



## **10 Game-Changing Tech Trends for 2011**

*BS&T's editors predict the hot technologies that will be banking game-changers in the year ahead.*

By BS&T Staff, January 3, 2011

Along with revitalized spending power, bank IT executives will have to deliver on technology initiatives with measurable improvements in revenue growth, customer retention and compliance. So placing the right bets on key technologies that truly can transform the business will be more important than ever. Here are BS&T's predictions of the hot technologies that will be banking game-changers in the year ahead.

### **1. The Mobile Banking Revolution Has Begun**

Smartphone adoption in the United States has gone mainstream. According to a fall forecast from IDC, 269.6 million mobile devices shipped in 2010 -- a 55 percent increase over 2009. What does this mean for banks? Easy: More opportunity to put sophisticated banking services in the palms of customers' hands, 24 hours a day, 365 days a year.

Throughout 2010 consumers were assaulted with new handheld devices running Google's Android operating system, Research in Motion's BlackBerry OS and Apple's latest iOS iPhone platform. Adding to the mobile eruption was the advent of the tablet computer, led by Apple's iPad, Samsung's Galaxy Tab and RIM's PlayBook.

"Mobile obviously is top of mind for everyone," says BS&T Reader Advisory Board member John Itokazu, EVP and CIO of Salt Lake City-based Zions Bancorporation. "I'm interested in watching what happens in mobile as it relates to all mobile devices."

Surely the bevy of available devices and the skyrocketing rate of adoption are significant factors in the consumer mobile revolution. Ultimately, however, for banks to leverage the mobile channel to attract and retain customers, they have to provide mobile services and downloadable apps that provide value and encourage adoption.

One area where banks can provide that value, which is key to mobile banking adoption, according to Gartner, is remote deposit capture. In its October report, "U.S. Banking Customers Increasingly Use Online, Mobile Services to Deposit Paper Checks," Gartner identifies RDC as a possible driver to mobile banking adoption. Currently, USAA, Chase and State Farm Bank are among several institutions that have deployed mobile remote deposit capture apps for the iOS and Android platforms. --*Matt Gunn*

### **2. Large Banks Explore Hybrid Clouds**

Large banks' private clouds -- in which cloud virtues such as virtualization, shared resources and on-demand deployment are brought to bear in an internal IT environment -- will grow larger, and their experiments with public and hybrid clouds will increase, predicts Adrian Kunzle, managing director, head of engineering and architecture, at New York-based JPMorgan Chase. "I don't think banks can ignore cloud computing," he says, while acknowledging that some banking applications, such as those that require high performance, may never be suitable for a cloud implementation.

"You'll see increased attention to private clouds, and you'll see people get their feet wet in hybrids in 2011, where they connect their private cloud to a public cloud," adds Kunzle.

Research supports Kunzle's predictions. A recent IDG survey revealed that 75 percent of companies will use enterprise-class cloud computing solutions within five years. Asked what benefits they perceive in cloud computing, 78 percent of the 172 CTOs, CIOs and IT global managers surveyed by IDG selected "pay only for what you use" and "easy/fast to deploy to end-users." Three-quarters of respondents chose "monthly payments," 69 percent selected "encourages standard systems" and 67 percent said "requires less in-house IT staff, costs."

In Bank Systems & Technology's cloud computing survey this year, 19 percent of banker respondents said they are developing or using a private cloud. Public clouds have been slower to catch on among BS&T's readership: 16 percent of respondents said they are receiving services from an external cloud provider today, and 28 percent said they are considering using the services of an external cloud provider.

Bankers' security concerns about cloud computing (i.e., the need to protect data) are being resolved, according to Kunzle, who is on the steering committee of a promising new user group, the Open Data Center Alliance, that is creating road maps for vendors in the data center, private cloud and public cloud spaces. --*Penny Crosman*

### **3. The Automated Branch**

Whether it's what the customer sees or what's going on behind the scenes, bank branches are becoming smarter, friendlier and more automated going into 2011. While check writing is on the decline and more and more customers turn to the online and mobile channels, the shift toward smarter, more efficient branches that emphasize choice and seamless service is born of the necessity to lower costs, boost efficiency and improve sales.

To that end, Celent projected back in January 2010 that the industry would be at the bottom of a dip in retail branch IT investments, with some recovery expected to begin in 2011, although the more obvious recent shift has been toward self-service. Two of the North American banks that are embracing the retail store concept in developing their branches are Portland, Ore.-based Umpqua Bank and Montreal-based Royal Bank of Canada. RBC, in particular, is integrating self-service capabilities into its branch locations.

An example of a bank improving its branch efficiencies through better behind-the-counter processing capabilities, Zions Bancorporation, a holding company for eight banks in the west and southwest United States with combined assets of \$51.6 billion, has been aggressively adopting check imaging and branch capture. While two of its banks are 100 percent on branch capture as of 2010, Zions EVP and CIO John Itokazu expects the rest of the company's banks to have converted by the end of 2011. "It will force us to rethink how we do the work in the branch," he explains. --*M.G.*

#### **4. Getting Serious About Social Media**

Although 60 percent of bankers who responded to an Aite Group survey in October 2010 described themselves as social media "novices" or "beginners," that will change in 2011; Aite analysts say 90 percent of banks will have a dedicated social media budget by 2012.

Dan Marks, chief marketing officer at First Tennessee (Memphis) and a banking industry social media pioneer, believes 2011 will be the year most banks get involved in social media. "2010 was the year of unmistakable awareness" of social media, and 40 percent of banks are actively involved, he contends. "Next year, folks who started early will be taking this to the next level, and banks that aren't yet participating will finally realize they have to."

In fact, all banks are already involved in social media, Marks adds -- whether they realize it or not -- because customers are talking about them on blogs, Facebook and Twitter, even if the banks are not active in those venues. "If banks are going to be part of the conversation, they need to be active in social media," Marks stresses.

Among other emerging social media trends, monitoring and analytic tools from companies such as Radian6 and Nielson are getting better and are including integration options to help a company understand what customers are saying across different social media channels, Marks observes. Next year his bank will deploy tools that create maps between customers' social media activity and increased website traffic and product purchases, he adds.

Marks says he also is starting to see content management platforms for social media emerge. "The proliferation of channels gives the social marketer the opportunity to manage content across Facebook, YouTube, Twitter, Foursquare and other social media networks, and coordinate and plan content distribution across those channels," he says.

Security and compliance will remain a concern, Marks acknowledges. "There's no doubt regulators are looking at it, and FINRA has come out with a strong stance on social media," he comments. Banks will need to educate employees and customers about privacy and security best practices. --*P.C.*

#### **5. Balancing Business Gain With Added Risk**

Credit, market and liquidity risk all will be concerns for banks as they grapple with the requirements of the Dodd-Frank financial reform legislation and Basel III. The most universal risk worry for banks large and small will be credit risk. Regulators will want to see banks free up credit, yet keep credit standards high.

"Credit risk will continue to be a big focus, not just on the mortgage side, but across consumer lending," says Michael Versace, research director, global risk management, at IDC Financial Insights (Framingham, Mass.). As a result, banks will need to obtain more and better data to make credit decisions and to create analytics based on that data.

"Everybody is watching Basel III," adds John Filby, president of risk and compliance solutions at Fiserv (Brookfield, Wis.). "We're hearing concern about a spillover effect to the whole market," he says, noting that small-bank customers are concerned about how far down the rules will reach. One technology angle here is the risk models that banks use to determine capital ratios; proprietary models likely will save banks money versus the standardized approach.

Many banks are working to create an enterprisewide view of risk with reports and dashboards that show credit, counterparty and trade risk across the board. "A lot of banks say they're still looking for that holy grail, which is a golden source of truth," relates Fred Kim, a senior manager at Accenture. "They're still pursuing that, spending an enormous amount of time gathering and aggregating their data. They also have struggles because the data in large bank systems is still very fragmented. ... They're trying to simplify and consolidate the data infrastructure and make sure it is in sync with the general ledger." These are very long-term projects that will be advanced -- but probably not completed -- in 2011. --P.C.

## **6. Modern to the Core**

At the base of any bank's ability to serve customers, conduct transactions and run day-to-day business is its core banking platform. And as banks offer more choice in terms of online and mobile channels, in particular, and a wider product portfolio, that increased level of service means a higher demand on core systems. Core banking renewal also comes with the prospect of delivering on the promise of conducting business in real time. And some of the nation's biggest banks are taking the plunge in 2011.

"When you look at the U.S. market, four of the top 20 banks are doing a core systems replacement over the next 12 months," according to Fiaz Sindhu, an executive and core banking expert with Accenture's North America banking practice. "We expect another two to four to take the jump in North America."

Core banking modernization or replacement represents a major investment in terms of budget dollars; the risk of systems downtime as work is being done; and the cost of dedicating staff time to building, testing and supporting new systems as they launch. But conversely, continuing to do business with legacy systems has a cost of its own, such as

the price of siloed customer service across channels or of privately maintaining systems after vendors cease to support them.

While expensive up front, core replacement or renewal ultimately can simplify a bank's processes while adding flexibility, be it in product bundling, real-time capabilities, or systems unification following a merger or acquisition, Sindhu relates. "The key question that I ask up front is, 'Do I feel the need to grow revenues?' " he says. "Core banking is a way to do that." --*M.G.*

## **7. Analytics: The Next Generation?**

For at least the past two years, bankers have been urged to recognize the value of analytics tools to help identify and manage risk, enhance customer insight, and improve product, pricing and channel efforts. As a growing number of banks invest in business intelligence-related systems, analytics will continue to be a hot technology in 2011 -- but more because of market developments rather than new technical capabilities.

Or, as Richard Martino, SVP, market analytics & performance solutions, U.S. Bank, said in a presentation at BS&T's 2010 Executive Summit, "At the end of the day, analytical competitors try to improve the odds of success [by leveraging] customer data for multiple uses and actions, [including] treatment strategies, retention tactics and capital allocation."

For example, with new regulatory restrictions on interchange revenues and other transaction-related fees, banks will start using analytics tools to look at "transactional data" -- how their customers are using (or not using) their credit and debit cards, according to JJ Rorie, director, product development, First Data Corp. (Atlanta). With the understanding of which customers are using their cards mainly for big-ticket items and which ones are using them to purchase day-to-day items, banks can identify patterns and then tailor their marketing efforts more profitably, she says.

With potential applications of analytics expanding, the biggest obstacle to optimizing these investments could be a lack of skilled professionals with specialized expertise in this area. U.S. Bank's Martino referenced economist Hal Varian's prediction that "The sexy job in the next 10 years will be statisticians," adding that, "The real trick isn't doing the math, but telling a story -- what can I do with [this information]? That expertise is scarce."

First Data's Rorie notes that banks' investments in analytics systems increasingly are being initiated by the chief marketing officer or line-of-business executives in areas such as cards and payments. "Everyone's starting to get more sophisticated about analytics and knowing the power of it," she says. --*Kathy Burger*

## **8. Mobile Payments Set to Soar**

Mobile payments, distinct from mobile banking as a whole, will follow a meteoric trajectory next year. While payments made from mobile phones in 2010 amounted to \$16

billion, Aite (Boston) research director Gwenn Bezard predicts these types of payments will experience a 68 percent compound annual growth rate over the next five years, which pegs the volume of mobile payments at \$46 billion next year and at \$214 billion in 2015.

Bezard says the recently announced Isis mobile payments joint venture between AT&T, Verizon and T-Mobile (see related article, page 9) will have a profound effect on mobile payments adoption next year. But he also envisions major participation by banks. "Banks will have a very significant role," he insists.

Taking advantage of the Near Field Communication (NFC) contactless payment chips that handset manufacturers are embedding in their phones, the mobile wallet solution that Isis is developing will replace credit and debit cards, loyalty cards, and coupons, Bezard adds. Other mobile payments initiatives that sprouted this year -- such as a pilot of microSD chip-based mobile payments by Visa and DeviceFidelity along with Wells Fargo, Chase, Bank of America and U.S. Bank -- will fade away in favor of more ubiquitous plans, such as the Isis initiative, he contends.

Mobile operating system (OS) providers will get in on the act next year, too. Google CEO Eric Schmidt announced in late November that the search giant is partnering with third-party payments processors to create "bump for everything" mobile payments technology that will be baked into the next Android release. And Apple has indicated that it wants the iPhone 5 to be an "iWallet."

Still, Bezard doesn't advise banks to rush into mobile payments. "I don't see an urgency for banks to be the first provider," he says. Rather, he adds, they should find ways to work with providers while steering clear of intermediary technologies. --*P.C.*

## **9. Collaboration: It's a Small World After All**

The ability to work together in real time with colleagues and clients on the other side of the world used to be the stuff of science fiction. But with the rise of new collaboration technologies -- be they based on the web or in the cloud, and whether they are powered by videoconferencing, voice, wikis, software or hosted solutions -- collaboration tools have reached a point where cost and familiarity are no longer a barrier to adoption.

Collaboration technology is reaching consumers in the form of smartphones like Apple's iPhone enabled with video chat and web apps such as Google Docs. It's hitting the enterprise in the form of telepresence, videoconferencing and enterprise content management. For many banks, collaboration begins with ECM -- not only as a means to work across departments or across the world on a document, but to be able to track internal or customer documentation and information across a longer lifespan.

"Having files here in a vault wasn't practical," explains Andrew Weibel, assistant vice president of information systems for Westfield, Mass.-based Westfield Bank, which primarily serves commercial clients. "We had to allow staff access to these documents."

For other banks, such as Umpqua Bank, videoconferencing could be a means to connect customers in one location with experts in another branch. Umpqua -- a leader in building a connected and integrated customer experience through technology -- expected to have videoconferencing in seven to 10 of its banks by the end of 2010. --*M.G.*

## **10. Loan Automation: A Long Way to Go**

Banks have been talking about bringing more automation to the lending process for several years, but that goal will take on additional urgency in 2011. According to a recent study by financial analysis software company Sageworks (Raleigh, N.C.), 57.2 percent of the financial institutions surveyed said they plan to make more or significantly more commercial loans in 2011 compared with 2010; 31.4 percent of respondents said they plan to make the same number of loans.

However, fallout from the subprime mortgage crisis will continue to shape banks' lending strategies, as revelations about shoddy foreclosure practices are directing renewed scrutiny on banks. Meanwhile, the average timeline of the mortgage origination process actually is increasing, while customer satisfaction has declined, according to the J.D. Power and Associates' (Westlake Village, Calif.) 2010 U.S. Primary Mortgage Origination Satisfaction study. The study found that the time from application to approval increased to 27.5 days in 2010 from 20 days in 2009, and the time frame for the entire origination process increased to 52.1 days in 2010 from 46.9 in 2009.

"Servicing the loan efficiently gives you a loyal customer," according to Christine Pratt, senior analyst, Aite Group, who discussed how banks can revive the small-business lending channel at a recent Aite conference. Whereas banks have been focusing on analytics to manage risk in the lending process, "There will be a shift in 2011, ... a positioning for growth," Pratt said. "There will be a migration to technologies that speed up processes around decisions." For example, she noted, "There are some wonderful new iPad applications that speed the loan process."

Of course, automation of lending processes is no simple task, as it potentially could involve a whole portfolio of solutions, from core systems to data aggregation capabilities to risk management/compliance systems to fraud detection tools to imaging and content management. In growing the small-business loan portfolio, Pratt advised banks to, "Consider alternatives like managed services and cloud [computing] that won't take huge capital investments to move forward." --*K.B.*