May - July 05/Vol 01/Issue 02 FLEGORIEG

CONNECTING THE BANKING WORLD





Maximize Opportunity. Minimize Risk.

Has your bank experienced The "Finacle" Feeling yet? The feeling that comes from confidently facing challenges and seizing opportunities, while secure in the knowledge that your risks are minimized. With Finacle, the universal banking solution from Infosys, your bank too can experience that imminent feeling of success.

Finacle addresses the business requirements of universal, retail, corporate, community and private banks worldwide.

Built on the next generation technology and a flexible architecture, the solution's ability to scale seamlessly with growing business volumes ensures greater business agility and lower TCO for banks. With a successful implementation track record and global deployment capability, the solution minimizes risks while maximizing business opportunities. Its customers include ABN AMRO, ICICI Bank, Credit Suisse First Boston, National Commercial Bank of Saudi Arabia, First Bank of Nigeria and Mizuho Corporate Bank, to name a few.

With Finacle, you can dive into a sea of opportunities while keeping the risks at bay.

Universal Banking Solution from Infosys

www.infosys.com/finacle



Core Banking Consumer e-Banking Corporate e-Banking Treasury Wealth Management Cash Management

For more information, e-mail us at finacleinfo@infosys.com

Infosys Technologies defines, designs and delivers IT enabled business solutions across the globe. Each solution is delivered with a high degree of time and cost predictability that ensures peace of mind for its customers.

FINACLEGONMEGT



Contents

May-July 05/Vol 01/Issue 02

4 Voice from the Desk

The Art of Core Banking Replacement

5 Cover Story

Key Challenges in Core Banking Replacement Survival of the Transformed

10 Inside Talk

Strategic Role of Technology Interview with Rik Op den Brouw, Senior Executive VP of Group ICT at Rabobank

13 Case Study

NCB Jamaica Banking on Technology

18 Tech Watch

SOA Plug-and-Play Services

22 Kaleidoscope Out with the Legacy

25 Hallmark

26 First Look

The Future of Retail Banking A Book Review



NCB Jamaica Banking on Technology



FinacleConnect is a quarterly journal on banking technology published by Infosys Technologies Limited. For more information contact: Sumit Virmani, Infosys Technologies Limited, # 44 Electronics City, Hosur Road, Bangalore 560100, India. Tel: +91-80- 51057020 or write to us at: finaclemktg@infosys.com All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, recording, or otherwise, without the prior written permission of Infosys Technologies Limited. Design & Layout by CIOL, www.ciol.com

Voice from the Desk



The Art of Core Banking Replacement

As the term itself suggests, a 'core banking solution' forms the very backbone of a bank's technology infrastructure. It is a mission-critical application and even a minor error can critically affect a bank's operations causing it to come to a grinding halt. It is, therefore, essential for a bank to have a robust, future-proof core banking solution that can enable the bank to design innovative products and execute new competitive strategies. As banks across the world evaluate their existing core banking solutions' ability to meet current and future needs, we discuss the issues surrounding corebanking replacement in this edition of FinacleConnect. We look at why it is imperative for banks to replace antiquated legacy applications and the benefits achieved by a few progressive banks that have taken this momentous step. Indeed, according to estimates by leading research firm, TowerGroup, global IT investment in core systems replacement is expected to increase from USD 14.4 billion in 2005 to USD 34.3 billion by 2010.

Industry experts almost unanimously state that going forward it will be impossible for large banks to remain competitive without replacing their core banking solution. At the same time, they also agree that core-banking replacement is among the most difficult projects that any bank can undertake. In this edition, we explore the main challenges of core banking replacement from selecting the right technology partner to expectation management among the bank's personnel. "Replacement of a core system is a major exercise for a bank," says Rik Op den Brouw, Senior Executive VP, Group ICT, Rabobank, in an interview with FinacleConnect. He adds, "One of the main challenges is to keep all systems up and running during the replacement exercise." He explains that as third party vendor solutions have matured in the financial industry, the bank has moved from a 'build' to a predominantly 'buy' strategy. This strategy is indicative of a popular trend. Most banks today prefer to buy off-the-shelf packaged solutions that can provide rich functionality, open standards, latest technology and time-to-market benefits rather than going for developing a solution in-house.

Core banking replacement is often likened to (and very aptly I would add) the task of replacing the engine of a Boeing 747, mid-air! It is a massive exercise requiring a delicate touch, all the while ensuring that the bank does not lose sight of its main goal. We hope you enjoy all the articles covered in this edition of FinacleConnect

Till next time.

Girish G Vaidya Senior Vice President and Business Head Finacle



Key Challenges in Core Banking Replacement

Survival of the Transformed

Core banking replacement has, for long, been considered a strict no-no by banks. Established comfort level with existing technologies and processes, relatively comfortable margins that provided the luxury of overlooking operational inefficiencies, and finally, the fear of the unknown, have all ensured that banks steered clear of this subject. But the current competitive environment with increasingly demanding customers is forcing banks to take a reality check on their technology environment and ensure that their IT strategy is aligned to their business objectives. And core banking replacement is often the only solution to their problems. However, replacement of core banking solutions—be it for large or small banks, global or regional—is akin to a heart transplant. This can be one of the greatest challenge for any institution, which can either result in the bank leapfrogging to a high degree of differentiation and an enriched customer value proposition, or it can create considerable risks for the bank if the transition is not managed properly.



Key Challenges

Banks need to focus on key factors, which make the core banking transformation a successful experience. Broadly speaking, the key challenges in core banking transformation are:

- 1. Vendor capabilities and credentials
- Dependence on legacy/vendor applications and impact on envisioned technology architecture
- Bank's business goals and alignment to leverage the new technology

Vendor Capabilities and Credentials

Transforming a bank's core systems is a strategic decision that has far-reaching implications on the bank's future business strategies and success. The various aspects that need to be considered include:

Financial stability

Financial strength and business continuity are the most important attributes for evaluating any vendor. Typically, payback for most core banking replacements could take anywhere around four-five years, even for rapidly growing institutions. Transforming core banking systems bring with them associated changes to operating processes, surround systems, interfaces, hardware and network configurations, coupled with the re-skilling and re-deployment of people. The Total Cost of Ownership (TCO), keeping in mind all these factors, would be quite significant, even for small institutions. Hence, a core banking solution, once implemented, should be robust, scalable and future-proof and serve the business interest for at least 10 years. This is why the long-term viability of the vendor assumes critical significance.

Vendor's commitment to the business

Apart from financial viability, the vendor's commitment to the financial solutions business is crucial. Banks must gauge the vendor's ability and intent to commit finance, resourcing and infrastructure to continuously enrich their solution offering to meet contemporary banking requirements. Some of the criteria could be the number of customer sites across the globe, profile of client banks, contribution of the financial solutions business to vendor revenues, track record, as well as vendor's investment in the core banking space.

Vendor's domain and technology competence

Continuing with legacy technology and outdated banking practices and processes will sound the death-knell for most solution providers and, in turn, severely impact the client bank's capability to survive and flourish in an increasingly dynamic business environment. A few factors that merit attention are:

- o Is the deployed technology future proof?
- Does the vendor have a good understanding of banking business practices across the globe?
- Is the solution based on open standards to facilitate seamless working with surrounding systems and delivery channels, straight-through processing capability and offers real-time information to its stakeholders and customers?
- Is the technology stable and user-friendly? Typically, minor modifications should be handled with minimal vendor intervention, and without compromising on the solution architecture. Further, the solution should

A core banking solution, once implemented, should be robust, scalable and future-proof and serve the business interest for at least 10 years.



be scalable enough to handle projected business volumes without compromising on response times or consuming substantial resources.

- Does the vendor have a clear roadmap for ongoing research, development, upgrade and support?
- Does the vendor have the requisite quality and number of trained, experienced personnel to work on the technology platform to ensure business continuity as well as business transformation?

Vendor's deployment capabilities

For a vendor, developing and marketing the solution to banks is only part of the job. The critical aspect is ensuring a smooth transition to the new system and empowering the bank to leverage its capabilities. The vendor should provide a robust delivery and support platform to manage ongoing business requirements and crisis, within acceptable response times. The main areas that require focus are:

- o Does the vendor have a proven and properly documented implementation methodology?
- Is the implementation methodology designed to ensure proper training, documentation and user empowerment to enable the bank's personnel to deploy the solution across their businesses with minimal recourse to the vendor?
- Has the vendor implemented the solution in the bank's geography and for banks of a similar profile? Also, what is the implementation track record in terms of success rates, adherence to budgets, timelines

and delivery commitments?

 Does the vendor have a well-thought through, multi-layered support strategy (both personbased and interactive i.e. web-based with a rich data bank and global best practices) to adhere to stipulated SLAs and ensure bestin-class customer service standards?

Dependence on Legacy/Vendor Applications

Often, the biggest impediment to a smooth implementation is the migration path from the old to the new. This is further compounded in case of migration from a legacy third party application as compared to that from a manual or proprietary solution. This is because of the dependence on the legacy solution provider to enable proper migration of data. The process also exposes the interfaces deployed and requires changing workflows and procedures to best leverage the new solution's capabilities. The key challenges to be understood and overcome are:

Data migration

This is an extremely critical and at times a painful phase during the implementation process. It entails a complete understanding of the data structures in the existing system, a one-to-one mapping with the relevant fields in the new system, identifying gaps in the data, enriching the same (remember, a core banking solution can only process what is fed into it—garbage in is garbage out!) and finally, migrating the complete data to the new system. This has considerable dependencies on the existing IT teams in the bank as well as the incumbent and new vendor to ensure a smooth cutover.

The biggest impediment to a smooth implementation is the migration path from the old to the new. This is further compounded in case of migration from a legacy third party application as compared to that from a manual or a proprietary solution.



Understanding the prevalent systems and interfaces deployed

Proper analysis is required to understand which of these would continue to exist in the revised architecture and, if so, the linkages with the new core banking system.

Understanding the functioning of the legacy environment

This is required to enable modification and streamlining processes and workflows to achieve desired business objectives with greater operational efficiencies.

Configuring the new architecture

The new architecture needs to be configured with the objective of eliminating functional redundancies and achieving STP. It should provide banks the flexibility to quickly devise new products and services, ranging from plain vanilla to exotic highend structured products, tailored to individual markets and segments.

Bank's Business Goals

This is probably the single most important factor that will determine the success of the implementation and the extent to which the bank leverages the new technology to achieve its stated imperatives. The critical considerations are:

Expectations management

Stakeholders at different levels usually have differing expectations from the solution. A Chief Information Officer (CIO) will expect a wellintegrated operating environment and a low TCO, a marketing manager the flexibility to design and roll out new products, whereas a Chief Operation Officer (COO) would be more concerned with streamlined, straight through processes and minimal operating risk. It is critical to have complete clarity on the desired outcomes from the transformation. Knowledge and understanding of local practices, regulations, cultural and lingual issues is also important.

Finalization of the scope and the timelines

This should be driven purely by business imperatives and the bank's ability to commit resources (people, finance, infrastructure) to the project. Based on this, the bank can opt for a variety of approaches like:

- 'Big Bang' approach: All branches and lines of business going live simultaneously.
- o 'Phased Pilot' approach: The solution is first implemented at few pre-selected, pilot locations and finally rolled out across the bank.
- 'Line of Business (LOB)'-based approach: The bank identifies one/multiple lines of business (e.g. treasury, loans etc.) where the solution is first implemented in the chosen line of business.

Each of these approaches has its own advantages and drawbacks. The Big Bang approach will result in faster implementation cycles, greater visibility and stakeholder interest levels. On the other side, it calls for considerably higher resourcing on the part of the bank as well as the vendor, and much lower error tolerance levels—there are no second chances. A 'Phased Pilot' approach enables the bank to get a first-hand feel of the solution in a smaller space and affords the opportunity to identify lacunae, incorporate learnings, and ensure

Stakeholders at different levels usually have differing expectations from the solution.



a better fit to business requirements, enhancing the probability of a successful implementation. This is usually the preferred approach for large, complex deployments. The major downside would be longer implementation cycles, resulting in a longer payback, and, at times, a re-negotiation of the scope of the project. The LOB approach allows the bank the flexibility of migrating solutions as per the maturity and readiness levels of the individual businesses with little impact on other business units. However, this may again create siloed structures with disparate customer information, different workflows and inhibit the bank from deriving the complete benefit of the new technology.

Empowerment

There should be sufficient empowerment at the core and operating team level to enable them to champion the transformation across all stakeholders in the bank.

Change management and ownership issues

This occurs primarily due to a 'top-down' approach in identifying the business objectives as well as inadequate and improper communication of the change drivers and resultant business benefits. It is important to ensure complete buy-in across all stakeholders and address concerns that the bank's personnel may face, on account of re-organization, reskilling needs, change in operating practices and fear of redundancy. Clear, timely and relevant communication across all levels is essential.

Midway changes through the project

This is one of the biggest risks in any core

banking implementation, resulting in reprioritization, budget and time overruns, and quite often, a high degree of disillusionment and a feeling of being let down by the new technology.

Resource availability

Timely availability of adequate skilled resources and infrastructure such as hardware and network is required. This goes a long way in ensuring a smooth transition within the timelines targeted by the bank.

Finally...

While the advent of state-of-the-art technologies and global best practices undoubtedly offer improved agility, efficiency, CRM capability and faster implementation cycles, banks need to be mindful of the challenges associated with core banking deployments. These challenges, once understood and mitigated properly, are perfectly manageable. All the same, banks must appreciate that technology is an enabler and not a panacea. As history indicates, successful banks are those that have understood the potential of new technologies and aligned themselves to fully leverage its power. These are banks that have focused on the adaptive change that made the technology transformation process successful

Balaji R Iyengar Principal Consultant Finacle

There should be sufficient empowerment at the core and operating team level to enable them to champion the transformation across all stakeholders in the bank.

Inside **a k**

Strategic Role of Technology

Ranked among the 25 biggest banks in the world and among the top 10 banks in Europe, Rabobank is a diversified financial institution with assets of over 500 billion dollars and nearly nine million business and private customers in the Netherlands.

Rabobank was one of the first European banks to implement a service-orientated mobile banking service and with over 500 new users every week, is one of the largest mobile banking providers in Europe. It is also one of Europe's largest Internet banks, with nearly 10 percent of the country's population banking with them online.

"Technology is a key focus area at the bank," says Rik Op den Brouw, Senior Executive Vice President of Group ICT at Rabobank. Group ICT includes the overall organization of Information and Communication Technology for the Rabobank Group, and Op den Brouw is responsible for the IT strategy and architecture for the bank including all technology developments for bank branches, Internet banking service and call center. Prior to this, he was Managing Director of Rabofacet BV, a subsidiary of the Rabobank Group, where too technology was one of his key responsibilities. Nearly three months into his new role, Op den Brouw talks to Rekha Menon, Research and Contributing Editor at FinacleConnect, about the role of technology, core banking and technology strategies.

What role does technology play in a bank?

 $(\mathbf{0})$

A

The role of technology is strategic. I think a bank is based on IT, which encompasses all areas of the bank from its core operations and new distribution channels to customer relationship management offerings. In addition, technology is very important for meeting regulatory requirements such as Basel II, where the bank needs to do realtime reporting and credit-risk calculations. At Rabobank, IT is an integral part of our strategy and we have successfully deployed technology solutions to meet businesss needs. For instance, Rabobank is one of the largest Internet banks in Europe. Through the Internet, our customers can transfer funds, make payments, apply for a mortgage or personal loan and more.

Q Have you initiated any key technology program recently?

A We are doing a very large CRM project. In fact we have just connected all our users, nearly 30,000, to the new solution. We are replacing 45 legacy systems, nearly all of which were developed in-house, with the new CRM solution. We are also renewing some of our core applications in the area of securities processing and loans. Again, here, we are replacing legacy systems that were primarily developed in-house. And finally, we are busy implementing Basel II projects.

Q Several leading banks are evaluating the option of replacing their existing core banking solutions. What do you think are the biggest drivers and benefits of replacing a legacy core banking solution?

Α The key business drivers for replacing legacy systems are risk mitigation and reducing costs. And the IT drivers are reducing complexity and ensuring that systems are more process oriented. It is important to have more control of the technology architecture, which is possible with new solutions. The decision to replace legacy systems is not new for us. Technology has been an integral part of Rabobank for the past 40 years, and we have replaced existing systems whenever there was a need to enhance our technology infrastructure. For example, we replaced our payment systems back in the 90s, and currently I would say that Rabobank has the most developed payment system in Europe. We developed the new system in-house because there were no suitable off-the-shelf solutions available at that time.

What is Rabobank's stand on 'in-house' vs. 'offthe-shelf' packaged solutions?

At Rabobank, we first look for packaged solutions and in case packaged solutions are not available, then we go for developing the system in-house. For instance, we have decided to develop our mortgages and loans solution inhouse, only because no existing packaged solution met all our requirements. This policy (offthe-shelf over in-house) was adopted only at the beginning of this century, around 2001/2002. Earlier, the market was not mature enough. There weren't too many third party solutions available in the market.

What do you think a core banking solution should have?

Α

Α

A

We would go for a packaged solution that has a broad acceptance in the marketplace. This means that it should be based on open standards, its user interface should be web-based, have real-time functionality and so on. The solution should be functionally rich, should process reports efficiently and enable the bank to effectively manage the rationalization of backoffice processes. It is important for the core solution to enable the bank to offer customers a single view of all their financial information across all delivery channels including the bank branch.

What are the challenges in replacing a core banking solution?

Replacement of a core system is a major exercise for a bank. The bank needs to define a clear goal, make a clear plan and stick to it. One of the main challenges is to keep all systems up and running during the replacement exercise. In addition, keeping costs low is crucial, after all, the bank's key objective is to increase revenues and reduce expenses.

Finally, how do you think a bank can effectively use technology to prepare itself for the future?

Essentially, the bank should design an IT architecture that reduces complexity. Technology solutions should be used that are based on open standards and can be deployed quickly. From Rabobank's perspective, using packaged solutions that have all these features help reduce the complexity of a bank's IT systems





TEN MOVES AHEAD

- 1. LINUX AND SOLARIS[™] OS APPLICATIONS RUN SIDE-BY-SIDE
- CHOICE OF SYSTEMS: SPARC[®], AMD OPTERON[™], INTEL
- 3. RUNS ON OVER 250 SYSTEMS FROM OTHER MANUFACTURERS
- 4. APPLICATIONS RUN UP TO 30 TIMES FASTER
- 5. MILITARY-GRADE SECURITY, VIRUS-FREE FOR THE LAST 20 YEARS
- 6. GUARANTEED COMPATIBILITY*, GUARANTEED INDEMNITY
- 7. UP TO 80% SYSTEM UTILIZATION (NO MAINFRAME REQUIRED)
- 8. SYSTEMS AND DATA FIX THEMSELVES
- 9. REVOLUTIONARY NEW FAILSAFE FILE SYSTEM FOR DATA PROTECTION
- 10. SCALES FROM 1-WAY TO 100-WAY

MOVE AHEAD TODAY AT www.sun.com/solaris10 OR CALL TOLL FREE: 1600-338-072



SALES OFFICE: SUN MICROSYSTEMS INDIA FVT. LTD, 6TH FLOOR, PRESTIGE OBELISK, 3KASTURBA ROAD, BANGALORE 560 001, NDIA. TEL: (91) 80 5693 0600, FAX: (91) 80 5693 0655 REGD. OFFICE: 6TH FLOOR, DIVYASHREE CHAMBERS, OFF LANGFORD ROAD, BANGALORE 560 027, INDIA. TEL: (91) 80 2229 8989, FAX: (91) 80 2223 1794. 62006 SUN MICROSYSTEMS, NO. ALL RIGHTS RESERVED. SUN, SUM MICROSYSTEMS, THE SUM LICED, SCLARB AND THE NETWORK IS THE COMPUTER ARE TRADEMARKS OF REGISTERED TRADEMARKS OF SUN MICROSYSTEMS, NO. N THE UNITED STATESAND OTHER SLL ERANGT TRADEMARKS ARE USED UNDER LICENSE AND ARE TRADEMARKS OF REGISTERED TRADEMARKS OF SPARC INTERNATIONAL, INC. N THE UNITED STATES AND OTHER COUNTRES. STATESAND OTHER SLL ERANGT TRADEMARKS ARE USED UNDER LICENSE AND ARE TRADEMARKS OF REGISTERED TRADEMARKS OF SPARC INTERNATIONAL, INC. N THE UNITED STATES AND OTHER COUNTRES.





NCB Jamaica Banking on Technology

NCB needed to Transform: Why?

National Commercial Bank (NCB), the strongest capitalized bank in Jamaica, grew through mergers and acquisitions during the nineties to become the dominant force in Jamaica's financial sector. However, the mergers created conflicts within NCB because of differences in the cultures of the banks, and more importantly because of their diverse infrastructures. Administration of these totally decentralized systems was a nightmare. NCB's proprietary mainframe-based core banking system could not coordinate the disparate databases in the branches. Customers were restricted to doing transactions with their own local branch and bank employees took a long time to close the books at the end of the day. Without standards in place, the bank was unable to implement the applications and needed to improve the situation. In the mid nineties, the bank came under indirect government control, which further restricted its ability to invest in necessary changes until its financial health had been fully restored. Essentially, NCB had problems everywhere—people, processes, and technology.



The year 2002 gave a fresh lease of life to the bank when AIC Limited, Canada's largest privately-held mutual fund company, acquired just over 75 percent of the shareholding in NCB from the Jamaican government. Soon after that, AIC realized that they had inherited an inefficient firm with antiquated operations, and the only way to regain the bank's position in the market was to embark on a complete transformation. The goal was to revamp virtually every aspect of the bank's operations-replace the antiquated core banking system with a new-generation open solution, bring in operational efficiencies by centralizing back office operations, elevate customer-facing processes and add a host of new delivery channels.

What Solution did NCB Implement?

After a thorough evaluation of leading banking solutions, NCB selected Finacle, the universal banking solution from Infosys Technologies. It set up a dedicated program management office to handle the multiple projects within its core banking transformation program. The bank also created a steering committee that met on a weekly basis to monitor every stage of the implementation and ensured that all issues were resolved.

NCB adopted a Big Bang approach for the core banking solution deployment where all branches and lines of business went live simultaneously. The Finacle implementation took just six months, proving wrong initial estimates by



NCB Jamaica - A Profile

National Commercial Bank (NCB), the strongest capitalized bank in Jamaica is the market leader in foreign exchange trading, pension fund management, stockbroking and credit cards. NCB is regarded as a pace-setter in the financial sector, being the first to introduce a local proprietary credit card, private label, cobranded and international credit cards in Jamaica. The bank provides a world of financial services to its clients, both through its strong network of branches and subsidiary companies. Using the powerful customization and parametrization capability in Finacle, NCB has been able to launch innovative products with minimal effort. leading consultants that a core banking implementation at NCB would take up to five years.

In the following months, NCB deployed various other components of Finacle universal banking solution–consumer e-banking, corporate ebanking, CRM, treasury and the alerts solutions. NCB and Infosys created a comprehensive implementation plan for change to guide all personnel involved in the transition process. Infosys also carried out a business process reengineering study to bring in process innovation and align NCB's processes with some of the best business practices within Finacle.

What were the Critical Success Factors?

- High level of commitment from NCB top management.
- Treatment of transformation exercise as a 'Business Project' rather than a 'Technological Change'.
- Rapid and well thought out decisionmaking process.
- Excellent program management.
- Effective stress management by the bank.
- · Effective expectation management.
- Efficient communication with employees, customers and shareholders about the transformation exercise.

What are the Business Benefits?

Technological advantage leading to innovation

Using the powerful customization and parametrization capability in Finacle, NCB has

been able to launch innovative products with minimal effort. Savings Bonanza, a new savings product from the bank, where the bank holds monthly lucky draws instead of offering interest on savings accounts, has helped the bank increase their local savings pool by nearly 10 percent. Another innovative product, NCB Payroll Plus, has been extremely popular, leading to a 129 percent growth in the bank's consumer loan portfolio. Payroll Plus enables employees to assign their future salaries to the bank to access bank loans that help them with activities such as paying school fees, undertaking home improvements, and even starting their own small businesses.

Improving customer relationships

The technology transformation has helped NCB transform itself into a customer-centric service-oriented organization. With the Finacle CRM solution, the bank now has a unified view of their customer relationships across the group, which empowers them to service requests across various financial products such as credit cards and insurance. In addition, under its 'customer experience management' initiative, the bank has expanded its electronic offering: An expanded telephone banking facility, Internet banking service, alert messaging service and a state-of-the-art customer care center. Using the consumer e-banking solution and the alerts solution, customers are able to conveniently access a much wider range of banking services including account management, bill payment, alerts, and a series of ad-hoc service

requests. As part of this transformation program, NCB has also re-designed their entire branch infrastructure and trained the front-office staff on improving their customer service.

Reducing cost and increasing revenues

NCB is continuously focusing on extracting maximum benefit from the new technology platform both in cutting costs and in increasing revenues. For instance, the new technology platform has helped NCB renew their corporate lending business by enabling the bank's corporate banking division initiate skilful financial structuring arrangements, which have been well appreciated by their corporate customers. NCB is also one of the first banks in the region to offer corporate banking over the Internet. With recommendations from the business process re-engineering exercise carried out, NCB was able to centralize various operations that were earlier carried out at the branches. This helped the bank cut the end-of-day book balancing time from 150 minutes to 30 minutes. Further, centralization of several activities such as clearing and account opening has enabled the bank's branches and other units to focus more on activities like customer delivery, achieving economies of scale, reducing operating costs, and managing operational risk more effectively



"We were looking for a solution that was based on new generation technologies, and that allowed us to achieve our transformation goals, and a partner who had a true end-to end capability and could meet our aggressive timelines."

Michael Lee Chin Chairman, National Commercial Bank of Jamaica

continuously focusing on extracting maximum benefit from the new technology platform both in cutting costs and in increasing revenues.

NCB is

Oracle Grid

All Your Databases n a Grid



✓ No wasted capacity



✓ No wasted money



Oracle Grid It's fast... it's cheap... and it never breaks



oracle.com/grid or call 1.800.633.0753

Note: 'Never breaks' indicates that when a server goes down, your system keeps on running.

Copyright © 2005, Oracle. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

tECH WATCH

SOA Plug-and-Play Services

Most large banks throughout the world have a highly heterogeneous technology environment comprising several disparate applications running on a variety of platforms. With shifting economic conditions and rapidly evolving IT strategies along with mergers and acquisitions, few banks have had the appetite to untangle the morass of legacy systems running their businesses. But that is not holding up progress and innovation, thanks, in part, to the increased adoption of Web services and its conceptual cousin, the Service-Oriented Architecture (SOA).

Legacy Core Banking Solutions

To keep pace with rapidly evolving business and operational requirements along with changing customer demands, banks need to constantly upgrade their banking practices and processes. This is only possible if banks regularly enhance their core systems and associated applications. Since most core banking applications at large financial institutions were developed almost two decades ago and have been enhanced from time to time to meet business needs, not only have individual applications become complex, but an intricate maze of applications has been created as well. In addition, there are very few tools available for the outdated platforms on which the core banking applications were initially developed. These complexities make the task of enhancing core systems extremely difficult, time consuming and costly.

Not surprisingly, a growing number of banks are considering replacing existing core systems with next-generation vendor solutions. However, replacing this complex web of applications with new core banking solution is not a straightforward task of merely switching off an old system and turning on the new one. Apart from the fundamental need to meet functional requirements, the data from old systems needs to be cleansed, transformed and then migrated to the new system. Processes driven by older applications too need to be changed and users need to be re-trained on the new application and processes.

Due to the siloed architecture within banks, where each business unit has their own systems and islands of information, core-banking replacement is a complex integration exercise. Islands of systems have to be either made redundant or integrated with the new solution based on business requirements and processes. In such a scenario, the traditional approach of a 'big bang' replacement where all systems are replaced at one go is practically infeasible for large banks. Change management of such magnitude is not manageable and banks are evolving a phased approach to replacing legacy core banking solution.

ECH

In the last few years some banks have attempted a Line of Business (LOB)oriented migration approach. This involves the bank replacing only those modules of the incumbent core system that serve a specific line of business, like demand deposits, personal loans, mortgages, trade operations and cash management. This approach enables the bank to experience the benefits of the new core banking solution rather early in the project. However, it also means that the new solution needs to integrate with existing modules of the incumbent core banking solution. This is where SOA can help the bank in easing the overall migration process.

Service-Oriented Architecture

SOA is neither a product nor a solution. It is an integration framework that binds internal and external services to create a solution. Just as a storage area network provides virtualized storage that is not dependent upon a specific storage device, and grid computing provides virtualized processing that is not dependent upon a specific computer, service-oriented architecture provides virtualised application functionality that is not dependent upon a specific block of computer code. With SOA, instead of focusing on different applications that reside on different computers, the emphasis is on business services that represent several different underlying applications.

Typically, in a non-technical context, a 'business service' is a logical unit of work that is carried out in an enterprise and can be associated with internal operations or services offered to customers. However, from an application development perspective, 'services' has a different connotation and is used to typically define logical operations carried out by specific application components or programs. The 'service' concept is used to abstract the actual execution of the service from the requestor of the service. Hence there is a supplierconsumer relationship between the requestor of the service and the supplier of the service. The architectural framework of web services brings out the usage of services in a commercial sense and in open space, essentially the Internet. The usage is based on standards defined by apex bodies like w3 and companies like Sun, Microsoft and IBM. Hence, when services architecture was adopted by developers to develop applications, the initial services adopted were primarily business-oriented services (like payments). Over the last few years, the scope of a 'service' has changed from business like services to execute a specific function like credit card payments to services over information architectures or networking services.

SOA is neither a product nor a solution. It is an integration framework that binds internal and external services to create a solution.

TECH

Through a web services interface, it is easy to bypass the underlying complexities and system dependencies of a given application (as in a point-to-point interface using APIs). Web services-based solutions deployed across the enterprise, especially banks, not only allow the developers to leverage plug-and-play logic across platforms quickly but also reduce the total cost of development.

As more services become available, the ability to integrate with all other systems, services and companies is, in many cases, more challenging than the individual development of a particular service itself. Not only does the connection between two systems have to work as intended, but the various parties involved also have to negotiate Service-Level Agreements (SLAs), performance guarantees and contingency plans.

Adoption of Services and SOA

A service-oriented architecture assumes an island of service identified by functionality and not by technology. It also includes process definition standards and can accommodate process changes that would take place during a core banking implementation. Since SOA is technologyagnostic, not aligned to any specific technology platform, development language or technology tool, SOA can seamlessly be put into practice in existing IT environments. This quality of SOA ensures that changes in technology and processes during core banking replacements can be phased out and managed effectively.

In an ideal SOA environment, services are published by applications and these services are offered for use based on various SLAs and standards-based interfaces. These services can be business services, like posting a transaction, to technical services, like data access and network communication. In a core banking replacement project, where a bank adopts an LOB-oriented migration approach, SOA can help the bank identify business services related to specific lines of business, independent of other applications, that can then be scheduled for replacements.

The following diagram depicts a typical high-level banking solution framework. Here, services related to various business functions are provided by product-specific applications, whereas services independent of products such as customer relationship management or document management are provided by common infrastructure services. To achieve such a framework, a bank could start rearchitecting its IT environment from any end and gradu-



BANKING SOLUTION FRAMEWORK: SOA ENABLES MAXIMUM AGILITY

Source: Datamonitor

ally break the monolith core system into parts. Till the desired level of granularity is achieved, the bank could use an intermediate mechanism of 'wrapping' services around the current core to fit it into such a framework. The complexity of integration is reduced if the services are divided according to the product or category, since the number of interactions or interface points is minimal and the intermediate cost of integration is reduced.

The plug-and-play nature of a SOA based solution is extremely attractive for financial institutions, and banks have cautiously started adopting web services and the vision behind services-oriented architecture. Most of the deployments thus far have been in non-core, peripheral areas such as distribution channel interfaces, or interfaces with external agencies like credit bureaus or online payment systems. Since the abstraction of business services within many legacy core systems does not exist, the adoption of SOA has been slow in legacy core systems replacement projects. Another reason for the slow adoption of SOA within banks has been the lack of standards for services internal to the organization. Standards are an important aspect of SOA, without which deployment is not possible and standards like IFX, FLX and BPEL are currently prevalent in this arena. Notwithstanding these issues, a few progressive banks have successfully adopted SOA for services external to the organization.

Indeed, enabling banks to implement best-of-breed components from vendors or develop new functionality inhouse without resorting to a wholesale replacement strategy, whether by open-source or proprietary tools, .NET or Java, SOA or point-to-point, at least one thing is clear, the plug-and-play benefits of SOA and Web services promises to increase the pace of innovation in financial services

Madhav Soundalgekar Solution Architect Finacle

SOA Benefits - In a Nutshell

By adopting SOA and process driven core banking solutions, banks can achieve tremendous benefits.

- Banks can migrate functionality into a centralized middle tier environment, thus creating a centralized enterprise components' layer of business logic sitting in front of the core systems. This allows banks to remove duplication and leverage synergies across multiple product systems, thus maximising cost savings, homogenizing operations and standardizing sales processes. The business components in this enterprise layer are product-agnostic (e.g. pricing, commissions, workflow) and can be readily standardized across product systems with minimal customization.
- As process functionality is abstracted from the core systems, these systems can be progressively pushed back in the technology architecture, eventually functioning as pure processing engines.
- Banks earlier only had the choice of either wholesale replacement with a packaged solution or maintaining existing legacy systems. SOA provides an alternative to the complex and high risk 'big bang' replacement strategy by allowing banks to replace specific areas of functionality.
- SOA enables banks to achieve economies of scale through reuse of both technology and business components.
- Banks can overcome the problem of siloed business unit systems through the use of standardized, componentbased application logic.
- SOA enhances flexibility and business agility so that changes can be made to individual components within the bank's technology infrastructure without major ramifications for the rest of the system.



Out with the Legacy

Banks and financial institutions are often categorized as front-runners in adopting technology, and with good reason. Way before technology became an integral part of an enterprise, in the sixties and seventies, at a time when other industries were barely beginning to understand the true power of technology, a majority of large banks in developed economies had already automated their core systems. These in-house developed COBOL, mainframe-based core banking solutions helped banks experience the tremendous benefits of eliminating manual paper-based processes. However, this first mover advantage of yesterday has created its own set of disadvantages. While technology has evolved to an open architecture, componentized approach, these large banks are still saddled with the legacy of the past.

Saddled with the Legacy

Mainframe-based legacy systems adequately served banks in the past, but it is common knowledge that they are based on obsolete technology and are well beyond their product lifecycle. The fundamental design and development methodologies of the sixties and seventies were not very advanced, and did not use modern techniques and concepts such as reusing code and object-oriented programming. Legacy systems were built around accounts rather than a customer and most applications did not have clear interfaces to share data with third-party applications. This led to an inflexible, siloed architecture. Over time, to meet customer needs, banks added several new functionalities or applications, thus creating an unwieldy set of core systems. Bank mergers and acquisitions further accentuated the problem. At Raiffeisen Zentralbank Austria (RZB), one of Austria's leading commercial and investment banks, mergers and acquisitions left the bank with a non-homogenous mix of core banking systems. Maintaining this diverse set of systems with separate development requirements and interface management issues proved extremely inefficient, leading the bank to consider replacing its systems.



Legacy systems are ridden with another problem: Inadequate documentation. Over the years, the documentation of several core systems has been lost or changed hands so many times that the basic knowledge is no longer available. According to the CIO of a leading multi-national bank that had initially developed their COBOL, mainframe-based core system in the seventies, having a system that was not documented to the last line of code presented a huge business risk to the bank.

The cost of maintaining these mammoth infrastructures is not insignificant either. In fact, most banks' IT budgets are largely dedicated to maintaining their legacy systems. According to estimates by research firm TowerGroup, while core systems account for nearly half of banks' total technology spend today, these systems account for nearly three quarters of bank's total maintenance expenditure!

With such obsolete, unmanageable core banking systems, banks continuously face operational issues such as introduction of a new product requiring code changes and integration problems between the core banking system and ancillary solutions. Legacy systems do not enable real-time capabilities or ensure customer centricity within a financial institution. While most banks today offer access to their services through an increasing variety of delivery channels, with legacy core systems, they find it difficult, if not impossible, to provide customers with a unified view of their financial information across all delivery channels. Indeed, staying with antiquated systems makes it impossible for a bank to meet its goals of higher efficiency, greater flexibility and straight through processing, along with meeting increasingly stringent regulatory and compliance requirements.

Writing on the Wall

To compete successfully and meet current and future customer needs, banks need to replace their legacy core systems with open, new-age solutions. The writing on the wall is for all to see and has been there for a long time. Realization about the inadequacies of legacy core banking systems is not new and there have been several efforts in the past to change the status quo. In the eighties and early nineties, several leading banks undertook massive projects to overhaul their legacy core banking systems. But such initiatives came to a naught. In a majority of cases, banks tried to re-build their core banking systems in-house from scratch, but were unable to meet the ever-increasing complex features and functionality requirements. In the process, these banks ended up sinking several millions of dollars in migration projects, and to this day, continue to run mainframe-based core systems that are over four decades old.

But the opportunity costs, risks involved and the actual maintenance cost of running legacy systems are just too high for this state of affairs to continue for long. Fortunately, a solution to this predicament is at hand.

The latter half of the past decade saw tremendous changes in the core banking technology environment. No longer do banks have to rely on in-house development efforts or half-baked third-party solutions that barely meet their requirements. Available now are best-of-breed sophisticated core banking solutions providing a flexible, open, webbased environment. The new-age solutions are easily parametrizable, offering real-time capabilities, enhanced process efficiencies, multi-channel integration, customer-centricity and quick time-tomarket. Above all, the new age core banking solution

While core systems account for nearly half of banks' total technology spend today, these systems account for nearly three quarters of bank's total maintenance expenditure! - Tower Group.



can be quickly deployed and offers reduced Total Cost of Ownership (TCO) for the bank.

Leading the Way

Understandably, several banks that burnt their fingers during earlier core banking replacement efforts are cautious about treading the same ground again. But a few leading banks have successfully taken the plunge. For instance, ABN AMRO Bank in India has recently replaced its core banking solution and achieved cost savings along with crucial time-to-market benefits and business agility. Santander, the largest bank in Spain, which has grown rapidly due to an aggressive acquisition strategy, has undertaken a massive core systems replacement project, where the first stage will be to consolidate the group's core systems in the Spanish market onto a single platform and to ultimately replace that platform. According to a report by the research firm, Celent Communications, Santander expects to reap cost savings of about €250 million annually as a result of the migration. The Celent report states that banks that undertake core banking replacement projects and complete them successfully stand to reap significant benefits, with some banks being able to reduce their total operating expenses in the range of 5-8 percent. While reduced IT expenses account for only about half of the savings from such projects, the other half of the

savings is achieved by more streamlined back-office operations.

Going forward, it will be almost impossible for a large financial institution to remain competitive without replacing its core system, states Celent. According to estimates by TowerGroup, global IT investment in core systems replacement is expected to increase from 14.4 billion USD in 2005 to 34.3 billion USD by 2010, which in the process would reduce maintenance costs by 17 percent. At a recent core systems event in London, Guillermo Kopp, Vice President at TowerGroup, stated that the critical need in the banking industry was for banks to transform their legacy infrastructures to drive operational excellence. Speaking at the same event, David Ellender, Head of Solutions, UK Banking Product Performance and Solutions echoed Kopp's views, "Core systems modernization has moved up the decision-making agenda. Historically perceived as a purely IT concern, it is now seen as absolutely crucial to both operational efficiency and business strategy execution." The message is clear. It's high time the legacy is made history before the banks become one in maintaining these legacies

Girish G Vaidya

Senior Vice President and Business Head Finacle



Global IT Investments in Core System (In US\$ Billions)

Source: TowerGroup

Going forward, it will be almost impossible for a large financial institution to remain competitive without replacing its core system - Celent.

Hallmark

Infosys in the news

Q4 revenues grow 50.2 percent YoY

Infosys Technologies Limited announced financial results for its fourth quarter ended March 31, 2005. Revenues for the quarter aggregated \$ 455 million, up 50.2 percent from \$ 303 million for the quarter ended March 31, 2004. Net income was \$127 million (\$ 77 million for the quarter ended March 31, 2004). Revenues for the year ended March 31, 2005 stood at \$ 1592 million (\$ 1063 million for March 31, 2004) and net income for the year ended March 31, 2005 was up to \$ 419 million (\$ 270 million for March 31, 2004).

'Best managed company' award

Infosys has won "India's Best Managed Company Award" based on a study conducted by Business Today and AT Kearney. The study looked at a company's financial performance (quantitative) as well as the qualitative, non-commercial aspect of management, examining how it innovates, learns and delivers on stakeholder needs. Infosys excelled on both aspects.

Finacle – The Universal Banking Solution from Infosys

Punjab National Bank (PNB) reaches 1000 branches on Finacle core banking solution

Punjab National Bank has gone live with 1000 branches on Finacle universal banking solution. Started with a pilot of 7 branches, the bank has rolled out 1000 branches in a record time, making it one of the largest public sector banks to implement centralized banking solution. Punjab National Bank implemented Finacle to compete more effectively in a deregulated environment enabling the bank to consolidate disparate systems, gain a centralized view of operations, ensure data consistency and lower its maintenance costs.

Recent wins

Aspis Bank, Greece has signed up for Finacle universal banking solution to replace its legacy systems. Finacle will power the banks core banking and treasury operations across 66 branches. A medium sized retail and commercial bank established in 1992, it has total assets approaching 2 billion euros and provides its wide client base with the full range of banking products and services. The new solution will provide the bank with a future proof technology platform that offers tremendous flexibility, scalability and reduced total cost of ownership.

Bank of Alexandria, Egypt a state owned bank, the third largest in Egypt has selected Finacle to power the bank's core banking, e-banking, CRM, wealth management, financial management, asset-liability management and loan origination requirements and will be deployed across its 200+ branches. This technology driven transformation initiative is to create a clear differentiation in the Egyptian banking market with better, more personalized customer service, greater customer convenience, innovative products and services and technology enabled aggressive growth.

Esanda, Australia a wholly owned subsidiary of the ANZ Banking Group Ltd, launched the Online Saver Product, which utilizes the Finacle universal banking solution from Infosys. The solution enables Esanda to compete head on with Australia's major banks by offering customers access to a high interest savings product accessible via the telephone or internet. The project, which was completed in six-months, was rolled out across Queensland in April 2005 and will be launched nationally later this year.

Customer Speak

"Finacle enabled us to dispense with multiple applications and move to a single platform, accessible by all employees. By implementing an integrated, centralized and online core banking solution, PNB expects (that) the annual (cost) reduction would be more than the expenditure to offset the initial investment on Centralized Banking Solution (CBS). The bank expects to recover its investment in about two years time period after CBS implementation".

K.S. Bajwa, GM-IT, Punjab National Bank



FIRST**LOOK**

BOOK REVIEW

From Traditional to Agile Banks

The Future of Retail Banking - Delivering Value to Global Customers: Joseph A DiVanna

A book on the challenges faced by the retail banking industry is opportune. The twin forces of globalization and disintermediation, combined with technological developments, have ensured that retail banking today is undoubtedly among the most competitive areas in the

financial services industry. *The Future of Retail Banking* reflects on the current trends and technologies impacting the retail banking industry and suggests ways in which banks can prepare for the future. Joseph DiVanna, an independent consultant and author of three other books on business and technology, has authored the book. According to DiVanna, the future of retail banking is neither technological nor is it simply about embracing customer's ever-changing needs. He describes the future of retail banking as "a complex task of transforming traditional banking institutions into agile organizations that deliver financial services to facilitate a rising set of emerging lifestyles."

Taking a historical view of banking intermediaries of ancient times that were formed to satisfy a need to exchange goods and services, DiVanna establishes the fundamentals of the retail banking value proposition and describes how changing global lifestyles and technological advances along with regulatory developments are impacting this traditional value proposition. DiVanna goes on to transpose basic business and marketing concepts such as strategic vision and core competencies in the retail banking environment stating that to prepare for the future, banks need to develop cohesive strategic initiatives. "All strategic initiatives are composed of four essential elements: vision, capability, sustained refinement and continuous feedback," he states. He further adds, "Developing a vision is not a one-time event, just as the firm's value proposition is not static, but continually changes, reacting to customer and market demands." Talking about the importance of branding for a retail bank, DiVanna explains, "Like products, brands cannot be complacent, unchanging or perceived to be dated. Retail banking brands are dynamic, incorporating customer's lifestyle needs. Banks require a cohesive branding strategy to reflect customer's changing lifestyle needs."

A significant portion of the book dwells on the importance of technology for retail banks, the impact of dotcom boom and how banks should harness technology to their betterment. Although technology is now an integral component of a retail bank's offerings, it is important to realize that technology by itself is no longer the prime differentiator. Market differentiation based on technology alone is rare and in many cases only exists for a short time. The key to innovation and creating competitive differentiation for the next generation of retail banks lies in understanding how to apply technology to achieve superior product delivery

and higher levels of customer service.

DiVanna identifies operational excellence, customer intimacy and alliances as other elements essential to a bank's success in the future. This ultimate state of utopia is referred to as 'synergistic banking' wherein a bank can achieve operational synergy through a three-step process of developing corporate self-awareness, realignment of resources to focus on core processes and creating a network of partners, and finally cost optimization and risk mitigation.

Most of the ideas discussed in *The Future of Retail Banking*, are not new. However, put together, they present a cohesive picture of how retail banks can compete in the future. The liberal use of live examples is the highlight of this book. By quoting examples of how banks around the world are bringing about product and service innovation, DiVanna ensures that the reader's interest does not flag.

Where the book does falter is in being too verbose. There is sometimes a lack of clarity in presenting forth an idea and there are too many repetitions. Often the same point is made several times with slight variations that might confuse the reader or give a sense of déjà vu. However, in this well-researched volume, DiVanna has skillfully managed to weave business concepts with global retail banking examples to create a fairly interesting book that adequately fulfils the need for a comprehensive analysis of the retail banking industry

Rekha Menon

Research and Contributing Editor FinacleConnect





1



www.infosys.com





Maximize Opportunity. Minimize Risk.

Has your bank experienced The "Finacle" Feeling yet? The feeling that comes from confidently facing challenges and seizing opportunities, while secure in the knowledge that your risks are minimized. With Finacle, the universal banking solution from Infosys, your bank too can experience that imminent feeling of success.

Finacle addresses the business requirements of universal, retail, corporate, community and private banks worldwide.

Built on the next generation technology and a flexible architecture, the solution's ability to scale seamlessly with growing business volumes ensures greater business agility and lower TCO for banks. With a successful implementation track record and global deployment capability, the solution minimizes risks while maximizing business opportunities. Its customers include ABN AMRO, ICICI Bank, Credit Suisse First Boston, National Commercial Bank of Saudi Arabia, First Bank of Nigeria and Mizuho Corporate Bank, to name a few.

With Finacle, you are in safe hands - even as you reach for the sky.

Universal Banking Solution from Infosys



www.infosys.com/finacle

Core Banking Consumer e-Banking Corporate e-Banking Treasury Wealth Management Cash Management

For more information, e-mail us at finacleinfo@infosys.com

Infosys Technologies defines, designs and delivers IT enabled business solutions across the globe. Each solution is delivered with a high degree of time and cost predictability that ensures peace of mind for its customers.