KeyCorp's Internet Investment Pays Significant Dividends

Back in the middle of 1997, Cleveland-based KeyCorp took a good, hard look at how the Internet was affecting the financial services industry—and found itself in a position of needing to play catch-up. The fact that KeyCorp is now considered one of the nation's leading online financial services companies is testimony to just how well the firm responded to that challenge.

"As technology evolves and the pace of change increases, events emerge on the forefront of development that aren't anticipated by all competitors—at least not in the same time frame," says K. Wade Tolman, executive vice president and group manager at KeyCorp.

According to Tolman, the need to close a perceived gap and reach "Internet parity" with its competition was a major driver in the initiative that has resulted in KeyCorp's current state-of-the-art customer service network—a network based in the Internet and in Web-based technologies.

"I think that when the Internet began to emerge, it was perceived by a few in our company as a clear opportunity to extend our reach to customers, particularly those that would have been outside of our primary markets," he continues. "So we did have some sense of what the Internet could do for us in terms of broadening our reach and improving our responsiveness to customers. But we were also very aware of what many other competing organizations were doing relative to the Internet—and initially our effort was driven largely by the desire to maintain parity with our peers."

An Opportunity Comes Together

Banks and financial institutions traditionally have been bound by brick-and-mortar infrastructure. According to Tolman, some attempts have been made to expand beyond that limitation, but the technologies used were only marginally capable.

"In the case of the Internet, though, the technology was a breakthrough," says Tolman. "It clearly extends reach and is accessible by any interested party, so that enhanced market potential also became a driver in our initiative."

This new technology was coming to the fore at the same time that significant legislation deregulating banks was being enacted.

"A piece of legislation called the Riegle-Neal Act, which had to do with national banking, was passed," notes Tolman. "It really broke down the old barriers that had existed around state vs. national charters and interstate banking, effectively eliminating the old interstate banking legislation that had been in effect."

This opened up all boundaries to banks on a nationwide basis; and by providing them with the ability to branch nationally, it allowed corporate customers with a national or global presence to conduct business across their entire franchise with a single financial institution. This new ability dovetailed with the emerging Internet technology, which provided the means to access all this formerly disparate information at a single point—the Web browser.

"It's one thing to aggregate all of a far-flung enterprise's accounts and provide statements, balances, transaction information, account transfers, and so on. But it's not really valuable to them unless they have easy access to it. Companies must be able to access this information—and take action on it—from any location at any time," says Tolman. "This is another important strength of the Internet."

Seeing this convergence of technological and regulatory opportunity, KeyCorp moved quickly to collapse all of its state charters and form a unified national bank, becoming one of the first financial institutions to do so.

Building out the Internet Architecture

At the time it made that strategic move, KeyCorp had a very rudimentary Internet architecture: a single nonredundant T1 access line with a minimal set of applications supporting their Key.com site—a static destination. At the time, the site was hosted externally.

"When we made the decision to upgrade our Internet channel significantly, we also made a commitment to provide our customers with a good experience in terms of availability, performance, and security," says Tony Farinacci, senior vice president, enterprise network, at KeyCorp. "So as we prepared for this second-generation Internet banking approach, we spent a great deal of time considering how the infrastructure should be evolved."

From a design perspective, four essential objectives were set as targets:

- Scalability
- Security
- Reliability
- Availability

Scalability

"Because at that time we had no idea what to expect in terms of growth, we had to build an infrastructure that was highly scalable," says Tolman.

The company wanted to be able to respond quickly to whatever the demand might be, wherever and whenever it might occur. Accordingly, the company set a high bar for the new infrastructure.

"Our very first aspiration was to set it to accommodate a million customers—even though that was a fairly aggressive goal at the time," says Tolman. "We knew we wouldn't be operating at that level quickly, but building it to that scale ensured that we wouldn't underestimate the market."

Such planning proved to be prophetic: KeyCorp now averages nearly 15 million electronic transactions monthly and anticipates that approximately 65 percent of all its transactions will be handled electronically this year.

Security

According to Tolman, security was a critical consideration—particularly from the customer perspective.

"Unless the customer feels that everything about their ability to conduct business over the Internet is secure, they simply won't conduct business over the Internet," he says. "So we employed the best security technology available, including 128-bit encryption."

KeyCorp's security architecture is based on a combination of Cisco routers and PIX firewall solutions that support Internet banking applications according to the highest security standards. Farinacci says that he hasn't had a security problem to speak of since the system was implemented,.

"Our customers are confident in the security measures we have established, and their increasing use of the system over time underscores that this confidence remains at a very high level," he says.

Reliability

In the brick-and-mortar banking business model, the bank dictated the terms under which customers did business. They had to come in and conduct their business when the doors were open; and after they closed, even if work was being performed on their accounts, it was essentially inaccessible to the customer.

All that has changed with the coming of the Internet.

"Now the customer dictates the time, place, and terms of doing business," says Tolman. "So in our effort to make data available—and to be accessible on their terms—we needed to make sure that the infrastructure was highly reliable. We had to make sure that if we lost a component in the system, we wouldn't lose the customer."

Having redundant systems was a key in achieving this.

"As you can understand, technology is always prone to failure," continues Tolman. "It's not uncommon for someone doing good work with a backhoe to dig up a telecom cable somewhere—and without redundancy, that takes a segment of our user population down. With redundant systems in place, we have the capability to switch over to a redundant circuit, and life goes on without a hitch."

KeyCorp put in a dual ISP solution, utilizing both AT & T and UUNet for high-speed links across two geographic data centers—one in Cleveland, the other in Albany, NY. The network employs a full suite of Cisco routers as connections back to the Internet and internally to the Internet infrastructure, with 7500 routers being used to connect out and 7200 routers providing the ability to reroute data between the data centers.

"We have Web servers front-ending in Cleveland and Albany, and application servers in both locations as well," says Farinacci.

"From an infrastructure point of view, I never have to worry about the Internet architecture," he continues. "The system has the ability to lose any component and reroute to full capability within six seconds."

For example: If a customer is having a session with Cleveland and the firewall goes down, the session is rerouted to Albany automatically—and the switch occurs transparently to the customer.

Availability

According to Tolman, the last piece of the infrastructure puzzle is availability.

"We still have legacy systems that have to process data every night, and without taking measures, this information would be inaccessible to the customer," he says. "We have been very aggressive in ensuring that data is always available, 24/7. By whatever channel by the customer chooses to do business with us, their information is always updated in real time."

Tolman cites ATM transactions as a good example of this. On the way home from work, for instance, a customer carries out an ATM transaction. By the time he or she arrives home and logs onto the Internet, that transaction will already be reflected online. Such speed and accuracy builds high customer confidence in the system.

Fine Tuning with Internet Appliances

To further improve system performance and provide the customer with optimum routing, KeyCorp has implemented Cisco Distributed Director and Local Director to manage workload across the company's Internet servers.

Cisco System's Local Director is a high-availability, Internet scalability solution that intelligently load-balances TCP/IP traffic across multiple servers. Servers can be automatically and transparently placed in or out of service, and Local Director itself is equipped with a hot standby failover mechanism, eliminating all points of failure for the server farm. Local Director is a high-performance Internet appliance with proven performance in the highest-traffic Internet sites.

The Cisco Distributed Director efficiently distributes Internet services among globally dispersed Internet server sites by leveraging the intelligence built into the Internet router-based infrastructure, standard Domain Name Services (DNS), and the Hypertext Transfer Protocol (HTTP).

Farinacci says both of these components are good examples of Internet Appliances. "The idea behind Internet Appliances is to place a single function onto a dedicated box," he says. "This focuses and simplifies the work to be done, increasing performance while driving down costs. They're less complex, easier to configure, and much more reliable over time—something that has been proven out in our system."

Balancing Content and Technical Concerns

According to Tolman, some of KeyCorp's success in the Internet initiative must be attributed to the excellent balance that has evolved over time between infrastructure and content emphasis.

"When we first started on this quest, the initiative was clearly 'owned' by the technology group within KeyCorp," says Tolman. "Our Chief Technical Officer at the time had a better sense or vision of where the Internet might lead than did most of our lines of business; and this had a positive effect, because it gave us a duality of focus as the Internet began to emerge. We were in fact focused on content, and we had a content manager at the time; but our focus on

infrastructure was equally strong, so that we were committed to supporting and sustaining what we built."

Tolman believes that without this balanced focus, KeyCorp might have overemphasized content at the expense of infrastructure. Such a mistake was common in many early Internet banking ventures, and the effect on performance quality often led to disappointed users.

Another benefit of having the technology group lead the initiative at the outset was that a common look and feel emerged across the company's lines of business.

"This wouldn't have happened if our lines of business had moved independently to build their own Internet channels," Tolman says.

As KeyCorp's Internet presence has matured, the center of "ownership" has shifted toward content and the lines of business—a natural progression once the infrastructure is solidly in place. The company still has one individual overseeing the total Internet channel, though, to ensure consistent look and feel and brand presentation.

A Foundation for Business Initiatives

One of the other drivers for KeyCorp as it pursued the Internet initiative was the vision of its CEO to have the company's central site become a portal or destination site—so feature-rich with industry-related information that customers would go to it as a destination from which they could easily access information they considered valuable, whether or not it related directly to KeyCorp.

"There was some early work done with this specifically in mind—for example, a joint initiative with Amazon.com—but this focus has become less important as we've become more expert in running the Internet business," Tolman says.

According to Tolman, the concept of a website that would serve as a general destination has evolved more specifically into one that facilitates more business-to-business (B2B) transactions.

For example, established KeyCorp customers now have the opportunity to leverage KeyCorp's buying volume to lower their own procurement costs for goods and services (e.g., office suppliers).

In another B2B initiative, the company's Electronic Services Group can also help small business customers to create Web storefronts for secure transactions, through a strategic partnership with Econex.

These types of services provide more value-added incentive for doing online business with KeyCorp.

Providing Pure Opportunity

The Internet channel is also designed to afford KeyCorp what Tolman calls "pure opportunity" for customer retention and cross-selling activity.

"All financial institutions are looking for a larger share of their customers' wallets," says Tolman. "This is particularly important for KeyCorp, because we've publicly announced our intention to be a broad-service financial institution and have acquired a number of companies specifically to broaden our services. Therefore, we're actively looking to cross-sell to our customer base."

When KeyCorp customers log onto Keynet for the first time, they complete a fairly detailed profile that KeyCorp then uses to surgically target its array of services to the specific needs and interests of that customer.

"We offer specific information to each customer based on their own information," says Tolman. "It's 'marketing to the one,' a truly powerful tactic empowered by Internet technology."

Benefits Beyond Parity

What began as an exercise to assure competitive parity has resulted in a resource that's given KeyCorp competitive advantage. The company's new Internet channel has dramatically extended market reach and improved customer satisfaction, and it's rapidly facilitating the company's strategic objective of providing a more diversified portfolio of banking and financial products and services to its customer base.

"We've gone from basic banking services to trust applications, 401K products—nearly 30 different Web-based applications at this time," says Farinacci. "Our lines of businesses are quickly getting their products on the Net and providing better and faster access for their customers."

He concludes, "To compete in today's financial marketplace, these capabilities are essential; and with the help of partners like Cisco, we've built an Internet channel that will ensure our ability not only to compete, but to lead, in the dynamic years ahead."

NEXT STEPS

To see the extensive range of online financial and banking services that KeyCorp now provides, go to: http://www.key.com

For more detailed information on the Internet Appliances that Key Corp is using in its Internet architecture, visit
http://www.cisco.com/warp/public/779/smbiz/service/pubmatrix/hw/hw341_xref.htm
or
http://www.cisco.com/warp/public/779/smbiz/service/pubmatrix/hw/hw340_xref.htm.
Click on the link for product literature for Local Director (first URL) and Distributed Director (second URL).

IN BRIEF

**Challenge ** KeyCorp, one of the nation's largest multiline financial services companies, determined that it needed to upgrade its Internet channel to achieve parity with competitors who were becoming more sophisticated in leveraging this technology—and to provide a better platform to reach into new markets, launch new business initiatives, and increase customer satisfaction through better responsiveness.

**Solution ** KeyCorp worked closely with Cisco to upgrade its rudimentary Internet channel to one that was scalable, secure, reliable, and available 24/7 to its growing base of customers. Rolling out a new core network on an ATM backbone, it dramatically improved Internet capabilities to extend its service offerings and to provide highly reliable service and real-time access to customer data—moving it from a "catch-up" position to one of industry leadership.

**Results ** KeyCorp is now one of the nation's leading online banking institutions, completing approximately 15 million electronic transactions monthly—nearly 65 percent of its total transaction volume. The company has leveraged its new capabilities to launch a host of business initiatives, facilitating movement toward its announced strategic goal of providing an increasingly broad range of financial instruments and services.