Leading the IT Organization of the Future

A Roundtable Overview

U.S. Chapter Discussion

Roundtable *on* Digital Strategies

Leading the IT Organization of the Future

Thought Leadership Roundtable on Digital Strategies

An executive roundtable series of the
Center for Digital Strategies at the Tuck School of Business

The U.S.Chapter convened for a discussion on the IT organization of the future and the trends, including the current recession, that are influencing its likely development. This Roundtable on Digital Strategies was hosted by the Defense Information Systems Agency (DISA) in Arlington, VA. CIOs were joined by key direct reports for this discussion. Executives and academics from 3M, Bechtel, Cargill, DISA, Eaton, General Dynamics, Sysco, Time Warner Cable, the United States Army, the University of Virginia, and the Tuck School of Business at Dartmouth participated.

Key Insights Discussed in this Overview:

The Thought Leadership Roundtable on Digital Strategies (www.tuck.dartmouth.edu/roundtable) publication series is edited by Hans Brechbühl, Executive Director of the Center for Digital Strategies.

Hunker Down Wisely and Build for the Future

The worldwide recession is affecting Global 1000 corporations in many ways, including corporate mandates on cost-cutting, staff reductions and production slowdowns. However, it has had a somewhat surprising impact on IT organizations according to CIOs.

Unlike in past downturns (2001), when IT department budgets were disproportionately cut in comparison to other areas, CIOs are reporting that while they are trimming budgets like everyone else, they are not being slashed. "It's really kind of an interesting dynamic because we have seen, even in the time we've cut expenses dramatically as a company, our project portfolio has to some extent increased," reported Bill Blausey, CIO, Eaton Corporation. "What has happened is they all have the same targets to hit. They had to cut expenses. They saved their IT dollars. They cut somewhere else in the belief that the IT projects would drive efficiencies."

Companies cannot operate efficiently on a 24/7 global basis without a rock solid technology infrastructure—especially in a downturn. In these times, all employees are working harder and asking more of IT. "This has driven more rigor into the approval process and may not have necessarily killed as many projects because a lot of the projects are adding value by cutting expenses or growing revenues," agreed Frank Boncimino, CIO, Time Warner Cable. "It's definitely driven things to be more rigorous around the governance of the IT spend."

Blausey also indicated that he sees the recession as an opportunity to decide which legacy systems to maintain and which to jettison. "We're going to continue to support the old and drive the new…and force any savings or at least part of the savings over to drive the new." Scott Zimmerman, Manager of Enterprise Systems at Bechtel, agreed. "…shedding applications from the portfolio, typically we couldn't get the support from the business to do that. And now they're driving some of that change, eliminating version complexity from their environment. So they're helping us do the things that we knew we needed to do all along…this environment is helping drive a lot of that now into the business."

Many CIOs agreed, saying their executive colleagues are embracing efforts to consolidate and centralize operations, eliminate multiple versions of software programs and get rid of legacy hardware and applications. Twila Day, CIO of Sysco Corp., said her team is taking full advantage of the recession to streamline operations. "Going through this change is actually easier because of the economic situation we're in," she commented. In fact, she added "it's going to solve a lot of issues that we've been dealing with on a day in and day out basis. And, they're (executive colleagues) more willing to make changes because we are in this situation."

The downturn has also provided companies with an opportunity to redefine and renegotiate their relationships with vendors and suppliers. At Time Warner Cable, Boncimino said, he's leveraged a mandated 10% budget cut to not only renegotiate key contracts with outside vendors, but "make very good, smart business decisions to re-architect ourselves."

 "Our mantra as we're going through this storm, is to say we're going to hunker down *wisely*, we're going to build to the future," said Cargill Inc.'s CIO, Rita Heise. "We can cut costs and make decisions really fast about what we're not going do or how we're going to streamline the organization. But we felt it was really important to emphasize the *wisely* part."

3M is taking a three-pronged approach to the current economic slowdown, according to CIO Ernie Park. The company is preserving cash, reducing costs and preparing for growth. And Park sees another potential bit of a silver lining to the recession; he sees a "tremendous opportunity to gain market share" against competitors "who are in worse financial shape." "What Ernie is saying is very much what we are doing as well," echoed Lucas Wagenaar, VP, IT for Sysco. As "some companies are hunkering down we have an opportunity to advance and become more efficient and I think take more market share."

Even the Defense Information Systems Agency (DISA), which provides IT infrastructure and support for a military fighting two wars, is using the recession as an opportunity to streamline operations and cut expenses. "We shouldn't be draconian, but I think we have an opportunity…to put the right kinds of governance in as long as we don't become so infatuated with ourselves that we make ourselves an enemy in the company," said John Garing, DISA's CIO.

The Impact is "Permanent": Volatility, Adaptability and Flexibility are King

Participants agreed that many changes being made in response to the recession will most likely be permanent. What is happening today will create a 'new normal,' according to Geir Ramleth, Bechtel's CIO. "When we come out of this, I think that we will see that the demands on IT and every function will be very different," said Ramleth. "I think it is a resetting of the world order, more than just a blip…we have to look at this as more than just a temporary state…it is the beginning of a new permanent state."

Volatility and the need to respond quickly to change is a key driver of the new permanent state, according to Ingmar Leliveld, a Batten Fellow of the Darden School of Business, University of Virginia. "What will be different in the next five years is not so much the pace of change, but the volatility," he commented. "I think we'll see very big swings from big dips to big peaks down to big troughs…a lot of that is driven by scarce resources and energy in particular. I think (one way) IT organizations can better manage the volatility is to get a seat at the table with strategies that are developed earlier, at a top executive level, but also at a deeper level down in the organization. That gives you the greatest leeway in terms of being flexible with your own organization."

Reducing expenses and increasing transparency around IT spending is another permanent aspect of the new normal, according to Sysco's Wagenaar. "We've always looked at reducing cost…looking at outsourcing and cloud computing reduces costs…it also creates some transparency for the business," said Wagenaar.

One area of concern expressed by CIOs was the possibility of losing top IT talent due to budget cuts. They fear that it may be difficult to replace innovative thinkers when the economy picks up again. "I think the raw talent is going to become critical once we get out of the doldrums that we're in today…" said Cyndee Burke, VP, Corporate Systems, Eaton. "Once we begin to improve and the economy improves we're all going to be fighting for the same resources."

"You have to be extremely careful of who you let go," agreed Bechtel's Ramleth. "You have to be really sure that you have your succession plan ready and that succession plan is tied in to

your strategy." 3M's Park agreed: "How do you really support our IT requirements with the next generation of employees?" he asked. "The real focus needs to be on the strategic proposition of the IT function."

"One of the things that I see will be permanent, is the learning in our organization from having to go through this," indicated Eaton's Blausey. "Because honestly, a lot of the organization has not seen anything like this, especially to this extent. The ability to remain flexible and adaptable across everything moving forward really becomes critical."

Other Trends Affecting the Future Development of Corporate IT

In addition to the recession, CIOs are grappling with other trends impacting their organizations. Although IT is widely recognized as the structural underpinning of a global corporation, "IT is one of the most immature functions within any enterprise," said Ramleth. "Therefore, what we're going through is just a maturity phase towards that new state we're going to." Cargill's Heise pointed out two other important trends: the ever-increasing drive for connectivity in all aspects of the corporation, and the convergence between IT and other departments. "I'll call it convergence collaboration, shifting the maturity of the overall organization around 'IT savvy-ness.'"

Geir Ramleth agreed, sharing an example of the ingenuity of a Bechtel field engineer: "He was out surveying where we were going to build a highway in Albania, and he drove around literally into mountains and woods with a Jeep, with a GPS, went back that evening, and next morning could actually show the customer (the government), through Google Earth exactly where the road would go. He just mashed up his data points from his GPS to Google Earth, and they drove through the terrain exactly where it was…" Here's a task they thought would take a year and he did it overnight."

John Garing shared a similar example of IT savvy-ness from the California fires a year ago last fall: "All of a sudden Twitter and Google Earth became the command-and-control system. It wasn't because somebody designed it, planned it, tested it. These young people, these young firefighters figured out 'Oh, I got an iPhone here. I need Google—I know where the fires are. I can communicate. I can chat back and forth, IM back and forth.'"

Lines are further blurring between the IT department and other areas of the corporation. IT is working directly with colleagues to streamline technology and provide everyone with all the tools they need to do their jobs efficiently. This trend contrasts dramatically with IT's previous role as a more passive internal service organization.

The boundaries between work and private life are also blurring, according to Ramleth. Younger workers are used to working where and when they want to. They are big collaborators and wonder why certain data needs to be protected so tightly. As a result IT finds itself dealing with very disparate groups of employees: "IT immigrants," older workers and "IT natives," the younger, nimbler employees who have grown up tech-savvy. Managing IT natives will definitely change the face of many IT departments now and into the future.

CIOs are both watching and actively exploring the evolution of cloud computing, both public and private clouds, to determine what role that phenomenon might play in their mix of computing solutions. Various SaaS (software as a service) applications are also under review as a possible way to cut costs and boost efficiencies. If projects are to be handled by outside vendors, whether in the cloud or in someone else's office, CIOs said they must be aware of increased counter-party risk and make sure they are dealing with reputable vendors.

Creating Business Value for the Enterprise

In today's corporation, IT is no longer an order-taker, sitting in a silo waiting for people to drop off a bag of problems. CIOs have generally been given a seat at the management table. CEOs, as well as their executive peers, openly rely on the CIO to develop innovative solutions to a variety of business challenges.

"I think we need to act like business executives," suggested Ernie Park. "Meaning, we shouldn't wait until the CEO or CFO comes to us to say, 'cut your costs by 10 percent' or whatever. We should come up with a transformational idea and go to senior leadership and say, 'look this is how I'm going to transform the IT organization and create value or savings out of operations to fund strategic initiatives."

To accomplish these objectives, CIOs must be completely integrated into the decision-making process. "We would blur the lines between who is on the IT side and who's on the business side," said Wagenaar. He said that's why IT employees are now seamlessly serving as members of cross-functional teams assigned to tackle a particular problem.

Working arm-in-arm with colleagues across the enterprise to develop solutions is a positive trend, according to Rita Heise, Cargill's CIO. "We're going to see…how this working together in a different way, at a different level, on a different dimension, is going to really add positive results to the corporation."

Ernie Park said 3M is focusing on three areas to create more shareholder value: achieving strong business alignment, being a center of excellence and a maintaining a strong governance structure for IT operations. Park cautioned his colleagues to be careful about how their management teams and peers measure the success of IT operations. A traditional return-on-investment model (ROI) often does not reflect the true value contributed by a well-managed IT strategy. Instead, Park said CIOs should insist on setting and meeting key performance indicators (KPIs) related to the overall business.

"We have to ensure our IT leaders are measured by those rather than IT's own metrics that may not be relevant to our corporate objectives," explained Park, adding that, even if an IT project is delivered on time, if "that project didn't result in improving the business values, then we have failed."

Eaton CIO Bill Blausey said he has a three-pronged strategy to create and measure business value, which Eaton calls "operational contribution," the real dollars contributed by IT: reduce the demand for working capital, cut expenses and boost sales growth. "We have a target in our strategy of driving $300 million of operational contribution." Blausey said his organization is

working on several projects with the marketing organization to drive sales growth. He's also "trying to improve how our plant operations run and even drive out expenses in other parts of the organization."

UVA's Leliveld indicated that based on a study he did with the Kellogg School at Northwestern a couple years ago, he really liked this approach. "We started out with about 120 different IT organizations, all Fortune 1000 organizations. We found that the most effective way of showing value was through demonstrating operational contribution. And from what we saw, the greatest rat hole around showing value is to pursue this ROI path!"

Accelerating the time-to-value proposition is another way IT can contribute to corporate profitability. Park said CIOs should avoid long-term, multi-year projects. "We need to focus on what is critical to the business over the next 12 months," suggested Park. "You need to focus on creating value right away because there's the time value of money….and that's the real challenge with many of these ERP projects."

Bechtel has come up with a "five-five-five" strategy to address this very issue. "We said let's break everything down into five-five-five," said Ramleth. "We should be able to complete small projects in five months with five people and a budget of $500,000." By breaking up a big project into smaller pieces, Ramleth said his team recently spent a few million dollars completing a global project that would have cost 10+ times under a different model. This strategy worked because it demonstrated success and built confidence along the way. "We did it step-by-step without anybody getting upset…and as a result of this, today we run our company worldwide on one ERP system for accounting and finance as well as one for HR and Payroll."

Michael Krieger, deputy CIO, G-6, U.S. Army, said he had begun to say that projects should require no more than 'nine months and a million dollars,' but he prefers Ramleth's approach. "As IT guys, we really have to show that we can be agile and, in a timely fashion, continue to deliver capability, listen to user response and quit delivering five-year projects."

Working Closely with Colleagues

To continue creating value for the overall business, CIOs must interact differently with colleagues, customers and vendors.

Cargill's Heise said she asks colleagues to bring her their 'big rocks,' the tough problems that her team relishes tackling. "We say, bring forward your challenges, your opportunities and what we've characterized as your big rocks," she said. But, she doesn't want them to suggest a preconceived solution. In fact, she's trying to shift the problem-solving process 180 degrees by understanding the business strategy and the opportunity before proposing a solution.

Sysco's CIO Twila Day agreed with Heise, saying that you can't talk to colleagues from a technology perspective when describing solutions. "You have to talk to them from a business perspective…that's the whole point."

Time Warner Cable's CIO Frank Boncimino said he relies on IT experts known as 'solution architects' to sit down with his business colleagues and solve problems. When "you create your

map with the business, it becomes a shared problem that you are solving together…versus me and my organization being a black box," he commented. "We said 'We're going to document the requirements together as a team'…(then) all that pressure went away. They were so thankful and that led to better solutioning because you weren't just talking about the sunny-day scenarios anymore."

Getting Closer to the End-Customer

When it comes to connecting more closely with customers, Sysco's Day said she's found success by "getting the IT people back out into the business so they can actually see the business working, they can see the systems being used, they can ride with the drivers, they can go with the marketing associates to call on the customers." She continued, "It's amazing how the lights go on when you're outside and you really understand how the things you've delivered are being used because it's completely different from the way you actually thought it was going to be used."

Moderator John Gallant agreed with Day, pointing out, "it strikes me the most powerful way to have a voice at the table is to say, 'this is what the customer needs,' to have that understanding better almost than the business side."

When Gallant asked for examples, Bechtel's Scott Zimmerman said his team has been shifting from just "managing LANs and desktops" to really understanding what customers need to complete a project on time and on budget. "We need people who understand the information and how that flows when supplying to the engineering and construction (organizations) and down to the customer at the end," said Zimmerman. Exchanging more information with clients is critical to making better decisions and providing better solutions. "This is evolving around information exchange and information management. We're driving it from corporate, but it's going to be a real mindset shift for our organization within the next year or so."

Savvy organizations are going a step further by permitting their vendors, suppliers and customers to actually managing various processes. Ernie Park described a scenario where Wal-Mart asked Procter & Gamble to provide inventory management and distribution systems for a variety of consumer products, including those sold by its competitors, through a robust CPFR process (collaborative planning, forecasting and replenishment). "P&G and Wal-Mart used to fight against each other years ago, until they realized they had to collaborate to address their objectives," Park explained, adding that it revolutionized their supply chain and led to the concept of category management. "We need to learn a lot from that type of partnership and collaboration."

M. Eric Johnson, director of the Center for Digital Strategies at Tuck, suggested that "You often learn from your worst customers." He shared the example of Nokia sending out people to shop for phone in U.S. stores and seeing "how painful it is because the sales guys don't know anything about Nokia phones and they aren't able to represent the brand well." By recognizing that the U.S is a huge market that doesn't buy its phones, Nokia reps felt the pain and are motivated to make changes.

Center executive director, Hans Brechbühl, pointed out that a tangible additional benefit of keeping the focus on the end-customer is "suddenly, within a corporation, you have a common goal as opposed to the opportunity for friction within the company."

Moderator Gallant said that companies are facing much more pressure to be close to customers because today's customers are more tech-savvy than those in the past. "The next wave of customers is going to demand a lot more in capabilities from your company. So how do you deal with that?"

3M's Park suggested that we would see more focus on managing and controlling enterprise data in the future. The Army's Michael Krieger agreed, saying his users, officers and soldiers on the battlefield, are demanding more access to data and the ability to 'mash it' up. "How do we make the data more accessible?" he asked. "How do you provide the baseline of tools and the infrastructure so that the young people can take that data and do neat things?" Still, he and other CIOs said they have to decide how much data to release and set a tolerance for the risks related to sharing data. One approach suggested Park, is to manage and control enterprise data in such a way "that they'll be given access to data but wouldn't be able to change or manipulate it."

Krieger said he equates his soldiers on a remote hilltop to Park's sales people or engineers, suggesting that, "we've got to empower the people at the edge of our organizations, but we've got to get control of what is the authorized data source."

UVA's Leliveld cautioned that sharing data with customers can be positive, but companies have to make sure any shared data is in very good shape. "There's a lot of very dirty data out there," he stated. He indicated IT must have very deep expertise and be aligned with the business before releasing data to outsiders.

Running the Utility Well: Doing it All Faster and Cheaper

Cargill's Rita Heise reminded colleagues that CIOs must "build the trust and confidence" surrounding day-to-day operations before upping the ante to optimize operations for the future. The need to efficiently and effectively run the IT utility will not go away regardless of how well IT adds business value in other ways. "While we spend a lot of time talking about the future and the change being centered on more business alignment, more business partnering, working more strategically with the business…those other things that we have commoditized over the years— I've heard that word used—those things still have to get done. Those aren't capabilities that we can say, 'Oh, we don't have to worry about those anymore.'

"Internally in Cargill we use the notion of value creation," Heise continued, "but we also have to preserve the value we've already created. And so our role is value preservation and value creation, and we've spent years creating a bunch of value for the corporation and it would be a shame if we allowed that to disintegrate, and so it's equally important for us to preserve the things that we've built on over the years."

Almost all companies are striving to re-invent the commodity part of IT through consolidation, standardization and optimization. Some are seeking quantum breakthroughs in this area. Sysco

moved to a centralized IT model about six years ago. "We pulled in much of the functionality at that point, saved a lot of money and went to on-demand," explained CIO Twila Day. Now, they are making further efforts to simplify the infrastructure and "blowing up all of the paradigms." She admitted that changing vendors isn't an obstacle to consolidation. "Our biggest problem is ourselves, the mess we've gotten ourselves in through years of trying to patch (and) add-on."

Consolidating operations is usually an easy way to cut costs and improve efficiency. DISA consolidated its data centers from 18 to four and now relies on just two centers to handle communications. Eaton's Bill Blausey said he, too, has consolidated operations into two data centers. Consolidating the locations where data is stored is also relatively easy, if done right.

Beyond consolidation, some companies are in the midst of making more sweeping changes, virtually re-inventing their operations to optimize them. One approach to finding new solutions is to look at how other companies manage their IT operations. That's just what Bechtel did, seeking out fresh ideas from companies born in the internet age. About three years ago, Ramleth said his team began rethinking the way the company managed data storage, computing services and data delivery. They studied eighteen successful companies, including Google, YouTube, Amazon and Salesforce.com to figure out how they ran various aspects of their IT operations so cost-effectively and tried to incorporate the best practices learned.

Bechtel adopted a number of best practices from these companies—bringing data to the network rather than the network to the data, for instance. "Just as simple as that—because when you bring data to the network, you can buy network in a totally different way at different prices," explained Ramleth.

By increasing efficiencies and going virtual, Ramleth explained how Bechtel increased server utilization from 2.3 percent in 2002 to about 70 percent today. The company built one data center, but virtually in three locations to solve latency; one in the U.S., one in the United Kingdom and one in Singapore. Bechtel is also looking into buying computing services from Amazon and looking at other 'cloud' solutions because it is cheaper than handling projects internally.

The company also cut the number of applications from 1,600 to 800, which includes multiple versions of several popular applications. Bechtel has also created a user-friendly, web-based interface for employees and vendors to access the information they need. They have embraced some Web 2.0 applications and are encouraging IT employees to be more innovative. "We've gotten proof of the benefits of this, in that three of our biggest propeller heads have come to me separately and they've said, 'you know it's kind of interesting? Now, I have so much fun at work that I shut down my home lab.'"

Seeking out new strategies is imperative, Ramleth said because although Bechtel has many long-term employees, its younger workers and outside contractors are demanding more dynamic and easily accessible IT services. "…we can't sit as a large IT group and demand stuff from users in the same way we did before, that just frustrates them," Ramleth pointed out. "What we have is this new generation of users coming in that have a much stronger will, they have a much stronger intellect for IT than they used to…so you have to have a very different participative model going forward."

Tuck's Brechbühl agreed that Bechtel's whole approach fits well with the "consumerization of technology" expectations that employees increasingly have. He also pointed out that the browser-like approach to accessing applications, data, etc. "fits very well with a role-based security approach."

Companies are also redefining their relationships with vendors and suppliers, streamlining operations and demanding more for their money. "I have some major vendors, billing system vendors and others," said Frank Boncimino, CIO of Time Warner Cable. "I'm meeting with their CEOs and their executives and saying, 'I know this is going to be a big change for you, because we're going to change the way we do business together."

William Osborne, director, engineering, manufacturing and network systems for General Dynamics, on the other hand, said he's grappling with providing IT support for a very decentralized company. "Each one of our business units is essentially a network unto themselves," he said. He is dealing with a federation of networks rather than one central network. He said a move toward centralization in the General Dynamics culture would be a "huge barrier to overcome."

Bechtel's Ramleth said he was successful in getting the company to take a global approach to IT. "We will now run all IT on one budget," he said. "All those warlords are now stripped. They will then become operators of cost centers, not of P&L centers."

Companies are also slashing expenses by shunning expensive software programs that require individual license fees and frequent, expensive upgrades. Instead, companies are developing their own platforms, similar to what Bechtel has done, and exploring cost-effective solutions, including cloud computing and buying affordable computing services from vendors like Amazon.com.

Cloud Computing as an Option

Although cloud computing may not provide an immediate solution for the very biggest companies, CIOs said the concept is still worth exploring. "Can we ever drive down the costs within our own operations to match what's going to happen in the cloud?" asked moderator Gallant.

Participants said they are all exploring whether cloud computing can boost efficiency and cut costs. However, when Ernie Park tried to move 3M's databases to Microsoft's cloud computing solution, Microsoft did not have the capacity to handle 450,000 data bases. Undaunted, Park said he's still looking at other cloud computing solutions, because "I believe it will address some of those utility-based solutions."

Time Warner's Boncimino said the question he asks himself is whether to pay operating expenses and not go through the "hassle of standing it up myself" or "do I want a capital play?" "It still comes down to capital versus OpEx and how you want to operate because you could do the exact same thing in your four walls."

Know Your Organization and Your Partners

Rita Heise reminded colleagues that timing and pacing must play into all critical IT decisions. If she pushes implementing a particular technology or program too fast, it may be a disaster. But, she said pushing too slowly can also lead to failure. "It's really trying to figure out what's the pace of adoption of whatever the next technology is."

Timing and pacing aside, CIOs cautioned that when IT operations are outsourced, they must be assured that they are dealing with reliable third parties. "If you're letting all your operations depend more and more on counterparties, you're increasing risks," said UVA's Leliveld.

Heise agreed, saying companies must seek out reliable and trustworthy vendors when it comes to outsourcing IT operations whether it is cloud computing or other services. "As you establish long-term contracts and partnerships and relationships, you've got to be darn sure that they not going to go belly up or have challenges beyond just running the data center or running a development shop. I think that's going to be important as we go through these economic times."

Heise cautioned that even if CIOs are working with trusted vendors, companies have to be careful about who they do business with. "These times are bringing much more scrutiny on counter-party risk," she said. For all customers, suppliers or outsourcing firms, "there's going to be heightened sensitivity and scrutiny around the financial viability of those institutions."

Still, establishing trustworthy relationships with vendors can save corporations and agencies both time and money. For example, DISA's John Garing pointed out that the Army simplified the purchase of tires by signing a "managed services" agreement with Michelin. Michelin is providing the Defense Logistics Agency with all its tires, often providing other manufacturer's brands as well as its own. Garing elaborated that he no longer thinks of it as outsourcing. "In my parlance, that means giving somebody else responsibility for something. As a managed service, you can have better control and still get the service done by somebody else."

Twila Day cautioned that with so many options for managing IT operations, CIOs have to look beyond just saving money. "You have to do it because you think it is right," she said. "You've got to be able to deliver the end result you're looking for."

Eaton's Blausey agreed that decisions to outsource or not should be based on "what makes sense in your enterprise and what the opportunity is." He went on to say, "as it becomes simplified and commoditized, and there are certain providers out there, that gives you a lot more options. We have more options than we've ever had before."

The IT Organization Moving Forward

If given the opportunity to build their IT organization from scratch, the CIOs agreed that no one would recreate the same organization they have today. The IT group of the future will be a different animal. The CIO will be expected to serve as a business strategist as well as technology expert. He or she will lead through collaboration and work hard to gain the trust of every department served.

Gallant relayed that he had had the opportunity to meet with a number of IT vendors lately. While acknowledging that they likely had a vested interest in saying so, he relayed "One of the interesting things that we're hearing from them is that they feel that one of the things that is holding back change in IT is the current structure of IT."

To this end, Twila Day said she's created a new way of working within Sysco to solve problems throughout the enterprise by creating business liaison groups. "We've pulled people out of the IT organization and paired them with the business, for each one of the business process groups. They're both doing the same job on this team during the blueprinting process." She's also asked herself whether IT is a service organization or a strategy organization. Her answer was "both."

"When I referred to this blurring of the lines, I think there is a distinction of the difference between IT, the organization, and IT, the capability the organization has," Cargill's Heise added. "And, so that's where I see the blurring of the lines and I think, of my role over time."

Bobbie Stempfley, deputy CIO of DISA, observed that "we've moved from being 'how-things-work' people to 'how-things-work together' people." No longer will the IT department just provide technical solutions. Sysco's Wagenaar sees the IT organization being smaller and more agile, heavy on management and lighter on "doers." The focus will be on providing broader, architectural solutions for problems. The IT department should view itself as the company's "solutioning partner," according to Tom Hageman, VP, Solutions Development and Support for Time Warner Cable.

Hageman also predicted that it is important to emphasize the need to put "*information* back in the chief information officer." The Army's Krieger agreed, saying he envisions a future where "we're going to change from IT guys to information management people."

To provide better technology solutions moving forward, CIOs said they will try to recruit a far different type of employee than those on board today. "IT people will have to develop interpersonal skills more than technical skills in the future," predicted Ernie Park. General Dynamics's CIO, Tommy Augustsson pointed out that the educational background of the CIO has changed already. "We have 13 business units. Five of the CIOs of those business units come from what I would consider a technical background. The other eight do not."

Park indicated that CIOs should look for people with strong customer relationship management skills since working closer with customers is a trend that is turning into a norm. It is also imperative to hire people who can manage predictive analytics. "Predictive analytics would become very important to us…because after all, what do leaders do? Make decisions where to go in terms of markets or distribution channels or what products to deliver, right?" Park continued, "We have to create insights about the future, not necessarily about the past…that means we have to develop that type of predictive analytic skill throughout the organization."

Time Warner's Boncimino said future IT employees need to be "more service-oriented, architecture-based…It's going to be BEA and web-logic people." He added that as the IT world becomes more intense, there will be a need to setup systems that allow employees to do "more self-service." His colleague Hageman agreed, "I think that's where IT is going to go…we're going to have to be there to speak their language," he said, adding that he envisions a group of

IT people who "are very good at complex relationship management," and people who can manage vendors who will be handling commodity-driven projects.

GD's Osborne sees a challenge given a major shift in the attitude of employees. "I think one of the things that will change in the future is that IT people don't see themselves married to an organization," he pointed out. "A lot of the younger folks that are coming along today see it as a project. They want to work on a certain project but once they lose interest, they want to move to someplace else that will produce some impact on the organization."

The IT organization of the future may look completely different because the CIOs responsibilities could stretch far beyond technology. "I would say you have to look at what makes sense based on the organization," said Sysco's Day. 3M's Ernie Park agreed, saying the CIO's role will be defined by the type of company he or she works for and the capabilities of the individual. "It would depend on two things…the type of company that you're with… if it's a technology company, a CIO may actually play a greater role in setting the strategic direction of the company." If the company has nothing to do with technology, the CIO might be charged with buying services from outside vendors. No matter what, Park said a CIO's career path depends on his or her strengths. "If you are a capable person…you could potentially become chief innovation officer as Ken Bohlen did at Textron."

Heise said CIOs have to re-orient how they view their role, meaning. "It is about information <u>and</u> technology, not 'information technology'. The role I see myself playing is shepherding the information and technology capability of the organization," she continued. "I don't think there is any one magical structure or any one magical role for the CIO. The role of CIO becomes more of trying to build that capability through the organization versus just having a structure called the IT organization that's responsible for delivering it."

Conclusion

The IT organization of the future will be even more fully integrated into the rest of the business operations. It will not only serve as the backbone for all company operations but enable insights and innovation on all fronts. Future IT employees will be more than tech-savvy; they will have to be well-rounded and well-versed in a variety of business operations and they will have rotated in and out of multiple functions. They will need to know the business inside and out and be prepared to boost revenue as well as productivity.

The fact that we will not return to "business as normal" seems clear—but what the "new normal" is, if there even is one, seems less so. It does seem clear though that there will be a premium on flexibility and adaptability, on the ability to assess and manage risk, and on the capability to handle trade-offs. Some of these fundamental tradeoffs may be:
- Better partnering and alignment vs. ultimate accountability;
- Internal alignment vs. external (customer) alignment (may be more perceived than real);
- Flexibility vs. customer intimacy/participation;
- Flexibility vs. counter-party risk (with partners/vendors).

Information and technology will undoubtedly be central to handling these tradeoffs both within and outside of IT.

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