Shaping Banking's Next

Infosys® Finacle

Banking Trends
for 2025 and Beyond

Contents

Preface

The banking industry has been balancing disruption and opportunity for several years now, and the pace of change shows no signs of slowing as we move into 2025 and beyond.

Banks reached a combined revenue of $7 trillion and net income of $1.1 trillion, with healthy capital (12.8 percent CET1) and liquidity (77.2 percent) positions in 2023. Yet this stability coexists with mounting pressures: while emerging challengers make further inroads, specialized competitors continue to chip away at profitable niches such as private credit, payments, and wealth management. Regulators worldwide are introducing more stringent mandates that demand ongoing investment. Meanwhile, costs remain elevated due to higher compensation and the need for technological advancements.

Amidst these dynamics, market skepticism is palpable. Global banking's price-to-book ratio hovers at 0.9—one of the lowest among major industries—signaling investors' skepticism about the sector's ability to generate long-term economic value. Infosys Finacle-Qorus survey further suggest that consolidation will accelerate: 70 percent of banking executives predict a major wave of industry consolidation by 2030, and an equal percentage believe non-incumbent players could capture over 30 percent of the consumer segment.

Yet, this environment also holds promise. BCG estimates at least $7 trillion in additional value could be created with bolder strategies for customers and society, capitalizing on projected growth in the coming five years. Credit quality is expected to be higher and noninterest income will continue to emerge as a potential bright spot for future revenue growth in 2025. Emerging technologies like AI and cloud are expected to catalyze accelerated technology modernization. Industry leaders believe a comprehensive transformation across business models, customer engagement, operations, and technology is key to staying relevant.

This report identifies nine key trends that will continue to shape the future of banking, spanning technology, business strategy, and societal imperatives. These trends provide a roadmap for financial institutions aiming to leap ahead in 2025 and beyond:

1. Shaping Banking's Next Business Models

In 2025, banks will look to further capitalize on 3 business models - digital-only propositions, embedded banking, and marketplaces. Digital-only propositions are expected to expand as new and incumbent banks continue to create fully digital offerings leveraging advanced ecosystems for seamless onboarding, personalized financial management, and real-time support. At the same time, embedded banking will scale expansion beyond payments, into credit, insurance, and investment services. The adoption of embedded financial services among businesses will further accelerate. Banks are also set to lead the development of marketplaces, offering a blend of financial and non-financial services that foster deeper customer loyalty and lifetime value.

2. Shaping Banking's Next Customer Engagement

Customer engagement is evolving rapidly in response to changing demographics and technological capabilities. Banks will further tap underserved segments providing tailored offerings leveraging appropriate delivery channels and ecosystems. Banks will need to keep track of emerging channels that are becoming mainstream in their regions to reimagining customer engagement across the stages of onboarding, conversations, selling and servicing. Furthermore, hyper-personalization powered by AI will continue to take center stage, with banks using real-time data to deliver deeply contextualized and seamless experiences across digital and physical touchpoints.

3. Shaping Banking's Next Operational Models

Digital operational resilience is a priority as banks intensify investments in systems capable of mitigating cyber and systemic risks. The pressure on operational efficiency continues to mount on incumbent banks chasing the milestone of cost-to-income ratios below 40% with next generation processes and technologies. Ecosystem process agility is another key area, as banks enhance collaboration with fintechs and third-party providers through API-enabled ecosystems to improve flexibility and innovation.

4. Shaping Banking's Next with ESG

The banking industry's collective commitment towards climate finance will see continued focus and investments, with banks expanding portfolios of green bonds and sustainable finance products. Banks will need to continue monitoring and make progress across global frameworks that are driving the need for comprehensive ESG approach. 2025 will see growth in the proportion of banks forming partnerships to create ESG ecosystems that include carbon offset marketplaces and impact measurement platforms, advancing both environmental and social goals.

5. Shaping Banking's Next with Data and AI

Investments in scalable, cloud-native data platforms as foundation for AI-led initiatives and compliance will see continued growth in 2025 and beyond. While banks explore Predictive AI and pilot Generative AI across customer service, product design, and operational efficiencies, Agentic AI, with its autonomous decision-making capabilities, is being deployed across areas like fraud prevention and compliance. Meanwhile, ethical AI continues to gain prominence, as banks establish governance frameworks to ensure fairness, transparency, and accountability in AI systems.

6. Shaping Banking's Next with Cloud

Banking executives are increasingly focused on ROI and FinOps practices to optimize cloud costs and ensure measurable returns. Hybrid cloud strategies will continue to gain traction, offering a blend of public and private cloud benefits for enhanced flexibility and security. Furthermore, banks are set to scale adoption of advanced tech stacks, including multi-cloud solutions with native integrations, to power next-generation workloads.

7. Shaping Banking's Next with Advanced Architecture

Modern architecture will continue to be the pillar of progress. Headless architecture, which decouples front-end and back-end systems, is enabling banks to innovate at speed and scale. APIs and event-driven architectures are expanding real-time capabilities for seamless integration and responsiveness. In 2025, banks will double down on Zero Trust and Security by Design to fortify their defenses against evolving threats.

8. Shaping Banking's Next with Security and Privacy Tech

Security remains a top priority as banks face increasing cyber threats. The cybersecurity mesh is emerging as a flexible, integrated approach to connect disparate systems into a unified security framework. This approach enhances banks' ability to detect, respond to, and mitigate risks in a dynamic threat landscape. Privacy-enhancing technologies are becoming essential to building trust in the digital age. Homomorphic encryption is gaining traction, enabling secure computation on encrypted data without exposing sensitive information. Federated learning is another area of growth, allowing collaborative AI model training across institutions while maintaining data privacy and security.

9. Shaping Banking's Next with Edge Computing and Post-Quantum Cryptography

Lastly, emerging technologies are set to revolutionize banking in unexpected ways. Edge computing is gaining momentum, enabling faster decision-making through localized data processing in payments and IoT-driven services. Banks are exploring quantum computing and post-quantum cryptography to future-proof security against next-generation computational threats.

The banking industry is poised for significant evolution, with progressive institutions leading the way by embracing these transformative trends in 2025 and beyond. By scaling next-generation business models, redefining customer engagement, optimizing operations, and adopting cutting-edge technologies, banks can not only overcome challenges but also unlock unprecedented opportunities. We hope this report provides a comprehensive benchmark to your bank's strategies in navigating disruption and opportunities in 2025 and beyond.

01. Shaping Banking's Next Business Models

The banking industry is facing a pivotal moment in its evolution today. In 2023, global banks generated a staggering $7 trillion in revenue and $1.1 trillion in net income, boasting robust levels of capital and liquidity. Despite this financial strength, a price-to-book ratio of 0.9—the lowest across all industries—reveals the market's skepticism about future value creation. The message is clear: to unlock the full potential of their balance sheets and regain investor confidence, banks must transcend traditional paradigms and embrace new business models tailored to the digitally driven, customer-centric era.

The transformation underway is not about minor adjustments or tactical improvements. Rather for some years now, it has demanded a fundamental realignment of how banks integrate into daily life, how they compete through ecosystem participation, and how they differentiate themselves with technology-enabled, data-rich offerings. Banks that embrace these shifts can reclaim growth, realize higher profitability, and capture a share of the estimated $20 trillion value creation opportunity as the sector's valuations revert to historical levels. Yet, bridging this gap demands strategic vision, organizational agility, and the courage to co-innovate with partners and customers.

Among the emerging business models, three stand out: digital-only propositions that redefine customer access and experience; embedded banking and Banking-as-a-Service (BaaS) models that integrate finance seamlessly into third-party platforms; and marketplaces that orchestrate a wide array of products and services. Each represents a critical pillar in the future of banking—together, they can reshape the industry, refine financial value chains, and deliver a more dynamic and resilient financial services ecosystem.

Industry Trendline

Over 400 digital-only banks globally backed by ~ $32 billion in venture capital funding disrupted traditional models in the past decade

Embedded finance revenues will surge 148%, from $92 billion in 2024 to $228 billion by 2028

Cross-industry platforms will reshape banking into integrated experiences, with McKinsey highlighting five growth arenas, including BaaS and investment advisory

Banks to strike balance between innovation and optimization with Cloud in 2025

Digital-only proposition: Experimentation to execution

Embedded banking: Disruptive concept to a core growth driver

Marketplaces: Banks as service providers to ecosystems orchestrators

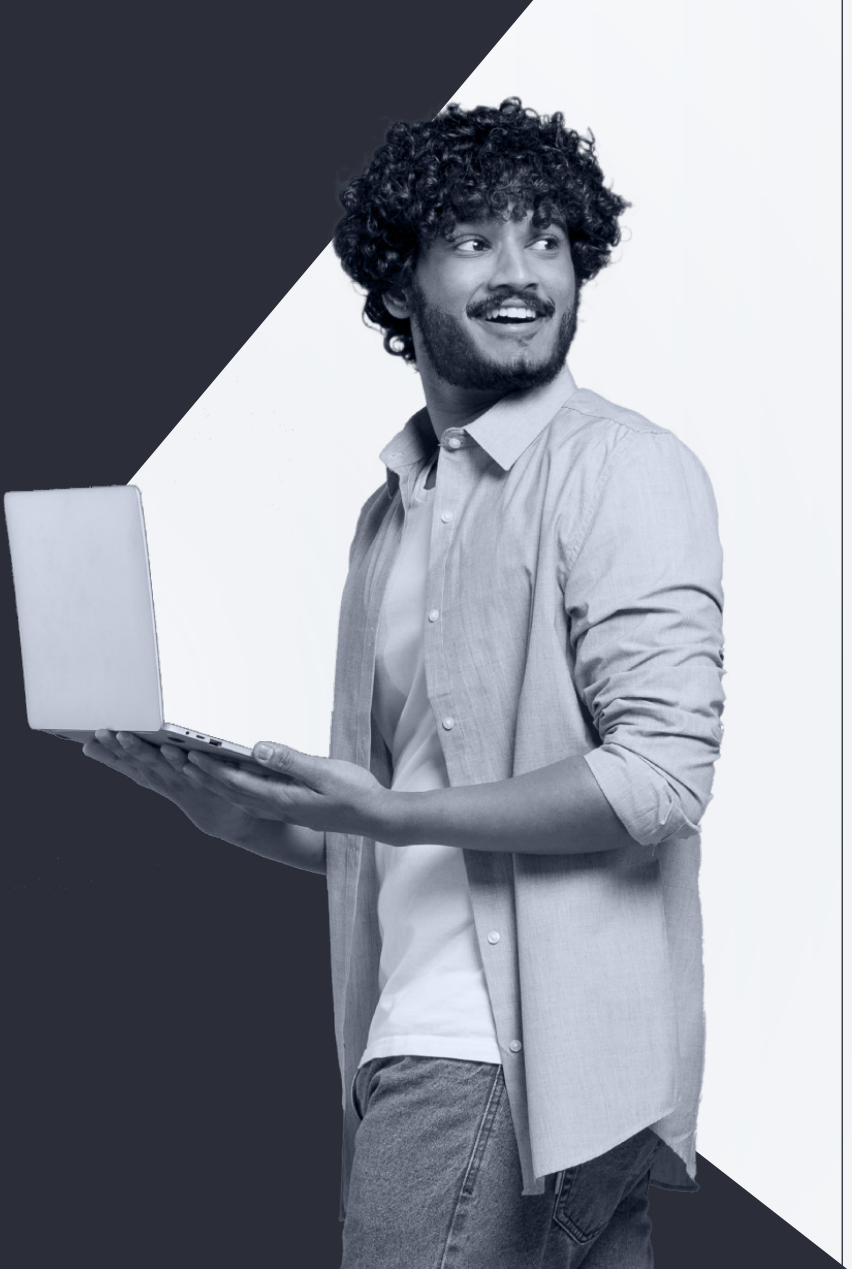
1.1 Digital-Only Propositions

The past decade has seen a surge of digital-only banks, with around 400 licensed neobanks launched globally. These institutions, backed by approximately $32 billion in venture capital funding from 2017 to 2021, disrupted traditional banking models by prioritizing customer experience, scalability, and innovation. However, the era of novelty is transitioning into one of accountability, where digital banks must deliver profitability and sustainable growth.

In 2025 and beyond, the digital-only proposition will continue to evolve from experimentation to execution. Leading digital banks are focusing on leveraging economies of scale to enhance profitability per customer. By adopting cloud-native architectures and modular systems, these banks can streamline operations, reduce costs, and achieve profitability boost. Additionally, they are expanding their presence across multiple markets, transitioning from localized players to regional champions capable of replicating success across geographies.

Digital-only banks are also diversifying their revenue streams by productizing their technological capabilities, operational expertise, and data assets. Offerings like Banking-as-a-Service (BaaS) and non-financial services are becoming critical components of their strategy. This shift enables them to embed their solutions into broader ecosystems, such as e-commerce or healthcare, effectively creating new touchpoints and expanding their customer base.

However, challenges persist. Many neobanks struggle with profitability as investor sentiment shifts. To thrive, digital-only banks must optimize customer acquisition costs, refine their monetization strategies, and embed emerging technologies like generative AI and Web3 to stay ahead of traditional players closing the digital gap. The future belongs to those that balance scale, innovation, and sustainability.



Case-in-Point

RCBC Pulz was conceived to provide underbanked and unbanked Filipinos belonging to the mass affluent segment an access to a digital banking solution that corresponded to their need for convenient access to high-quality banking. By transforming RCBC Pulz into a digital concierge, this ensured that mass affluent Filipinos had a hyper personalized experience. Since its relaunch as RCBC Pulz, the digital solution saw a 27% surge in transaction volume and 34% increase in transaction value. For interbank transactions powered by Instapay, RCBC Pulz saw a 33% increase in transaction value and a 31% increase in transaction volume.

Game on Deposit is a one-of-its-kind gamified fixed deposit by Liv, which is a digital-only bank powered by Emirates NBD, a leading banking group in MENAT. The innovative deposit allows customers to secure the market's highest interest rate by predicting the winners of sports tournaments. To participate, customers only need to select the team they think will win the tournament while opening the deposit. If their selected team wins, they earn 10% p.a. interest. If it reaches the semi-finals, they receive 5% p.a. interest. If neither, they still earn a 2.3% p.a. interest.

1.2 Embedded Banking / Banking-as-a-Service (BaaS)

Embedded banking has progressed from a disruptive concept to a core growth driver for the financial services industry. By 2025, embedded finance revenues are projected to grow 148%, from $92 billion in 2024 to $228 billion by 2028. This trajectory underscores the pivotal role of embedding financial services into third-party platforms, from e-commerce marketplaces to ERP systems.

Banks that have already established embedded offerings must now scale and diversify. The focus is no longer solely on enabling payments or accounts but expanding into credit, insurance, and investment services seamlessly woven into everyday digital experiences. Consumer credit is increasingly shifting toward embedded lending models, driven by frameworks like PSD3 in Europe, India's OCEN, and co-lending regulations that reduce underwriting costs and accelerate loan delivery.

Digital public infrastructure plays a vital role in enabling embedded banking. Platforms such as India's UPI and Singapore's digital identity frameworks reduce onboarding friction and provide compliant data-sharing channels.

Multi-rail payment systems are gaining prominence as embedded finance providers integrate multiple open banking APIs to enable seamless and cost-efficient transactions, especially for bulk disbursements and cross-border payments. The adoption of embedded financial services among businesses is further accelerated by comprehensive product offerings, including consolidated APIs for international payments and cloud-based accounting solutions.

To differentiate, banks must evolve from simple integrations to building composable, event-driven architectures that enable scalability and real-time responsiveness. Advanced analytics and AI are crucial for delivering personalized, scenario-based solutions, such as point-of-sale financing or SME credit. Banks must also continue to refine their partner ecosystems, using data insights to maximize profitability and deepen customer engagement.

The regulatory landscape remains complex. Sponsor banks face increasing scrutiny, with compliance challenges often becoming bottlenecks. Successful banks will address these challenges by strengthening their governance frameworks, enhancing cybersecurity, and prioritizing partner onboarding processes. Embedded banking offers vast growth potential, but only for those willing to invest in advanced infrastructure, seamless customer experiences, and a robust ecosystem strategy.

Case-in-Point

UnionBank of the Philippines (Samsung Finance+): Entered the Buy Now Pay Later (BNPL) space, offering instant gadget loans with a fully digital experience.

Kasikorn Line, Thailand, a joint venture between Kasikorn Bank and Line, launched a range of banking services that are offered via messaging app LINE BK.

1.3 Marketplaces

Marketplaces represent a transformative business model where banks transition from service providers to orchestrators of ecosystems that cater to a broad range of customer needs. In 2025 and beyond, cross-industry platforms will dominate, breaking down traditional value chains and creating integrated experiences. Banks that continue to embrace marketplaces can unlock higher margins, new revenue streams, and enhanced customer loyalty.

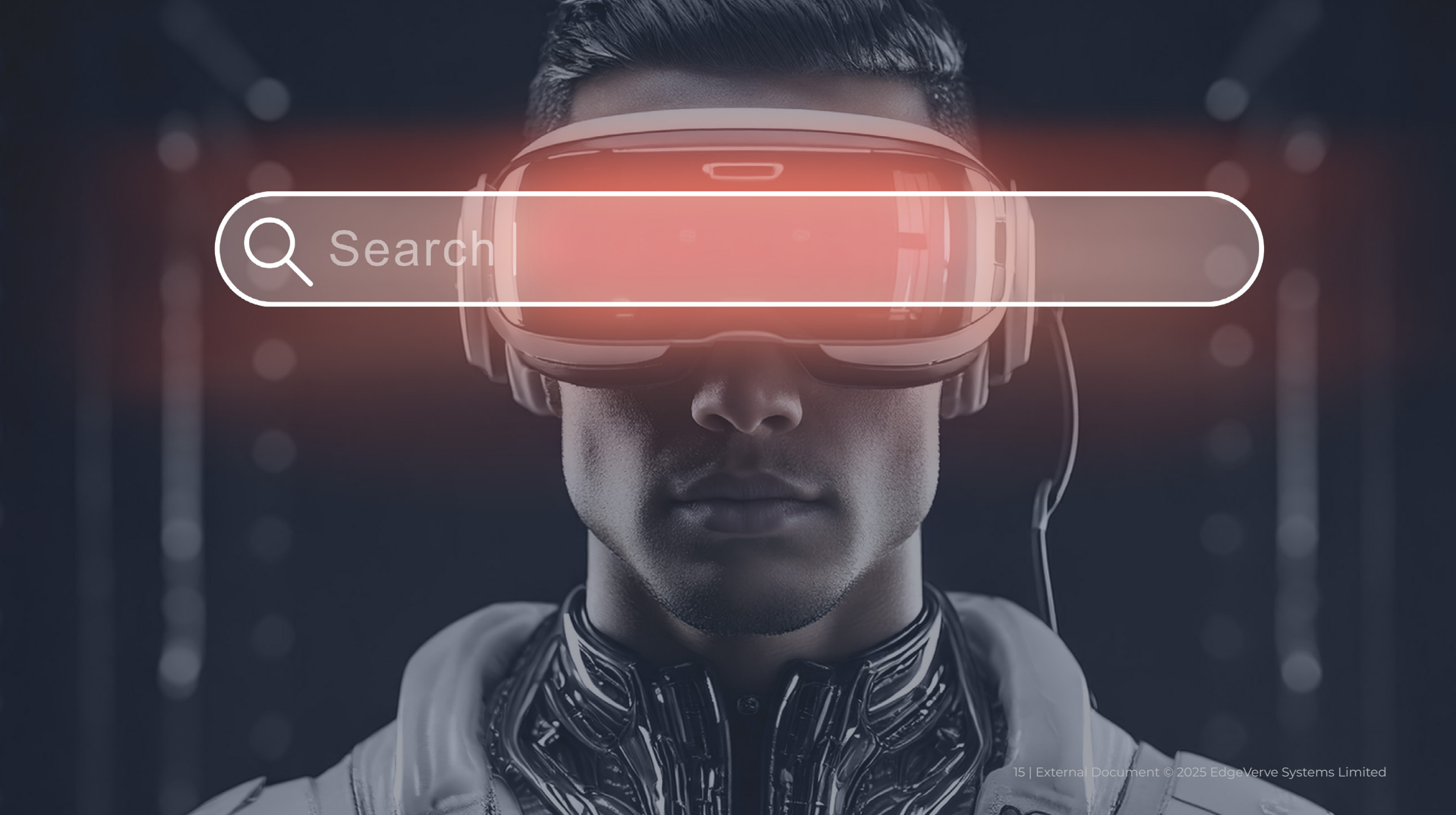
The marketplace model is evolving beyond simply aggregating products; banks are increasingly looking to create curated ecosystems. For example, a home-buying marketplace might integrate mortgage solutions, real estate listings, legal services, and insurance. Such offerings align with customer journeys, providing convenience and value while generating diverse income streams for the bank.

Banks that excel in this space leverage advanced analytics to understand customer behaviors and preferences. Predictive insights allow them to recommend tailored solutions, from ESG investments to micro-savings apps, enhancing engagement and driving cross-sell opportunities. Real-time data integration ensures marketplaces evolve in line with customer needs.

Collaboration is a cornerstone of success. Banks must build strong partnerships with fintechs, insurers, and service providers, enabling seamless integration of third-party offerings. A foundational API-driven architecture, robust partner onboarding frameworks, and automated compliance checks ensure scalability and agility.

However, marketplaces require strategic specialization. McKinsey identifies five arenas for growth, including everyday banking, investment advisory, complex financing, mass wholesale intermediation, and banking as a service (BaaS). Banks must choose areas where they can leverage their strengths while aligning with broader ecosystem opportunities.

The transition to marketplaces demands overcoming legacy challenges, such as outdated core systems and siloed operations. By investing in modular, cloud-native architectures and embedding sustainability into their models, banks can create resilient and future-proof ecosystems. Those that succeed will redefine the customer experience, cementing their role as essential nodes in the evolving financial value chain.



Case-in-Point

The Westpac and ShopBack partnership gives customers a more rewarding way to shop. Customers can earn bonus cashback by shopping ShopBack offers, in the Westpac app or via the Westpac Lounge in the ShopBack app, using a Westpac credit or debit card. Westpac engagement analysis show that over 70% of customers interacting with the program are Millennials, proving that the proposition is resonating with the original brief and target audience.

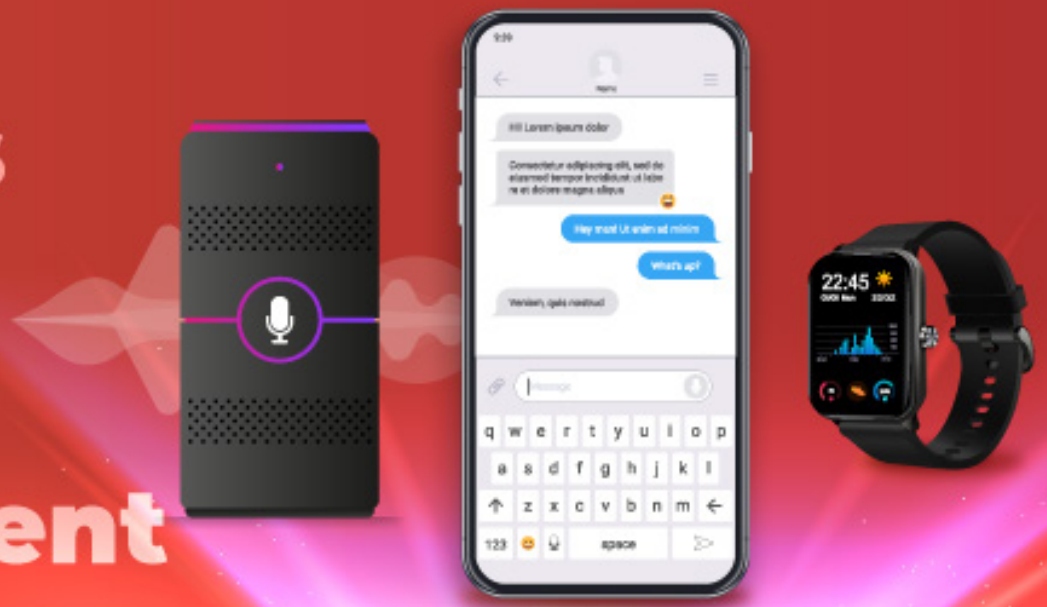
Introducing D-Verse by BPI! A secure NFT marketplace where customers can buy digital art, sports, and collectables using fiat currency. Powered by blockchain for authenticity, it's designed to be user-friendly, bridging accessibility gaps in finance. D-verse represents a new business opportunity for BPI in tokenized asset markets, diversifying the Bank's revenue streams.

The Path Ahead

The evolution of business models in banking reflects the industry's ongoing transformation to meet the demands of a dynamic, digital-first world. From digital-only propositions reimagining direct customer engagement, to embedded banking integrating financial services seamlessly into everyday platforms, and marketplaces orchestrating holistic ecosystems, these models are reshaping the financial landscape. Success lies in the ability of banks to not only adopt these models but to continually innovate, scale, and adapt them to changing customer expectations and technological advancements. Banks that invest in advanced capabilities, foster strategic partnerships, and leverage data-driven insights will not only thrive in this competitive environment but also redefine their role as essential enablers of value in the modern financial ecosystem. The future of banking belongs to those who dare to lead this transformation with agility, foresight, and a commitment to delivering unparalleled customer value.

02.

Shaping Banking's Next-Gen Customer Engagement



Customer engagement in banking continues to be redefined, influenced not just by industry disruptors but by sectors that set the benchmark for customer-centricity. McKinsey reveals that more and more customers expect the levels of satisfaction they receive from leaders such as Amazon, Apple, and Google—and they expect this from even the sleepiest corners of markets across all industries. This underscores an urgent imperative for banks to continue evolving from being transactional service providers to trusted partners, delivering value at every interaction and anticipating customer needs in innovative ways.

The competitive landscape in banking is complicated by the rise of fintechs, neobanks and big techs, that leverage technology to deliver hyper-personalized services at scale. Additionally, modern customers demand more than just individual banking services; they seek integrated experiences that blend financial, lifestyle, and advisory services seamlessly that are unique to their segment, context and life-stage. Banks that will invest in innovative approaches will not only foster deeper relationships but also unlock significant benefits, including customer loyalty, accelerated growth, and stronger shareholder returns.

To remain relevant in 2025 and beyond, banks must continue to move away from the universal banking model, creating and delivering value for segments that offer opportunities in the spaces/ regions that they operate. A strong focus on nuanced customer segments, tapping new engagement channels, and building hyper-connections must form the cornerstone of customer engagement strategies. For banking leaders, the path forward demands bold innovation and unwavering commitment to redefining engagement—not just to meet expectations, but to continuously exceed them.

Industry Trendline

The gig economy represents 12% of the global workforce | Generation Alpha exceeds 2 billion by 2025

Voice banking presents a $2.99 billion opportunity by 2028

Gen AI could add between $200 billion and $340 billion in value annually

Elevating Customer Engagement in 2025, banks will

Further evolve avenues of value creation and delivery for nuanced customer segments

Scale investments in emerging channels to embed customer engagement seamlessly into everyday life

Scale data and AI to create connected customer journeys in the world of hyper-connection

2.1 Nuanced Customer Segments: Meeting Distinctive Needs

Nuanced customer segments have always been a part of the banking landscape, but their importance has grown significantly in recent years. Traditionally, banks focused on broad categories such as retail customers, corporate clients, and high-net-worth individuals. Within these groups, distinct sub-segments like gig workers, global immigrants, tech-savvy seniors, and Generation Alpha have unique financial needs and preferences that continue to evolve. In the corporate banking space, emerging segments such as sustainability-focused enterprises and digital-first startups are driving tailored product development, while in wealth management, niche segments like next-gen wealth inheritors and impact investors are shaping bespoke advisory services.

While these segments are not new, the scale of their expectations has expanded. For instance, the global gig economy now accounts for up to 12% of the global workforce, with transaction volumes forecasted to reach $455 billion by 2023. Similarly, Generation Alpha, expected to exceed 2 billion by 2025, represents a rapidly growing cohort with distinct digital engagement needs. The demand for tailored and contextual experience continues to rise, driven by specialized fintechs and digital-native players entering these markets.

Banks are making strides to address these evolving demands, but scaling personalized offerings efficiently remains a critical challenge. Incumbent players face competition from fintechs adept at meeting niche needs with agility and precision. Compounding these challenges are legacy infrastructure, complex regulatory environments, and the high cost of innovation, particularly in underserved segments like gig workers and immigrants. However, advancements in AI, real-time analytics, and cloud-native platforms are unlocking new opportunities for delivering tailored and hyper-personalized solutions in a cost-effective manner.

To sustain success with these nuanced customer segments, banks must prioritize new avenues of value creation and delivery. Internally, this means enabling employees with platforms to configure products with speed and minimal effort. Banks are also expected to empower customers to configure bespoke financial products that meet their specific needs. Externally, banks need to be able to co-innovate with ecosystem players and fintechs for unique offerings. On the delivery channels, banks need to continue embracing emerging channels. Strategic collaboration with established ecosystems that already command strong reach in these segments on an ongoing basis will also be critical. These partnerships can help banks achieve the scale and depth needed to foster meaningful relationships with these segments.

By aligning their strategies with evolving customer expectations, leveraging technology, and building collaborative ecosystems, banks can position themselves as trusted partners for these nuanced segments, unlocking growth opportunities and securing long-term relevance in an increasingly competitive landscape. As we approach 2025, banks must continue investing in technology and digital platforms to create unique value for these segments, solidifying their role in a rapidly evolving financial ecosystem.

J.P. Morgan introduced a new service tier—J.P. Morgan Private Client—designed for customers with $750,000 or more in deposit and investment balances, filling a gap between Chase Private Client and J.P. Morgan Private Bank. This tier provides tailored wealth management services while addressing a previously underserved segment.

Case-in-Point

Bancolombia is one of the largest banking groups from Colombia. Recognizing that blue-collar workers often need a small loan to tide them over at the end of the month when finances run low, Nequi, the digital bank of Bancolombia, introduced an end-of-month, pre-approved unsecured, digital loans micro loans. The Bank piloted a “Lifesaver Loan” from Nequi for amounts between COP 100.000 and COP 500.000, and a maximum repayment period of one month. The loan, which requires no documentation, co-debtors or guarantees, is credited within 5 minutes through the Nequi app.

Goldman Sachs partnered with Amazon to provide credit lines for small and medium enterprises (SMEs), seamlessly embedded within the Amazon marketplace. This collaboration highlights the growing trend of leveraging partner ecosystems to create value, offering business owners access to quick, scalable financing solutions integrated directly into the platforms they rely on daily.

2.2 Emerging Channels: Where Banking Meets Daily Life

Emerging channels in banking, while not new, are now witnessing significant adoption as advancements in technology and changing customer behaviors bring them into the mainstream. These channels, ranging from voice assistants and social messaging apps to IoT-enabled devices, offer banks new avenues to onboard, converse with, service, and sell to customers. To stay competitive, banks must closely monitor the growth and potential of these channels in the spaces that they operate, aligning their strategies to deliver meaningful customer engagement and drive long-term value creation.

Voice-based banking is emerging as a critical frontier, presenting a $2.99 billion opportunity by 2028. This growth underscores the increasing acceptance of hands-free, conversational interfaces, marking a shift toward more intuitive and seamless customer interactions. In parallel, social commerce is transforming digital engagement, driven by an impressive compound annual growth rate (CAGR) of 31.6% from 2022 to 2030. This opens new opportunities for banks to engage customers, market products, and deliver services.

Wearables and IoT devices, a market poised to grow at 14.76% CAGR by 2030, are transforming transactional banking into frictionless, embedded experiences. ING's FINN-Banking of Things and BMW's in-car payment pilot exemplify how IoT can drive innovative, context-aware financial solutions.

The growing importance of these channels emphasizes the need for banks to adopt a robust omnichannel strategy. To capitalize on emerging opportunities, banks must identify where these channels align with customer behaviors and expectations. Using real-time analytics and predictive insights, they can tailor services to meet specific needs, ensuring seamless and personalized experiences across touchpoints. For instance, social commerce platforms could evolve into sophisticated sales channels, while IoT-enabled devices facilitate autonomous, pre-configured payments.

In 2025 and beyond, banks must embrace emerging channels not as isolated touchpoints but as integral components of a holistic customer engagement strategy. This requires leveraging real-time data and predictive analytics to deliver hyper-personalized, context-aware interactions across platforms like voice assistants, IoT devices, and social ecosystems. By embedding financial services seamlessly into customers' daily lives and fostering partnerships with technology providers, banks can enhance convenience and relevance. However, these innovations depend heavily on access to sensitive personal data, necessitating robust privacy measures. To maximize customer engagement, banks must integrate privacy by design into their technology ecosystems, ensuring secure, seamless, and trusted services. Hence, prioritizing trust through transparent data practices and robust privacy frameworks will be critical to sustaining customer confidence.

Case-in-Point

TD Bank in Canada has successfully integrated Alexa to enable customers to inquire about TD products, locate ATMs and branches, check foreign exchange rates, and access contact information seamlessly. These capabilities demonstrate how banks can leverage voice technology to provide convenience and deepen customer relationships.

Union Bank of India is one of the largest public sector banks in India. The bank recently enhanced its digital presence with Union Virtual Connect (UVConn), offering 65 banking services in 7 languages via WhatsApp to over 487 million users. Additionally, Union Voice Assistant extends conversational banking by providing services through voice commands. This conversational platform not only enhances customer service but also offers opportunities for cross-selling products and generating new leads.

2.3 Hyper-connection: Leveraging Data and AI to Create Connected Customer Journeys

The McKinsey Global Institute estimates that across the global banking sector, gen AI could add between $200 billion and $340 billion in value annually. As customers increasingly demand seamless, personalized experiences, leveraging AI and data platforms has become a strategic imperative, signaling a fundamental shift in how banks onboard, serve, and grow with their customers.

Building a hyper-connection is key with advanced AI tools enabling banks to offer unique and highly relevant value propositions to individual customers. For example, next-best-action models powered by behavioral analytics allow banks to recommend tailored financial products or services. These systems analyze transactional data and behavioral patterns to anticipate customer needs—whether it's suggesting an investment opportunity, offering a loan top-up, or creating a customized savings plan. Similarly, AI-driven dynamic pricing strategies allow banks to adapt fees and rates based on individual customer profiles. Behavioral segmentation is also unlocking new dimensions of customer engagement by enabling banks to target unique customer behaviors to enhance acquisition, deepen engagement, and drive business outcomes.

Omnichannel engagement through personalized, consistent and real-time interaction will be most critical. This will also provide banks with data from multiple touchpoints that can be leveraged to explore new and compelling ways of engagement.

Despite the promise, scaling AI initiatives presents challenges, including the need for robust data infrastructure, cohesive governance frameworks, and compliance with evolving regulations like the EU's AI Act. Transparent and ethical data practices are critical to preserving customer trust while balancing innovation with responsibility.

For banking CXOs, the imperative is clear: investing in advanced AI and data platforms is no longer optional but foundational to future success. These technologies offer the tools to redefine customer engagement in a cost effective manner, set new standards in building hyper-connect, and meet rising customer expectations in a rapidly evolving digital landscape. By investing in these technologies and integrating them effectively, banks can redefine their relationships with customers and set new standards for customer-centric banking.

Case-in-Point

Royal Bank of Canada (RBC) has developed NOMI Budgets, an AI-driven feature within its mobile app that simplifies budgeting for clients. NOMI Budgets analyzes individual spending patterns to recommend personalized budgets, helping clients manage their finances more effectively. This tool proactively suggests budget categories based on past spending, making financial management intuitive and tailored to each user's habits.

The Path Ahead

As we move toward 2025 and beyond, the future of customer engagement in banking will hinge on a platform-centric approach that redefines value creation. By addressing the distinctive needs of nuanced customer segments, leveraging emerging channels, and creating hyper-connections, banks can position themselves as integral to their customers' lives. Success will require scalable organizational capabilities, robust ecosystem partnerships, and the ability to adapt quickly through innovation—all while upholding data privacy as a cornerstone of trust. Banks that embrace this vision will be well-equipped to thrive in an increasingly dynamic and competitive financial landscape.

03.

Shaping Banking's Next Operational Models

Operational efficiency remains a top priority for the banking sector in 2025 as institutions seek to balance innovation with cost-effectiveness in an increasingly competitive landscape. Despite significant investments in technology and process improvements, the average efficiency ratio is projected to remain around 60% . These figures underscore the pressing need for more transformative approaches to achieve meaningful productivity gains.

As advanced technologies such as artificial intelligence (AI), automation, and predictive analytics mature, banks are increasingly leveraging these tools to optimize operations, enhance customer experiences, and strengthen risk management frameworks. However, the road to operational excellence requires more than just technological upgrades. Banks must reimagine their operating models, prioritizing scalability, flexibility, and integration across their systems and processes.

A holistic approach is imperative—modernizing legacy infrastructure, building adaptive processes, and fostering a culture of agility and innovation. By aligning digital investments with strategic priorities and empowering their workforce with the tools and skills to thrive, banks can unlock agility, gain operational resilience, reduce cost-to-income ratios, and capitalize on opportunities in a rapidly evolving ecosystem. Operational efficiency is no longer just a metric; it is a critical enabler of sustainable growth, competitiveness, and long-term value creation.

Industry Trendline

Resilience regulations are shaping financial operations across key markets like the US, UK, Singapore and others

Europe's cost-to-income ratios dropped from 57.29% in mid-2023 to 54.24% by mid-2024

In preparing for emerging business models, 63.7% of banking executives believe that initiatives to achieve organization process agility are not delivering as per expectations

Achieving Operational Efficiency in a Complex Ecosystem in 2025

Resilience, Resilience, Resilience will be the cornerstone of banking

Strategic imperatives to drive cost-to-income ratios below 40%

Achieve organizational process agility to succeed with ecosystem collaboration

3.1 Resilience: Cornerstone of Banking in 2025 and Beyond

As global banking continues to evolve, operational resilience has become a central focus for banks worldwide. The rising regulatory pressures, coupled with increased cybersecurity risks, have amplified the need for robust resilience frameworks. The cost of cybersecurity breaches continues to rise, with global average costs reaching $4.88 million in 2024 , highlighting the critical need for comprehensive measures. At the same time, the global regulatory landscape has become more stringent, with key regulations like the EU's Digital Operational Resilience Act (DORA) focusing on minimizing disruptions, ensuring financial stability, and protecting customer data. Several countries and regions including the US, UK, India, Australia, Singapore, Hong Kong, Switzerland, Canada and more have rolled out such regulations aimed at enhancing operational resilience in the financial sector. Banks in these countries and regions have been making strides to comply with these regulations, yet there remain significant challenges in fortifying operational systems against evolving risks.

The need to modernize IT infrastructure, manage third-party risks, and ensure cybersecurity resilience is more pressing than ever. Banks have already made considerable investments in these areas, establishing foundational resilience measures, such as periodic stress tests, disaster recovery plans, and cybersecurity frameworks. However, to truly thrive in this increasingly complex environment, banks must go beyond compliance-driven approaches and adopt more proactive, agile, and innovative strategies. The evolving threat landscape demands that banks look at resilience through a holistic lens, focusing on areas such as data integrity, workforce preparedness, and real-time threat detection. The new era calls for operational frameworks that can adapt swiftly to disruptions, ensuring not only continuity but also the capacity to recover quickly and minimize impacts.

Looking ahead, banks must integrate cutting-edge technologies, including AI-powered cybersecurity tools, digital twins, and decentralized IT architectures, to foster resilience. By using predictive threat intelligence and anomaly detection powered by AI, banks can move from reactive to proactive security measures, identifying vulnerabilities before they become threats. Additionally, banks need to consider modernizing their core systems with cloud-native platforms and adopting multi-cloud strategies to reduce reliance on any single provider. The importance of third-party risk management cannot be overstated, and banks must collaborate with ecosystem partners, fintechs, and regulators to create a cohesive, collective resilience framework. More than just compliance, this strategic approach will enable banks to safeguard their operations, protect customer trust, and capitalize on opportunities in the evolving digital era.

Banks that proactively embrace advanced technologies, foster collaborative ecosystems, and prioritize a resilience-first culture will not only navigate disruptions with confidence but also position themselves as leaders in the industry. By continuously evolving their strategies and investing in innovative solutions, they can turn resilience into a competitive advantage, ensuring sustained trust, stability, and growth in an increasingly complex financial landscape.

Resilience Regulations Around the World

- United States: Regulations such as the Cyber Incident Reporting for Critical Infrastructure Act (CIRCIA) mandate incident disclosures.
- UK: The Operational Resilience Framework focuses on impact tolerances and service continuity.
- India: The RBI Digital Payment Security Controls and IT Framework for NBFCs stress robust cybersecurity, incident reporting, and third-party risk management to safeguard operations
- Asia-Pacific: Countries like Singapore enforce the Cybersecurity Act, emphasizing third-party risk management.
- Australia: The APRA Prudential Standard CPS 234 requires robust information security practices.
- EU: Digital Operational Resilience Act (DORA), which sets a gold standard for operational resilience across the EU.

3.2: Driving the Need for Cost-to-Income Ratios Below 40%

The pursuit of cost-to-income ratios below 40% has become a defining metric for operational excellence in banking. This goal reflects the industry's response to digital transformation, heightened shareholder expectations, and mounting competition from fintechs and neobanks, all of which demand leaner, more efficient operations. Despite substantial investments—banks globally allocate approximately $600 billion annually to technology—the anticipated productivity gains, particularly in developed markets like the United States, remain elusive . However, there are signs of progress: generative AI offers transformative potential, with an estimated $200 billion to $340 billion in annual productivity gains—representing up to 9 to 15% of operating profits in value through increased productivity. Additionally, supervisory banking statistics highlight Europe's cost-to-income ratios dropping from 57.29% in mid-2023 to 54.24% by mid-2024 .

The path to achieving sub-40% cost-to-income ratios is fraught with challenges. Legacy IT systems remain a significant barrier, driving high maintenance costs and constraining agility. Fragmented processes and siloed workflows exacerbate inefficiencies, especially in customer service, compliance, and loan processing. Cybersecurity demands are rising, with banks investing heavily to counter sophisticated threats, while evolving regulations, such as DORA, add layers of operational complexity. Compounding these issues is the competitive pressure from digital-first banks and fintechs, which excel in delivering cost-efficient, customer-centric services.

To overcome these hurdles in 2025 and beyond, banks must focus on strategic imperatives: modernizing technology, streamlining operations, and investing in targeted innovations. Accelerating the shift to cloud-native platforms and hybrid cloud solutions will be pivotal, enabling scalability and cost optimization while enhancing operational flexibility. Automation, powered by robotic process automation (RPA) and AI, can drive efficiencies by eliminating repetitive tasks, enhancing fraud detection, and optimizing risk assessments. Centralized data platforms must replace fragmented systems, fostering real-time analytics and ensuring better data governance for compliance and resource optimization.

Equally important is reimagining IT infrastructure. By adopting modular, API-first architectures and leveraging low-code and no-code platforms, banks can reduce dependency on legacy systems and accelerate solution delivery. Proactive cybersecurity measures, underpinned by AI-driven tools and zero-trust frameworks, will strengthen resilience while keeping costs manageable. Empowering the workforce with advanced digital tools and tailored training programs is another critical lever, enabling employees to maximize productivity and focus on high-value activities.

As the financial ecosystem continues to evolve, the journey toward sub-40% cost-to-income ratios is about more than cost-cutting. It represents a shift toward building agile, future-ready organizations that balance efficiency with strategic investments in innovation, compliance, and customer experience. By building on current efforts and embracing cutting-edge technologies, banks can turn operational efficiency into a sustainable competitive advantage.

Case-in-Point

Emirates NBD's digital-first strategy has allowed the bank to set new benchmarks in efficiency, reducing costs and enhancing service. In the 9 months ending Sep 2024, the bank achieved a cost-to-income ratio of 29.4%, a testament to their relentless focus on operational excellence.

3.3 Increasing Organizational Process Agility in Ecosystem Collaboration

As we step into 2025, operational efficiency in banking is defined by the need for agility, particularly in processes supporting ecosystem collaboration. With partnerships among fintechs, big techs, and third-party providers becoming integral to delivering innovative, value-added services, banks must evolve rapidly. Yet, many banks struggle to meet this imperative, with 63.7% of banking executives noting that their initiatives to prepare for new business models are underperforming.

Legacy IT systems, organizational silos, and regulatory frameworks like the Digital Operational Resilience Act (DORA) pose significant challenges, necessitating a shift toward modular architectures and API-first approaches that enable seamless data exchange and system interoperability. This shift not only facilitates faster rollouts of new offerings but also ensures compliance in a rapidly changing regulatory landscape. This is particularly important as the onus of regulatory compliance in the evolving banking landscape will continue to be on banks rather than ecosystem partners.

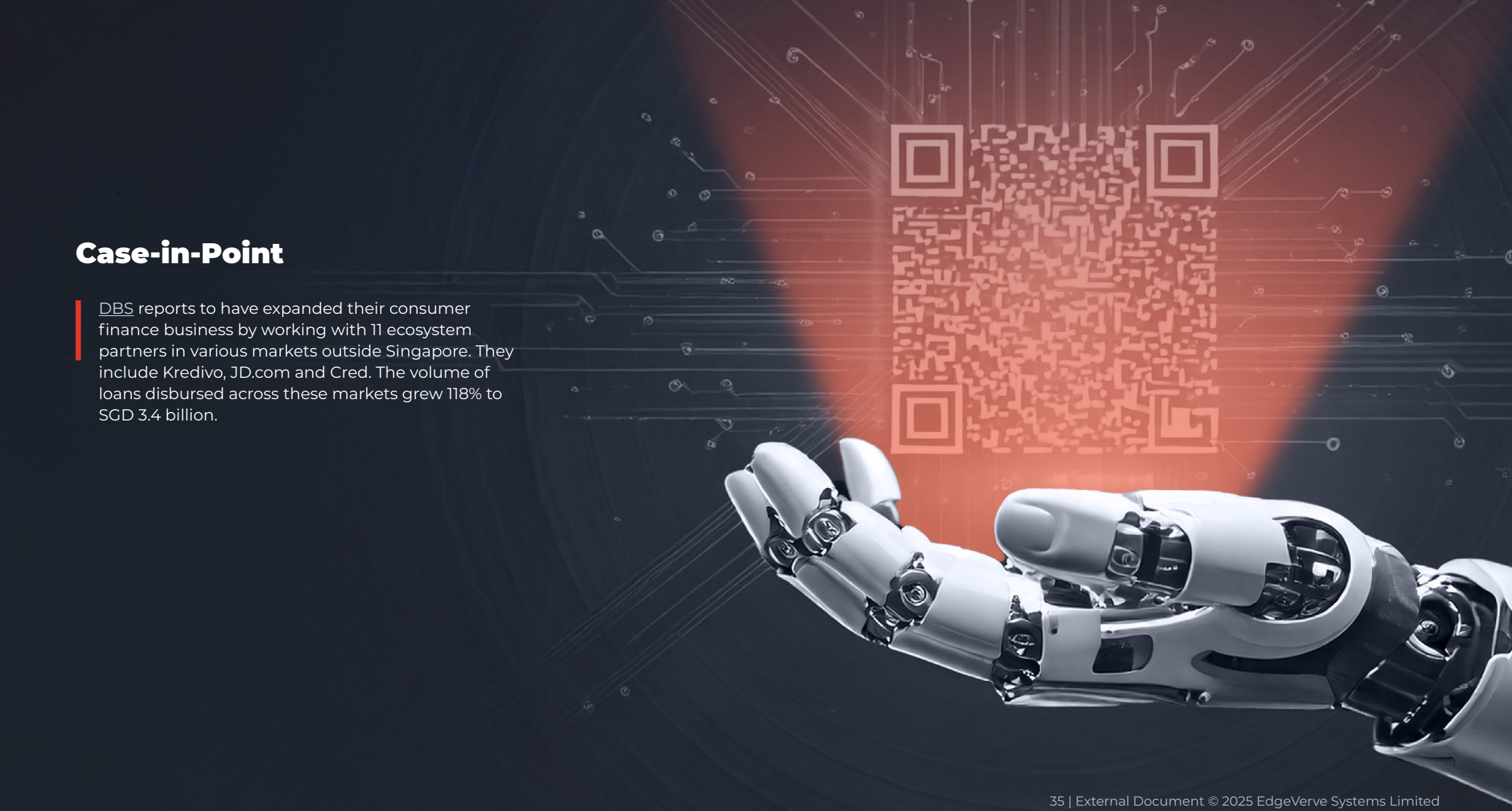
Banks face the dual imperative of enhancing resilience while fostering agility. To meet these demands, banks must redesign internal processes by moving from hierarchical structures to agile, cross-functional teams. Agile methodologies and dynamic resource allocation will help banks prioritize high-impact initiatives, accelerating innovation. Real-time risk analytics and advanced digital workflow automation can strengthen oversight, streamline third-party onboarding, and improve service delivery. Investments in predictive analytics and AI-driven compliance tools will further enable banks to monitor third-party dependencies effectively, mitigating vulnerabilities.

Cultural transformation also plays a crucial role. Banks must embed a mindset of experimentation and collaboration, with leaders modeling openness to change. Training programs can prepare employees to navigate external partnerships, while advanced data tools can enable real-time decision-making and hyper-personalized customer experiences. By fostering a resilience-first, agile culture, banks will unlock the potential of ecosystem partnerships to deliver long-term value.

In 2025 and beyond, operational efficiency through agility and resilience will no longer be optional—it will be a strategic imperative. Banks that combine these capabilities with innovation will establish robust, customer-centric ecosystems capable of thriving in a fast-evolving regulatory and market environment.

Case-in-Point

DBS reports to have expanded their consumer finance business by working with 11 ecosystem partners in various markets outside Singapore. They include Kredivo, JD.com and Cred. The volume of loans disbursed across these markets grew 118% to SGD 3.4 billion.



04. Shaping Banking's Next with ESG

Banks worldwide are increasingly gearing up for the pivotal role they will play in fostering the Environmental, Social, and Governance imperative in the industry, for their client community and for the society at large. In 2025 and beyond, four key ESG trends are set to reshape banking strategies. First, global developments on climate finance—including evolving pledges from international conferences—are driving a shift toward climate-resilient projects, green lending, and renewable energy investments. Second, the growth in ESG regulations and reporting is prompting banks to measure and disclose a broader range of sustainability metrics, particularly around carbon emissions and responsible governance. Third, the emergence of ESG ecosystems highlights the importance of partnerships among banks, fintechs, NGOs, and industry consortia for data sharing, innovative product development, and scaling sustainable finance solutions. Finally, the effective, responsible, and sustainable use of AI will enable banks to streamline operations and improve decision-making, but it also demands careful consideration of environmental footprint, social impact, and governance standards. Together, these trends underscore the increasingly central role ESG will play in the future of banking.

Industry Trendline

The parties in COP29 conference held in Baku Nov 2024, collectively committed to USD 300 billion annually towards climate finance

ESG standards demand banks report Scope 1, 2, and 3 emissions for transparent benchmarks

Embedding ESG into AI strategies unlocks value across business, experience, and efficiency

With Sustainability as a Core Strategy in 2025, Banks will

Prioritize scaling their climate finance portfolios to address mitigation and adaptation goals

Enhance their ESG reporting frameworks to meet evolving regulatory requirements and stakeholder expectations

Build a robust ESG Ecosystem to access reliable data, enhance measurement frameworks, and scale ESG initiatives

Ensure that AI is deployed responsibly and sustainably at their bank

4.1 Global Developments on Climate Finance

From the recently concluded COP29 conference held in Baku in Nov 2024, one of the biggest takeaways was the parties' collective commitment of USD 300 billion annually towards climate finance. This pledge by developed nations is substantial, despite falling short of the demand figure of USD 1 trillion annually towards the same. It is an indicator of a significant directional trend. Let's put this into context.

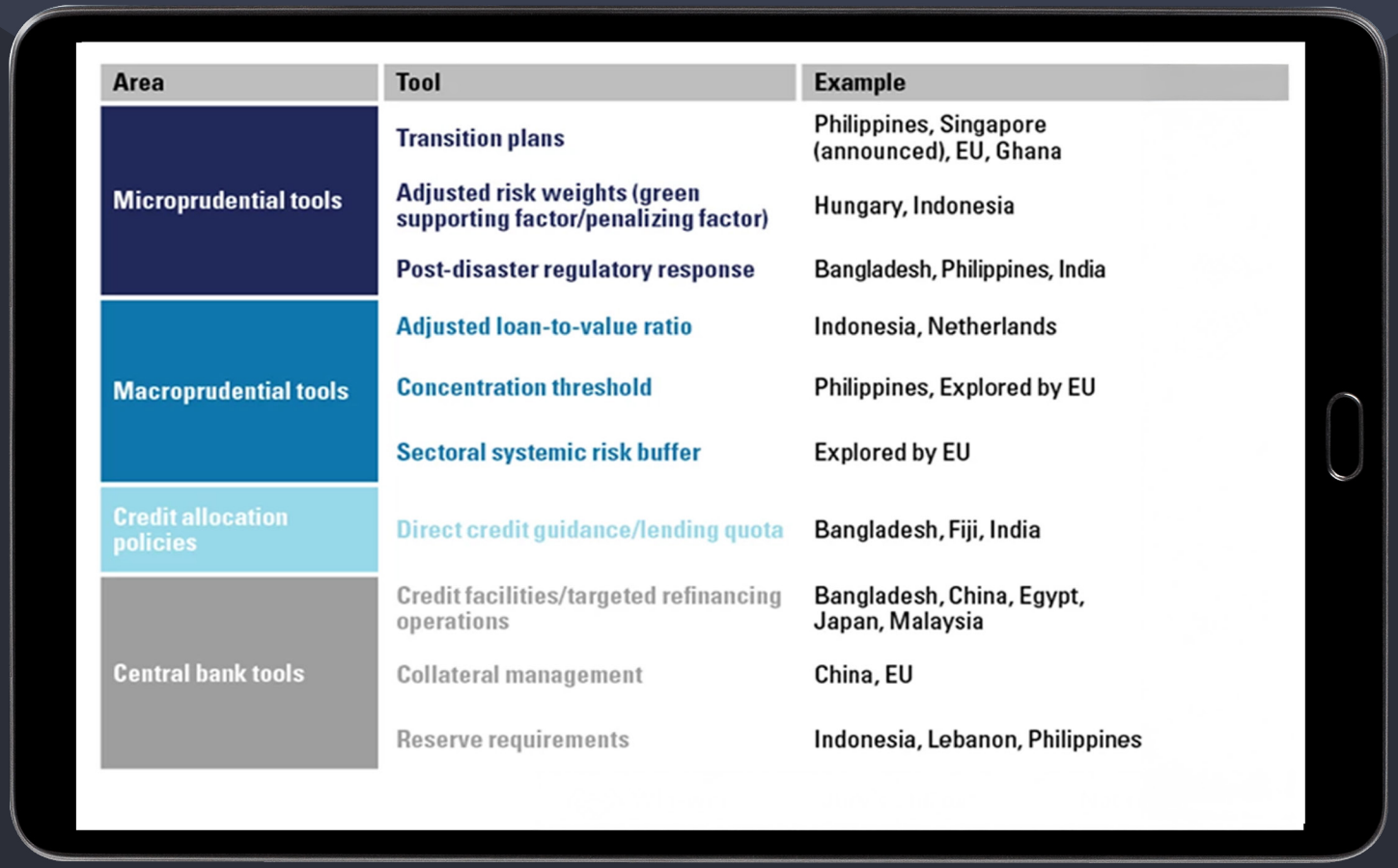
The World Meterological Organization has already published that the year 2024 has been the hottest year on record, with global warming temporarily hitting +1.5 deg Celsius. What has been the effect of this? A study done by the International Chamber of Commerce reports that increasing climate change over the past decade has resulted in over 4000 extreme-weather related events globally, and estimates that the economic loss due to these events is USD 2 trillion. This is only based on acute climate related events and doesn't include chronic and gradual impacts of climate change.

Not surprisingly, over the past few years, there has been notable progress in the areas of climate services, early warning systems, understanding climate variability, renewable energy generation, energy system resilience, analysis of energy demand patterns, and several initiatives on protecting the environment, harnessing sustainable energy, and driving investments towards sustainability. The climate finance funding from the developed nations to the developing nations are likely to flow into such initiatives, seeking climate change mitigation actions, reducing GHG emissions and climate resilient nation building, with a process for transparency and assessing the progress.

The UNFCCC (United Nations Framework Convention on Climate Change) website includes a climate finance data portal that provides details on the climate finance process, fund movements, climate action initiatives undertaken by various countries with the help of the climate funding.

According to a World Bank Group survey, climate financing is five percent or less of the lending portfolio for nearly 60 percent of EMDE banks (Emerging Market and Developing Economies) – with 28 percent providing no climate financing at all. Consequently, there is growing interest among central banks in using so-called targeted refinancing operations—providing more favorable financing terms for climate friendly lending by banks—to encourage green finance.

Banks should prioritize scaling their climate finance portfolios to address both mitigation and adaptation goals. Leveraging technology will be crucial—banks should invest in advanced data analytics, AI, and blockchain to track, manage, and report climate finance flows transparently. They should also develop innovative green financing instruments, such as green bonds and sustainability-linked loans, to mobilize capital for renewable energy, climate-resilient infrastructure, and emission reduction initiatives. By integrating climate risk into decision-making and fostering collaborations, banks can accelerate progress toward a sustainable future.



Area	Tool	Example
Microprudential tools	Transition plans	Philippines, Singapore (announced), EU, Ghana
	Adjusted risk weights (green supporting factor/penalizing factor)	Hungary, Indonesia
	Post-disaster regulatory response	Bangladesh, Philippines, India
Macroprudential tools	Adjusted loan-to-value ratio	Indonesia, Netherlands
	Concentration threshold	Philippines, Explored by EU
	Sectoral systemic risk buffer	Explored by EU
Credit allocation policies	Direct credit guidance/lending quota	Bangladesh, Fiji, India
Central bank tools	Credit facilities/targeted refinancing operations	Bangladesh, China, Egypt, Japan, Malaysia
	Collateral management	China, EU
	Reserve requirements	Indonesia, Lebanon, Philippines

4.2 Growth in ESG Regulations and Reporting

As a fallout of increasing global interest and focus on ESG, today it is no longer sufficient to claim that an organization embraces ESG considerations. There are increasing interest from many parties, including customers, partners, investors and employees to know more about how and how much the organization is ESG conscious. Another global development that is unfolding is that ESG compliance and reporting is being mandated and regulated by increasing number of countries.

The below figure from compliance and risks (https://www.complianceandrisks.com/) depicts the growth in global ESG regulations over the past 8 years.

Below is a list of key ESG regulations that will be impacting your business over the next 12-18 months:

- **EU:** CSRD – Corporate Sustainability Reporting Directive, 2022
- **EU:** ESRS – European Sustainability Reporting Standards, Commission Delegated Regulation 2023
- **EU:** CSDDD – Corporate Sustainability Due Diligence Directive, July 2024
- **EU:** SFDR – Sustainable Finance Disclosure Regulation, 2021
- **USA:** Enhancement and Standardization of Climate-Related Disclosures for Investors, Final Rule, March 2024
- **UK:** Sustainability Reporting Standards, Guidance Document, Revised, May 2024
- **UK:** Non-financial Reporting Review: Simpler Corporate Reporting, Consultation Document, May 2024
- **Canada:** Sustainability Disclosure Standard CSDS 1 – General Requirements for Disclosure of Sustainability-related Financial Information, Exposure Draft Standard, March 2024
- **Latvia:** Sustainability Disclosure, Draft Law, Jan 2024
- **Singapore:** Sustainability Reporting: Enhancing Consistency and Comparability, Consultation Document, March 2024
- **China:** Sustainability Reporting for Major Listed Companies, Guidelines, April 2024
- **South Korea:** Sustainability Disclosure Standards, Draft Standard, April 2024
- **India:** BRSR – Business Responsibility and Sustainability Reporting, May 2021, amended June 2024, phased mandatory from April 2023 onwards

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https://www.complianceandrisks.com/
https://commission.europa.eu/
https://www.sebi.gov.in/ (BRSR reporting)
https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/

Most ESG standards also recommend or mandate measuring the environmental impact of a business organization through an industry-neutral metric like CO2e (tonnes of CO2 equivalent), which helps in an apples-to-apples comparative benchmarking. Banks specifically would need to also report on not only their Scope 1 & 2 emissions, but also Scope 3, which are emissions directly influenced by the bank's lending portfolio.

Some examples of the banking specific metrics sought include the below.

- The ISSB and SASB reporting asks for several metrics, including
  - Description of approach to incorporation of environmental, social and governance (ESG) factors in credit analysis
  - Description of significant concentrations of credit exposure to ESG factors, which may include carbon related assets, water-stressed regions and cybersecurity risks
  - Number of data breaches, percentage that are personal data breaches, number of account holders affected
  - The India BRSR regulation also asks for a break-up of the Total Scope 3 emissions (Break-up of the GHG into CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, if available).

In 2025 and beyond, banks should prioritize enhancing their ESG reporting frameworks to meet evolving regulatory requirements and stakeholder expectations. This includes implementing robust systems for measuring and disclosing comprehensive ESG metrics, such as Scope 1, 2, and 3 emissions, alongside integrating environmental, social, and governance factors into credit analysis and risk management practices. Emphasizing transparency and accountability in sustainability disclosures will be essential for maintaining regulatory compliance and fostering trust among investors, customers, and other stakeholders.

4.3 Emergence of ESG Ecosystems

Banks are increasingly recognizing that achieving meaningful ESG impact is not a solo endeavour – it requires collaboration with a broader ecosystem of partners, including fintechs, technology providers, non-governmental organizations (NGOs), regulatory bodies, and industry consortia. Such ecosystems enable banks to access reliable data to measure emissions and evaluate lending opportunities, enhance measurement frameworks, and scale ESG initiatives effectively.

What are ESG ecosystems enabling for banks?

1. Access to Reliable Data: ESG ecosystems are helping banks overcome data gaps by sourcing diverse, high-quality ESG data from specialized providers and NGOs.
2. Effective Measurement and Better Disclosures: Partnerships with technology firms and data analytics providers are allowing banks to evolve ESG measurement, reporting, and compliance.
3. Greater ESG Impact: Collaborative ecosystems are enhancing banks' reach across the ESG value chain through co-developed solutions, such as green finance tools and sustainable investment platforms, amplifying their ESG impact.

HSBC:

- HSBC collaborates with organizations like the World Resources Institute (WRI) and CDP to enhance climate risk data and improve ESG disclosures. They have also launched partnerships to support global carbon markets and green financing initiatives.

Standard Chartered:

- Standard Chartered has created partnerships with fintechs and industry bodies to advance ESG-aligned trade finance and supply chain financing. They also work with NGOs to ensure their ESG products have measurable social and environmental benefits.

BNP Paribas:

- BNP Paribas works closely with global organizations like UNEP FI (United Nations Environment Programme Finance Initiative) and other industry players to align its ESG practices with global frameworks. It actively co-develops ESG impact tools and green finance solutions.

How can your bank build a robust ESG Ecosystem in 2025 and beyond?

- Data Partnerships: Collaborations with ESG data providers (e.g., MSCI, Refinitiv, Sustainalytics) and open data platforms.
- Technology Integration: Working with tech firms for blockchain-based transparency, carbon accounting tools, and AI-powered ESG analytics.
- Cross-Sector Alliances: Partnering with market-specific NGOs, government bodies, and industry groups to align with international and local ESG standards and best practices.

4.4 The Effective, Responsible, and Sustainable use of AI

While Artificial Intelligence (AI) is set to revolutionize the banking sector by improving decision-making, efficiency, and speed of innovations, there are several environmental, socio-ethical and compliance-driven considerations that banks must address at a strategic level, to ensure that AI is deployed responsibly and sustainably at their bank.

ESG considerations being integrated into the AI adoption journey

Environmental Considerations

AI systems, particularly large-scale machine learning models, require significant computational power, leading to high energy consumption and carbon emissions. Optimizing AI operations and using renewable energy-powered data centers are critical to minimizing the environmental footprint of AI.

Socio-ethical Considerations

As AI is increasingly used for decision-making (e.g., credit scoring, risk analysis), it raises concerns about algorithmic bias, transparency, and fairness across customers from diverse backgrounds and walks of life. Banks must ensure that AI-driven decisions are equitable, non-discriminatory, and aligned with ethical principles.

Governance Considerations

AI deployment is often accompanied with concerns around data privacy, security, regulatory compliance, performance monitoring and accountability. Having a well-defined AI compliance charter that is adherent to global standards, is a crucial foundational block to ensure long-term compliance, even as regulation evolves in this field.

4.5 What are banks doing to drive ESG-conscious AI adoption?

ESG-consious AI actions	Examples
Environmentally-conscious AI	
Energy-Efficient AI Models: Shift to models that require less computational power.	Microsoft Sustainability Cloud, used by several banks, offers AI-powered tools optimized for energy efficiency.
Cloud-Based AI: Use cloud platforms optimized for low-energy consumption.	Deutsche Bank partnered with Google Cloud to enhance AI systems while reducing energy usage.
Renewable Energy Use: Power data centers with clean energy to offset emissions from AI operations.	Standard Chartered shifted its data centers to renewable energy sources to support sustainable AI operations.
Socio-Ethically-conscious AI	
Transparent Algorithms: Banks must use explainable AI to ensure stakeholders understand AI-driven decisions.	ING developed a governance framework for AI to ensure transparency in credit scoring models.
Stakeholder Inclusivity: Engage diverse groups to develop AI systems that consider varied perspectives.	Citi has actively worked towards stakeholder inclusivity in its AI systems by engaging diverse teams and external experts (such as DEI advocacy groups) to ensure their AI models reflect varied perspectives and minimize bias, particularly in areas like credit risk assessment and customer engagement.
Governance-conscious AI	
Governance Frameworks: Robust frameworks to monitor, audit, and rectify biases in AI models.	BNP Paribas conducts regular bias audits on its AI models to ensure equitable decision-making.

The responsible and sustainable use of AI is a critical trend for 2025. By incorporating environmental, socio-ethical and governance considerations into your bank's AI strategy, you can can unlock tremendous value in business, customer experience and efficiency, while remaining ESG conscious.

05.
Shaping Banking's Next with Data and AI

Data and AI are no longer a novelty in the banking industry. Over the past few years, banks have increasingly turned to AI technologies, such as machine learning, deep learning, and natural language processing, to enhance their operations. Recently, the focus has shifted towards generative AI and predictive analytics, which is reshaping AI strategy and pushing the envelope from tech circles to executive boardrooms. This increasing importance of AI is evidenced by the growing investment in AI, with the IMF predicting that AI spending in financial institutions will double between 2023 and 2027. Despite the excitement, banks have faced challenges in translating AI investments into measurable outcomes.

Generative AI, while offering immense potential, has led to underwhelming results in some cases, with banks finding it difficult to scale pilot projects into impactful, long-term solutions. On the other hand, agentic AI has shown promise in areas like decision-making, risk management, and customer personalization. Predictive analytics is also gaining limelight with its potential in enhancing personalization and risk management capabilities. Looking ahead, banks are set to prioritize robust data foundations by investing in advanced data platforms to process structured and unstructured data, and ensure data is streamlined, accurate, and aligned with AI objectives. These efforts will position banks to unlock the full potential of AI in 2025 and beyond, driving sustainable growth and innovation in an increasingly competitive industry.

Industry Trendline

While billions were invested in AI infrastructure and generative AI in 2023, only 20% of businesses reported earnings improvements in 2024
Forrester

In 2025, 25% of companies that use gen AI will launch agentic AI pilots or proofs of concept, and this figure will grow to 50% in 2027
Deloitte

41% of banks believe their architecture is insufficient to support data management, analytics, and AI.
Innovation in Retail Banking 2024

Data and AI: New learnings, opportunities, and strategies to gain traction in 2025

Generative AI: Banks to reset expectations and adopt practical strategies

Agentic AI: Breakthrough technology with huge promise for banking

Predictive Analytics: Putting data to work like never before

- Data Platforms to take center stage

5.1 Generative AI: Banks To Reset Expectations and Adopt Practical Strategies

Generative AI is at the center of attention in banking as they explore its potential to boost productivity, enhance efficiencies, and unlock new value. In recent years, most banks have announced generative AI initiatives and many even went a step further and implemented RAG models to increase chances of success. However, the journey so far has been a mix of failed pilots and underwhelming outcomes. Generative AI was placed at the "peak of inflated expectations" in Gartner's 2023 Hype Cycle for Emerging Technologies whereas in 2024, it is placed in "trough of disillusionment".

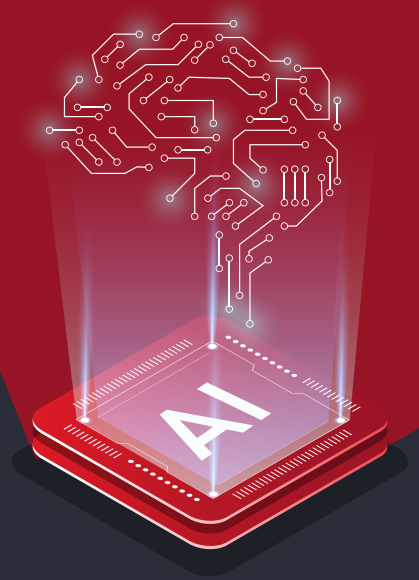
The high expectations surrounding generative AI often exceed its current maturity and readiness. Many banks overestimate the immediate returns from generative AI projects, resulting in frustration and premature scaling back of initiatives. According to Forrester, while billions were invested in AI infrastructure and generative AI in 2023, only 20% of businesses reported earnings improvements in 2024. Clearly, banks are facing challenges in translating generative AI pilots into scalable, impactful solutions, leading to unmet expectations. This trend risks stifling long-term innovation, as organizations underestimate the extended timelines required to realize meaningful ROI.

Moving ahead, banks will recognize that realizing real benefits of generative AI is not an overnight transformation. To fully leverage generative AI, banks need a comprehensive, strategic approach that goes beyond isolated implementations. Banks are expected to explore generative AI in conjunction with complementary technologies. Adoption of small language models will help banks quickly adopt and scale AI. Domain-specific models, multimodal retrieval-augmented generation (RAG), and synthetic data generation also hold significant promise.

While building their generative AI strategies, banks will also have to take into consideration the possibilities of adversarial attacks that can deceive AI into producing unintended or harmful outputs. Continued experimentation and research, well-defined plans for pilot-to-scale transitions, staff training, and long-term commitment a will help banks unlock the true value of generative AI.

Case-in-Point

Citigroup employs generative AI to analyze extensive regulatory documents efficiently, ensuring compliance with new capital regulations across different jurisdictions



Morgan Stanley has launched an AI assistant based on OpenAI's GPT-4 that allows its 16,000 financial advisors instant access to a database of about 100,000 research reports and documents. The AI model aims to help financial advisors quickly find and synthesize answers to investing and finance queries and offer highly personalized instant insights.

5.2 Agentic AI: Breakthrough Technology with Huge Promise for Banking

Artificial Intelligence is evolving rapidly, bringing us closer to a future where machines can autonomously execute complex tasks, make decisions, and take actions with minimal human intervention. This is made possible by agentic AI, a new frontier in AI technology. Agentic AI refers to autonomous systems capable of planning, executing, and adapting to achieve specific goals set by users. In banking, agentic AI acts as a virtual workforce, assisting, offloading, and augmenting human efforts or traditional applications to deliver enhanced efficiency, personalization, and innovation.

Agentic AI can drive smarter, faster decision-making in areas like investment management and lending, while improving risk management to enable more aggressive growth with minimized losses. For example, agentic AI could revolutionize portfolio management by continuously analyzing market trends, making real-time trading decisions, and adapting investment strategies based on dynamic economic data and breaking news. This capability will empower banks to provide highly tailored products and services, unlocking new revenue streams through targeted cross-selling and upselling, ultimately boosting customer loyalty.

Agentic AI is set to gain popularity in banking as we step into 2025 and beyond. Deloitte predicts that in 2025, 25% of companies that use gen AI will launch agentic AI pilots or proofs of concept, and this figure will grow to 50% in 2027. Banks are expected to establish multi-agent AI system where multiple independent agents can make decisions and collaborate to achieve a common goal. Review agents will help augment their impact by enhancing overall accuracy and compliance of the system.

As intelligent agents gain more capabilities, they will enhance decision-making processes and improve situational awareness by analyzing data faster and predicting outcomes with higher accuracy. While initial ROI may be uncertain, banks should view agentic AI as a long-term investment. By measuring success in phases and adjusting strategies based on real-world data, banks can better gauge the impact and refine their approach for sustainable growth.

Case-in-Point

PayPal utilizes agentic AI to monitor transactions in real-time, employing machine learning algorithms to detect and prevent fraudulent activities effectively.

Goldman Sachs utilizes agentic AI in its trading platforms to analyze market trends and execute trades autonomously based on predefined algorithms.

5.3 Predictive Analytics: Putting Data to Work Like Never Before

Thriving in banking today requires timely and deep insights into risks, customer relationships, costs, revenues, and other key parameters. Moving beyond traditional reporting and business intelligence tools, predictive analytics leverages historical and real-time data to forecast future outcomes with greater accuracy. By applying machine learning, data modeling, and AI techniques, banks can shift from reactive decision-making to proactive strategies, enhancing their ability to anticipate market shifts, manage risks, and seize new opportunities. As customer expectations grow and market dynamics become more volatile, predictive analytics is emerging as a cornerstone of modern banking transformation.

Predictive analytics offers wide-ranging applications across banking functions, from core banking operations and cash flow management to trade and supply chain finance and more. Banks can significantly raise the bar in personalization by analyzing customer data to deliver hyper-targeted services and offerings, improving both satisfaction and loyalty. In risk management, predictive models help banks anticipate credit defaults and optimize lending decisions, reducing financial exposure. Similarly, banks can detect fraud patterns in real time, enhancing their ability to protect customer assets and ensure compliance. By harnessing predictive analytics, banks can also improve operational efficiency, reduce costs, and stay ahead of evolving market demands.

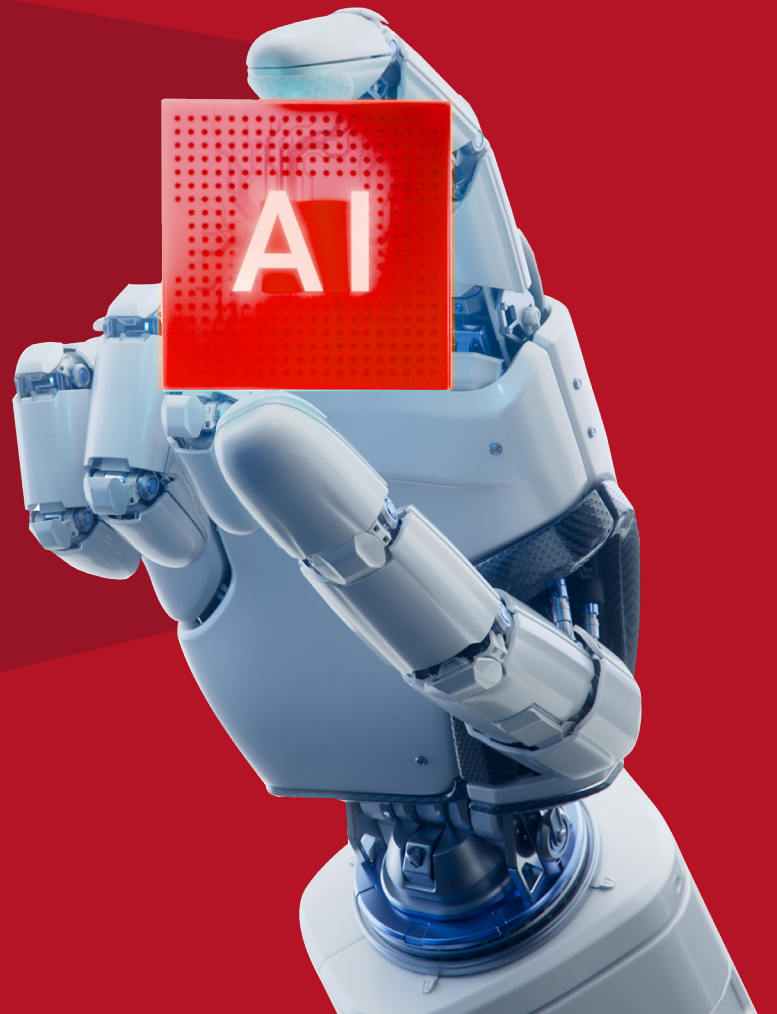
As banks continue their digital transformation journeys, predictive analytics is expected to see exponential adoption. The market for predictive analytics in banking is projected to grow from USD 3.6 billion in 2024 to USD 19.6 billion by 2033 – a staggering 5x growth. Moving forward, banks will need to continuously refine their predictive models, integrating diverse data sources—from structured datasets to real-time feeds from IoT devices—to improve accuracy and reliability. Additionally, banks will focus on reducing algorithmic bias to ensure fair and ethical decision-making. The ability to deliver real-time insights and offer tailored solutions will be a key differentiator for banks that aim to stay competitive in an ever-evolving market.

For banks, the real value of predictive analytics lies in its strategic implementation. While technology provides the tools to make accurate predictions, human intervention remains critical in translating these insights into actionable decisions. To fully realize the potential of predictive analytics, banks must invest in data-driven culture, upskill their workforce, and collaborate with technology partners who can help drive innovation. Moreover, embedding predictive analytics into core processes will enable banks to anticipate market changes, improve customer experiences, and strengthen risk resilience. Those that approach predictive analytics with a long-term vision and commitment will gain a sustainable competitive advantage in the future of banking.

Case-in-Point

Transcepta launched trade and supply chain financing options aided by strategic partnership with InFin. InFin and Transcepta are leveraging analytics-based approach for financial decisions underpinned by predictive analytics and data integration capabilities.

Bank of America leveraged big data analytics to ascertain the reason for many of its commercial customers defecting to smaller banks. This helped the bank to launch a more flexible online product (Cash Pro Online) and a mobile version (Cash Pro Mobile) in lieu of the earlier product providing all-in-one offering.



5.4 Data Platforms to Take Center Stage

As AI continues to reshape banking, its success is increasingly dependent on the foundation of reliable and well-structured data. Banks must first achieve data-readiness before they can implement strategic AI initiatives. However, many banks are still grappling with this challenge. According to Innovation in Retail Banking 2024 survey by Infosys Finacle and Qorus, 41% of banks believe their architecture is insufficient to support data management, analytics, and AI.

To become data-ready, banks need to ensure the data needed to train AI models is consistently available, of high quality, structured, and aligned with project objectives. In light of these AI pre-requisites and learnings, banks are expected to invest heavily in modern data platforms. These platforms allow for data integration processes to bridge the gap between diverse data sources, eliminating anomalies, duplication, information gaps, and biases. This is crucial for creating reliable data pipelines, managing large datasets, and supporting the data models required for AI and machine learning.

As AI becomes central to banking operations, the focus will shift towards data platforms that can manage complex data systems and scale efficiently. While investing in data platforms is the right move, banks must be mindful of certain considerations to ensure the success of these platforms. The data platform should be AI-friendly, meaning it must be able to integrate smoothly with AI tools and support machine learning workflows. This ensures that data can flow seamlessly from storage to model development and analysis.

Finally, banks should choose platforms that align with industry standards like BIAN. These standards offer a structured framework for data modeling and ensure that platforms are built with long-term scalability and interoperability in mind.

Case-in-Point

A Leading Indian Private Bank streamlined its pricing and billing by leveraging Finacle Data Platform. The platform created a BIAN-inspired pricing and billing data model to capture relevant data for analysis and to deliver insights to create flexible pricing capabilities.

Accelerating with Caution

The future of AI lies in human-AI partnerships facilitated by collaboration between banks and technology providers. While accelerating innovation on all these fronts, banks will also have to equally focus on ethical implications of AI. AI governance platforms will be essential for managing the legal, ethical, and operational performance of AI systems. Integrating data observability practices into AI development lifecycle can also help build more robust and trustworthy AI systems. By focusing on ethical AI frameworks, building transparent systems, adopting data privacy measures, and ensuring regulatory compliance, banks can enhance trust and mitigate the risks associated with AI adoption while realizing the true value of AI.

06. Shaping Banking's Next with Cloud

Cloud has emerged as a cornerstone of digital transformation in banking, offering agility, flexibility, and scalability at significantly reduced infrastructure costs. The discussion has shifted from “why” to ”how” and “how soon” banks should adopt cloud. Over the years, cloud has evolved through multiple models—private, public, and hybrid—each with its own strengths and challenges. As we look to 2025 and beyond, cloud’s importance will grow and so will the complexities with its implementation, hosting models, and business outcomes.

Within the broader cloud trend, some critical themes are emerging as focal points for banks for 2025 and upcoming years. Hybrid and multi-cloud are expected to accelerate significantly as banks navigate complex regulatory, security, and operational demands. Synergies between cloud and AI are also expected to change the pace of technology adoption and act as a catalyst for growth. Finally, as the focus and investments grow, banks are expected to evaluate their cloud ROI and maximize it through FinOps and AIOps.

Industry Trendline

By 2025, over 85% of organizations will adopt a cloud-first approach, with more than half of these relying on multi-cloud strategies
Gartner

In 2025, AI won’t just be another service running in the cloud—it will be the intelligent force optimizing every aspect of cloud operations.
CNCF

Banks are increasingly using a FinOps approach to track and optimize cloud expenses, indicating a need to maximize the return on cloud investments.
Deloitte

Banks to strike balance between innovation and optimization with Cloud in 2025

Accelerated shift towards Hybrid and Multi-Cloud

Cloud and AI as mutual catalysts for enhanced tech adoption

Banks to maximize Cloud ROI with FinOps

6.1 Accelerated Shift Towards Hybrid and Multi-cloud

It has now been widely acknowledged that the right way to embark on cloud transformation journey is not an either/or model approach. Banks would want to have the control and security of a private cloud while benefiting from the agility and scalability of a public cloud model. The concerns around risks, regulations, governance, latency and security also presents the challenge of striking the right balance between on-premise, private and public cloud options. Hybrid and multi-cloud offers that opportunity to banks.

The adoption of hybrid cloud is gaining momentum, however, the adoption rates vary for different application areas. In Innovation in Retail Banking survey 2024 by Infosys Finacle and Qorus, 26.5% banking executives chose hybrid cloud as the most preferred cloud model for payments – highest for any application area. Other banking application areas where hybrid cloud is a popular model include loan servicing (22.7%), digital channel suite (22.3%), data lake, analytics and AI (20%), and loan origination (18.9%). In 2025 and upcoming years, we expect the hybrid cloud adoption rates to increase further across all application areas.

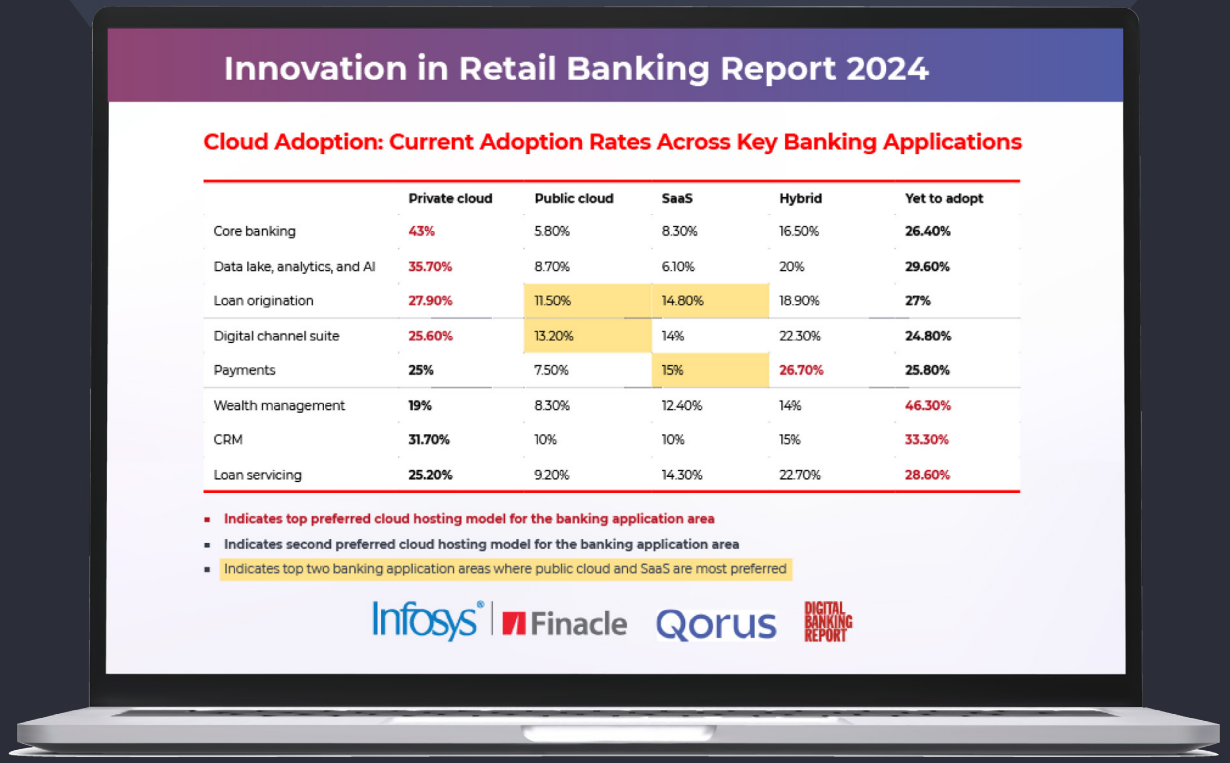
On similar lines, multi-cloud is expected to transform enterprise technology use in 2025, allowing banks to utilize multiple cloud platforms while avoiding dependency on a single vendor. Multi-cloud integration will enable flexibility as banks are able to select top-tier services from various cloud providers based on their storage, computing power, AI, and similar requirements. Gartner predicts that by 2025, over 85% of organizations will adopt a cloud-first approach, with more than half of these relying on multi-cloud strategies to fuel business innovation and digital transformation. Multi-cloud approach will also improve resilience and ensures business continuity by distributing workloads across multiple cloud environments, reducing downtime risks with a single provider. According to a report, 82% of organizations are already leveraging a multi-cloud approach, and 78% are running workloads in at least three public clouds.

With this accelerated shift to hybrid and multi-cloud, banks will also have to address challenges associated with the adoption. This includes workload allocation and governance practices around data transfer between applications and environments. To get hybrid & multi cloud strategy right, banks need a comprehensive business-driven decisioning framework to identify right cloud setup for each workload. This, along with a data and application governance framework is key to drive success. Banks must also look at hybrid and multi-cloud investments as catalyst to drive enhanced enterprise security. An integrated approach to harmonize security posture across the cloud estate, along with building a single pane of glass is of paramount importance.

Case-in-Point

Banco Santander has opted for a hybrid cloud approach which already hosts 90% of their infrastructure for modernizing its entire core banking business.

KeyBank has been leveraging a multi-cloud and hybrid cloud management software to power its digital properties and apps.



	Private cloud	Public cloud	SaaS	Hybrid	Yet to adopt
Core banking	43%	5.80%	8.30%	16.50%	26.40%
Data lake, analytics, and AI	35.70%	8.70%	6.10%	20%	29.60%
Loan origination	27.90%	11.50%	14.80%	18.90%	27%
Digital channel suite	25.60%	13.20%	14%	22.30%	24.80%
Payments	25%	7.50%	15%	26.70%	25.80%
Wealth management	19%	8.30%	12.40%	14%	46.30%
CRM	31.70%	10%	10%	15%	33.30%
Loan servicing	25.20%	9.20%	14.30%	22.70%	28.60%

6.2 Cloud and AI as Mutual Catalysts for Enhanced Tech Adoption

Cloud and AI are being seen together as catalysts with powerful synergy. Where AI brings the capability to analyze datasets and make informed decisions, cloud provides necessary infrastructure to store, process, and access the data anywhere. In 2025 and upcoming years, this integration of cloud and AI will help banks scale operations efficiently, optimize costs, and deliver personalized customer experiences, ensuring innovation and competitiveness.

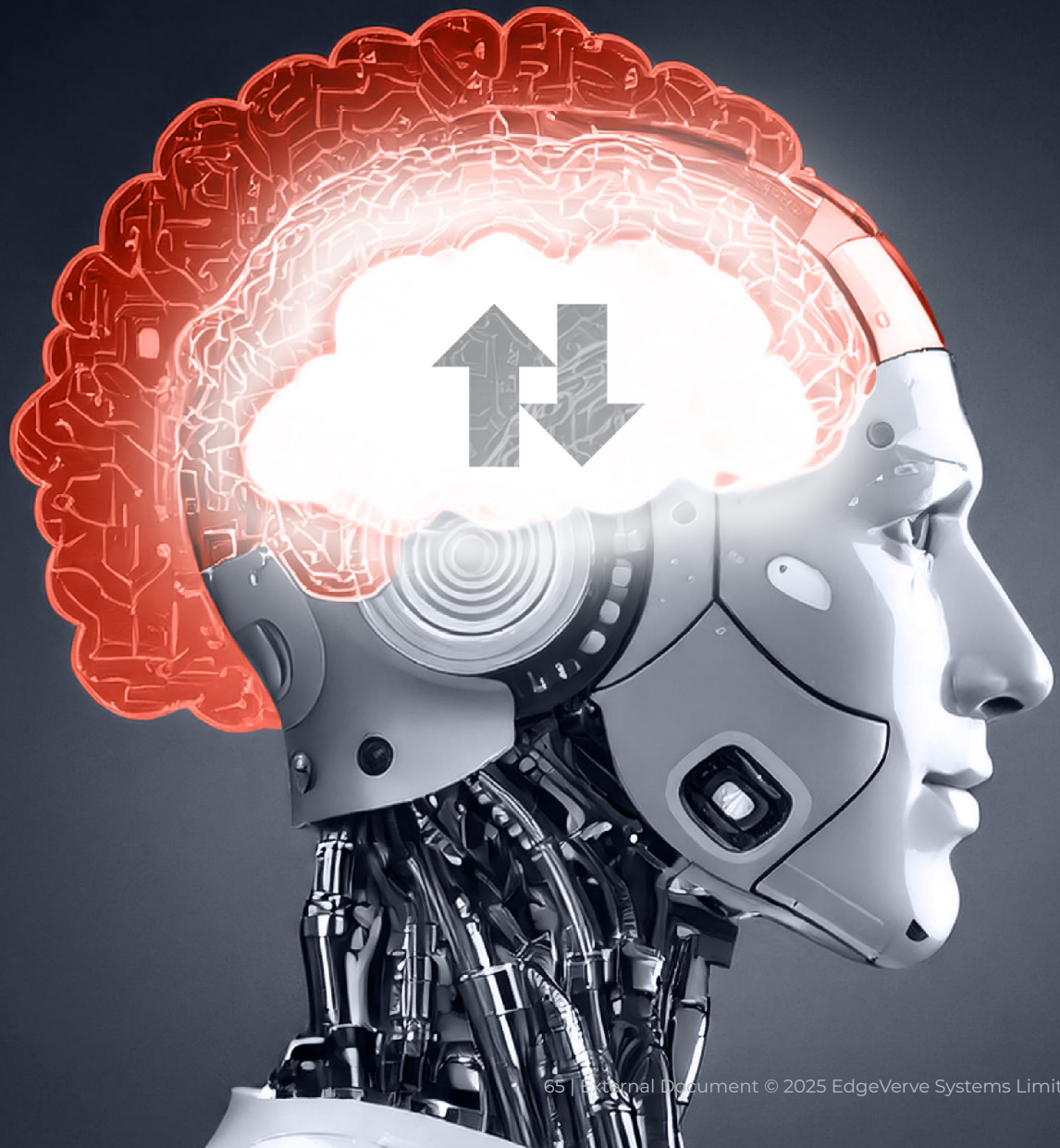
Cloud-native banking platforms will facilitate the rapid development, deployment, and scaling of applications. This is crucial for AI and generative AI models, which require substantial computational power and experience fluctuating demands. In 2025, AI won't just be another service running in the cloud—it will be the intelligent force optimizing every aspect of cloud operations. Cloud also fosters interoperability between different technologies, enabling banks to seamlessly integrate AI with other emerging technologies like edge computing, quantum computing, and IoT, thereby creating innovative solutions.

On the other hand, AI will transform cloud infrastructure management by leveraging machine learning algorithms to automatically monitor, analyze, and optimize cloud resources. This will help banks predict potential discrepancies proactively, optimize resource allocation, and handle routine tasks like patch management and scaling. As AI continues to evolve, cloud will become more resilient, adaptive, and capable of supporting increasingly complex workloads.

In 2025 and beyond, banks will increasingly view cloud and AI as mutual catalysts, planning pilot projects and proof of concept initiatives to experiment with emerging technologies. This will mean banks will have to ensure a thoughtful cloud strategy which includes equipping their talent with right skills to work with cloud-native technologies. It is also important to make sure that their cloud providers enable interoperability to avoid vendor lock-in. A culture of experimentation and collaboration between IT and business teams will help banks embrace cloud and AI strategy that facilitates better tech adoption.

Case-in-Point

One of the aspects of Deutsche Bank's cloud transformation journey has been to utilize AI and ML to simplify and accelerate their cloud migration decisions.



6.3 Maximizing Cloud ROI with FinOps

The need for scaling cloud workloads is greater than ever today as banks are increasingly integrating AI which leverages the elasticity and computing power of cloud. As more core workloads move to cloud, volume of data will frow, necessitating greater scale of cloud consumption and fluctuating computing requirements. As banks progress in this journey, managing and optimizing cloud costs is one of the biggest challenges they will face. The complexity is further compounded by hybrid and multi-cloud environments, supported by different cloud providers. This makes the ROI conversation more challenging.

In 2025 and beyond, banks will focus more on balancing cloud costs with measurable outcomes, especially as they navigate public and private cloud options, security concerns, and the economics of cloud. Industry findings show that banks that fully leverage cloud are ahead of peers in achieving measurable returns, suggesting a growing emphasis on demonstrating tangible value from cloud initiatives. Forty percent of cloud-powered companies, compared to 24% of the rest of the survey population, say they expect 15%+ revenue growth over the next 12 months. This trend reflects the view that cloud is not just a cost-saving tool but a driver for top-line growth.

Imbibing advanced capabilities and processes around FinOps (Financial Operations) and AIOps (Artificial Intelligence for IT Operations) as part of the hybrid cloud operating model will help banks maximize their returns from cloud investments. According to Deloitte, banks are increasingly using a FinOps approach to track and optimize cloud expenses, indicating a need to maximize the return on cloud investments while managing costs effectively. FinOps aids banks by meticulously monitoring and managing cloud expenditures, enabling them to see how and where cloud services are being consumed across the entire cloud estate. With this, banks can better forecast demand for cloud services, take data-driven decisions to optimize cloud spending and right size resources in line with business priorities. On the other hand, AIOps strengthens the impact of FinOps by leveraging the cognitive power of AI and ML models to accurately predict the optimum level of resource allocation. With such practices and enablers baked into the hybrid cloud operating model, banks stand to save over 20% of cost on their cloud operations.

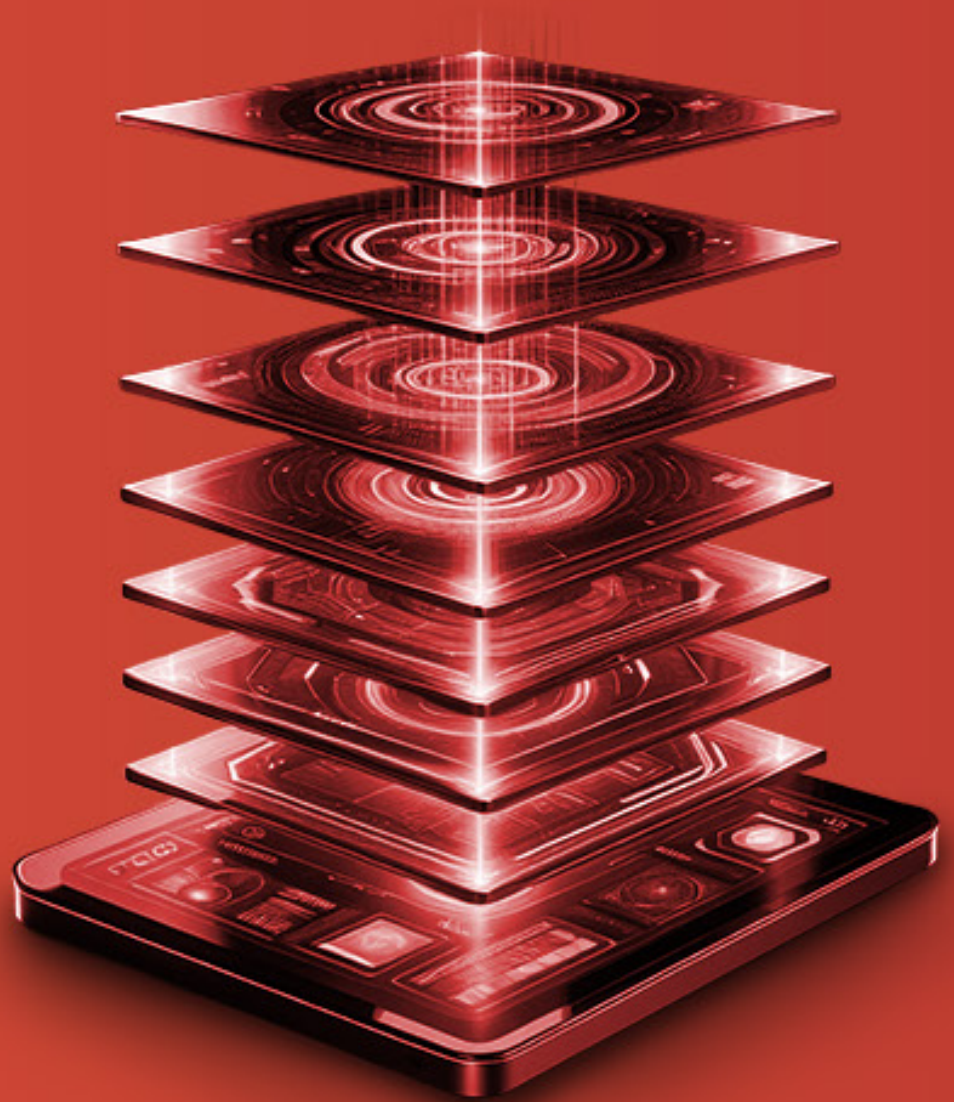
To succeed with FinOps and AIOps strategy, banks will have to navigate the additional concerns related to data sensitivity and integration with existing systems. Implementing FinOps and AIOps involves collecting and analyzing vast amounts of data. Establishing clear data governance policies and procedures will help secure data security, privacy, and compliance. Banks should also focus on fostering collaboration between finance, IT, and business teams to ensure buy-in and shared ownership of FinOps and AIOps initiatives.

Case-in-Point

Capital One, a leading financial services provider, implemented FinOps practices to optimize cloud spending and improve financial management processes. By leveraging FinOps tools, Capital One was able to save over $100 million in cloud expenses.

The Cloud Path Ahead for Banks

Cloud is expected to remain at the heart of banking transformation—serving both as a technology foundation and a business enabler. Banks' success in this space will be increasingly defined by how they adopt more practical cloud models, ensure ROI with cost optimization strategies, and innovate with emerging technologies. The stepping stones towards these cloud imperatives lie in ensuring a right mix of capabilities, talent, and technology providers. This holistic approach will enable banks to strike the right balance between innovation and optimization they strive to achieve with their cloud initiatives.



07.
Shaping Banking's Next with Advanced Architecture

Nearly 50% of all bank transactions are expected to occur through non-bank channels by 2030. The future of banking isn't just digital – it is embedded in lifestyle apps, highly personalized, and competitive. This underscores the urgency for technology constructs that support seamless, personalized, and purpose-driven financial interactions. Modern banking architectures, rooted in principles like data and AI-first, cloud-native, open constructs, modularity, offer the agility, scalability, resilience, and cost-efficiency required to meet these challenges head-on while maintaining regulatory compliance. In recent years, banks have shown progress in enhancing their architectural maturity, adopting cutting-edge principles to stay ahead of the curve.

Looking ahead in 2025, banks will sharpen their focus on three pivotal areas to scale their architectural capabilities further. First, headless banking architecture will empower banks to decouple front-end interfaces from back-end systems, enabling faster innovation and hyper-personalized customer experiences. Second, event-driven and API-first strategies will take center stage, enabling real-time, integrated services that seamlessly connect with external ecosystems. Finally, security principles will become the bedrock of architectural designs, addressing threats arising with advent of new business models. Together, these efforts will position banks to excel in customer engagement, drive operational excellence, and foster sustainable growth in an increasingly competitive landscape.

Industry Trendline

64% of financial institutions are expected to adopt headless architecture running into 2025 to meet growing demands for flexibility and personalization
IBS

Banks are embracing event-driven and API-first architectures backed by AI capabilities to remain competitive.

Nearly 60% banking executives signaled that their bank's application architecture maturity is "as good as others but not better" when it comes to security principles
Innovation in Retail Banking 2024

Banks' Architectural Maturity to take a giant leap in 2025

Headless Banking Architecture to ensure customer-centricity

Event-driven and API-first strategies to become key for growth and expansion

Zero-Trust Security Principles will become foundational

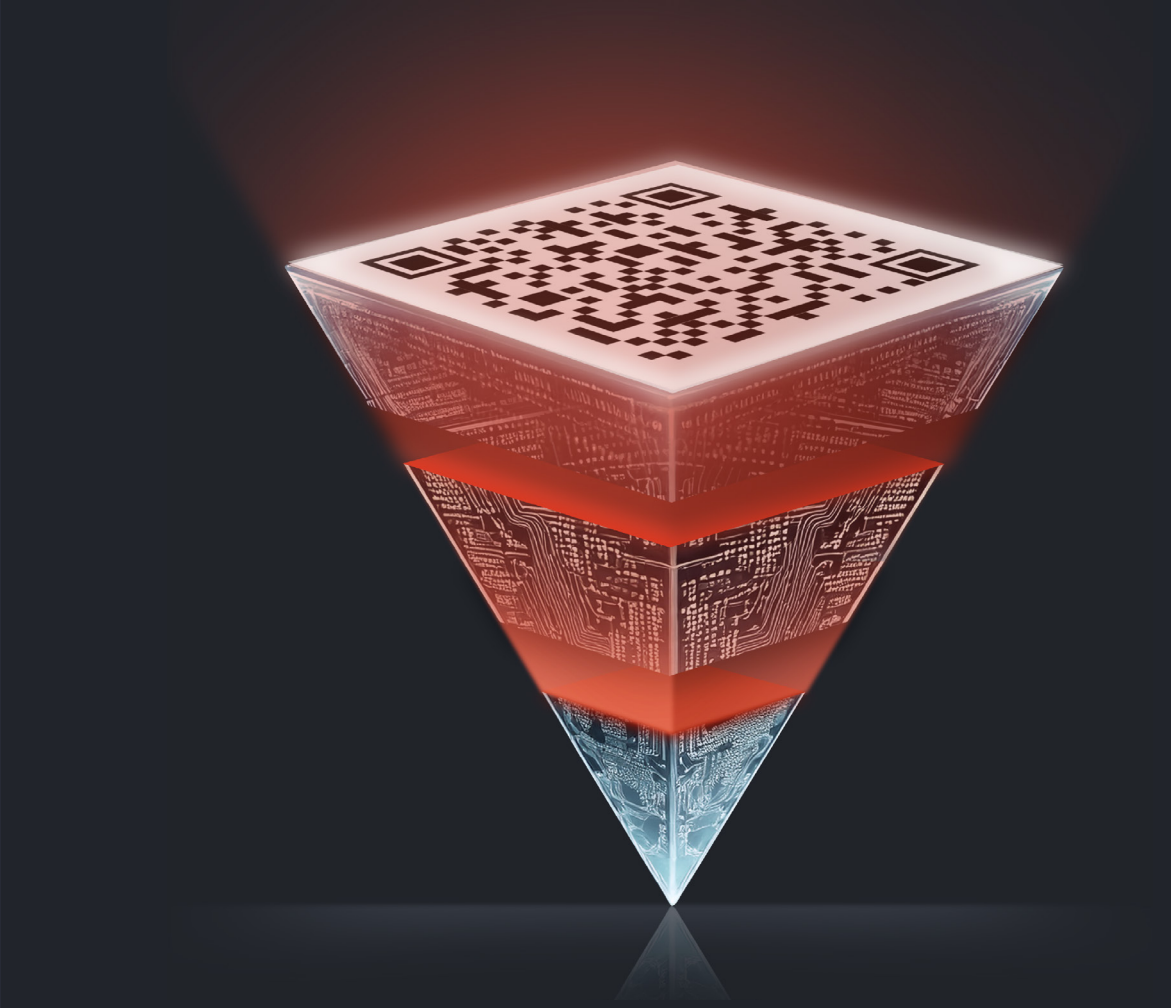
7.1 Headless Banking Architecture to Ensure Customer-centricity

As banks face an urgent need to reimagine how they engage with customers, banking experiences can no longer remain channel-bound, siloed, or one-size-fits-all. Instead, delivering hyper-personalized and seamless experiences across every touchpoint is going to be the standard for success. This calls for banks to adopt agile, iterative front-end innovation aligned with ever-evolving customer needs while ensuring their back-end systems are modular, scalable, and optimized for performance.

Headless banking architecture are set to address this need by decoupling the front-end user interface from back-end systems, enabling faster innovation and personalized, context-driven customer journeys. This modular, API-driven approach allows financial institutions to create persona-centric journeys, delivering contextual services at the right time and place in the customer lifecycle. With low-code and no-code platforms as part of the experience stack, banks can rapidly design, test, and deploy user experiences, achieving greater agility and responsiveness.

According to a report, 64% of financial institutions are expected to adopt headless architecture running into 2025 to meet growing demands for flexibility and personalization. In 2025, we will see greater adoption of composable architectures, where banks build modular front-end experiences using reusable components and Backend for Frontend (BFF) APIs. These APIs will integrate experience services, ensuring smooth and consistent user interactions across multiple platforms. Moreover, headless architecture facilitates partnerships with fintechs and other ecosystem players, enabling banks to introduce new functionalities and services without overhauling their core systems, reducing time-to-market significantly.

While implementing headless architectures, banks will encounter challenges associated with regulatory mandates and technology adoption. To overcome these hurdles, banks must focus on robust API governance, prioritize scalable and secure platform designs, and foster partnerships to share technology investments. By addressing these challenges head-on, banks can unlock the full potential of headless architectures to reshape customer experiences and drive sustainable growth.



Case Examples

JP Morgan Chase, Goldman Sachs (with its Marcus brand), and HSBC, are investing heavily in digital banking initiatives, including the adoption of headless and API-driven architectures to enhance customer experiences and expand their digital offerings.

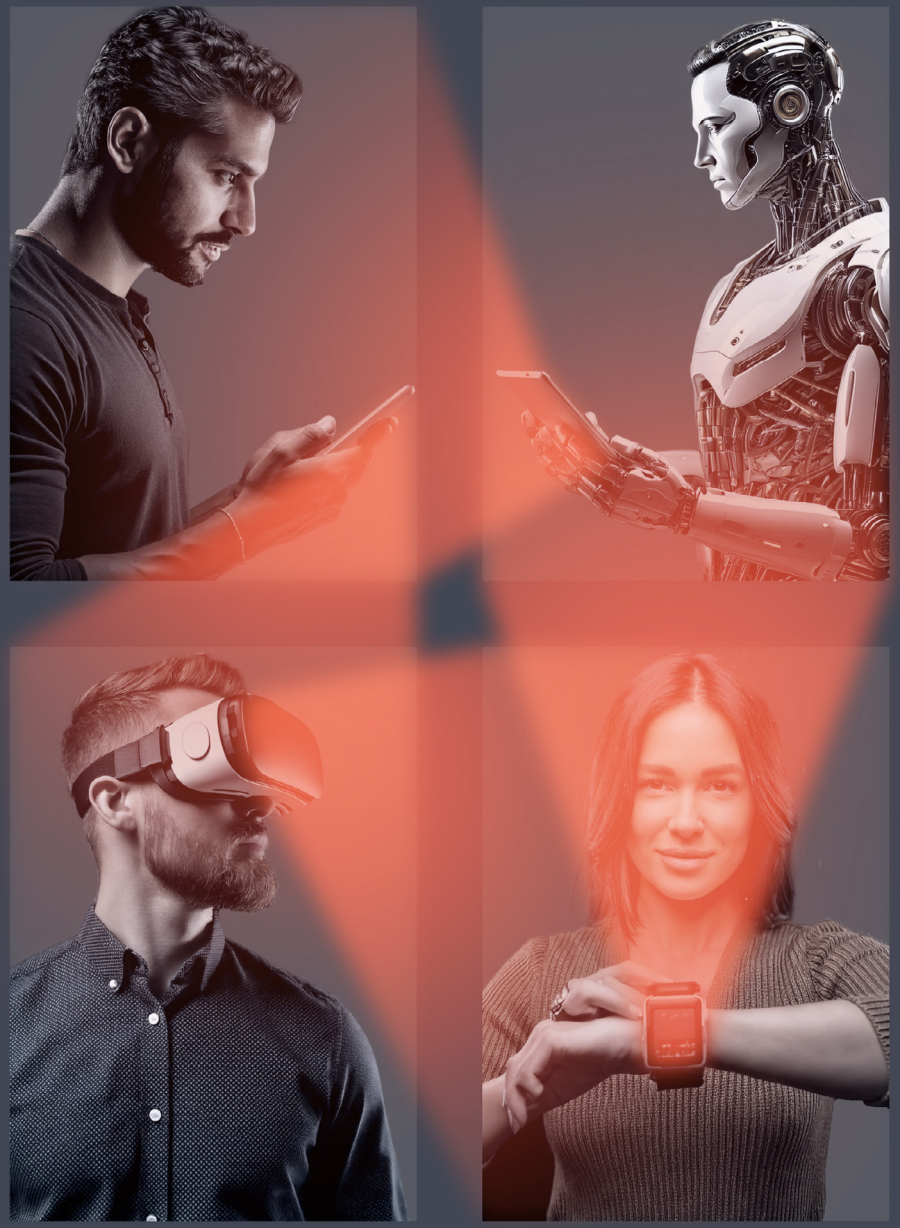
7.2 Event-Driven and API-first Strategies to Become Key for Growth and Expansion

Lifestyle apps like Amazon, Uber, and WhatsApp have set the bar for seamless, anytime-anywhere experiences, pushing banking services to integrate deeply into these ecosystems. Banks that continue to rely on monolithic systems and siloed data face significant risks, including a lack of agility, limited personalization, and inadequate responsiveness to market changes. Recognizing this, banks are embracing event-driven and API-first architectures backed by AI capabilities to remain competitive.

An API-first strategy forms the backbone of modern banking ecosystems. This approach prioritizes designing robust, well-documented APIs that facilitate seamless integration with internal systems, fintechs, and third-party partners. Easy consumption of APIs enables banks to accelerate product development, improve operational efficiency, and enhance customer experiences. On the other hand, event-driven architectures revolutionizes how banks respond to triggers such as transactions, customer interactions, or market changes. Unlike traditional request-response models, this reactive system enables real-time responses, operational efficiency, and personalized customer experiences. For instance, event-driven systems can initiate instant loan approvals, deliver tailored offers, or even automatically detect fraud based on real-time customer behavior.

In 2025, adopting event-driven and API-first strategies backed by AI will become essential for banks to thrive in the face of rising competition from digital challengers. Banks will invest in comprehensive tech stacks featuring robust API management tools, gateways, developer portals, identity and authorization mechanisms, and real-time usage monitoring. Event-based platforms will allow banks to process and analyze data in real-time, enabling immediate insights into customer behavior, market trends, and operational risks. These capabilities will empower banks to offer hyper-personalized experiences, proactive support, and seamless omnichannel services while advancing open banking initiatives.

However, significant challenges remain. The lack of standardized APIs is a critical hurdle, as varying API standards across financial institutions hinder interoperability and smooth integration. To overcome these barriers, banks will increasingly adopt platforms powered by BIAN-inspired APIs, events, and standards-driven approaches. These platforms will enhance data sharing with third-party providers, foster ecosystem innovation, and strengthen customer trust in open banking services.



Case Examples

With 700+ APIs, ICICI Bank, powered by Finacle, boasts of one of the broadest API portals for banks across the globe.

The bank handles 150 million API calls a day and provides connected banking services with over 100 SME apps.

7.3 Zero-Trust Security Principles Will Become Foundational

The rapid adoption of open banking, API-led collaborations, public cloud, and virtualized data centers is fundamentally reshaping the security landscape for banks. Traditional perimeter-based security models that rely on “trust within the network” are proving inadequate. Banks are confronted with growing regulatory scrutiny and evolving data protection requirements, making it imperative to redefine their security frameworks to protect sensitive customer data and maintain trust.

Banks will increasingly adopt holistic security frameworks based on security by design and Zero Trust principles. These approaches embed robust security measures from the start and enforce a “never trust, always verify” stance, ensuring every access request is authenticated and operates on least privilege principles. Security by design integrates protections across APIs, applications, networks, and data architectures, while advanced solutions like AI-driven threat detection, multi-factor authentication, and encryption enhance resilience. In the Innovation in Retail Banking Survey 2024 by Infosys Finacle and Qorus, nearly 60% banking executives signaled that their bank’s application architecture maturity is “as good as others but not better” when it comes to security principles. This shows while banks have already made lot of headway in implementing security measures, there’s still plenty of progress to be made.

In 2025, banks will double down on Zero Trust and Security by Design to fortify their defenses against evolving threats. Strong Identity Access Management (IAM) solutions, incorporating biometrics, behavioral analytics, and risk-based access control, will form the cornerstone of their security frameworks. Cloud-native security tools such as Cloud Access Security Brokers (CASBs), Security Information and Event Management (SIEM) systems, and Cloud Security Posture Management (CSPM) tools will be widely adopted to monitor and safeguard cloud environments. Data encryption and segmentation will become standard practices, minimizing the impact of potential breaches by restricting sensitive data access to predefined roles and needs. DevSecOps and secure software development lifecycles (SDLC), enriched with security protocols, will help banks proactively identify and mitigate vulnerabilities throughout the development process.

Integrating these models with legacy systems can be complex and resource-intensive, requiring significant time, effort, and expertise. Missteps during the transition could create unintended security gaps. Employee training remains a critical component. Additionally, the lack of standardization across security practices and tools may complicate interoperability and coordination across banks’ global operations. Moving forward, banks must invest in robust planning, employee education, and collaboration with industry bodies to overcome these obstacles and maximize the benefits of Zero Trust and Security by Design.

Case-in-Point

Goldman Sachs, Capital One, and JPMorgan Chase are deploying Zero Trust security and Zero Trust access frameworks to bolster their banking cybersecurity frameworks, regulatory compliance and support for remote work and digital transformation.

Reimagining Bank's Architecture

As banks face the imperative of scaling new technologies and innovate continuously, modernizing architecture is the first thing they need to get right. Embracing modern principles like headless banking, event-driven, API-first, AI, and security principles will help banks grow their architectural maturity that will in turn lay the foundation for new solutions and unlock efficiencies. Reimagining their architecture will help banks meet evolving requirements of today's banking landscape and thrive for years to come.

08.

Shaping Banking's Next with Security and Privacy Tech

Security and privacy are cornerstone in banking today as these aspects have now transformed from afterthoughts to top priorities. As banks embrace innovations and new technologies – most of which revolve around data, traditional security approaches no longer suffice. These factors are driving banks to rethink their security strategies — moving from reactive measures to proactive, embedded privacy-first approaches. In 2025, these imperatives are expected to reflect in banks' technology investments and strategies as well.

Banks will increasingly embed security and privacy considerations at core of their strategies. Two key areas of focus will be cybersecurity mesh and privacy-preserving technologies. Cybersecurity mesh will help banks secure distributed environments by creating dynamic micro-perimeters around devices and users, improving threat detection and response. Meanwhile, privacy-preserving technologies like homomorphic encryption and federated learning will allow banks to innovate with data while preventing data security breaches. These technologies will enable secure collaborations, better fraud detection, and personalized services while keeping customer data secure.

Industry Trendline

90% banking executives foresee threats and budgets more than doubling in cybersecurity space by 2030
Innovation in Retail Banking Report 2024

In last 12 months, homomorphic encryption moved from "innovation trigger" to "peak of inflated expectations" in Gartner Hype Cycle
Gartner

Federated machine learning offers business value in enhanced data privacy and compliance; better use of edge data through local data processing.
Forrester

In 2025, Security- and Privacy-First Technologies will become vital

Headless Banking Architecture to ensure customer-centricity

Cybersecurity mesh to help improve overall security posture

Privacy-preserving technologies in focus: Homomorphic encryption and federated learning

8.1 Cybersecurity mesh to help improve overall security posture

The traditional “castle and moat” approach to cybersecurity, with a single perimeter around the network, is no longer sufficient in today’s dynamic and distributed environments. The rise of remote work, cloud computing, and the Internet of Things (IoT) has blurred the lines of the network perimeter, making it increasingly difficult to defend. According to Innovation in Retail Banking survey by Infosys Finacle and Qorus, 90% banking executives foresee threats and budgets more than doubling in cybersecurity space by 2030. Cybersecurity mesh is expected to emerge as the go-to option for banks to respond to this challenge.

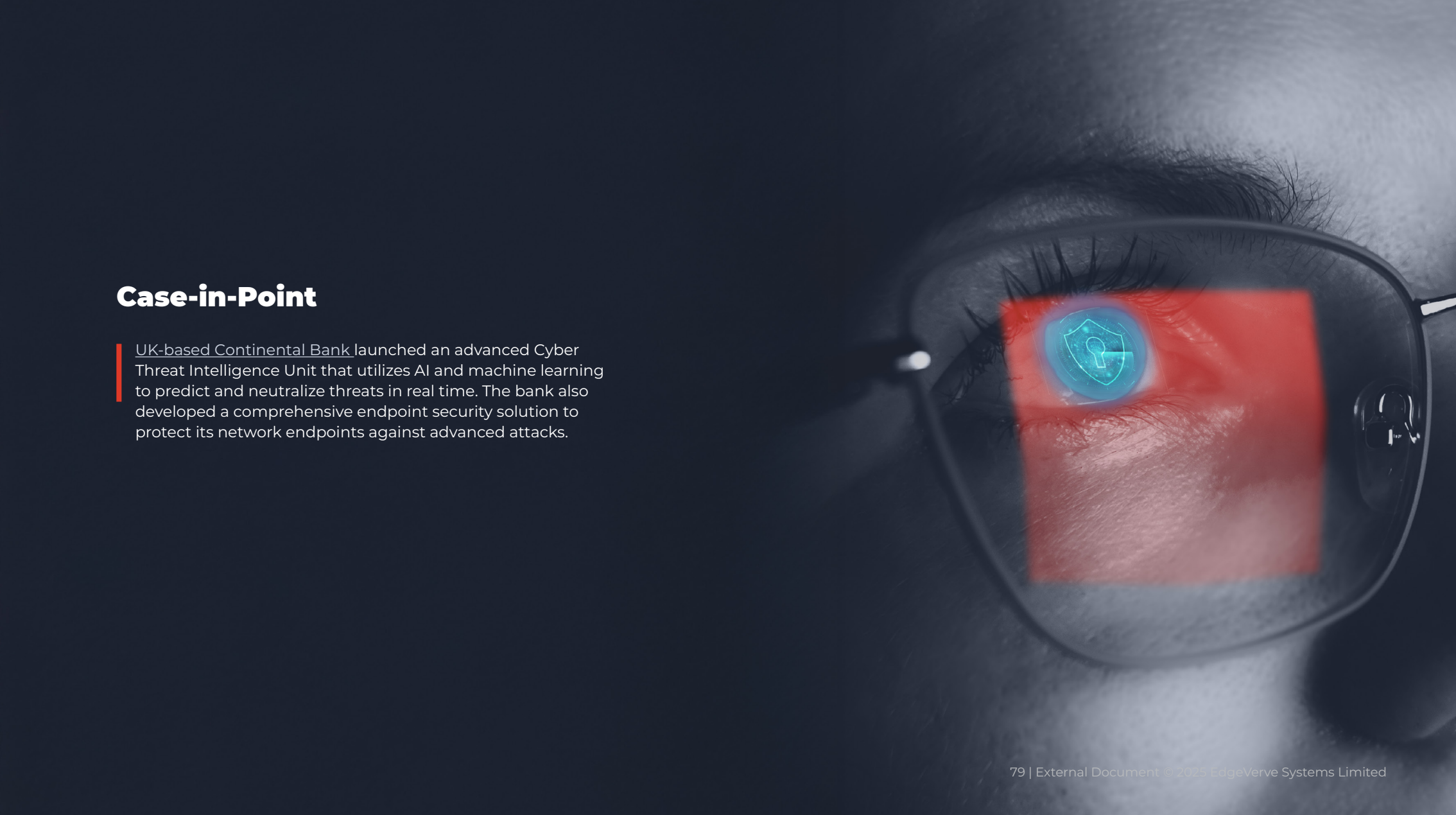
A cybersecurity mesh is a decentralized security architecture that focuses on securing individual devices and users rather than relying solely on a centralized network perimeter. It leverages a distributed identity fabric and dynamic security policies to create micro-perimeters around each entity. By securing individual devices and users, banks can better protect sensitive data and mitigate the risk of cyberattacks. The mesh provides granular visibility and control over devices, users, and data flows, enabling proactive threat detection and response. The decentralized nature of the mesh allows banks to adapt quickly to changing threats and business needs.

In 2025 and years thereafter, interest in this space is expected to grow significantly in upcoming years. Banks will focus on integrating mesh-based solutions with their existing security infrastructure after conducting pilot projects and evaluate the effectiveness. Automation will play a critical role in scaling and managing the complexity of the mesh. Collaboration between banks, technology vendors, and security experts will be essential for driving innovation and best practices.

Integrating mesh-based solutions with existing systems can be complex and time-consuming. There may be a shortage of skilled professionals with the expertise to design, implement, and manage mesh-based security solutions. To ensure success in this journey, banks must adopt a phased approach to implementation and gradually expanding the scope. Investing in training programs and partner with technology vendors will help augment the existing capabilities. Addressing these challenges while embracing the principles of the cybersecurity mesh will enable banks to significantly enhance their security posture.

Case-in-Point

UK-based Continental Bank launched an advanced Cyber Threat Intelligence Unit that utilizes AI and machine learning to predict and neutralize threats in real time. The bank also developed a comprehensive endpoint security solution to protect its network endpoints against advanced attacks.



8.2 Privacy-preserving technologies in focus: Homomorphic encryption and federated learning

The banking industry faces increasing pressure to protect sensitive customer data while simultaneously leveraging it for innovation and competitive advantage. Traditional data sharing and analysis methods often involve centralizing data, which raises significant privacy and security concerns. This is where privacy-preserving technologies like homomorphic encryption and federated learning are coming into play.

Homomorphic Encryption is a powerful cryptographic technique which allows computations to be performed directly on encrypted data without the need to decrypt it first. This means that sensitive information remains protected throughout the entire processing chain. In the last 12 months, the technology has moved from “innovation trigger” to “peak of inflated expectations” in Gartner Hype Cycle, signaling significantly growing interest.

Federated learning is another technology of interest in this domain. It is a decentralized machine learning approach enabling multiple organizations to collaboratively train a shared model without sharing their raw data. Each participant trains a local model on their own data and only shares model updates with a central server, preserving data privacy. According to Forrester, “Federated machine learning offers business value in enhanced data privacy and compliance; better use of edge data through local data processing; and access to richer and more diverse data sets.”

As data privacy becomes bigger priority than ever, banks will focus on these privacy-preserving technologies in 2025. Both these technologies offer robust protection for sensitive customer data, mitigating the risks of data breaches and unauthorized access. Federated learning enables banks to collaborate on advanced analytics and AI models without compromising data privacy, fostering innovation and improving services. Homomorphic encryption and federated learning can help banks comply with stringent data privacy regulations like GDPR and CCPA.

While still in early stages, some banks are experimenting with these technologies for specific use cases, such as fraud detection and risk assessment. Banks are expected to develop highly personalized financial products and services based on aggregated customer data without compromising privacy. Banks are expected to collaborate to identify and prevent sophisticated fraud schemes without sharing sensitive customer data. Federated learning will also help improve supply chain risk management and optimize lending decisions.

These technologies can be computationally expensive, which may limit its scalability for certain applications. Implementing and managing these technologies requires specialized expertise and can be technically challenging. The lack of standardized protocols and frameworks can hinder interoperability and widespread adoption. Continued investment in research and development is crucial to improve the performance and efficiency of these technologies. Collaboration between banks, technology providers, and regulators alongside training programs can help to develop best practices and address common challenges. Adoption of these privacy-preserving technologies will not only ensure privacy and compliance with regulatory requirements but also allow for responsible use of data.

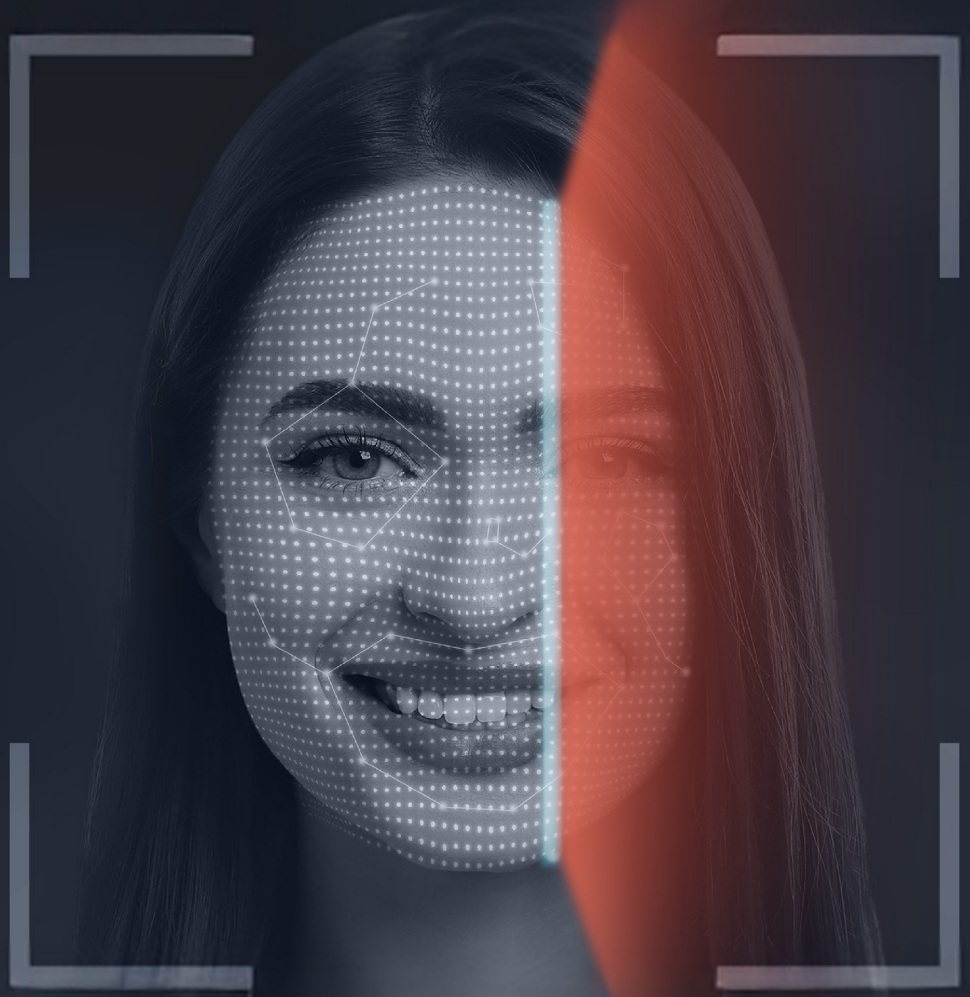
Case Examples

HSBC is one of the banks exploring privacy-enhancing technologies like homomorphic encryption. The bank has launched projects to enable secure data sharing, tackle financial crime, and carry out in-depth investigation of real-world, regulator-approved applications.

China's WeBank has developed a federated learning model for credit rating. The co-developed model is strictly restricted to measuring the credit risk of small and micro-enterprises. This has halved the number of defaults among WeBank's loans to these customers.

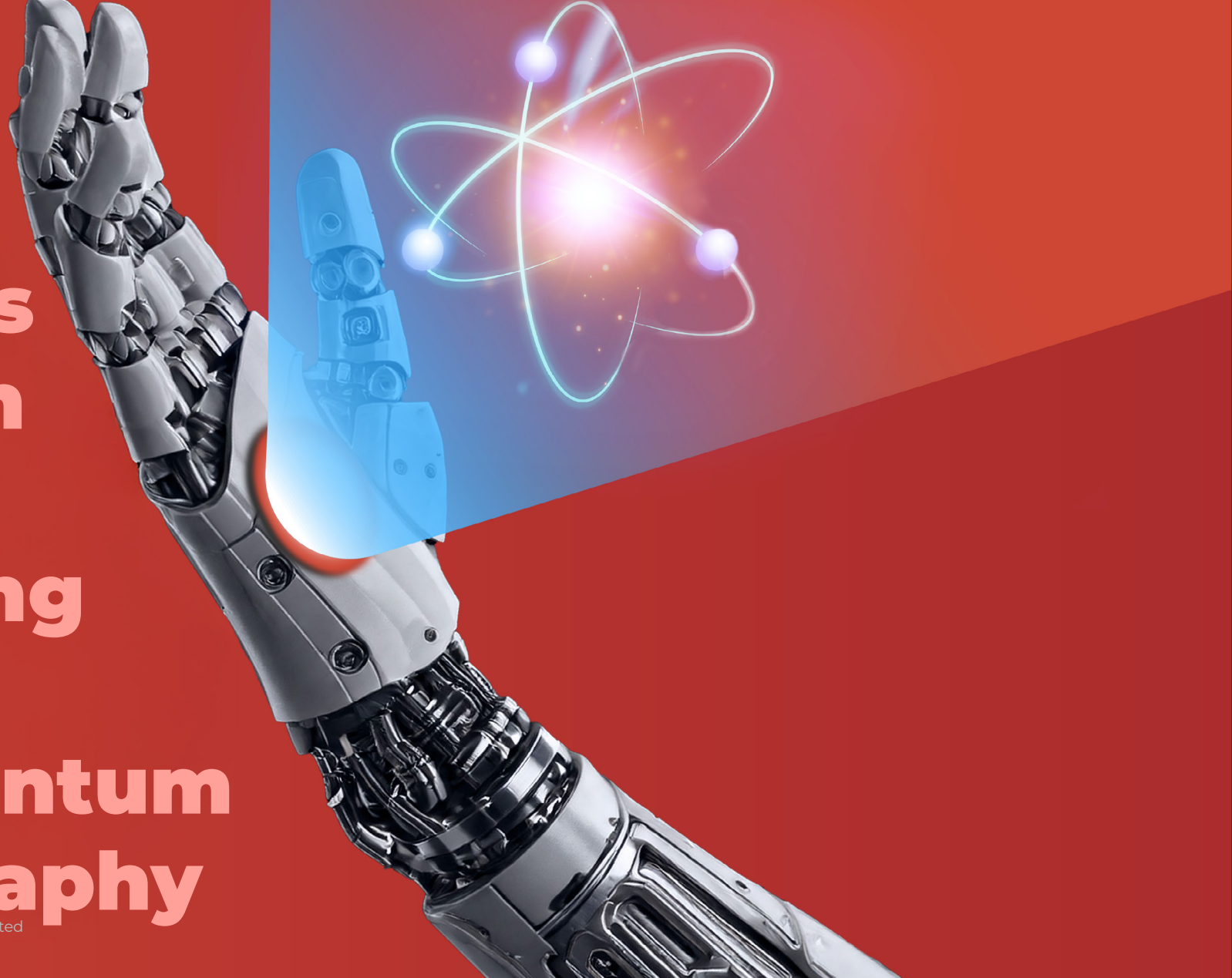
Mastering Security and Privacy Tech Will Be Crucial

As data security and privacy takes centerstage even further in 2025, cybersecurity mesh and privacy-preserving technologies will be crucial for banks to tackle emerging threats and safeguard sensitive information in distributed environments. By embedding these technologies at the core of their operations, banks can move from reactive to proactive security strategies, ensuring compliance and protecting customer trust. Mastering these innovations will be crucial for banks to secure future success in an evolving regulatory and threat landscape.



09.

Shaping Banking's Next with Edge Computing and Post-Quantum Cryptography



While the banking industry continues to focus on widely discussed trends like cloud and AI, several nascent technologies are quietly advancing with the potential to reshape the financial ecosystem in the coming years. Edge computing and post-quantum cryptography (PQC) are two such technologies that are not yet mainstream but are gaining momentum. As the demands for faster, more secure, and efficient systems increase, these emerging technologies will address critical challenges in data processing, cybersecurity, and customer experiences. We expect banks to focus more on these technologies in coming years to equip themselves better.

Edge computing will enable banks to process data closer to the source, ensuring real-time insights, reduced latency, and enhanced security—a game-changer for fraud detection and personalized experiences. Meanwhile, post-quantum cryptography will address the imminent threat posed by future quantum computing advancements, which could render today's encryption methods obsolete. By adopting quantum-safe encryption algorithms, banks can safeguard their transactions and customer data against future cyber threats. In 2025 and beyond, banks will progress further in these technology areas, ensuring better preparedness to safeguard their operations, protect customer trust, and drive sustainable growth.

Industry Trendline

Global spending on edge computing to exceed $378 billion by 2028.
IDC

52% of organizations are already assessing their quantum-related vulnerabilities, while another 30% have begun implementing risk mitigation measures

Deloitte

Technologies at gradual pace but strong proposition for banks in 2025 and beyond

Edge Computing to address the need for speed, security, and efficiency

Post-Quantum Cryptography to secure banks in Quantum Era

9.1 Edge Computing to Address the Need for Speed, Security, and Efficiency

Most banks today have some form of cloud strategy in place today – moving away from on-site infrastructure. However, the right path forward is to ensure distributed workload storage and management across multiple infrastructure points from scalable remote data centers to on-site points at the edge. Edge computing allows enterprises to process data much closer to where data originates, enabling speed, security, and efficiency. Balancing workloads across cloud and edge infrastructures enables banks to optimize latency, data privacy, and security, tapping into real-time analytics for instant decision-making.

2025 and beyond will see edge computing adoption in the banking sector accelerate, driven by a combination of enhanced customer experiences, real-time analytics, and cost efficiency. Research predicts that over 40% of larger enterprises across industries will integrate edge computing into their core infrastructure by 2025. Furthermore, IDC forecasts global spending on edge computing to exceed $378 billion by 2028. Early use cases emerging in 2025 revolve around fraud detection, risk assessment, high-frequency trading, and hyper-personalized customer engagement. Banks are expected to deploy AI models at the edge to instantly identify suspicious behavior without sending sensitive data to a central repository, mitigating regulatory and compliance challenges.

Most banks, still refining their transition from legacy systems to modernized, cloud-based platforms, should focus on careful workload orchestration between cloud and edge. They will need to establish robust governance frameworks, ensuring consistent security policies across distributed nodes, and develop clear strategies to handle the evolving ethical and regulatory implications of AI. Talent acquisition and executive buy-in will be critical—securing professionals who can design, deploy, and maintain edge architectures is paramount.

Meanwhile, progressive banks are expected to move beyond basic operational improvements, leveraging edge capabilities to deliver hyper-personalized services and near-instant onboarding experiences. These institutions will invest heavily in AI at the edge, allowing advanced ML models to run closer to data origin. Such real-time insights can help streamline everything from risk scoring to product recommendations, ultimately elevating the customer journey. With edge computing becoming central to strategic competitiveness, forward-thinking banks in 2025 will seize this advantage to differentiate themselves through faster innovation and enhanced trust in an increasingly data-driven financial ecosystem.

Case-in-Point

Banco Bradesco enabled a private 5G network capable of supporting surveillance applications with different quality of service requirements. The application will be installed on an edge computing machine with 5G connectivity.

Edge computing enabled HSBC to deploy IoT-based robot “Pepper” which uses AI and ML to deliver unique customer experiences, reduce customer waiting times and present the information as needed.

9.2 Securing Banks in Quantum Era with Post-Quantum Cryptography

The gradual advancements in quantum computing are set to fundamentally reshape the cybersecurity landscape. The development of a cryptographically relevant quantum computer (CRQC) while still distant, will render many of today's public-key cryptography protocols obsolete, posing a significant threat to banks' core processes, including secure transactions, user authentication, and data privacy. Once CRQCs materialize, attackers could decrypt sensitive information that was previously considered secure, leaving banks exposed to substantial risks. According to industry surveys, 52% of organizations are already assessing their quantum-related vulnerabilities, while another 30% have begun implementing risk mitigation measures. These figures underscore a growing recognition that proactive preparedness is essential and waiting until quantum threats fully materialize is not an option.

In response to the looming quantum threat, in years to come, post-quantum cryptography (PQC) will emerge as a critical defense mechanism for banks. PQC algorithms are based on mathematical problems that are challenging for both classical and quantum computers to solve, making them inherently resilient to quantum-based attacks. Transitioning to PQC will allow banks to secure sensitive customer data, protect transaction integrity, and ensure long-term privacy. An essential advantage of adopting PQC is that it can safeguard previously intercepted data, ensuring it remains indecipherable even when quantum computers become capable of breaking existing cryptographic methods. For banks, experimenting with quantum-safe algorithms will be crucial to maintaining trust and protecting their digital assets in the years ahead.

While PQC offers a robust solution, the transition to quantum-safe encryption presents several challenges for banks. A lack of preparedness and limited knowledge about post-quantum algorithms pose significant barriers. Unlike traditional cryptographic algorithms, quantum-safe methods often come with different performance characteristics, which may require rewriting existing applications and restructuring cryptographic processes. Additionally, banks must address the operational complexities of transitioning to new algorithms, such as managing data retention policies, replacing legacy cryptographic methods, and updating existing infrastructure. Without a well-defined roadmap, banks risk falling behind in securing their systems against quantum threats.

To ensure a smooth transition to post-quantum cryptography, banks must adopt a structured and forward-looking approach. This begins with establishing a dedicated task force responsible for assessing the scope, impact, and cost of the transition. These teams should coordinate efforts across security operations, IT infrastructure, and software engineering to ensure seamless integration of quantum-safe algorithms. Banks must experiment replacing outdated cryptographic methods with quantum-safe alternatives as part of a long-term risk management strategy. Additionally, banks should begin embedding quantum considerations into their cybersecurity frameworks, ensuring they stay ahead of emerging threats. By proactively embracing post-quantum cryptography and collaborating with industry experts and technology providers, banks can future-proof their digital assets, maintain customer trust, and ensure resilient operations in the quantum era.

The Road Ahead

As banking innovation takes another leap, both edge computing and post-quantum cryptography can emerge as vital areas of investments for banks in coming years. In 2025, banks must accelerate edge adoption to optimize latency-sensitive processes like fraud detection and customer engagement, while also preparing for quantum threats by adopting quantum-safe encryption. By embedding these technologies into long-term strategies and enhancing readiness, banks can future-proof operations, protect customer trust, and maintain competitiveness in an increasingly fast-paced, security-conscious financial landscape.

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