



# The CIO, Reimagined

**Big pharma is big on big data and all the technology that comes with it, which suggests that individuals who can contribute to these conversations will find their thoughts in increasing demand at life-sciences companies. And who can potentially contribute more than chief information officers? Here's a look at the evolution of the CIO — from lowly overseer of laptops to prized partner in innovation.**

**By Karen Epper Hoffman**

It wasn't so long ago that the chief information officer at most typical large life-sciences companies was relegated to the back office, primarily charged with making sure that everyone's computer worked. While pharma has been behind the curve in its adoption of technology, many companies have nonetheless arrived at the conclusion that the use of mobile devices, cloud computing, big data analytics, and wearables ranks among the most effective ways to differentiate themselves from the competition. To that end, the role of the CIO has not only been elevated, but also expanded to meet the needs of an increasingly tech-savvy business — and its exceedingly well-informed and tech-happy consumer base.

Mark Hernon, Takeda's regional CIO for the Americas, says that while "the role of IT has been historically limited to supporting the back office and basic infrastructure," he and his colleagues now work much more actively with their peers in R&D and sales, particularly in building out CRM and sales force-automation systems. In the past, Hernon says, marketing teams would hand off many such projects to external agencies, which built out whatever technology solutions were needed. But this structural approach made tying marketing into a company's overarching tech infrastructure more challenging. As a result, pharma companies would often end up with "a patchwork of systems that was complex to manage from a technology point of view," Hernon says.

That's changing, and fast. In particular, Hernon cites social media and big data as key drivers of the trend. "There is more data available than ever before and more opportunities to use that data." For instance, he explains, "We can use [it] to have a direct relationship with patients and providers."

A new study released in February by the IMS Institute for Healthcare Informatics and executive recruitment firm Egon Zehnder, New Strategic Information and Technology Rules in Life Sciences Companies, confirms the elevation of the CIO.

"Several CIOs are stepping up and becoming more strategically oriented," says Alain Serhan, co-leader of Egon Zehnder's global digital health initiative and an author of the study. "As technology becomes core to the pharmaceutical business, there is a fantastic opportunity for the CIO to

step up and play a more significant role. There's no one better at understanding data sets and analytics."

The onslaught of new and emerging technologies has served to expand the CIO's position, but so too has the growth of would-be competitors, particularly digital health startups and medical-services middlemen that are using technology to disintermediate larger life-sciences companies.

"Pharma is at a stage where executives are realizing that there are different models out there," Serhan explains. "And if you fast-forward, you could envision a scenario where they would be disconnected from the patient or the provider."

Debbie Profit, leader of Otsuka Information Technology, has witnessed a similar shift during the past two years. She notes that IT management has gone from being "very task focused" to "being seen as a differentiator, [as] part of the solution."

### NEW ROLES, NEW RESPONSIBILITIES

As CIOs and their teams step into a more collaborative and strategic role, the position itself isn't just changing. In fact, it's often now split into different jobs.

The IMS-Egon Zehnder study found that within the past three years, eight out of ten leading life-sciences companies have created new digital and innovation leadership roles — and nearly half have hired new CIOs.

"What companies are looking for in terms of competencies is the ability to be customer centric and understand the online and offline behavior of patients," Serhan explains. "They're looking for more digital fluency in understanding media and for people who are extremely data savvy."

The CIO position is arguably more of a linchpin to the future strategy of these firms than ever before, according to Bruce Forman, the chief information security officer at UMass Memorial Medical Center.

"If we can agree that technology can be used to streamline operations to make everything more efficient and that we're able to analyze data and make decisions in ways we weren't able to do before, then we can agree that CIOs have a unique position," Forman says. "They are mission critical. They have to understand where the organization is going and help come up with the strategy."

As Profit points out, this is all part of the broader cross-industry shift of IT, from "being not just a technical engine, but a creative one." As such, IT teams need to work hand in glove with their R&D, marketing, and sales counterparts.

"We need to be sitting around the table," Profit stresses, "road-mapping and planning with them." She adds that IT leaders contribute not just an understanding of how technology can facilitate better access, marketing, and customer service, but also how technology works, and how companies should think about technology from a business perspective.

For a more collaborative dialogue at Otsuka, Profit

says that IT professionals and their R&D colleagues are using "interactive walls" (like electronic white boards) to share information and discuss ideas. "When you bring technology and clinical folks together, you can deliver very different outcomes," she says. "From a commercial perspective, whether we're discussing mobility or digitizing the sales team, this lets us think more creatively about disseminating information."

While IT executives and CIOs once could communicate in the "arcane language of technology," that is no longer the case. Nowadays IT has to converse with marketing and sales about how technology can be used to meet business objectives

The needs for creative thinking and better communications skills are also reshaping the way companies fill the CIO position. "It is changing the kind of people we look for in IT," Hernon notes. "Executives are realizing that technology is no longer a fringe topic. There's no bright line between technology and business."

Whereas IT execs and CIOs could previously communicate in the "arcane language of technology," Hernon says that top IT executives must now be able to converse with marketing and sales colleagues about how technology can be employed to meet business objectives. "They need to be there to represent technology," he adds. "That sometimes requires a more diverse background or a different kind of background than it did before."

As a former strategy consultant and CIO of a medical startup, Hernon prefers to hire IT people who have a wide range of professional experience. At Takeda, IT team members have come out of the commercial side — and also moved into the commercial side — of the business.

However, despite the increasing importance of the CIO post, top technology professionals still find it hard to break into the uppermost ranks at life-sciences companies. According to the IMS-Egon Zehnder study, fewer than 25% of CIOs have been integrated into the executive team at small companies and just 14% at large ones. This is likely due to the perception that IT is still mostly about basic infrastructure needs.

"The onus is on the CIO to prove his or her ability and influence the executive team to get a seat at the table," Serhan says. "They need to take on that leadership and demonstrate their insights about how to use the information that [life-sciences companies] are sitting on." ■