What CEOs Expect

Chief executives want CIOs who look outside the company walls to find new business opportunities

BY RICK PASTORE

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Two leading IT strategy experts from MIT on what CIOs need to know about the opportunities—and threats—of a world where evolving technology enables companies not only to be smarter, but to act smarter, too.

Smart companies are racing to find new ways to capitalize on exponentially increasing computer power, storage capacity, communications speed, and “smart-world” instrumentation. They’re finding better ways to make innovation happen every day.

But the key, says Jeanne Ross, is for companies to start by ignoring technology.

Really, she says, Ignore it.

Strange advice, coming from the director and principal research scientist at the Center for Information Systems Research at the MIT Sloan School of Management. But that’s the best way to let IT work for you, she says. Companies, Ross argues, need first to figure out what kind of value they want to create before they can usefully consider how IT can help them create it. They need to trust themselves—and trust technology and their CIOs—to work backwards from the vision of how they want to operate and what they want to be.

Moreover, it doesn’t matter whether your business is science-oriented, tech-oriented, media-oriented, people-oriented, or far-off-the-grid-oriented. Andrew McAfee, research scientist at the Center for Digital Business at the MIT Sloan School, says that if you’re not now using data and scientific analysis to back up intuition when making a decision, you soon will be.

The following conversations with Ross and McAfee make up the first in a series of special editorial sections created by the editors of MIT Sloan Management Review as they explore the shape of “The New Intelligent Enterprise.” The goal of the series is to provide strategic insights to IT leaders about how to address the challenges and opportunities presented by the ever-evolving nature of what technology can do. This first section draws on the expertise of leading MIT faculty members; coming sections will feature insights from top corporate executives.

— Michael S. Hopkins, Editor-in-Chief, MIT Sloan Management Review
Why Heroes are Bad

MIT technology strategist Jeanne Ross tells why technology will underpin everything, become a bigger business driver than ever, and lift the significance of the CIO—but shouldn’t be the first thing an organization thinks about.

CIOs are now asked not only to ensure that IT works seamlessly while cutting costs, but also to drive growth. What changed?

Several things. What tends to happen is that non-CIOs running an organization look at competitors and start to get their arms around what information-related innovations are possible. They don’t fully see the opportunities, but they see that what’s ahead is going to be an IT-driven phenomenon. They decide that their current data won’t get them there. And they turn to the CIO and say, “Fix it.” Or a company has made an acquisition and they’ve been talking about cost savings, as well as promising new services to customers. They bring the new company on and say, “Well, how are we going to make this happen?”

It used to be that a lot of people found operations uninteresting. But there’s been a slow recognition that success is not just about finance, say, or building the right portfolio of companies. It’s about getting operations right.

And IT becomes the path to operations success? Actually, I think companies are better off not thinking about technology. Stop framing it as, “What will technology let me do and then I’ll figure out what I want to do with my business.” You used to have to do that, but you don’t anymore. Now you can imagine how you want to run your business and then ask how technology can get you there.

At this point, if there’s something you really want to do, somebody will be able to help you find a technology that will do it. And it will probably be affordable. The more fundamental question is a matter of sitting down with the smart people that are already inside the company and asking, “How can we operate?” This is a decision you have to make. You have to put a stake in the ground and start building a foundation for it.

But you’re an IT person, and it sounds like you’re saying IT is secondary.

Yes, I am telling you to ignore the technology. “Ignore” is a strong word, but because people are so crazy about IT now, I think it’s the right advice. Ignore the technology. Think about how you would like to run your business.

What’s the role of CIOs, then? What should they be doing to ensure they play a valuable strategic role in leading companies to capitalize on what IT now can do?

The CIO will continue to have responsibility for technology because somebody has to be thinking about what’s possible and what experiments to run. Marketing people can do this, but they’re usually more comfortable if they have a technologist working with them.

CIOs will become business process engineers. And IT managers are perfectly positioned to do this because their entire lives have been spent understanding processes as they’ve implemented technology to support them.

To enhance a company’s strategic decision making, though, the most important thing CIOs can do is to provide clarity around the operating model. It used to be that IT managers did whatever each individual business unit manager wanted. Now they’re saying, “IT is about how we function as an enterprise.” Even though you wouldn’t think that’s new anymore, it’s like they’ve learned it again. The big evolution for CIOs will be the ways they take on responsibility for business processes in organizations. They need to become business engineers. It’s a special skill set to Continued on page 3
figure out how to bring together a company’s whole portfolio of existing skills in IT and in the business and how to engineer processes that are implementable and valuable. It’s really hard.

But IT managers are perfectly positioned to do this because their entire lives have been spent understanding processes as they’ve implemented technology to support them. IT people now talk about “our level one processes” and “our level two processes.” They have that recognition of what technology capabilities have to be built underneath things.

As IT leaders become end-to-end business engineers, creating new collaboration across units, what business benefits have you seen result?

There are many. One critical one is that data sharing across units enables a company to present a single face to the customer. Increasingly, global companies are insisting that their suppliers provide a single point of contact for sales and support. Companies that can’t share customer and product data find it difficult to meet this type of customer demand.

To recap: you’re saying, Ignore IT and design the business operation. But you’re also saying, You know who’s good at this? The person who’s spent all his or her time thinking about IT.

You’re right. And the biggest dilemma is that if I’m CIO and you tell me exactly how you’d like the business run, my job is to admit that our existing technology is an obstacle, map out a new direction, and get you to accept that it will happen much slower than you want.

The most important thing for CIOs to do is to find high impact things to do near-term while they’re pursuing the longer-term. Find one thing the company can do now that’s going to make a difference and get the momentum going. That is a gift. ‘Not all CIOs can do it. Their inclination is just to say, “Oh, my God, this is such a mess. Here’s the five-year plan.”

Managing change of behavior is much bigger than managing change of the technology.

Is there a behavior-change challenge that organizations especially face?

As we steer toward more automation, more standardization across the enterprise, more data sharing, we’re increasingly going to have to stop people from performing heroics in the workplace. We used to rely on people to be heroes. We’d say, “Do something brilliant and whatever the customer wants.” That’s just not going to work in today’s world. Because we need things that work across the enterprise, and heroism is too unpredictable. When the right hand doesn’t know what the left hand’s doing, it just messes up everybody else. Your heroics become my problem.

So heroics are out. What’s in is a conception of the organization and you as a team. If you have to do something heroic, you better make sure everybody knows what you just had to do. As companies get better and better, they’ll call for those heroic behaviors less and less.
Andrew McAfee

The Scientific Mindset

Of all the ways that changing technology capabilities will remake organizations, says MIT’s Andrew McAfee, none is as big as the transition from intuition-based decision making toward an approach based on science.

What’s the most significant management shift that evolving IT capabilities will drive?

It’s really hard to understand what new possibilities have opened up and what important constraints are gone because of the cornucopia of technology that we’re sitting on. One of the biggest changes is that when you have this unbelievable amount of computing horsepower and a mass of data to apply it to, you can be a lot more scientific about things. You can be more rigorous in your analysis. You can generate and test hypotheses. You can adopt a much more scientific mindset.

If you don’t try to migrate your company and your decision-making in that direction, you’re missing out on a huge opportunity, and you had better hope your competition is also not moving in that direction. Because when you compare scientific to pre-scientific approaches, there’s one clear winner over and over.

What actions should IT managers take to ensure they prove valuable in their organizations as leading drivers of the transition to the “scientific” Intelligent Enterprise?

IT leaders can do two important things. First, they can explain to their business-side colleagues both why and how information technologies are changing the company and competition—in other words, how enterprises are becoming more scientific thanks to technology. Second, they can help their colleagues make important decisions by presenting and explaining available options and making recommendations. The technology landscape is constantly changing, and is alien and confusing to lots of executives. IT leaders can help them by presenting technology options, discussing them in business terms, and essentially reducing a seeming infinity of tech choices down to a small set of business decisions.

A lot has been said about IT’s unique span-the-silos role in organizations. What business benefits have you seen result from IT-driven increased collaboration among business units (or among business roles)?

As one former CEO of a tech giant told me: “If only we knew what we know, we’d be three times as productive.” When work takes place only within silos, there’s going to be a lot of redundancy and waste.

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