

# All Charged Up

MasterCard gets a payoff through a flexible approach to IT-enabled product development BY MICHAEL FITZGERALD

**The credit card business turned 55 last year**, and it might look as though the industry is having a midlife crisis—what with credit purveyors trying to dump the classic mag-stripe-and-plastic cards in favor of cards that use wireless technologies and even mobile phones. But that’s no midlife crisis. It’s market expansion, and it could change the way most people use their credit cards.

“Startling innovations in technology are rolling like thunder through our industry,” says W. Roy Dunbar, MasterCard’s president of global technology and operations, in a May 2006 speech to the 18th annual Card Forum & Expo. Among the factors Dunbar cited as having sparked the need for innovation: consumer demands for easier, more secure transactions; globalization; and the impact of new technologies, which are creating new business opportunities (such as paying for something with a cell phone).

MasterCard faces more competition in part because it (along with Visa International) recently lost an antitrust suit, leaving the door open for its member banks to end now-exclusive relationships by signing deals with American Express and Discover. The company also sees an uptick in competition from PayPal and other online payment services.

Dunbar says MasterCard has plenty of good ideas; the question is knowing which ones to pick. Dunbar joined MasterCard two years ago after more than a decade at Eli Lilly. One of the main concepts he brought with him from the pharmaceutical industry was the idea of failing fast—that is, testing ideas quickly and discarding them if they don’t work. In this way, one can accelerate the process of finding ideas that do work.

“You can’t institutionalize innovation, but there may be supportive processes you can build,” says Dunbar.

## A Process for IT Innovation

Accordingly, MasterCard has moved to formalize support for innovation within its culture. It is two years into a program called Rapid Value Creation, an effort to approach new ideas systematically across the 210 countries where it operates. Rapid Value Creation starts with MasterCard’s key functional executives, who meet monthly to set priorities for new ideas that come from groups like IT, product development and marketing. In this way, management is able to get in step behind ideas—and get them to market—more quickly than in the past.

Dunbar says MasterCard’s IT systems are key to implementing new ideas.

### Reader ROI

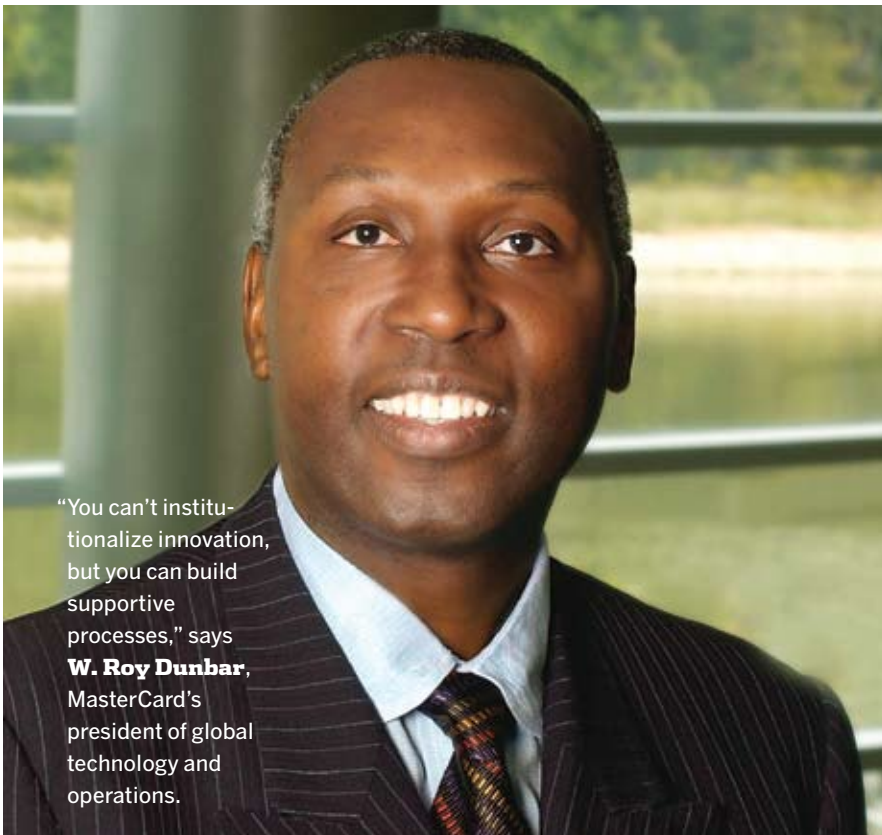
- ∴ What drives innovation in the credit card industry
- ∴ Ways that IT enables new product development

“The architecture is component-based and many elements are brought together in varying configurations to create just the right capability to support innovations,” he said. At the beginning of the decade, MasterCard spent \$160 million overhauling its core systems, which Dunbar says should help the company develop new markets ahead of its competitors (the biggest of which is Visa).

Craig J. Maurer, an analyst at Soleil Securities Group in New York who has tracked MasterCard since it went public in May 2006, says that if MasterCard’s IT is ahead of Visa’s (something difficult to determine because Visa remains a private association), it may help MasterCard win deals with banks, particularly in emerging markets overseas, where Visa is less entrenched than it is in the United States.

MasterCard appears off to a good start with PayPass, its wireless, or “contactless,” card system, which allows people to use a credit card without swiping it through a reader. Since its launch in 2002, PayPass has more than 11 million cards and devices in circulation, making MasterCard the largest purveyor of such cards. Meanwhile, MasterCard’s success in expanding PayPass worldwide (in 13 countries so far, including Turkey) won the company several innovation awards in 2006, including being named Company of the Year by consultancy Frost & Sullivan. And the recognition is opening up new markets for MasterCard, including, potentially, the New York transit system, which has expanded a recent six-month trial of PayPass to enter the subway.

The subway trial required MasterCard to revise its technology approach more than once—for example, to adapt the range and sensitivity of its readers so that users didn’t get stuck in turnstiles waiting for their payment to be approved. The experience



“You can’t institutionalize innovation, but you can build supportive processes,” says **W. Roy Dunbar**, MasterCard’s president of global technology and operations.

has allowed MasterCard to look at how it could use PayPass to take tolls from cars, and other ways to get a slice of low-revenue transactions. Thinking in such directions is paramount for MasterCard, because credit cards, debit cards and stored payment cards now are used as often as cash. Maurer observes that MasterCard seems more aggressive than the competition about pursuing technologies like contactless payments, but he cautions that this is a nascent market. There are only about 36,000 establishments with PayPass readers, compared with 23 million places with conventional readers. He is more impressed by a deal between MasterCard and Cingular Wireless to test contactless payments using cell phones, in part because of Cingular’s customer base of more than 50 million. But again, the impact depends on whether con-

sumers take to the idea. In January, the New York subway started testing PayPass using cell phones as a payment device.

### IT in the Driver’s Seat

One way MasterCard is trying to innovate faster is by expanding its sources of ideas. The company is going beyond its traditional partners, the financial institutions, and is listening as well to merchants and even consumers. Within the IT department, Dunbar has put in place what he calls an Accelerated Solutions Development Environment (ASDE), a software development process that helps IT respond more quickly to such proposals.

Dana Lorberg, group head of technology strategy and business development at MasterCard, says the environment enables the company to choose the software development methodology that meets a customer’s needs best; some projects might be developed using a traditional waterfall methodology, others using an iterative method or agile methods. Project managers use ASDE to take a project from start to finish—from

requirements development through the pilot stage to product launch.

The ASDE process was inspired by a project that addressed new card activation. The company saw people getting new MasterCard and then leaving them, unactivated, in their wallets. One of MasterCard’s issuing banks offered to work on the problem. MasterCard and the bank put together a program through which people who used their cards at participating stores got rebates. From the initial two-day meeting between MasterCard and the bank, it took six weeks to launch, including changes to MasterCard’s systems in order to credit customer accounts with incentives to use the cards and with rebates when they did use it. The result was a significant increase in card usage over a three-month period.

Afterward, executives recognized the value of having a repeatable process for identifying and executing innovation. “What is misleading is the idea that innovation is dreamed up by product guys,” says Jerry Sargent, MasterCard’s vice president of debit strategy and alliance development: “IT, they see some things that we don’t see. Our view of this innovation process is extremely collaborative.”

ASDE was useful in developing a real-time debit card fraud monitoring tool that MasterCard expects to roll out this quarter.

One of MasterCard’s technology vendors suggested the concept for the fraud monitor, proposing the two companies work together on a new way of scoring online transactions in real-time. The tool, employing neural network technology, uses information such as where a card was used last and develops probability ratings that a particular transaction might be fraudulent. MasterCard was able to develop a tool in about six months.

Dunbar says examples like these show that MasterCard has been able to boost its ability to innovate through collaboration. “We can facilitate large-scale problem solving and creativity,” he says. Now MasterCard just has to keep up with the future. **CIO**

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