Bart Narter

Cutting Cost to the Core

How Philippine National Bank Saved 75% by Moving off the Mainframe

January 2010
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Executive Summary

The mainframe has been the platform of choice for core banking systems across the globe, especially in North America and Western Europe. Today Celent is observing a number of banks moving to open systems. Numerous core vendors now support various flavors of Unix, and banks are finding open systems to be a sufficiently lower cost option that the migration off the mainframe actually funds the entire project.

In this report, Celent studies Philippine National Bank (PNB), once the government-owned bank of the Philippines and now a private, non-government bank traded on the Manila Stock Exchange. PNB was running FIS (formerly Metavante and before that Kirchman) Bankway International on the IBM mainframe and moved to Oracle Financial Services Software Limited (formerly i-flex solutions) FLEXCUBE running on HP Superdome and HP-UX.

The move from mainframe to Unix and Bankway to FLEXCUBE enabled the bank to lower its IT costs by an astounding 75%, as shown in Figure 1, while growing the business at double-digit rates.

Figure 1: IT Costs Were Reduced to One-Fourth of Their Previous Level

![Total IT Cost Comparison](image)

Source: PNB, Celent analysis
Introduction to the Bank

Philippine National Bank (PNB) is a universal bank providing a full range of banking and other financial services to large corporate, middle market, small and medium enterprises (SME), and retail customers, as well as to the Philippine government, national government agencies, local government units, and government-owned and controlled corporations (GOCCs).

PNB was established as a government bank on July 22, 1916. While its historical focus was to serve the banking needs of government-related entities and GOCCs, since 2000 the bank has increasingly concentrated its services toward large corporate, middle market, SMEs, and retail customers.

The bank’s principal commercial banking activities include deposit-taking, lending, bills discounting, trade finance, foreign exchange dealings, fund transfers/remittance servicing, a full range of retail banking and trust services, and treasury operations. Through its subsidiaries, the bank also engages in a number of diversified financial and related businesses such as remittance servicing in the United States, Canada, Guam, Japan, Singapore, Hong Kong, France, Italy, the Netherlands, Germany, Austria and Spain. The Bank also offers full-service banking in the United Kingdom, Singapore, Hong Kong and New York and Los Angeles in the United States, investment banking, non-life insurance, stock brokerage, leasing and financing and foreign exchange trading.

PNB is one of the country’s biggest commercial banks. As of June 30, 2009, its total assets, deposits, and capital amounted to (Philippine peso) P274 billion (US$5.8 billion), P201 billion (US$4.3 billion) and P31 billion (US$660 million) respectively. This financial standing placed PNB as the fourth largest privately owned commercial bank in the Philippines.

PNB boasts of a wide distribution network in the domestic and international fronts. Locally, it has 324 branches and 404 ATMs located nationwide. Its overseas network is the most extensive among local banks with 109 branches, representative offices, remittance centers, and subsidiaries in 14 locations in the US, Canada, Europe, the Middle East, and Asia. Moreover, PNB maintains correspondent relationships with 669 banks and financial institutions worldwide. As a result of this broad geographic coverage, PNB is a dominant provider of remittance
services to overseas Filipino workers, who are an important part of the local economy, sending over a billion dollars in remittances back to the Philippines every month. Eighty-five percent of these remittances were credited to a PNB domestic account.

The bank is growing quickly. Deposits grew 12.6% over 2007 to 201 billion pesos. Internet banking users grew by 76% year over year; bill pay transactions, by 175%; and other Internet transactions, by 80%. Retail lending grew by 145% over last year.

On the corporate side, letters of credit (L/Cs) grew by 45%, and non-L/C trade finance (documents against payment, documents against acceptances, and open account) grew by 118%.

If this growth weren’t enough to manage, the bank is in the process of merging with Allied Bank Corporation (ABC), a P147 billion (US$3.1 billion) bank, also of the Philippines.

PNB has six lines of business reporting into the CEO:

1. Retail Banking (branch and ATM)
2. Consumer Finance (home, auto, housing loans, and credit cards)
3. Institutional Banking (corporate, government)
4. Trust
5. International Banking (banking and remittances)
6. Special Assets (non-performing assets)
The bank has six additional departments reporting into the CEO that support its infrastructure.

1. Controller (finance)
2. Operations
3. Treasury
4. Technology
5. Human Resources
6. Legal
Deciding to Make the Move

No one takes a decision to move core systems lightly, but it was an easy decision for PNB. The bank was running three poorly supported core banking systems. Kirchman (now FIS) Bankway International ran its Philippine operations, and the bank was extremely unhappy with the support. As one of the very few non-US customers, PNB didn’t feel it received the support and software updates it required. “We were paying a huge amount and didn’t get anything back. The support was really bad. Furthermore, we needed to change our operating system from OS/390 to z/OS, since Bankway stopped supporting OS/390. This meant additional but unnecessary costs to us,” stated Cynthia Javier, Chief Technology Officer and Executive Vice President at PNB.

The bank also used Kirchman Dimension 3000 on the IBM AS/400 (now called the i Series) in the US for its New York and LA branches. It ran a heavily customized and unsupported Misys Equation in Hong Kong, Singapore, the UK, and Japan, also on the AS/400.

“Business users were universally dissatisfied with Bankway, Dimension, and Equation,” added John Howard D. Medina, Senior Vice President at Philippine National Bank and Project Director for both the core banking system selection and implementation projects. The Kirchman help desk, in particular, was 12 time zones away from Manila, and the system was not compliant with many local regulations. Software updates and enhancements were nonexistent. Business needed a more responsive and flexible system to implement new products. Bankway wasn’t delivering.

The overseas remittance business required that there be 24/7 availability so that remittances initiated overseas during nonbanking hours in the Philippines could be processed immediately. The overnight batch on Bankway took eight to ten hours, time when remittances couldn’t be processed. As the bank’s bread and butter, this was a deficiency that couldn’t be tolerated. The Internet banking and ATMs were on store-and-forward as well. It was not unusual for branches not to be live until 11 a.m., even though the branches opened at 9 a.m. The bank upgraded the mainframe to mitigate these issues in 2005, but the issue remained a threat as the bank grew.
On the old IBM/Bankway system, backup was not live. Files and transaction logs needed to be restored in a batch on the backup machine to bring it current, which could take up to 10 hours.

Bankway also lacked audit and controls the bank required. Most back office transactions were implemented without logging or dual approval, so the bank used screen captures and log sheets for control. These highly manual processes were driving increased operational cost. The bulk of bank back office operations involved controlling and verifying these transactions.

Batch files were the other way to update transactions, but errors in the batch file and bad teller transactions would be posted in the online process and then unposted in the end of day process. This meant a lot of rework.

The bank was paying millions in license fees on application software (Bankway) operating system software (OS/390), programming language software (COBOL), and other licenses. The bank was financially prepared to move. Senior management was looking to move to a single global data center supporting all branches, replacing many ad hoc systems with a universal core system. The mainframe hardware was on an operating lease; software maintenance was scheduled for renewal all at the same time. Core banking applications were fully depreciated.

The combination of millions of dollars in maintenance fees and dissatisfied business users made the decision to move easy. The next step: move to what?
Selecting a New Core System

In May 2006, the bank decided to replace all its core banking systems. The senior management steering committee was essential to the success of the project and comprised the bulk of the business leadership of the bank, including:

- CFO / Financial Controller (Carmen Huang, Executive Vice President)
- Global Operations Head (Anthony Q. Chua, Executive Vice President)
- Chief Technology Officer (Cynthia V. Javier, Executive Vice President)
- Chief Credit Officer
- Institutional Banking Head
- Retail Banking Head
- Consumer Finance Head
- International Banking Heads

Other factors driving the success of the core selection and migration included a team of business analysts that reported into operations, a bankwide evaluation team, and experienced bankers who had gone through core selection and migration at other banks in the Philippines.
PNB had business requirements that a new system would need to meet, as shown in Table 1.

### Table 1: Requirements Drive Features

<table>
<thead>
<tr>
<th>Business Requirement</th>
<th>Technology Solution</th>
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<tbody>
<tr>
<td>Real time operations</td>
<td>Real time online posting of transactions</td>
</tr>
<tr>
<td>Little or no customization</td>
<td>Fully parameterized system</td>
</tr>
<tr>
<td>International branches</td>
<td>Multiple institution support</td>
</tr>
<tr>
<td>International branches</td>
<td>Continuous availability across time zones</td>
</tr>
<tr>
<td>International branches</td>
<td>Support for multiple accounting and regulatory requirements</td>
</tr>
<tr>
<td>Airport and casino branches that run 24/7/365</td>
<td>Continuous availability</td>
</tr>
<tr>
<td>High-volume government legacy business and international remittances (4 million transactions per day)</td>
<td>High transaction volume support</td>
</tr>
</tbody>
</table>

Source: PNB

Other attributes the bank was seeking in a software provider included:

- Local office or local service partner
- Local or regional customers
- Support of PNB overseas requirements
- Live installations at banks of similar size and complexity to PNB
- New sales and product updates in the past few years

Business drove the decision based upon features and functionality. “The dog [business] should wag the tail [technology], not the other way around,” explained Ms. Javier. PNB was a mainframe shop, but if the business wanted a system which ran on Unix, IT would comply.

Mr. Medina took a unique approach to core selection with an accelerated process, as shown in Table 2 on page 11. The needs analysis included business analysts who were able to tightly refine requirements very early in the process. The request for information (RFI) was far deeper than usual to include due diligence. The bank required vendors to provide user manuals. The gap analysis required that the
system be at least as good as the Bankway International benchmark without customization. The bank also required a clear product roadmap for the next three to five years from the vendors and matched that against its five-year plan. The proof of concept (POC) included user acceptance testing (UAT). Final vendor selection was based upon bank-wide scoring of the system, ensuring total buy-in.

### Table 2: PNB Accelerated the Selection Process

<table>
<thead>
<tr>
<th>Traditional Phases</th>
<th>PNB Acceleration Techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs Analysis</td>
<td>Involve business analysts from the start</td>
</tr>
<tr>
<td>Request for Information (RFI)</td>
<td>Due diligence; ask for user guides.</td>
</tr>
<tr>
<td>Baseline / Gap Analysis</td>
<td>The system had to beat the incumbent without customization.</td>
</tr>
</tbody>
</table>

#### Finalists

<table>
<thead>
<tr>
<th>Request for Proposal</th>
<th>Bankwide walkthrough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proof of Concept</td>
<td>Unit Acceptance Testing (UAT)</td>
</tr>
<tr>
<td>Vendor Selection</td>
<td>Bankwide scoring</td>
</tr>
<tr>
<td>Contract Negotiation</td>
<td></td>
</tr>
</tbody>
</table>

Source: PNB

The bank had a one-year timetable from needs analysis to vendor selection, driven by a deadline for renewal of several hardware and software maintenance contracts, as shown in Figure 2.

### Figure 2: The Decision Deadline Was About One Year

![Timeline of decision process](chart.png)

Source: PNB
The bank had a rigorous scoring methodology that included negative points, as shown in Table 3 and Figure 3.

**Table 3: The Scoring Methodology**

<table>
<thead>
<tr>
<th>Score</th>
<th>Technology or Operations</th>
<th>Business</th>
</tr>
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<tbody>
<tr>
<td>Superior to Existing</td>
<td>New functionality</td>
<td>Long-term business requirement</td>
</tr>
<tr>
<td>Better than Existing</td>
<td>Process improvement</td>
<td>Short-term business requirement</td>
</tr>
<tr>
<td>Baseline</td>
<td>Existing core functionality</td>
<td>Existing core functionality</td>
</tr>
<tr>
<td>Worse than Existing</td>
<td>Processing gap</td>
<td>Workaround</td>
</tr>
<tr>
<td>Far Inferior to Existing</td>
<td>Missing functionality</td>
<td>Business gap</td>
</tr>
</tbody>
</table>

Source: PNB

Eight systems were scored on this basis, and there were two clear standouts, as shown in Figure 3. The top four candidates were Systems 2, 3, 5, and 8. Note that Systems 1, 4, 6, and 7 had negative points in certain categories, so bar length in Figure 3 is not representative of the total score.

**Figure 3: PNB Started with Eight Potential Systems**

Source: PNB
The final four are shown in Figure 4. Only three core banking systems offered true 24/7 availability; the fourth candidate system scored very well, but required two host systems: one that would process end of day batch, and another that would act as a stand-in system during this processing. This moved it off the final contender list. The only mainframe-based core banking candidate (System 8) took itself out of the running. The bank was down to the two finalists, Systems 2 and 5.

**Figure 4: The Final Four**

There were two successful proof of concept tests and realistic two-year implementation plans. The bank’s shortlist comprised Oracle FLEX-CUBE and another open systems core banking application.
Making the Move to FLEXCUBE

The bank moved to a combination FLEXCUBE Retail (FCR) and FLEXCUBE Corporate (FCC) to fulfill all its business technology needs. Why FLEXCUBE? The system scored very well in terms of addressing almost all the bank’s requirements. The product was continuously being updated, and there was a commitment from the vendor to work with the bank to enhance the product for the local market.

The CIF was strong in FLEXCUBE, since it could access both FCC and FCR functionalities. It included relationship pricing and some loan functionalities that weren’t available on the other finalist.

FLEXCUBE supported offline functionality at the branch level, which was most appreciated in remote island branches where communication lines were slow and unreliable. Some of these branches are so remote that cash is brought into the branch via boat, helicopter, or airplane. Store and forward at the branch level gave the advantage to FLEXCUBE.

FLEXCUBE also supported third currency (not Philippine peso or US dollar) accounts in accordance with Philippine banking regulations and had dual messaging support for MasterCard/Visa transactions. Funds could be authorized in real time and debited in an end of day batch after settlement with the card network.

FLEXCUBE supported local accounting and regulatory requirements for PNB’s various international branches and supported multiple languages for multiple channels in those branches.

PNB was also transactionally-intensive, pushing through over 4 million transactions per day with remittances and many government social security payments due to its legacy as a government bank. FLEXCUBE could manage these volumes.

Finally, FLEXCUBE enabled users to support themselves as much as possible. Business analysts can change parameters to create products or update pricing. There is a group called User System Support in operations comprising tech-savvy CPAs and accountants that set up the system and update parameters.
FLEXCUBE also provided much of the channel capability with teller and sales platform. The bank used FLEXCUBE@ Connect to interface to the other channels, as shown in Table 4. There were other systems that FLEXCUBE did not replace, but interfaced with, listed in Table 5.

<table>
<thead>
<tr>
<th>Channel</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teller</td>
<td>FLEXCUBE</td>
</tr>
<tr>
<td>Sales Platform</td>
<td>FLEXCUBE</td>
</tr>
<tr>
<td>Internet Banking</td>
<td>Interface to internally developed</td>
</tr>
<tr>
<td>Bill Pay</td>
<td>Internally developed</td>
</tr>
<tr>
<td>ATM</td>
<td>ACI Base 24</td>
</tr>
<tr>
<td>IVR</td>
<td>Fujitsu</td>
</tr>
<tr>
<td>Mobile</td>
<td>Proprietary applications of the local telcos</td>
</tr>
<tr>
<td>Interface Layer</td>
<td>FLEXCUBE@ Connect</td>
</tr>
</tbody>
</table>

Source: PNB

<table>
<thead>
<tr>
<th>Function</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury</td>
<td>Misys Opics</td>
</tr>
<tr>
<td>KYC</td>
<td>GIFTS</td>
</tr>
<tr>
<td>Trust Administration</td>
<td>SunGard TAPS</td>
</tr>
<tr>
<td>Cash Management</td>
<td>Nucleus</td>
</tr>
<tr>
<td>Remittance capture</td>
<td>Internally developed</td>
</tr>
</tbody>
</table>

Source: PNB
The bank moved from the mainframe to Unix and from VSAM to an Oracle relational database, as shown in Table 6.

Table 6: The Bank Moved to More Modern Technology Infrastructure

<table>
<thead>
<tr>
<th>Old</th>
<th>New</th>
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<tbody>
<tr>
<td>Programming Language</td>
<td>COBOL, Assembly</td>
</tr>
<tr>
<td>Middle layer</td>
<td>None</td>
</tr>
<tr>
<td>Operating System</td>
<td>OS/390</td>
</tr>
<tr>
<td>Database</td>
<td>VSAM</td>
</tr>
<tr>
<td>Hardware</td>
<td>2 IBM 390</td>
</tr>
<tr>
<td>Disk</td>
<td>IBM Shark</td>
</tr>
<tr>
<td>CPUs/MIPS</td>
<td>707 MIPS</td>
</tr>
<tr>
<td>Memory</td>
<td>72 GB upgraded to 128 GB</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IBM MQ, Unix</td>
</tr>
<tr>
<td></td>
<td>HP-UX</td>
</tr>
<tr>
<td></td>
<td>Oracle 10.2g</td>
</tr>
<tr>
<td></td>
<td>3 HP Superdome Servers</td>
</tr>
<tr>
<td></td>
<td>HP 3.0 TB upgraded to 4.4 TB</td>
</tr>
<tr>
<td></td>
<td>up to 32 cores</td>
</tr>
</tbody>
</table>

Source: PNB, HP

While core system outsourcing is more and more popular in many countries, it was not even considered in the Philippines. “We have very strict outsourcing regulations. If we were to outsource, we would be the first in the country,” explained Ms. Javier.

Migration wasn’t as difficult as expected, in spite of the fact that the bank did most of the work. It was a phased approach with overseas branches first, then batches of 12 to 15 branches until all 324 were moved, converting another batch each weekend. “I was expecting the worst, and it wasn’t as bad as I expected. It was manageable,” recounted Ms. Javier. Celent has observed that most successful core migrations are driven by the bank itself with augmented staff, rather than a third party.

The bank was clearly focused on moving off Kirchman by March 2009. Missing this deadline would require another year of software and mainframe maintenance payments.
As shown in Figure 5, the bank first moved the smaller international branch network over to the new system, which took one year. After the bank gained knowledge and experience on the system with the first phase of implementations, the bank started rolling out domestically, starting with 12–15 branches per weekend and ramping up to 30–40 branches per weekend as the deadline for moving off the old system approached, as shown in Figure 6.

One hiccup in the migration process was a capacity issue. As each additional group of branches moved to FLEXCUBE and the bank opened more accounts, performance began to suffer. Oracle had estimated capacity requirements based upon estimated transaction volume that
had assumed certain growth rates given by the bank. The bank reached
those milestones sooner than expected, which was a good problem to
have on the business side, but a problem nonetheless on the technical
side. Before response time on ATM, branch, and Internet banking
impeded business, the bank needed to install capacity upgrades to
account for the new volumes. Fortunately the Unix platform allowed
incremental capacity upgrades that did not disrupt daily operations.
HP was also very responsive and quick to provide much needed equip-
ment on an emergency basis before the actual deliveries could arrive.
HP allowed PNB to use the additional memory, storage, and CPUs until
the bank was able to purchase them in 2009. PNB was most grateful for
the hardware support.
TCO

The total cost of ownership of the new system was dramatically lower than the old system’s TCO:

- Software costs dropped by 72%.
- Hardware and operation system maintenance costs were reduced by 70%.

Software savings are expected to increase in successive years since the annual maintenance cost escalations were improved in new contracts.

Migration

Although the bank wanted to do a “big bang” conversion, a more manageable phased (regional conversion over 10 months) approach was adopted because of both logistical (reconfiguring over 300 existing remote branch servers simultaneously) and technical (the ability to convert millions of accounts in a weekend) limitations.

The migration also involved more than 55 people over the 6–24 month implementation:

- Development: over 6–8 months;
- Operations: over two years.

Platform

The new HP hardware was considerably less expensive than the IBM mainframe, so much so that the bank could purchase three HP Superdomes for less than the price of an IBM mainframe. This enabled the bank to have active load-balanced backups on two Superdomes while using the third for business continuity at a remote site. All three machines are “hot,” meaning that backup is continuous and active. It was the hard dollar cost savings of moving off mainframes that funded the entire project.

This active backup has been quite helpful in maintaining continuous uptime. There have been a few times when the database server shut down, but it hasn’t impacted the business because of the active backup.
As shown in Figure 7, platform cost savings were substantial. The old costs were continuing the leases on the existing mainframe. Included in platform costs are hardware acquisition costs, operating system licenses, utilities, and hardware leases. In this way it compares apples to apples—including not just the hardware but also the software associated with that hardware. On the new platform, once the five year depreciation is complete in 2015, the costs drop to about one-third of the previous mainframe environment.

Software

The bank was able to generate huge savings on the software side of the house. Note that the bank consolidated from three different core systems (Bankway, Dimension, and Equation) down to a single platform (FLEXCUBE). FLEXCUBE’s universal capabilities allowed for considerable cost reduction.
As shown in Figure 8, software licensing costs were considerably reduced. Unlike the hardware, the software platform has years in which the new software platform will cost more than the old one, such as 2010 and 2011.

The spike in 2009 for the old system was due to one-time conversion and maintenance costs. To remain on Bankway required an upgrade from OS/390 to z/OS. Since the OS migration was application-driven, the bank assigned it to software rather than hardware costs.

Steadily increasing software costs were based on the software license cost structure of the old core system. The new software has a five-year accounting life that ends in 2014. Once the software is fully depreciated in 2015, the costs of the software are about one-fifth of what would have been projected on the old system.

Overall, IT costs dropped to about one-fourth of what would have been experienced by the bank using the all-encompassing FLEXCUBE software on an HP-UX platform, as shown in Figure 9 on page 22.
Once both the hardware and software were depreciated in 2015, the costs for the new platform decreased substantially. This savings is a function of both the software and the hardware. Moving to a new platform enabled Philippine National Bank to rethink its IT costs from the ground up.

**Operations**

The bank also made the decision to reengineer its processes to conform to FLEXCUBE best practices rather than retain existing workflow, Mr. Medina explained. The bank adopted global best practices learned from other FLEXCUBE sites to the extent possible, since PNB was the first bank to implement FCR and FCC in the Philippines.

The creation of a global data center running a centralized core banking system now allows the bank to shift back office operations across borders. No longer limited by technical system access limitations, the bank can move middle and back office work to the Philippines, where labor costs are lower without sacrificing quality and speed.

Operations is conducting early retirement programs in spite of the bank’s rapid growth. PNB will also be folding the operations of Allied Bank into its operations without significant headcount increases. This is all possible because of the automation that FLEXCUBE enables in the back office.
Two big changes the customers felt were the ability to successfully implement consolidated customer relationship views and branchless account numbers. The challenge in implementing consolidated customer relationship views is that it is difficult to enforce a single customer record in a country where there is no national identification system or where tax and social security numbers cannot be relied on for individual identification. A practice found in Africa of using a combination of a customer’s initials and birth date to create a unique identifier allowed PNB to achieve this.

The standard practice in the Philippines is to include the domicile branch codes in the account numbers to facilitate interbranch processing and controls. Since the controls were built into FLEXCUBE, this old practice could finally be stopped at PNB.
Business Benefits

Aside from reducing operating costs, the move to a new core banking system is allowing PNB to grow its business by offering new products and services quicker and with more flexibility. New products can be created quickly via parameters and immediately made available to customers. New products were even implemented during the conversion.

Third currency deposit products (such as those in Asian currencies like Japanese yen, Korean won, and Chinese yuan) were now easier to offer nationwide without having to contend with currency accounting regulations, front end teller limitations, and real time currency conversion.

Branch reach and capabilities to service customers have also improved. Remote branches can continue to serve customers even when connections to the main data center are unavailable due to the store and forward capabilities of the localized branch servers. The browser-based front end platform allows branches in problematic locations to operate via secure mobile phone connections. In a country of thousands of islands with a limited hard line infrastructure, the possibilities of reaching even more remote areas are promising.

The ability to easily and quickly offer new services on the teller platform also allowed PNB to add value to its institutional customers. For example, the bank was the first to accept social security payments from the teller and transmit the relevant data electronically to the country’s social security system.

Another benefit was the ease of doing business analytics. The means by which business and customer data could be extracted and analyzed from the mainframe were limited. By moving to an Oracle relational database and using third party tools like Business Objects and Crystal Reports, the bank now has the ability to make informed business decisions.

The improved capabilities and reduced operating costs have made PNB’s decision to retire three core banking systems a project worth the investment, effort, and birth pains.
Conclusions

Philippine National Bank needed to change its IT architecture for strong business reasons. They needed real time posting of transactions, continuous availability across time zones, and support for multinational multientity banking. The previous solution wasn’t up to these challenges. In the process of migrating the core from a traditional batch, mainframe, COBOL environment to a real time Unix environment, they were able to dramatically cut IT costs on both a short-term and long-term basis.

Platform consolidation drove efficiencies on the hardware and software sides of the equation, reducing IT costs by over 70%. It is only through a total rethink of the IT infrastructure that such pronounced reductions are possible. PNB undertook this rethink and is reaping benefits that will only increase as the bank grows.

Additionally the new technology platform is enabling the bank to drastically revamp itself in terms of its operations, products, and service offerings. Obtaining new business capabilities and functionalities at substantially lower IT costs means PNB is now having its cake and eating it too.
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Typical projects we support related to core banking include:

**Vendor shortlisting and selection.** We perform discovery specific to you and your business to better understand your unique needs. Based on our industry knowledge, we then objectively create and administer a custom RFI/RFP process with selected banking technology vendors to assist you in making rapid and accurate vendor choices.

**Business practice evaluations.** We spend time evaluating your business processes, particularly in banking industry product development, benchmarking, and channel-building. Based on our knowledge of the market, we identify potential process or technology constraints and provide clear insights that will help you implement industry best practices.

**IT and business strategy creation.** We collect perspectives from your executive team, your front line business and IT staff, and your customers. We then analyze your current position, institutional capabilities, and technology against your goals and competitors’ initiatives in the financial services space. If necessary, we help you reformulate your technology and business plans to address short-term and long-term needs.

Support for Vendors
We provide services that help you refine your product and service offerings. Examples include:
**Product and service strategy evaluation.** Based on our familiarity with banks across the globe, we help you assess your market position in terms of functionality, technology, and services. Our strategy workshops will help you target the right financial institutions and map your offerings to their needs.

**Market messaging and collateral review.** Based on our extensive experience with your potential banking industry clients, we assess your marketing and sales materials—including your website and any collateral.

**Market penetration.** Celent understands markets globally with analysts in the United States, Canada, Europe, India, China, Japan, and other countries. We can help your company understand market dynamics and enter new markets more effectively.
Related Celent Research

Core Banking Solutions for Small Banks: A North American Perspective
Rajesh M R and Bart Narter

Core Banking Solutions for Midsize and Large Banks: A North American Perspective
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A Tale of One City: Core Renewal via SOA at National City Bank
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