

The Innovation Paradox

Business innovation
or innovative IT?

The Virtuous Cycle of Innovation and Efficiency

By Gary Beach, Publisher Emeritus, *CIO* magazine

Choice is good.

And when it came to IT investment strategies, chief information officers and senior IT executives used to have lots of choices. Some focused their strategy on driving sales and creating an environment that facilitated innovation. Others looked to leverage IT to lower the overall cost of business or simply run their IT shops more efficiently.

Now, the option of choice is gone. CIOs must do it all.

Dell Inc. recently partnered with *Harvard Business Review* to produce a report addressing the “do-it-all” challenges for CIOs.

The report, “Innovation from Efficiency: Unlocking the Value in IT Systems,” draws its conclusions from a survey of 371 business executives who are members of *Harvard Business Review’s* Advisory Council. These business leaders were asked to select their top three business priorities in the coming year.

A quick review of the data seems to suggest that enabling innovation, driving more sales and creating greater levels of customer acquisition/retention are more than twice as important as operating an efficient IT infrastructure.

I shared these results with the CIO of a major financial company for her observations on what is more important: innovation or efficiency. Her response hit the mark: “CIOs who bifurcate their strategic priorities into innovation or efficiency will never maximize either objective. You can’t have one without the other. Innovation drives investment efficiency. In turn, investment efficiency creates more dollars for the CIO to innovate. Innovation is not inexpensive. The greatest challenge a CIO has in managing innovation and efficiency is to be able to be well versed in the goals of the business so when innovation creates efficiency, the CIO can hold on to those dollars to reinvest into innovation rather than showing up on the CFO’s bottom line. It is not easy.”

The 2013 *CIO Magazine* “State of the CIO” reports that CIOs indeed do plan to spend more time cultivating better relationships. Sixty percent said they plan to meet more frequently with influential stakeholders.

Another CIO I spoke with believes strongly that CIOs cannot afford to solely strengthen relationships with internal stakeholders. “CIOs need first to be on the front-lines of innovation at their companies. And the front line means getting close to the customer. Only by feeling customer pain can a world class CIO frame the innovation and efficiency strategies to solve it.”

The Dell Inc./*Harvard Business Review* study hits the mark: No longer are innovation and efficiency siloed objectives for CIOs. Rather, they are part of a “virtuous” cycle where innovation and efficiency are deeply integrated corporate strategies.

To survive in the 21st century, CIOs must do both.

Let’s keep the innovation discussion going. Meet me on Twitter @gbeach.



The Innovation Paradox

Like the proverbial question of the chicken and the egg, which comes first: business innovation or innovative IT?

Business innovation can be defined as creating new economic value, new value for customers or a competitive advantage. Usually it is initiated by the business units working in concert with the IT department, which leverages innovative technology as a tool to help create business value.

"We see business innovation today being driven by the lines of business, co-creating value with IT," says Jim Stikeleather, chief innovation officer at Dell Services. "This contrasts sharply with the former vision of IT as a service organization in charge of the infrastructure, where cheaper/better/faster is the order of the day. CIOs today need to ask themselves, do you want to be the chief infrastructure officer or the chief innovation officer?"

In this view, the needs of the business drive IT to innovate by creating radically different economic value or radically more effective ways of generating current economic value.

Interestingly, recent drill-downs into successful enterprises show a nuanced relationship between IT infrastructure and business innovation. A reference IT architecture based on a strategic plan provides the essential infrastructure for the modern business. For a growing number of enterprises large and small, an IT infrastructure that is simplified, standardized and automated is a necessary step toward business innovation.

Owens & Minor's Reference Architecture

This paradox can be seen at Owens & Minor (O&M), a Fortune-500 medical supplies distributor and provider of healthcare supply-chain services. While IT is closely aligned with the business in a strategy of expansion into new markets, new products and new services, a simplified and standardized reference IT architecture underpins innovative solutions. In fact, cost savings from more efficient IT is reinvested to fund business-enhancing projects.

"Our strategy going forward includes a focus on expanding our services to manufacturers beyond those that have typically gone through wholesale distribution," says Rick Mears, senior vice president and CIO at O&M. "We also want to expand our services to healthcare providers outside acute-care hospitals, such as surgery centers and physicians' practices." In addition, the company is expanding sourcing and distribution of its MediChoice® label medical supplies. Says Mears, "IT's role is to expand and transform its capabilities to support, and even push, the business strategy in every way."

To accomplish this, O&M has worked closely with Dell Services. By outsourcing routine IT operations to Dell's data center in Plano, Texas, IT workers are free to focus on higher-value activities. And Dell's consultants have helped O&M to transform its IT architecture into a cornerstone of business innovation.

"Dell provided a strategic and visionary service in helping us create a five-year plan on how new technology could drive our business strategy," says Mears. "Dell also helped us deploy new technology that would create savings and opportunities to fund new solutions that will change how we support new markets."

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—Rick Mears, senior vice president and CIO, O&M

The key is a standards-based, layered systems architecture that makes it easy to plug-in advanced technology such as cloud-based infrastructure, best-of-breed software as a service (SaaS) applications and device-independent mobility. Leveraging virtualization and a private cloud increases IT efficiency and agility while reducing costs, compared to the server-by-server approach to application deployment. In addition, a plan for master data management eases the process of change, since it lessens the time to deploy and integrate new applications.

An example of these benefits comes from O&M's inventory management function. Prior to the new IT architecture, silos of inventory-management code existed within dozens of supply-chain and logistics systems. After the new architecture, O&M's vice president of inventory is spearheading a project to replace legacy code with two best-of-breed inventory systems, one for planning/forecasting and one for operational management. The result will be better inventory management across the enterprise due to improved functionality and standardized processes.

Another positive from a standardized IT architecture comes from its ability to more easily support device-independent mobility — highly useful to customers wanting to use O&M's new customer portal for online ordering. "It's a great example of how a user can use any device on any network on any platform," says Mears. "The IT architecture and standards around data management enable us to plug in most modern applications."

This freedom from restrictions hints at the future of innovation at O&M: reducing barriers typically put up by IT by giving tech-savvy business users direct access to information technology. "If we can get everybody working together without restriction," says Mears, "we can literally add value to our technology base every day."

Reducing Time to Value

At DHL, the Deutsche Post DHL Group, a standardized and simplified IT infrastructure serves as a catalyst to innovation, says David Thornewill, CIO of Global Business Services at DHL. The 13,000-employee shared services group supports business units such as supply chain, express delivery and freight forwarding. To improve its support and drive innovation, the group is pursuing STONE, a vision for IT that stands for a "strategy of one."

"Like many enterprises that have grown through acquisition, our application landscape is unnecessarily rich," Thornewill says. "To become more agile and innovative, our vision is to have one data center, one version, one process. Managers in the business units appreciate the benefits of such simplicity. If for every journey I had to build a car, I would be very selective of the journeys I made. If the marginal cost of each journey were peanuts, I would take some journeys that may or may not pay off. The opportunity cost is greatly reduced."

The simplification and standardization inherent in STONE enables Thornewill's group to capitalize on important trends such as cloud computing, device-independent mobility and the pervasiveness of IT tools. His department, for example, manages software licensing, security and other IT functions using an instance of Salesforce.com — far easier and less costly than typical management systems. Thornewill also notes the possibility of quickly and easily integrating cloud-based services for, say, a pilot project of a disaster-recovery solution.

"If the cap-ex of a proposed solution approaches zero, I don't need to go through the rigmarole of developing a business case, presenting it to somebody for approval and all that goes with it," says Thornewill. "With cloud I can say, 'Let's try this, and if it doesn't work we can try something else.'"

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Services, DHL

Potential benefits in business innovation also accrue from consolidating unintegrated, shared services systems, such as accounting, into one SaaS application. Aside from making it easier to enhance a single enterprise-wide solution versus many unintegrated systems, the cost savings can be considerable. The savings, in turn, open the door for new opportunities. "Every penny saved on accounting systems can be returned to the shareholders," Thornewill says, "or you can redirect your resources to do more useful things, such as developing new products or offering better customer service."

How Mobility Supports Patients

Improving customer service is the watchword at The Hague Medical Center in the Netherlands, where the IT infrastructure supports Wi-Fi and other mobile technology accessible through handheld devices. The customers are patients, who receive better care through the staff's pervasive access to information and communications, and whose stay is made more comfortable through access to mobile apps.

"Bringing information to the workforce through Wi-Fi technology and handheld devices has been a tipping point in healthcare and IT technology," says Cees van der Meiden, sector manager, Information and Communications Technology at the Hague Medical Center. "The fact that now — at least we're close to this — staff can access information on their handhelds in real time and act on it makes a real difference."

Interestingly, much of van der Meiden's innovative work centers on bringing mobile information to the patients themselves. "When a patient arrives at the hospital," he says, "we can greet them on their phone and say, 'We have an app, if you can use it, to guide you through our departments. We can inform the doctor that you have arrived at the hospital, we can tell you that you'll be next in line, and that you'll be helped in ten minutes.'"

"We are more customer focused than in the commercial world," continues van der Meiden, "but in some ways we have to be — because healthcare is very serious business."

Focusing on the Application

To fans of Formula 1™ racing, the IT operations of Caterham F1 Team are serious business as well. According to Bill Peters, Head of IT for the team, the business involves setting up in the field 20 times a year to support two cars that travel up to 200 miles per hour. Some 20 gigabytes of data is produced on a racing weekend, beamed from trackside back to base for analysis in a high-performance computing lab.

"Formula 1 racing requires tremendous computing power to make the cars, and we have to process real-time race results in climate conditions that are often harsh," says Peters. "So we run the gamut from a supercomputer with 186 Dell servers, to Dell Precision laptops that have to survive the wind and sand of Bahrain."

The latest in IT infrastructure helps support the team in the field. A half-rack of Dell servers run 20 virtual servers for team staff who build, run and manage the cars over the weekend. "The savings from not having 20 separate machines is tremendous," Peters says. "It's half of what some other teams take to races, and it gives us room to take things that are vital, like spare car parts!"

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To further improve operations, Caterham F1 Team and Dell Services are exploring how to leverage cloud computing. “If we had everything in the cloud, managed by Dell Services and accessible all over the world, we could feasibly get to a place where we wouldn’t have to take much kit to the race,” says Peters. “It could reduce our overhead massively.” More importantly, perhaps, cloud infrastructure could improve the core business of making cars go faster.

“The applications are the value for an F1 team, because the main thing is to help the engineers get more performance out of the race cars,” says Peters. “If we could focus our attention on the applications, rather than worrying about whether the backups were done, or whether a particular server was performing well, that would be a better use of our resources.” This is the vision of Dell Services’ cloud computing and managed services initiatives: providing reliable IT infrastructure so executives are free to pursue business innovation. ■

Hi-Vis Innovation at DHL

A simplified IT infrastructure led to business innovation at DHL’s Global Business Services. For the revenue-generating business units such as supply chain, freight forwarding and express delivery, however, DHL has created a separate group, DHL Solutions and Innovations (DSI). DSI is a think-tank where ideas for creating new economic value are explored and, ultimately, turned over to the business units for refinement and implementation.

“Innovation may be the only true source of competitive differentiation,” says Jim Stikeleather, chief innovation officer, Dell Services. “DHL is interesting because they have created an organization whose sole focus is to drive innovative ideas that are fed into the business units.”

To see this approach in action, consider a recent joint project between DHL and Dell Services. The collaboration involved devising new approaches to DHL’s business using the latest information technology. A key concept was to envision projects with broad appeal. Rather than point solutions, Dell created a systemic technology architecture for innovation that would apply to different aspects of DHL’s business.

Consultants at Dell Services came up with several approaches, including a mobile solution for supply-chain management; a data capture and communications solution for field sales staff; a field-service support application; and an augmented reality solution for component assembly, which is a big part of DHL’s supply-chain business.

The augmented reality solution was singled out due to its business benefits and broad appeal. “Many people don’t realize it, but DHL assembles and ships car doors and other products for major manufacturers,” says Glenn Wintrich, director of innovation services at Dell Services and leader of the DHL engagement. “If assemblers could visualize step-by-step instructions through augmented reality goggles, assembly quality could be improved, staff training would be easier and less experienced workers could be hired. In addition, the approach could be extended to field service, driver training and similar tasks at DHL.”

Once augmented reality was chosen, the next step was integrating a system in the lab, and then performing a pilot project involving a 10-step assembly. Upon successful completion, the project will be turned over to the supply-chain business unit for refinement and potential implementation in a real business situation.

Although the project is still in progress, it aptly illustrates the changing nature of the IT shop in helping to drive business innovation. “Our shared vision for innovation is not using technology to solve a specific problem; rather we’re providing solutions that prevent problems from happening in the first place,” says Stikeleather. “The collaborative relationship between DHL and Dell Services is a prototype for how services can accelerate innovation in the business arena. It exemplifies the benefits many customers are receiving from Dell’s commitment to an innovation agenda.”

Innovation: Business Challenges and Technology-based Solutions

Maintaining competitive advantage and growing the business are two of the biggest challenges executives must manage. But the speed of change in today's business environment is affecting the ability to meet these objectives.

New business models are emerging and the global environment we operate in is becoming increasingly complex. The ability to find and unlock new potential will differentiate the enterprise. But these opportunities are often hidden and can only be taken advantage of through innovation. To remain competitive and continue to grow, leaders must transform their business into an organization where innovation is continual, embedded in the culture and systemic. Dell has developed a comprehensive architecture for systemic innovation to do just that.

Innovation: Getting Ahead of the 2.0s

Change is occurring at an ever-increasing pace in seemingly every aspect of business. Thanks to the Internet, mobility, consumerization and social media, new ideas can emerge, take hold and go viral in continually shorter timeframes.

The response is a re-thinking of how we do everything and is the catalyst for the emergence of the 2.0s; new, globally disruptive and transformative models, systems and approaches to the way we manage (Management 2.0), organize (Enterprise 2.0), and buy and sell (Capitalism 2.0). These changing behaviors have an aggregate effect on the economic environment (Economics 2.0) and are underpinned by the emergence, implementation and application of technology (Information Technology or IT 2.0). The resulting challenge for the CIO and IT leaders is daunting.

The real impact of the 2.0s is not in how they are individually assessed, but how they interrelate and combine to transform the business landscape. Management 2.0 and Enterprise 2.0, for example, are altering the way corporations organize, operate and improve business performance. Efficiency can no longer be achieved simply through supply and demand improvements, but requires innovation to uncover new solutions with faster delivery and higher quality. Capitalism 2.0 and Economics 2.0 are changing how companies create value and, in turn, how they are valued.

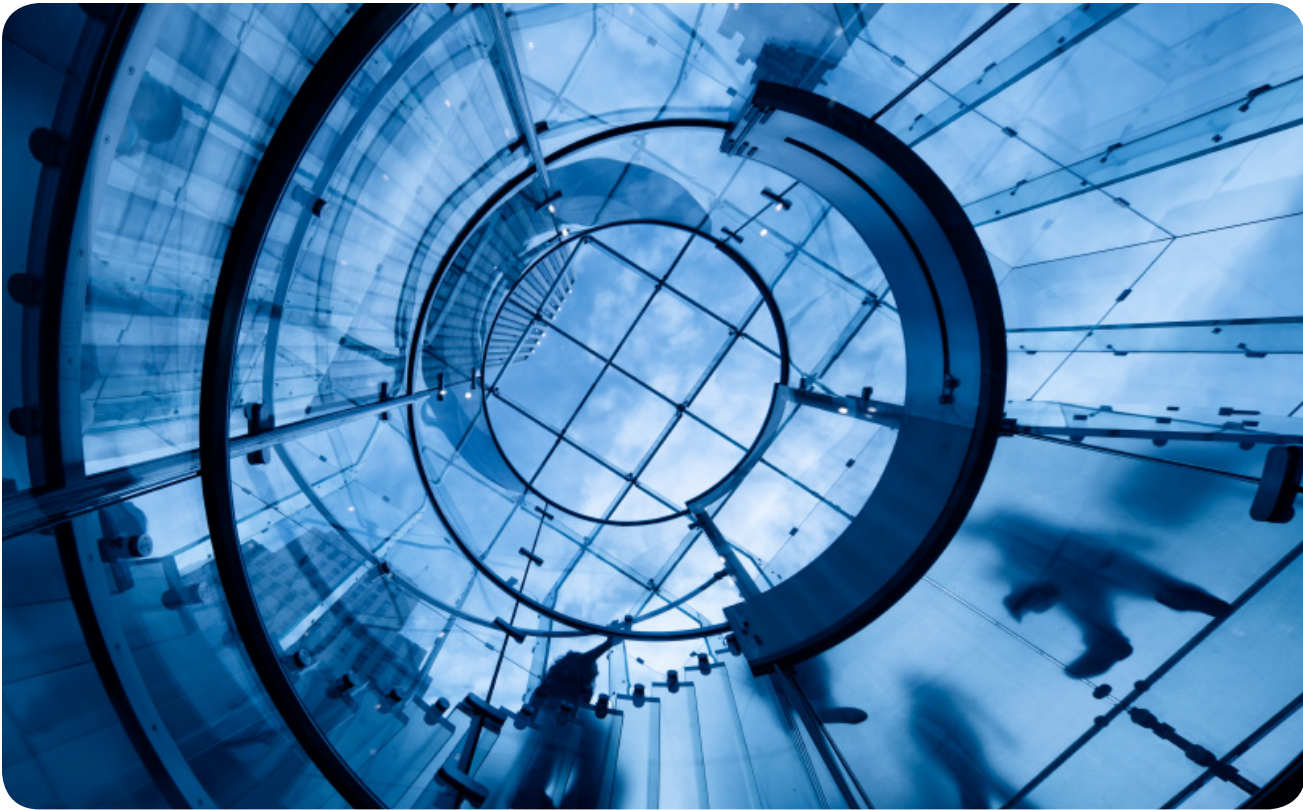
IT 2.0 is the recognition that technology is no longer a separate entity from the business, but is embedded in and, in many ways, is the business. Business needs are being redefined by increased demand for mobile access, sophisticated data management and analytics, and the ability to combat persistent global security threats. New utility models are being used to manage these demands by moving technology and applications to cloud environments in order to achieve business impact. IT 2.0 is redefining relationships with customers, partners and even competitors.

Business leaders cannot ignore the 2.0s, but need to embrace them and find new approaches to these complex trends. Because technology is so embedded in today's business models, IT innovation must be part of the answer. It is the CIO who is expected to lead the transformation and help achieve the desired business outcomes and get ahead of the 2.0s.

Your Customer Innovation Plan: Transformation in Action

Dell recognizes every company has its own strategic initiatives and challenges. Within Dell's Architecture for Systemic Innovation is the Customer Innovation Plan, which puts in place processes and governance to address these unique needs. The Plan is designed as a flexible guide that documents a collaborative, systematic approach to innovation between you and Dell.

The CIO's role continues to evolve: According to the State of the CIO 2013, one-third of CIOs now actively call on customers, up from just 18 percent two years ago.



Your specific Customer Innovation Plan will document the high-level processes, resources and key participants of a joint Customer-Dell team used to identify viable innovation opportunities that address the current and future business needs. The Plan is updated and maintained as your needs and organization change over time. ■

To find out how Dell can create a Customer Innovation Plan for you, contact a Dell representative at dell.com/services

Additional resources

More CIOs are Gaining Stature as Business Strategists

CIOs are earning business credibility, sharpening customer focus and raising IT's strategic profile, according to our 2013 State of the CIO survey.

[Click here](#)

CIOs Must Align Their Needs with Business Demands

Technology, by its very nature, is a sign of progress, and that means IT leaders can't rest on their laurels. They need to constantly develop their skills to stay relevant. Shweta Rao spoke to Srinibash Sahoo, SVP and head-technology, DSP BlackRock Investment Managers, to find out how he's doing just that.

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