Intelligent banking

A blueprint for creating value through AI-driven transformation

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Contents

Foreword

This report is the result of extensive research into the value being created by artificial intelligence (AI) within the banking sector. It is designed to provide actionable insights for leaders at every stage of their AI journey, from those deploying their first pilots to banks seeking to scale enterprise-wide AI initiatives.

While some banks are highly advanced in their use of AI, many others face significant barriers that impede progress. Moving beyond tests and pilots is no longer an option — it is an imperative. This report serves as a guide to help banks navigate this critical transition and unlock AI's transformative potential.

Banks are beginning to grapple with the reality that seizing the significant opportunities AI presents will require far more than just an investment in technology. It demands a holistic rethinking of strategy, culture, operation practices and an ethical framework for deployment.

Yet, many find themselves stalled by inertia. Long-term value is difficult to define, and many organizations struggle with setting clear objectives, identifying key performance indicators (KPIs), and proving return on investment (ROI). These challenges are compounded by the costs of technology upgrades, implementation risks and hesitations among senior executives who are eager to transform but cautious about leading the charge.

To prepare for an intelligent enterprise, banks should embrace AI as a driver of sustainable growth. By integrating AI across functions — from marketing and customer service to fraud prevention and risk management — banks can create innovative, customer-centric solutions that not only enhance profitability but also deepen customer loyalty. This report provides the tools and insights needed to break through barriers, scale AI adoption and position banks to succeed in an increasingly competitive and intelligent future.

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AI is not just a technology investment for banks — it's a catalyst for redefining strategy, operations and culture. To unlock its potential, banks must overcome inertia, embrace transformation and integrate AI as a core enabler of customer-centric, sustainable growth. "
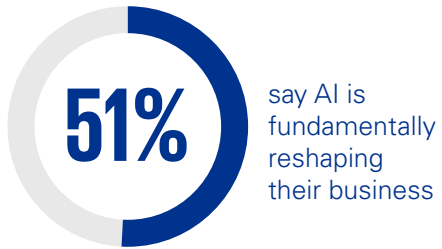
Francisco Uría
Global Head of Banking and Capital Markets
KPMG International
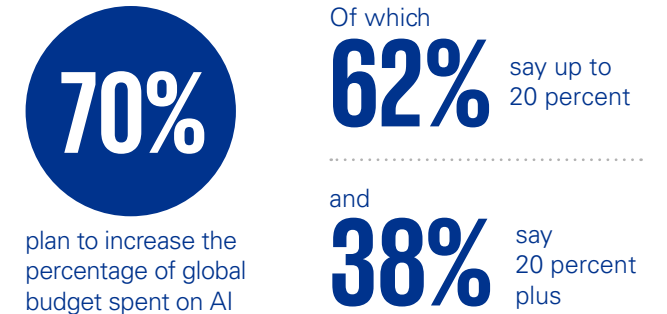
At a glance

AI use is widespread in banking

51% say AI is fundamentally reshaping their business

Banking executives have high expectations

80% believe that banks that **embrace AI** will develop a **competitive edge** over those who do not

62% expect a moderate to very high ROI from AI investments

But the pressure is on to prove ROI

70% face significant pressure from shareholders to show immediate ROI on AI investment

AI spending will likely increase significantly

70% plan to increase the percentage of global budget spent on AI

Of which **62%** say up to 20 percent

and **38%** say 20 percent plus

AI goals are clear

68% are seeking to reduce costs

42% to enhance the customer experience

The initial benefits

66% have achieved cost savings

Only **26%** have experienced revenue growth

And only **13%** have experienced a high revenue contribution from AI
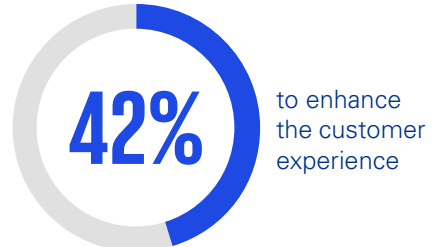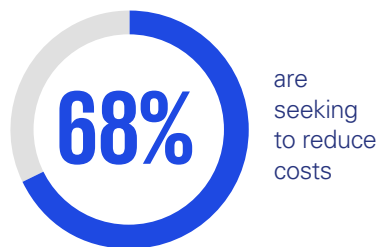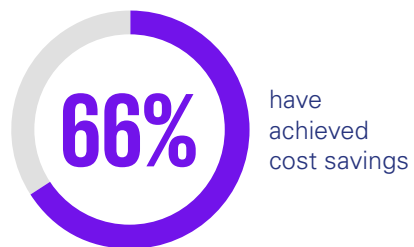
Introduction

Banks are increasingly experimenting with generative AI in isolated use cases, such as chatbots, content creation and personalized marketing. However, many are struggling to extract meaningful value from these efforts. Our study finds that while many financial institutions see AI as critical to their future, and beginning to realize efficiencies, only a small fraction report achieving revenue growth from their AI investments.

Banks face unique challenges

Many struggle to establish a risk environment robust enough to support broader AI deployment, particularly in highly regulated areas like credit decisioning or compliance monitoring. Concerns about data governance, operational integrity and regulatory scrutiny create barriers to progress. At the same time, the rapid pace of technological advancements — combined with the competitive dynamics of proprietary versus open-source AI platforms — adds complexity, leaving banks uncertain about how to scale their efforts.

Banks embrace the new world of AI agents

AI agents are set to transform banking by enabling hyper-personalized, efficient, and seamless customer experiences while driving operational efficiency.

These intelligent agents can act as 24/7 virtual advisors, providing tailored financial guidance, automating routine transactions, and proactively managing customer needs based on real-time data and predictive insights. In operations, AI agents can streamline back-office processes, such as fraud detection, compliance monitoring, and risk assessment, by analyzing vast amounts of data with unmatched speed and precision.

A blueprint for value

To overcome these challenges, seize the opportunity and prepare for the next generation of AI technologies, banks should adopt a deliberate, structured approach to AI adoption. In this report we introduce the three phases of AI value — a framework designed to help banks prioritize efforts, align investments, and realize the full potential of AI.
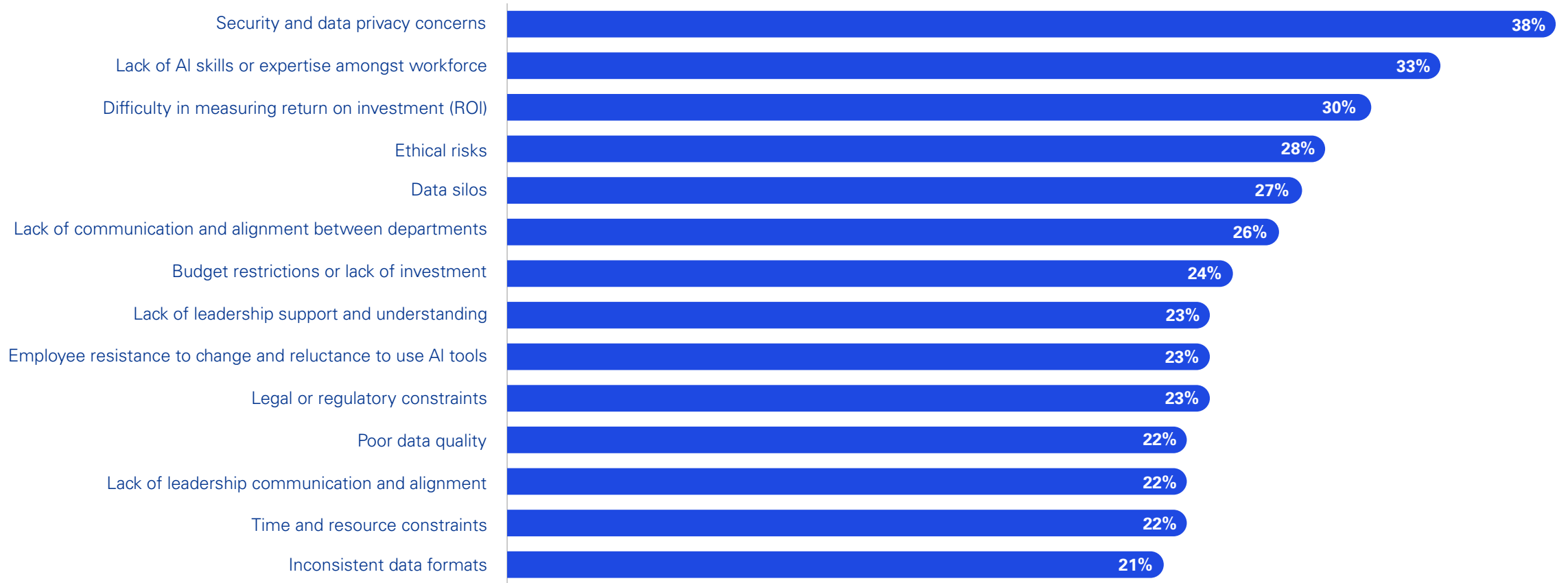
85%
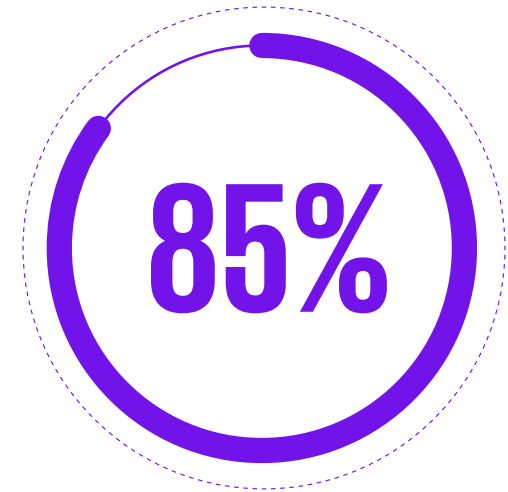
say employees within their organization are quickly getting to grips with using the AI tools/ technology they've invested in

Figure 1: Data concerns and lack of skills emerge as top challenges

Percentage who say their organization has faced the following challenges when integrating AI

| Challenge	Percentage
Security and data privacy concerns	38%
Lack of AI skills or expertise amongst workforce	33%
Difficulty in measuring return on investment (ROI)	30%
Ethical risks	28%
Data silos	27%
Lack of communication and alignment between departments	26%
Budget restrictions or lack of investment	24%
Lack of leadership support and understanding	23%
Employee resistance to change and reluctance to use AI tools	23%
Legal or regulatory constraints	23%
Poor data quality	22%
Lack of leadership communication and alignment	22%
Time and resource constraints	22%
Inconsistent data formats	21%

What challenges has your organization faced when integrating AI? (Maximum 5) n=183

Source: Intelligent banking: A blueprint for creating value through AI-driven transformation, KPMG International, 2025

Four key considerations that will likely accelerate AI adoption and the creation of long-term value:
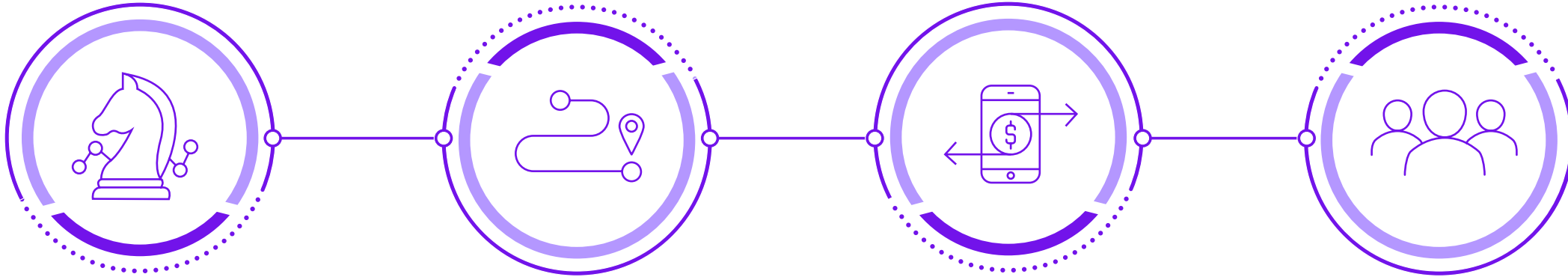
Design an AI strategy that aligns with core competencies and unlocks value

Banks should establish a bold vision for AI that aligns with their core strengths. This vision should guide a transformation roadmap that redefines how AI drives growth and innovation while holding teams accountable for results. Aligning AI deployments with strategic goals — such as improving fraud detection, streamlining underwriting and enhancing customer personalization — can help maximize ROI.

Build trust into the transformation roadmap

AI in banking introduces unique risks that can undermine trust, meaning proactive risk management critical from the outset. Banks should address data privacy and security challenges, helping ensure compliance with financial regulations while protecting sensitive customer information. Combating algorithmic bias and adopting explainable AI systems that regulators, customers, and internal stakeholders can trust is critical.

Create sustainable technology and data infrastructure for AI adoption

Data is a critical strategic asset and the foundation for all AI initiatives. Banks should build a robust data governance framework, focusing on quality, integration and security, while also creating a foundation for long-term scalability. This includes investing in enterprise-grade AI infrastructure that can support high volumes of transactions, complex risk models and real-time decision-making.

Build a culture that uses AI to uplift human potential

A multifaceted talent strategy that balances retention with upskilling is a key priority. Academic institutions, fintech startups and innovation hubs can inject fresh perspectives and enhance workforce capabilities. Immersive AI training programs help to drive innovation in customer experiences and operational models, diversify hiring pipelines and enable transformative outcomes.

Research findings

"

Our organization is still in an experimental stage with respect to AI. We've not yet established any clear objectives or KPIs around how it's used. "

Chief Executive Officer — Japan

Current state

Banks are actively exploring and refining strategies to deploy AI. Amidst foundational and talent readiness challenges, the banking sector is cautiously yet innovatively adopting AI, employing diverse implementation strategies and integrating complementary technologies to transform key business functions.

AI is no longer just a futuristic concept in banking — it's already driving innovation in critical areas such as fraud detection, personalization and risk management. Leading global institutions are at the forefront, using AI to transform key processes and deliver enhanced customer experiences. These banks have identified hundreds of AI use cases, from streamlining operations to offering hyper-personalized products and services. However, for other banks the research highlights a number of inhibiting factors:

The foundational infrastructure is still in development

Banks face a challenge in building the critical infrastructure necessary to support scalable AI solutions: Only 25 percent have enterprise-wide cloud or hybrid-cloud platforms strategically supporting data-driven services, leaving many banks struggling to lay the groundwork for effective AI adoption.

Leaders and employees are just coming to grips with AI's potential

Sixty-one percent of banks provide ethics and guardrails training for AI, helping employees navigate the responsible application of the technology. However, in-depth AI training remains limited, with only 30 percent offering advanced content that fosters a comprehensive understanding of AI capabilities.
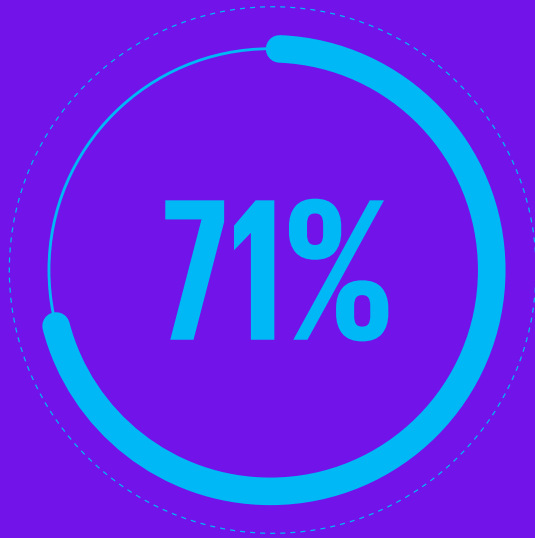
71%

agree it is prudent to wait for greater clarity in the evolving AI technology landscape before committing to significant investments.

No dominant AI implementation model

Banks are experimenting with a mix of approaches to AI implementation. Sixty-six percent of banks are leveraging cloud-based AI platforms, while 46 percent use open-source tools and 83 percent rely on on-premises solutions. Additionally, 86 percent are developing custom AI solutions in-house, although approaches to implementation vary depending on the level of digital maturity.

Leaders are concerned about control

Control over AI remains a key concern for banking leaders, with 58 percent expressing nervousness about the influence AI technology providers may have on their business operations. Furthermore, 71 percent agree it is prudent to wait for greater clarity in the evolving AI technology landscape before committing to significant investments.

AI is being coupled with automation technologies

Banks are increasingly integrating AI with complementary technologies to maximize impact. For example, 82 percent are pairing AI with robotic process automation (RPA) to streamline workflows, while 84 percent are exploring autonomous agentic AI solutions.

AI is transforming business functions in pockets

AI is making its greatest impact in information technology (IT) and marketing functions, with 61 percent of banks reporting high or transformative effects on IT operations and 55 percent seeing significant advancements in marketing.

Barriers to progress

Making substantive progress is complicated by:

Significant concerns over AI risks and ethics

AI adoption in banking is accompanied by widespread concern about risks and ethical implications. Seventy-one percent of leaders agree that establishing robust frameworks for regulatory compliance is essential to ensure responsible AI implementation.

Balancing AI adoption with sustainability objectives

However, balancing sustainability goals with AI initiatives poses a challenge, as 70 percent struggle to reconcile AI's energy usage with their environmental objectives and 66 percent view meeting sustainability goals as a higher strategic priority than implementing AI.

Data is a significant barrier

The quality of data remains a major obstacle for banks seeking to scale AI adoption, with 72 percent expressing concerns about data quality. Without consistent, reliable and accessible data, banks face challenges in building accurate and effective AI models, stalling progress toward meaningful AI-driven transformation.

Bankers are taking a wait-and-see approach

The rapid evolution of AI technologies is creating uncertainty and hesitation among banking leaders. Seventy-one percent believe it is best to wait for the AI tech landscape to stabilize before making significant investments, while 57 percent feel overwhelmed by the sheer volume of information and hype surrounding AI.

AI expertise is limited

A lack of specialized AI expertise is also holding banks back, with only 19 percent guided by highly specialized AI teams driving strategy across the organization. In addition, just 18 percent use AI as a core driver for product and service development across multiple areas.

Accuracy

Accuracy is a significant inhibitor to scaling AI in banking, as the highly regulated financial sector demands strict compliance with risk and regulatory requirements, leaving little room for error. Without mechanisms to ensure AI outputs are consistently accurate, repeatable and explainable, banks face the challenge of balancing innovation with the need for human oversight, which can slow down adoption and limit scalability.

Moving forward

It's clear that bankers face a complex web of challenges as they navigate AI adoption. Despite significant efforts to implement AI, these fragmented strategies and limited readiness illustrate the need for a more structured approach.

In this report we introduce the three phases of AI value creation: An organizational framework designed to help banks progress from isolated foundational capabilities to enterprise-wide innovation. By building trust, aligning strategies, enabling technology and empowering their workforce, banks can unlock AI's transformative potential while mitigating risks. This framework not only offers an approach for successful adoption but also helps ensure that AI becomes a sustainable, strategic enabler for long-term growth and value.

> " The biggest challenge right now is regulatory requirements and specific regulators for authorities from different locations from Spain, Germany, UK. They all have their different requirements and expectations. "
>
> **Chief Compliance Officer** — Germany

Building the intelligent bank

"

A well-run corporation is like a Swiss watch with lots of gears. If you wanted to make it digital, you cannot just take out one gear and put a transistor in. You have to have a holistic plan for how all the pieces fit together. "

Erik Brynjolfsson — Professor and Senior Fellow at the Stanford Institute for Human-Centered AI (HAI), Director of the Stanford Digital Economy Lab

Successfully implementing AI in an organization involves a strategic approach to building capability across foundational, functional and enterprise layers. Establishing a transformation management office is also crucial for aligning AI strategy, value orchestration and project delivery across all layers. The body coordinates initiatives, establishes standards and best practices, and facilitates cross-functional collaboration to drive accountability and enterprise-wide value.

Enterprise

This layer orchestrates transformational change of the whole enterprise, starting with how AI can adjust strategy, business models and key objectives for the enterprise. It defines enterprise-wide operating model shifts, workforce evolution and risks and controls. This layer prioritizes AI transformation initiatives into a roadmap and runs a transformation office to help manage funding, track benefits and adjust priorities dynamically to help maximize the value delivered.

Functions

This layer drives AI-enabled transformation across business functions, prioritizing customer-facing value streams and end-to-end enabling processes and workflows, which enhance the flow of value. AI applications, agents and robotics are embedded in the workflows. Functional operating model changes are delivered to realize potential benefits.

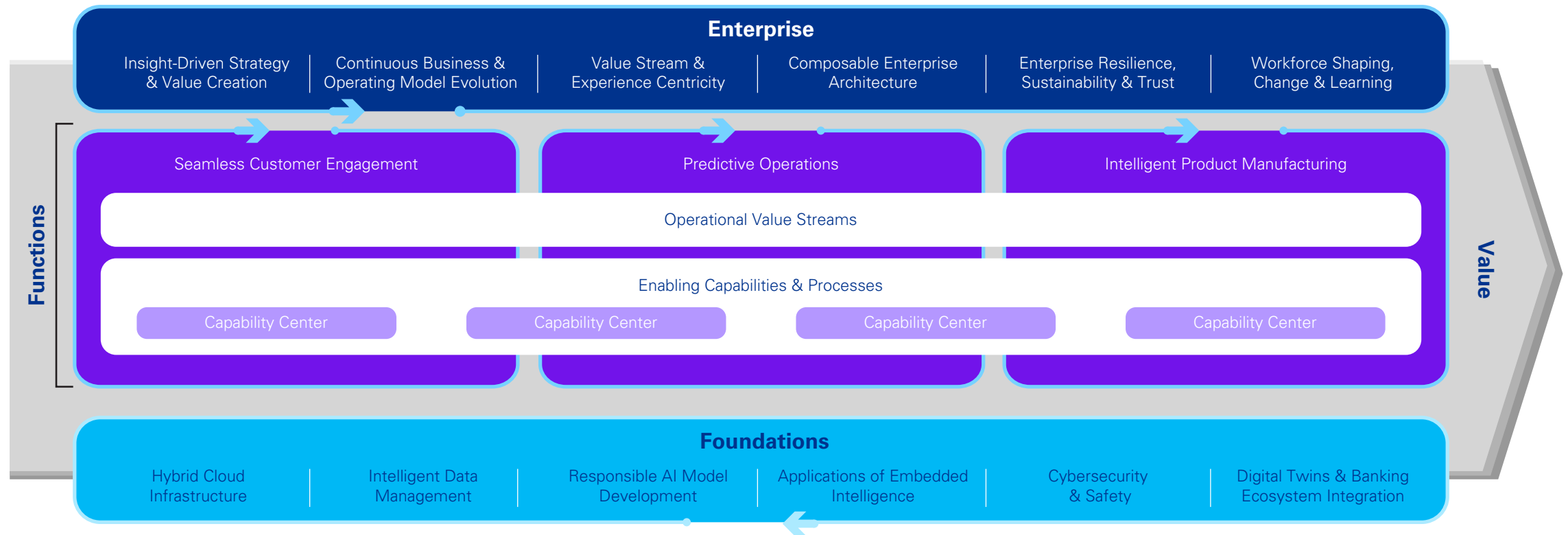## Foundations

This layer establishes the AI-first technology stack, including infrastructure, cloud and choices on chips. High quality enterprise data needs to be curated and diverse model are likely to be deployed to handle domain specific AI and support the adoption of AI agents. An increased focus on cybersecurity for AI is needed as well as a plan for other emerging technology, such as quantum.

Blueprint for intelligent banking

This blueprint outlines some of the key, high-level capabilities for an AI-powered, customer-centric bank. The intelligent bank leverages advanced technologies, personalized experiences, data-driven insights and automated operations to enhance efficiency, innovation and resilience. Focused on embedding intelligence across value streams, capability centers and processes, it ensures seamless customer interactions, robust risk management, intelligent product manufacturing and future-ready adaptability to thrive in the intelligent economy.

Enterprise

| Insight-Driven Strategy & Value Creation | Continuous Business & Operating Model Evolution | Value Stream & Experience Centricity | Composable Enterprise Architecture | Enterprise Resilience, Sustainability & Trust | Workforce Shaping, Change & Learning |

Functions

Seamless Customer Engagement | Predictive Operations | Intelligent Product Manufacturing

Operational Value Streams

Enabling Capabilities & Processes

Capability Center | Capability Center | Capability Center | Capability Center

Value

Foundations

| Hybrid Cloud Infrastructure | Intelligent Data Management | Responsible AI Model Development | Applications of Embedded Intelligence | Cybersecurity & Safety | Digital Twins & Banking Ecosystem Integration |

The journey to become an intelligent bank

Effective AI enabled transformation goes beyond technology implementation. By examining leading practice, we have identified that banks can increase capability and value across three phases of AI transformation.

This provides a structured yet flexible framework for navigating the complexities of AI adoption. It balances the need for short-term efficiency gains with the imperative to prepare for future growth and innovation. It helps banks prioritize their efforts, allocate resources effectively, build capability and align their AI initiatives with both short-term goals and long-term strategic objectives.
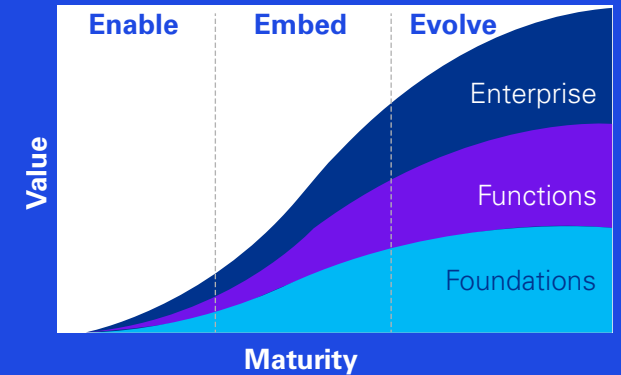
Enable

The Enable phase focuses on enabling people and building AI foundations. Organizations appoint a responsible executive, create an AI strategy, identify high-value use cases, boost AI literacy, align with regulations and establish ethical guardrails. AI pilots are launched across functions, while cloud platforms and pre-trained models are leveraged with minimal customization.

Embed

The Embed phase integrates AI into workflows, products, services, value streams, robotics and wearables, delivering greater value. A senior leader drives enterprise-wide workforce redesign, re-skilling and change, embedding AI into operating models with a focus on ethics, trust and security. AI agents and diverse models are deployed, supported by cloud and legacy tech modernization, while enterprise-wide data enhances operations.

Evolve

The Evolve phase evolves business models and ecosystems, using AI and frontier technologies like quantum computing and blockchain to solve large sector-wide challenges. AI can orchestrate seamless value across enterprises and partners. Emphasizing ethics and trust with real-time security, this phase uplifts human potential with broad and deep workforce training, fostering a creative, innovative and value-driven future.

A company may have a portfolio of initiatives aimed at any level (of the operating model) within each phase. The ratio of effort and investment across the phases will vary as the organization matures. Initially, most resources will focus on phase one, with a small effort to explore enterprise-wide transformation. Over time, as foundational efficiencies are realized more effort is invested in phase two, while, with an eye on the future, long-term investments in phase three start to lay the groundwork for transformative innovation. This dynamic balancing act ensures banks can achieve immediate results while setting themselves up in the right way for future success.
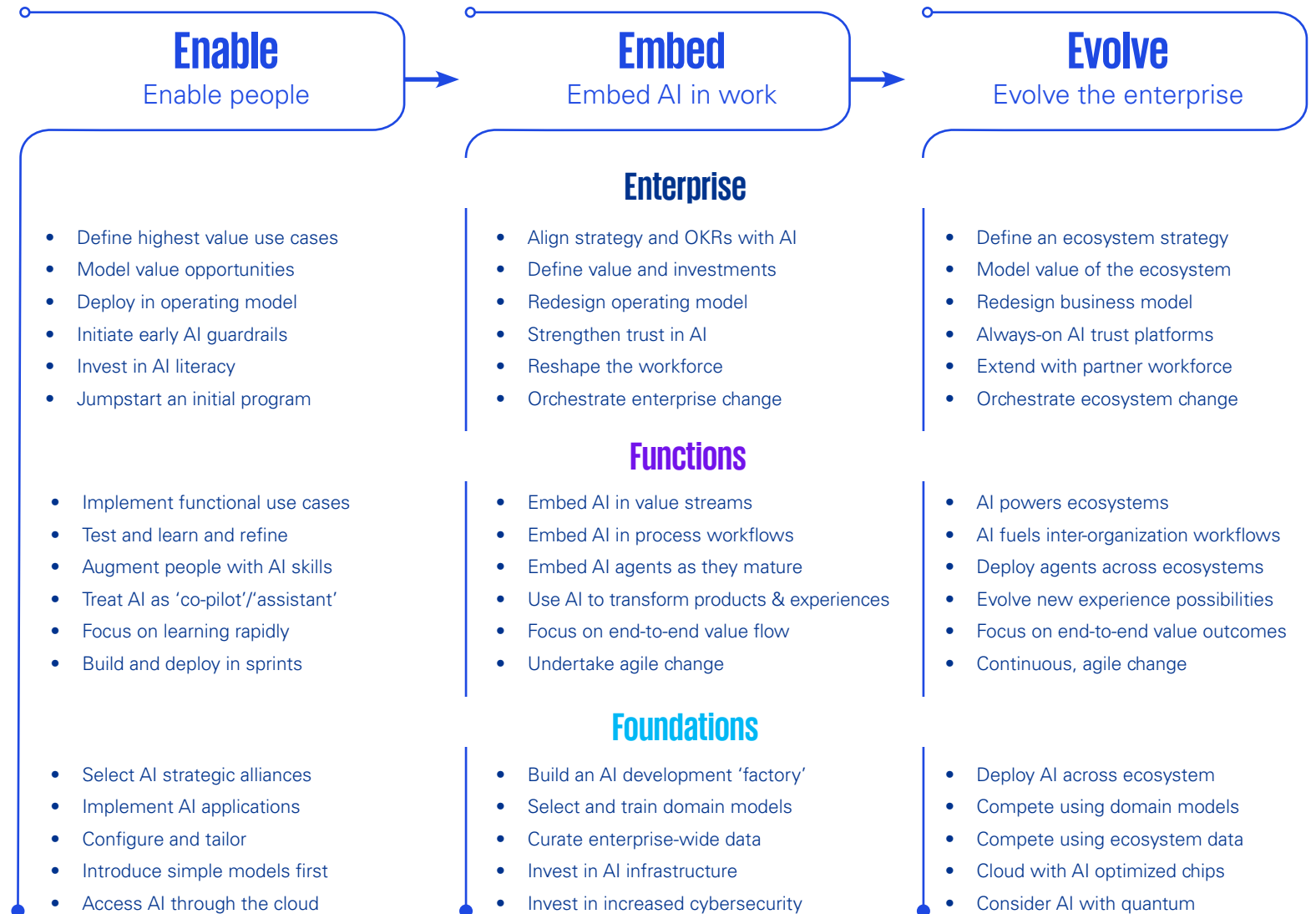
Phases of the AI journey

Focusing on maturity across the three phases — Enable, Embed and Evolve — is critical for sustained value creation. It requires increasing the maturity of the capabilities that are vital to the foundations, functions and enterprise layers simultaneously.

At the enterprise layer, increased AI maturity involves orchestrating AI across functions to enable enterprise-wide innovation and strategic alignment. Without a balanced focus on all three layers, organizations risk missing opportunities for transformation.

At the functions layer, AI should be embedded into key value streams, optimizing specific processes and creating improved outcomes, such as more compelling products and services and more engaging, end-to-end employee and customer experiences.

At the foundations layer organizations should build up the new AI-first technology stack, through a process of technology modernization. Infrastructure, data, models and applications can all become optimized for delivery of AI.

Enable
Enable people

→

Embed
Embed AI in work

→

Evolve
Evolve the enterprise

Enterprise

Enable	Embed	Evolve
• Define highest value use cases	• Align strategy and OKRs with AI	• Define an ecosystem strategy
• Model value opportunities	• Define value and investments	• Model value of the ecosystem
• Deploy in operating model	• Redesign operating model	• Redesign business model
• Initiate early AI guardrails	• Strengthen trust in AI	• Always-on AI trust platforms
• Invest in AI literacy	• Reshape the workforce	• Extend with partner workforce
• Jumpstart an initial program	• Orchestrate enterprise change	• Orchestrate ecosystem change

Functions

Enable	Embed	Evolve
• Implement functional use cases	• Embed AI in value streams	• AI powers ecosystems
• Test and learn and refine	• Embed AI in process workflows	• AI fuels inter-organization workflows
• Augment people with AI skills	• Embed AI agents as they mature	• Deploy agents across ecosystems
• Treat AI as 'co-pilot'/'assistant'	• Use AI to transform products & experiences	• Evolve new experience possibilities
• Focus on learning rapidly	• Focus on end-to-end value flow	• Focus on end-to-end value outcomes
• Build and deploy in sprints	• Undertake agile change	• Continuous, agile change

Foundations

Enable	Embed	Evolve
• Select AI strategic alliances	• Build an AI development 'factory'	• Deploy AI across ecosystem
• Implement AI applications	• Select and train domain models	• Compete using domain models
• Configure and tailor	• Curate enterprise-wide data	• Compete using ecosystem data
• Introduce simple models first	• Invest in AI infrastructure	• Cloud with AI optimized chips
• Access AI through the cloud	• Invest in increased cybersecurity	• Consider AI with quantum

The first phase: Enable

Enable people with AI

The Enable phase is about enabling people and establishing the foundations for AI adoption. At the enterprise level, this includes appointing a responsible executive, developing an AI strategy, identifying high-value use cases, increasing AI literacy, aligning with regulations and introducing ethical guardrails.

At the function level, businesses pilot AI solutions across various areas, building skills, fostering innovation and learning from these initial implementations.

At the foundation level, organizations leverage cloud platforms and pre-trained AI models from strategic providers with limited customization. This phase focuses on creating awareness, experimentation and alignment to ensure the organization is prepared for broader AI integration.

Figure 2: Leadership goals for AI adoption focus heavily on operational gains rather than strategic value

Percentage who say their organization wants to achieve the following through using AI

Goal	Percentage
Increase operational efficiency (e.g. automating repetitive tasks and processes)	45%
Enhance customer experience	42%
Increase revenue	41%
Mitigate business risks (e.g. fraud detection, risk management, compliance)	40%
Reduce costs	37%
Gain significant competitive advantage in the market	37%
Improve decision-making	37%
Improve data management (e.g. quality, protection)	34%
Drive innovation and new product development	31%
Improve stakeholder management (e.g. supply chain, clients, etc.)	29%
Support sustainability and environmental goals	27%
Optimize financial planning and forecasting	26%

Which of the following goals does your organization want to achieve through using AI? (Maximum 5) n=183

Source: Intelligent banking: A blueprint for creating value through AI-driven transformation, KPMG International, 2025

To guide clients' AI strategy and investments, KPMG in the US recently concluded an 18-month research project — *Quantifying the GenAI opportunity.* The research evaluated the realistic value at stake from fully deploying and adopting Gen AI.
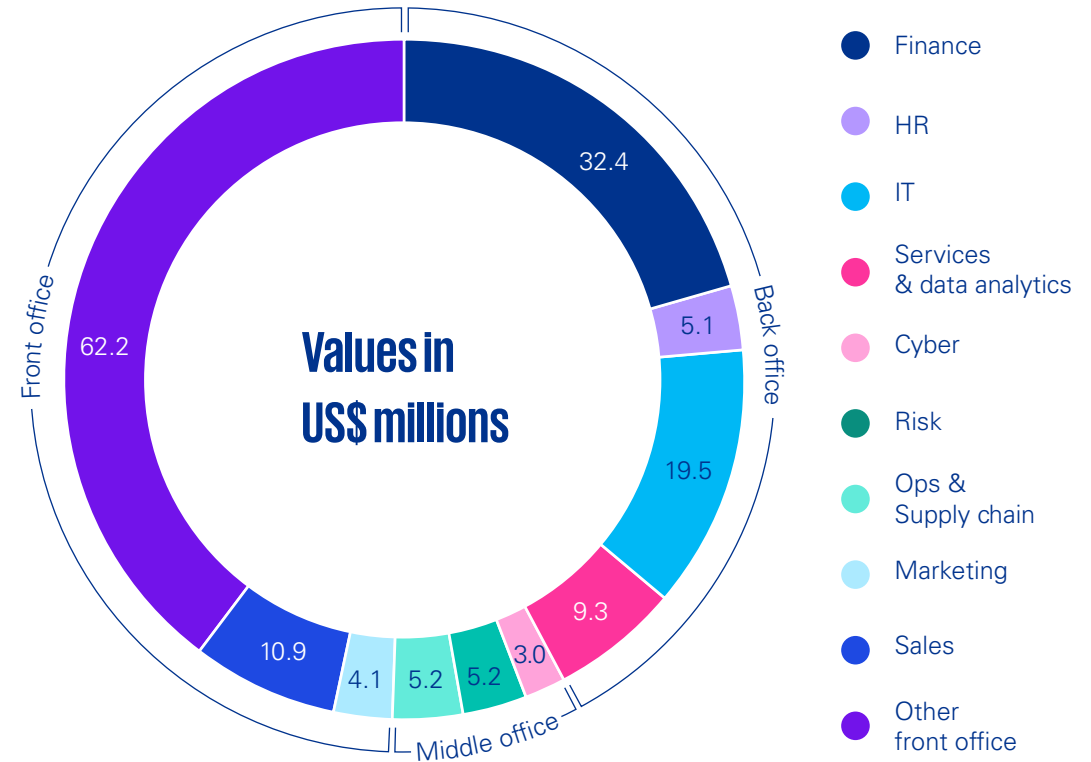
Over

17 million
companies globally were assessed.

After looking in depth at

7,000
companies employing

72 million
people and pressure-testing results with

500 clients,
the results conservatively equate to 4–18 percent EBITDA improvement in labor productivity alone. The following chart reveals the potential value at stake within the banking sector.

Figure 3a: Gen AI opportunity by function: Banking

Values in US$ millions

Finance 32.4
HR 5.1
Back office
IT 19.5
Services & data analytics 9.3
Cyber 3.0
Risk 5.2
Ops & Supply chain 5.2
Marketing 4.1
Sales 10.9
Middle office
Other front office 62.2
Front office

Source: Quantifying the GenAI opportunity, KPMG in the US, February 2025

Figure 3b: Gen AI opportunity, task complexity breakdown: Banking

	Finance	HR	IT	Services & data analytics	Cyber	Risk	Ops & Supply chain	Marketing	Sales	Other front office
High	58%	69%	57%	54%	62%	58%	63%	70%	69%	64%
Medium	34%	26%	33%	41%	27%	27%	32%	24%	28%	30%
Low	7%	5%	9%	5%	11%	14%	4%	7%	4%	5%

Back office — Finance, HR, IT, Services & data analytics
Middle office — Cyber, Risk, Ops & Supply chain
Front office — Marketing, Sales, Other front office
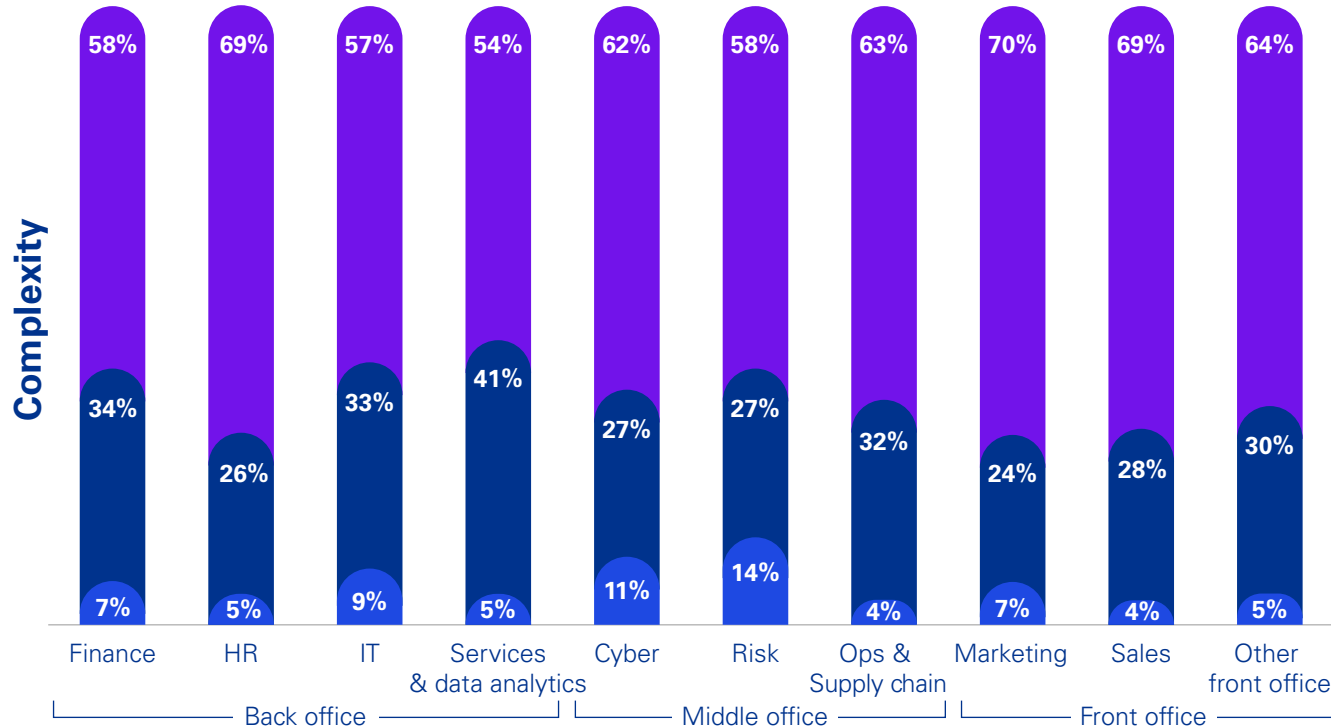
● **Low complexity**
Based on tasks that are relatively simple and can be effectively augmented using readily available Gen AI tools such as Copilot, ChatGPT and other out-of-the-box technologies.

● **Medium complexity**
Based on tasks that have potential for Gen AI augmentation but may necessitate the development of more integrated and customized solutions.

● **High complexity**
Based on tasks that have potential for Gen AI augmentation but will likely require the creation of integrated and sophisticated solutions, as well as comprehensive governance and change management to enable adoption.

Source: Quantifying the GenAI opportunity, KPMG in the US, February 2025

Top 10 areas of opportunity: Banking

01 Customer relationship management

02 Operations execution

03 Performance optimization

04 Data analysis

05 Product performance analytics

06 Operations and supply chain resource allocation

07 Customer sentiment analysis

08 Content generation

09 Data compression

10 Quality assurance and testing

Source: Quantifying the GenAI opportunity, KPMG in the US, February 2025

Consequently, most banks focus on reducing costs and increasing efficiency. AI automates repetitive, manual processes, which can help streamline operations and minimize human error. For example:

Fraud detection and prevention: Several banks are using AI to analyze transactional data in real time, identifying patterns indicative of fraud. This automation not only reduces the workload for fraud analysts but also enhances accuracy and speed, minimizing financial losses. For instance, in 2023, a major credit card company thwarted 80 million fraudulent transactions worth $40 billion globally, attributing this success to substantial investments in AI technology.[1]

Document processing: A major US bank uses AI to review and analyze thousands of legal documents in seconds. This task previously required hundreds of hours of manual labor, significantly reducing costs and human error.

Loan underwriting: AI-driven automation is resulting in faster and more accurate loan underwriting decisions. At one global bank, AI-based underwriting has reduced loan processing cycle times from 30 to 16 days, effectively doubling underwriting efficiency. By analyzing vast amounts of customer data, including credit history, income patterns and risk indicators, AI models identify and assess creditworthiness with speed and precision, enabling faster decision-making while minimizing errors.[2]

AI is changing the customer experience in banking

AI-powered chatbots and virtual assistants are revolutionizing customer service by providing instant responses to common queries, transaction searches and account management tasks. First generation chatbots are being upgraded to conversational, contextually aware chatbots that emulate human interactions. These tools reduce wait times and allow customers to access support 24/7, offering convenience and reliability. Similarly, AI-driven personalization engines analyze transaction history, spending patterns and demographics to deliver tailored product recommendations, such as suggesting relevant credit card offers or savings plans.

As mentioned, AI also improves customer experience by enhancing transaction security and reducing fraud. HSBC, for example, uses AI to detect fraud across millions of accounts, providing customers with a sense of security and trust. These innovations make everyday banking more seamless, secure and customer-centric, laying the groundwork for deeper engagement and loyalty in later stages.

Banks are leveraging AI to revolutionize know your customer (KYC) processes, improving efficiency, accuracy and compliance. AI-powered tools automate identity verification, analyze vast datasets to detect anomalies,

and flag potential risks in real time, significantly reducing the time and cost associated with traditional KYC checks. Machine learning algorithms enhance fraud detection by identifying patterns of suspicious activity that may go unnoticed by manual processes. Additionally, natural language processing (NLP) enables banks to extract and verify critical information from unstructured documents, such as passports and utility bills, with precision. By integrating AI into KYC, banks can strengthen regulatory compliance and also enhance the customer experience through faster, frictionless onboarding.

> "

When we started leveraging AI, especially for some of our solutions, usually for the customer enrolment process, we acquired many customers through the chatbot system, which resulted in more revenue. "
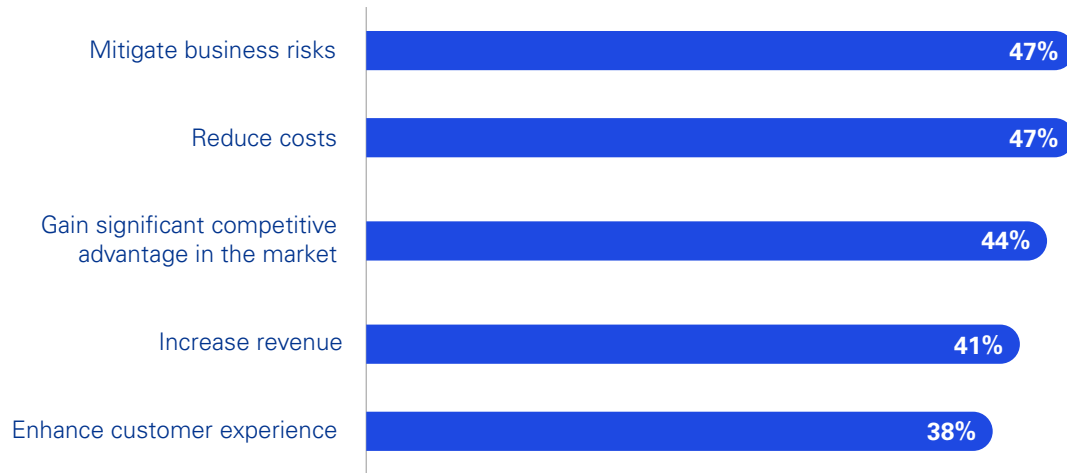
Chief Information Security Officer — US

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1 Reuters, "Visa prevented $40 bln worth of fraudulent transactions in 2023 — official", 23 July 2024

2 Coforge, "AI and Automation: Enhancing efficiency in Mortgage Underwriting amid market challenges", Accessed November 2024

Figure 4: AI maturity deepens focus on operational gains, with strategic goals lagging behind

Percentage who say their organization wants to achieve the following in the first phase through using AI (top 5)

Goal	Percentage
Mitigate business risks	47%
Reduce costs	47%
Gain significant competitive advantage in the market	44%
Increase revenue	41%
Enhance customer experience	38%

Which of the following goals does your organization want to achieve through using AI? (Maximum 5)
Early AI maturity (n=34)

Source: Intelligent banking: A blueprint for creating value through AI-driven transformation, KPMG International, 2025

AI and the employee experience

For employees, AI in the first phase automates repetitive processes such as data entry, document verification and compliance checks, reducing errors and freeing up employees to focus on customers. This not only increases efficiency but also reduces the mental fatigue associated with repetitive, manual work.

AI tools also act as cognitive assistants, supporting employees with real-time insights and help with decision-making. Relationship managers and call center agents are using AI-driven dashboards that provide personalized customer information, such as financial goals or recent inquiries, allowing for more meaningful and informed interactions. Additionally, predictive analytics helps employees anticipate customer needs, enabling proactive outreach and tailored solutions.

By minimizing administrative burdens and empowering employees, AI can help banks deliver better customer experiences.

> AI will change the way we hire people, from the number of staff that are required to do certain functions, the types of staff and the number of people in certain roles. I don't think there'll be less staff, but I just think they'll be doing different things.

Divisional Director — Australia

Case study

A major German bank

The Chief Compliance Officer (CCO) at a major German bank shared insights into its journey towards AI adoption. The bank applies AI in key areas like anti-money laundering, fraud detection and compliance monitoring, aiming to streamline processes such as transaction monitoring and KYC.

Current AI usage

Experimentation without a cohesive AI strategy

The bank's current AI usage is fragmented. Although individual teams are independently experimenting with AI tools such as Copilot in Power BI and Gen AI, the bank does not have a cohesive organizational AI strategy.

Despite this decentralized implementation, AI has proven instrumental in enhancing efficiency, particularly by programmers who are using it to streamline coding, or for data processing by the data analytics teams. This has saved the teams significant time on repetitive tasks.

Initially hesitant to adopt AI, the bank has since transitioned into a cautious integration phase, acknowledging the technology's transformative potential while remaining mindful of associated risks.

Challenges

Navigating regulatory, technical and human hurdles in AI adoption

The bank faces several challenges in its AI adoption, including meeting stringent regulatory requirements for explaining how AI decisions are made, which are critical for compliance.

In addition, the CCO notes that legacy systems and data silos create technical barriers that hinder seamless integration, while a lack of staff expertise hinders the effective evaluation and utilization of AI outputs.

Outlook

Leaders expect to be more agile and open-minded as they embrace AI's potential

The bank's journey mirrors industry trends and the struggle of balancing AI's potential with regulatory and workplace challenges. Although the respondent mentions that a unified AI strategy is expected by mid-2025, he highlights the need for leaders to become more agile and experimental to drive AI innovation and guide AI usage responsibly.

Case study

Making a step change in regulatory compliance with Gen AI

Client challenge

KPMG's client, a leading global banking group serving over 21 million customers offers a wide range of banking, insurance and asset management services to individuals, businesses and institutional clients.

The risk team, however, has struggled to find an efficient way to navigate and comply with 17 separate regulations that involve over 2,000 regulatory requirements across over 1,600 pages.

The team faced difficulties in comparing the most recent version of the regulations with previous versions of regulations and drawing synthetic opinions efficiently. The manual process required a significant amount of time and effort has also led to concerns related to potential compliance risks.

Our approach

Professionals from a KPMG member firm analyzed the available AI solutions on the market and built a customized Gen AI chatbot.

This technology solution operates on a "chat-with-document" logic, which means that changes to policy documents can be visualized, reducing the time it takes for employees to review and compare documents and extract specific information.

It integrates relevant banking regulations and produced responses through pre-defined prompts and precise questioning.

A Proof of Concept (POC) was developed initially to demonstrate the model's capability to learn from a closed set of regulatory documents that were overseen by human experts to mitigate risks.

Value delivered

The Gen AI chatbot solution demonstrated the potential to shift from a primarily manual review process to an AI-assisted approach that reduces time, effort and risk.

Thirty-six regulatory compliance evaluation cases within the POC were tested and validated the model's high confidence level in generating the expected results.

It represents the first step in an evolutionary path for the technology, including extending it to all relevant regulations, comparative analyses and integration into the bank's cost optimization system.
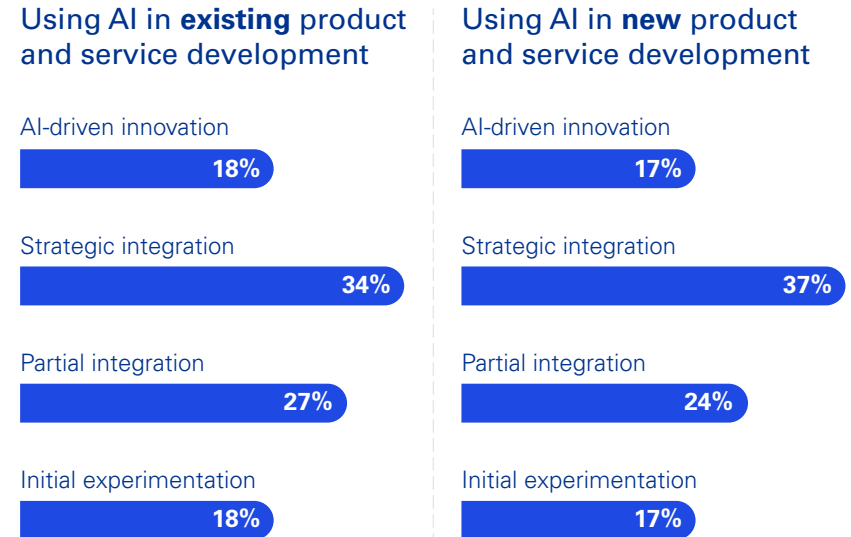
The second phase: Embed

Embedding AI in the flow of work

The Embed phase integrates AI into end-to-end workflows, products, services and value streams, transforming how work is performed across the enterprise and delivering greater value.

Here, AI enables large teams to handle complex tasks and enhances efficiency. A senior leader, supported by a capable transformation office, oversees enterprise-wide change, setting strategic goals and embedding AI into operating models, robotics and wearable devices.

This phase emphasizes ethics, inclusion, safety, security and trust. AI agents, along with diverse models (large and complex, small and low cost, open, closed and domain-specific), are embedded into workflows, supported by data from various sources. Infrastructure combines cloud resources with on-premises GPUs, with a strong focus on security.

Figure 5: The banking sector is yet to fully leverage AI's potential for new services and enhancements

Using AI in **existing** product and service development

AI-driven innovation
18%

Strategic integration
34%

Partial integration
27%

Initial experimentation
18%

Using AI in **new** product and service development

AI-driven innovation
17%

Strategic integration
37%

Partial integration
24%

Initial experimentation
17%

To what extent (if at all) is your organization using AI in existing products or services? To what extent (if at all) is your organization using AI to develop new products or services? n=183

Source: Intelligent banking: A blueprint for creating value through AI-driven transformation, KPMG International, 2025

> We use AI to help us accelerate development, speed up time to market, production cycles and project life cycles… I think it will help us to drive revenue.

Chief Executive Officer — Japan

The focus is on breaking down silos, redesigning the ways banks unlock more complex value opportunities in the second phase. AI becomes embedded across the bank's core functions, enabling dynamic decision-making, real-time insights, and predictive personalization.

Shared data platforms foster collaboration and a culture of agility and innovation. Customer satisfaction scores, cross-sell effectiveness, and speed-to-market join efficiency and cost reduction as key metrics of success.

Banks also need to prepare for agentic AI, which is rapidly evolving in capability. Initially, macros (simple, rule-based agents) operate on data tasks like credit scoring and fraud detection. As banks advance, software (platform-based) agents will be configured handle more complex, context-aware tasks, acting as semi-autonomous assistants. Banks should build shared data platforms for use by deterministic AI or true agents built on 'large action models' that can independently assess risks, design products and optimize entire value streams like loan processing.

This can drive a paradigm shift in how a bank's workforce is shaped, where employees go from traditional roles to becoming managers of AI agents, treating these systems as complex cognitive co-workers. In this model, employees are no longer merely task executors but orchestrators of AI-driven workflows, overseeing and optimizing the performance of advanced AI agents capable of handling complex, context-aware operations.

Key value streams in banking

Loan origination: This value stream encompasses the entire process of a customer applying for a loan, inquiry, risk assessment, approval, disbursement, servicing and eventually, closure.

Onboarding and account opening: This journey begins when a customer first engages with the bank, opening an account, going through compliance checks and receiving initial financial services.

Fraud prevention: This stream spans the entire banking system, integrating real-time fraud detection, risk mitigation and customer protection activities into one seamless process.

Payment processing: Covering a wide range of activities, this stream involves domestic and cross-border transactions, payment approvals, reconciliation and real-time tracking of funds.

Customer retention and growth: This focuses on the continuous engagement with a customer over their financial lifecycle, including personalized advice, loyalty programs and customer satisfaction management.

Barriers to realizing value

Banks should address critical foundational activities early on, as failing to do so can stall progress. Key barriers include an incomplete vision for the future operating model, outdated foundational and technology infrastructure and inadequate governance frameworks to mitigate risks and uphold ethical standards.

Equally vital is securing the buy-in of leaders and employees by demonstrating AI's transformative potential. Specific areas for focus include:
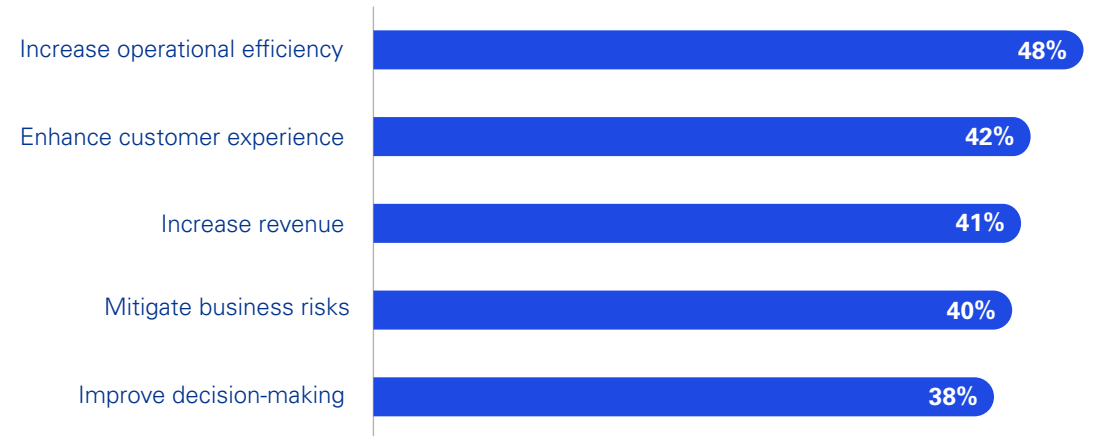
Lack of trust

As AI becomes integral to processes, banks face increasing pressure to maintain transparency and trust, both internally and externally. Scaling AI without robust frameworks for accountability and explainability can lead to mistrust among employees, customers and regulators.

Managing strategy implementation

Scaling and embedding AI across the organization requires a profound transformation of structures and leadership. Most banks are historically organized around products such as credit cards, mortgages, or savings accounts, with each function operating in silos. Moving to value streams disrupts these legacy structures, requiring processes that cut across departments and focus on end-to-end customer journeys. Change management becomes a critical task, as banks must not only roll out new technologies but also foster acceptance of new workflows and cultural norms. Poorly managed transitions risk low adoption of AI tools, employee dissatisfaction and stalled transformation efforts.

Figure 6: AI maturity deepens focus on operational gains, with strategic goals lagging behind

Percentage who say their organization wants to achieve the following, in the second phase through using AI (top 5)

Goal	Percentage
Increase operational efficiency	48%
Enhance customer experience	42%
Increase revenue	41%
Mitigate business risks	40%
Improve decision-making	38%

Which of the following goals does your organization want to achieve through using AI? (Maximum 5)
Growth AI maturity (n=139)

Source: Intelligent banking: A blueprint for creating value through AI-driven transformation, KPMG International, 2025

Workforce concerns

Many banks lack the in-house expertise to meet AI's demands. This talent gap slows the pace of transformation, as banks struggle to upskill employees or hire specialized professionals but upskilling and talent acquisition are only part of the battle: This shift often encounters resistance from teams and leaders aligned to specific products, slowing the adoption of value stream approaches. For instance, aligning risk, operations and customer service into a single value stream like "home ownership" can create tensions as functions adjust to new ways of working.

The transformation also has significant implications for employees and organizational structures. Many roles will evolve as automation reduces the need for routine tasks, requiring employees to shift to higher-value activities, such as oversight and strategic decision-making. This creates uncertainty among staff, who may fear losing relevance: A 2024 KPMG global customer experience excellence study found that younger employees in particular are worried that entry level jobs will no longer exist because of AI.[3] Early wins are needed to generate momentum.

Leadership also plays a pivotal role in this transition. Scaling AI demands leaders who can break down silos, align cross-functional teams, and foster a culture of experimentation and collaboration. However, traditional leadership styles in banking, often hierarchical and risk-averse, are not always equipped for these demands. Leaders must champion value streams and empower teams to innovate, even when this disrupts established practices. Without such transformational leadership, efforts to scale AI may falter.

The technology evolution

Significant investment is required to roll out new technologies that can support AI at scale. Banks must implement advanced machine learning platforms, real-time analytics, and scalable infrastructure like cloud computing. These investments may conflict with existing IT roadmaps and budgets, creating delays and prioritization challenges. Legacy issues also play a big role. Banks are increasingly turning to AI enabled software re-engineering tools (such as Codeium) to tackle the challenges of legacy code and technical debt. These tools analyze, refactor, and optimize outdated codebases, making them more efficient, secure, and maintainable. They automate labor-intensive tasks like identifying redundant code, optimizing performance bottlenecks, and modernizing code to align with current programming standards.

> " I think the biggest challenge is people's adoption and having a common understanding of the tech. I think that's the biggest one, readiness. Then, the change management piece is always a journey. "
>
> **Head of AI** — Canada

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[3] KPMG International, "Beyond the noise: Orchestrating AI-driven customer excellence", October 2024

Case study

An American financial services company

Specializing in cash handling and manufacturing smart safes and point-of-sale equipment, Loomis, a US financial services company, employs 23,000 people across 20 countries and generates US$3 billion annually. Chief Information Officer (CIO) Kendall Knight discussed how the organization uses AI to improve operations and create new business opportunities.

Current AI usage: Using AI for operational excellence and customer engagement

The organization employs Gen AI and machine learning to solve operational and customer engagement challenges. Gen AI enhances response capabilities, personalizes customer interactions and provides 24/7 service. Machine learning applications include a software-as-a-service (SaaS) offering that forecasts cash requirement

for banks and credit unions, generating US$20 million annually. Internally, AI analyzes video and data patterns to detect internal theft, replacing manual processes and significantly improving efficiency.

Challenges: Overcoming expertise, compliance and innovation challenges in AI adoption

Identifying meaningful use cases, ensuring compliance with strict banking regulations, data governance and privacy and overcoming legacy system constraints are challenges. Loomis initially lacked in-house expertise, so relied on external consultants and freelance data scientists to implement pilot programs. Business leaders are still developing their understanding of AI's capabilities and limitations.

Organization's AI outlook: Scaling AI across departments to drive competitive advantage

Looking ahead, Knight envisions broader AI adoption across departments, enabling efficiencies in areas like finance, human resources and operations. The company expects significant changes in leadership roles, emphasizing the need for cross-functional AI knowledge.

Learn how KPMG firms help clients' gain value through AI

KPMG in the UK's AI policy platform helped a leading global bank untangle the complex world of managing risk.

KPMG in the US helped one of the world's largest financial institution reduce its loan processing time from days to hours.

The third phase: Evolve

Evolving your bank's ecosystem

The Evolve phase transforms enterprises to adapt to market disruptions, forming new business models and ecosystems to solve larger, industry-wide problems. Companies establish and orchestrate ecosystems with customers, suppliers and governments, orchestrated by AI to deliver seamless value.

> "The third phase gives the biggest payoff. As AI enables costs to come down, some markets will grow, some decline, and new ones emerge. Invest in areas of price elasticity — things we can do more of with AI as costs decline. Your competitors may focus more on what is disappearing and risk being replaced. "
>
> **Erik Brynjolfsson** — Professor and Senior Fellow at the Stanford Institute for Human-Centered AI (HAI), Director of the Stanford Digital Economy Lab

AI integrates with frontier technologies like quantum computing, blockchain, and advanced visualization, driving breakthroughs innovation in products and services and involving close collaboration with customers, key alliances and partners.

Ethics, safety, and trust are paramount, with real-time monitoring and security updates ensuring platform integrity. This phase emphasizes uplifting human potential, improving experiences, and providing robust training and support to help the workforce transition into a creative, imaginative future of value creation and collaboration.

In the third phase, organizations use predictive insights to continuously optimize for better, more sustainable outcomes. AI agents, no longer inhibited by silos and organized along value streams, can enable embedded intelligence in core processes, improving customer experiences and product value.

Third phase use cases

Market leadership and innovation

AI-driven autonomous banking

AI takes full control of managing customer finances. AI-driven systems automatically manage account balances, optimize investment portfolios, and even adjust loan terms in real-time based on market conditions and customer financial behavior. For example, a retail bank in the UK is experimenting with fully autonomous banking services that automatically transfer money between accounts based on real-time cash flow analysis.

AI-powered digital marketplaces

Leading banks are increasingly transforming into platform businesses, using AI to create digital ecosystems where customers can access a range of services from third-party providers. AI helps banks match customers with the most relevant products and services, whether it's a mortgage from a partner bank or an insurance product from a fintech company. Ping An in China has already developed a comprehensive financial ecosystem, using AI to integrate insurance, banking and health services into a seamless customer experience.[4] Ping An reported over 202 billion Chinese Yuan Renminbi (RMB) in AI driven product sales as a result of this approach.[5]

Blockchain and AI synergy

In the third phase, banks are exploring the intersection of AI and blockchain to enhance security, transparency and operational efficiency. By combining AI's predictive power with the decentralized nature of blockchain, banks can offer more secure and efficient services, such as smart contracts that automatically execute agreements based on predefined conditions. J.P. Morgan's Quorum blockchain platform integrates AI to create secure, transparent transactions in its trading and financial services.[6]

AI-driven predictive finance

In this phase, banks use AI to move from reactive to predictive finance, where AI not only helps customers manage their money but anticipates their needs and financial goals. Banks can offer predictive insights, such as when a customer might need a loan, helping them plan their financial future with precision.

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[4] FutureCIO, "Ping An Bank forges ahead with smart banking 3.0", 3 July 2023
[5] Ping An Annual Results 2023
[6] CoinDCX, "How JP Morgan is Transforming Banking with Blockchain & JPM Coin", 15 September 2023

"

The new services that financial institutions can provide with AI are going to create new customer facing products and new decision-making tools. "

Head of AI — Canada

Leading banks are already exhibiting third phase characteristics. Creating and orchestrating new ecosystems.

Banks can enhance their core offerings by integrating with partners in wealth management, health solutions and sustainability. Fintechs, tech giants and non-financial partners can help banks create a holistic ecosystem tailored to customer needs. For example, customers may access real-time financial insights alongside tailored investment recommendations, lifestyle perks, or business analytics — all from a unified, AI-driven platform.

Ping An and BBVA have developed open banking platforms that allow third-party developers to create applications that integrate with its services.

Banking will likely also become deeply predictive and proactive. Instead of customers seeking financial services, the bank anticipates their needs and delivers services seamlessly at the right time, through the right channel. For example, AI-powered assistants may analyze spending patterns to suggest cost-saving measures or automatically optimize loan terms based on market conditions.

Financial services integrate invisibly into customers' daily lives, embedded within other activities like shopping, traveling, or running a business. AI can enable this by providing instant, contextual financial decisions in real time, without requiring active customer input.

Case study

European bank boosts customer insight analysis for product development with AI

Client challenge

KPMG's client is a European bank specializing in serving small and medium enterprises. It has several brands, subsidiaries and associated banks.

The client sought to gain a better understanding of customers' perceptions and experiences to improve their products and services.

Their primary challenge was the complexity of extracting actionable insights from the large volume of qualitative data collected through customer satisfaction surveys.

The objective was to gain detailed insight into customer sentiment toward the bank's offerings; pinpointing satisfaction levels, areas of discontent, and the general sentiment toward the bank.

Our approach

The KPMG team leveraged its OpenAI platform to conduct a detailed sentiment analysis of the customer satisfaction survey responses to extract actionable insights.

With the help of Python, MS Excel and OpenAI, the KPMG team created and analyzed a large dataset of responses to generate an overview of customer sentiment.

A close examination of the emotional content of the feedback allowed the range of customer emotions — from satisfied to disappointed — to be charted in detail. The bank recognized this as a strategic method for developing a deeper understanding of customer perception to allow targeted improvements that enhanced customer satisfaction and loyalty.

Value delivered

The analysis provided a refined understanding of overall customer sentiment, allowing the bank to identify areas of strength and opportunities for improvement.

The AI implementation helped reduce response time for customer feedback from months to weeks through automated AI-driven analysis. It also provided a deeper level of analysis that had not previously been available.

The use of Gen AI reduced the survey data analysis time by 75 percent, and reduced manual errors by 5 percent.

At a strategic level, the approach contributed to improved product and service offerings. As these improvements were based on customer feedback, they led to higher customer satisfaction levels and loyalty.

Key considerations

Four strategic actions

The research reveals that those organizations that are realizing the most value from their AI investments have focused on four strategic actions:

1 | **Design an AI strategy that aligns with core competencies and unlocks value**

Leaders should craft a vision that aligns core competencies — product innovation, customer success, data management and ecosystem partnerships — with AI capabilities, while ensuring accountability for execution and outcomes. Leadership accountability is critical to help ensure that the vision translates into measurable impact. Leaders help actively engage with ecosystem players, fostering collaboration to strengthen AI strategies. By uniting teams across engineering, product and data science, and focusing on market leadership and customer experience innovation, leaders can drive alignment and ensure measurable impact from AI initiatives.

Key actions

- **Define a unified AI vision and strategy**

  Leaders should articulate a clear, organization-wide vision for AI that aligns with the bank's core competencies — such as product innovation, customer success and ecosystem partnerships. This vision should be specific, actionable, and tied to measurable outcomes, helping them to ensure that all teams understand how AI initiatives contribute to broader business goals.

- **Establish cross-functional collaboration**

  Before attempting to breaking down silos between engineering, product and data science teams, banks should baseline their infrastructure and operating model maturity to assess readiness for larger operating model transformation. Banks should create cross-functional teams focused on understanding where the bank can productize services, using AI to create new business model opportunities and fuel growth.

- **Implement measurable objectives and key results (OKRs)**

  Banks should adopt robust performance measurement frameworks, such as OKRs, to track the effectiveness of the implementation of the strategy across the organization. These metrics should be tied to strategic business outcomes, such as revenue growth, customer satisfaction, or market share. Regularly evaluating progress against these metrics helps ensure that AI initiatives remain aligned with the organization's strategic priorities and provides a basis for iterative improvement.
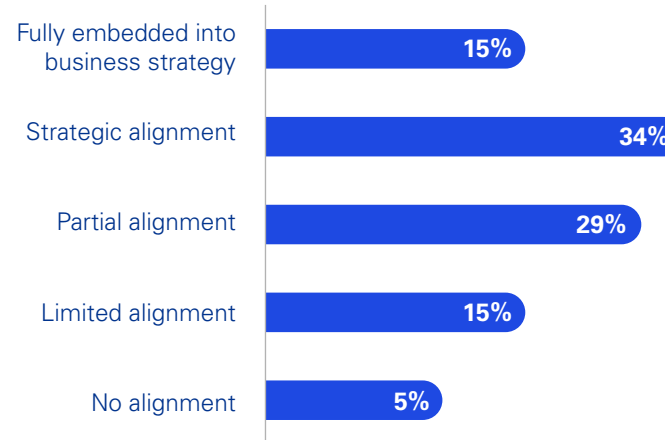
"

I think everyone in functional leadership roles will have to become more knowledgeable on what AI means, what its capabilities and limitations are, and how we can use it. "
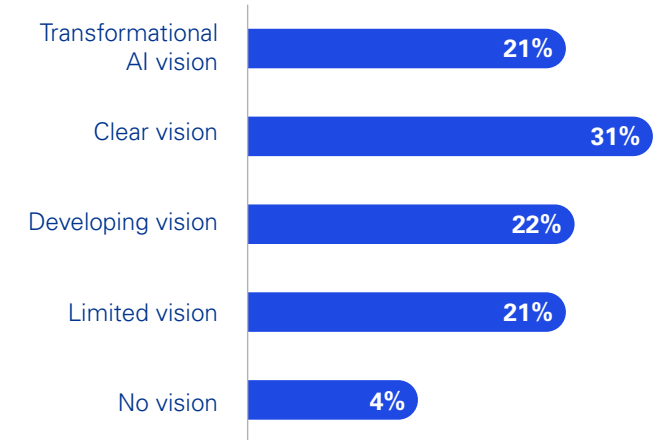
Chief Information Officer — US

Figure 7: Only half of organizations are strategically aligned with a clear vision on how they will implement AI

Level of strategic alignment

Category	Value
Fully embedded into business strategy	15%
Strategic alignment	34%
Partial alignment	29%
Limited alignment	15%
No alignment	5%

Clarity of vision

Category	Value
Transformational AI vision	21%
Clear vision	31%
Developing vision	22%
Limited vision	21%
No vision	4%

To what extent (if at all) have leaders within your organization established strategic alignment on the adoption and implementation of AI? / To what extent (if at all) does your organization's leadership have a clear vision of the way AI can be used to its benefit to help the organization transform within the next 5 years? n=183

Source: Intelligent banking: A blueprint for creating value through AI-driven transformation, KPMG International, 2025

2   Build trust into the transformation roadmap

As banks advance across the three phases of AI adoption, the potential for risk and reputational damage grows exponentially. Governance, ethics and accurate data are critical to maintaining stakeholder trust and unlocking AI's transformative potential.

> I think they're going to have to understand far better what kind of risks lie therein. 🙿

Divisional Director — Australia

Key actions

- **Establish robust AI governance frameworks**

  Banks should implement comprehensive AI governance structures that set clear standards for accountability, transparency and compliance. This includes defining roles and responsibilities across teams, establishing protocols for monitoring AI performance and creating mechanisms to address risks such as algorithmic accountability and ethical considerations proactively. Leaders and employees need to trust the AI tools they are using if they are to advocate their use to others.

- **Embed ethical and bias-detection mechanisms**

  Ensuring fairness and mitigating bias in AI systems is essential. Banks should develop and deploy tools that continuously audit AI models for unintended biases, especially in sensitive applications like credit decisioning or fraud detection. This requires diverse and representative training datasets, regular model testing and clear guidelines for acceptable model outcomes. Collaborating with independent auditors or ethics boards can provide additional oversight and credibility.

- **Prioritize privacy by design**

  As banks handle vast amounts of customer data, integrating privacy considerations into every stage of AI development is crucial. Adopting a 'privacy by design' approach means implementing encryption, anonymization, and secure data-sharing practices as standard. This helps ensure compliance with data protection laws and builds trust with customers and stakeholders.

- **Invest in security and resilience**

  AI systems are increasingly attractive targets for cyberattacks, including model poisoning and adversarial attacks. Banks should focus on eliminating the weakest links in the infrastructure and invest in advanced security measures to protect AI systems and underlying data. This includes implementing real-time monitoring for anomalies, regularly updating defenses and training teams to respond to emerging threats. Building resilience into AI systems helps ensure that they can continue to function reliably even in the face of disruptions or breaches.

3 **Create sustainable technology and data infrastructure for AI adoption**

Banks should balance the need for experimentation with the pursuit of scalable returns. As the AI landscape evolves, banks should make 'no-regret' investments looking for early wins that build momentum and can provide a solid foundation for future innovation — regardless of how the technology matures.

> The ability to retain people or to attract people who understand AI is important because you also need a technical skill set. "
>
> **Chief Information Security Officer** — US

Key actions

- **Invest in scalable and flexible infrastructure**

  Banks should build a robust, cloud-native infrastructure capable of supporting the dynamic needs of AI technologies. This includes adopting platforms that enable machine learning operations for efficient model deployment and lifecycle management. By focusing on scalable solutions, banks can help ensure they have the flexibility to expand AI initiatives as needs grow, avoiding the pitfalls of rigid, short-term fixes.

- **Establish comprehensive data management practices**

  High-quality, unified data is the backbone of effective AI. Banks should prioritize investments in advanced data platforms that consolidate siloed datasets into a single source of truth, enabling seamless data access and governance. Implementing tools for data quality, lineage and security ensures AI models are built on reliable foundations and can adapt as regulatory requirements or business needs evolve. Banks should clean, organize and validate data to keep it free from inconsistencies, redundancies, and biases that could undermine AI performance. Observability tools can monitor data health continuously, addressing potential issues before they impact AI outcomes.

- **Focus on modular and interoperable solutions**

  To help future-proof their technology stack, banks should invest in modular AI systems that can integrate with existing tools and accommodate emerging technologies. Open APIs, interoperable software and vendor-agnostic solutions allow banks to experiment with new innovations without locking themselves into specific ecosystems. This approach helps ensure flexibility in responding to technological advancements.

- **Create a balanced investment portfolio**

  Banks should adopt a dual strategy of no-regret foundational investments — such as infrastructure, data management and governance frameworks — paired with controlled experimentation in cutting-edge AI technologies like generative AI or autonomous systems. This balance helps ensure the organization can drive immediate value while remaining agile enough to adopt transformative innovations as they mature.

4 Build a culture that uses AI to uplift human potential

Human expertise remains indispensable alongside AI-driven automation. Attracting top talent in AI and machine learning is one of the most pressing challenges for the banking sector, given the increasing global demand for these specialists. To meet this challenge, companies should not only recruit the best but also focus on upskilling and reskilling their existing workforce. Investing in robust learning and development programs helps ensure employees stay ahead of the curve as technology evolves. Such efforts are critical to building internal expertise and fostering a workforce capable of adapting to new AI capabilities and opportunities.

"

I think they're going to have to take an approach of being very, very strict around making sure that any investment rolling out some kind of AI function has specific KPIs, has return expectations and has a genuine process improvement, as opposed to just rolling out something for the sake of it. "

Divisional Director — Australia

Key actions

- **Foster transformational leadership**

  Leadership should evolve to champion AI adoption by fostering a culture of trust, transparency and collaboration. Leaders should actively communicate the strategic vision for AI, emphasizing its role as an enabler rather than a disruptor. Transformational leadership practices, such as empowering teams to experiment with AI, recognizing successes and addressing concerns openly, helps build confidence and alignment across the organization. Leaders also need to model adaptability, demonstrating a willingness to embrace change and invest in their own AI knowledge to guide the organization effectively.

- **Build an AI-literate workforce**

  Banks should create tailored learning programs that provide employees with a foundational understanding of AI, its applications, and its implications for their roles. Upskilling should go beyond technical teams; employees across all functions, including operations, customer service and risk management, need to understand how AI impacts their work and enhances their decision-making capabilities. For technical roles, banks should provide specialized training in AI development, machine learning and data science to close the talent gap.

- **Address cultural resistance through change management**

  Overcoming cultural resistance requires a structured change management approach that includes clear communication, employee engagement and support systems. Banks should proactively address fears around job displacement by emphasizing how AI can augment roles rather than replace them. Engaging employees in co-creating AI solutions fosters buy-in and helps ensure AI tools are designed with their practical needs in mind. Establishing forums for feedback, collaboration and success stories can help dispel misconceptions and create enthusiasm for AI-driven transformation.

- **Redefine roles and career pathways**

  AI will likely fundamentally change the nature of work in banking, requiring a redefinition of roles and career pathways. Banks should identify areas where AI can automate routine tasks and shift employees toward higher-value activities, such as customer engagement, strategic analysis and innovation. Clearly mapping out these new career opportunities and pathways helps employees see AI as a means of growth rather than a threat. Additionally, banks should establish new roles, such as AI ethics officers or value-stream leaders, to align human expertise with AI capabilities to help ensure responsible implementation.

Preparing for an AI future

It has become a cliché to warn that banks must move quickly on AI or risk being left behind, but clichés often contain a grain of truth. Our research highlights a deeper tension: Banks, inherently risk-averse institutions, currently perceive the risks of AI as outweighing its benefits. This hesitancy creates a significant barrier to progress. Banking executives face a dual imperative: they must simultaneously articulate the transformative potential of AI and address its associated risks in a way that inspires confidence across the organization.

Figure 8: A variety of benefits are selected in the top 5, showing that organizations are yet to distinguish where AI can be best used

Percentage who say their organization has achieved the following benefits through using AI

Benefit	Percentage
Increased operational efficiency and cost reduction	36%
Improved stakeholder management	31%
Fewer business risks and greater regulatory compliance	31%
Improved data analytics and insights	30%
Gaining competitive advantage in the market	28%
Enhanced customer experience	27%
Enhanced supply chain management	26%
Increased revenue/growth	26%
Optimized financial planning and forecasting	26%
Better supported sustainability and environmental goals	26%
Faster, data driven decision making	25%
Strengthened cybersecurity and data privacy	24%
Development of new products and services	23%
Increased employee engagement and ability to attract talent	23%

What benefits has your organization had from using AI in the business? (Maximum 5) n=183
Source: Intelligent banking: A blueprint for creating value through AI-driven transformation, KPMG International, 2025

The first step is to build a compelling case for AI's long-term benefits, showing how it can fundamentally transform the business. This requires thinking beyond incremental efficiencies and envisioning a future where AI drives personalized customer experiences, optimizes risk management and enables entirely new business models. Leaders should engage in rigorous strategic analysis, including wargaming scenarios that explore how AI might reshape the competitive landscape. What will competitors do? How might non-banking entrants and tech companies encroach on traditional markets? What are the risks of inaction, such as losing customers to more agile rivals or being disintermediated by fintechs? Answering these questions should galvanize action, making the cost of doing nothing starkly clear.

At the same time, banks should confront the risks of AI head-on. Moving forward with AI as an enterprise-wide asset requires robust frameworks for identifying, mitigating and monitoring risks. These include ethical concerns like bias, compliance challenges, security vulnerabilities and the operational risks inherent in relying on complex models. Leaders need to create a culture of transparency and build processes that surface risks early, with mechanisms to detect and address unknown risks as they emerge. Proactive risk management isn't about eliminating uncertainty — it's about managing it effectively enough to move forward with confidence.

AI is not a passing trend; it is an accelerating force that continues to evolve and disrupt. To navigate this reality, banks should take no-regrets actions — foundational investments in scalable infrastructure, data governance and AI-friendly operating models — that position them to capitalize on future breakthroughs. These actions can help ensure that when the technology advances, the bank is ready to integrate, adapt and thrive. Inaction is not an option; banks should balance the perceived risks with the transformative potential of AI to remain competitive and relevant in a rapidly changing financial landscape.

AI is not a passing trend; it is an accelerating force that continues to evolve and disrupt.

Methodology

To gain a broad understanding of how leaders are navigating the opportunities and challenges of implementing AI, KPMG International conducted a robust research program involving multiple methodologies. This included in-depth interviews with eight AI experts spanning technology, government regulation and industry, as well as discussions with sector-specific KPMG specialists. Qualitative research was conducted to uncover nuanced, industry-specific challenges and opportunities, including insights from several industry experts, including Erik Brynjolfsson of Stanford University, a renowned authority on AI and digital transformation.

The research was further strengthened by a quantitative survey of 1,390 decision-makers across key global markets, including 183 respondents from the banking sector. These leaders shared their experiences and perspectives on overcoming barriers to AI adoption, from dismantling legacy systems to addressing organizational inertia. In parallel, an 18-month research project evaluated the realistic value at stake for fully deploying and adopting generative AI. Together, these inputs offer a clear roadmap for organizations to unlock AI's potential and drive meaningful, enterprise-wide change.

The research was further strengthened by a quantitative survey of

1,390

decision-makers across key global markets, including 183 respondents from the banking sector.

Foreword | At a glance | Introduction | Research findings | Building the intelligent bank | First phase | Second phase | Third phase

Key considerations | Preparing for an AI future | **Guiding your AI transformation**

KPMG: Guiding your AI transformation with experience and trust

With over 150 years of experience in data, industry insights, technology and regulatory expertise, KPMG is uniquely positioned to help you uncover AI opportunities, work through critical business challenges and unlock new revenue streams. From strategy to implementation, we guide you in taking small, impactful steps to tackle even the most complex problems — all underpinned by trust.

We've invested in an AI-enabled platform for organizational change. It brings together the best of our thinking, frameworks, strategies and tools. So, you can change smarter and move faster — eliminating inefficiencies and building trust and confidence, at every step.

Wherever you are on your AI journey, KPMG can help:

Develop a transformational AI strategy

Define your AI goals, identify opportunities and risks and create a tailored strategy and execution plan. Build a business case with clear metrics to secure investments and ensure measurable success by scaling AI for enterprise-wide impact and building lasting capabilities.

Ensure AI trust and compliance

Scaling AI introduces complexities and risks. KPMG Trusted AI teams can help ensure your AI solutions are ethical, secure and compliant. Our Trusted AI Framework, built on ten ethical pillars, empowers organizations to boldly deploy AI responsibly, transparently and with confidence.

Empower your workforce with AI

KPMG AI Enabled Workforce solutions deliver personalized adoption and upskilling experiences, helping your team embrace generative AI and infuse it into everyday work.

Build a sustainable AI technology infrastructure

Leverage KPMG professionals' experience to integrate AI frameworks, platforms and accelerators, helping you ensure your technology infrastructure is ready to scale AI initiatives.

We help clients harness the power and potential of AI. From strategy to implementation. Small steps to solving seemingly impenetrable problems. Underpinned by trust.

You can discover endless opportunities with AI. You can with KPMG.

About the authors and contributors

We could not have created this report without the support, knowledge and insights of AI experts and colleagues around the world who contributed their time to this report. Thank you to Leanne Allen, Gerrit Bojen, Rebecca Brokmeier, Erik Brynjolfsson, Sam Burns, Swaminathan Chandrasekaran, Adrian Clamp, Pär Edin, Paul Greenan, Benedikt Höck, Kendall Knight, Dan Marsh, Scott Marshall, Joseph Parente, Jeff Potter, David Rowlands, Anthony Street and René Vader.

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Benedikt Höck is Head of Artificial Intelligence for KPMG in Germany. In this role, he is responsible for the go-to-market, the range of services and the internal use of (Gen) AI. He provides clients with holistic support during the transformation: from strategy, the implementation of suitable use cases and the enablement of the organization to secure use through trusted AI. He is also a partner in the field of management consulting, where he focuses on the data/AI-driven optimization of processes, particularly in the area of customer centricity.

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Adrian Clamp is the Global Head of Connected Enterprise — KPMG's customer centric, agile approach to digital transformation, tailored by sector. He has over 30 years' experience in leading complex technology change. He specializes in leading large scale digital transformation programs, deploying new advanced technologies, including AI to unlock value within large complex organizations.

Adrian is a member of KPMG's global Consulting leadership team and Global AI Council. He is dedicated to helping to deliver technology enabled innovation and new ventures which improve the lives of millions of customers, consumers, citizens and patients.

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