

Technology Labs

Banking Technology Vision White Paper

accenture

High performance. Delivered.



• Consulting • Technology • Outsourcing



Contents

Technology Trends in Banking	3
Data and decisions "at fingertips"	4
Mobility: New markets, new channels, new methods	5
Convergence of Collaboration, Communication, Community and Content	6
Internet Computing for Greater Business Agility	7
Trends Influencing the Pace and Focus of IT Adoption	8
Building Elasticity for High Performance	10
Imagine a Day Five Years from Now....	11

Technology Trends in Banking

Significant shifts in the business environment, economic volatility, changing customer and staff expectations, and the adoption of new technology make it increasingly challenging for banks to navigate technology strategy alternatives and prioritize technology investments.

To help companies become high-performance businesses in this ever-changing climate, each year Accenture Technology Labs creates a Technology Vision: a comprehensive analysis of how technology trends will impact businesses in the next three to five years. The vision helps businesses discern, anticipate and adapt strategically to the shifting risks and opportunities that lie ahead.

This year's research and analysis helped Accenture envision a time, not long from now, when business capabilities may be essentially "elastic," capable of flexing to adjust to any level of economic volatility and able to catapult an organization to unprecedented levels of performance. Behind such elasticity are four major technology trends: data and decisions; mobility;

convergence of collaboration, communication, community and content; and Internet computing. In addition, Accenture sees three factors that could significantly accelerate or decelerate the adoption of these trends in the banking industry: the millennial generation, cyber-security and sustainability.

This paper presents a review of the Technology Vision for Banking by exploring how each of these technology trends and influencing factors will impact banks in the coming years. In particular, we discuss how these trends will affect the four main areas of a bank's operations: the "corporate core," manufacturing, the "hub" and distribution (Figure 1).

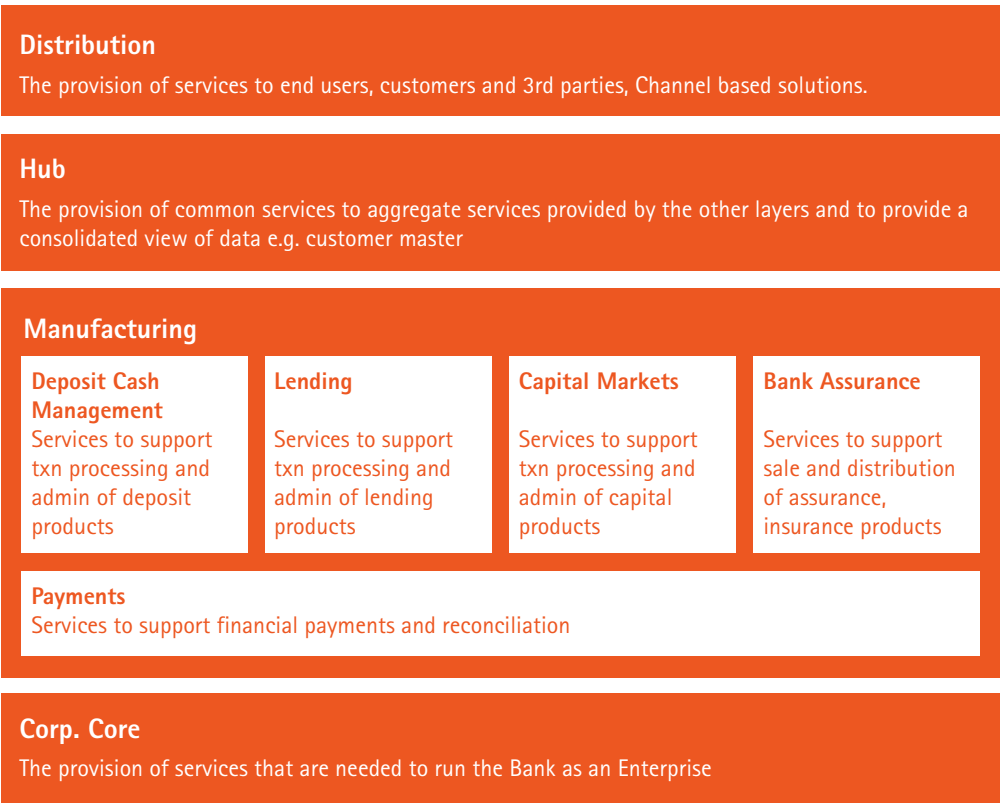


Figure 1. The principal areas of a bank's operations will be affected to varying degrees by the technology trends in the next several years.

Data and decisions "at fingertips"

Technologies for extracting intelligence from data are maturing, adding urgency to all aspects of data management. There is now exponential progress being made in companies' ability to aggregate and secure data and provide insight quickly and effectively to the right people at the right time. This data-based intelligence surge will significantly impact banking sales, marketing and services functions and will support the increasing development of channel-specific solutions. Opportunity areas for banks include decision tools and underlying support systems that help to better understand risk, enhance sales and customer service and reduce time to serve.

During the next three to five years banks will have significantly better data and greater intelligence about customers. It will be available at the "fingertips" of all customer-facing functions, enabling more efficient and effective sales and service. Companies will be able to capture and retrieve less-structured data types (image and voice, for example) and increasingly use external public data sources. Analytics will be in place to support real-time decision making for both banks and their customers. For instance, Maybank Berhad was recently recognized by research and advisory firm Financial Insights for Innovation in Analytical CRM, for its efficiency in using advanced data mining that is enabling the bank to analyze, understand, predict and influence customer behavior throughout the customer life-cycle.¹

Data and decision tools also will greatly evolve the information support for decision-making among bank customers and prospects. Customers will have the right information about such things as products, services and billing at their time of need, and it will be delivered via multiple possible channels including contactless interface via phone. Kuala Lumpur Hong Leong Bank (HLB), for instance, has launched Pay+, the first real-time online inter-bank funds transfer service via Internet banking in Malaysia. Pay+ gives a response in a matter of

seconds (instead of the traditional one to three working days) of acceptance or rejection from participating banks, giving customers ample time to exercise other options if necessary.

Banks' common, or hub, services such as customer management, product management, pricing and knowledge management will leverage rule-based analytics and visualization tools to support better decision making in pricing and many other functions. And, in the enterprise support functions, the focus of advanced analytics will be on areas such as mitigating risk through automatically and immediately notifying staff of regulatory changes or reporting non-compliance via channels such as email. For example, Large Indian banks such as SBI and Indian Bank are using a single core banking software that automates and integrates different banking processes of lending and treasury on a single platform (as compared with many western banks, which have different systems for specific functions of lending and treasury). In fact, the research and consulting firm Celent recently selected Indian Bank as the "model bank" for its innovative and extensive use of core banking software. The Indian Bank was able to use core banking software to generate an additional \$712 million in revenue from a newly launched cash management system.²

To enable real-time analytics banks also will have improved data scrubbing, data quality management, data security and governance. In fact, data quality management will enable banks to make critical improvements in verifying the quality of data (such as in payments and stock trades), securely source external data and share data between applications.

Mobility: New markets, new channels, new methods

Mobile devices are beginning to eclipse personal computers as the electronic channel for businesses and consumers. Meanwhile, netbooks are a surprising market success, and smart phones that can rapidly access expanding 3G networks are becoming more and more capable.

Mobility provides banks with access to new markets (for instance, banking the unbanked), new mobile payment methods (including micro and contactless payments) and better use of channels such as independent financial advisors employed by banks to prospect for new clients. For the bank workforce, mobility means using location-aware mobile devices and applications, as well as being able to access remote data, such as home-office data, from afar to make key decisions quickly (for instance, those involving pricing, payment authorization and relationship management). Mobile sales force initiatives are making processes such as risk assessment visits faster and more efficient delivering a positive bottom-line impact.

Hub capabilities of the bank (including pricing decisions, payment authorization and customer relationship management) will be available via mobile devices and accessible by staff when on the move. And, all such mobility will be supported via open security architecture.

Banks, particularly in emerging markets, are already capitalizing on mobility. For example, Monilink is the UK's mobile banking network, providing banking customers with access to their financial information directly from their mobile handsets. Monilink's Mobile Money service is currently available to customers of Alliance & Leicester, first direct, HSBC, Lloyds TSB, NatWest, Royal Bank of Scotland and Ulster Bank and across all major mobile networks. Istanbul-based, \$61 billion-asset GarantiBank offers mobile banking services. In the first two months, its Mobile Banking Portal signed up 50,000 customers who racked up more than 30,000 transactions and \$24 million in transaction volume.³ And CashEdge is signing up a first round of banks in the U.S. for its newly launched POPmoney, an email and mobile person-to-person funds transfer system that allows bank customers to send electronic payments by using the email address or mobile phone number of the recipient.



¹ IDC Financial Insights, Financial Insights Honors 10 Outstanding Asia/Pacific Financial Services Firms For Effective Application Of Technology In Their Day-To-Day Business Operations, February 27, 2009.

² The Economic Times, Indian banks pip US peers in tech race, July 6, 2009

³ Bank Technology News, Big Calling; How mobile banking is opening access to basic financial services in developing countries, August 1, 2008

Convergence of Collaboration, Communication, Community and Content

Two very distinct types of collaboration technologies— one supporting effective, targeted, point-to-point collaboration and the other supporting diffuse, open and community-based collaboration—are converging and redefining how we work.

Use of collaboration and community tools (such as tele-presence, video conference, co-browsing capabilities, desktop sharing and social networks) will provide better connectivity with customers and across the workforce. This will enable new remote sales and service propositions, use of social networks as enabling tools for sales and service, and increased use of the remote workforce. For instance, experts can connect to any branch as virtual advisors to answer questions about products or services or they may connect directly with customers via Web call-backs and Internet chatting. All will be enabled through a mix of open technology.

Innovation programs and social networking tools are generating interest among banks, particularly with seasoned experts beginning to retire and a new generation of workers who take Web 2.0 tools for granted. Bank of America Corp. launched the BofA_Help account on Twitter to give its customers another way to get help with online banking. BoA also has a Future Banking Blog that speaks to thought leaders engaged in financial industry innovation.

ANZ Bank has developed "ANZ MoneyManager," a free Internet-based platform that brings together an individual's personal finance information from banks, credit unions and other financial companies, and displays it in one place to provide users with valuable insights into their finances and spending habits. And Bankinter introduced a Video Call service and had almost 30,000 calls in the first six months. The sales conversion ratio reached 25 percent.

As in the distribution and customer-facing functions of the bank, collaboration and community tools will enable virtual connectivity and collaboration across the workforce. Wells Fargo recently focused on leveraging the insights of its 160,000 employees. As part of its drive to enhance its companywide innovation capability, the bank piloted the Accenture Collaborative Innovation Solution to help it generate, filter and prioritize both new ideas and ideas for improvements.⁴

Internet Computing for Greater Business Agility

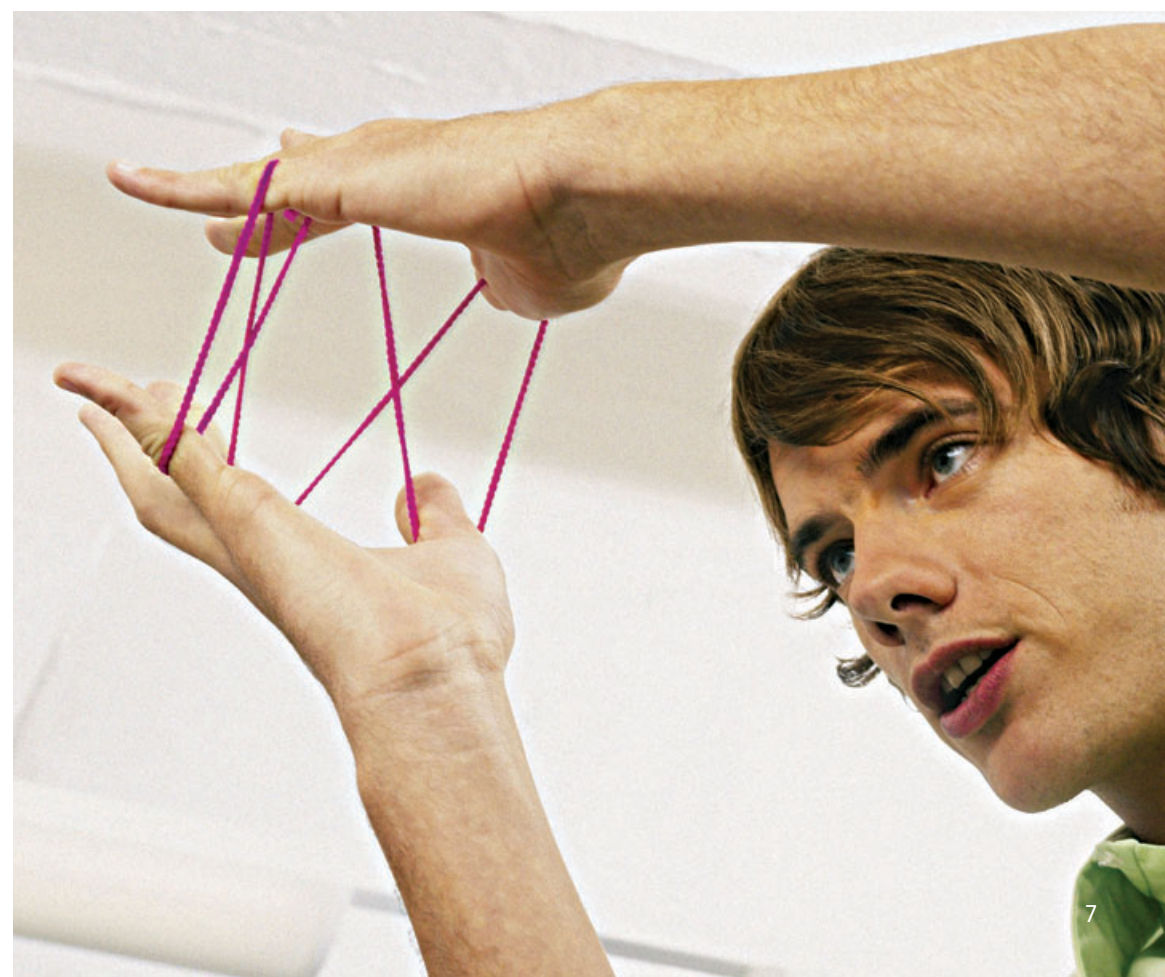
The Internet is rapidly becoming the locus of more and more IT-based business capabilities for many good reasons. First it reduces cost. For instance, virtualization and cloud computing typically lower infrastructure, maintenance and energy costs. Internet computing also provides elasticity, scalability and greater business agility such as near real-time risk calculation results, and "infinite" computing capacity on demand. And, Rich Internet Applications (RIAs) provide the potential for vast improvements in the usability and productivity of Web-based banking applications, and increase the Web's usefulness as a computing platform.

Significant advances in Internet websites will enable improved and personalized experiences for customers and staff. Across the common processes of the bank (such as pricing and customer management) the focus of Internet computing will be putting in place the technical capabilities (Web 2.0, RIA, Rich Widget Portals and RSS) to make planning and knowledge available across multiple distribution channels and improve the staff experience.

External applications will support elements of business processes, if not complete processes.

Use of cloud computing for key banking applications such as market analysis, portfolio analysis, peak load management and batch processing will reduce costs and increase flexibility. For example, Deutsche Bank has set up a private corporate cloud system.⁵ And cloud computing is being deployed as a less-expensive loan automation enabler for Community First Bank and Landmark Community Bank. Both are using a Web-enabled suite of scalable technology resources provided as a service by LendingCycle.⁶

At the production infrastructure layer of the bank, virtualization will prevail as companies work to reduce costs and increase flexibility.



⁴ IDC, Leveraging Companywide Innovation with SOA: The Wells Fargo Case Study, Doc # 214128, September 2008

⁵ ComputerWorld Canada, Year In Review: Jumping on the cloud computing bandwagon, January 5, 2009

⁶ Bank Technology News, Lending Clarity from the Cloud, April 1, 2009

Trends Influencing the Pace and Focus of IT Adoption

While the preceding technology trends will clearly impact banks at multiple levels (from customer-facing functions to core capabilities), three key factors have the potential to accelerate or decelerate the adoption of new technologies in banking: the millennial generation, cyber security and sustainability.

The Millennial Generation

Loosely defined as those individuals now between their mid-teens and late twenties, the Millennial Generation represents young people who have grown up in a milieu of email, multi-player games, MP3 music, digital cameras, mobile phones, social networks and other trappings of the digital world. The influence of this generation on the direction of information technology-- particularly as it applies to the workforce and customer engagement-- cannot be discounted.

Because of comfort with technology, the millennial generation as a workforce will have greater expectations about the availability of technology and its use in the workplace. Company reputations are continually being shaped and reformed by new generations and changing workforces. These reputations will greatly affect an organization's ability to sustain its competitive advantage in the coming years.

Millennial generation customers are key to future sustainable growth. Banks will need to target millennials with a truly differentiating approach, including innovative new advertising formats, tailored offers pushed over new remote channels, and new packages relevant to millennials' needs and their innovative communication means. For example, the community site Wesabe allows users to link Twitter accounts to their Wesabe membership to record cash spending on the go. PNC Bank's "Virtual Wallet" is targeted to millennials as an online banking and money management site that combines checking, short-term savings and savings for long-term growth. It features interactive payment and money management tools, such as bill pay, a planning calendar, wish list, and a slider tool to seamlessly move money between accounts.

Cyber-Security and IT Risk

Already, the security and availability of IT systems, networks and data assume critical significance in terms of ensuring business continuity. It is by no means a stretch to say that Internet computing increases security risks in many ways. However, it could be argued that risk actually is reduced by Internet-based and cloud computing because organizations increasingly can entrust their systems and data to providers for which managing IT is a core competence. How companies perceive these risks will clearly influence the pace of adoption of these technologies.

Banks need to secure data and protect identities, address threats and vulnerabilities, and meet stringent compliance demands while reducing costs and increasing profitability. Integrated security solutions can increase the speed, efficiency and quality of business processes for a direct improvement to a company's bottom line.

For example, Banco Azteca is using a fingerprint-based system provided by DigitalPersona to enable its customers to establish and maintain savings and credit accounts. Similarly, Bank of America has introduced SafePass as an online banking security enhancement that sends a 6-digit, one-time passcode as a text message to a customer's mobile phone to secure high-risk transactions. And, National Bank of Australia is using voice biometrics to authenticate customers for telephone banking.

Sustainability

While the dramatic drop in energy prices in the latter half of 2008 has made energy conservation a lower priority than last year, long-standing and widespread concern about global warming and climate change continue to influence many companies' policies and regulations. The concerns and regulations around sustainable development surely will affect the direction of IT.

Transparency and sustainable performance is growing in importance for banking senior leaders, consumers, investors and employees. Climate change already has started to impact the business of banks. Supply chain reviews and in particular, assessment of banks' IT energy efficiency, are resulting in a reduction in costs and higher productivity for banks. And with direct regulation on carbon emissions and sustainable lending practices expected in the medium-term, many banks are committing to sustainable development programs and launching "green" products. For example, Citi and Bank of America have dedicated billions of dollars to investing in sustainable finance, while in emerging countries, a few banks such as Nedbank and Itau are setting up innovative sustainability governance and risk management solutions.



Building Elasticity for High Performance

To be sure, technology will dramatically impact the strategies and operating models of banks in the next several years. Delivery channels and distribution capabilities will continually evolve. As companies are able to capture and retrieve less structured data such as voice and image, information quality and security will improve. And as this increasingly useful information becomes available at "fingertips," functions such as sales and service will become far more effective and efficient. Rapid expansion in the use of collaboration tools will facilitate increased remote working, new sales and service propositions and new models of desktop support. All of this evolution increases the importance of strong hub or integration capabilities to deliver a consistent, real-time experience across the bank and its customers. This, in turn, requires a fundamental reappraisal of core manufacturing capabilities to deliver a higher level of operational benefits.

In this increasingly complex and unpredictable economic environment, banks must anticipate and adapt to shifting risks and opportunities. Capitalizing on the trends in data and decision-making, mobility, collaboration and Internet computing is vital to building the adaptive business capabilities that banks will require to adjust to volatility and reach new levels of performance.

Imagine a Day Five Years from Now....

The Customer

John Smith is a businessman and golden customer at ABC Bancorp. John starts his day by checking his iGoogle dashboard and, particularly, his banking widget where he can access his accounts and his financial status. He also logs into his Facebook account to check the latest notifications. He notices that some of his contacts posted recommendations of a new banking offer: a Green Loan.

On his way to the parking lot, John quickly logs into his Mobile Banking Application, browses through the new offers and marks his interest in the new Lending Product. He uses his NFC mobile to pay for the parking.

During the day, David Banks, his account manager, contacts him to schedule an appointment. John goes to the branch and uses his NFC phone to identify himself. A personalized message is displayed to welcome him and a notification is sent to his account manager. While waiting for his account manager, he interacts with an avatar using his voice to get some additional information about the Green Loan offer. Then, the account manager welcomes John, explains the advantages and details of the offer and shows him how to subscribe to it. John decides to take his time to think about it.

Later in the day, John connects to his Banking Widget Portal to subscribe but gets stuck on a tricky question concerning his tax situation. He requests chatting to his account manager. He explains the problem to Mr. David Banks who suggests he securely takes control of John's computer. Thanks to the collaborative co-browsing feature of the banking widget portal, John gets a tailored assistance to his needs. He finally subscribes to the Green Loan offer the same day by digitally and remotely signing the contract using biometrics.

The Bank's Relationship Manager

David Banks starts his day by logging into his RIA Banking Workstation and accessing his integrated agenda. An integrated Web 2.0 RSS feed reader alerts him of the launch of some new products. He logs into the bank's Social Network to learn more by discussing it with other colleagues and experts. This Collaboration tool facilitates the viral spread of knowledge across the bank departments.

Thanks to the Branch Monitoring Application, he gets real time metrics on the customers within the branch (such as how they are distributed and areas where the queue is long), which enables him to react quickly, avoid congestions and optimize space usage.

While browsing through the online notification list, he notices John Smith's interest in a new banking offer. Because John is a golden-level customer, David uses the RIA Banking Workstation to immediately call John by using an icon on his profile. He uses the same application to automatically book a free slot during the same day.

David prepares for his meeting by using an analytical tool that gives a summary of John's situation in plain English. This enables him to better understand John's needs and make more relevant offers.

During the day, he gets a pop-up notification on his Banking Workstation alerting him that John has stepped into the branch. David meets with John and gives him details on the Green Loan offer. He takes the opportunity to suggest other offers that might interest him.

Later on, David gets an alert telling him that John is requesting online assistance. He accepts and offers to securely take control of John's PC thanks to the co-browsing capability. He assists John until the end of the procedure and helps him digitally and remotely sign the contract.

The Bank's CIO

At an executive ballroom in the London headquarters of ABC Bancorp, Steve Brown -- the bank's global CIO -- kicks off his bi-monthly leadership meeting. Participants include regional CIOs and directors in New York City, Shanghai, Sao Paolo, and Singapore, linked together via state-of-the-art telepresence systems. Topics on the meeting agenda include "banking in a box" for South American countries, data governance, security and IT risk, IT and sustainable strategy and process optimization in an agile-sourcing environment.

The meeting marks the official launch of ABC's cloud-based, "banking in a box" offering, which enables ABC Bancorp to enter new markets at an unprecedented speed while satisfying local regulatory and market requirements.

With more than half of ABC's IT infrastructure being outsourced, much of the discussion on that day is devoted to how to effectively manage ABC's data resources. In light of recent cyber attacks and data breach incidents, data security has become the No. 1 concern among the meeting participants.

The meeting adjourns by noon.



Accenture is a global management consulting, technology services and outsourcing company. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. With approximately 177,000 people serving clients in more than 120 countries, the company generated net revenues of US\$21.58 billion for the fiscal year ended Aug. 31, 2009. Its home page is www.accenture.com.

Copyright © 2010 Accenture
All rights reserved.

Accenture, its logo, and
High Performance Delivered
are trademarks of Accenture.