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IBS intelligence
Global FinTech Perspectives

MOVING PAST THE LEGACY CORE

Core Banking Modernisation for African banks

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01 INTRODUCTION

The days of legacy core are numbered

Legacy systems have long been marred by issues such as process inefficiencies, high time to market, rigidity, and limited functionality to integrate with new-age systems. **While technological advancements have opened new opportunities for banking technology to enable rich functionalities for banks and their customers, legacy systems aren't well placed to realise all the benefits.**

The COVID-19 pandemic acted as an eye-opener to highlight the gaps in the resilience of existing business models. It was a wake-up call for incumbent banks with legacy systems and inadequate digital readiness.

The banking industry in Africa is at an interesting juncture. Typically, the IT infrastructure of African banks has lagged behind their global counterparts. The legacy infrastructure has struggled to keep pace with the technological advancements and market requirements.

Banks are aware that their legacy systems may become a constraint going ahead. A digital core is needed to keep up with all the shifts. African banks are now keenly interested in embarking on core modernisation projects to better support their current needs and enhance future-readiness.

Modern core banking platforms

Modern core banking platforms unlock the potential of technology advancements such as advanced analytics, Artificial Intelligence (AI), machine learning (ML), among others, which banks can leverage to exceed customer expectations and enhance business metrics.

Flexibility, scalability, and agility are key attributes of modern cores. These platforms enable banks to deploy solutions rapidly, automate processes, and be more customer centric. Modern platforms with API (application programming interface) capability can facilitate multi-geographical deployments and seamless integration with other ecosystem players.

Modern core platforms can enable banks to better respond to emerging market dynamics – and must be under consideration for a bank still utilising legacy core banking systems.

The impact of COVID-19 on the African economy was less severe comparatively. The pandemic eroded 3.6% of global GDP[1] in 2020, compared to 2.1% for Africa. According to the African Development Bank Group[2], the continent's economy is expected to grow by 3.4% in 2021, driven by the recovery of economic activity, stimulus packages to boost consumption, and increased productivity due to digitalisation.

Digitalisation will have a multifold impact on the economy and the banking industry. With the increasing adoption of digital technologies, banks would be better positioned to further the regional agenda of inclusion and SME enablement. Digital technologies will also enable banks to make their processes more efficient, which is especially important, considering the cost-to-asset ratio of African banks is over twice the global average.

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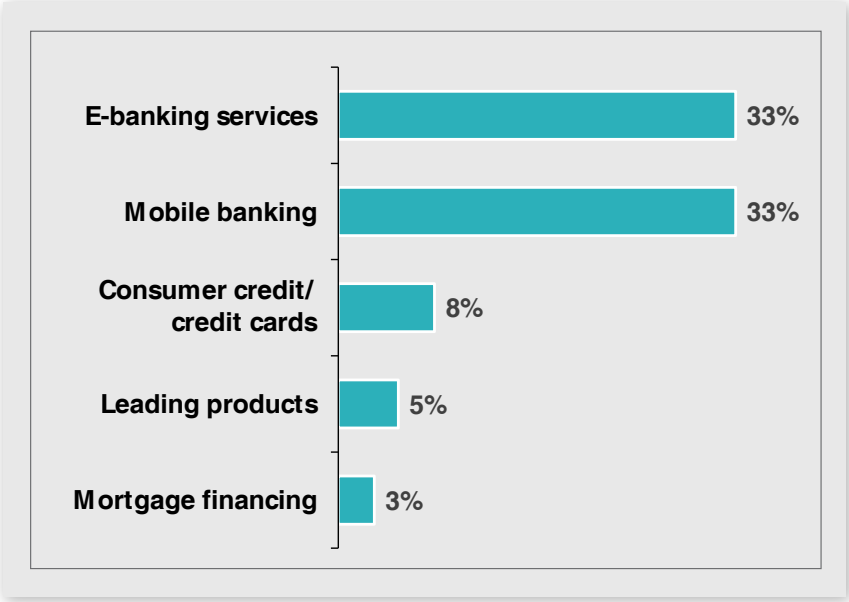
Long-term priorities of banks and focus – the disconnect

Low adoption of traditional banking in the region meant that the population relied heavily on 'feature phone'-based offerings. The success of Vodafone's M-Pesa established the importance of accessibility. Launched in 2007, M-Pesa is the largest payments platform in Africa, with 50 million users and a monthly transaction volume of over four billion[3].

Enhancing the accessibility of banking services is also a focus area for African banks. A study from European Investment Bank in 2019 identified mobile banking and e-banking services as long-term focus areas for 2 of 3 banking groups in Africa. Moreover, increasing internet and smartphone penetration in Africa opens new avenues for banks to expand their reach and connect with customers seamlessly. However, most banks are still continuing with their ageing systems and have done little to leverage such opportunities.

Figure 1. Product and Service Long-Term Strategic Focus of African Banks



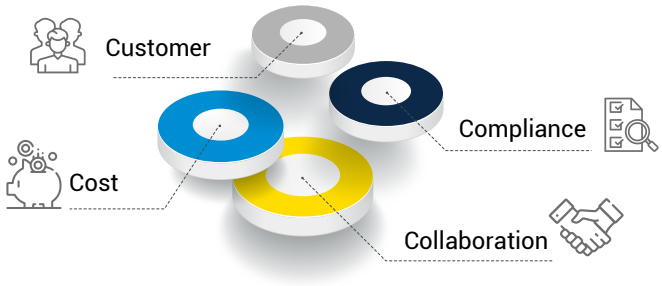
Source: IBSi Vendor SalesVision™

IBS intelligence's SalesView data suggests that banks are comparatively hesitant in modernising their existing banking infrastructure. Core banking deals in Africa have decreased at an annual rate of 7% in the last five years in contrast to an annual increase of 3% globally in the same period.

Regulators keep financial institutions under intense scrutiny. For multinational banks, compliance pressure is significantly higher owing to the complexities of aligning with multiple regulators. Accounting for the reality that banking industry regulators in Africa have been late movers for recognising the need and developing frameworks to support the growth of digital banking models, the banking industry in Africa will witness a period of significant regulatory overhauls.

03 CORE BANKING MODERNISATION | NEW CORE, TAILORED FOR AFRICA

The anchors for core banking modernization



Irrespective of geographical region, key factors that continue to urge banks to consider modernising their cores include a combination of market requirements. Legacy cores may struggle to keep up with external and internal factors such as evolving customer expectations, emerging compliance requirements, growing cost pressure, and the increasing need for collaborative innovations

Customer

Customers prefer anytime, anywhere access to banking services. Given the kind of experiences customers have with BigTechs and FinTechs, a seamless and channel-agnostic banking contextual experience is gaining importance. Availability of self-service options is also another factor that extends convenience to the customers.

In an African context, however, there are slight differences. **Across all regions, African customers have the least access to the physical branch networks. While they can still access banking via mobile and web channels, the experience remains fragmented. There is a strong demand from customers to make banking services more streamlined and accessible.**

Smartphone penetration is increasing in the region, driven by strong adoption in some of the biggest African economies. According to a GSMA report[6], approximately half of the mobile connections in Africa used smartphones in 2020, which is set to increase to nearly two-thirds by 2025. These digital-savvy users prioritise convenience, accessibility, and intuitive interactions – quite like their global counterparts. African banks must be prudent of this emerging digital-savvy segment.

In an African context, however, there are slight differences. Across all regions, African customers have the least[8] access to the physical branch networks.

African banks need platforms that can help them offer a seamless omnichannel experience to their customers, providing frictionless on-boarding, proactive offerings and a set of comprehensive digital banking capabilities for retail, SME and corporate. Systems that allow quick product configuration, enable banks to offer persona-based journeys, and make the customer experience intuitive will be in demand simply because they increase customer satisfaction, and a satisfied customer is the best business strategy of all.

Multiple African banks are taking initiatives to better align with customer demands. For instance, Wema Bank, a commercial bank in Nigeria, launched a fully digital bank, ALAT[4], to meet the diverse banking needs of its customers, irrespective of their location. In 2020, Mauritius Commercial Bank launched an SME banking platform[5] with customisable user journeys across all product lines.

Compliance

Banking is a heavily regulated industry – and the recent emergence of FinTechs have driven regulators to adapt the existing framework for these new digital players. Other contributors to the dynamic regulatory landscape include the consolidation of fragmented regulations and opening up the industry.

With the emergence of digital banking services, regulators are updating compliance norms in the following key areas: know your customer (KYC), transparency, privacy, fraud, anti-money laundering (AML). Aligning with these frequently changing mandates is a challenge for legacy core banking systems that lack flexibility.

Digital banking is gaining adoption in Africa, and banking regulators in the region are undertaking necessary steps for better future readiness. For instance, the Central Bank of Nigeria introduced the Banks and Other Financial Institutions Act 2020 to regulate FinTech providers and, in general, any institution that conducts financial business electronically, digitally, or virtually. Concerned by predatory digital lending practices, the Central Bank of Kenya initiated a bill to regulate the conduct of digital financial services providers in Kenya. South Africa is consolidating the legal framework for banking and is taking steps to enable digitalisation of the industry, while Ethiopia is gearing to allow foreign entry in the sector. Mauritius has a Data Protection Act in force that controls how businesses and the government can use personal information. Such a dynamic landscape necessitates modern core banking platforms to be robust enough to align with existing compliance mandates and flexible enough to swiftly accommodate imminent changes.

African banks need a platform that can enable better risk management and compliance. Flexible platforms that allow user configuration of reports, have automated and intelligent fraud/AML checks, and have centralised data management capabilities for a single source of truth are much in need.

4 Cs | Cost

Cost management continues to be a high priority area for the banking industry. Pressures continue to mount on banks due to low margins and increasing competition from new digital players. Particularly incumbent banks realise the importance of operations enhancement and infrastructure upgrades to keep the banking backbone efficient.

African banking industry lacks operational efficiency compared to its global counterparts. African banks' return on equity is languishing, and the cost-to-asset ratio is significantly poor than the global average. Banking systems are disparate, siloed, and lacks structured integration. Data distribution is decentralised, making it difficult for banks to fully automate processes. Manual and semi-automated processes add to the cost and induce additional chances of error.

African banks need fully integrated applications that eliminate system fragmentation, system overlaps, and process duplication. Systems with straight-through processing (STP) and robotic process automation (RPA) that can reduce manual processing and enhance operational efficiencies are in demand.

4 Cs | Collaboration

Collaboration and co-innovation are driving advancements in the banking industry globally. FinTechs, which were earlier seen as a competition, have emerged since as capable partners. Players such as banks, FinTechs, BigTechs, non-banking financial institutions are collaborating with a wide variety of companies to create an open banking connected ecosystem. The open banking ecosystems offer a greater value to the banks by enabling them to meet emerging customer expectations more swiftly and efficiently. Legacy systems lack agility and flexibility to align with other players seamlessly, without which banks may find it challenging to maintain their value proposition to customers.

A large proportion of African banks lack the capability to integrate seamlessly with other players. The unavailability of an orchestration layer, API-enabled core, or composable microservices-based architecture complicates the integration process. As a result, such banks in Africa are rather far from being ready for open banking adoption. The Central Bank of Nigeria has already published[7] a regulatory framework for open banking in the country. **More regulators are considering a framework to enable open banking adoption in African economies. In such a scenario, banks need an infrastructure that enhances their future-readiness and allows them to be more competitive.**

Legacy systems lack agility and flexibility to align with other players seamlessly, without which banks may find it challenging to maintain their value proposition to customers.

African banks need modern platforms with a future-proof architecture. They are considering a modular microservices-based architecture and an API-enabled core for faster integrations and updates. First movers in some markets are beginning to collaborate with third parties, startups, and other ecosystem players to bring in more innovations. For instance, South Africa-based Nedbank collaborated with Mastercard and FinTech Ukheshe Technologies to launch Money Message, a platform for small and micro businesses to receive in-chat payments via WhatsApp.

Various requirements of African banks captured for core banking modernisation may evolve with time or according to the market forces. It will, however, be of critical importance for African banks to move to a robust, modern platform that can tackle the present challenges and offers agility and adaptability for future-readiness.

> African banks are on the journey of core banking infrastructure modernisation. One of the most critical aspects is realising economies of scale between different banking functions and achieving economies of speed for delivering services to customers quickly, and at scale.
>
> **Core Banking Expert, a leading commercial bank in Mauritius**

04 MODERN CORE | ADVANTAGES **AND KEY CONSIDERATIONS**

A modern core can close the gaps

Modern core banking systems can help banks enhance customer centricity, operational efficiency, scalability, and readiness for ecosystem integration. The benefits of core modernisation will help banks directly cover business priorities such as revenue growth, cost optimisation, and risk reduction.

Customer Centricity

Modern cores enable banks to offer a contextual customer experience by enabling seamless and intuitive omnichannel journeys. Modern cores with a 360-degree view of customers can help banks provide seamless experiences and personalised offerings. At the same time, integrated data sets will also help banks offer greater personalisation and further empower the decision engine. Modern core platforms can enable banks to offer an addictive user experience that can improve customer loyalty and fuel growth.

> One often overlooked benefit of core banking modernisation is the improvement of businesses processes and functions.

Operational Efficiency

Modern cores leverage technological advancements to enhance processes and minimise manual interventions. Advanced data management capabilities and STP-enabled process flows can enable banks to execute processes in real-time. DevOps and automated testing features of modern cores can accelerate product development and testing and reduce time to market significantly.

It can significantly streamline operations and enable efficiencies of scale by eliminating fragmentations caused by disparate legacy systems. Modern platforms can eliminate the drag due to obsolete platforms, and the resultant increase in efficiency and productivity will lead to greater organisational agility and lower costs.

Scalability and flexibility

Modern core banking platforms have composable microservices-based architecture and are cloud-native and cloud-agnostic. Shifting from a monolithic architecture to microservices-based loosely coupled architecture can help banks upgrade components via a continuous integration/deployment approach without impacting other modules, enabling easier integrations and upgrades. Cloud-agnostic platforms also offer greater flexibility for banks to choose their preferred cloud strategy – public, private, or hybrid.

Ecosystem Integration

Modern platforms have a modular architecture and are API-enabled, facilitating ease of integration and communication via APIs. Ease of integration will allow banks to connect with banking and non-banking ecosystems and co-innovate seamlessly with third parties. Banks can acquire new competencies, enhance their offerings, or launch new FinTech models swiftly by leveraging the expertise of other specialists in the ecosystem.

Roadblocks make banks apprehensive of the modernisation journey

Modern core banking platforms have the capability to address current capability concerns of African banks that are still using legacy platforms. However, banks are not yet ready to embark on a modernisation journey due to cost, capability, and change management concerns.

Cost: Cost consideration is essential, especially from the capital expenditure point of view. Banks may also be constrained by other concurrent projects that may be reducing the availability of resources.

Capability: Banks in Africa are also concerned by the availability of talent to embark on a modernisation journey. The financial services industry finds it difficult to attract and retain technology talent as it competes with startups and BigTechs for the same talent.

Change Management: Core banking system modernisation may have an impact on the operations and channels. However, change management would be one of the key concerns for banks where the new system changes the system and user interfaces significantly.

The roadblocks to core banking modernisation are unique to each bank. Any modernisation initiative must start from a vision, with set business and strategic goals and create a compelling business case for modernisation. Ascertaining the value from both quantitative and qualitative perspectives is essential because core banking modernisation may not immediately offer noticeable quantitative benefits. Once all the stakeholders are comfortably onboard, banks have to take critical decisions on 'how to modernise.'

Core banking modernization - Key Considerations

Approach to core modernisation → Identifying partners to engage with

Approach to core modernisation

The core banking system is the backbone of banks' operations. Banks prefer to minimise operational risks while considering their modernisation approach since any downtime in services will harm the business. Banks must carefully evaluate the risks and value offered by core modernisation for each approach and choose what fits the best according to business priorities. They can explore the following approaches, in decreasing order of risk exposure:

Core replacement: Core replacement approach involves migrating to a modern core banking platform and discarding the legacy system. Modern core banking systems are typically tightly coupled with Fintech ecosystem solutions (i.e. digital channels, reporting etc.), offering seamless integrations with the surround systems and enhanced business capabilities. Banks consider this approach when the legacy system is unable to meet business requirements, or the overall application landscape requires consolidation, for example, due to redundancies or expiring licenses. This approach requires higher efforts and a longer implementation timeline (~24-36 months). The complexity is a function of the number of entities and systems involved, thus exposing banks to higher execution risks in the transformation journey.

Additional core: This approach involves banks implementing a new core in parallel to the existing core. The new core is a modern platform with the latest capabilities and serves unique business purposes (i.e. digital-only bank, or deposit-only platform). New customers are onboarded to the modern core. Once the new platform meets business expectations, banks can migrate from the legacy core to the new one. The approach is generally adopted to manage interim states, as adopting a second core banking system entails dual integration across systems. This approach is the fastest (~12-18 months) and responds to high transformation urgency.

Progressive modernisation: Progressive modernisation approach reduces the dependency on the legacy core. It involves building modern microservices-based modular systems that replace the functionalities of the existing

core gradually and incrementally. Only select services undergo modernisation at a time. This piecemeal approach is preferred the most by banks globally due to low risk exposure and would also work well for most banks in Africa.

Core refactoring: Refactoring approach is another risk averse approach to core banking modernisation. Code refactoring involves restructuring the existing code (for example, switching from COBOL to JAVA) without changing external behaviour to improve non-functional and technical performance. Banks can consider this approach when they have a vision of modernisation but are not willing to switch to a new core banking system, for example, if the current platform capabilities still satisfy business needs. Core refactoring enables improved readability, easier maintenance, greater extensibility, and potential cloud-readiness with more complex data needs without enhancing business capabilities.

Platform upgrade: Upgrade the existing core banking system to a new platform version. The upgrade is done when a platform is nearing its end of support cycle, and it adds only a limited set of enhancements. The upgrade retains all the functionalities while ensuring that the platform is still supported. However, banks may miss out on the latest capabilities offered by best of breed solutions.

Continue with the existing system: Risk-averse banks, with no urgency to modernise their core, may choose to continue with their existing system when the system manages to meet all operational requirements. However, banks with an 'if it isn't broken, don't fix' mindset also risk losing out on the growth agenda.

Identifying partners to engage with

Once the approach to core banking modernisation is fixed, banks will have the enormous task of driving the plan to action. Banks will need the support of technology suppliers and integrators during the modernisation journey.

Banks will need a software vendor that can offer excellent coverage for functional and technical requirements. Agility in Implementation and swift support must also be critical factors while looking for implementation partners. Players with extensive global and local experience would do well to support the banks and navigate unforeseen circumstances in the modernisation journey.

05

CONCLUSION

The African banking industry landscape is at an exciting juncture. It is gradually becoming more open to FinTech advancements, digitalisation and open banking. African banks will look to benefit from digital advancements by offering more convenient and accessible services to retail and corporate customers. However, legacy platforms may pose a constraint in achieving new business objectives successfully. As modern core banking platforms can close such capability gaps and improve the future readiness of banks, core banking modernisation will be a key area of transformation going forward.

Banks willing to modernise their core must fully understand their platforms' existing technical and functional limitations as a first step and then determine the transformation strategy that meets business objectives. In this context, choosing a trusted implementation partner with local and global expertise becomes paramount to help banks drive the modernisation journey seamlessly and effectively.

ABOUT INTELLECT
DIGITAL CORE

Intellect Digital Core (IDC) Platform is a leading Core Banking suite, designed around the powerful Digital 360 approach. IDC presents the best of both worlds ie Customer Experience (Digital Outside) & Operational Efficiency (Digital Inside). Built on a cloud native and API first, event driven microservices based architecture, IDC , empowers banks to move from fragmented digital activities to a re-imagined modernization strategy to drive their digital transformation, all at a pay as you grow model.

Ranked #1 in the world in the Retail Banking, Wholesale Banking – Transaction Banking and InsurTech categories in the annual IBSI Sales League Table 2021, the fully integrated digital platform caters to Retail, Corporate and SME banking segments. IDC helps 275+ banks from 110 countries embark on their digital transformation journey.

Know more: https://www.igcb.com/digital-core.html

> We were at a point where we wanted to upgrade our core banking system. After a critical assessment of all leading platforms in Africa, we found that the new IDC platform has good potential. We embarked on our core modernisation journey with Intellect, Intellect is also best suited for us because they have an absolutely fantastic middleware platform, Olive Fabric, that is going to give us space to innovate further.
>
> **Al-Amin Sadruddin Merchant,**
> Group Chief Technology Officer and Digital Transformation
> Exim Bank (Tanzania) Limited

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Intellect Design Arena Ltd. has the world's largest cloud-native, API-led microservices-based multi-product FinTech platform for global leaders in Banking, Insurance and Capital Markets. It offers a full spectrum of banking and insurance technology products through its four lines of businesses – Global Consumer Banking, Global Transaction Banking (iGTB), Risk, Treasury and Markets, and Insurance. With over 25 years of deep domain expertise, Intellect is the brand that progressive financial institutions rely on for their digital transformation initiatives.

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