Craig Bassett, Senior IT Manager at Honda Motorcycles & Power Equipment, says a speedy response to business needs is key to IT success.

IT at the *Speed* of BUSINESS

Customers, partners and the business want everything now, if not sooner. Here's how smart CIOs are picking up the pace.

By Larry Lange

In today's tough business climate, organizations must respond speedily to fast-changing market demands. For the CIOs of these organizations, that means constantly finding ways for IT to empower the business and to provide IT services faster than ever before. Often the solution involves adopting innovative new technologies while keeping a tight control on costs.

"Being responsive to business needs is paramount to success as both an IT team and a company," says Craig Bassett, Senior IT Manager of Honda Motorcycles & Power Equipment (MPE) in Melbourne, Australia. The business expects IT to constantly deliver improved solutions, he says, adding: "It's relentless."

Adam Famularo, General Manager of Cloud Computing at CA Technologies, notes: "In the future, CIOs will be judged based on how proactive their stance was in ensuring that IT runs at the speed of business."

Several factors are driving this need for speed. Newly empowered customers want their mobile phones and tablets wired to the enterprise — and to utilize social media tools for business, sometimes referred to as the consumerization of IT. There's pressure on CIOs to take business services global, even into emerging markets, and to keep up with the rapid growth of new technologies, especially with the advent of cloud computing. And for the first time, IT is being tasked by business to actually drive revenue. What's more, all this must happen now.

"In this new need-for-speed era, we urgently need CIOs who can solve business problems

PHOTOGRAPH: GAVIN BLUE

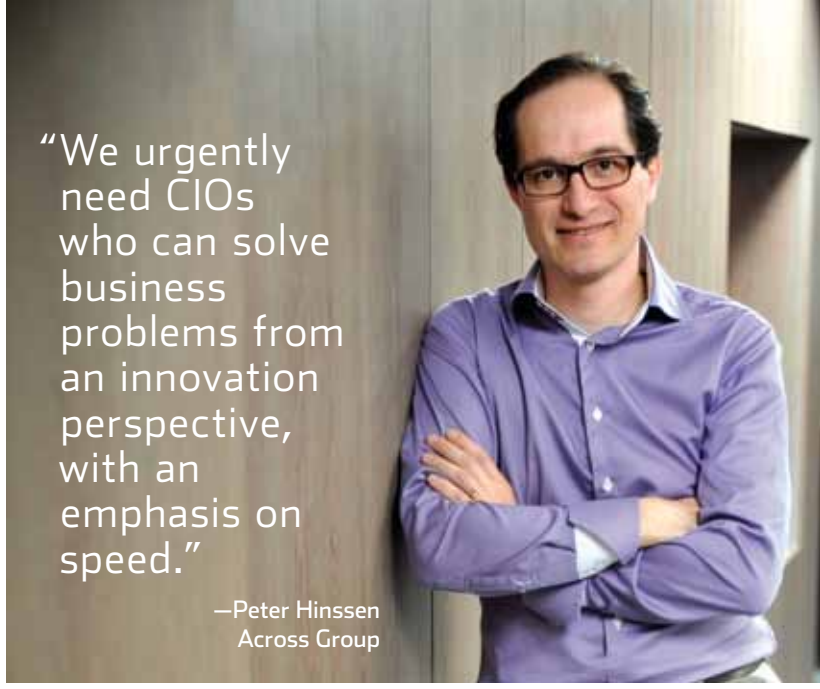
from an innovation perspective, with an emphasis on speed," says Peter Hinssen, lecturer, writer and co-founder of Across Group, an IT consulting firm.

To meet today's speed challenge, smart CIOs are opting for several approaches. Some deploy innovative technologies, including virtualization, cloud computing and advanced business intelligence (BI) tools. Others focus on their IT strategy, working carefully to align IT with the most important goals of the business. Still others find value in IT's culture by deploying leadership techniques to keep their staffs loyal, motivated, driven — and focused on the business. "It's time to rethink how you do things — now," urges Chris Curran, Diamond Advisory Services Principal at audit and consulting firm PricewaterhouseCoopers (PwC).

The degree to which IT is picking up the pace — and the degree to which that change matters to the business — is suggested by a CIO survey conducted this past June by Harvey Nash USA, an executive recruiter, in conjunction with PA Consulting Group. In the survey, more than a third of the respondents said driving revenue growth is now among their top priorities. Also, three-quarters of the responding CIOs said they believe that if IT fails to innovate, their companies will lose market share.

Driving business at high speeds is top-of-mind for Senior IT Manager Bassett at Honda MPE. The $300 million (Australian) company distributes motorcycles, marine power equipment and watercraft through a network of more than 800 nationwide dealerships utilized by over 4,000 dealer staff. Bassett's IT staff of nine took the initiative on its own to find ways to deliver more effective business services, and they began by revamping their customers' Internet capabilities. "We pushed for more and more online systems for empowering our customers [the dealers] to order products," Bassett says.

The Honda dealers that IT serves were working from old-school legacy systems that could not be enhanced by IT for greater efficiency, Bassett explains. So his IT group optimized those systems to move dealers over to a new online-based system, which IT could also flexibly tweak as needed in meeting the dealers' needs.



Now, during a sales transaction, a dealer can simply log on, choose a product and the color that its customer wants — anytime, 24x7, enabling the warehouse to accommodate those orders faster than ever before. In fact, in the 12 months since the new system was implemented, online ordering by Honda MPE dealers has jumped to 90 percent from 50 percent, according to Bassett. This means the dealers using the new system are getting the administrative work for their sales transactions done faster than ever, freeing them to spend more time focused on new sales. But this also means higher levels of customer satisfaction, as consumers get their products delivered quickly by Honda MPE warehouses.

SPEEDING THE CLOUD IS NOW A SNAP

Speed is a huge incentive for many cloud-computing projects. That's why CA Technologies is offering a new way for IT departments to deploy cloud computing at the speed of business.

The approach uses an innovative methodology known as Rapid Server Imaging (RSI), developed by partner Racemi Inc. IT technicians, working with an optional RSI component embedded in the Server Automation solution from CA Technologies, can simplify and speed huge data migrations to the cloud. "We've cut provisioning and migration time down from days or weeks to hours, even minutes," says Bill Talbot, Product Marketing Manager for Service Automation at CA Technologies. "As a baseline, we're seeing an 80 or 90 percent reduction in time and effort."

To do so, RSI captures an image — a real-time snapshot — of an entire server's content. That includes the server's operating system, applications and configuration settings.

In the past, this task was performed by the time-consuming and meticulous method of "scripting" — that is, coding by software engineers. Scripting is especially time-consuming when it involves the laborious task of server provisioning, which prepares a server for running applications, processing workloads or other operations. Typical provisioning tasks include selecting the server, loading the operating system software and applications, and configuring network parameters.

For just a single server, that's no big deal. But for a large enterprise data workload migration to the cloud, IT might need to script and provision hundreds of servers. That's the potentially time-consuming, error-prone part.

RSI eliminates the need for all that manual scripting. "You simply capture all those servers' images," Talbot explains. "Then you simultaneously port them very rapidly to exactly where you want, all with very little manual effort."

The RSI process also delivers greater flexibility. Once configured correctly, IT can use the system to migrate from physical servers to virtual servers; from virtual servers to cloud servers; from one cloud server to another; and even from a public cloud server back to a local server.

When Amazon Web Services (AWS) had a huge and lengthy outage this past April, some healthcare-company customers were unable to access their patient records. Had those companies deployed RSI and the CA Service Automation solution, they could have deployed a recent backup of their server images and critical data to another supported cloud provider's environment or back into their own data center. What's more, they could have done so at a moment's notice. Now that's speedy. –L.L.

For the business, these newly empowered dealerships and satisfied customers translate to keeping a much sharper competitive edge.

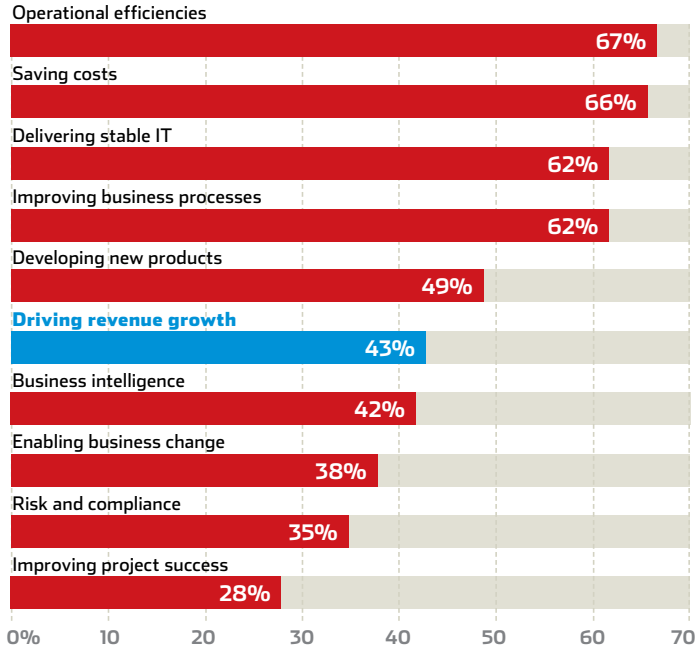
Further, since the Honda MPE business continues to call for lower costs and speedier processes, Bassett and his team have markedly cut IT infrastructure costs and further improved customer relations by deploying cloud services from Salesforce.com. They are also working with other cloud providers to handle the firm's credit card expenses and travel arrangements, and work with an Infrastructure-as-a-Service (IaaS) cloud provider to host Honda MPE websites and run its Web-based services.

Bassett's team uses technology from Nimsoft to consolidate the monitoring of its various data centers, service providers and cloud infrastructures. "Now we have a nice, glossy plasma monitor right in the middle of our support area," Bassett says. "It shows us all the relevant graphs of traffic alerts and any network issues." Such data, now readily available in one place on one screen, gives Honda MPE's IT team the real-time information they need to optimize their IT systems on a dime. That information reaches the Honda team quickly, enabling them to proactively address any network slowdowns, power outages or angry customer calls.

BI tools are another important element in Bassett's speedy-IT strategy. Honda MPE is a long-time user of a BI suite that creates in-depth, actionable reports for the business by drawing on data from the company's two data centers. These reports offer business users the dealerships' daily sales and current target achievement numbers, as well as the numbers on back orders in their warehouses. Even better, this information is continually updated in real time.

CIO Priorities at Business Speed

IT leaders rank their most important tasks



DATA: Harvey Nash USA, "CIO Survey 2011," survey of 540 senior IT executives in the U.S.
NOTE: Multiple replies were permitted

Streaming Netflix

"At Netflix, we get speed" says Steve Swasey, VP of Corporate Communications at the Los Gatos, Calif.-based Internet subscription service for movies and TV shows. They have to. Everything Netflix does is technology-centric. "IT needs to drive business," Swasey says. "So everyone who works here is tasked with an expectation to evolve and innovate in real time." It seems to be working. In the last quarter alone, Netflix gained more than 5 million new customers, bringing its total number of subscribers to over 23 million. What's more, Netflix's streaming movies account for nearly 30 percent of all downstream Internet traffic in North America during peak periods, according to Sandvine, a provider of network solutions.

Several major business initiatives are high on the agenda for the Netflix IT team. For one, the company recently renamed its DVDs-by-mail service, to Qwikster, while retaining the Netflix brand for its streaming-video business. For another, the company — which operates mainly in the U.S. and Canada — is expanding internationally, including Latin America.

There is also the matter of sheer volume: Netflix expects to serve more than 1 billion streams of movies and TV shows this year, nearly double last year's total.

Indeed, with its move to become a content-streaming Internet company, Netflix needs to stream large data sets to customers quickly and on demand; to do so, it must store video content measured in petabytes, or quadrillions of bytes.

Netflix has engaged cloud computing in a major way. "We've shifted all our traffic over to the cloud for our streaming service," says Swasey. The company is a customer of Amazon's Elastic Compute Cloud (EC2) and Amazon Simple Storage Service (S3). These services help Netflix with transcoding — the direct digital-to-digital data conversion of one encoding to another — and with storing its growing movie content library for delivery on more than 200 consumer devices, including the Nintendo Wii, Apple iPad and Sony PS3 console.

Netflix deploys the Nimsoft Monitor solution for cloud monitoring. This solution provides IT with a real-time, automatically updated picture of all network activity. The information is presented with easy-to-grasp graphics on a few communal monitors, replacing the task of manually sorting through data-center information.

But even before Netflix's ambitious cloud move, driving deep into innovation with a sharp eye on speed was a corporate imperative. One big challenge arose from Amazon's EC2's SimpleDB, a scalable data store. While SimpleDB is fine for projects involving gigabytes of data, Netflix needed it to handle terabytes. That was well beyond SimpleDB's sweet spot. So Netflix developers built their own open source large-tier data cache management in front of SimpleDB to accommodate the data they wanted to send to the Amazon Web Services (AWS) cloud.

This innovative fix also helped Netflix move to the cloud faster than it could have otherwise. That, in turn, enabled Netflix to launch its streaming-movie service right away. "We've already changed the way Americans watch movies with our DVD-by-mail business," Swasey says. "And now, with our streaming capabilities, we've significantly shifted consumer behavior once again."

BI tools are also important to Netflix's quest to work faster and with greater agility. One example involves the way Netflix lets its subscribers rate movies and TV shows they have viewed on a scale of one to five stars. That amounts to a staggering 5 billion ratings in the Netflix database. To manage this volume, Netflix IT applies custom filters and highly sophisticated algorithms to the ratings. This, in turn, transforms the ratings data into personalized

information for individual customers. For example, the Netflix website can recommend movies to an individual subscriber by matching and comparing his or her ratings with those of other Netflix subscribers, and by observing which movie the subscriber is currently watching or considering. "We continually collect, synthesize and analyze data," Swasey says. "And it's all done to create a better consumer experience."

For many CIOs, the growing need for speed dovetails with a new mandate to do more with the same, or ever fewer, resources. That's not easy, even in the best of times. But in today's fast-moving business environment, smart CIOs can't make excuses. Instead, they must figure out ways to make it happen.

Isidore Sobkowski, CIO and Executive Director of New York City's HHS-Connect, is doing just that. HHS-Connect is a transformational technology program housed in the Deputy Mayor for Health and Human Services Office that aims to break down the silos across the Health and Human Services (HHS) sector to better serve New Yorkers in need. His team recently undertook an ambitious federated data-sharing portal initiative called "Worker Connect" to allow real-time access to approximately 6,000 authorized users in nine New York City government agencies. "The goal," Sobkowski explains, "is to break down the data silos across agencies, their entrenched IT systems and their IT infrastructures."

Rather than spending a huge portion of IT's budget on outsourcing the project or by purchasing a bank of expensive new servers, the team instead created a cloud-like federated data-sharing system. This solution gives the authorized users access to the documents they need, when they need them. Yet the system also enables each agency to maintain ownership of its respective documents.

This shared-services system was optimized for speed by tools from CA Technologies, including CA SiteMinder®, for secure Web access management, and CA Embedded Entitlements Manager, for fine-grained data filtering. Sobkowski says that it's often the delicate and complicated issues around sharing sensitive data that are the barriers to accomplishing great innovations, not necessarily technology. "Without highly flexible and customizable security tools, we wouldn't have been able to get the cooperation necessary for a breakthrough initiative like Worker Connect," Sobkowski says. "It is only once we were able to assure our partners that they would still maintain ownership and authority over their data, and have a say in who gets to see it by using fine-grained filters and access management that we were able to get them onboard."

Sobkowski's team is also about to launch a business intelligence initiative that's so advanced, he's calling it an "artificial intelligence" (AI) project. The new software will uncover patterns and trends about New York's neediest by utilizing the plethora of raw data generated by the city's many agencies.

Such statistical data will first be examined by the AI program in conjunction with the Center for Innovation Through Data Intelligence, a research and policy group dedicated to studying and understanding issues across HHS, to enable discovery of recurring evidential trends about those populations served by the city. The AI tool will then transform that data into understandable, actionable and real-time information for use by the NYC HHS staff.

In this way, HHS-Connect hopes to provide real-world answers to once-theoretical questions that didn't have real answers, such as, "How many citizens will end up on welfare?" or "How many people will become homeless or incarcerated when they age out of foster care?" In terms of speed, having that kind of predictive information means that NYC HHS workers will be able to focus more on prevention, offering targeted assistance in advance instead of in response to a problematic situation. "We'll be able to help our citizens in need, before they need it," Sobkowski says.

While a great strategy and innovative technology are both vital for improving IT's speed and agility, another factor could be even more important: culture.

"For IT [staff] to take the leap to move at the speed of business, they must think

AT DISNEY INSTITUTE, BUILDING A CULTURE OF SPEED

In the new "need for speed" era, CIOs need to rethink their IT cultures, says Bruce Jones, veteran leadership coach at the Disney Institute in Orlando, Fla.

Jones should know. With 16 years as programming director for Disney Institute, Jones and his team conduct seminars and offer accredited programs on topics such as business strategy and service excellence. Attendees include executives from global organizations such as Volvo, Siemens Medical and Humana Inc.

Disney leaders like Bruce Jones spend 60 to 80 percent of their day in the field.

Jones says today's CIOs must blend high tech and high touch to successfully serve today's demanding customers. "The biggest key for CIOs is how they can empower their people to support the business vision," he says.

Jones says this can be accomplished with leadership centering on preemptive creative and innovative solution building, not just on after-the-fact problem solving. Further, CIOs must instill a cultural mindset of offering the highest levels of quality and excellence for serving their business customers — not just with effective and efficient technology, but by offering creative and innovative ideas that can speed business objectives.

Disney executives deploy a deceptively simple leadership technique that has proven quite effective over the years. For one, they use terms such as "cast member" instead of "employees," and the "stage" instead of the "office" to provide a magical, show-business feel to the corporate culture.

Along these lines, Jones advises CIOs to keep their "cast members" — the IT staff — in tune with how the business works. Doing so will empower the "cast" to contribute creative ideas across the "stage" to not only solve problems in their own bailiwicks, but also devise innovative business solutions.

For CIOs rethinking their roles, Jones offers a story about company founder Walt Disney. When asked why he no longer did artwork for his animated movies, Disney replied that he now thought of himself as a "bee who wandered around the studio, pollinating ideas."

Today's Disney culture has embraced that thinking. Its frontline leaders spend 60 to 80 percent of their day in the field, according to Jones. There they talk with "cast members" and customers, listen for feedback, and share the results with the business — quickly. — L.L.

PHOTOGRAPH: COURTESY OF THE DISNEY INSTITUTE

and act differently," Famularo of CA Technologies says. "They must discard some concepts from the past and shift to a bold and fresh approach in order to enter the age of agility and create a new future of IT in enterprises."

Experts say having a great corporate culture in the IT organization is a new CIO imperative. "The CIO's number one priority should be his or her people," says Hinssen of Across Group.

For starters, Hinssen advises, CIOs need to start building teams capable of making the transition to cloud computing, if they haven't already. Because while IT is capable of implementing change quickly, it is also notoriously the slowest to change itself. "I know it will be difficult to find people with both technical skills and a social dimension in their skill set that can communicate with business," Hinssen adds. "But you'll just have to."

That issue is on the table at Honda MPE in Australia, where many staffers of Senior IT Manager Bassett are technology veterans who think about software development, code writing and system development in very traditional ways. At the same time, Bassett says, "We've hired new Web people, who are a bit nonconformist about traditional business software engineering." Bassett's challenge, therefore, is to continually build bridges between these two groups — the IT traditionalists and the "Web guys" — and to keep them jointly focused on meeting the demands of the business. Among other things, that means weekly team meetings plus ad hoc meetings, "so we don't get disconnected," Bassett says.

Inspirational

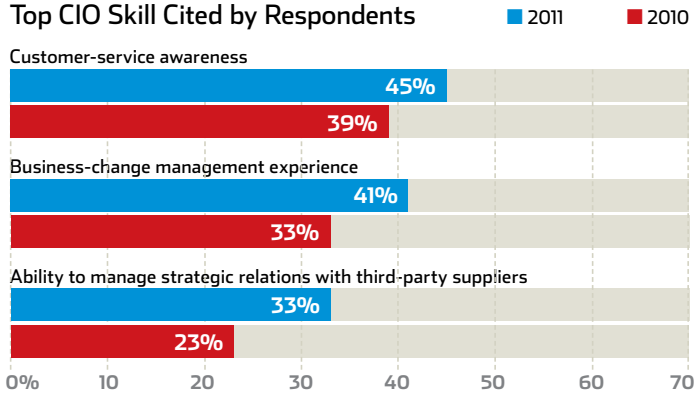
Similarly, at NYC HHS, creating and maintaining an optimized IT culture is critically important for CIO Sobkowski. After all, HHS agencies serve a higher mission — providing the critical safety net for New York City's neediest. "It's not just about pulling wires, writing code or managing an IT project," Sobkowski says. "It's about helping people, which might mean providing somebody [with] a bed on a freezing night or a meal when they need it." His group brainstorms often, coming up with ideas and leading in a hands-on way. For his own part, Sobkowski says he doesn't "dictate" to anyone; rather, he hopes to "inspire" them.

Netflix, too, is grappling with the issue of the IT culture. Specifically, Swasey says, the company strives to balance freedom with responsibility. For example, Netflix staffers have a choice of whether they want to work alone and autonomously or in a group and collaboratively. "Netflix staff are very loosely coupled, but tightly aligned," Swasey says. "Our people are not given any direction at all, except to continue to innovate, continue to change, make our website better, make our content offerings better, the connected devices more prevalent. All with the overriding goal of a better customer experience."

Some companies have gone even further and formalized the creation of a great corporate — and, by extension, IT — culture. The Disney Institute, for one, offers employee training to a long list of companies. (See sidebar, "At Disney Institute, Building a Culture of Speed, p. 16.)

Yet some CIOs are still dragging their heels, even as the business demands ever faster responsiveness and agility. In some cases, CIOs fear losing control over their IT systems. Others still do not grasp the inherent value of cloud computing. Still others are simply comfortable with IT traditions and don't want to change. "Too many CIOs love the smell of a data center in the morning," says Hinssen of Across Group.

CIO Skills Reflect the Need for Speed



DATA: Harvey Nash, "CIO Survey 2011," survey of 540 senior IT executives in U.S.
NOTE: Multiple replies were permitted

One unintentional side effect of cloud computing is the way it allows business users to allocate IT resources on their own. In fact, one in five business managers has already purchased a cloud service without the IT department's knowledge, according to a global survey of nearly 575 C-level executives and IT decision makers, conducted this past June by business-technology services provider Avanade Inc. In a poll of 2,600 business decision makers, Forrester Research found that 65 percent of respondents have budgets to buy technology "without involving IT."

"Every industry is going to deploy cloud-based applications and services at some point. And that may — or may not — involve IT," Curran of PwC says. To which consultant Hinssen adds: "If CIOs don't take a proactive stance on this new need for speed, their irrelevance to the business will come sooner than they ever imagined."

What's needed now, Curran adds, is nothing less than a change in the role of IT. Instead of operating as providers and builders of IT services — the norm for decades — CIOs need to become orchestrators, integrators of cloud services for the business, he says.

Even if business units purchase cloud services on their own, Curran adds, there is still an important role for IT. All those new services will eventually need to be secured, integrated and standardized, to both make sense architecturally and provide what the business wanted in the first place. "If IT's not involved in that," Curran says, "then the business is going to run into a big brick wall."

Hinssen similarly advises CIOs to view this new era of mobile devices and cloud domination as an opportunity. "CIOs need to change the role of IT from being the most cost-efficient to getting the most out of innovative technology," he says. "This is not the end of IT, but it is the end of IT as we know it."

PwC's Curran is even more abrupt: "For the first time ever, IT is not integral to the business. Business can now go elsewhere for [cloud] providers to give them the solutions they need, faster than ever before."

For these reasons, CIOs must deploy new, agile IT business models. In these new models, IT fully incorporates the business unit before, during and after any future IT analysis and build work. "It's time to rethink how you do things," Curran says. And how quickly does all this need to happen? CIOs, that would be now. ■

LARRY LANGE is a freelance writer and a former senior editor at TechWeb, PlanetIT.com, *EE Times* and *IEEE Spectrum*.