10 Predictions for What the CIO Role Will Look Like in 2020

– John Brandon, CIO

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What will the job of CIO be like in the year 2020? In many ways, the answer is already clear: The IT leader will still be the nucleus of any company, working closely with business executives and strategizing about future technology directions, leading a staff of highly trained professionals and championing streamlined technical operations. The position will still require a mix of analytical foresight and management prowess over the next decade.

At the same time, we also know that technology will change dramatically. Who could have predicted even 10 years ago that the CIO would have to deal with complications such as cloud security and virtualization? To find out how the role will change in eight years, we tapped industry leaders, analysts and CIOs themselves to discover what the challenges of 2020 for the CIO will be like. Here's what we found out.

1. Microsoft's reign may end.
Perhaps one of the most dramatic changes in 2020 could be a lesser role for Microsoft. Todd McKinnon, CEO of Okta, an identity access management company, says the rise of iOS and Android have put a dent in Microsoft's dominance, but many companies have stuck with Windows Server for better or worse. However, mobile will likely end a Microsoft hegemony.
"In 2020, employees, customers and partners will demand—and expect—access to apps from more than one heterogeneous device," he says. "If the CIO has not built an infrastructure to support this, we're going to see a lot more, and likely very serious, security breaches by 2020."

2. The IT department won't be physical.

There's a dramatic shift to the cloud, but most of us can still tell you who works in IT, where the department is located and who is in charge. By 2020, there will be a shift from an IT department for end users to a "follow me" IT service provider mentality. In other words, IT itself will move to the cloud. The concept will shift from a department that manages cloud services to a cloud service itself.

Bob Janssen, CTO of RES Software, a company that makes Windows desktop management software, says the end-users of today are the last generation of corporate workers who can tell how and where IT is operating. The next generation won't even know. Those workers will have ties with about 150 other workers (on average); they grew up analog and learned digital.

3. Hyper-kinetic business collaboration will occur in the cloud.

High-definition videoconferencing has certainly made progress, but most meetings still take place in person. By 2020, McKinnon says, collaboration in the cloud will replace collaboration behind a firewall. This means the CIO will have to address how employees use cloud services. "As a result, the position of the CIO will evolve into one that emphasizes strategic business leadership—looking at where and how to best collaborate with business partners," he says. "This also means that the CIO will have had to address head-on the issue of moving information from behind the firewall in terms of security."

4. CIOs will managing fewer humans, especially for security.

By 2020, the role of CIO will shift away from one that is mostly about managing humans in a large workforce. While that may seem too far-future for some, the reality is that computing is becoming much more autonomous, requiring less dependence on human intervention for systems to run correctly. Darnell Washington, CEO of SecureExperts, says building security, identity management and even emergency response will be controlled by computer artificial intelligence (AI). "First response and collection of situational awareness will be initially obtained by unmanned systems, robots, surveillance drones, and other unmanned aerial vehicle systems that contain audio and video capabilities," he says.

5. End-users will not be in departmental groups.

Janssen also says end-users will no longer work in groups. That shift will be one of the most critical changes for CIOs, who often meet with teams to collaborate and strategize. Instead, IT will become a service provider to individuals, making sure their gadgets, software and systems work. He says "native" digital users might have as many as 15,000 important business relationships (many of them not in person) that can serve as technical resources. A gap will develop by 2020 where the hyper-connected social platforms mean workers are much more acquainted with friends than co-workers. So the CIO of 2020 will be required to compete with the Facebook of tomorrow. "Facebook-like enterprise networks will serve as a far more effective means of collaborating among teams," he says.

6. Cyberwarfare will turn the CIO into a general.

It's no secret that the modern CIO has to deal with cyber-attacks on a routine basis. However, as John Thielens, CSO at enterprise security company Axway explained, cyber warfare will reach a heightened state and will require an almost militaristic stance by the CIO. One fallout from increased attacks: Internet neutrality principles will finally crumble. That means a CIO might have to move into a role of negotiating peering agreements between Internet service providers. (Today, the Web is essentially a freeform entity where ISPs pass information along unhindered.) "We'll see national firewalls going up as a way to keep cross-border relationships safe," Thielens says. "We'll see the management of interconnectivity between large global businesses become significantly more challenging."
7. **BYOD will be the norm.**

In the future IT department, employees will bring their own devices to work and IT helps makes them secure. Today, that remains an exception to the rule—in most cases, IT still provides hardware to employees and manages the infrastructure. Tim Naramore, CTO of Masergy, a managed network provider, says IT will mostly be charged with managing employee-owned devices. For the most part, workers will find their own computing devices and use them at work.

8. **Outsourcing will use AI.**

One key trend for CIOs: Outsourcing will move from managing physical teams that handle incoming calls or tech support issues to a more complex role dealing with computer AI. Greg Pierce, cloud strategy officer at Tribridge, an enterprise consulting company, cites the example of a call center. Today, it exists in a building where reps answer the phone. By 2020, speech recognition systems will advance to the point where a robot can answer the phone and provide tech support, using a digital voice that sounds the same as a human. That means the CIO will have to manage this legion of "bots" and the decision trees for support, not the people doing the work.

9. **CIOs will impact business direction.**

Many CIOs of today meet with business leaders and contribute to the overall direction of the company. In the future, the CIO won't just contribute. He or she may be the main thought leader, moving from an advisory role to one more focused on direct innovation. Masergy's Naramore says the CIO will be involved in every key business decision, from marketing to product design to logistics, because technology will play a pivotal role (or even the major key role) in those areas.

10. **Analytics will be increasingly important.**

Making decisions means having good data, and most CIOs have learned this lesson. In the future, explains Oliver T. Bussmann, executive vice president and CIO at SAP AG, the CIO will delve even deeper into analytics as a way to predict future technology trends.

"He or she needs to earn a place in the C-suite by looking into the future of where the business is going, and determining the right technology roadmap to enable new business models, to improve margin, or otherwise give their company a leg up on the competition," Bussmann says. "In many cases this will mean leveraging in-memory computing and analytics to react to and capitalize on trends in real-time. Running massive internal infrastructures will no longer be a priority as almost everything runs in the cloud; however, data security will be of paramount importance—and there will potentially be integration challenges."

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