Core banking transformation – seizing the digital opportunity

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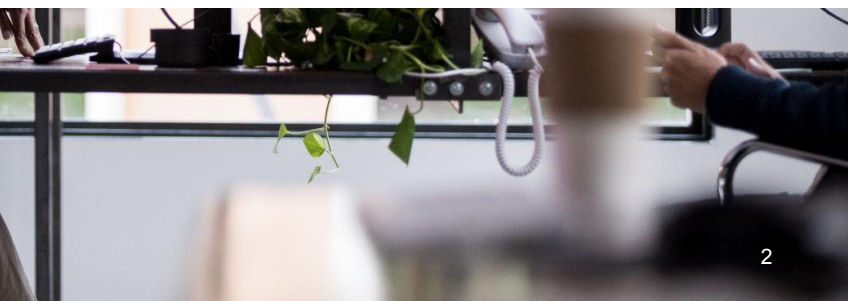
The banking sector continues to be at the heart of an ongoing transformation and the emergence of disruptive trends in the industry is relentless. The advances in technology coupled with innovations fueled by fintechs and non-incumbents, demands banks to swiftly prepare for a 'new normal'. As expectations rise and customers look to break free from the shadows of traditional banking, it is evident that banks must transform their traditional business models and core systems.

In this paper we look at the non-negotiable characteristics that will have an impact on the banks of the future; the technologies at play for a future-proof core banking system; and how PwC Middle East can help in this transformational journey.

The state of play: Customers of tomorrow with radically different behaviours and expectations

The banking industry is witnessing a seismic shift. From what was seen as a fairly straightforward business, it has catapulted into an evolved, transformative one with significant visceral changes in the very core of the organisation. The exponential technology maturity, emergence of innovative business models (such as open economy, a diverse ecosystem, embedded finance and platformization), advent of new fintech players, increased regulatory complexities, and ever-evolving customer behaviours are forcing a 'new-normal', placing immense pressure on the traditional universal banking we have known for years. This intricate and evolving web of trends has forced banks to rethink their model to generate sustainable business value and define a strategic anchor that centres around a novel understanding of the financial markets and clients, organisational capabilities, and emerging exponential technologies.

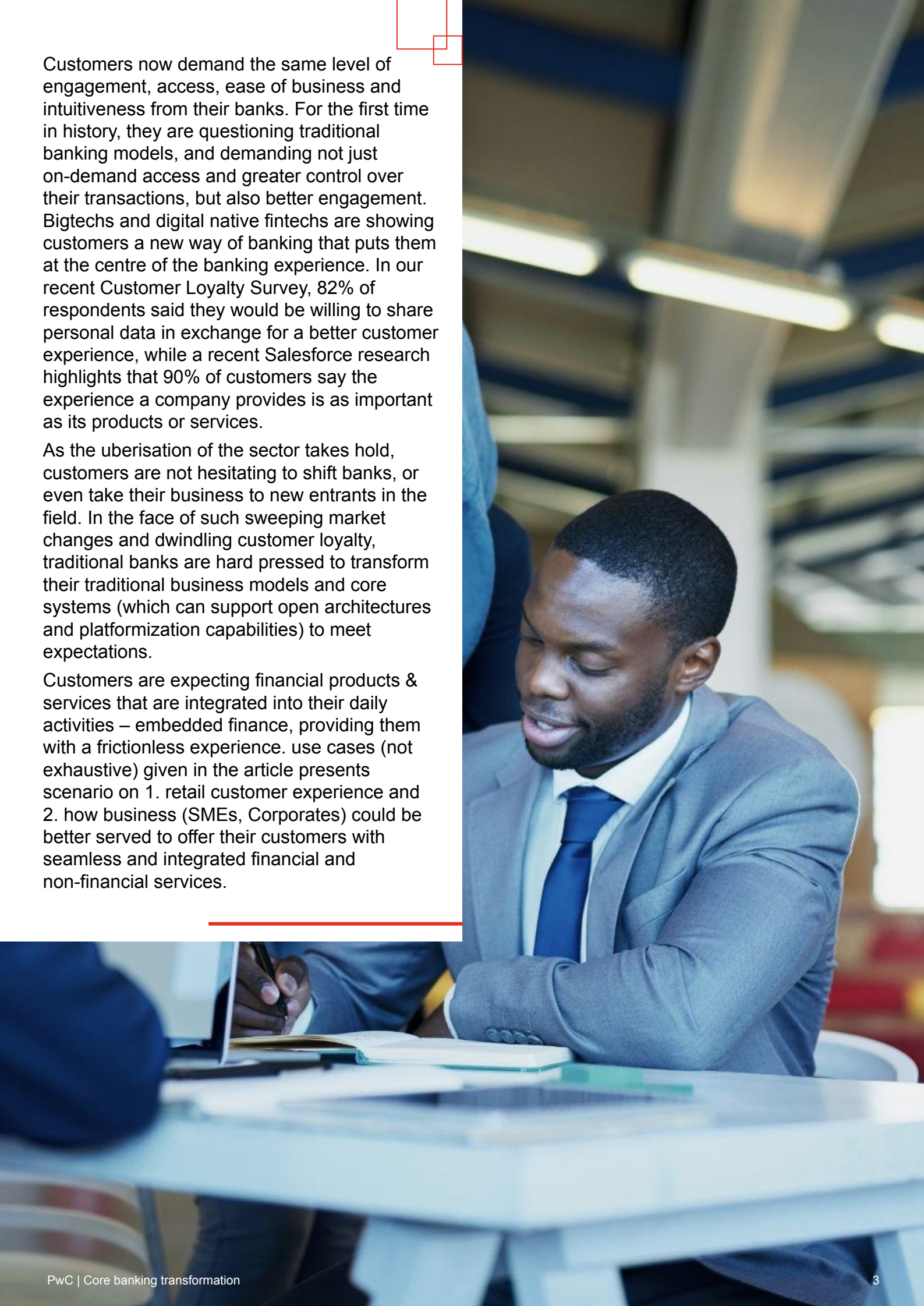
For decades, the banking business model needed to improve on customer engagement and differentiation. Customers had no choice but to trust banking institutions with their finances and banks enjoyed a high degree of loyalty. However, financial crises over the last few years, increasingly stringent regulations, digital disruption and the emergence of fintechs and technology giants have profoundly impacted the sector. Add to it the fact that most other industries have adopted new technologies like cloud mobility, internet of things and artificial intelligence to offer hyper-personalised, anywhere, and anytime services. Retailers for example, offer omnichannel experiences and highly customised offers and services.



Customers now demand the same level of engagement, access, ease of business and intuitiveness from their banks. For the first time in history, they are questioning traditional banking models, and demanding not just on-demand access and greater control over their transactions, but also better engagement. Bigtechs and digital native fintechs are showing customers a new way of banking that puts them at the centre of the banking experience. In our recent Customer Loyalty Survey, 82% of respondents said they would be willing to share personal data in exchange for a better customer experience, while a recent Salesforce research highlights that 90% of customers say the experience a company provides is as important as its products or services.

As the uberisation of the sector takes hold, customers are not hesitating to shift banks, or even take their business to new entrants in the field. In the face of such sweeping market changes and dwindling customer loyalty, traditional banks are hard pressed to transform their traditional business models and core systems (which can support open architectures and platformization capabilities) to meet expectations.

Customers are expecting financial products & services that are integrated into their daily activities – embedded finance, providing them with a frictionless experience. use cases (not exhaustive) given in the article presents scenario on 1. retail customer experience and 2. how business (SMEs, Corporates) could be better served to offer their customers with seamless and integrated financial and non-financial services.



Use case 1:

Abdullah works in a marketing firm in the UAE and is fond of exploring new places - he comes across a beautiful destination on his Instagram feed. Abdullah factors in his current financial status to plan his trip by simply using a voice command. This command has allowed him to request his account statement and inquire about promotions on flight tickets and hotel bookings, as he is a loyalty-program member of these airlines. A bank statement pops up with an interactive view of his monthly expenses, along with current offers on flights and hotels in the city on the bank's digital credit card. At this point, Abdullah decides to go ahead and book his flight and decide on the other things later. In response to his interest, a virtual assistant window pops up to confirm Abdullah's details, book the flight and make its payment. He then confirms his details and intent to pay through facial expression. The bank's app asks for biometric authentication to make the payment from his digital card, which Abdullah can approve through his fingerprint impression on the mobile.

Use case 2:

Foodie is a large food delivery company wanting to offer its five million customers a mobile account and payments card with features tailored to the segment. BankOn is a digital bank and fintech focused on facilitating seamless and affordable banking directly and through B2B clients. It is a BaaS provider to some of the most recognizable brands in the world and helps them embed financial tools and services into their brands and ecosystems.

In 10 weeks from the first conversation, BankOn enabled Foodie to launch a prepaid debit card managed through the Foodie app. Fully remote sign-up using facial recognition against national ID and the physical card delivered in 45 minutes upon successful registration. A tailored rewards program with 1-2.5% cash back and price discounts of up to 50% at select food merchants. Ahmed is a customer of Foodie, he uses Foodie debit card for his regular spends, and leverages the food merchant discounts through debit card and Foodie app.

Forcing banks to reconfigure their 'core': Transitioning from being mere conduits for the flow of money to becoming life-style platforms

The digital bank of tomorrow has evolved from its traditional brick-and-mortar perception. The future league of banks orchestrates customer experience across a multitude of digital touchpoints while maintaining contextualised engagements and managing the distribution of insights-backed products and services.

There is a gamut of non-negotiable characteristics that form the basis of the bank of the future.

1 Ambient multi-experience to raise the digital bar of experience

With customers becoming hyper-connected and interacting through conversational and wearable devices, banking will be invisible in the future. Voice and facial expressions stand to replace physical cards, mobile payments, and loan applications. Banks need an approach to enable numerous permutations on the modalities (e.g., touch, voice, gesture), applications, and devices their customers use to interact with multiple touchpoints along the journey. Multi-experience digital platforms will power this hyperconnectivity and invisibility. According to a recent Gartner study, at least one-third of enterprises will deploy a multi-experience development platform (MXDP) to support mobile, web, conversational, and augmented reality development1. The MXDP approach is designed to create scalable internal efficiencies and decrease the cost of digital experience development at any touchpoint.

Similarly, developer productivity rises throughout the touchpoints with high-yield tooling and common development languages. This platform allows continuous improvement of the digital journey and shorter release cycles to enhance customer experiences with emerging technology. To stay connected and engaged with customers, banks must adopt a multi-experience platform for consistent and frictionless digital experiences across multiple-channels and omni-touchpoints.

2 Omni-of-things demands a future-proof open platform

Customers prefer to interact with the bank through a unified channel and expect a consistent user interface and functionality experience. The clients also interact with the bank on third-party applications. However, customers demand more than just multi-experience. The integrated customer journey inside and outside the bank can create hyper-personalised experiences across the digital ecosystem. An online travel booking, for instance, could potentially initialise a personal travel insurance origination journey. A well-established open infrastructure will help deliver integrated, personalised journeys like these. Banks need an open platform that orchestrates seamless interactivity between the digital infrastructure and third-party applications to complement product portfolios, improve operational efficiency, and increase revenue streams. The unified exchange of data and resources through open API architecture optimises financial services across the customer journey to create fully digital relationships with hyper-personalisation. This platform is a critical future-proofing strategy for banks to incrementally transform their existing systems to maintain relevance, strengthen customer acquisition and retention, and sustain profitability.

3 The joint forces of contextualised and augmented insights

Customers today demand insights based on unique behavioural spending and saving patterns tailored by category to help them make informed decisions. Banks are among the most data-intensive industries globally, and their data insights hold high importance. Banks are increasing AI investments to build algorithms and data models that continuously assess transactional data to optimise their customers' financial decision-making. However, the contextualised insights must be further integrated and embedded into the digital customer journeys, helping banks add new revenue streams. For instance, involving steps would include real-time dashboards showing month-on-month splits on spend categories and product and service recommendations. The bank of tomorrow must be embedded in every part of the customers' life to aid proactive decisions on improving daily tasks' efficacy while enhancing life quality. The influence of AI in the future of financial services is all set to increase, given its potential to boost performance and revenue. Apart from customer-focused contextualised insights, banks could explore more ways to leverage AI by developing a system that aids decision-making. This move in augmented data insights helps bank employees seamlessly manage the platform and create a flexible test environment to develop new apps efficiently. Augmented insights use datasets in any form and build evidence-based, probabilistic systems that understand unique processes and operational preferences – for instance, credit rating and customer attrition rates. These insights are highly reasoned and explainable, with facts and evidence for each recommendation to establish trust between the customer and the bank. Banks of tomorrow must build a digital platform that utilises contextualised insights and augmented intelligence that align well with the customers' financial and lifestyle priorities and automates banks' operations.

4 Scalable digital platform as a service

With the advent of embedded finance and the open banking phenomenon, there are two important platform models in which banks engage with their customers ‘banking-as-a-platform’ and ‘banking-as-a-service’. In the first platform model, the bank owns the customer relationships and integrates services from fintech and other providers to complement the offering. In the second platform model, the customer relationship is owned by the non-banking platform, which integrates services from the bank. Critical for the banks to pivot into a scalable platform supporting the open ecosystem. Banks require a future-proof, container-based, cloud-native architecture that adopts the microservices architecture style. This modern and future-proof architecture design is fundamental for a scalable platform-based structure that facilitates plug-and-play digital operations to enrich customer experiences.

Furthermore, the new digital platform architecture could help banks avoid substantial re-engineering efforts when migrating from an on-premise to an on-demand SaaS-based delivery model when required, helping the banks’ executives focus more on product strategy and customer value propositions. As a critical step to succeed amid the digital ecosystem, the platform-as-a-service also allows banks to unlock data and application services to partners, such as fintechs, third-party developers, and e-commerce players through open APIs. The effectiveness of this approach depends on the bank’s ability to build seamless computing capabilities compatible with cloud architecture. Eventually, a platform approach impacts the delivery model and allows banks to shift from being financial solutions creators to assemblers of customer-driven products and services. This capability helps banks accelerate their entry into new markets, change propositions, and quickly ramp up according to the needs of digitally native consumers. Digital platform-as-a-service also allows the bank to test, fail fast, and move to other profitable services and customer-relevant products.

At the heart of this transformational change is the new-age core banking system

Core banking system transformation programs come in to provide best-in-class customer experience and faster time to market with new products and services. Banks must launch next-generation core banking solutions to support innovation and continuous deployment.

API-first architecture and design

Decoupling of frontend and backend functionalities with option to extend the features to different products, business lines and geographies such as development of simple feature like repayment that can be added for various product lines.

Cloud-native architecture

A cloud-native architecture that uses standard containers and Kubernetes cluster to make it deployable on any public, private or hybrid cloud, as well as any virtual machine environment.

Composable Architecture

A microservices architecture that houses independent modules and services for individual products on the same core platform. This allows continuous update of services and creation of new products quickly and easily to meet emerging opportunities or management to make it deployable on any public, private or hybrid cloud, as well as any virtual machine environment.

Multi-everything paradigm

Multi-platform that is compatible and deployable on different operating systems; ability to support multi-currency as system base currency and multi-time zones for various geographical sites of banks & FIs; Multi-tenancy feature offering the solution to multiple banks, international branches, and / or segregation of financial book setup by business lines; ability to offer products / features with multi-language option

Speed to market

Modern banking platform's object-oriented design and flexibility to inherit existing product features leads to rapid products to market, gaining the first-mover advantage.

Analytics model

Preconfigured analytics model offering reporting dashboards, business intelligence and key performance indicators (KPIs), integrated with real-time data access and predictive analysis. Ability to extend analytics features through APIs and toolkits.

Cost of change

Partnership ecosystem, availability of resources in the region, microservices architecture, open API model and cloud native architecture, leading to lowest possible Total Cost of Ownership (TCO) and ongoing maintenance and upgrade costs.

Compliance

Parameter-driven compliance (compliance with Shariah or other local/ international requirements) enables banks to adapt it to their specific compliance requirements.

Impact of CBS halo effect on your business strategies

The bank obtains all functionalities via the core banking system to the greatest extent possible. This means that the bank also has the front-end systems and the API layer covered by the core banking system. Because of this, the bank relies largely on its core banking system provider, and it should therefore seek a close partnership for further developments with this provider. The integration of additional services in the ecosystem along the customer journey, such as insurance, should be mapped in cooperation with the system manufacturer.

Financial institutions seek core banking modernisation as an effective means to respond to internal business imperatives such as business bank growth and efficiency. Consider the following factors:

Customer

Improve customer experience, expand customer reach, fuel deposit growth.

Business

Standardise and streamline end to-end business processes; improve and ensure compliance with new emerging regulations; expedite time-to-market for new products.

Technology

Gain the benefits of technology advancements, while also reducing the costs associated with the maintenance of legacy systems, improve core applications through service-oriented architecture (SOA) and enhanced interoperability; replace siloed and product-based legacy systems with an open banking framework that provides customer centricity.

Operations

Improve operational efficiency via standardising business processes, implementing straight-through processing capabilities, and eliminating manual operations.The modernisation also helps to facilitate the outsourcing of non-core operations.

What should banks do to prepare for tomorrow (banking technology experts' assessment of CBS)

Our research reveals that more than 50% of banks in the region have failed with their core banking expeditions (upgrade or replace) because they lack a thorough understanding of the current core banking system challenges and their current and future business needs.

PwC has helped many banks and NBFIs conduct core banking system maturity assessment and validate their technology alignment, capability to meet business strategy and ambitions.We strongly recommend such a discovery exercise before embarking on your next steps related to the core banking system.

It is not just about the selection process or criteria of core banking system vendors, but rather understanding the business and technology needs of the organisation, identifying current and foreseeing future impediments arising due to outdated technology, lack of support and continuous enhancements (regional and global). This assessment and discovery of the bank's current core bank systems lead to informed decision-making about whether to upgrade existing core or replace it, and in both cases, provides the bank with a basis to negotiate the scope with vendors.

Preparing the roadmap for the CBS strategy: How PwC has helped banks review their core banking system

Turbocharge your Core Banking Transformation journey with plug and play approach utilizing best in-class assets and accelerators

1 Current Core Analysis

Discovery & Core Upgrade vs Replacement
- Detailed approach for assessment of current state, discovery of core, business processes and peripheral systems
- Library of CBS capabilities

Business Case & Investment Envelope
- Step-by-step business case preparation plan to define transformation vision, objectives, dentify business opportunity and calculate business benefits and RoI for the program

Core Selection
- Pre-defined frameworks & industry reviews for selection of core banking vendors with which aid in capabilities evaluation against business & technical requirements

2 Core – Strategy & Planning

Vendor Onboarding
- Framework specifying the key dimensions to align with the vendor on scope, i.e., commercials, requirements & timelines

Program Planning
- Approach to program delivery excellence and governance

Data Migration Strategy
- Proven data migration steps from strategy to execution

3 Core Implementation

Implementation Strategy
- Framework and tools to assess gaps, conduct prioritization and devise roadmap for implementation

User Journeys, Design, Build & Integrate
- Artefacts illustrating customer journeys and typical pain points flowing into solution design
- Reference target technical architecture
- Business architecture alignment to target op model

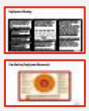
Data Migration Mocks
- High level plan with data migration mocks integrated with other milestones
- Approach for conducting DM mocks & testing of data

Testing Lifecycle
- Detailed list of test scenarios with templates allowing testers to record results & highlight defects

4 Rollout

Cutover Planning
- Cutover Plan with all business, technical and data migration activities critical to manage pre cutover and post cutover requirements

Deployment
- Deployment Plan which enlists possible deployment methods, delivery approach and the delivery teams
- Framework with scoring- based approach and methodology to assess the risk and accordingly devise a mitigation plan before going-live



PMO and QA

Core banking transformation is hard. But don’t sweat it. We have been in the trenches before, and we know what the transformation journey looks like.

From our experience, essentially there are typically six major blind spots that result in core banking program failures. These span across the following list:

- **Lack of well-defined core strategy planning**
- **Inadequate budget and investment envelope**
- **Lack of business engagement and gaps in functional requirements and conceptual design**
- **Incompetent implementation partner**
- **Data migration and testing related gaps**
- **Lack of in-depth cut-over planning**

At PwC, we have built a robust framework to support our clients across this transformation journey with the following key phases.

Phase 1 - Current core analysis

The need to modernise (upgrade/replace) your existing Core starts with the realisation to transform the organisation to address the future desires and requirements (in line with the transformation highlighted above). Key activities involve a detailed discovery exercise to baseline the requirements and pave the future transformation roadmap. A robust business casing needs to be followed by a core transformation strategy.

Phase 2 - Core strategy and planning

The next stage of the transformation journey includes key steps around defining the robust core strategy, vendor onboarding, program planning and comprehensive data migration strategy. All stages are critical to achieve the readiness to get started with the implementation journey.

Phase 3 - Core implementation

This phase involves charting the implementation journey with key steps involving the user journeys, design (functional and technical), build and integration/interfacing, data migration cycles, followed by a detailed testing lifecycle.

Phase 4 - Roll out strategy and execution

This phase is the final moment of truth and marks the culmination of all the planning and execution phases defined earlier. Key activities include command centre-driven cutover planning, deployment and rehearsals and launch. Typically this requires a thorough understanding and execution plan related to change management, business continuity, training, and communication.

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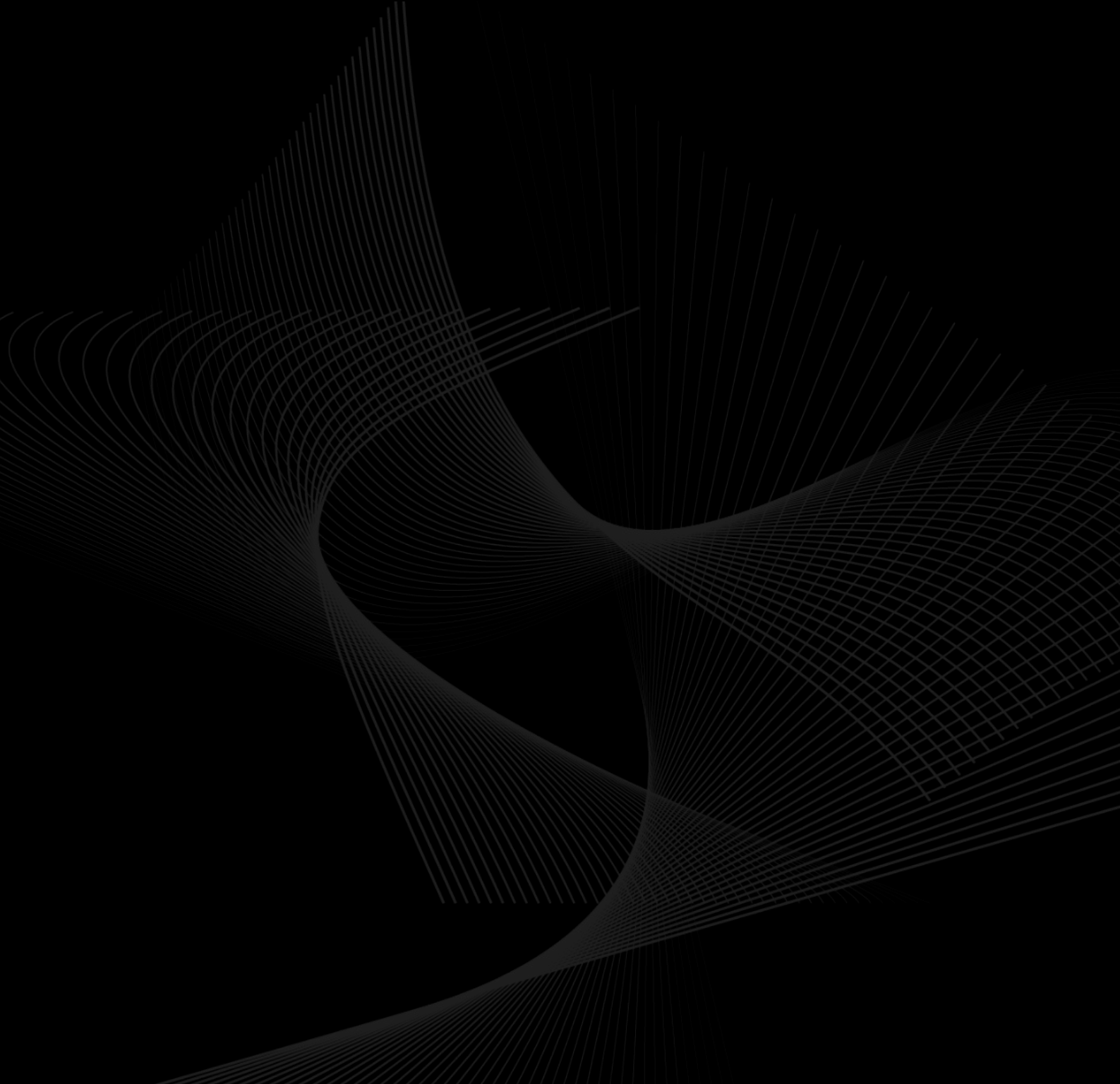

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