approach. However, there are significant deficiencies in the operating model, change management, and governance structures. This discrepancy suggests that while the technological foundations are well-established, the operational and strategic frameworks necessary to support these technologies are still underdeveloped.

This trend indicates that leaders might be launching AI initiatives with a strong technical emphasis,

rather than aligning them with business needs from the start. The focus on data and cybersecurity readiness, often driven by regulatory requirements, supports this tech-first strategy. However, the areas identified as lowest priorities—goal and target setting for AI projects, responsible AI policy development, and employee upskilling—highlight a significant oversight. These aspects are crucial for integrating AI into the organizational ethos and ensuring it aligns with business principles. Consequently, the current readiness landscape shows a tilt toward technological preparedness at the expense of a balanced approach that equally considers business objectives and ethical considerations.

BCG has observed similar issues in some of their engagements, where a lack of emphasis on the business perspective, change management, and governance has led to implementation failures. To address this, we recommend that AI initiatives be closely aligned with business needs to meet actual requirements upon launch. This balanced approach can help bridge the readiness gaps and promote a more holistic and effective AI adoption strategy.

GenAI readiness: Tech-readiness leads, but it's imperative to bring business-readiness to the same level ^[Exhibit 15]



*Survey data collected is from mid-large sized banks only



Governance & Strategy

Establish AI Leadership

Set up an in-house AI Center of Excellence or appoint a Head of AI close to key decision-makers, such as the Chief Operating Officer, to ensure AI initiatives sync with business strategies and compliance standards.

Redesign Operating Model

Adapt the organizational structure to maximize value from GenAI, ensuring cohesion with strategic ambitions.

Set Up Governance Structures

Develop a comprehensive GenAI strategy that aligns with business objectives and measurable key results. Establish formal structures such as CXO-level AI Steering Committees and ensure leadership is responsive to guide AI initiatives based on real-time data.

Initiate Adoption

Start with a phased, function-specific strategy, integrating AI thoughtfully across your business. Focus on creating value in human, process, technology, data, and governance areas, ensuring alignment with a unified strategy that optimally leverages technology to meet organizational goals.

Technology & Data Infrastructure

Enhance Data Quality and Accessibility

Recognize that AI success is fundamentally linked to the quality and accessibility of your data. Maintain rigorous standards for cybersecurity, data accuracy, and organization to ensure effective and reliable AI systems.

Develop Robust Data and GenAI Platforms

Create a single source of truth for company-wide data to support the entire AI model lifecycle, from data curation to deployment.

Cybersecurity & Compliance

Integrate Security into AI Operations

Incorporate robust security practices into machine learning operations and development security operations to ensure the safe design, build, and deployment of GenAI applications. Continuously assess and validate the security practices of AI vendors.

Ensure Legal Compliance

Adhere strictly to Indonesia's PDP Law to prevent severe legal and business consequences.

People & Culture

Focus on Talent and Skills Development

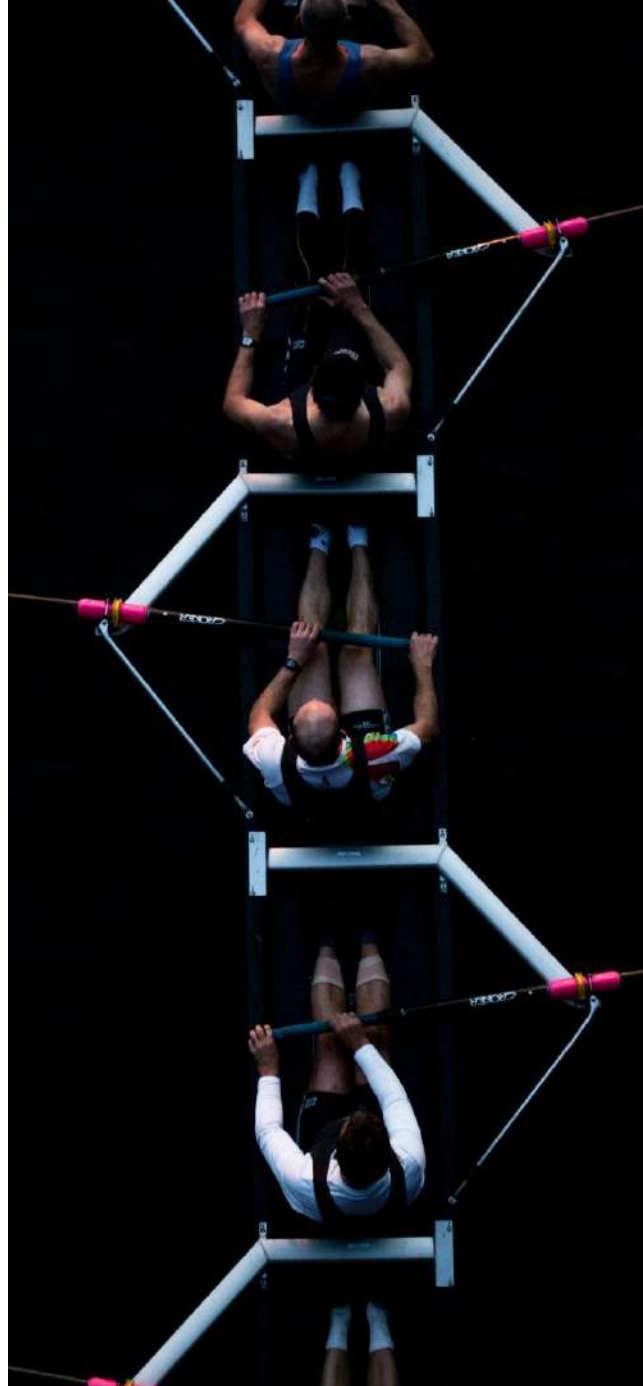
Upskill and reskill current employees, recruit new talent, and continuously enhance capabilities for roles that lead, govern, build, and use AI. Enhance leadership skills to support AI-related decision-making.

Cultivate a Supportive Culture

Foster a culture that embraces GenAI by defining and instilling desired behaviors and organizational mindsets. Empower leaders to integrate AI into business processes and establish clear, actionable targets.

Change Management

Implement a comprehensive change management program to engage relevant employees in the transformation process, which typically constitutes 70% of the effort required to effect change within the organization.



Operational Excellence

Create an AI Delivery Office

Manage projects, monitor performance, and maintain organizational direction through a delivery office that upholds technical standards and ensures high-quality use and deployment of GenAI products.

Mitigate Risk via Responsible AI Practices

Employ practices and tools to ensure the responsible use of AI, assessing risks during the ideation phase and maintaining ongoing compliance tracking. Establish necessary escalation pathways.

Define Performance Metrics

Establish clear metrics to assess the impact of new technology and convert insights into quantifiable business results.

Create User-Centric AI Solutions

Collaborate closely with users (whether they are employees, customers, or both) to develop practical and user-friendly AI solutions. Quickly release these tools to gather feedback early and frequently.

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About Us



About AC Ventures

AC Ventures (ACV) is a top venture capital firm that invests in tech-enabled businesses focused on Indonesia and Southeast Asia, with over US\$500 million in assets under management. The firm empowers entrepreneurs with more than capital by combining operational experience, industry knowledge, deep local networks, and resources. ACV's team has invested in over 120 regional tech companies since 2012. With a team of more than 35 professionals led by Adrian Li, Michael Soerijadji, Helen Wong, and Pandu Sjahrir, it has offices in Jakarta and Singapore.



About Kadin Indonesia

Established in 1968, Kadin Indonesia is the Indonesian Chamber of Commerce and Industry. It is the umbrella organization for all chambers of commerce and business associations in the nation, including foreign chambers of commerce in Indonesia. Kadin Indonesia serves as the voice of the private sector and maintains intimate relationships with government institutions.

It has a mission to support the vital, sustainable, and equitable economic growth in Indonesia. Its networks, which include 35 provincial chambers of commerce and 514 district branches, represent the voice of all business associations covering all relevant sectors of the Indonesian economy. Partnering with key government institutions, it actively participates in business and economic reforms. Kadin Indonesia is the first point of contact for foreign companies and opens doors to the country's dynamic private sector.



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BCG X is the tech build & design unit of BCG. Turbocharging BCG's deep industry and functional expertise, BCG X brings together advanced tech knowledge and ambitious entrepreneurship to help organizations enable innovation at scale. With nearly 3,000 technologists, scientists, programmers, engineers, and human-centered designers located across 80+ cities, BCG X builds and designs platforms and software to address the world's most important challenges and opportunities. Teaming across our practices, and in close collaboration with our clients, our end-to-end global team unlocks new possibilities. Together we're creating the bold and disruptive products, services, and businesses of tomorrow.