

CLOUD-BASED CORE BANKING IN THE PHILIPPINES

In June 2017, the Asian Development Bank (ADB) and Cantilan Bank Inc. (CBI) signed an agreement to conduct a pilot study on cloud-based core banking technology. The pilot was supported by the central bank of the Philippines, the Bangko Sentral ng Pilipinas (BSP), which placed the pilot in a regulatory sandbox while related regulation and processes were updated.

In January 2019, CBI became the first BSP-regulated bank in the Philippines to fully rely on a cloud-based Software as a Service (SaaS) system as their core banking system.

This brief focuses on success factors and lessons learned during CBI's transition to "the cloud". The shift will bring a more flexible and accurate banking system. Increased operational efficiency will reduce cost, increase convenience for customers, and ultimately boost financial inclusion.



Regulatory context and partnerships

In 2013, the BSP issued Circular 808 guiding all banks and other BSP-supervised institutions on IT risk management, opening up for cloud-based technical solutions for the financial sector.

In 2015, it adopted the National Strategy for Financial Inclusion to ensure that the financial system reaches also the underserved or marginalized sectors of the population through the "use of technology and other innovations to reach the financially excluded".

In 2015, ADB approved a regional technical assistance to "scale up on financial inclusion through digital financial services systems in order to serve the un- and underserved population", under which the CBI pilot was financed.

In 2013, CBI had already refined its mission to "develop and support financial inclusion".

Oradian, founded in 2012, was selected to be the service provider for the project. Its mission "to boost financial inclusion by enabling financial institutions to grow and serve more clients" is directly aligned with ADB and BSP objectives.

CBI and financial inclusion

As of the end of 2017, CBI had 24 branches and 19 extension offices, covering 12 provinces in four regions in Eastern Mindanao and Visayas, a result of a rapid brick-and-mortar expansion in 2010–2015. More than 90% of domestic deposits and 97% of total domestic loan volumes in Philippine banks came from 27 high-access provinces. CBI is not present in any of those 27 provinces. Rather, CBI serves provinces with more limited access to financial products and services. These are also provinces that suffer considerably higher poverty than the national Philippine average.

CBI's presence is strongest in the Caraga region (Region XIII) where 17 of its 24 branches are located. This region has an average family poverty incidence of 30.8%, compared to the national average of 16.5%. Only around 24% of families in the Caraga region have bank deposits. It is estimated that 7 out of 10 adult savers keep their savings at home, and borrowers tap informal sources for funds such as family, relatives, or friends (62%) or informal lenders (10%).

Better inclusion of this large unbanked or underserved part of the Philippine population into the formal financial system will reduce vulnerability and risk for the individuals and is likely to have a positive effect on economic development.

SUCCESS FACTORS AND LESSONS LEARNED

CBI's switch in January 2019 to full reliance on a cloud-based SaaS system managed by an external provider was a success thanks to several factors. Numerous lessons were also learned.

Challenges during implementation led to a longer-than-expected phase of running the new and old system in parallel. The main reasons for the delay included an underestimation of the change process complexity. Connectivity and integration of third-party solutions together with difficulties related to accounting, audit, and reporting systems not yet updated to cloud-based solutions posed some of the main implementation hurdles. Without a solid business case, senior-management buy-in, and a dedicated team of “Instafin Champions” at CBI, the pilot would likely have taken even longer to implement, or failed.



Success factors

Time and resources invested in building the business case, together with buy-in from senior management, and formation of a dedicated team of Instafin Champions at an early stage contributed to the team's ability to drive implementation forward, notably when facing unexpected challenges to implementation. Monthly management meetings kept branch management informed.

Immediately visible benefits or “short-term wins” of the new system counteracted some of the system change fatigue, caused by increased workloads and overtime at branch level as well as for the Instafin Champions.

The coalition of partners with aligned strategic visions contributed to overcoming key challenges that caused the longer phase of running the old and new systems in parallel.



Lessons learned

Further clarifying internal management procedures and clarity on what decisions are made, where, and by whom, such as through a “communications escalations plan”, could have helped ensure a steadier implementation progress.

Building in time allowance for “the unknown” into the implementation schedule may have led to a more realistic timeline. While other projects are unlikely to encounter the same issues as CBI, similar issues are likely. A process where also areas assumed to pose no or few difficulties were scrutinized could have alerted management of possible issues at an earlier stage, e.g., automated teller machine (ATM) integration and contract adjustment, alignment of accounting procedures with the new system, or internet connectivity.

Working with a cloud-based SaaS and a service provider in a different time zone can be challenging, especially during

technically intense periods. The service provider factored in ample support during implementation, but the extent of required support was underestimated. Working with a service provider as a committed and responsive partner, rather than seeing the system change as mere procurement, was essential to timely adjustments of levels of support.

The longer-than-expected transition process—operating old and new system in parallel for more than a year—resulted in considerably higher workloads than foreseen, above all for the Instafin Champions. The CBI Instafin team would have benefited from creating a slightly larger team as well as appointing champions at selected branches or cluster of branches at an earlier stage.

Continuous training to ensure effective use of the system is necessary, but traditional forms—bringing branch level staff to headquarters—is costly and time consuming, and often needs to be scheduled on weekends. Using new communications technologies would reduce costs and save time.



Next steps

Sustained actions and support from CBI headquarters will be needed to ensure change is institutionalized at branch level and the new system is used to improve operational efficiency as well as customer cost and convenience, and, ultimately, contribute to financial inclusion. The change of the core banking system is but a first step towards a new way of doing business.

Several models for managing change exist and tend to have a number of key stages in common, including preparation, implementation, and institutionalization of change. A thorough assessment of challenges and solutions for each stage is key to successful implementation of innovation.

SUCCESS FACTORS AND LESSONS LEARNED

The CBI pilot project was a successful collaboration between the private sector, a government/regulatory body, and an international development partner, where all players made crucial contributions.

The BSP, as a long-term driver of change targeting increased financial inclusion, set the agenda by providing a “regulatory sandbox environment” for CBI and the service provider. At the same time, the BSP learned from the project and updated regulations and processes, without compromising data integrity or security. ADB as an international development partner provided knowledge and specific technical assistance and functioned as a neutral dialogue partner. Backed by these two players, CBI and the service provider were able to successfully implement an innovative but challenging project, while limiting the risk.



Success factors

The coalition of partners with aligned strategic visions and with an open and constructive dialogue from start led to a solution-focused approach when the pilot project moved into unknown territory and clear regulatory guidance was unavailable. Without the partnership, the project would have been stuck more often and longer when faced with unanticipated challenges.



Lessons learned

The “sandbox” approach placing the pilot project in a safe test-and-learn environment is useful. It could be made more effective from a clearer structure, above all on requirements to exit the sandbox. For future cases, it may be beneficial to remain in the protected environment of the regulatory sandbox for some time after a legacy system is discontinued, to lower commercial and legal risk of noncompliance with regulations still based on old-system architecture.

The knowledge and understanding of “the cloud” and its scope and what regulations apply is still limited among many, including within financial institutions. User-friendly guidelines or instructions are needed on how financial institutions can work with emerging financial technology (fintech) outsourcing models, including issues related to data integrity and security.



Next steps

For the BSP to remain a driver of change in emerging fintech solutions and ensure clear and simple processes, without compromising data security, its capacity needs to be continuously developed.

As a result of the successful pilot and active support from the BSP as the regulatory body, ADB is developing a framework for a matching grant technology fund to enable others to use fintech to further financial inclusion of underserved and unbanked groups in the Philippines.

Useful links:

ADB. Financial inclusion. <https://www.adb.org/sectors/finance/issues/financial-inclusion-microfinance>

BSP. Financial inclusion reports and publications. http://www.bsp.gov.ph/about/microfinance_reports.asp

CBI. Vision and mission <http://www.cantilanbank.com/our-vision--mission.html>

Oradian. Vision and mission <https://oradian.com/vision-mission/>

BSP. 2013. *Circular 808 Guidelines on Information Technology Risk Management for all Banks and Other BSP Supervised Institutions.* <http://www.bsp.gov.ph/downloads/regulations/attachments/2013/c808.pdf>

BSP. 2015. *National strategy for financial inclusion.* <http://www.bsp.gov.ph/downloads/publications/2015/PhilippinesNSFIBooklet.pdf>

BSP. *National baseline on financial inclusion.* <http://www.bsp.gov.ph/downloads/publications/2015/NBSFIFullReport.pdf>

Philippine Statistics Authority. 2015. *Full year poverty statistics:*

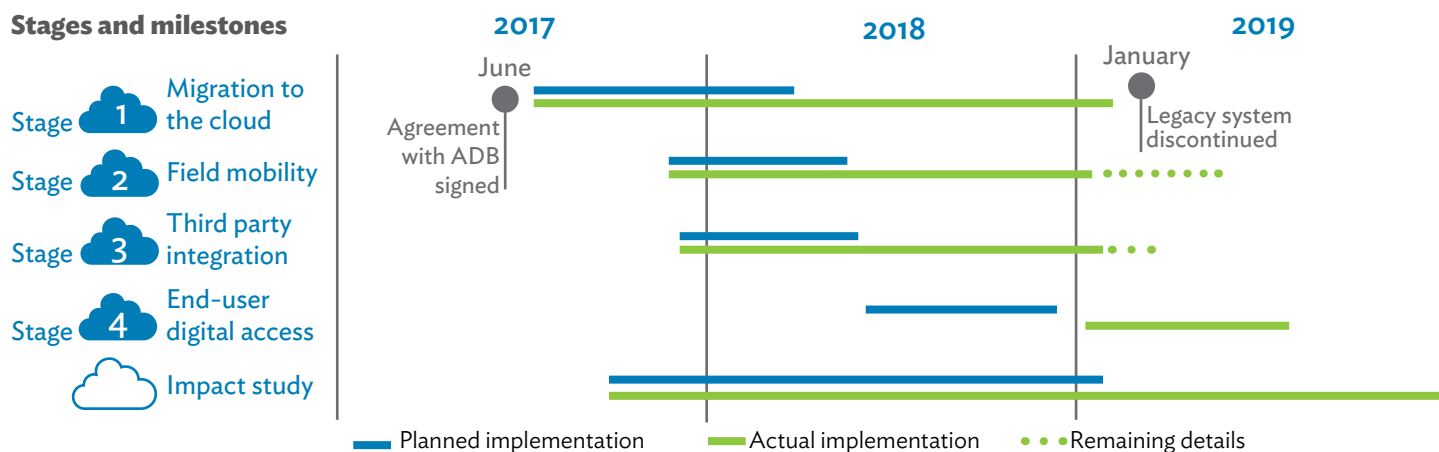
<https://psa.gov.ph/content/poverty-incidence-among-filipinos-registered-216-2015-psa>

IMPLEMENTATION TIMELINE AND PROGRESS

Shortly after signing the implementation agreement with ADB, CBI and its service provider partner, Oradian, kicked off the ambitious and unprecedented project to move from a conventional on-site core banking system to the cloud-based SaaS InstaFin. In January 2019, CBI turned off its legacy system and during the year final adjustments will be made to the system and a more efficient and flexible way of doing business will commence, cutting costs, improving client convenience, and, in turn, drawing more people into the formal financial system.

The pilot project consists of four key stages. The first stage has been completed and the remaining three will be completed during 2019. This will be followed by an assessment of the impact of the pilot. An ambitious earlier timeframe was adjusted due to unforeseen and underestimated challenges.

Stages and milestones



Stage 1 Migration to the cloud

2017 – Piloting

Between June and August 2017, the first three pilot branches were migrated to the new cloud system. This included substantial business process assessments and testing of data capture and migration procedures. Adjustments were made as needed. Training was provided to the “InstaFin Champions” at CBI headquarters and to all staff at the pilot branches.

2018 – Roll-out with old system in parallel

During 2018, full migration to the cloud of all branches across 12 provinces was completed in batches, and staff training was rolled out. Business process assessments of individual branch data continued. By September 2018, all branches had successfully migrated and were “live” on the new system, albeit still in parallel with the old system. In December 2018, the BSP conducted its annual on-site examination, a risk assessment of the new system was conducted, and final adjustments were made.

2019 – Legacy system discontinued

On 21 January 2019, CBI received the green light from the BSP to move forward: The legacy system was switched off and CBI became the first BSP-regulated bank in the Philippines to rely on a cloud-based SaaS for its core banking system.

Stage 2 Field mobility

By end 2018, account officers were using tablets to complete a broad range of transactions in the field in “off-line” mode. Data were transferred and transactions completed once officers were reconnected to the system in the office. A decision on adjustments of full data access in the field was made based on a data security risk assessment. However, as knowledge and understanding of data security features deepen, changes are likely to be made in the future to increase field-level system access. Field mobility is key for financial inclusion of unbanked and underserved populations in remote areas.

Stage 3 Third party integration

ATM integration with the new system was technically straightforward and completed in July 2018. The ATM system was, however, provided in a bundle agreement with the legacy core banking system and a contract adjustment to complete integration was necessary. Integration of remittances and mobile money is expected to be completed in 2019.

Stage 4 End-user digital access

The fourth and final stage of the pilot will be implemented in 2019, following thorough data security risk assessments.

For more information about this project:

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