

DEVELOPING DIGITAL BANKING PLATFORM STRATEGIES FOR FUTURE CHALLENGES USING SCENARIO PLANNING

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Abstract

The study explores strategies for digital banking platforms in Indonesia, emphasizing scenario planning to address future challenges. Indonesia's digital banking sector, propelled by technological growth and changing consumer preferences, faces critical challenges such as regulatory fluctuations, intense competition, cybersecurity risks, and low financial literacy. Using Allo Bank as a case study, this research employs PESTLE and SWOT analyses, along with scenario planning, to evaluate strategic responses to key uncertainties in regulation, consumer behavior, and technology. The findings reveal that scenario-based planning enhances adaptability in digital banking, enabling Allo Bank to proactively navigate market complexities and leverage opportunities. Key recommendations include investment in regulatory compliance, technology for secure digital operations, and continuous innovation to maintain competitiveness in a volatile regulatory environment. This study underscores the importance of adaptive strategies for sustained growth in Indonesia's dynamic digital banking ecosystem.

INTRODUCTION

The digital banking landscape in Indonesia has seen rapid growth, driven by technological advancements, changing consumer preferences, and supportive regulatory frameworks. Data from the Indonesian Internet Service Providers Association (APJII) in 2021 indicated that approximately 210 million Indonesians were connected to the internet out of a total population of 272 million, with 79% using it for online transactions and 72% for financial services. This extensive internet penetration has opened substantial opportunities in the digital banking sector, especially among tech-savvy millennials and Gen Z, who increasingly prefer digital solutions for their banking needs. This trend is further evidenced by McKinsey's 2019 report, which highlighted that digital banking usage in Indonesia grew twice as fast as other Asian markets over the previous three years.

A survey of 900 Indonesian financial services consumers conducted by McKinsey found that 55% of digital users expressed an intention to use digital banking within the next six months, showcasing significant openness to adopting digital banking platforms in Indonesia.

The Otoritas Jasa Keuangan (OJK), Indonesia's financial services authority, recognized the sector's potential and, in response, established a regulatory framework for digital banks under POJK Number 12 of 2021. This regulation categorizes digital banks into three primary types: (1) new products from established banks, (2) new business units within parent banks, and (3) new entities designed solely as digital banks. Examples include Livin' by Mandiri and Jenius under the new product category; Blu and Raya as new business units; and fully digital banks like Bank Jago and SeaBank. However, while digital banking in Indonesia offers significant promise, the sector also faces critical challenges. These include regulatory changes, intense competition, cybersecurity risks, and low financial literacy among Indonesia's unbanked population the third largest globally according to the World Economic Forum. With financial literacy at just 40%, as per a 2023 report from EY, there is a clear need for the industry to focus on building trust and education to help customers fully embrace digital banking solutions.

One of the prominent players in the digital banking arena is Allo Bank, established as part of the CT Corpora ecosystem in 2021. Initially known as PT Bank Harda Internasional, Allo Bank was rebranded following acquisition by PT Mega Corpora. Since its relaunch, Allo Bank has gained considerable traction, amassing over five million users by 2022 and securing a 13.12% increase in assets, making it Indonesia's fifth-largest digital bank, although it trails major competitors like SeaBank and Bank Jago. To sustain growth in this competitive market, digital banks must leverage adaptable platform strategies to navigate changing market dynamics. Scenario planning, a strategic planning tool, can help digital banks prepare for potential market challenges, such as technological disruptions, evolving regulations, and shifting customer preferences. This study aims to explore how scenario planning can aid Allo Bank in developing robust digital banking strategies for a future filled with uncertainties.

A PESTLE analysis (Political, Economic, Social, Technological, Legal, and Environmental) will further analyze the external factors shaping the digital banking environment in Indonesia, helping to identify key drivers, challenges, and potential future scenarios. A SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) helps

identify internal capabilities and market position. Scenario planning provides a structured approach to anticipate and prepare for future challenges in the digital banking landscape. Together, these frameworks offer a comprehensive approach to identifying the key opportunities and challenges for digital banks in Indonesia, especially in light of technological disruption, shifting regulatory landscapes, and evolving consumer behavior. Through this approach, the study seeks to recommend strategic actions for Allo Bank to strengthen its position and adapt to the evolving digital banking landscape.

RESEARCH METHODS

This research adopts a qualitative approach, ideal for understanding complex social dynamics and exploring future scenarios. As Creswell (2012) notes, qualitative research allows for in-depth insights into participant perspectives and contextual influences. In this study, scenario planning is central to identify strategic options for digital banking amid Indonesia's evolving market. Following Creswell's model, the research will progress through problem identification, data analysis, and scenario creation, leading to strategic recommendations.

Research Design

The research design of this study being formulated is follows:

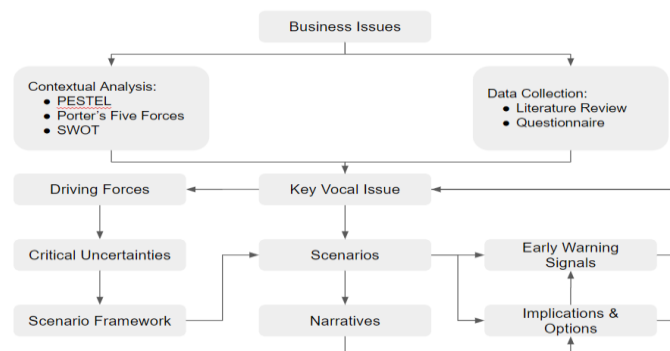


Figure I: Research Design

Data Collection Method

Primary Data: Semi-structured interviews with digital banking professionals in Jakarta will be conducted, focusing on key drivers and uncertainties in digital banking. This method provides insights into industry challenges and emerging trends. Sample questions include: (1) What are the main drivers of digital banking in Indonesia? (2) How do you rate these factors based on uncertainty and impact?. **Secondary Data:** A literature review of academic and industry sources will provide contextual insights, complementing

primary data in the scenario development process.

Data Analysis Method

The study integrates PESTLE and Porter’s Five Forces for macro and competitive analysis, respectively: (1) PESTLE: Assesses political, economic, sociocultural, technological, legal, and environmental influences, contextualizing external factors that shape digital banking. (2) Porter’s Five Forces: Evaluates industry-specific pressures, including buyer and supplier power, threats from substitutes and new entrants, and competitive intensity. Following these analyses, scenario planning will proceed by identifying Key Focal Issues and Critical Uncertainties. A 2x2 scenario matrix will map these uncertainties to produce narratives and implications for strategic planning. Finally, early warning signals will be defined to guide proactive responses to emerging trends. This comprehensive methodology supports adaptive strategy development for Indonesia’s digital banking sector.

RESULTS AND DISCUSSION

This section presents the main findings derived from interviews, and PESTLE, Porter’s Five Forces, and SWOT analyses, identifying the critical factors influencing digital banks in Indonesia, particularly Allo Bank, in formulating effective strategies. Four key components emerged as primary focal issues and drivers: government regulations, customer needs, technological advancements, and market competition. These factors serve as the foundation for developing future scenarios to help Allo Bank navigate challenges and leverage opportunities in the digital banking landscape. Based on the interviews, the key factors that affect the successful implementation of digital banking include:

Tabel 1. The Key Factors that Affect the Successful Implementation of Digital Banking

Factor	Implementation of Digital Banking	Uncertainty Level (1-3)	Impact
Customer Needs	Customers are the main driver in determining the types of features and services needed. This is confirmed by research that shows that the demand for online transactions is increasing (Ettrich et al., 2024)	2	Medium

Business Goals	These factors are more controllable by banks, but it is still important to align business goals with the latest trends and technologies (Ogundipe et al., 2024)	1	Low
Technology Development	Technological developments such as AI, blockchain, and mobile banking services play an important role in the development of more advanced banking features (Nnaomah et al., 2024)	1	Low
Government Regulations	This is the factor with the highest uncertainty because regulations such as from the OJK or BI can delay the rollout of new features (Faj'ri et al., 2024)	3	High

Source: Personal Data Analysis

1. Defining the Key Focal Issue

Indonesia presents a promising landscape for digital banks due to its technological advancements and growing economy. However, the rapid influx of players has led to a saturated market. The main focus of this thesis is to develop strategies for thriving in Indonesia's competitive digital banking sector over the next five years.

2. Defining the Key Driving Forces

Key driving forces identified include technological advancements, such as AI and machine learning integration, alongside shifts in consumer behavior favoring online transactions. These developments enable digital banks to offer personalized services and competitive interest rates. Additionally, government regulations serve as both a barrier and a catalyst for innovation, as highlighted by OJK research (2021). Customer preferences increasingly lean towards mobile banking over traditional transactions like ATM usage.

Table 2. Driving Forces Analysis

Driving Forces	Description
Government Regulation	Government regulations especially from OJK and BI, either push or block innovations in digital banking. Approval is required before launching new features
Technological Developments	The integration of AI, machine learning, and other technologies speeds up service personalization and improves digital banking performance.

Customer Needs	Consumers increasingly prefer digital services, particularly through mobile platforms, driving the need for accessible and user-friendly mobile banking apps.
Market Competition	Intense competition between banks and fintechs, with features like high-interest rates, low transaction fees, and seamless onboarding to attract customers.

Source: Secondary data Analysis

Four key factors drive the development of digital banking in Indonesia. First, government regulation from the Financial Services Authority (OJK) and Bank Indonesia can facilitate or hinder innovation, affecting the speed of product launches. Second, advancements in AI and machine learning enhance service personalization, allowing banks to better meet consumer needs. Third, a shift toward digital services, particularly on mobile devices, increases demand for user-friendly banking apps. Lastly, intense competition among banks and fintechs compels players to offer attractive incentives, such as high interest rates and low fees, driving continuous innovation. Together, these factors highlight how regulation and competition significantly shape the success of digital banking in Indonesia. As observed through various analytical tools such as PESTLE and Porter’s Five Forces, there are several driving forces for a digital banking industry in Indonesia:

a. Government Regulation and Policy

Government regulations are crucial in the Indonesian digital banking landscape. The Financial Services Authority (OJK) oversees all financial transactions, requiring digital banks to register their products to operate legally. Regulatory changes can abruptly halt operations, as seen with TikTok Shop's closure due to Permendag No. 31 of 2023 (source). This highlights the significant impact of government policy on innovation and operational viability in the sector. Regulatory compliance incurs high costs and can slow down technological advancements, making it a critical factor for digital banks like Allo Bank to navigate (Muljawan, 2021).

b. Customer Needs

The increasing internet penetration, now at 79.5%, coupled with the rising influence of millennials and Gen Z, drives the demand for accessible and efficient digital banking services (Aulianur & Purwanegara, 2024). Customers prioritize mobile access and personalized experiences, necessitating continuous market analysis by banks to align their offerings with evolving preferences. Failure to

meet these needs can lead to diminished market share and customer loyalty.

c. Technology and Ecosystem Development

Technological advancements, such as QRIS and eKYC, have propelled digital transaction growth, with a reported 84.5% increase in QRIS usage (source). However, rapid technological changes pose risks, including cybersecurity threats, which surged in recent years, with over 900,000 cyberattacks reported in 2022 (BSSN). The need for significant investment in technology and compliance with regulatory constraints complicates adaptation for digital banks (Kotler, 2018).

d. Competitive Rivalry

The competitive landscape is intensifying, with OJK approving multiple digital banks and established conventional banks enhancing their digital services. This rivalry compels banks to innovate and differentiate their offerings continually. The emergence of fintechs like OVO and GoPay further pressures traditional and digital banks to deliver superior value propositions.

Through a mapping of driving forces based on their level of uncertainty and impact, government regulation emerges as a high-uncertainty factor with significant implications for the industry. In contrast, customer behavior and technology developments are categorized as lower uncertainty factors, allowing for more predictable strategic planning. With that approach, each driving forces are being mapped below:

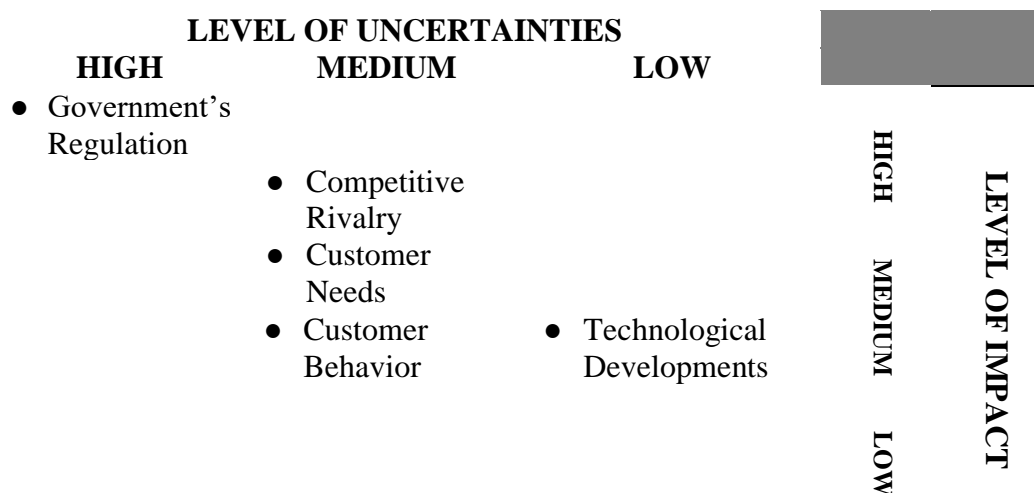
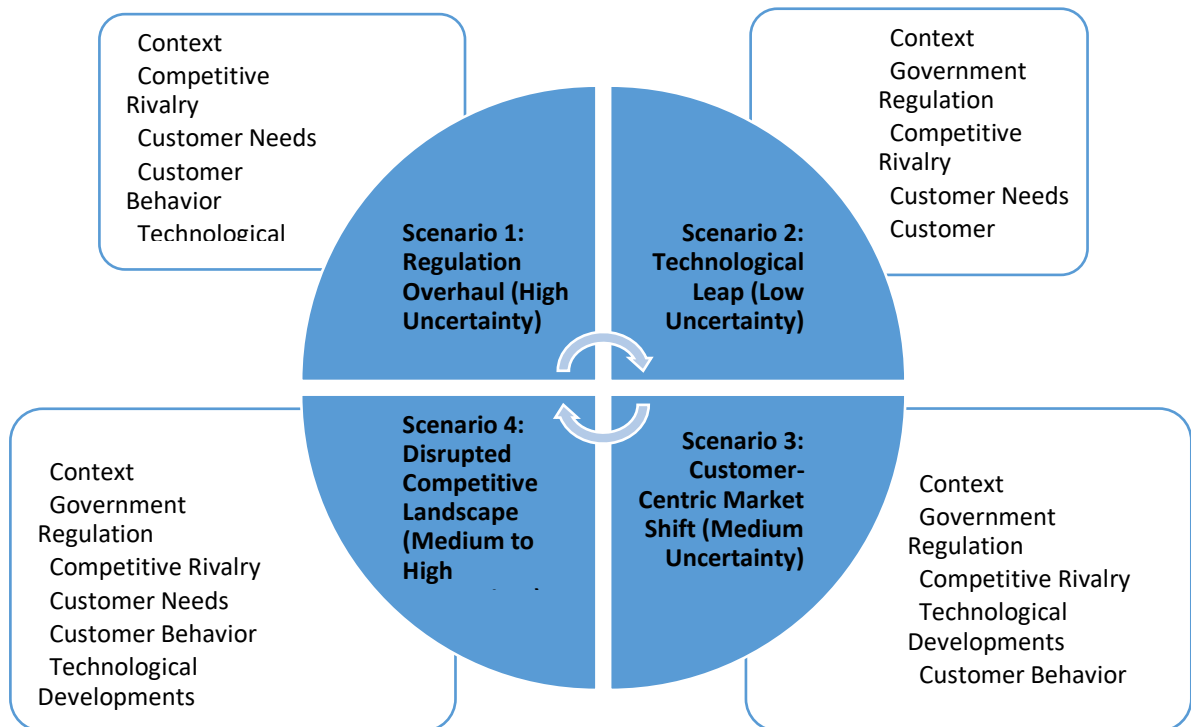


Figure 2. Illustrates the Level of Uncertainty in Various Factors Affecting a Business or Organization

3. Building The Scenarios

To effectively build scenarios based on identified uncertainties, we focus on the

interplay of factors such as Government Regulation, Competitive Rivalry, Customer Needs, Customer Behavior, and Technological Developments. Scenarios provide organizations with a framework to prepare for various future possibilities amid high uncertainty.



Scenario 1: Regulation Overhaul (High Uncertainty)

Context: Increasingly volatile government regulations lead to frequent changes in policies.

Competitive Rivalry: Stricter regulations may push smaller firms out, benefiting larger corporations with robust compliance teams.

Customer Needs: Companies must innovate to meet changing regulatory demands.

Customer Behavior: Customers may prefer businesses demonstrating transparency and adaptability.

Technological Developments: Investment in RegTech and automation becomes essential for compliance.

Key Strategy: Develop flexible business models and invest in compliance technologies to maintain agility in responding to legal changes (Kris Christen, 2004).

Scenario 2: Technological Leap (Low Uncertainty)

Context: Technological advancements are steady and predictable.

Government Regulation: Minimal regulatory changes allow for experimentation with new technologies.

Competitive Rivalry: Healthy competition thrives as innovation differentiates companies.

Customer Needs: Businesses can tailor solutions that enhance convenience and personalization.

Customer Behavior: Customers expect seamless digital experiences.

Key Strategy: Focus on continuous innovation and align technological upgrades with customer preferences (Klimenko, 2024).

Scenario 3: Customer-Centric Market Shift (Medium Uncertainty)

Context: Customer needs evolve due to societal shifts, requiring companies to adapt.

Government Regulation: Moderate regulations focus on sustainability and ethical practices.

Competitive Rivalry: Increased competition as companies strive to meet evolving consumer values.

Technological Developments: Stable advancements enable sustainable solutions.

Customer Behavior: Loyalty hinges on companies reflecting sustainability and social responsibility.

Key Strategy: Integrate ethical values into the business model and prioritize transparency (Vetrivel et al., 2024).

Scenario 4: Disrupted Competitive Landscape (Medium to High Uncertainty)

Context: Rapid technological advancements create industry disruptions.

Government Regulation: Minimal changes allow new entrants to innovate freely.

Competitive Rivalry: Fierce competition from agile startups challenges traditional firms.

Customer Needs: Customers demand cutting-edge solutions and seamless interactions.

Customer Behavior: Increased selectivity and reduced loyalty lead customers to switch brands.

Technological Developments: Disruptive technologies present new opportunities.

Key Strategy: Embrace innovation, invest in digital capabilities, and form partnerships with tech startups (Larsson et al., 2024).

Each scenario highlights interactions among uncertainties in regulation, competition, customer behavior, and technology. By recognizing these potential futures, organizations can develop adaptive strategies that ensure resilience and sustained growth. Preparing for regulatory shifts, leveraging predictable technological advancements, and maintaining customer-centric approaches will enable businesses to thrive in diverse future landscapes.

4. Implications and Options

Each of the four scenarios presents unique challenges and opportunities based on regulatory, competitive, customer behavior, and technological uncertainties. Below is a concise analysis of the implications for each scenario, along with strategic options for organizations.

Table 3. Analysis of the Implications for Each Scenario

Scenario	Implications	Strategic Options
Scenario 1: Regulation Overhaul (High Uncertainty)	<ul style="list-style-type: none"> Regulatory volatility leads to frequent changes. Smaller firms may exit due to inability to adapt. Pressure to innovate in response to new regulations. 	<ul style="list-style-type: none"> Invest in RegTech for compliance. Foster strong government relations. Diversify into stable markets. Maintain an agile, short-term strategy.
Scenario 2: Technological Leap (Low Uncertainty)	<ul style="list-style-type: none"> Technological integration gives competitive advantages. Increased customer expectations from tech advancements. Lower barriers lead to increased competition. 	<ul style="list-style-type: none"> Prioritize continuous R&D investment. Enhance customer experience through innovation. Collaborate with tech firms and streamline operations.
Scenario 3: Customer-Centric Market Shift (Medium Uncertainty)	<ul style="list-style-type: none"> Evolving customer values emphasize sustainability. Need for real-time customer engagement. 	<ul style="list-style-type: none"> Integrate sustainable practices into operations. Build ethical branding focused on social values.

Scenario	Implications	Strategic Options
<p>Scenario 4: Disrupted Competitive Landscape (Medium to High Uncertainty)</p>	<ul style="list-style-type: none"> • Competitive pressure to align with customer expectations. • Startups disrupt traditional business models. • Rapid tech adoption is necessary to maintain market position. • Customers switch quickly to competitors. 	<ul style="list-style-type: none"> • Develop long-term customer relationships. • Adopt a digital-first approach and accelerate innovation. • Partner with or acquire innovative startups. • Embrace agile management to respond to market changes.

Source: Personal Data Analysis

5. Early Warning Signals

Early warning signals are essential indicators that help organizations anticipate changes in the digital banking sector. Key signals include:

- a. **Regulatory Announcements:** New policies from regulatory bodies could indicate shifts in compliance requirements.
- b. **Technological Advancements:** Breakthroughs like blockchain and AI may signal rapid tech adoption.
- c. **Market Entry by New Competitors:** An influx of startups offering innovative solutions suggests a changing competitive landscape.
- d. **Customer Behavior Shift:** Increased demand for mobile-first and personalized banking solutions may necessitate a strategic pivot.
- e. **Cybersecurity Breaches:** A rise in cyber-attacks can prompt urgent investments in security measures to maintain compliance and customer trust.

These signals can help digital banking firms proactively adjust strategies and enhance compliance and technology adoption.

6. Business Solution Summary

To effectively navigate Indonesia's regulatory environment over the next five years, the company must prioritize monitoring and adapting to government regulations. Key strategic steps include:

- a. **Dedicated Regulatory Compliance Team:** Establish a specialized team to monitor regulations, conduct audits, and provide guidance on compliance (Chukwurah & Aderemi, 2024).
- b. **Regulatory Foresight Mechanism:** Invest in predictive analytics and market intelligence to identify emerging policy trends and forecast potential regulatory changes (Capatina et al., 2024).
- c. **Stakeholder Collaboration:** Build strong relationships with government agencies and industry associations to better understand the regulatory landscape and influence policy (Hendra et al., 2024).
- d. **Risk Management Framework:** Develop a robust framework to assess regulatory risks and create mitigation strategies, ensuring operational flexibility (Adeniran et al., 2024).
- e. **Leverage Technology for Compliance:** Utilize RegTech solutions to automate compliance processes and receive real-time updates on regulations (Balakrishnan, 2024).
- f. **Regular Scenario Planning:** Incorporate scenario planning to prepare for various regulatory futures, refining strategies based on potential outcomes (Frank et al., 2024).
- g. **Agility in Operations:** Design flexible business processes and supply chains that can quickly adapt to regulatory changes (Fasnacht & Proba, 2024).
- h. **Stay Informed through Industry Networks:** Engage with industry networks to gain insights into upcoming regulatory changes, enhancing the company's strategic preparedness (Jalali et al., 2024).

Here is the table summarizing the business solution structure based on government regulation scenarios over the next five years:

Table 4. Business Solution Structure based on Government Regulation

Step	Objective	Implementation Steps	Timeframe
Establish a Regulatory Compliance Team	Monitor and ensure compliance with government regulations	● Recruit and establish the compliance team	Year 1
		● Conduct audits of current regulatory measures	
		● Monitor regulatory changes	
		● Report to management	

Step	Objective	Implementation Steps	Timeframe
Develop a Regulatory Foresight Mechanism	Predict future regulatory changes	● Invest in predictive analytics tools	Year 1-2
		● Analyze political, economic, and environmental trends	
		● Identify the impact of regulatory changes on business operations	
Engage in Stakeholder Collaboration	Build strategic partnerships with government and associations	● Increase dialogue with government and regulatory bodies	Year 1-5
		● Participate in industry policy discussions	
		● Provide policy recommendations	
Implement a Risk Management Framework for Regulatory Changes	Mitigate risks posed by regulatory changes	● Conduct regulatory risk assessments	Year 1-5
		● Diversify products/markets	
		● Develop risk mitigation strategies for regulatory exposure	
Leverage Technology for Compliance	Automate compliance processes using technology	● Invest in RegTech to automate regulatory reporting	Year 2-3
		● Integrate real-time updates to ensure compliance	
		● Automate regulatory monitoring	
Conduct Regular Scenario Planning	Prepare the company for various regulatory scenarios	● Develop best-case, worst-case, and likely scenarios	Year 2-5
		● Assess the impact of each scenario	
		● Review and update scenarios regularly	
Build Agility into Business Operations	Increase adaptability to regulatory changes	● Design flexible supply chains	Year 2-5
		● Create modular product designs for rapid changes	

Step	Objective	Implementation Steps	Timeframe
		<ul style="list-style-type: none"> Train employees for quick responses to regulatory shifts 	
Stay Informed through Industry Networks	Gain early insights on regulatory changes	<ul style="list-style-type: none"> Join industry networks and think tanks 	Year 1-5
		<ul style="list-style-type: none"> Participate in regulatory forums 	
		<ul style="list-style-type: none"> Leverage insights for strategic planning 	

Source: Personal data analysis

CONCLUSIONS AND RECOMMENDATIONS

This study highlights key drivers and challenges in Indonesia's digital banking ecosystem, shaped by technology, consumer behavior, competition with fintech, and regulatory influences. Allo Bank faces four possible scenarios: Regulated Prosperity, Technological Boom, Consumer Power, and Competitive Disruption each impacting its strategy. To remain competitive, Allo Bank should focus on tech innovation, regulatory alignment, and customer-centric services, with strategic partnerships with fintech as a buffer against market disruptions. Key recommendations include bolstering R&D, talent development, data security, regulatory engagement, and market research to adapt flexibly. A five-year implementation plan is advised, with specific actions for each scenario to ensure resilience and growth.

RECOMMENDATIONS

Here are more detailed strategy recommendations related to things that need to be improved, improved, and developed by Allo Bank in the future:

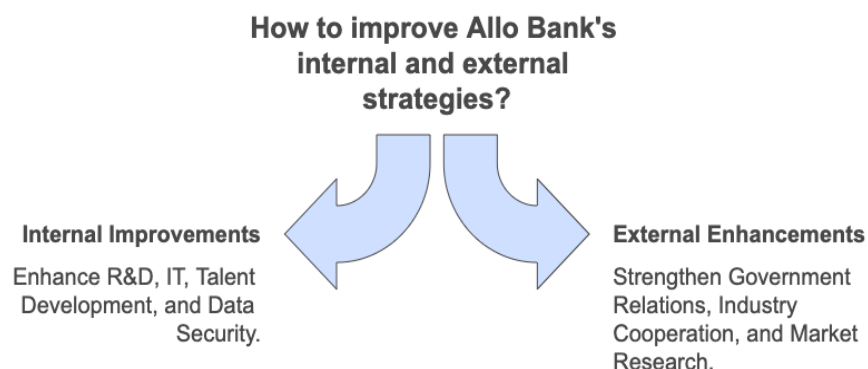


Figure V. Improve Allo Bank's Internal and External Strategies

1. Internal and External Recommendations for Allo Bank

a. Internal:

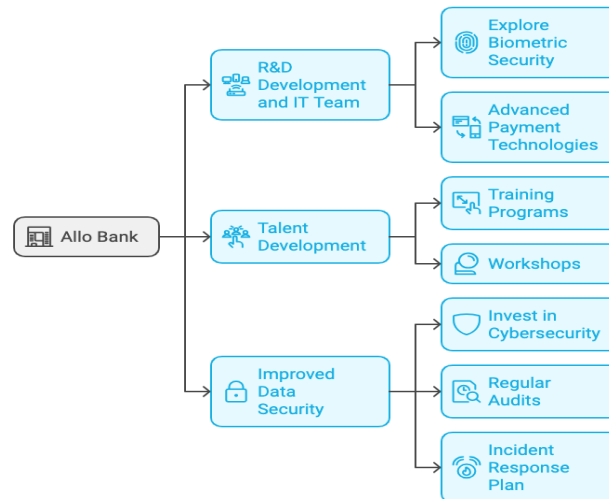


Figure VI. Strutucre Improve Allo Bank's Internal Strategies

- 1) R&D Development and IT Team: Further development of the R&D and IT division is essential to prepare for future technologies, such as the development of biometric security features and advanced payment technologies.
- 2) Talent Development: Talent development in the areas of business strategy and technology should be a priority to increase productivity and innovation within the company.
- 3) Improved Data Security: Increasing the level of data security is crucial to avoid cyberattacks, as mentioned in some scenarios.

b. External:

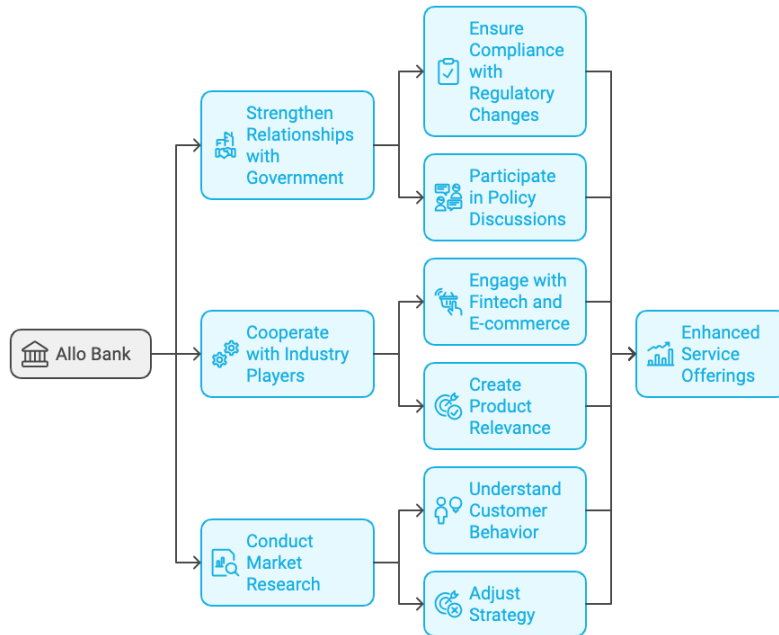


Figure VII. Structure Improve Allo Bank's External Strategies

- 1) Relationship with Government: Strengthen relationships with regulators such as OJK to ensure compliance with regulatory changes and active involvement in policy discussions.
- 2) Cooperation with Other Industry Players: Engaging players across industries such as fintech and e-commerce to create product relevance.
- 3) Market Research and Customer Behavior: In-depth research related to customer needs and digital market trends will help in adjusting Allo Bank's strategy.

2. Implementation Plan (5 Years)

The following table classifies strategies internally and externally, and provides a 5-year timeframe for their implementation.

Table 5. Classifies Strategies Internally And Externally Implementation Plan (5 Years)

Strategy	Duration	Period	Information
R&D Development and IT Team	Internal	1-3 Years	Focus on digital technology development and data security
Talent Development	Internal	1-2 Years	Training and improvement of HR competencies

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Improved Data Security	Internal	1-3 Years	Implement more advanced security technologies
Relationship with the Government	External	1-5 Years	Maintain good relations with regulators
Cross-Industry Cooperation	External	2-4 Years	Collaboration with fintech and e-commerce for expansion
Market and Customer Research	External	1-2 Years	Research on consumer behavior for product improvement

Source: Personal data analysis

In the digital banking ecosystem in Indonesia, there are several key driving factors and challenges faced. These driving factors include technological advancements, changing consumer behavior, the growing need for digital services, and fierce competition between traditional banks and fintech companies. Government regulation also plays an important role as a driver and challenge, as regulatory uncertainty can slow down innovation. Another challenge is cybersecurity threats and imbalances in technological infrastructure, especially in areas that have not been reached by technology to the maximum.

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