



Why banks need to  
rethink functionality  
now and not later

# Contents

<b>Business is changing</b>	<b>03</b>
<hr/>	
<b>Systemic barriers to change</b>	<b>05</b>
<hr/>	
<b>Functionality is no longer fit for purpose</b>	<b>06</b>
<hr/>	
<b>What's really changing in banking technology</b>	<b>07</b>
<hr/>	
<b>Why execution is harder than strategy in banking</b>	<b>09</b>
<hr/>	
<b>Operational resilience as a business outcome, not a compliance checkbox</b>	<b>10</b>
<hr/>	
<b>How banks can move forward without breaking what already works</b>	<b>10</b>
<hr/>	
<b>Rethinking functionality as a continuous capability</b>	<b>10</b>

“ We cannot ignore the fact that banks’ complexity and constantly changing risks require a certain type of vigilance. The challenges we face, such as digital transformation, climate risk and geopolitical developments, do not lend themselves to simple solutions because, by their very nature, they are not simple problems.”<sup>1</sup>

In banking, business goals haven’t changed. Cost, growth, operational resilience, compliance and customer experience (CX) are still the signs of success. But the business landscape has changed. The development of technology, regulation and competition convergence has created tighter margins, making goals harder to deliver.

There are multiple friction points creating discrepancies between business objectives and business outcomes for banks.



<sup>1</sup> Patrick Montagner. [Developments in banking supervision: the quest for simplification in an ever more complex world](#). European Central Bank, Banking Supervision. September 9, 2025.

# Business is changing

To stay viable, banks are being forced to rethink how they do business. Transaction-based revenues are no longer a reliable source of income, at least not to the extent that they used to be. As crypto, stablecoins and cross-border payment technologies make it easier than ever to move money, banks have had to cut fees to remain competitive.

As AI agents increasingly help customers manage and optimize their financial lives, customer inertia is likely to decline. This will make it easier for customers to compare providers and switch when better options are available, putting additional pressure on banks to retain customer loyalty.

This shift highlights a broader reality in retail banking: traditional revenue from payments and transactions is no longer as dependable or as profitable as it used to be. Margins continue to tighten, while costs rise as banks are expected to constantly adopt new technologies and, at the same time, meet complex regulatory requirements. The cost-to-margin ratio means scale alone does not necessarily lead to profitability.

Banks are having to shift their focus to core banking, wealth management and value-added services that go beyond transactions.



# Systemic barriers to change



The path to lower costs, stronger compliance, improved customer experience and faster time to market increasingly lies in the effective use of AI, cloud and automation. But banks cannot adopt these technologies at the speed required. Regulatory obligations, data localization requirements and governance frameworks continue to slow progress. As a result, two forces often work against each other: each technological advance introduces new complexity, creating friction between innovation and control.

Regulatory compliance is becoming more demanding as banks face increasingly stringent and complex requirements. Fragmented regional regulations make progress harder, forcing banks to tailor systems and processes for each jurisdiction before changes can move forward. This regulatory patchwork slows transformation and introduces complexity, most visibly in how banks are required to manage and store data.

Data localization is a perfect example of regional differences creating complexity. India requires personal and financial data to be stored within the country, introducing an extra step for international banks. On the other hand, the EU's General Data Protection Regulation (GDPR) doesn't require data to be stored locally, but it imposes strict controls on how personal data is handled, processed and transferred. Laws such as the US Clarifying Lawful Overseas Use of Data (CLOUD) Act allow US authorities to request access to data held by US-based providers — even when that data is stored overseas. This has accelerated a shift toward local and regional cloud providers, driving initiatives such as EuroStack as European organizations seek greater control over data privacy and sovereignty.

Transaction monitoring is another area where regulatory complexity creates friction. Beyond the global baseline set by the Financial Action Task Force (FATF), national requirements vary significantly. In the UK, for example, the Senior Managers & Certification Regime (SM&CR) makes senior leaders personally accountable for transaction monitoring and response.

Even when banks succeed in designing technology rollouts that meet these varied regulatory requirements, progress is still slowed by lengthy and complex governance cycles. Prepackaged AI solutions are no exception, often requiring extended approval before they can be deployed. This governance friction becomes a structural constraint, limiting how quickly banks can adapt to change.

# Functionality is no longer fit for purpose

Modernization is nothing new. How banks operate has changed vastly over the years. But rethinking functionality isn't just another innovation. It's an urgent structural concern.

The speed at which banks can evolve their functionality is critical to commercial viability and day-to-day operations. To keep processes running efficiently and within regulatory requirements, functionality must be continuously maintained and updated.

There's no room for delay. Today's pressure to evolve is driven by the collision of three distinct forces.



## 1. Innovation is outpacing governance

Financial institutions cannot simply adopt new technology. Any change must pass rigorous governance checks to confirm that systems can handle sensitive data and that updated workflows align with regulatory obligations.

As the pace of technological change accelerates, governance processes struggle to keep up. Approval cycles are complex and time-consuming, often delaying adoption.

This tension is especially visible with AI. In banking, AI accelerates opportunity and risk at the same time. While it can unlock efficiency and new value, it also amplifies exposure if controls and oversight lag in capability. As innovation speeds ahead, governance becomes the first limiting factor.

## 2. Legacy complexity constrains adaptation

Banking functionality reflects decades of layered technology decisions. For established banks, this results in thousands of applications spread across mainframes, distributed and modern platforms.

AI adoption exposes this complexity. Its scale, data intensity and infrastructure demands highlight architectural limits that restrict adaptability and slow transformation.

Neobanks face a different challenge. While they are not weighed down by legacy platforms, they also lack the mature governance structures that incumbents have built over time. The emphasis on rapid, technology-led customer experiences can leave gaps in security, compliance and operational control — gaps that AI tends to expose quickly.

## 3. Resilience has become a regulatory expectation

Regulators recognize that banking operations are inseparable from existing and emerging technology. To maintain stability, operational resilience has become a regulatory requirement.

Architecture is no longer judged solely on performance or uptime. Banks must be able to demonstrate their ability to prevent disruption and remain operational under stress. Fragile or fragmented functionality does not meet this standard.

In this environment, modernization is no longer optional. Banks are being compelled to rethink functionality to meet rising expectations from regulators, customers and the technologies they depend on.

# What's really changing in banking technology

“ AI could enhance the value and provision of financial products and services in novel ways, through greater efficiency, speed, scale and hyperpersonalization. At the same time, it may disintermediate some business models and blur others. This could transform retail financial market dynamics in ways that are not yet known.” <sup>2</sup>

There is a broad consensus that AI will play a central role in the future of banking, driven by both consumer and business needs. Consumers increasingly expect AI to be part of their digital experiences, while banks rely on it to reduce costs, drive revenue, support compliance and deliver stand-out customer experiences at speed. However, while AI acts as a powerful accelerator, it also exposes weaknesses in legacy architecture, data foundations and governance models.

Banking objectives can only be achieved when AI adoption is grounded in practical realities. This requires looking beyond the hype to where AI can be applied with clear, traceable benefits. To date, AI has been most effective in use cases where return on investment is measurable, risk can be managed and human oversight remains integral. In practice, this means applying AI to manage manual processes and remove workflow bottlenecks, with tangible gains in areas such as document validation, fraud monitoring and transaction processing.

The focus now must be on operationalizing AI with human oversight as a standard. For most banks, this means optimizing straight-through processing with appropriate guardrails in place. Pushing beyond that prematurely risks derailing transformation efforts, particularly as regulators increasingly emphasize human-in-the-loop AI. In banking, the consequences of error are simply too high for a fully hands-off approach.

While much of AI's near-term value comes from automation, it is important to recognize the scale of previous investment in automation. Many banks have already invested heavily in robotic process automation (RPA), and replacing these systems wholesale is neither practical nor desirable. Instead, AI should be positioned as an additional intelligence layer on top of existing automation. This approach better reflects the realities of cost, timelines and regulatory approval cycles.

Ultimately, AI does not automatically modernize banks. As institutions move forward with adoption, this technology tends to surface deeper architectural, data and governance shortcomings. Addressing these weaknesses creates the conditions for sustainable progress and establishes a stronger base for ongoing development.

<sup>2</sup> Sheldon Mills. [Review into the long-term impact of AI on retail financial services \(The Mills Review\)](#). Financial Conduct Authority. January 27, 2026.

# Why execution is harder than strategy in banking

“ 49% of respondents whose organizations use AI in service operations report cost savings... but most of them report cost savings of less than 10%. With regard to revenue, 71% of respondents using AI in marketing and sales report revenue gains... but the most common level of revenue increases is less than 5%.”<sup>3</sup>

It's no secret that banks are finding the pace of change challenging. There is a clear execution gap.

But the narrative that progress is slow because banks are traditional or resistant to change no longer holds. Across financial services, including long-established institutions, change is increasingly viewed as a matter of survival. Banks are more willing to embrace transformation than they are often given credit for.

However, some structural realities of banking are difficult to change and continue to slow the pace of innovation.

Compliance is an unavoidable operational reality. Responding to new technologies while maintaining compliance demands a disproportionate share of funding, resources and time.

This burden is increasing as banks must now account for current and future risks. Threats such as harvest now, decrypt later (HNDL) require institutions to protect data today against attacks that may only become viable with the advent of quantum computing. Compliance, security and trust must be future-proofed, adding further complexity to transformation efforts.

At the same time, resources that could otherwise support innovation are often redirected toward legacy remediation. Many existing systems cannot handle new technologies, forcing banks to either extend aging platforms or migrate to new ones entirely. Neither solution to legacy systems is quick or cheap, further constraining the ability to move at speed.



<sup>3</sup> Stanford Institute for Human-Centered AI. [The 2025 AI Index Report](#). website.

No matter which strategies are used to accelerate time to market — such as building on prebuilt platforms — approval cycles can't be rushed. AI can shorten development timelines from years to months or even weeks. But following governance and approval processes adds years to new product development. This tension highlights a core challenge in banking transformation: technological speed is slowed by decision-making.

No financial institution is immune to this dynamic. Neobanks are often viewed as leaders in technological innovation, benefiting from fewer legacy constraints and greater freedom to move quickly. Yet speed alone does not eliminate complexity; it often delays it. Regulatory scrutiny, security expectations and operational discipline eventually become unavoidable, even for the most agile players.

Incumbent banks, by contrast, move more deliberately to prioritize stability and trust. Failure isn't an option in a highly regulated environment with severe regulatory penalties for noncompliance.

Neither neobanks nor incumbents are clearly winning the race. Sustainable progress depends not on speed alone, but on the ability to execute change within reliable, well-governed structures.

At the same time, banks are being drawn back toward core banking, wealth management and value-added services as transaction-based revenue continues to erode.

Despite these pressures, innovation is not slowing — it's shifting location. Increasingly, it's happening around banks rather than solely within them. Through ecosystems, partnerships and targeted investments, banks can bring external innovation inward in a controlled way, integrating new capabilities without compromising regulatory, operational or trust requirements.



# Operational resilience as a business outcome, not a compliance checkbox

The increasing reliance on technology in financial services has brought operational resilience into sharp focus. As banks embed technology more deeply into their core operations, the cost of failure rises. Execution becomes harder because critical processes must remain stable, secure and continuously available. In this context, resilience is not defensive — it is foundational to growth, trust and scalability.

Regulatory resilience and commercial resilience are now inseparable. Operational resilience has moved beyond a technical concern to become a regulatory mandate. Banks are expected to demonstrate that they can withstand system failures, cyberincidents and other disruptions using the technology currently in place.

What happens if a critical platform fails, or a breach disrupts customer access? Banks face consequences from hefty fines to reputational damage and loss of customer trust, reinforcing resilience as a core business priority.

Putting operational resilience into practice requires action across multiple fronts. It must cover the technology itself, the processes that depend on it, and the people who oversee the bank's operations. Each layer is essential to functionality — and each represents a potential point of risk.

Expectations for operational resilience have also risen. Uptime is not the only measure of success. Banks are expected to anticipate disruption, build tolerance into systems and processes, and maintain continuity under pressure. This includes having defined practices for responding to incidents and restoring operations when failures occur. How quickly can services be stabilized when disruption is unavoidable?

There is now an assumption that financial institutions will face stress, whether from third-party outages or targeted cyberattacks. As a result, prevention must be matched by tolerance, continuity and recovery. Together, these capabilities form the basis of operational resilience.

“Operational resilience is defined as the ability of an institution to deliver critical operations through disruption. This builds on the prudential operational risk framework, encompassing internal governance, outsourcing, business continuity and relevant risk management-related aspects.”<sup>4</sup>

<sup>4</sup> European Banking Authority. [Operational Resilience](#). website.



# How banks can move forward without breaking what already works

“ Fintech boosts banking performance (37.14%), customer experience (37.46%), and competitiveness (30.16%).”<sup>5</sup>

So, where do banks go from here? The best route forward is an aligned approach to digital sovereignty. This addresses issues on a technical, operational and legal level.

## To move forward, banks need to act on three fronts in parallel

### 1.Strategic partnerships

Given the constraints banks face, they will gain more — and faster — from technological developments by forming strategic partnerships that provide access to specialized expertise. Banks that are taking a strategic approach are building relationships with fintechs that benefit both parties. In some cases, they are investing in equity stakes to benefit from the first-mover advantage.

### 2.Internal AI capability

In parallel, banks must continue to develop in-house expertise. This includes investing in sovereign AI models and internal deployments. Internal ownership of critical capabilities becomes increasingly important to maintain standards and meet requirements such as data localization.

### 3.Infrastructure readiness

Moving toward an AI-optimized future also requires confronting infrastructure realities. Banks need to fill the gaps exposed by the new technology. AI requires specialized infrastructure, including access to GPUs, high-bandwidth connectivity and substantial network capacity. AI increases the demand for power and cooling requirements, creating physical constraints, while existing data centers struggle to scale. New data capacity can take up to 18 months to deliver.

## Consolidation as a foundation for controlled scale

As a result, consolidation strategies are emerging, including the NTT DATA AI Factory. These approaches are designed to streamline AI adoption by establishing an optimized, AI-ready technology stack — reducing data center footprint, lowering cooling demands and increasing infrastructure density. While improved environmental, social and governance (ESG) outcomes are not the primary driver, they often emerge because of modernization. Well-designed architecture inherently reduces environmental impact, an area that is likely to face increased regulatory scrutiny over time.

The AI Factory did not emerge for innovation's sake. It reflects a practical response to the need to renew existing infrastructure and maintain functionality in the wake of rising regulatory expectations and the operational demands of AI. In this environment, change is nonnegotiable. Banks must strengthen their foundations or risk those foundations giving way under mounting pressure.

Consolidation strategies acknowledge the realities of the financial services landscape and provide a clear, achievable path to reinforcing — and selectively reinventing — banking infrastructure for modern requirements.

<sup>5</sup> Prosenjeet Ghosh & Uttam Golder. [Exploring the effects of FinTech adoption on traditional banking: A systematic literature review on opportunities and challenges](#). Digital Business. June 2026.

# Rethinking functionality as a continuous capability

Functionality is not something banks can modernize periodically. In a market shaped by constant change, functionality must be actively maintained or no longer serve its purpose. This is why banks need to rethink functionality now and not later. Delaying action increases complexity, narrows options and makes future change harder and more expensive.

## Functionality must evolve with the bank's business model

What banks do to create value is changing, and functionality has to move with it. As transaction-based revenue becomes less reliable, banks are prioritizing advisory, ecosystem and value-added services that require new infrastructure. At the same time, functionality must support multijurisdictional regulations that continue to evolve alongside technology.

## Technology now determines viability

Technology is no longer only a growth enabler; it increasingly determines whether the business can operate at all. This is not about adding tools or running isolated innovation projects. It's about reinforcing operations so they can withstand today's demands from customers, competitors and regulators.

## AI value extends beyond automation but requires discipline

AI can support more resource-efficient operations when used as an accelerator, not an autonomous replacement. Near-term value often comes from efficiency and workflow improvements, while longer-term value depends on an enterprise-wide approach that scales responsibly.

## Banking progresses, even without evolving as rapidly as other sectors

Banks face constraints that other industries do not, particularly around risk, regulation and trust. That does not make evolution impossible — it changes how it must be executed. New pathways are required to balance innovation with governance so banks can maintain functionality.

## Operational resilience is now core to functionality

Operational resilience has become central to maintaining functionality across technical, regulatory and business dimensions. Stressors are evolving alongside technology, and new capabilities can introduce pressure and weak points if they are not implemented with appropriate security, stability and governance.

## Renewal requires a multistrategy approach

Functionality can be renewed to meet today's demands, but it typically takes multiple strategies working together. Banks can benefit from partner ecosystems while building owned capabilities in-house, especially in areas where control and long-term sustainability matter most. Underpinning this is infrastructure that can support AI at scale, which is increasingly becoming a critical dependency.

## The moment for action

The forces reshaping banking are already in motion. Modernization requires a partner that can help banks manage trade-offs across regulation, infrastructure, resilience and AI, while maintaining control.

Approaches such as the NTT DATA AI Factory are designed to help banks navigate this complexity. By bringing together AI-ready infrastructure and repeatable, governed execution, they support operations at enterprise scale.

Talk to an NTT DATA expert to explore how to industrialize AI with execution and control. Schedule a discovery workshop to assess readiness, identify priority pathways and build a practical roadmap.

Visit [nttdata.com](https://nttdata.com) to learn more.

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