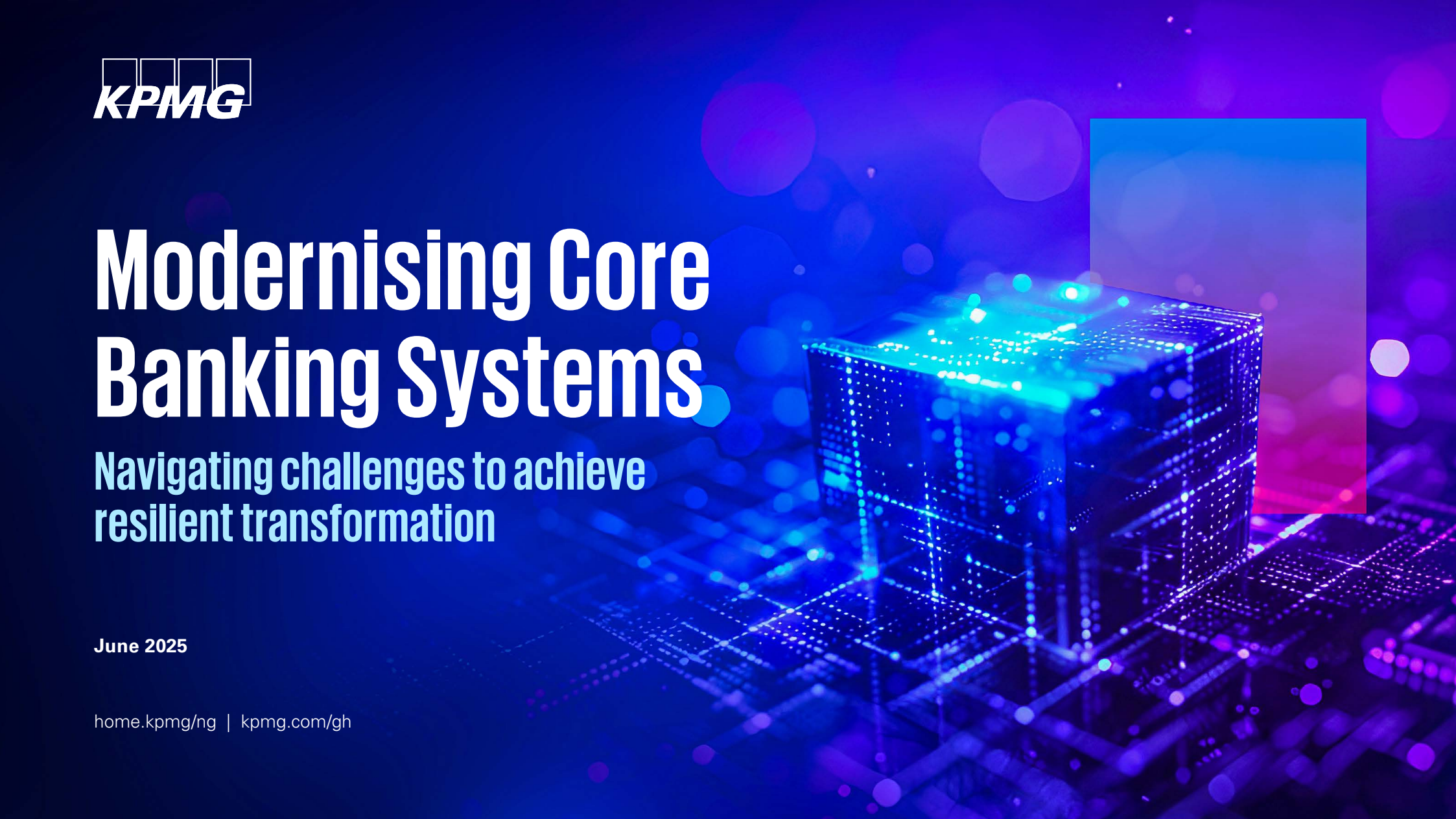
KPMG

Modernising Core Banking Systems

Navigating challenges to achieve resilient transformation



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Foreword

The banking sector is at a critical point in its digital transformation journey driven by the ever evolving customers' expectations and demand for faster, more personalised, and seamless financial experiences. As digital adoption accelerates at an unprecedented pace and regulatory compliance requirements tighten, the need for robust, flexible, and future-ready core banking systems has never been more pressing. Modernisation of the core banking system is also driven by the need for banks to better position for the new realities of the financial ecosystem, which is increasingly shifting towards deeper collaboration and strategic partnerships powered by Open Banking. However, the complexities and challenges associated with this transformation have raised the stakes involved for banks, their customers and business partners.

KPMG brings deep understanding of both the technical and operational aspects of successful core banking modernisation to help financial institutions navigate this challenging landscape.

We have seen first-hand how the right approach can deliver lasting value and competitive advantage, and we are committed to supporting our clients at every step of their transformation journey.

This thought leadership will explore the imperatives for core banking modernisation, dissect recent challenges and offer a proven framework for planning and executing these complex initiatives. Our aim is to arm bank executives with practical insights and clear strategies to confidently embark on core banking transformations that enhance operational resilience, improve customer experience, and position their organisations for long-term success in an increasingly dynamic digital future.

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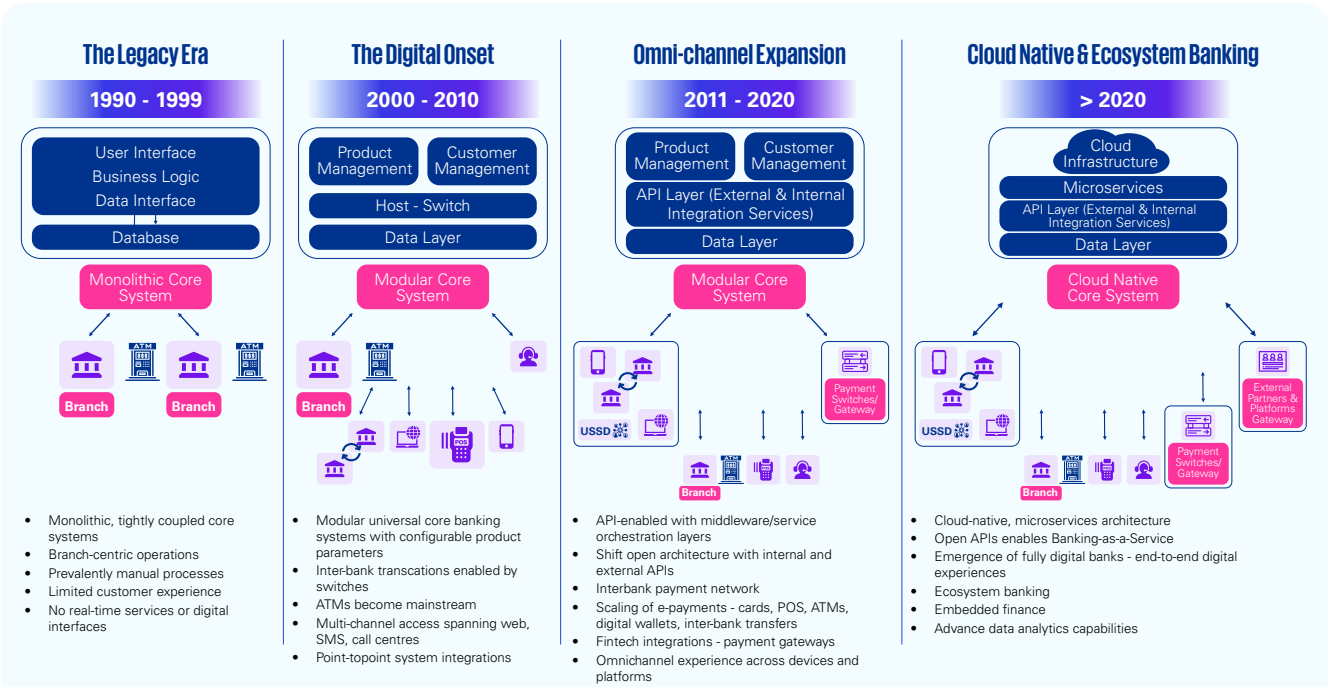
Section 1

Core Banking Systems in West Africa

Evolution of Core Banking Systems

Core banking systems have evolved significantly over the past few decades. From the early days of branch-based, decentralised operations, banks have progressively embraced automation and expansion of digital banking services, which now account for a substantial part of banking transactions. This evolution is driven by factors like increased internet and mobile penetration, the ongoing drive for operational efficiency, reaction to disruptions in the industry, and the need to maintain compliance with ever-evolving regulatory requirements.

The illustration below shows the evolution of the core banking system across four generations as banks evolved from decentralised siloed branch automation to more sophisticated banking systems powering omni-channel digital experiences at scale and operating within more integrated banking ecosystems.



- Monolithic, tightly coupled core systems
- Branch-centric operations
- Prevalently manual processes
- Limited customer experience
- No real-time services or digital interfaces

- Modular universal core banking systems with configurable product parameters
- Inter-bank transcations enabled by switches
- ATMs become mainstream
- Multi-channel access spanning web, SMS, call centres
- Point-topoint system integrations

- API-enabled with middleware/service orchestration layers
- Shift open architecture with internal and external APIs
- Interbank payment network
- Scaling of e-payments - cards, POS, ATMs, digital wallets, inter-bank transfers
- Fintech integrations - payment gateways
- Omnichannel experience across devices and platforms

- Cloud-native, microservices architecture
- Open APIs enables Banking-as-a-Service
- Emergence of fully digital banks - end-to-end digital experiences
- Ecosystem banking
- Embedded finance
- Advance data analytics capabilities

Regional Realities, Legacy Constraints: Why West African Banks Struggle to Modernise Their Core Systems

Over the years, core banking platforms modernisation in West Africa has been shaped by the region's operational and infrastructural realities. Challenges like unreliable electricity, poor internet connectivity, low adoption of national identity systems continue to affect how financial services are designed and delivered.

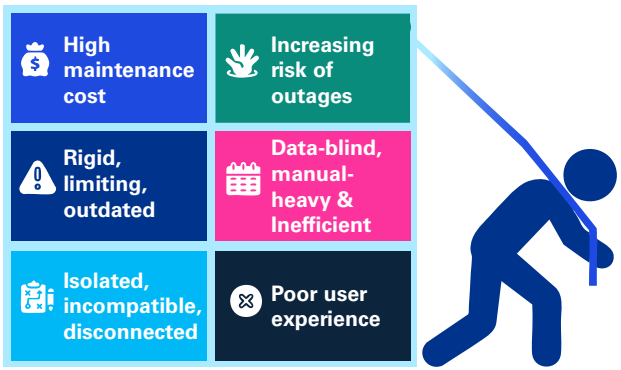
In many West African markets, financial inclusion has advanced not through seamless digital innovation, but through practical workarounds like agency banking and mobile money—solutions that bridge gaps of limited and disproportionate distribution of requisite banking infrastructure (e.g branches, ATMs, POS terminals, connectivity etc). According to the 2024 KPMG West Africa Banking Industry Customer Experience Survey, 83% of Nigerian customers visited agency outlets at least once a month, up from 75% in 2023. In Ghana, mobile agent money transaction volumes rose from 5.07 billion in 2022 to 6.81 billion in 2023, a 34.3% increase. The number of active agents also grew from 505,122 to 609,000 within the same period, according to the Bank of Ghana's Payment Systems Oversight Annual Report 2023 .

Faced with these realities, most traditional banks have had to adapt and extend their legacy systems by adding modules, implementing patchy customisations, and process workarounds to meet the ever-evolving demands.

This approach focuses more on short-term fixes than long-term overhaul of the core system. Most West African banks are essentially innovating around the core as their businesses grow both in size and complexity with the inevitable consequence of numerous challenges and limitations including:

- High dependency on scarce legacy skillsets.
- Extensive legacy-driven customisations which undermine system stability, performance and scalability.
- Difficulty integrating with modern digital channels and ecosystem partners.
- Lack of system agility to support dynamic needs of new products and services.
- Security vulnerabilities, creating a higher risk of fraud incidence.
- Inability to support requirements for advanced analytics and automation.
- Poor user experience which invariably results in errors and loss of productivity due to complex interfaces and convoluted journeys
- High maintenance and support costs

In essence, banks are spending more to do less—with legacy systems that were never built to support the emerging demands of modern banking.



Most financial institutions continue to rely on **legacy core banking systems, leading to high maintenance costs and a scarcity of skilled personnel.**

Consequently, **banks face increased risks of outages and security vulnerabilities**, leading to operational disruptions and a **decline in customer trust**.

On the other hand, digital-first challengers are taking a more agile route. Emerging digital leaders are building on cloud-native core systems designed for flexibility, speed, and customer-centric innovation. These platforms support real-time processing, embedded financial services, and seamless integration with partners across ecosystems. Because they are not weighed down by legacy decisions, they are able to move faster, deliver better experiences, and respond more quickly to market changes.

In today's financial services landscape, the gap is becoming clear. While traditional banks struggle to modernise legacy systems, digital-first players are racing ahead with lean, scalable, and future-proof technology stacks. The question is no longer whether to modernise, but how soon and how seamlessly banks can do so—before the cost of delay becomes too high.

The Modernisation Push

Overview of West Africa Banking Sector's Modernisation Push

Banks in West Africa have begun prioritising core banking transformation, encouraged by digital disruption, central banks' policies, and increasing customer expectations. For instance, the Central Bank of Nigeria (CBN) have played significant roles in enabling reforms through initiatives like regulatory sandboxes, open banking guidelines, and digital identity frameworks.

These regulatory interventions have not only set the stage for innovation but have also spurred action among financial institutions. In response, several banks across the region have embarked on core banking upgrades ranging from modernising legacy platforms to implementing entirely new, cloud-native solutions. For instance, in Nigeria, some banks have recently undertaken full-scale core system transformations to better align with new digital service expectations.

While these efforts aimed to enhance operational efficiency, improve customer experiences, and comply with emerging regulatory guidelines, many met significant hiccups. Frequent system downtimes, transaction errors, difficulty accessing funds and post-implementation challenges such as data inconsistencies (e.g., discrepancies in data mapping, formatting mismatches, legacy system incompatibilities, or incomplete data cleansing), service unavailability in the bank's physical branches and on the bank's digital channels (mobile apps, internet banking, and ATM networks) became commonplace, fuelling public outcry and eroding customer trust. These challenges, however, have not dampened the urgency to modernise. As banks contend with the growing pains of transformation, they must also respond to a rapidly evolving external environment—one where digital-native customers expect more digital services comparable to experience on some fintech platforms, and digital service reliability is non-negotiable.

The Driving Forces Behind Core Banking Modernisation

The push to modernise, considering the historical context that has been laid, is also a result of several key factors which are explored below:

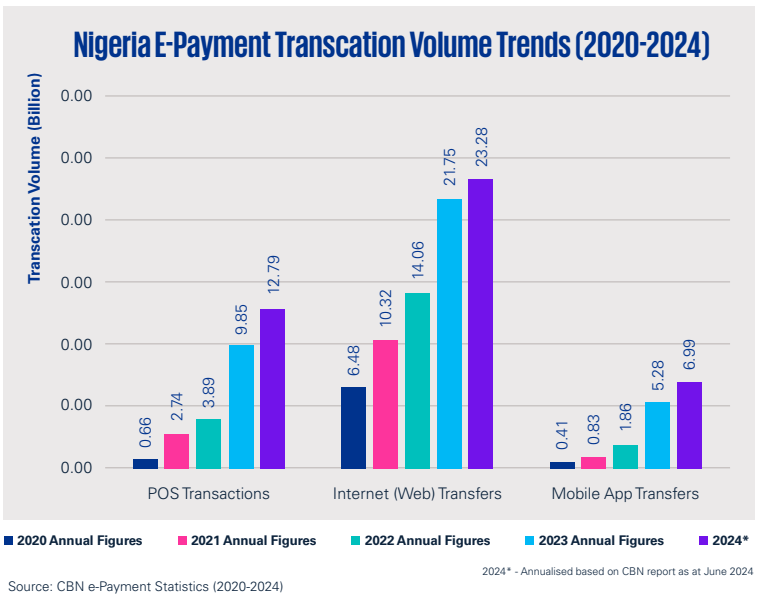
Evolving Customer Expectations

West African banking customers are increasingly digitally savvy and expect seamless, real-time experiences across channels. The rapid adoption of mobile banking, digital

payments, and agency banking has reset the bar for convenience and accessibility. Customers now expect to be able to open accounts, apply for loans, and manage transactions from their mobile devices, without ever visiting a branch.

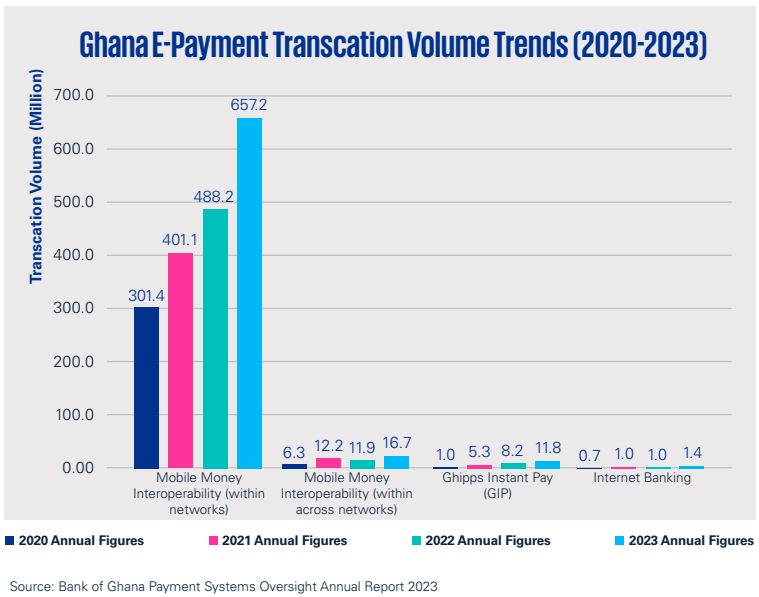
This shift is evident in both Nigeria and Ghana, where e-payment adoption has seen significant year-on-year growth. In Nigeria, as shown in the chart below, transaction volumes have surged across Internet (Web) transfers, POS transactions, and mobile app transfers. For instance, Internet transfer transactions more than tripled from 6.48 billion in 2020 to over 23 billion in 2024, while POS and mobile app transfers similarly recorded exponential increases.

In Ghana, the growth trajectory for e-payments is just as compelling. Between 2020 and 2023, Ghana's payment ecosystem underwent a rapid transformation, largely propelled by mobile-first and instant payment platforms. Mobile money interoperability transfers saw remarkable growth with intra-network transactions volume growing by about 118%, while cross-network transfers surged by 167%. This reflects massive user adoption and growing confidence in mobile-based financial services.



2024* - Annualised based on CBN report as at June 2024

Source: CBN e-Payment Statistics (2020-2024)



Source: Bank of Ghana Payment Systems Oversight Annual Report 2023

This trend was significantly accelerated by the erstwhile pandemic, which saw a massive shift towards digital banking and cashless payments but has been greatly accentuated by the 'coming of age' of digital natives such as the millennials who now occupy a significant proportion of the customer base of banks .

Operational Efficiency

A number of banks continue to run ageing core banking platforms that are costly to maintain, difficult to integrate, and reliant on manual processes. These inefficiencies translate into higher overhead and slower service delivery. In contrast, modern platforms built on flexible, cloud-ready architectures drastically cut maintenance expenses, simplify data sharing, and enable real-time analytics. By automating routine tasks and consolidating operations, these platforms improve scalability, reduce errors, and open the door to rapid innovation—such as launching new digital products or integrating with ecosystem partners. Ultimately, upgrading to a modern core system fosters greater agility, competitiveness, and customer satisfaction in an ever-evolving financial landscape.

The factors highlighted reflect the reality that banks which do not modernise could face exposure to compliance risks, reputational damage, and reduced competitive advantage, which, ultimately, erodes market share. Thus, the race is on for banks to modernise effectively and position themselves as reliable, customer-focused institutions that can weather future disruptions.

The Fintech and NeoBank Squeeze

The West African banking landscape has rapidly evolved, with local FinTechs playing significant roles in reshaping traditional banking services such as savings, investments, payments and lending services. Unlike traditional banks—often weighed down by legacy systems and extensive branch networks—digital-only players run lean, agile platforms that focus on delivering convenient, customer-centric experiences in niche areas. They streamline processes such as account setup, payments, and loan applications, often allowing customers to perform banking tasks via a smartphone in seconds.

Traditional banks realise they must keep up, as emerging FinTechs offer a more differentiated customer experience (CX) through user-friendly apps, instant services, and competitive fees.

Open Banking

Open banking is a financial services innovation that gives third-party financial providers API access to customer banking information. This subsequently provides customers with more options and control over their financial data.

Open banking is currently serving as a powerful catalyst for the growth and innovation of Nigeria's digital-first financial players by streamlining access to financial data and infrastructure through secure APIs. Open banking is an offshoot of the collaboration between Traditional banks, Neobanks and FinTechs which seeded the growth of innovative financial products such as virtual accounts (offering digitally-generated account

numbers for seamless collections and automated reconciliations), card management solutions (including virtual and physical card issuance, tokenisation, and spend controls), payment rails integrations (connecting neobanks and FinTechs to global and local payment networks for faster, cross-border transactions), and merchant payment gateways (facilitating secure, multi-channel payment acceptance for business). FinTechs leverage open banking APIs to create merchant payment gateways, recurring payment solutions, data aggregation services (which support compliance), spend analytics, and transaction categorisation tools, enhancing financial analytics for businesses and individuals, and enabling inclusive financial services. Open banking is paving the way for financial services innovation through ecosystem collaboration and partnerships. With the recent announcement CBN push for launch of open banking in Nigeria by August 2025, it is imperative for banks to ensure readiness of their core technologies and operational processes to support open banking.

But Nigeria is not alone. The momentum is spreading across the region. Ghana's Open Banking Directive is aimed at enhancing the current banking and financial landscape to improve Ghana's financial services sector through financial inclusion, the secure sharing of customer-consented data, and innovation in the financial service delivery, increasing competition amongst regulated financial institutions in Ghana.

These developments are paving the way for embedded finance models, where banking capabilities are embedded directly into non-financial platforms, such as e-commerce apps and mobility services—further redefining how customers interact with financial institutions.

Open Banking's Impact:

- **Data mobility and control:** Open Banking allows for customers to securely share their financial data with Third Party Providers (TPPs), facilitating access to personalised financial services.
- **Service integration and collaboration:** APIs support seamless integration between banks and TPPs, resulting in the development of progressive financial products and services.
- **Financial inclusion:** Open Banking can improve financial inclusion by using alternative data sources (mobile phone usage, utility bill payments, social media activity) and extending access through digital channels.
- **Driving core banking modernisation:** Nigeria's core banking systems are being reformed faster due to the need to accommodate API-driven data sharing and service integration.

Regulatory Compliance

The regulator's focus on risk management, cybersecurity, and operational resilience has spurred banks to invest in platforms capable of meeting stringent compliance standards.

For example, in Nigeria,

- **Mandatory BVN (Bank Verification Number) and KYC (Know Your Customer) checks** have necessitated seamless data capture and real-time verification capabilities.
- **Data protection regulations**—inspired by global trends and Nigeria's own Data Protection Regulation—call for robust privacy features embedded in core systems.
- **Operational risk guidelines** from the CBN highlight the importance of system availability, pushing banks to improve uptime and reduce service disruptions.
- **The CBN's regulatory sandbox and Open Banking Initiative** are encouraging banks to expose services and data to third-party providers in a secure and standardised way. This requires a level of architectural flexibility and modularity that most legacy core systems struggle to accommodate.

In Ghana, the regulator focuses on risk identification and mitigation, digital resilience, compliance, collaboration, capacity, and sustainability.

- **Risk identification:** Enhancing the use of data analytics and early warning indicators to identify emerging risks, whether in asset quality, cybersecurity, fraud, liquidity, or systemic buildup of non-performing loans.
- **Compliance:** With traditional players introducing both opportunities and risks. While many operate under lighter regulatory regimes, it has become necessary for banks to respond with innovation, agility, and a sharper focus on customer-centric services. Additionally, the regulator has mandated a Compulsory Basel III & IV training for all bank directors to enhance regulatory knowledge and governance.
- **Digital resilience and data protection:** Banks are assuming responsibility for the safety of their systems, product integrity, and customer protection. The Bank of Ghana is encouraging strategic partnerships, digital transformation, and product innovation while deepening its engagement with non-bank financial service providers to ensure innovation thrives within a stable, well-supervised ecosystem that supports financial inclusion and protects consumers.

Compliance with these and other regulations often necessitates significant enhancements to core banking systems and surrounding infrastructure. Banks must be able to show end-to-end control over their operations, with clear audit trails, robust security measures, and reliable backup and recovery capabilities. Legacy systems can make this compliance burden extremely challenging and resource intensive.

Section 2

Principles of the Modern Core Banking Platform

The evolution of core banking platforms reflects a fundamental shift in how financial institutions approach technology. As banks navigate their transformation journeys, several overarching principles have emerged that guide successful modernisation efforts. These principles collectively address the key challenges that traditional banking platforms face: rigidity, high maintenance costs, limited scalability and difficulty in innovation.

At its core, the architecture of modern banking platforms is built on four fundamental principles: modularity, scalability, resilience, and adaptability. These principles manifest across four key architectural layers, each with its own modernisation trajectory and best practices.

These modernisation principles are summarised below:

Modularity: allows banks to break down complex systems into manageable, independent components that can be developed, deployed, and scaled independently.

Scalability: ensures that banking systems can handle growing transaction volumes and user bases efficiently. Modern architectures achieve this through horizontal scaling, rather than the vertical scaling approach of traditional systems.

Resilience: encompasses design patterns that ensure system stability even when components fail, enabling service provision even during partial outages or maintenance windows.

Adaptability: allows banks to respond quickly to changing market conditions, customer needs, and regulatory requirements.

These foundational principles transform every layer of the banking solution stack, creating a cohesive architecture that supports modern banking operations. We examine how these principles manifest across each major architectural layer below.

Application layer modernisation

The application layer of modern core banking systems embodies these principles through several key architectural patterns. The shift from monolithic applications to microservices represents the most visible manifestation of modularity and adaptability principles.

From monolithic systems to modular architectures

Legacy core banking systems were built as large, monolithic platforms with tightly coupled components. In these systems, key functions such as account opening, customer management, payments, amongst others were tightly coupled within a single application. While this approach simplified initial development and deployment, it created significant challenges for maintenance, scaling, and innovation. Making any change to any part of the system was a risky, time-consuming process, as these changes required extensive testing and a redeployment of the entire application.

> **“A system is only as stable as its weakest link—when a simple update to one module forces an entire core banking system offline, the actual cost is measured in service disruption and lost customer trust.”**

By contrast, modern core banking applications embrace a microservices architecture, where banking functions are decomposed into independent, loosely coupled services. Each service - whether for payments, customer onboarding, or loans - can run independently while communicating with other services through APIs. This design enables banks to introduce new features without disrupting core operations and targeted scaling based on demand. This design also allows for much faster and more frequent release cycles by the solution provider enabling greater agility in responding to market needs. The benefits in sum are represented below:

- Independent scaling of services based on demand.
- Faster deployment cycles
- Greater resilience through service isolation
- Easier integration with 3rd-party services and partners

We see that leading global banks have successfully implemented these principles. For instance, DBS Bank, Singapore’s leading consumer bank, embraced microservices to break down its monolithic systems into smaller autonomous units, as it recognised the need for agility in the rapidly evolving financial landscape. This shift enabled the Bank to introduce new features with minimal disruption to existing services.

Integration layer evolution

The integration layer serves as the nervous system of the modern core banking architecture, enabling seamless communication between different services, channels, and external partners.

In traditional banking systems, integration was often an afterthought, leading to point-to-point connections that created a complex web of dependencies. Modern integration architecture, guided by the core principles of modularity, scalability, resilience, and adaptability, takes a fundamentally different approach.

The modern integration layer implements these principles through API-led connectivity, event-driven integration patterns, and robust API governance frameworks. This approach creates a flexible, yet controlled, environment where new services can be easily integrated while keeping security and compliance requirements.

API-First Design

At the heart of modern integration lies the principle of API-first design. This approach treats APIs not as mere technical interfaces but as products that serve specific capabilities. Banks implementing API-first design create well-documented, versioned APIs that act as contracts between services.

This approach presents several key advantages:

- First, it enables parallel development across teams. When APIs are defined early, teams can work independently using agreed-upon interfaces, significantly accelerating development cycles.
- Second, it eases partner integration, allowing banks to easily expose services to fintech partners and participate in broader financial ecosystems.
- Finally, it fosters innovation by making it easier to experiment with new services and capabilities without disrupting existing operations.

Leading financial institutions have proven the power of this approach. For example, BBVA, through its API Market platform, enables partners to embed banking services directly into their applications broadening the bank's reach and creating new revenue streams. According to the article "BBVA is prepared for open banking ," this initiative reflects the bank's strategic shift toward ecosystem-based innovation, powered by open banking capabilities.

Event-Driven Integration

While APIs excel at request-response interactions, modern banking systems also require real-time data flow and event processing capabilities. Event-driven integration patterns complement API-first design by enabling loose coupling between services and supporting real-time data streaming.

In this model, business events (such as account opening, transactions etc) are published to an event backbone, typically implemented using modern event streaming platforms. Services can subscribe to relevant events without needing to know about the event producers, creating a highly decoupled architecture that is both scalable and resilient.

This pattern is particularly relevant for scenarios requiring real-time processing, such as fraud detection or personalised customer experiences. When a transaction occurs, multiple systems can simultaneously process the event for different purposes without creating complex dependencies between these systems.

Infrastructure layer transformation

The infrastructure layer has perhaps undergone the most dramatic transformation in modern banking architecture. Traditional banking infrastructure, characterised by on-premises data centre and manual operations, is giving way to cloud-native, automated platforms that embody the core principles in new and powerful ways.

Cloud-Native Architecture

The adoption of cloud technologies in banking goes far beyond simple infrastructure hosting. Modern banking platforms embrace cloud-native principles that fundamentally change how infrastructure is provisioned, managed, and scaled. This approach implements the modernisation core principles in several ways, as follows:

Modularity:

This is achieved through containerisation, where applications and their dependencies are packaged into containers that can run consistently across different environments. This approach, combined with container orchestration platforms, enables banks to deploy and manage applications with unprecedented flexibility

Scalability:

This is enhanced through auto-scaling capabilities that automatically adjust resources based on demand. This eliminates the need for over-provisioning while ensuring that systems can handle peak loads efficiently. Leading banks have implemented these capabilities to handle seasonal spikes in transaction volumes without service degradation

Resilience:

This is built into the infrastructure through concepts like Infrastructure as Code (IaC) and immutable infrastructure. These practices ensure that infrastructure can be reliably reproduced and that changes are made through controlled, automated processes rather than manual intervention.

DevOps

The transformation of infrastructure goes together with the adoption of DevOps and Site Reliability Engineering (SRE) practices. These approaches bring development and operations closer together, enabling faster deployment cycles while maintaining the stability that banking systems require.

Modern banking infrastructure implements automated deployment pipelines, continuous monitoring, and self-healing capabilities.

Data Layer Innovation

The data layer is, perhaps, the most critical and challenging aspect of core banking modernisation. Traditional core banking systems were built around batch processing paradigms, where transactions accumulated throughout the day and were processed in bulk during end-of-day (EoD) procedures. This approach, while reliable, creates significant limitations in today's 24/7 banking environment. The transformation of the data layer requires a fundamental shift in thinking - from treating data as a byproduct of transactions to viewing it as a strategic asset that drives business value. Leading insights advocate for next-generation core banking platforms to be built for real-time data flows in order to enhance agility, reduce operational costs, and elevate customer satisfaction. Three (3) key innovations reshaping how banks process, store, and utilise data are:

Data Mesh Architectures

The emergence of data mesh architectures is enabling banks to decentralise data ownership while keeping centralised governance. This architectural pattern treats data as a product, with clear ownership and quality standards, while enabling different business domains to manage their data independently. According to Exadel's 2024 article, "How Data Mesh Technology Can Help Banks Unlock Data Potential," banks using data mesh have improved data agility, scalability, and quality by decentralizing data ownership, leading to more responsive and efficient data handling across various departments within banks.

Artificial Intelligence

The integration of AI/ML capabilities directly into core data processing is transforming how banks detect fraud, assess risk, and personalise services. Leading banks are embedding machine learning models directly into their transaction processing flows, enabling real-time fraud detection and risk assessment.

Data Streaming

The adoption of event-driven architectures and real-time streaming platforms has enabled banks to process and analyse data as its created, rather than in batch windows. This shift eliminates traditional end-of-day processing bottlenecks and enables true real-time banking services.

While this trend has not been fully implemented by incumbents, a lot of significant strides have been made. For example, Capital One, one of the largest banks in the United States, has adopted technologies such as Apache Kafka to integrate and correlate data in real time—enhancing its ability to deliver customer risk insights promptly, as detailed in Confluent's article, "Capital One Delivers Risk Insights in Real Time with Stream Processing" . However, challenges such as legacy systems, data silos, and technical debt make the full implementation of data streaming costly and complex. While real-time data streaming is not yet fully achieved across the banking industry, the sector is steadily progressing in that direction .

In summary, though a lot of these innovations may not be fully achieved in banking, the industry is recognising them and moving in that direction. The combination of technological advancements and strategic investments will most likely accelerate this future, providing early adopters with competitive advantage.

Section 3

Implementation Challenges & Lessons

The principles of modern core banking architecture outlined in the earlier section provide a compelling vision for the future of banking technology. The shift toward modularity, scalability, resilience, and adaptability across application, integration, infrastructure, and data layers is a fundamental reimagining of how banking systems should run. Yet, as many financial institutions have discovered, there exists a significant gap between architectural vision and implementation reality. The transition from legacy to contemporary systems is rarely straightforward. It involves navigating complex technical challenges, organisational barriers, and regulatory considerations that can derail even the most well-conceived modernisation efforts. Successful transformations require more than just sound concepts and architectural principles – they demand careful attention to implementation challenges, strategic considerations, and organisational factors that shape the modernisation journey.

This section explores the practical hurdles banks encounter during core banking modernisation, drawing from observed industry patterns and implementation experiences.

Platform Selection and Adaptation Challenges

Selecting a core banking platform is one of the most consequential decisions a bank will make. This decision has far-reaching implications for the institution's operations and market positioning for years to come. We have highlighted facets of this dilemma below:

Customisation versus Standardisation

When implementing purchased core banking systems, banks invariably deal with contentions between adopting standardised functionality and customising components to match their operating model. Each customisation offers potential competitive differentiation but introduces complexity for future upgrades and maintenance. Conversely, over-reliance on standard functionality may compromise the bank's ability to deliver distinctive business propositions and customer experiences.

This balance requires careful analysis of where customisation delivers genuine competitive advantage versus where industry-standard, off-the-shelf approaches suffice. Banks must evaluate each customisation request against both short-term implementation impact and long-term maintenance implications.

Managing Vendor Dependencies and Strategic Influence

Core banking vendor relationships present strategic considerations for financial institutions, particularly regarding long-term dependency and commercial leverage. Vendor lock-in remains a significant risk in core banking modernisation, as financial institutions often find themselves tied to a single vendor due to high switching costs, proprietary technologies, and complex migration challenges. According to TechCabal 2024 report on recent core banking application implementation , Nigerian tier-1 banks collectively spend approximately ₦82 billion annually on core banking software, with significant portions allocated to licensing, support, and customisation fees. This reliance on external vendors has driven some banks to explore proprietary solutions to regain control over their technology stack and reduce vendor dependency.

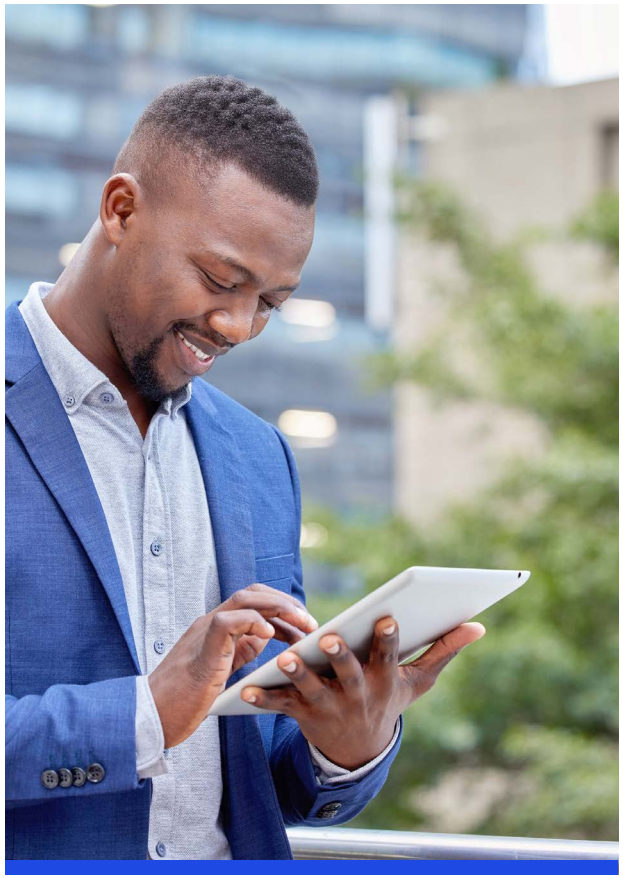
The concentrated nature of the vendor market, combined with the substantial switching costs associated with core systems, naturally creates questions about product roadmap alignment and long-term commercial leverage. Banks must carefully evaluate how their strategic priorities will be served within these vendor relationships over the expected lifecycle of the platform.

The Misconception of 'Ready-to-use' Banking Platforms

Core banking vendors market their solutions as 'pre-configured' or 'ready-to-use' packages, creating the impression that implementation is primarily a technical installation exercise. This 'mischaracterisation' significantly understates the extensive configuration work needed.

Implementing a modern core banking platform requires hundreds of detailed business decisions across critical areas:

- **Product parameter definitions:** Specifying exactly how each product functions, including interest calculation methods, fee structures, and product relationships.
- **Workflow and approval hierarchies:** Determining how transactions flow through the organisation, required reviews and authorisation and authorisation conditions.
- **Accounting treatment and product rules:** Defining how every financial event is recorded, classified, and posted to the General Ledger.
- **Regulatory compliance configurations:** Setting up how the system enforces requirements for KYC, AML, reporting, and other regulatory mandates.



- **Reporting structures:** Configuring entities like the chart of accounts, reflecting how business and financial data is organised, calculated, and presented for management, regulatory, and analytical purposes.

This configuration process serves as a forcing mechanism that requires banks to make explicit decisions about their operating model. Legacy systems often allow operational ambiguity – inconsistent processes across branches, undocumented exception handling, and informal approval mechanisms. New platforms demand clarity on key processes that reflect the essence of the banks operating model.

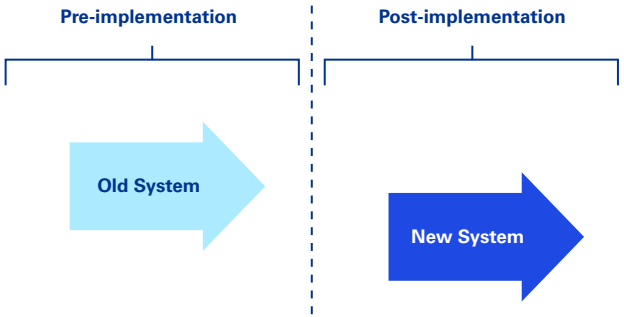
The result is that the core banking implementation becomes as much an exercise in business model definition as it is a technology deployment – a reality that typically contradicts the 'package' marketing narrative and often leads to underestimated implementation timelines and budgets.

The Migration Strategy Dilemma

The Most Consequential Implementation Decision

No single choice shapes a core banking implementation's risk profile more than the migration strategy. This decision fundamentally defines how the bank will transition its operations, customers, and data from legacy to modern platforms. This is explored below:

The "Big Bang" Approach



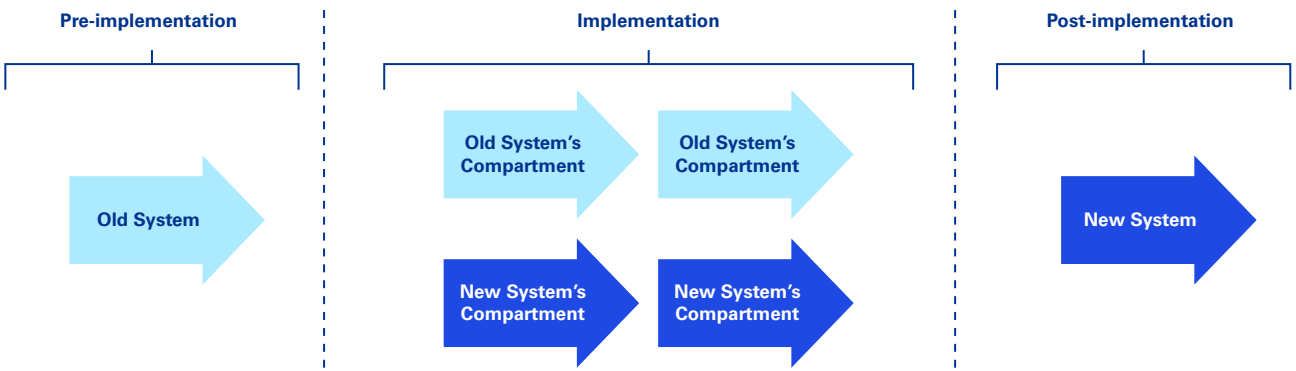
The "Big Bang" approach transitions all accounts, products, and channels simultaneously on a predetermined cutover date. This strategy offers compelling advantages:

- Eliminates the need to run and support dual systems
- Provides a clean cutover from legacy technology
- Simplifies customer communications (one transition event)

- Avoids complex interim integration between old and new platforms

However, this approach concentrates enormous operational risk into a single event. The cutover period becomes a critical inflection point where months or years of planning meet operational reality. The organisation must execute hundreds of transition activities within tightly constrained time limits, often over a weekend conversion window. Any significant issues during this period affect the entire customer base simultaneously, potentially triggering widespread service disruptions, regulatory scrutiny, and reputational damage.

Progressive Migration: Distributed Risk, Increased Complexity



The progressive approach transitions customers and products in phases, typically organised by product type, customer segment, or geography. This strategy distributes risk across multiple smaller transition events, creating important advantages:

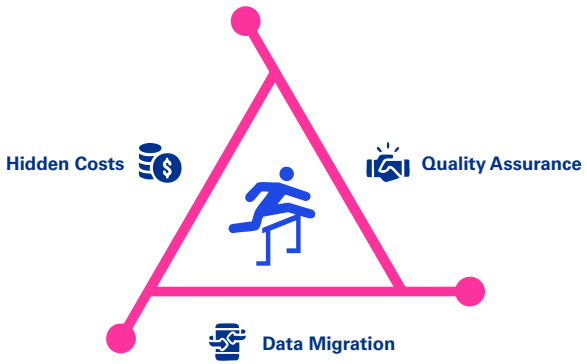
- **Limits the customer impact of any single conversion issue.**
- **Provides opportunities to refine migration processes between phases.**
- **Allows the organisation to build migration expertise through repeated events.**
- **Creates natural "go/no-go" decision points between phases.**

However, this approach introduces significant complexity. The bank must simultaneously run both legacy and new platforms during the transition period—which may extend for years in large organisations. This operational complexity manifests in multiple dimensions that are often underestimated:

- Data synchronisation between platforms becomes an ongoing requirement.
- Financial reconciliation processes must span both systems.
- Staff must be competent in both environments.
- Customer experience must remain consistent regardless of which platform hosts their accounts.
- Regulatory reporting must consolidate information from multiple systems.

The progressive approach trades the concentrated risk of a single high-stakes event (in the big-bang approach) for the distributed but cumulative risk of managing a complex dual-platform environment for an extended period. Neither approach eliminates risk—they merely transform it.

The Technical Implementation Realities



The Hidden Cost of Core Banking Integrations

Core banking systems never run in isolation. They function as the central hub within a complex ecosystem of interconnected applications and external networks. This integration landscape is one of the most technically demanding aspects of implementation.

Modern banks typically have a highly heterogenous applications landscape comprising a number of peripheral systems that interact with the core banking platform. These includes the following amongst others:

- Payment networks (SWIFT, Cheque Clearing (ACH), RTGS, card networks)
- Channel systems (mobile, online, branch, ATM, PoS)
- Customer Relationship Management systems (CRM)
- Risk and compliance systems (fraud detection, AML, sanctions screening)
- Business intelligence and reporting solutions
- Third-party service providers (credit bureaus, KYC services)

The technical complexity arises from fundamental architectural differences between these systems. Modern core platforms typically employ API-first architectures, while surrounding systems may use file transfers, database links, message queues, or proprietary interfaces. Each integration point requires detailed technical design to address differences in:

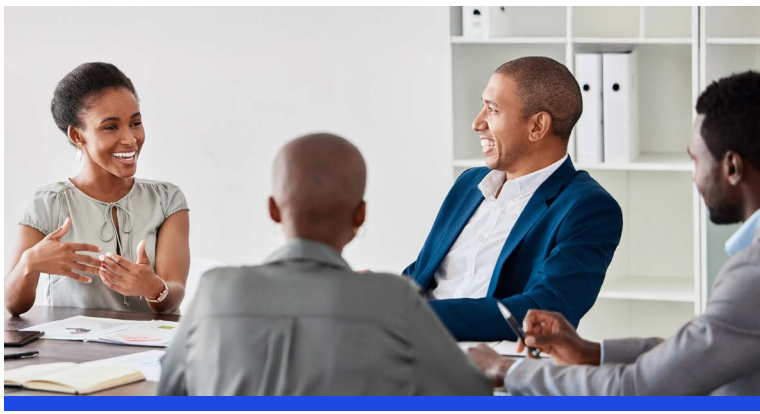
Data formats and structures

Processing cadence (real-time vs. batch)

Authentication and security models

Error handling and reconciliation methods

This integration work often consumes 30-40% of implementation resources yet receives disproportionately less attention during planning phases. Banks that establish dedicated integration competency centres and develop standardised integration patterns achieve more predictable outcomes.



Banks that establish dedicated **integration competency centers** and **develop standardised integration patterns** achieve more predictable outcomes.

Data Migration: Where Banking History Meets Modern Architecture

Data migration is arguably the most technically complex and frequently underestimated component of core banking implementation. The challenge extends far beyond simple data transfer—it requires transforming decades of banking history into structures compatible with modern platforms.

This transformation process reveals accumulated data quality issues that have been hidden within legacy systems:

- Inconsistent customer information across product systems
- Incomplete or non-standardised product parameters
- Transaction histories with missing or ambiguous categorisation
- Account relationships that violate modern data models
- Historical workarounds implemented to circumvent legacy system limitations.

Data quality issues typically require substantial remediation before migration can proceed. The complexity is compounded by the need to keep complete audit trails and transaction histories for regulatory compliance while transforming data to new structures.

The migration process requires sophisticated data transformation rules, extensive validation controls, and reconciliation processes that verify financial accuracy to the smallest currency unit. Banks often discover that data preparation requires significantly more effort than initially estimated, impacting overall implementation timelines..

Testing: The Proving Ground for Banking Operations

Testing is the critical bridge between technical implementation and operational readiness. Comprehensive testing reveals how the configured system will perform under real-world conditions before affecting customers and financial operations.

Effective testing for core banking implementations requires multiple specialised testing disciplines:

- Functional testing confirms that configured components operate as designed.
- Integration testing confirms that systems communicate correctly across boundaries.
- Performance testing measures system behaviour under production-scale transaction volumes
- Batch testing verifies that end-of-day, month-end, and year-end processes complete within required time limits.
- Regression testing ensures that fixes and enhancements don't create new defects.
- User acceptance testing confirms that business stakeholders can perform required functions and critical outputs such as computations, transaction posting, reports etc., are accurate and align with business and regulatory expectations.
- Security testing assures that the bank's security policies have been implemented completely and that there are no system vulnerabilities that can be unduly exploited.

Banks often underestimate the infrastructure, data, and coordination requirements for effective testing. Creating realistic test environments with production-scale data volumes is technically challenging but essential for validating system performance. Similarly, end-to-end process testing requires coordination across multiple business units and technical teams.

The most successful implementations allocate a good part of their total time budget to testing activities and resist pressure to compress test cycles when implementation timelines slip. This disciplined approach significantly reduces post-implementation issues and customer impact.

The Human Element: Organisational Transformation Beyond Technology

The most profound impact of core banking modernisation often has less to do with technology than with how the organisation runs. Modern platforms fundamentally reshape operational processes, job functions, and customer interactions. Organisations often underestimate this human dimension, focusing primarily on technical aspects while overlooking the comprehensive operational transformation required.

Rethinking Banking Operations

Modern core platforms embed process flows, control mechanisms, and operational procedures that may differ substantially from legacy environments. These differences require a fundamental reconsideration of how banking operations occur.

Banking processes built around legacy system limitations often incorporate unnecessary steps, manual workarounds, and redundant controls. Simply replicating these processes on modern platforms perpetuates inefficiency and does not leverage new capabilities. Effective implementations treat process redesign as integral to system implementation, systematically evaluating each workflow to cut unnecessary complexities and redundancies.

This operational redesign affects every aspect of banking from account opening to loan origination, transaction processing to exception handling, and customer service to regulatory reporting. Organisations that invest in comprehensive process review before system configuration achieve more efficient operations and better value.

Building New Organisational Capabilities

Legacy core banking systems typically require specialised technical knowledge focused on proprietary languages, custom code maintenance, and batch processing operations. Modern platforms demand fundamentally different organisational capabilities:

- **Configuration management:** The ability to translate business requirements into platform configuration rather than custom code.
- **API and integration:** Skills to manage real-time data exchange and connection between disparate systems.
- **Data analytics:** Capabilities to derive business insights from the enriched data available from modern platforms.
- **Digital service delivery:** Competencies in creating and managing customer-facing digital journeys.
- **Risk-based control frameworks:** Approaches that use automated controls and risk-based monitoring.

This capability shift requires more than technical training. It demands a fundamental rethinking of organisational structures, career paths, hiring profiles, and performance metrics. Banks that develop these capabilities in parallel with technical implementation build the foundation for sustained operational effectiveness.

Managing the Human Transition

Core banking modernisation affects thousands of employees across the organisation, from frontline staff to operations teams. This human transition requires careful management:

The Frontline Reality

For branch staff, call centre representatives, and relationship managers, the new system changes their daily customer interactions in fundamental ways. New interfaces, different transaction flows, changed approval processes, and altered product structures all affect how they serve customers. Organisations typically experience a noticeable drop in productivity, albeit temporarily, during this transition as staff develop proficiency.

This productivity impact has significant operational implications that must be addressed through:

- Comprehensive training programs that emphasise process understanding, not just system navigation
- Enhanced staffing levels during transition periods
- Modified performance expectations that accommodate learning curves
- Practical job aids and quick reference guides for common scenarios
- "Super users" embedded within teams to provide immediate support.

The Customer Experience Challenge

Core modernisation inevitably affects customers through changes to statements, digital interfaces, payment processing, and service delivery models. Banking customers are inherently resistant to change in their financial services, making this external transition particularly sensitive.

Effective customer transition strategies incorporate:

- Segmented communications tailored to customer usage patterns
- Advance notification of changes with clear explanations of benefits
- Step-by-step guidance for navigating new interfaces
- Temporarily enhanced support channels during transition periods
- Staff preparation for addressing common customer questions

Organisations that proactively manage this customer transition not only minimise disruption but can use the implementation as an opportunity to deepen customer relationships through improved experiences.

Implementation Governance: The Critical Foundation

Core banking modernisation is the most intricate transformation most financial institutions will undertake. The program typically spans multiple years, involves hundreds of staff and external partners, requires thousands of decisions, and affects every aspect of banking operations. This complexity demands sophisticated governance to maintain strategic direction while managing countless implementation details.

Effective Decision Architectures

The volume and variety of decisions needed during implementation create a fundamental governance challenge. These decisions range from strategic choices "Which migration approach should we adopt?" to granular configuration details "How should we structure product hierarchies?". Without an effective decision architecture, implementations face two common failure modes:

- Decision bottlenecks where excessive centralisation causes delays and missed deadlines.
- Uncoordinated decisions where disconnected teams make contradictory choices based on limited perspectives.

Successful implementations establish tiered governance frameworks with clearly defined authority at each level:

- **Executive Steering Committee:** Addresses strategic decisions, significant scope changes, major resource allocations, and critical risk responses.
- **Program Governance Board:** Manages cross-functional dependencies, resolves escalated issues, and ensures alignment across workstreams.
- **Functional Working Groups:** Make detailed decisions within their domains (e.g., retail products, channels, operations)
- **Technical Architecture Committee:** Ensures technical decisions support architectural integrity.

This layered approach ensures decisions occur at the right organisational level, with clear escalation paths when issues cross boundaries or exceed defined thresholds. Decision-making velocity often determines implementation pace more than technical execution speed.

The Essential Role of Business Leadership

Contrary to common perception, core banking modernisation is fundamentally a business transformation enabled by technology—not a technology project. This distinction has profound governance implications.

While technical partners provide essential expertise, business leaders must drive key decisions about:

- How banking processes will function
- Which product features to implement
- What customer experience to deliver
- How risks will be controlled
- Which operational policies to enforce

Implementations led primarily by technology teams without strong business direction inevitably struggle to translate banking requirements into effective system configurations. The most successful programs maintain business ownership with technology enablement throughout the implementation lifecycle.

This business leadership must extend beyond initial requirements definition to include:

- Configuration validation to ensure banking operations, transactional and accounting rules are properly implemented
- Operational readiness assessment before migration events
- Process confirmation and data validation during testing phases
- Post-implementation refinement to address operational gaps.

The Post-Implementation Reality

Even the most meticulously planned implementations require a stabilisation period as the organisation adapts to new operational realities. Many banking leaders underestimate this phase, expecting a clean transition to normal operations immediately after go-live.

The stabilisation period—typically lasting 3-6 months for major implementations—requires:

- Enhanced operational monitoring to quickly identify and analyse issues
- Dedicated support teams with accelerated issue resolution processes
- Regular governance forums to prioritise fixes and enhancements
- Temporary process workarounds while system issues are being addressed
- Focused knowledge transfer from implementation teams to operational and technical support staff.

This period is the critical bridge between project implementation and sustainable operations. Organisations that plan for this transition phase as an integral part of implementation achieve faster stabilisation and realise benefits sooner than those that treat it as an afterthought.

Key Success Factors

Despite the formidable challenges discussed throughout this section, financial institutions can successfully navigate core banking modernisation by following key patterns observed across successful implementations.

1 Strategic Clarity Before Technical Execution	2 Preparation Depth Determines Implementation Success	3 Leadership Commitment Through Implementation Challenges	4 Data Readiness Assessment	5 Realistic Planning Practices	6 Timeline Realism
7 Resource Planning	8 Leadership Commitment Through Implementation Challenges	9 Consistent Strategic Focus	10 Cross-Functional Alignment	11 Resource Protection	12 The Foundation for Modern Banking

Strategic Clarity Before Technical Execution

Successful modernisation begins with a precise definition of what the organisation aims to achieve beyond system replacement. This strategic clarity serves as the foundation for all subsequent implementation decisions.

The most effective core banking programs define clear answers to fundamental questions before technical implementation begins:

- Which specific business capabilities must the new platform enable?
- How will these capabilities create competitive advantage or regulatory compliance?
- Which operational inefficiencies must be eliminated through this transformation?
- What customer experience improvements will the new platform deliver?

- How will the organisation measure success beyond technical go-live?

This strategic foundation prevents the common pitfall of allowing technical considerations to overshadow business objectives. It provides the criteria against which implementation trade-offs can be evaluated throughout the program lifecycle.

Preparation Depth Determines Implementation Success

The preparation phase—before vendors are selected and implementation begins—largely determines downstream success. Thorough preparation includes:

Business Process Definition

Successful implementations begin with comprehensive documentation and optimisation of current business processes. This seemingly basic step serves multiple critical purposes:

- Identifies and eliminates unnecessary complexity before configuring the new system.
- Provides clear requirements for system configuration.
- Reveals potential compliance and regulatory considerations.
- Highlights staff training needs and potential resistance points

Organisations that rush through this foundational step invariably face more complex implementations, with requirements emerging incrementally throughout the project rather than being defined upfront.

Data Readiness Assessment

As discussed previously, data migration complexity is frequently underestimated. Successful implementations begin with thorough assessment of:

- Data quality across source systems
- Completeness of customer and account information
- Consistency of product parameters
- Accuracy of transaction histories
- Compliance with data protection requirements

This assessment informs realistic data migration planning and identifies remediation requirements that can be addressed before technical implementation begins.

Realistic Planning Practices

Core banking implementations consistently encounter similar planning challenges. The most successful organisations adopt planning approaches that address these predictable patterns:

Timeline Realism

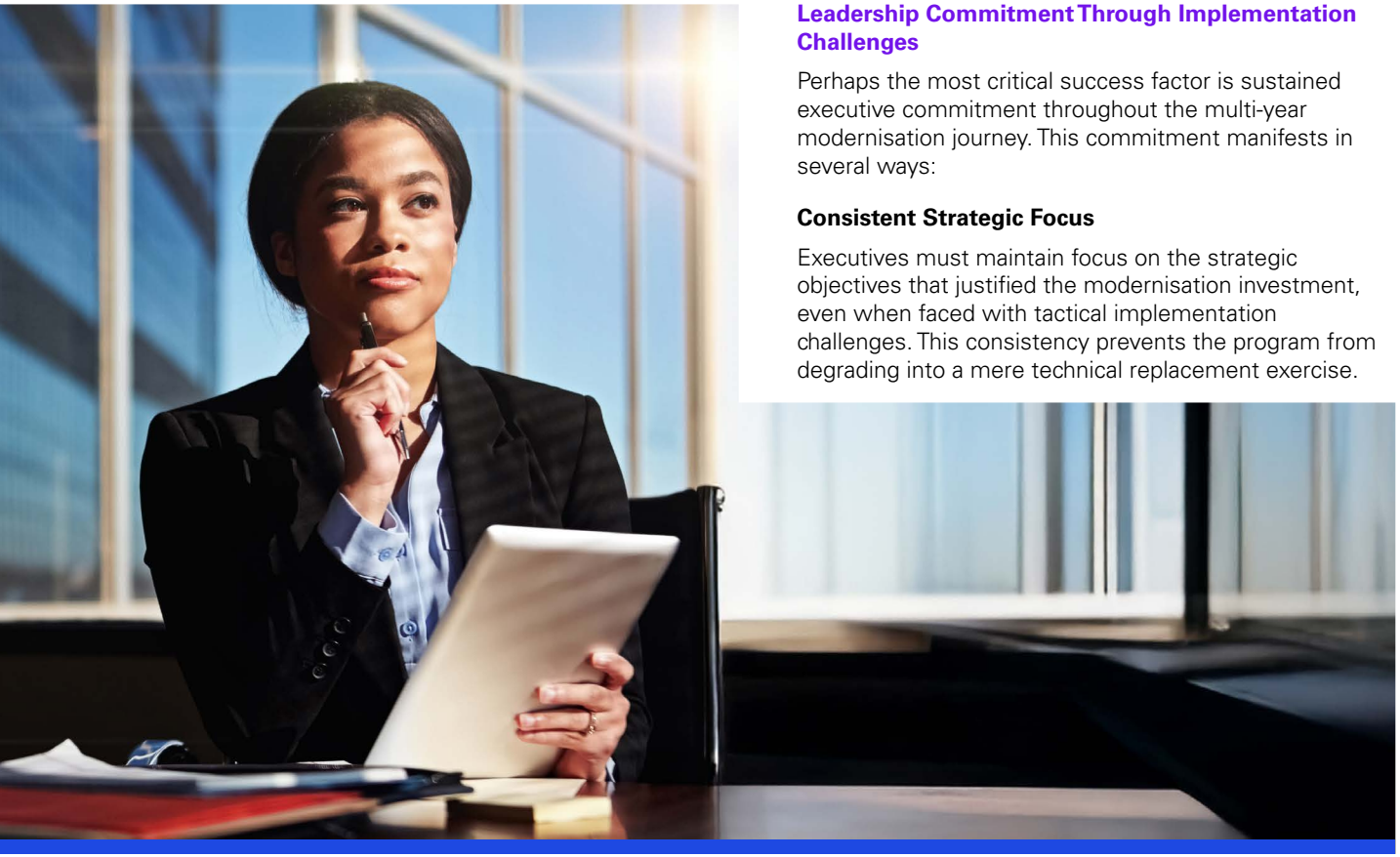
Successful organisations develop implementation timelines that reflect documented industry experiences rather than vendor optimism. This typically means:

- Allocating 2-3 times more effort to data preparation than initially estimated
- Building robust testing phases that cannot be compressed when earlier phases slip.
- Incorporating contingency for integration complexities, particularly with legacy systems
- Planning for extended post-implementation support periods.

Resource Planning

Core modernisation demands more than technical resources. Effective resource planning includes:

- Business subject matter experts dedicated to the program (not merely available "as needed")
- Operational staff for testing and validation activities
- Change management specialists for training and transition support.
- Data quality experts for migration preparation
- Additional operational capacity to manage temporary productivity impacts.



Leadership Commitment Through Implementation Challenges

Perhaps the most critical success factor is sustained executive commitment throughout the multi-year modernisation journey. This commitment manifests in several ways:

Consistent Strategic Focus

Executives must maintain focus on the strategic objectives that justified the modernisation investment, even when faced with tactical implementation challenges. This consistency prevents the program from degrading into a mere technical replacement exercise.

Cross-Functional Alignment

Core modernisation inevitably creates tensions between functional areas with competing priorities. Executive leadership must actively manage these tensions, making difficult trade-off decisions and enforcing cross-functional cooperation throughout the implementation lifecycle.

Resource Protection

When organisational pressures emerge—whether from competitive threats, regulatory demands, or economic changes—modernisation programs often face resource challenges. Sustained executive commitment includes protecting critical program resources even during challenging periods.

The Foundation for Modern Banking

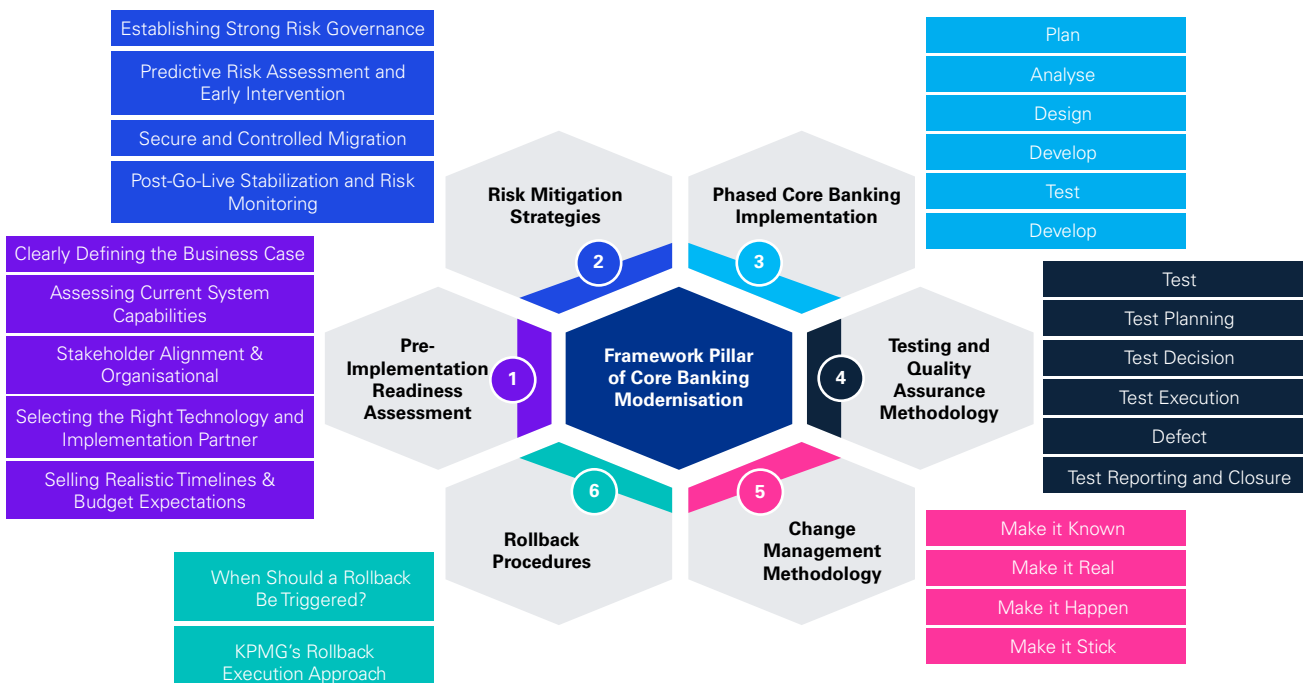
The journey of core banking modernisation, while challenging, delivers the essential foundation for modern banking operations. Financial institutions that approach this journey with strategic clarity, thorough preparation, realistic planning, and sustained leadership commitment position themselves to achieve both successful implementation and lasting competitive advantage. By recognising implementation realities and adopting proven practices, banks can navigate the complexity of core modernisation while minimising risk and maximising business value.

Section 4

A Framework for Successful Core Banking Modernisation

Having explored the practical challenges and lessons learned from core modernisation initiatives, it becomes clear that successful transformation requires more than just addressing technical hurdles – it demands a comprehensive approach that encompasses strategy, governance, people, and processes. The intrinsic implementation complexities typically cause financial institutions to baulk at the decision to modernise. The risks of failure—ranging from operational downtime to regulatory non-compliance, ballooning costs, and even reputational damage—can be catastrophic. But doing nothing is not an option either.

At KPMG, we've worked with leading financial institutions across the African sub-region to navigate this journey. We understand that a successful core banking modernisation isn't just about upgrading technology—it's a strategic initiative that requires a clear roadmap, risk management strategies, and a deep focus on execution. Through our experience advising banks on major transformation programs, we have developed a strategic framework that focuses on six critical pillars:



Pre-Implementation Readiness Assessment: Laying the Right Foundation

Before committing millions of dollars and months—if not years—of effort into core banking modernisation, the first critical step is understanding transformation readiness.

1. Clearly Defining the Business Case

Why are we modernising?

- Is it to reduce operational costs?
- Is it to comply with regulatory requirements?
- Is it to enhance customer experience and offer digital-first services?
- Is it to enable future scalability as the bank expands into new markets?

2. Assessing Current System Capabilities

Before mapping out the future, banks must take a hard look at their present reality—what is working, what is broken, and what gaps exist. This assessment helps determine whether they need a complete overhaul or a phased upgrade approach.

Does our infrastructure have the capacity to support modernisation?

- **Infrastructure capacity** – Can the current setup handle modern workloads?
- **Core banking functionalities** – Are critical banking operations running efficiently?
- **Integration readiness** – Does our technology landscape reflect the tenets of modern integration practices? Do we have clearly documented and versioned APIs that can facilitate seamless integration with the core, peripheral systems and other partners?
- **Compliance and security posture** – Are there existing risks that must be addressed before modernisation?

3. Stakeholder Alignment & Organisational Readiness

A core banking transformation touches every function of the bank—IT, operations, finance, compliance, product teams, and even front-line staff. If key stakeholders are not aligned from the start, resistance, miscommunication, and project bottlenecks are inevitable. This is why KPMG strongly advocates for early stakeholder engagement, ensuring that:

- **C-suite** executives understand the financial and operational impact.
- **IT teams** are involved in technology selection and transition planning.
- **Risk & compliance teams** are looped in to ensure regulatory considerations are accounted for.
- **End-users** (branch staff, call centre agents, etc.) are prepared for process changes.

4. Selecting the Right Technology and Implementation Partner

The choice of technology vendors, consultants, and system integrators can make or break the project. Key considerations when selecting partners include:

- **Industry experience:** Have they successfully implemented core banking systems for similar institutions?
- **Local knowledge:** Do they understand localised regulatory and operational landscape?
- **Support and maintenance:** Can they provide post-implementation assistance to ensure stability?
- **Technology alignment with target architecture principles:** Is the technology built using modern architectural principles that foster agility, scalability, resilience and security?

5. Setting Realistic Timelines & Budget Expectations

A common mistake banks make is underestimating the complexity and costs of a core banking upgrade. Too often, ambitious deadlines are set, only for banks to later realise that migrating years of financial transaction data, and training staff on a new system

takes longer than expected. A well-planned pre-implementation phase should include:

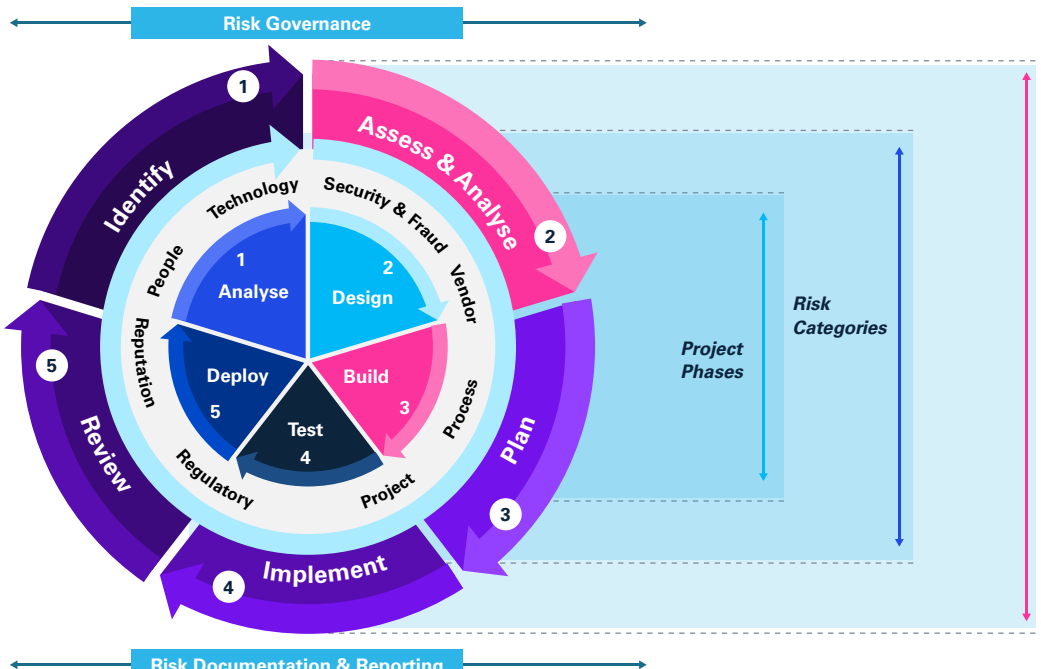
- Detailed project timelines with realistic milestones.
- Comprehensive cost analysis (including hidden costs like training, cybersecurity, and downtime risks).
- Risk buffers to accommodate unforeseen challenges.

Risk Mitigation Strategies in Core Banking Modernisation: Addressing the Unforeseen Before It Disrupts the Inevitable

A core banking transformation affects nearly every operational and regulatory facet of a bank. The primary risks include:

1. **Technology and Cyber Risks:** Security vulnerabilities, system downtime, and integration failures.
2. **Regulatory and Compliance Risks:** Non-compliance with data protection laws, anti-money laundering (AML) regulations, and central bank directives.
3. **Data Migration and Integrity Risks:** Loss of transactional history, reconciliation failures, and inaccuracies in financial reporting.
4. **Operational and Change Management Risks:** Resistance to change, training gaps, and service disruptions affecting customer experience.

KPMG's Risk-Driven Transformation Framework



To manage these risks effectively, KPMG employs a structured risk assessment model. This model is centered on evaluating both the probability and impact of potential risks, as well as categorising and prioritising them based on severity—high, medium, or low.

Our risk assessment framework consists of the following key components:

1. **Establishing Strong Risk Governance: KPMG's risk governance model includes:**
   - **Risk Steering Committee:** A cross-functional team providing strategic oversight and ensuring alignment with regulatory and business objectives.
   - **Dedicated Risk Workstreams:** Embedded risk teams addressing specific domains such as cybersecurity, data integrity, and operational continuity.
   - **Continuous Risk Audits:** Periodic reviews and real-time monitoring of risk exposure at each stage of implementation.
2. **Predictive Risk Assessment and Early Intervention:**

   Rather than responding to risks after they materialise, KPMG focuses on early identification and intervention through:
   - **Industry Benchmarking:** Comparing risk exposure against global best practices in banking modernisation.
   - **Scenario-Based Risk Simulations:** Stress-testing migration plans against potential failure scenarios, such as system downtimes and data inconsistencies.
   - **Regulatory Compliance Readiness:** Ensuring that all controls align with regulatory expectations before deployment.
3. **Secure and Controlled Migration Execution:**

   Core banking modernisation efforts often fail due to poorly executed migration strategies. KPMG's approach is designed to de-risk the transition through:
   - **Comprehensive Data Validation:** Ensuring data consistency, integrity, and accuracy through multiple layers of validation.
   - **Phased Deployment Strategy:** Implementing controlled rollouts, starting with pilot programs before full-scale adoption.
   - **Operational Stress Testing:** Simulating real-world banking transactions in pre-go-live environments to ensure system readiness.
   - **Regulatory Pre-Approval:** Aligning migration strategies with regulatory requirements to minimise compliance risks.
4. **Post-Go-Live Stabilistion and Risk Monitoring:**

   KPMG ensures long-term operational stability after go-live through:
   - **Live Risk Dashboards:** Continuous monitoring of system performance, security incidents, and operational anomalies.
   - **Daily Reconciliation Audits:** Identifying and addressing discrepancies in transactions, balances, and financial reporting.
   - **Hypercare Support Model:** A structured escalation framework to resolve post-migration issues efficiently.
   - **Customer Experience Analytics:** Monitoring adoption rates and identifying areas for performance optimisation.

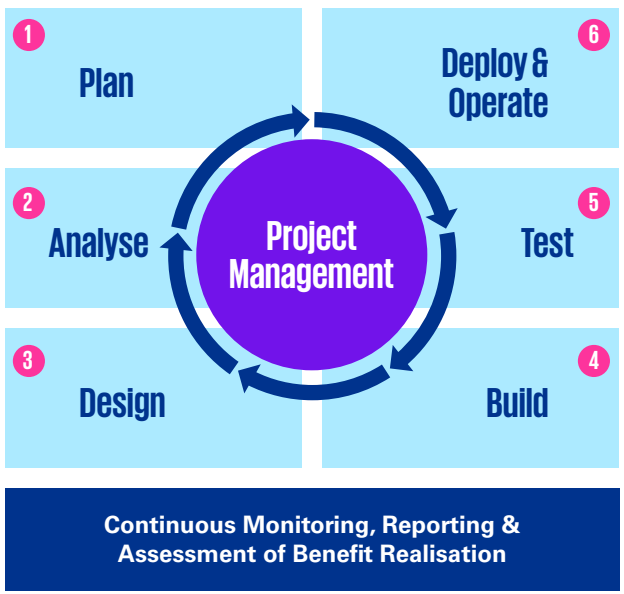
KPMG's Approach to Phased Core Banking Implementation: Minimising Risk, Maximising Success

At KPMG, we understand that a core banking transformation is a strategic evolution that impacts an institution's operations, regulatory compliance, and customer experience. Our approach to implementation is anchored in structured execution, risk mitigation, and business alignment, ensuring that every phase delivers measurable value.

We advocate for a phased implementation strategy, built around the **Software Development Lifecycle**, to **reduce risk**, **enhance operational continuity**, and **optimise stakeholder engagement.**

Our Phased Approach: Precision at Every Stage

Project Phases

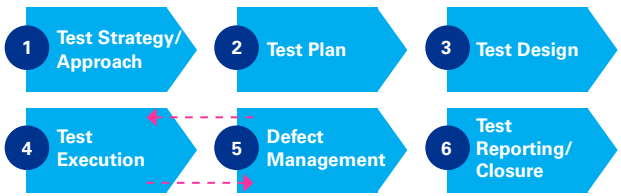


1. **Plan -** Establishing a Clear Path to Success: We begin by defining the strategic objectives and governance framework, ensuring that business and technology stakeholders are aligned. We develop a robust business case, identify potential risks, and design a phased execution roadmap that balances speed with control.
2. **Analyse -** Translating Business Needs into Technical Execution: Our team conducts a comprehensive assessment of the bank's operational landscape, gathering business, functional, and technical requirements. We work closely with key stakeholders to ensure that infrastructure, product workflows, and data structures are mapped effectively, reducing the likelihood of rework in later phases.
3. **Design -** Architecting a Scalable and Secure Solution: Our design approach focuses on scalability, security, and compliance. We define data migration strategies, integration models, and system configurations, ensuring that the new platform aligns with both regulatory requirements and business objectives. This phase also includes a structured change management strategy to prepare the organisation for transformation.
4. **Develop -** Controlled Execution with Built-in Quality Assurance: Development is executed in an iterative manner, ensuring that each component undergoes rigorous validation before moving forward. KPMG provides oversight to ensure that system builds, custom workflows, and integrations meet functional and regulatory expectations. Our approach emphasises early defect detection, reducing deployment risks.
5. **Test -** Ensuring a Seamless Transition to Live Operations: Testing is at the heart of KPMG's quality assurance framework. We oversee User Acceptance Testing, performance validation, security audits, and income assurance checks. Our structured testing approach ensures that the system is financially accurate, operationally efficient, and technologically secure before go-live.
6. **Deploy -** A Structured Cutover for Business Continuity: KPMG facilitates a structured deployment approach, managing cutover planning, user training, and post-go-live stabilisation. Our focus on early-life support and benefit realisation assessment ensures that the transformation delivers tangible business outcomes. We also implement a post-deployment monitoring framework to drive continuous improvement.

KPMG's Testing and Quality Assurance Methodology

KPMG employs a structured, systematic approach to system testing, ensuring high-quality software delivery and minimising defects before deployment. The

methodology follows a six-stage framework designed to integrate testing seamlessly into the software development lifecycle.



1. **Test Strategy/Approach:** The foundation of effective testing lies in defining a clear strategy that aligns with business objectives, technology requirements, and risk mitigation measures. KPMG establishes a tailored testing approach based on system complexity, regulatory compliance, and integration needs.
2. **Test Planning:** A well-defined test plan ensures structured execution. This phase involves outlining test scope, resources, timelines, and success criteria. Planning also includes risk assessment and contingency strategies to address potential challenges.
3. **Test Design:** KPMG designs test cases that comprehensively evaluate system functionalities, covering functional, integration, API/service, and data quality testing. This phase also defines automation strategies and performance benchmarks.
4. **Test Execution:** Testing activities are carried out according to the defined test cases. Any identified defects are escalated promptly for resolution, ensuring minimal disruption to the development cycle.
5. **Defect Management:** A structured defect management process is essential to track, classify, and resolve issues efficiently. KPMG ensures defects are logged, analysed, and retested, enhancing system stability before deployment.
6. **Test Reporting and Closure:** The final phase involves independent validation of test results, measuring outcomes against predefined success metrics. Detailed reports highlight defect trends, test coverage, and overall system readiness.

Comprehensive Testing Scope

Our QA methodology covers multiple testing dimensions, including:

- **Functional Testing** – Ensuring core functionalities operate as expected.
- **Integration Testing** – Validating seamless communication between systems.
- **API/Service Testing** – Assessing interface interactions and data exchanges.
- **Data Quality Testing** – Ensuring data accuracy and consistency.
- **Performance & Load Testing** – Evaluating system responsiveness under peak conditions.
- **Regression Testing** – Verifying new changes do not impact existing functionalities.
- **User Acceptance Testing** – Ensuring end-user validation and readiness.
- **Regulatory Compliance Testing** – Ensuring compliance with CBN guidelines, AML/KYC regulations, and data protection laws is non-negotiable.

Post Go-Live Continuous Testing

1. **Automated Regression Testing:** Ensures system updates don't break existing functionality.
2. **API Testing:** Verifying seamless integration with third-party platforms (e.g., payment gateways, regulatory reporting systems).
3. **Live Monitoring & Post-Go-Live Testing:** Tracking system performance in real-time and addressing anomalies before they escalate.

KPMG's Change Management Approach for Core Banking Modernisation

Core banking modernisation is a complex transformation that requires a structured approach to managing change effectively. KPMG's methodology ensures that banks not

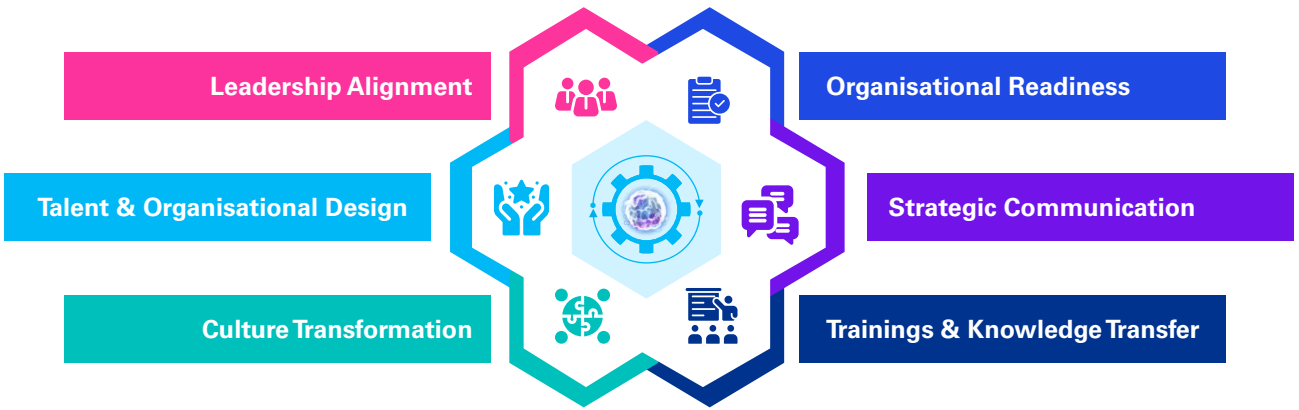
only implement new systems successfully but also drive sustainable adoption, minimise disruption, and optimise business outcomes.

To achieve this, we follow a four-phase approach to change management:

1. **Make it Known** – Establishing clarity by defining and communicating the change vision and business case to all stakeholders.
2. **Make it Real** – Translating the vision into actionable steps for employees, helping them understand its impact on their roles and the organisation.
3. **Make it Happen** – Implementing structured activities to transition the organisation toward the desired future state.
4. **Make it Stick** – Ensuring long-term adoption through reinforcement strategies to sustain the benefits of change.

Key Enablers for a Successful Core Banking Transformation

To navigate the complexities of core banking modernisation, KPMG integrates critical enablers into its change management approach:



1. **Leadership Alignment** – Securing executive sponsorship and ensuring stakeholder buy-in to drive transformation forward.
2. **Organisational Readiness** – Assessing change impact, building awareness, and fostering a culture of adoption.
3. **Talent & Organisational Design** – Preparing the workforce for new roles and capabilities in a modern banking environment.
4. **Cultural Transformation** – Defining and reinforcing cultural shifts required for modernisation success.
5. **Strategic Communication** – Delivering timely, clear, and targeted messaging to align stakeholders with transformation milestones.
6. **Trainings & Knowledge Transfer** – Providing structured learning programs to enable staff to operate efficiently within the modernised core banking framework.

Rollback Procedures: The Last Line of Defence

While failure is not anticipated, the complexity of system transitions demands preparedness for any eventuality. Rather than treating rollback as an emergency response, we incorporate it into our broader migration framework, ensuring informed, decisive action when needed.

When Should a Rollback Be Triggered?

A rollback is considered only in critical situations where recovery within the new system is not feasible. These include:

1. **Severe Data Integrity Issues** – When transaction inconsistencies affect financial records.
2. **Extended System Downtime** – If the platform remains non-functional beyond recovery timelines.
3. **Security Vulnerabilities** – When risks such as fraud exposure or data breaches emerge.
4. **Regulatory Non-Compliance** – If issues raised by auditors or regulators prevent continued operations.

KPMG's Rollback Execution Approach

1. **Governance & Decision-Making: The Go/No-Go Framework**

   Rollback decisions require both technical and strategic considerations. KPMG's roll back governance framework provides:

   - A structured "Go/No-Go" decision-making process, balancing operational feasibility with business risk.
   - A governance committee of executive leadership, IT, risk, compliance, and regulatory teams.
   - Clearly defined decision thresholds, ensuring that triggers are objective and well-assessed.

2. **Data Recovery & System Reinstatement**

   Once rollback is activated, precision in execution is critical. We ensure structured, validated restoration through:

   - Restoration of the most recent validated backup of the legacy system.
   - Data integrity checks before resuming operations.
   - Reconciliation tests to confirm transaction accuracy and prevent discrepancies.

   Each step is designed to restore stability with minimal disruption.

3. **Post-Rollback Review & Future Readiness**

   Every rollback presents an opportunity for refinement. Our post-event analysis ensures continuous improvement by:

   - Conducting a root cause analysis to determine failure points.
   - Identifying corrective actions before retrying migration.
   - Enhancing contingency plans to strengthen resilience in future transitions.

The key to success lies in approaching modernisation as a **comprehensive transformation journey**, maintaining clear focus on value realisation while **building the capabilities and culture** needed for **long-term success in digital banking**.

Section 5

The Future of Banking Starts Now: A Call to Action

The financial services landscape across **West Africa** is undergoing a decisive shift. As digital banking becomes the default and customer expectations accelerate toward real-time, personalised experiences, traditional institutions must confront a stark reality: legacy systems can no longer support the agility, innovation, and resilience that the future demands. Meanwhile, emerging digital challengers, free from the technical debt of outdated infrastructure, are redefining what modern banking looks like with intuitive platforms, frictionless service delivery, and rapid product evolution.

For incumbent banks, the question is no longer whether to modernise their core platforms, but how to do so effectively. Core banking modernisation is not a systems upgrade—it is an enterprise-wide transformation that touches technology, operations, risk, regulation, and customer experience. Poorly executed transformations have exposed banks to prolonged service outages, regulatory non-compliance, and data integrity failures—often with reputational and financial consequences that last far beyond go-live. On the other hand, banks that embrace a well-planned, execution-led approach are unlocking new revenue streams, enhancing operational performance, and building truly future-ready ecosystems.

At KPMG, we have worked alongside leading banks across the sub-region to architect and de-risk these complex journeys. Our experience shows that successful modernisation requires more than selecting the right platform—it demands strategic alignment, robust governance, incremental implementation, and resilience testing at scale. Today's banking systems must be modular, cloud-enabled, API-first, and able to integrate natively with ecosystem partners, regulatory APIs, and emerging third-party ecosystems—all while meeting evolving compliance requirements like those from the central banks and other regional regulators.

The industry's next wave of leaders will be defined by the choices they make now. The banks that act boldly, with clear intent and the right advisory support, will not only keep pace—they will define the pace.

Endnotes

1. **KPMG.** ***2024 West Africa Banking Industry Customer Experience Survey***
   Available at https://assets.kpmg.com/content/dam/kpmg/ng/pdf/2024/12/2024%20KPMG%20West%20Africa%20Banking%20Industry%20CX%20Survey.pdf
2. **Central Bank of Nigeria.** ***e-Payment Statistics, 2024.***
   Available at https://www.cbn.gov.ng/PaymentsSystem/ePaymentStatistics.html
3. **Bank of Ghana.** ***Payment Systems Oversight Annual Report 2023.***
   Available at https://www.bog.gov.gh/wp-content/uploads/2024/09/Payment-Systems-Oversight-Annual-Report-2023.pdf
4. **Banco Bilbao Vizcaya Argentaria (BBVA).** ***BBVA is prepared for open banking, 2017.***
   Available at https://www.bbva.com/en/bbva-prepared-open-banking/
5. **Confluent.** ***Capital One delivers risk insights in real time with stream processing.***
   Available at: https://www.confluent.io/resources/online-talk/capital-one-delivers-risk-insights-in-real-time-with-stream-processing/
6. **TechCabal.** ***Nigeria's biggest banks are doubling down on core banking software, 2024.***
   Available at: https://techcabal.com/2024/10/23/nigerias-biggest-banks-on-core-banking-software/
7. **Exadel.** ***How Data Mesh Technology Can Help Banks Unlock Data Potential, 2024.***
   Available at: https://exadel.com/news/data-mesh-in-banking/

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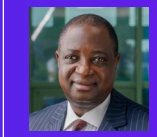

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