

7 lessons to learn from DBS' digital roadmap 2025

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Introduction

DBS's technology strategy prioritizes AI, cloud computing, and cybersecurity, reflecting its broader push toward digital transformation. Rather than incremental updates, the bank is undergoing a structural shift that affects key areas such as customer engagement, cost management, and risk mitigation. However, this approach also presents challenges, including regulatory complexities, cybersecurity risks, and the need for continuous technological adaptation in an evolving financial landscape.

The bank employs ~41,000 employees across its global operations, playing a crucial role in driving the bank's digital strategy. The bank reported a total income of USD 16.72 billion in 2024, translating to a revenue per employee of USD 407,805, reflecting strong operational efficiency. A substantial portion of its workforce is dedicated to technology and innovation with more than 8,500 software engineers and more than 1,000 data and analytics experts.

Over the past few years, DBS has accelerated AI adoption, deploying more than 1,500 AI models to enhance decision-making, automate risk management, and deliver hyper-personalized customer experiences. Cloud computing now powers 90% of the bank's applications and workloads, while blockchain is being integrated into digital asset transactions.

Key findings

1. Financial performance - DBS's total income grew 10.6% YoY, reaching USD 16.72 billion, driven by 5.7% growth in net interest income (NII) and 20.8% growth in non-interest income.
2. AI and cloud expansion - The bank has deployed more than 1,500 AI models across more than 370 use cases, generating USD 562 million in economic value. AI-powered financial nudges have driven a 40% increase in digital product adoption rates.
3. Blockchain and digital assets - DBS is integrating blockchain into trade finance, cross-border settlements, and asset tokenization, improving transaction efficiency while managing regulatory compliance risks.
4. Cybersecurity & risk management - Real-time AI fraud detection has led to a 60% reduction in fraudulent activities, strengthening customer trust and regulatory compliance.
5. Digital workforce development - The bank has trained more than 10,000 employees in AI and data analytics, ensuring that its workforce is equipped for the future of banking.
6. Competitive challenges - While DBS leads in AI adoption, it faces regulatory scrutiny, cybersecurity threats, and competition from fintechs and digital-native banks.

Financial Performance

Total Income

DBS's commitment to digital innovation has translated into record financial performance. The total income for the bank grew by 10.6% from USD 15.12 billion in 2023 to USD 16.72 billion in 2024. The growth was driven by:

1. Net interest income grew by 5.7% from USD 10.23 billion to USD 10.82 billion.

2. Non-interest income grew by 20.8% from USD 4.89 billion to USD 5.9 billion.
 - a. Strong wealth management inflows as investor sentiment improves.
 - b. Expansion in card fees by 18.8% from USD 783 million to USD 930 million due to higher spending.
 - c. Growth in loan-related fees by 16.2% from USD 415.5 million to USD 483 million as lending activity remained strong

Net Interest Income (NII)

NII grew by 5.7% from USD 10.23 billion in 2023 to USD 10.82 billion in 2024. The net interest margin saw a slight decline from 2.15% to 2.13%. This is due to a shift in the bank's asset mix and increased deposit competition, leading to higher funding costs. Fixed-rate asset replacement helped limit the decline.

Loan Growth & Asset Quality

The portfolio for the bank grew by 3.5% from USD 312.12 billion in 2023 to USD 322.95 billion in 2024. The growth was driven by institutional banking loans, with corporate loans up 3% and trade loans up 12%. On the other hand, consumer loans were flat due to mortgage competition and unattractive pricing.

Effective risk management kept non-performing loans (NPLs) at 1.1% despite an increase in non-trade corporate loan repayments.

Expense & Cost Management

Total expenses grew by 8.8% from USD 6.22 billion in 2023 to USD 6.76 billion in 2024.

1. Expansion in wealth management and digital banking led to a rise in staff-related expenses.
2. Tech investment in AI, data analytics, and cybersecurity contributed to higher operational costs.
3. The cost-to-income ratio was stable at 40%. Despite expense growth, the bank maintained efficiency, keeping costs aligned with revenue expansion.

AI and Cloud

DBS has embedded artificial intelligence across its business functions, deploying over 1,500 AI models in more than 370 use cases and generating USD 562 million in economic value. This is more than double the impact of the previous year, underscoring AI's increasing role in revenue generation and cost optimization. The bank's focus on AI is not just about automation; it is about enhancing decision-making, improving risk assessment, and boosting customer engagement.

1. AI-powered financial nudges have led to customers:
 - a. Saving twice as much compared to those not using AI recommendations
 - b. Investing five times more due to hyper-personalised financial planning insights
 - c. Securing insurance three times more frequently, driving higher revenue from insurance premiums.

- d. These AI-driven interactions contributed to a 40% increase in digital product adoption rates.
2. Fraud detection capabilities have been significantly enhanced through network graph analysis, which scans millions of transactions daily, identifying potential fraud with unprecedented accuracy. Real-time AI fraud detection has led to a 60% reduction in fraudulent activities, ensuring stronger customer trust and regulatory compliance.

At the foundation of this AI-driven approach is a robust hybrid cloud infrastructure that hosts 90% of DBS's applications and workloads. By migrating to a cloud-native environment, the bank has achieved greater scalability, reduced IT costs, and achieved faster deployment of digital services. The shift to the cloud is not just a technical upgrade but a strategic move to enable agility in launching new products while keeping infrastructure costs under control.

Blockchain and Digital Assets

Unlike many financial institutions that have taken a cautious approach to blockchain, DBS has positioned itself as a leader in institutional blockchain adoption. The bank is integrating blockchain across multiple domains, including asset tokenization, trade finance, and cross-border settlements.

1. DBS token services - Launched to help institutional clients tokenize financial assets, improving liquidity and investment efficiency.
2. Smart contracts for trade finance - Automated execution of financial agreements has cut processing time by 70%, streamlining cross-border transactions.
3. DBS has also expanded into crypto options trading and structured notes. While this remains a niche market, the ability to monetize blockchain-based financial instruments presents an opportunity for DBS to differentiate itself from traditional competitors.
4. On the risk side, introducing on-chain surveillance mechanisms helps manage fraud in digital transactions, ensuring that the expansion into blockchain does not expose the bank to excessive regulatory or reputational risks.

The business implications of these blockchain initiatives are clear: early adoption allows DBS to capture institutional demand for digital assets while establishing a robust framework for risk mitigation. However, scalability remains a challenge as regulatory uncertainty continues to shape the future of digital assets in banking.

Central Bank Digital Currencies (CBDCs) and Digital Payments

1. DBS is collaborating with the Monetary Authority of Singapore (MAS) on pilot CBDC projects.
2. Potential for instant, low-cost cross-border transactions using CBDCs instead of SWIFT payments.
3. Partnerships with ASEAN regulators to establish a regional blockchain-based settlement network.

Cybersecurity and Fraud Prevention

With digital banking becoming the norm, cybersecurity is not just an IT concern but a core business issue. DBS has proactively introduced self-managed security tools, allowing customers to lock accounts, block transactions, and file disputes in real-time. Over 1.5 million customers actively use these security features to lock accounts and manage fraud risks.

DBS has also enhanced its AI-driven cybersecurity measures:

1. AI-powered threat detection - Real-time AI scanning detects more than 10,000 fraud attempts per second, blocking threats before they escalate.
2. Biometric authentication - Multi-factor authentication using fingerprint and facial recognition has significantly reduced identity fraud cases.
3. Collaboration with regulatory bodies - DBS works closely with financial regulators to ensure compliance with cybersecurity mandates, positioning itself as one of the safest banks in Asia.

For DBS, cybersecurity is not just about risk prevention – it is also about preserving digital revenue streams. A single cybersecurity breach can lead to regulatory fines, reputational damage, and loss of customer confidence. By integrating AI-driven threat detection and real-time fraud monitoring, the bank is ensuring that its digital expansion is backed by a strong security foundation.

Building a Digitally Skilled Workforce

DBS's digital strategy goes beyond technology - it prioritizes its people.

1. AI-driven employee training:
 - a. Personalized learning paths using AI-powered DBS Learning Hub.
 - b. Over 10,000 employees are trained in AI and data analytics.
2. Workforce augmentation & job redesign:
 - a. Transitioning employees from manual data entry roles to AI-driven decision-making.
 - b. AI-powered HR analytics for predicting workforce skills gaps and recommending upskilling initiatives.

Digital Banking and Financial Inclusion

Beyond technology, DBS has recognized the economic potential of financial inclusion in ASEAN and India. Expanding access to digital financial services, the bank is tapping into underserved markets while strengthening its Southeast Asian position.

1. USD 750 million in loans has been disbursed to low-income individuals in Indonesia, demonstrating DBS's commitment to expanding its lending portfolio while addressing financial inclusion challenges.
2. USD 375 million in unsecured loans has been provided to micro, small, and medium enterprises (MSMEs), enabling business growth and strengthening long-term customer relationships.
3. Cross-border QR payment volumes have tripled, allowing seamless cross-border transactions and expanding revenue from digital payments.

These initiatives serve two purposes: expanding the customer base and driving transaction-based revenue growth. The real opportunity for DBS lies in converting these new customers into long-term digital banking users by offering bundled products, credit-building solutions, and AI-powered financial advisory services.

Risk Management

Looking ahead, DBS's strategy for 2024 focuses on balancing aggressive technological advancements with strong risk governance. The bank is implementing a Gen AI playbook and a cross-functional AI governance committee, ensuring that its AI applications remain transparent and responsible.

At the same time, capital management remains a priority. DBS has launched a USD 2.25 billion share buyback program to optimize shareholder value while maintaining strong dividend growth. This signals a commitment to returning capital to investors while funding continued technological investments.

DBS is also strengthening its technology resilience roadmap, ensuring that as the bank scales its AI, cloud, and blockchain initiatives, it maintains a stable and secure banking infrastructure. System downtime and technological disruptions can erode customer confidence, making resilience a critical factor in DBS's digital success.

Regulatory Scrutiny on AI and Blockchain Adoption

DBS's aggressive digital transformation strategy comes with regulatory challenges, especially in AI-driven credit assessment and blockchain-based financial services.

1. AI regulations - The Monetary Authority of Singapore (MAS) has issued guidelines on the responsible use of AI in banking, requiring financial institutions to ensure transparency, accountability, and fairness in AI decision-making. DBS must continuously update its AI governance frameworks to align with these evolving regulations.
2. Blockchain compliance risks - With the rise of Central Bank Digital Currencies (CBDCs) and tokenized financial products, regulators are tightening compliance requirements around anti-money laundering (AML) and know-your-customer (KYC) standards. DBS's expansion into digital asset trading and blockchain-based transactions needs to be carefully aligned with these new global compliance frameworks.

DBS's Competitive Edge in Digital Banking

DBS is integrating AI across its customer journey, expanding into digital assets, and fortifying cybersecurity. The bank is setting a precedent for how financial institutions should approach digital transformation.

The business impact of these initiatives is evident. AI is driving higher product adoption rates, cloud migration is reducing operational costs, and digital lending is expanding the bank's revenue base. However, the challenge lies in execution. The success of DBS's digital

strategy will depend on how well it manages AI-related risks, regulatory scrutiny in blockchain, and cybersecurity threats.

Conclusion

DBS's AI-driven, cloud-enabled, and blockchain-integrated approach has significantly advanced digital banking, influencing industry trends in innovation and efficiency. However, the bank continues to face challenges, including regulatory scrutiny, cybersecurity risks, and increasing competition from digital-native financial institutions.

To maintain its dominance, DBS should:

1. Expand its AI governance framework to address regulatory concerns on AI decision-making.
2. Strengthen cybersecurity measures to prevent sophisticated AI-driven cyber threats.
3. Increase focus on investment banking advisory to counteract the decline in IPO and M&A activity.
4. Continue growing in digital lending and wealth management, as fee-based income remains a key driver of profitability.
5. Enhance embedded finance partnerships, allowing third-party platforms to integrate DBS banking services via APIs.

With a clear vision and continued investments in cutting-edge technology, DBS is well-positioned to lead the next phase of digital banking transformation in Asia and beyond.

Innovating experiences
