Multi-Country Core Banking Implementation: Challenges and Solutions

The complexities and special requirements of multi-country applications, and a practical approach to selecting suitable vendors and SIs.

Executive Summary

With the expanding of operations across geographies, most global banks face the need to upgrade their core banking systems. Although an integrated core banking system has several benefits, there are many unique deployment challenges that must be dealt with before such benefits can be realized.

This paper presents a generic road map for a multi-country implementation. First, it highlights the challenges that a multi-country core banking implementation might have to face. Second, it outlines an approach to mitigate most of these risks and challenges. Third, it delineates some techniques to make an objective selection of the right vendor and systems integrator.

Introduction

The core banking system is the central processing unit of a bank. It is a customer accounting and transaction processing engine for high-volume back-office transactions. The inflexibility of traditional core banking systems is hobbling sustainable growth. Banks in most emerging markets, as well as traditional markets, are finding core replacement inevitable. Among the main drivers for core replacement, the most obvious is the need to provide a more cost-effective and efficient way to run core processes.

Global deployment of core banking systems offers significant benefits. Yet, less than 5% of the world’s banks deploy a multi-country application to service their global customers. There are several reasons why a bank operating in multiple countries should choose a single core banking platform, primary among which are cost savings, having a holistic and single view of the customer, ease of management information, streamlined and efficient processes and faster product development and deployment across multiple geographies. With multi-country deployment of core banking solutions, banks will be able to leverage IT to the maximum and build competitive advantage.

Challenges of Multi-Country Implementation

When a global bank implements a core banking system in a multi-country environment, additional challenges that add to the complexity of the program tend to arise.

The challenges involved in a multi-country environment can be classified under four broad heads (see Figure 1).
Legal and Regulatory Hurdles
Laws and banking practices can vary significantly across countries. Regulatory reporting requirements and compliance also vary across different countries. There are restrictions on hosting data across international borders; some cross-border transactions may require prior approval while some may not be allowed at all in certain countries. Besides, some countries may have data privacy laws to hide customer data. Labor laws for banking services will vary in different geographies. Two branches of a bank registered as two different entities in one country may be subject to restrictions in conducting business with each other based on the lines of business that the branches are involved in. For example, one branch being a foreign entity might face restrictions on the retail businesses it can participate in while the other being a local entity might not face such restrictions.

Technical Challenges
Availability of hardware and software support may vary by country. Local interfaces such as clearing and settlement, payments, etc. may be different in different countries, which may require special hardware and software support. Support for multilingual keyboards and screens might be needed. Local peripherals (e.g., printers, passbooks) may vary in different countries. Regional language software support and specific levels of customizations are deterrents for core banking systems. Issues such as power and rugged terrains are other hurdles.

Geographical and Cultural Challenges
The solution should include support for local languages and local practices (for example, provide passbooks instead of account statements). The challenge lies in enabling the bank to adapt to both global and local practices and to find synchronization between the two. A global implementation will need members of the core central team to work with teams from different countries. This could pose its own set of challenges.

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Other Challenges
Lack of knowledge: Employees implementing the core banking system face a steep learning curve in understanding new applications and the underlying technology. Often, the implementation team is different from the original application developers; as such, the team might not have a holistic understanding of the intricacies of the application.
Unrealistic timelines: To beat the competition and win the order, banking solutions providers tend to agree to unrealistic timelines. A banking application is expected to involve a large number of users. Since the applications are built with older or proprietary technologies, the choice of tools to stress and load test the applications is limited. However, because of the aggressive timeline and inadequate time provided for testing, load testing also stays under the radar. Proper reuse of old automation scripts and the knowledge repository sometimes become ineffective due to the complexity of the new core banking system.

Scope creep: The business users, who are accustomed to the existing systems and applications, do not clearly outline their expectations from the new systems. Functional and system consultants who have deep domain knowledge and implementation experience can play a vital role in eliciting the exact requirements and defining scope. Presenting a functional prototype helps business users affirm their understanding and draft their requirements clearly. Insufficient understanding of user requirements and not maintaining a properly defined, documented and controlled scope will lead to scope creep. New functionalities and customizations get tacked on as new product features emerge. This results in increased effort for the implementation team and causes them to overshoot the original budget and schedule.

Stakeholder management: Stakeholders at different levels have different objectives. The business analyst plays a vital role in managing the various stakeholders. To get the various business users to arrive at a consensus for defining the needs of the system is one of the biggest challenges in the requirements definition process. Large budgets and commitments allow critical stakeholders to add unrelated requirements to the scope, thereby increasing the risk of delivery.

Challenges in a multi-country environment: Conflicts may occur between internal group reporting needs and external statutory reporting requirements. Mergers and acquisitions initiated during the multi-country implementation may pose their own challenges. Banks need to adapt to the multiple evolving regulatory scenarios in a multi-country environment. A common mistake banks make is to find solutions to all regulatory changes in the core banking implementation, thereby risking the critical success factors of the program. A key challenge faced by banking technology is achieving the correct balance between solutions deployed across regions and those that are specific to a region.

Approach to Mitigate Challenges

Prioritize Goals, Define Flexible Implementation Plan
In the implementation cycle, various goals are defined. Prioritization of goals will ensure that critical goals are not overlooked. For a multi-country implementation, meticulous planning is required with a detailed plan for the initial phases and a high-level analysis for the subsequent phases. The plan should be flexible so that it can be updated and meet needs and contingencies that may arise during the course of the implementation.

Resource, Planning and Team Structure
Business must take ownership of the implementation process and there should be adequate representation of the key business stakeholders on the implementation team. The team should include domain specialists, testers and a product technology specialist. The goals and vision should be shared with all the team members. In a multi-country implementation, local considerations need to be kept in mind. Local vendors should be recruited in each country. There should be a large core team and smaller implementation teams for each country. The core team should complement the local implementation team. A comprehensive training program is crucial for the new recruits and the implementation vendors. The core team should follow the “train the trainer” approach. Pre- and post-assessment tests should be conducted to ensure the group is prepared for the mammoth task.

Design a Flexible Architecture and Data Model
A single centralized database, which is technically feasible, might provide the most benefits. However, some countries might require that the data reside in a server within their geographical boundaries, making it necessary to maintain multiple databases. The architecture and data model should be adaptable to changes, especially during mergers and acquisitions.

Finalization of Scope and Timelines

Implementation approach definition: The implementation approach should be chosen based on the bank’s business imperatives and its ability to commit resources (people, finance infrastructure). Two approaches that a bank can consider are:
• **Big Bang approach:** All branches and lines of business go live simultaneously.

• **Phased Pilot approach:** The solution is first implemented at a few pilot locations and then rolled out across the bank.

The Big Bang approach will result in faster implementation cycles and greater visibility and stakeholder interest levels. On the other hand, the Phased Pilot approach enables the bank to experience the solution on a smaller scale, learn from each phase and ensure a better fit to business requirements, thus enhancing the probability of a successful implementation.

**Track benefits and risks for multi-country implementation:** A multi-country implementation involves additional risks, and it is imperative to identify and constantly monitor the risk throughout the life of the program. The risk mitigation plan needs to be updated as the risk changes. Adequate metrics for measuring the benefits from a multi-country implementation should be defined. At each stage of the implementation process, the benefits should be identified, tracked and captured. Benefits should be identified by geography, by module and by occurrence.

**Timelines:** In our view, a phased approach based on readiness assessment is more viable. Readiness will depend on several factors – availability of hardware, resources, suitable rollout/go-live dates, local holidays, year-ends, etc. Parallel implementation across different countries may involve commitment of resources and various other risk factors that might not be justifiable. The timeline calculation must account for the fact that the initial implementations will take longer, as the lessons learned from them will expedite subsequent implementations. The early successes set the tone for the entire implementation. Therefore, countries with a higher probability of successful implementation should be chosen for the initial phases of implementation.

**Define a Testing Strategy**

An efficient test strategy can be divided into broad subheads: design, execution planning, execution and reporting. Some of the pointers to be considered under these subheads are:

**Design:** During the design phase of the test scenarios, test cases and test data are drafted.
While designing the test scenario, the sequencing of test scenarios should encompass the complete business flow for the modules.

Requirement traceability and end-to-end test coverage analysis should be carried out. Requirements should be prioritized to avoid scope creep. The products offered by the bank should be considered in preparation of test data, and the test cases should capture the services’ details.

For test data design, factors such as the type of bank branches to be included in the environment, branches with different holiday calendars, branches from different clearing zones, etc. should be considered.

**Execution planning/calendar:** For testing a core banking system, the test execution needs to be planned based on the bank’s day-to-day operation. A test calendar with date-wise execution of test scenarios should be maintained, which should in turn be based on resource availability. The prerequisites for the test scenarios should be clearly defined. The end-of-day batch runs need to be synchronized with the scenarios getting tested. The reports should get tested simultaneously with the related transactions done on that day in the end-of-day batch.

To test the functionalities that require interaction with other interfacing applications, the employees involved in those applications must be roped in to plan the testing. Comprehensive planning will preempt testing rework for subsidiary or branch testing. Batch runs should cover scenarios such as month-end, quarter-end, year-end, standing instructions and bank-specific holidays based on region, etc.

**Execution:** The test data setup for the required transaction should be done well in advance so that the functionality can be tested in line with the test calendar. Improving defect turnaround time, which includes the cost of overruns, delays, cost of resources and environment, should be considered.

**Reporting:** Test reporting assesses the progress of the upgrade or implementation of the project. Adequate test reporting can be conducted either by test case numbers – how many test cases were planned for execution, how many test cases have been executed and how many of them have passed – or by functionalities of the individual modules.

**Standardize, globalize and localize:** A multi-country implementation is an opportunity to standardize products, services and processes across multiple geographies. A new core banking solution should be considered before looking for customizations of the old way of doing things. Redundancies should be eliminated. Customizations should be done on the new core banking solutions, based on global requirements and those required to support local requirements in a specific country. Global products, reports and processes should be defined. The local products, reports and processes for specific countries should be an incremental effort over the global rollout. This will save effort, time and cost.

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**Choosing the Right Solution and Vendor**

**Vendor selection:** The most important criteria for evaluating a vendor are delivery track record, financial viability, technical and domain competence, product features and cost. A vendor’s training capabilities in multiple languages and multiple locations should be considered. Very few international vendors have expertise in multi-country implementation and include features in their product solutions to deal with multi-country requirements such as multi-entity, multi-time-zone, multilingual, etc. Very few provide a flexible architecture that offers localization and customization in addition to the core. Vendors with a proven track record of implementing a single core banking solution for a single bank across multiple geographies are rare. Banks should carry out due diligence in assessing a vendor’s methodologies, expertise and experience in deploying core banking solutions and their capability in incorporating emerging requirements in the solution. A framework to rate different vendors against these parameters will simplify the selection process.

**Role of systems integrator:** Systems integrators (SIs) are a key lever in the success of a core banking transformation. They ensure that the integrated system addresses the issues it is designed for. The role of a systems integrator spans identification of requirements, analysis, solution designing and deployment.
An SI has to understand and analyze existing and to-be processes, identify the gaps between them and achieve process efficiency.

Requirement gathering is another activity where the expertise of an SI can be of vital importance. If the requirements are documented correctly, it can prevent significant cost overruns during downstream activities. The development of detailed use cases and test cases in alignment with the business requirements and maintaining traceability between high-level business needs and the requirements will ensure that the business objective is met.

A systems integrator manages the quality of communication and collaboration across various departments; the SI is a single point of contact for the bank. Managing communication across the vendor organization and different groups of the banks is one of the key responsibilities of the SI.

Designing all possible test cases after considering different business scenarios and mapping those to existing requirements of the core banking application will help in comprehensive testing of the solution. Building a test knowledge repository will help in reusability of base functional test (BFT) automation scripts for BAU regression activities.

Last but not least, an SI can provide invaluable insights for recommending a roadmap to move to a model bank approach and facilitate future upgrades. It can help banks to upgrade to the next version of the core banking system, and complete a business process analysis and gap analysis in order to map the bank’s processes to the newer version of the core banking system.

**Systems integrator selection process:** A structured decision analytics tool that measures SI vendors on various parameters as determined by the bank will help select the most suitable SI. A generic roadmap for selecting an SI is delineated below:

- The applicants should be asked to create a business case for a core banking system highlighting their experience in this role.
- Clarifying the bank’s overall vendor management policy will define the hygiene factors expected from SI vendors and those that are nice to have.
- Performance measurement criteria to assess financial stability, product knowledge, domain knowledge, etc. will help narrow the list. Screening SIs based on only the “must-haves” and assigning weights for the “want” criteria and evaluating the shortlisted SIs using an appropriate.

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**Assessing Core Banking Vendors**

![Assessing Core Banking Vendors](image)

*Figure 3*
ate technique (e.g., a heuristic algorithm or more complex mechanisms such as usage of UKP mechanisms) will help determine the right SI.

Looking Forward
Given the mergers at global banks, multi-country core banking implementation will soon be the standard practice rather than an exception. Vendors should strive to enhance their solutions with multi-country features to ease the implementation. Vendors should also learn from experience and implement best practices. As a multi-country core banking implementation is a long-term process no matter how well it is planned and managed, it will have its challenges. Success will depend on not just how well the bank has planned the changes (both anticipated and unexpected) but how they adapt to these changes.

Reference

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