

# Cloud technology as a critical enabler for digital banking

There is no doubt that cloud-based solutions have become a dominant force in supporting businesses worldwide and a major pillar in the IT landscape. The days of making the case for cloud adoption are behind us and the prospects of cloud-powered businesses are today's reality.

That said, the banking industry has been slower in its adoption of cloud-based solutions despite the industry acknowledging their advantages. This rather slow adoption can be attributed to a number of possible factors; challenging migrations and regulatory constraints stand out when discussing the topic with banking CIOs. Large on-premise legacy systems are difficult to modernize, re-platform or migrate. They are, and have been for years, the backbone of secure and reliable banking. It takes careful planning, special-purpose budgeting and a dose of courage to decommission legacy systems and replace them with modern, agile and cloud-native solutions. Regulators have also been reluctant to open the door wide to cross-border hosting, citing data sovereignty and privacy concerns. Despite slowly changing attitudes, some restrictions are still in place and in demand of enhanced transparency and security for cloud computing. This in turn puts the emphasis on local service providers and foreign market entrants.

## Opportunities and challenges for banks embracing the cloud

Cloud technologies can streamline banking operations and allow banks to pivot to address new market realities. Their benefits go beyond the enhanced customer satisfaction, agile product development, systems scalability, cost reductions and efficient automation. Cloud-native solutions have proven to be significantly more capable to support new business alliances within the banking industry and beyond. FinTech companies continue to disrupt established markets with their innovative offerings but their need for payment clearance and transaction fulfillment requires solid banking support. FinTech alliances in the banking industry are creating new revenue streams and this did not come without challenges and demands.

With ever rising numbers of transactions and with the introduction of instant payment clearance; architectures, AML, financial crimes and credit risks are growing higher and harder to manage. Having a

shorter transaction time requires financial institutions to enhance their financial risk capability in terms of volume and speed. Cloud-based risk solutions supported by cloud computing and data management allows the risk team to react rapidly to threats and dive deeper into data analysis.

It is also crucial to consider the challenges of migrating sensitive data and functions for the banking sector. Commercial banks have moved more slowly than other sectors due to concerns for customer and institutional data, as well as transferring risk to a third party in such a heavily regulated industry. Such concerns factor into the bank's balancing of its capabilities and resources when choosing the type of cloud services they can utilize, such as an organization-specific cloud, a public cloud, or a hybrid cloud platform. This puts the emphasis on the available supply within the Kingdom via local service providers or foreign market entrants.

## Saudi banks embrace the cloud

Saudi Arabia has embraced a positive attitude toward increased digitization, in pursuit of Vision 2030. For this purpose, the Ministry of Communication and Information Technology has issued the Cloud First Policy in October 2021 mandating government owned entities to migrate to the cloud; a policy currently being regulated by the Digital Government Authority.

Similarly, SAMA issued its policy on cyber security and the use of cloud services in the financial sector. It also issued the Open Banking Policy in October 2021. Such a change in the mindset puts significant emphasis on modernizing vault-like integration protocols and brings open API concepts to the forefront. Several Saudi banks have started experimenting with open API solutions, but we are still a little far from API market offerings seen elsewhere in the world.

SAMA granted digital banking licenses to STC Bank and Saudi Digital Bank in 2021, and the PIF-backed D360 in February 2022. Further, the Governor of SAMA announced that the Kingdom will issue operating licenses to more digital banks in a clear indication of an upcoming diversified financial sector. Established banks in the Kingdom are also moving towards adopting new technology either through modernizing legacy systems or by creating modern parallel infrastructures.



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**Can cloud-based solutions expedite the transformation and the adoption of Open Banking concepts? Most certainly, yes.**

Hybrid cloud architectures are able to facilitate combining the bank's legacy datacenter with solutions hosted on public clouds. Multi-cloud architectures can enable banks to keep sensitive client data on their own legacy datacenters while deploying transactional applications and API assets on public clouds. This fully integrated approach ensures data security and controls while facilitating scalability, continuous development and real-time processing.

The banking sector is currently witnessing a number of multi-cloud platform deployments with announcements made in this regard by many leading banks. Many Saudi banks have announced that they have partnered with Red Hat Inc. to kick-start their digital transformation and cloud migration initiatives. While some initiated pilot programs to proof of concept work, others committed to migrating some of their applications to a new modern platform. Although most of these initiatives are still limited to private clouds and on-prem datacenters, they will certainly lay the foundation to a full-fledged cloud adoption. Once a digital multi-cloud platform is put in place, a bank could host applications and solutions on private and public clouds without the need to worry about architecture and integration issues. Done right, such architectural designs could scale up and across and will provide a solid foundation for the upcoming transformation.

## A changing role for banks

The healthy competition between FinTech, disruptive start-up financial institutions and conventional banks is starting to cultivate a new business model. An ecosystem that comprises banks, telecoms and service providers from transportation, hospitality, entertainment and others is emerging. This is shifting the way we perceive banks from account and credit managers to much more; Value-add services offerings in online banking apps are growing and becoming effective and convenient.

An example that is garnering global attention is yono, a digital bank created in 2017 by the State Bank of India (SBI), with the initial idea of yono being an online marketplace to attract the younger generation. The online platform includes a digital bank, a financial superstore offering investments and other financial services, and an online marketplace with lifestyle products from partners.<sup>18</sup> The application grew into one of the largest digital lenders in India and the first digital bank in the world to break even within two years.<sup>19</sup>

SBI solicited the help of technology leaders to design intelligent workflows and a robust security system to support the solution. yono workflows embed technologies such as AI, automation, blockchain, 5G, advanced analytics and cloud, which provide greater visibility and real-time insights to remediate problems across multiple business functions.

This case study is valuable for Saudi banks since it provides value-added services from within their app. It also includes and is backed by an ecosystem of partners in hospitality, sports, and entertainment. yono is able to operate as a FinTech while also being able to process payments in-house and maintain deposits; a concept that is well suited for new Saudi digital banks.



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