A Digital World: Where Will We Lead Corporate IT?

A Roundtable Overview
In October 2011 the Roundtable on Digital Strategies celebrated its tenth anniversary with a session titled “The Impact of Technology Mega-Trends on Corporate IT and Business Models.”¹ Four years and 15 roundtables later, the group again convened at the home of the Center for Digital Strategies at the Tuck School of Business at Dartmouth College in Hanover, New Hampshire, to discuss the impact of the nature of digital and the accelerating pace of technological change: on IT organizations, on companies, on the structures of entire industries, and even on how our everyday world will work in the future. Have these new technologies created a tipping point in IT? What new business models and new threats have emerged? What skills, structures, and roles do we therefore need? What are the leadership imperatives in this digital environment?

CIOs participated from the Bank of Queensland, Chevron, Clariant, Eastman Chemical Company, Eaton Corporation, the International Federation of Red Cross and Red Crescent Societies, Levi Strauss & Co., Swarovski, the Tetra Pak Group, and Volkswagen AG. They were joined by professors from the Tuck School of Business at Dartmouth College, and by the Directors and Executive Fellows of the Center for Digital Strategies.

Key Insights Discussed in this Article:

• **The pace of digital change has forced a tipping point.** After years of debate about IT’s role in the enterprise, business units have become too sophisticated and too fast-paced: The IT organization has to evolve or evaporate. ......................................... Pages 2-3, 6, 10, 16-17.

• **More than ever businesses must be customer-focused.** Every business strategy must now at least consider dealing with the customer through digital channels, and companies have to dial this into their planning, organization, culture, operations and leadership from the outset. ............ ............................................................ Pages 5-7, 9, 12, 17.

• **IT’s business model is shifting from service provider to integrator.** As IT gets more deeply entangled with the business units, it has to develop new organizations, structures, and governance models ................................................................. Pages 4-5, 10-12, 14-15.

• **Multi-modal IT is a critical skill to master.** Businesses need agility, quality, security and performance in everything from legacy ERP systems to agile development mobile apps. IT has to develop the processes and recruit the talent to manage the whole spectrum. ... Pages 4, 11, 13-16.

• **“Culture eats strategy for lunch.”** New approaches, structures, and organizations will likely fail unless they are backed up by clear, steadfast, and purpose-driven leadership to support cultural change. ................................................................. Pages 2, 4, 9-10, 13, 16-17.

Introduction: Winter or Spring?

“Winter is coming.” The repeated warning from HBO’s popular *Game of Thrones* series hangs over all the action. In the series it’s a literal warning (even if seven seasons seems like a while); metaphorically, the refrain highlights an impending cataclysm that will change the entire environment, for everyone, and the unprepared will not fare well — if they even survive to see the first snows.

What’s causing all this upheaval? In 2011 the Roundtable considered five technology “mega-trends:” the Consumerization of IT, Mobile, Cloud, Social, and Big Data. In 2015, the list of just “the big ones” has grown to a dozen (see inset).

As any strategy text will declare, however, in every threat lies opportunity. Dean Matthew Slaughter of the Tuck School of Business at Dartmouth College highlighted those opportunities in remarks to the Roundtable on Digital Strategies:

IT is like electrification in the last century. But electrification took a couple of generations to spread around the world: IT is an even more fundamental shift in technology that touches all industries. It is so dramatic in terms of its basic economics, in its questions about finances, about culture, about risk management, about who has access to what data, about how you change your investment decisions and how you operate.

What IT does today is provide access to virtually infinite amounts of information at any point around at the world at near-zero marginal cost. It’s transforming how almost every firm and organization in almost every industry is thinking about its fundamental sense of what it does. What *does* it produce? Who *are* its different stakeholders? What do those answers mean for roles and jobs and incomes?

“It’s remarkable how fast the change is happening,” Slaughter concluded, “And we look in awe and with a bit of uneasiness at what IT is doing around the world. So the theme of this Roundtable is remarkably well-chosen.”

The intensity of current challenges became clear even as participants introduced themselves at the start of the session: “Our business is going through a significant re-trenching.” “We struggle to get from a mindset focused on industrial technology to a mindset focused on customers.” “We are re-energizing the brand and the company, and we need to do the same for technology. It’s a big turnaround, a big transition.” The sense of opportunity came out as well: “We are catalyzing new thinking about how we should operate.” “Technology gives us a new and fantastic way to create new parts of our business, so that we can keep growing.”

“So what does all this mean for the future role of IT?” asked moderator Hans Brechbühl, Executive Director of the Center for Digital Strategies. “This is what we’ll come back and ask at the end of the day. As CIOs where should we be leading IT, and how? Let’s start,” he suggested, “By looking at the cumulative impact on IT of these trends over the last five years.”
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It’s All about the Business Outcome

“It’s the accessibility of all this that we haven’t seen before,” began Donna Vinci, Group Executive for Enterprise Solutions at the Bank of Queensland. “And the convergence of these trends in a way unseen before in history. That convergence and the speed of that convergence are creating the new economies and new business models, and hence the disruption that we’re all dealing with.”

“The speed of all this is exponential,” Clariant’s CIO Volker Laska continued. “The legacy IT environment (including ERP) is becoming a boat anchor that we have to overcome in order to keep up with the speed of business. We could work around it in the past; we can’t do that anymore.”

“We’ve always had the legacy, but the new complexity means that we’re getting exposed much faster now,” Vinci agreed, raising a theme of increasing risk that would resonate throughout the day.

Tim Sarvis, Director of IT Supply Chain and Administrative Solutions for Eastman Chemical, picked up on Vinci’s comment: “All of these technology trends, whether we’re talking about IoT, mobile, cloud — Security is just the balance point that we have to pay attention to. As we look at these technologies, whether they’re for productivity, automation, whatever, we have to balance those potential gains with risk assessment.”

Michael Krigsman, founder of CxOTalk, introduced another dimension: “It’s fundamental that the consumerization of IT is not just the proliferation of devices and apps. Consumerization is the increasing technology sophistication of people in the business units outside of traditional IT boundaries.”

“So one impact on IT,” Brechbühl suggested, “is an unbelievably increased need for agility, to produce much more quickly on behalf of the whole business. It’s a combination of the pace of convergence and the point about legacy being a boat anchor.”

“I’d take that a step further,” responded Keith Sturgill, CIO of Eastman Chemical:

These trends give technology professionals and corporate IT the opportunity to lead the company in driving more agility and faster decision-making. As technology professionals, that’s where our world is going. There’s a caveat, though, and that’s all the hype around some of these trends that can lead business executives to think, ‘All I need to do is purchase technology.’

Technology leaders have to become the adults in the room and make sure we handle the business discussion about what we need to accomplish with these technologies. It’s about facilitating a business outcome, and technology people are starting to force that conversation.

“Technology people are becoming business people, and business people are developing a good understanding of technology,” Sturgill finished. “Nothing but good can come of that.”

“The basis for all these decisions needs to be a clear roadmap of what we want to achieve from the business point of view,” agreed Max Braun, CIO of Swarovski. “So sometimes we need two-speed implementations, so we can be agile for opportunistic or trial-and-fail small initiatives.”
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“I may be the contrarian here,” objected John Garing, VP of ViON Corporation,

But we as an IT community have developed processes to get new things onto the corporate network in a way that they have business value and they work and they’re secure and trusted. But now business guys can go out with their own money, and buy whatever, without telling anybody. Then they put proprietary corporate data in an unsecure, unofficial place.

Who owns the data now? If we — the CIOs — don’t know where the data is, how are we going to defend the network, defend the company? This just increases the attack vectors and makes the problem more complex. We have to ask ourselves if we really want to go all-out agile and let people use their iPhones and their own online services to bypass what we’ve put in place.

“But because information security is not an IT problem,” added Roland Paanakker, CIO of Levi Strauss.

“That’s right, it’s a business problem,” Vinci affirmed. “I agree with John, but the business still needs to survive in a competitive world, and IT has to have its act together to provide an architectural environment with security outcomes that we want in the agile way that they want. IT needs to inform, and influence with agility, secure solutions for business. It’s a win-win, and I believe it’s solvable.”

“IT Has Lost Its Monopoly”

“The problem here, though, is that it’s not just a technology issue,” Krigsman argued. “Let’s say I’m in Marketing, and my goal is to deliver a campaign to my client quickly, and I can buy the tools to do all of it myself, and I have a far greater in-depth knowledge of what I need than IT does. And I go to IT for assistance and IT is not sufficiently responsive, then what am I going to do?”

“Then shame on IT for not being a partner with you,” Vinci answered. “If they were the right partner, and they understood your business, they could stand beside you and say ‘I know what you need; here are the choices to get you to market in a secure way, in an agile way, and quickly. The problem is as soon as you say ‘I go to IT.’ You shouldn’t have ‘to go’ to IT: We should already be working as peers and colleagues on solving problems together, and we should be anticipating what the business needs.”

“That’s how I characterize it for my teams,” agreed Jim Green, Chevron’s CIO for Global Exploration and Production. “We have to be half a step ahead of the business. Not five steps out there, but just enough ahead so that we understand the trends, understand what they’re trying to do, and why they’re trying to do it. That’s a pretty significant shift, and the other change we have to make is to shift our thinking from internal to external.”

“IT is not the function it was before,” explained Mark Meyer, Head of Global IM for the Tetra Pak Group. “It’s become like HR or finance. What business team doesn’t have a finance guy, doesn’t have an HR person sitting there? It’s not that person you go to with your order, but rather he’s embedded. There is value in the centralized IT function, but out there in the real-live world, it’s all distributed.”

“Most of the time IT has the burden of the enterprise perspective,” Paanakker agreed. “So when we get a functional request, we immediately put it into the complexity of the whole. And although that is
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the right thing to do, it’s not the first thing to do. The first question is, How do you enable the business? And how do you enable the business in a way that fits within your framework over time?”

“What the technology trends caused to happen is that we slowly lost our monopoly over the past years,” Laska concluded.

People can do IT without us: They can buy Salesforce with their credit card, they can store corporate data on Dropbox, they can work with external IT providers. People are popping up all around us, doing IT. What’s our first reaction? ‘They’re competing with us.’ No — Let’s look at them as additional resources who can get work done, and let’s find ways to integrate with them and work with them. The integration will end up in our laps anyway, but maybe only after they’ve lost corporate data. Our role shifts to much more of an integrator, an orchestrator.

“The millennials have done this to us in the business units,” Garing agreed. “Democratization of technology. Instead of providing service, we have to facilitate — with a very velvet glove. We have to get the rules right to bring stuff in while protecting corporate data as it needs to be protected.”

“I’m going to push on this,” warned Mark Hillman, co-founder of Mad Dog Technology.

I’ve been in 20 years’ worth of meetings where we’ve talked about IT adding value, partnering, being close to the business … all of that. The factors are the same, and it’s always pressure from trends. How many decades have we had this conversation? Is there an issue in the fundamental design of our IT organizations that causes us to keep having this conversation?

The issue is not how do we keep aligning to the business, but rather, are we investigating new business models, to define a new product, a new channel, a new whatever? That’s game-changing. Unless we change the frame, then any road will get you there.

“It’s the coming of age of the IT professional as a business professional,” Sturgill suggested.

Gone are the days when the successful IT person speaks his own language, sits at his cubicle and turns out code all day. To be successful, we have to edge our way into the business conversation. As uncomfortable as that may be during a transition period, it will be a defining moment for corporate IT: Either the corporate IT professional will grow in impact, or shrink in impact, but it will not stay the same.

“And the business professionals are going to be much more IT professionals as well,” pointed out Alva Taylor, Faculty Director of the Center for Digital Strategies. “That’s going to change your jobs and change what you do and change what’s expected of you. It’s going to have a big impact on how IT interacts with business.”

Who’s Your Uber?

Levi’s Paanakker picked up on the topic of strategies: “We often talk about ‘digital strategy’ and ‘IT strategy’ as if they’re two different things. ‘Digital’ is a buzzword. ‘IT’ is what has been going on. I think they’re one and the same.”
“You’re so right,” Meyer exclaimed. “But the organization hasn’t aligned to that yet.”

We have had isolated digital initiatives around our products and services, and we have had the rest of corporate IT. There has been enough distance between what they’re doing that they’ve lived independently.

Now with the digitization of how we deliver our products and services the two components have overlapped, and the organization is struggling to understand that they are the same thing. That is a huge challenge for culture, organization, prioritization — there are so many different separate lines to bring together. And to try to be an integrated business partner when we don’t yet have an integrated organization... It’s going to be a huge challenge.

“We are certainly going to have to change how we think about our strategies in technology,” Vinci agreed. “We’ve been too narrow in thinking just about technology solutions, and not actually making ourselves and our team’s business leaders fill out all the parts of the whole strategy in people, process, information risk, innovation, finance, and so on.”

So if digital strategies overlap with IT strategy in support of the business, and most businesses are under threat from the digital disrupters, Brechbühl asked, then “What are you doing as companies with digital business models to disrupt yourselves, or to shift your corporate model dramatically? Asked another way, ‘What are the disruptive digital models emerging in your industry?’ Who’s your Uber, and what might they do to you?”

“IT’s not just one thing that’s changing,” began Tim Gude, Corporate Executive Director for IT, Finance, and HR at Volkswagen AG. “It’s many things. For example, Baidu in China:"

Baidu is announcing a platform to sell cars. Easy. The interesting part is the mechanism by which you can configure your own car, which you can’t typically do on the manufacturer’s side. Then Baidu sends out a bid request for that car, which forces our dealer network into price competition to guarantee Baidu the best price in the market. Then they search for different manufacturers on the basis of “If you like that car, you might also like…,” and they send bid requests to those dealers as well. So now the customer has full price transparency in the market.

Now, across the auto industry, manufacturers have their own financial arms to finance 60 to 80 percent of all purchases. And Baidu is doing the same with the financing world, so different institutions can bid on financing the car. And the same thing is happening on the service side, for 12-, 24-, 36-month services. So all of a sudden, everything is at stake: Our price, our customer maintenance, our financing business, our brand loyalty... And this is just the beginning, it’s just one of a dozen digital disrupters in our industry that are doing things to our business model.

“That’s going to cause absolute trauma,” exclaimed Steven Kahl, Associate Professor at the Tuck School of Business. “Between the sharing economy, and the marketplace side that will destroy the selling and financing model, and the autonomous vehicle piece... For an industry that hasn’t changed in 100 years — in 10 years it will look nothing like it looks today!”
“And if you don’t figure it out,” added Ed Happ, Global CIO for the International Federation of Red Cross and Red Crescent Societies (“IFRC”), “You’re going to get into a war of the lowest-cost manufacturers, which will do nothing but dilute and destroy brands.”

“I fully agree in terms of how the revenue streams will work and what the customer interaction will look like,” Gude answered.

But if you want to have mobility, you need some kind of vehicle that drives you from A to B. So there is still a place for car manufacturers — or ‘mobility manufacturers’ — in the new world, maybe with decreased volumes at a different price point. The question is, What will this place look like, and what additional services can we offer, for example, our own sharing philosophy?

Chevron’s Jim Green described disruption in the oil industry:

We face a scenario a bit like what the airlines experienced when they let GE wrestle away the engine market. In doing so, they passed off a bunch of margin on condition-based maintenance. We’re now looking at the same basic thing in oil field services. We have the data and the intellectual capital, so we can run our maintenance programs and manage our assets in a more informed way than our competitors, so we can really get our operating costs down.

That’s driving us into a different set of business models: In the past, a lot of oil field design and development was very — very — one-off. Now as an IT guy, I can almost go online — and click, click, click — put an infrastructure in place. It’s gotten that standard.

“We are also looking into digital oil field strategies,” Clariant’s Laska continued.

We service oil wells, measure their performance, and pump in chemicals to enhance flow or other chemical/physical properties. The interesting thing is, we have our people at customers’ oilfields, so we can use mobile devices to record field activity. We can talk about automated billing. We can start with data collection from customer devices, and combine that with remote monitoring to do on-demand replenishment. And then bring all the data together to offer web-based analytics. This is a win-win situation for us and our customers.

Levi’s Paanakker described changes in consumer industries:

Especially in consumer-direct, the social technology environment is becoming more and more a commercial environment. You can see the styles, you can see what others are doing, and then maybe you want to buy the product. It’s not traditional retailers, or even ourselves, that are selling in this: It’s a whole new channel created by social media, managed by influencers who have followers in their lifestyle. So how can we build relationships with these influencers to indirectly sell to consumers?

The parallel thing going on is personalization, as barriers to entry go down. How do we react to mass customization? How many do we make, and where do we make them? How do we bring manufacturing closer to consumers, because they’re not going to wait for weeks? Think especially about higher-tier price points, where through social sharing you see a lifestyle look that you like, and buy the product right there. Ohh! And it happens to be Levi’s… We see that growing rapidly.
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Digital First, Digital Only

“15 years ago we had this exact conversation around the first Internet boom,” Tuck’s Kahl challenged the group. “All of these new e-commerce solutions were going to completely disrupt every existing industry. A lot of that didn’t transpire, and what did happen went much more slowly than people anticipated. What’s different now, and do we really believe this is all going to happen this time?”

“The IT capability of every individual in the world is what’s different,” Tuck’s Taylor answered. “You now have a group out there that’s ready to accept and work with the disruption. How long did it take us to not call the taxi company, but to call Uber? Pretty fast. That’s different.”

“The consumer expectation and their ability to adopt is not comparable to even ten years ago, maybe not even five years ago,” Paanakker added. “15 years ago, the idea was great but the customer wasn’t ready to consume.”

Vinci joined in: “It’s also the social side of people telling each other, of different communities telling each other that something works. It’s the trust piece, because I’m sharing my experience, and you’ll listen to me, even if you won’t listen to marketing.”

“It’s because you can find the perfect solution for the customer’s problem,” said Meyer, returning to the Uber example. “The customer’s problem in the early days was ‘I ought to call a cab.’ Now, you don’t know when the cab arrives, how to deal with paying, foreign currency is a hassle. With everything electronic, it’s just so convenient.”

Green answered the question from another angle: “It works now because the cost of entry for these companies is so low. You can form a company, you can buy a consumer-facing system, you can buy back-end transaction capability, and you can knit it all together without having to spend for really any physical infrastructure. And you’re in business!”

Returning to Kahl’s question, “There’s a big piece that’s not different, though,” Hillman pointed out. “Let’s name one company — a traditional bricks-and-mortar company — that became the disrupter in the space and totally changed its industry, versus the Amazon and Uber stories that we all have.”

“It doesn’t always start with a revolution,” Paanakker rebutted. “Companies do evolve, but you may not notice the scale of the disruption. But if I look at the investments we are making as a company now versus five years ago — it’s 100 percent different. Much more retail, much more consumer-facing, much more e-commerce that didn’t exist before.”

“Apple and the iPod is a maybe,” suggested Kahl. “They came out of a business and disrupted the whole media industry.”

“It was a huge business shift,” Krigsman countered, “But it was a new business; they didn’t cannibalize computer sales. It didn’t disrupt their existing business — It just disrupted everybody else’s.”

Vinci and Brechbühl raised the example of USAA, a financial services company that serves the US military community, that has perhaps not disrupted the entire industry but has certainly re-invented itself based on digital technologies.
“Innovation is at its core,” Vinci started. “It’s done across the whole organization, and it’s completely customer-centric.”

Nothing happens in that organization without going through a customer lens. It’s based on understanding what the whole family situation is about: for example, knowing that the family is growing, and the kids are getting older, so you’ll need a bigger vehicle. Probably a van, because you’re driving the soccer team, too, and with USAA’s buying power they can get them cheaper. So while on your mobile phone, you can pick the colors and the features, finance it, and have it delivered, bundled with insurance. Three clicks and done.

They sell that whole experience throughout life’s events. You’re getting married, you’re going on deployment. Well, if you’re on deployment, you can reduce your car insurance because it will be garaged, but you might want to increase your life insurance. So they tailor to life’s events, and their NPS advocacy score is the highest in the industry.

“They understand when the pieces are coming, and they’re proactively acting to them,” Brechbühl continued. “And they manage to maintain a high-touch customer service feeling, and they have — by far — the best digital presence and mobile app. So USAA is both contextually sensitive and customer focused, and somehow they’ve managed to avoid the inherent contradiction that the digital model pushes the customer a little further away and makes the interaction less personal.”

“They married the two together,” Vinci said. “Digital first, digital only, and customer first. And within digital, mobile first. Right through the whole company.”

“One company I know is doing exactly what you describe,” Krigsman mused. “Originally they said, ‘We’re a restaurant company, we’re not a technology company.’ But they’ve had to become a technology company, and today their self-image is ‘Of course we’re a restaurant company, but we’re also a technology business.’”

“Well, they’re recognizing that in order to be in their business, they have to make use of all possible tools,” Meyer suggested.

They’re not a digital company, but they’ve been excluding the digital capability from delivering what they are. We all need to take full advantage of digital capabilities to be who we are. Sometimes that might lead to another business segment that is completely digital. We deliver hardware; we deliver consumables. We know more about the dairy and packaging business than anybody. We can help any given customer, because we know more than they do. That data is an asset because now we can sell guaranteed performance, rather than just a machine.

“Bringing together large sets of information and analyzing them to understand that information has changed the landscape in terms of what we can provide,” agreed Bill Blausey, CIO of Eaton.

It’s not just phoning home with email: It’s more dynamic, it’s more interactive, it’s a big part of how we’re trying to leverage technology in a traditional organization. We’re talking about power management, about energy consumption — spaces where knowledge of how the product is behaving and predicting patterns adds a whole lot of value. It’s not disruptive, it’s just the same thing. It’s just doing it better and more effectively and more often.
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Brechbühl tied together a number of the threads in the conversation:

Jeffrey Hammond of Forrester does an interesting presentation around technology and the Age of the Customer. Part of his conclusion is that firms must master customer experiences. They must master software product thinking. They must master rapid iterative development. They must master ecosystem business models. They must master understanding and utilizing the value of data. And I would add, they must master offering services around these software-based products.

“Steve Blank at Stanford says ‘a start-up is a temporary organization in search of a business model,’” Krigsman commented. “It’s distinct from a traditional organization, which has a business model in search of stability.”

“And in our traditional companies the investment model is a gate process that forces proof, which overrides the human instinct and kills things,” Hillman added, “Instead of going forward with progressive evidence.”

“The traditional model is ‘Show the business case,’” Blausey agreed. “What we’re talking about here is nowhere close: You want to keep the momentum going in small steps so that it doesn’t get squished. The analytics case is a perfect example: There’s inherent value, but it takes time to figure out.”

“You have to fundamentally change the governance model,” Vinci declared, launching the next phase of the discussion. “You don’t change all of your risk appetite, but you change the risk appetite within that part of your investment profile.”

Businesspeople with an IT Habit

“So the impact of current technology trends on business models extends far beyond IT. What new roles are emerging having to do with digital technology that didn’t exist five years ago?” Brechbühl asked.

Green from Chevron gave the first response: “We’ve evolved to a model where the functional lead — say, Drilling, or Marketing, or Finance — has to carry the technology agenda for the function, has to drive new technology. And what we do in IT is help the functions that have been lagging get into a position of technology leadership.”

“For Levi’s the role is product ownership,” Paanakker offered. “Most of these roles are in the e-commerce space, but they will go into all functions. It includes user experience, user interface, design. And I try to instill the idea that employees are customers too, and so we should tailor consumer experiences for them, too. It makes you think differently.”

“At Clariant we created a role called ‘business account management,” Laska contributed. “It’s a strategic role to understand our business’ markets, their customers, their IT needs, and push those requirements back into the ‘IT supply chain’. They have to manage relationship networks and strategic alliances, both inside and outside.”

“What kind of background do these folks have?” Krigsman asked. “IT people or business people?”
“They’re businesspeople with a nasty IT habit,” Taylor suggested.

“I would prefer to take people from business who have an IT background, and then give them access to specialists in infrastructure and applications,” Laska assented. “In reality, it’s people from IT with a close business relationship. So they have a broad background, and they’re working to develop better business acumen. It’s not a new role, but they have gained importance as digital has grown.”

“In the past,” Eastman’s Sarvis said, “We’ve had an IT account manager and a corresponding functional manager, and these two people would work together to implement what the business required. Where we’re headed is that these two positions get consolidated into a single role that decides IT capabilities and outcomes. Now whether that role lies in IT or in the business ….”

“It’s the combination to deal with iterative processes,” added Blausey. “Somebody that understands market segments and products; has leveraged technologies in the analytic space, together with even statistical expertise. This is truly a new role as far as using technology to position the organization.”

Laska described another new role: “More operationally, we still need people who can run big programs, but we also need people who can handle a series of smaller agile approaches. That’s not necessarily the same people, because of the different methodologies. The agile projects are a portfolio of smaller initiatives, very close to the business.”

“We actually brought in agile coaches to train people in the shift from waterfall,” VW’s Gude added.

Opening up the Art of the Possible

“What about a heightened role of an architect?” Brechbühl asked. “Someone with the ability to integrate all of these pieces into a flexible-enough architecture?”

“A lot of this stuff is adopting what’s already out there to bring it into the company, rather than building it,” Garing agreed. “But how about ‘framework,’ rather than ‘architecture?’ ‘Architecture’ means strictness.”

“You do still need to protect the organization,” Vinci emphasized. “But you also need to open up the organization for agility, within a framework. You have your architecture, your patents, and so on. You say, ‘This is the license on how you play. As long as you stay within those frameworks and you have the governance to test things out, you can play fast.’”

Vinci expanded on the topic:

The changing profile of Everything-as-a-Service means going out to different providers, and so you’re going to have more things in more different places. Yet the customer is still coming in on the mobile phone and wants just to push a button and have that immediacy of experience.

So now we have the architectural challenges of going over uncontrolled space and time and through many different data centers, each of them with an infinite amount of compute power. How are we going to architect all those transactions across all those different supply chains to
come together in a moment of truth for the customer? That’s the architectural challenge our CIOs are going to have going forward.

“Customer-centricity is at the heart of nearly all these technologies,” Swarovski’s Braun summarized, “So the architect role has changed, and it requires both domain knowledge and very, very intense business understanding.”

Brechbühl expanded the discussion of roles by returning to Paanakker’s earlier comment about the unity of digital strategy and IT strategy: “Should and can IT be the driver of all things digital in the business? Is it our job to be out front?”

“I get confused when we try to separate ‘digital’ from ‘IT,’” Sarvis answered. “Look at the trends: mobile, cloud, social, IoT. They’re all being led by IT in extremely close partnership with our business partners. If not the CIO, who’s going to lead that organization? I can’t envision anyone else taking the lead on all of those.”

“The business owns the strategy,” Vinci continued, “And the business owns the customer.”

But if you have a business strategy separate from a digital strategy, you’ve lost. That cannot work. So who in the organization has the capability to inform and influence how to support the business strategy with technology enablers? It’s our role to say they are one and the same thing. We are the experts in interpreting how these come together. We are the connectors.

“You’re framing IT as more integrated into the broader process, as opposed to something distinct that we are going to broker and bring to the party,” Brechbühl observed. “So the metaphor changes from brokerage to integration.”

“You can do business strategy all day long,” Sarvis said, “But you may put in constraints because you don’t know what’s possible unless you have a technical slant, and you don’t know what’s possible with today’s digital technology. So IT can influence business strategy by opening up the art of the possible. We’re not controlling the business strategy; that’s not our place. But we can educate and enable business leaders to understand what’s possible.”

“I’m not sure there’s much of a difference,” Meyer demurred. “The person our CEO turns to is the head of strategic planning. I report to that person. Is he the CIO or am I? I’m not sure it matters. The key thing is the strategy for the business as a whole.”

“I was always aligned with the business units,” Meyer continued, “But I’m moving to being embedded. That moves me maybe from a master/slave relationship to a president/chief of staff relationship, but still they tell me what I’m going to do, after a two-way discussion of what’s possible. I’m an enabler.”

“This is the perennial yin and yang discussion about the role of IT leadership,” Happ observed. “We serve users and business needs, and we enable new things. In the same breath, we have to lead and challenge and ask poke-in-the-eye type questions. Yes, we play integrator, but we also have to watch the future and bring those challenges to the table. The balance between those two is terribly important in the CIO role.”
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“And there aren’t many single individuals who can get their heads around all this, so collaboration is critical,” Green finished.

Sitting with the Cool Kids

In the context of IT becoming increasingly complicated, moderator Brechbühl honed in on a topic that had been mentioned several times during the day:

There’s an idea that we need one organization to keep the trains running on time: the legacy systems and the infrastructure. And that we need an entirely different organization to be more customer-facing: nimble, agile, mobile — the team with the ability to hear an idea and have a prototype app in testing two weeks later. Some people have put forward the theory that these two processes simply can’t exist in the same organization, or even if they could then the talent wouldn’t match the needs. So it becomes ‘two-speed IT.’

VW’s Gude objected immediately to the term: ‘’Two-speed’ implies one is slow and the other is agile and nimble. This makes it very difficult to talk to people. ‘Bi-modal’ is a better expression.”

Gude agreed, however, with the need: “As an industrial company we need ERP systems in order to product cars with high quality, piece after piece, in a reasonable time. Failure is not an option within this landscape. We also need the capability to develop experimental things in less than two years, with a high toleration for failure and learning. And this isn’t just in IT: It’s true of the whole business.”

“I cannot screw up the trade flows in Europe,” Meyer agreed emphatically. “I don’t want anyone innovating in that area. But we’ll tag different things with which mode they belong in: ‘If it’s one of these, you get to play this way. If it’s one of those, here’s the structure you go by.’ Then I don’t have to divide the organization.”

“There’s an analogy to go-to-market strategies,” Paanakker suggested:

You have traditional waterfall, with a structured cadence, clear hand-offs and accountability, and that takes time. And then you have agile, and a couple of flavors in-between. I’d be afraid of separate organizations, because it’s solutions-based. A sales function might need agile, and a customer function might need waterfall.

People need to operate in both worlds, because it’s more of a talent and governance issue than anything else. In the end, it all comes together with common infrastructure, common security, common data definitions. If it isn’t under one IT function, then these will drift apart.

“But does it work to have the same people thinking about ERP also thinking about mobile apps?” Brechbühl probed.

“You design your organization to be fluid enough to cope with different needs,” Vinci answered. “They all work under the same umbrella group – one culture. Some work in a different sub-structure (when incubating the transition to the new speed), a different architectural governance within the overarching architectural roadmap and with different characteristics for speed. But the agile speed
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should be the only speed of the future. If you don’t converge towards ‘one speed and being outcome focused” you create new points of tension and divide that will not enable the business strategy.”

“When you implement these two different groups,” Krigsman asked, “Do you end up with a dual class system, where one group of people gets to do all the interesting things?”

“We solved that by seeding people from a core team and training them,” Vinci responded. “They got acclimatized, inspired. So one turn of talent comes through and takes that culture back to the main teams. And over time that flow gets bigger and bigger.”

Mark Hillman offered a different opinion: “There is a skills issue.”

There are people who are very detailed, and then there are crazy guys. Making one of them do the other is a rare thing, and so some years back there was a ‘cool kids’ issue. And Operations was not the cool kids’ table, at all. So we made it into one. We defined why it was to be cool in Ops, and what we were doing that was amazing and remarkable and what they should be proud of. It was a leadership thing — and I’ll tell you: If you put some really smart guys on a mundane problem, they’ll solve it totally differently, amazingly, and change the game.

What’s in a Name?

The Roundtable then split into three groups to drill into governance, structure, and culture of the IT entity of the near-future. Steve Plume, Executive Fellow of the Center for Digital Strategies, gave the report-out for the Governance team:

We started to talk about governance for dual-mode IT, and the first problem was what to call the two modes. “Core” versus “Edge” didn’t work, and “Systems of Record” versus “Systems of Innovation” didn’t work, either. So we built a list that might characterize Mode 1 and Mode 2 [see table next page], without trying to name them. The first governance principle that comes up across both modes is alignment to the business strategy.

How is that alignment expressed? Often by investment priority, and Mode 1 is often deeply entrenched in an enterprise, so Mode 2 may have a tougher time fighting for resources. Another governance principle might be the type of end-user, where Mode 1 targets a known use case for known users and Mode 2 might be more exploratory … until Max (Braun, Swarovski) said, “Not in my scenario.” So another takeaway is that the two modes mean different things to different groups in a spectrum across enterprises.

Another perspective is Mode 1 contracts to deliver a specified set of functionality in a specified time frame at a specified cost, while Mode 2 can often be more about discovery. Mode 2 invests in a direction, using almost a venture capital investment model. Tim (Gude, VW) characterized this difference as “In Mode 2 you’re trying to get to the right question, not necessarily the right answer.” So it’s much more iterative, focused on investigation and discovery.
IT Be Nimble, IT Be Quick

CDS’ Taylor took the floor to present the Structure conversation:

One observation is that the fundamentals remain the same: The principles we were thinking about ten years ago are what we’re thinking about now. They may get more difficult, and they may get more complex, but they’re the same principles we’re going to be thinking about in ten years.

One of the first is aligning your information technologies with your strategy to drive value. So if one of the first questions is “What structure do you want to have?,” the answer depends on what the strategy is of the business involved. The structure of the IT group needs to fit in with the strategy, and not drive it. John (Garing, ViON) pointed out that with things changing so quickly, you need to build in flexibility up front. So that after you’ve made choices about what systems to implement, you’re not locked into a new, inflexible legacy system two years down the road.

We need to have controls in place for service delivery, so that no matter who does it, it is consistent and meets company standards. And lastly in an ideal world we would be “location-agnostic” about where the people are, that is, what organization they are part of. Bill (Blausey, Eaton) says theoretically that would be fine, but in practice, it would be tough to control if IT resources were “out in the wild.”

Regarding two-speed IT, we suggest two processes rather than two speeds: “Control & Quality,” and “Innovation.” It’s not so much that they have to be formally separated as much as
recognizing that there are two sets of activities. Some groups may be able to handle both; others may have to be separate for it to happen.

Having “control and quality” implies having a clear enterprise architecture, and so you have to think about the role of shadow IT. Bill pointed out that these people are part of the citizenship of the company, that they don’t view themselves as outlaws. So what structure does it take to create “citizen IT,” so they adhere to the same practices and standards? It’s about having security and approvals, so that people don’t put stuff on the system that can be hacked or has viruses, or doesn’t meet quality standards or might corrupt your data.

But if you’re going to do all that, then central IT will become a hindrance. So what can you give back that will have benefits to them to be citizens and not shadow? One is to celebrate when someone in decentralized IT does something good. Announce it, help other groups to use it, and make them into heroes. Another is to have a rapid assist team to go help the citizens choose a package, work with data. “We help you do citizen IT faster.” And finally, make sure the citizens are solving the right problem. If something has already been solved by another group, help them avoid wasting resources through redundancy. Part of that is making sure they’re really solving a problem that’s appropriate for them to solve.

“And with the speed of change,” Taylor finished, “You’re going to have to be more nimble. You’ve got to be able to understand the business issues, and you’ll have to be able to handle complexity in a way you haven’t before.”

**What Good Looks Like**

“Culture is the values, beliefs, and ways of thinking that get things done,” Ed Happ of the IFRC started for the Culture team. “Principles include:

- Results orientation
- Taking pride and having a sense of identity
- A customer focus based more on listening than on telling
- Embracing uncertainty and ambiguity

“So the new IT culture needs to be tolerant of uncertainty, or ambiguity, and of risk,” Green continued.

It’s going to need to embrace new ways of doing things, new values and beliefs, and we’re going to have to accept more risks. And it’s going from a command-and-control environment to one that is more iterative: From a build-it/run-it type of IT to managing partnerships; from being a producer to being a liaison; from having an IT identity to being part of a brand identity.

Then Ed (Happ, IFRC) said, “Great, but culture eats strategy for lunch. Regardless of how good the IT strategy is, and how aligned it is with the business strategy — the challenge is how do we change culture?” First, through leadership engagement. Second, tie the identity of the IT organization more closely to the brand of the business. Change isn’t simple, but there are signals and symbols that we can use as IT leaders. Change the metrics, based on the principle that ‘What gets measured, gets done.’ Be more accepting of failure: Become a learning organization. Develop a shared purpose with the broader business organization. And one of the most important things
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that we can do as IT leaders is to model the change, and stay consistent and focused on what it is that we’re changing.

“What would be your first priority?” Taylor asked.

“Leadership engagement,” Green answered. “Spend lots of time in small group settings, talking with people to help them get the concepts and get them into the discussion. Help people visualize what good looks like.”

“The identity piece is what I really connect to,” Vinci offered. “When you can get siloed teams to form a new tribe: Straightaway it changes the whole mindset of the team, and what we’re there for. It profoundly blows people away. We align to the business, to the sense of purpose, to taking the customer journey, which aligns to the digital change as well. Then we take it back inside to enable that customer journey in the business strategy.”

Brechbühl posed a closing question to the Roundtable: “How do you describe the positioning and contribution of your IT organization three years from now?”

“We’re differentiating Chevron’s performance through the application of information and information technology,” Green answered.

“IT feeds profits worldwide,” Paanakker volunteered.

“I keep coming back to an image of cowboys herding cattle,” Taylor answered, “Because the coordination and value proposition out in the wild is going to be a bigger and bigger portion of the job, while the central part is controlling quality in mission-critical applications.”

“I have an image of a hub-and-spoke,” Plume countered, “In which IT is essential to and embedded in every business function, with command and control coming from the center.”

Sarvis added details to the concept: “Technology and business strategy become a single conversation. IT services, business process optimization, and innovation all align in a single organization to drive differentiated competitive advantage. They all come together so that technical trends support business outcomes. Without those forces coming together, it’s always going to be a disjointed conversation.”

“Every member of the IT organization has to be focused on business outcomes, and I don’t mean conceptual ones,” Hillman said. “Direct results of what they’re doing. Then digital capabilities need to be considered from the beginning of every initiative, whether that initiative starts in IT or elsewhere — because digital and IT are the same in real life.”

Blausey gathered many of the themes from the day into his summary statement of the future of IT:

We have a central purpose that’s already part of our business, and it won’t change three years from now: To make direct and measurable contribution to the company’s goals through competitive advantage and value creation. It comes down to that simple statement, and I wouldn’t change it. And unless you have an internal organization that can do that, you might as well just get rid of the whole thing.
### Participant List

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**15 October 2015**

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