

Workforce transformation and the CIO: Integrating technology and business

This article is part of a series developed by The Economist Intelligence Unit's *Pioneering Leadership programme*, sponsored by IBM, and drawing on interviews with leading CIOs from around the world.

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CIOs' executive brief: three ways to update IT skills for digital transformation

Keep your own IT skills current

"Read, read, read as much as you can," advises Theresa Payton, CEO of Fortalice Solutions and former White House CIO. "Then ask yourself, 'what am I going to do—while I'm transforming the business—that allows me to transform myself in my role?'"

Take a multi-tactic approach to building IT staff skills

Wondering whether to train, hire or outsource? All of the above, advise IT leaders. "The skills of those who report to the CIO are much more technical than they used to be," says Marc Probst, CIO of Intermountain Healthcare.

Engage with tomorrow's IT experts today

Jaguar Land Rover, anticipating a shortage of skilled engineers, has engaged with more than 2m young people in the UK, encouraging them to consider STEM (science, technology, engineering and maths) education through its Inspiring Tomorrow's Engineers initiative. Next, the company plans to engage with 2m more young people, this time worldwide, by 2020.

The pace at which new technologies—cloud, big data analytics, virtual reality (VR), artificial intelligence (AI), robotics and more—are developing is breathtaking. But if you really want to hear CIOs gasp for air, ask them about the new demands CIOs face as they seek to turn clever IT innovations into real-world business transformation.

CIOs must manage increasing IT complexity and the growing demands of business stakeholders. As Simon Bolton, CIO of UK-based Jaguar Land Rover also notes, modernising business strategies and aligning them with emerging technologies remain a CIO imperative: "My biggest aspiration is to help Jaguar Land Rover to be seen as a technology leader outside of the company within the automotive space.

"We've seen the industry changes: electrification, connected cars, autonomous driving, etc. We need to transform our business so that we're ready to maximise those opportunities. In today's world, where customers' expectations are changing very quickly, we need to have systems that can respond to those changing requirements."

CIOs face the dual challenge of maintaining business critical systems while adapting the business to leverage new technologies. Renata Marques, Latin America CIO of Whirlpool, advises CIOs to "have a very solid and stable foundation that doesn't consume the agenda of innovation and digital transformation."

And yet many CIOs and their staff are not necessarily prepared for all of this change and the major implications for the workforce and skills. In a recent survey conducted by McKinsey, more than 60% of business executives said that due to advancing automation and digitisation, they'll need to retrain or replace more than a quarter of their workforce between now and 2023.

To make many of these changes successfully, integration of business and IT knowledge will be essential. Ritesh Sarda, CIO of Sun Life Financial Hong Kong says:

“Technologies without the business acumen or those that fail to solve the relevant business problem are absolutely useless. I think CIOs have to become more business savvy and have to be integrated and engrained into the business so that we know how we can use technology to resolve business challenges and make things forward-looking from an industry perspective.”

New demands = New opportunities

Although balancing traditional business needs with the desire for innovation is always a challenge, the same changes that have reshaped the role of the CIO have also created new opportunities for workforce transformation.

Indeed, one reason CIOs need new skills is the way IT has moved beyond the back office and into customer-facing products and services. Consider today’s new cars. Essentially rolling data centres, they’re equipped with computerised engine components, Wi-Fi networks, GPS navigation, backup cameras, lane-departure warning systems and more. Tomorrow promises even more onboard IT, including electric batteries, voice-activated controls and self-driving capabilities.

Alongside these new tools, customers’ growing IT savvy puts even more pressure on CIOs. At Jaguar Land Rover, designers work on a seven-year product life cycle. For traditional automotive designers and engineers, to create a highly complex vehicle, that may seem like the blink of an eye. But for today’s consumers, it’s more like an eternity.

One path forward may be the adoption and implementation of Agile practices. “We need to do all we can to remain agile,” Mr Bolton says. “That’s becoming ever more challenging as technology moves faster and faster. As a company, we need to wrap our heads around this and make sure we’re all going forward at that speed.”

Ms Marques of Whirlpool brought in an Agile coach into the IT function to train her team once a week: “We started to transform our projects by adopting Agile methodology and delivering technology to the business in a different way. This is something that we’ve worked on a lot, not to just to speed up our process, but to create this future of innovation.”

Mr Bolton of Jaguar agrees that these changes bring new opportunities for workforce organisation. Historically, Jaguar Land Rover’s strengths have been engineering, manufacturing and design. Today, the company seeks to add to those strengths by placing greater emphasis on technology.

“Increasingly, we’re going to have to demonstrate real leadership around technology,” Mr Bolton says. “That requires a shift in skills, not just in the technology function, but across the company.”

That said, non-IT employees aren’t as far behind as they used to be, and like many consumers, both IT and non-IT staff have gained technological sophistication too. “One of the changes we’re going through,” notes Mr Bolton, “is we’re insourcing—not for every skill—but we’re bringing back in certain areas of technology that we’ve outsourced over the past few years”.

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*Simon Bolton
CIO, Jaguar Land Rover*

Marc Probst, CIO of Intermountain Healthcare, a not-for-profit health system based in Salt Lake City, Utah, has had a front-row view of the dramatic changes in overall familiarity with technology. Technical positions at Intermountain that formerly reported into IT and Mr Probst have shifted to its clinical and financial business units.

For Mr Probst, that means assuming a new role. “I’ve become more of a co-ordinator,” he says, “and a technical resource to make sure the things they’re doing fall within our security parameters and don’t blow up the system. It’s really different.”

Ms Marques of Whirlpool similarly describes the importance of being a technical resource for the business and understanding its strategic needs: “Our role as CIO is to be the conduit—to convert all the technical knowledge into a single strategy and not have a lot of different technologies everywhere not in conversation with our business.”

The value of reskilling and mentorship

Though IT employees still generally have a better understanding of technology than other employees, given the fast-changing nature of technology, many CIOs find that their current IT staff members still struggle to keep up with consumer or colleague expectations. It’s a rare IT department that employs experts in big data analytics, AI and VR. Yet these skills are increasingly in demand. Some even say the IT industry faces a talent shortage.

Two ways forward may be hiring for greater diversity and improving mentoring and internal training. In theory, that should not be difficult. One person advocating for those changes is Theresa Payton.

“Recruiters tell me, ‘there’s a war for talent, and we just can’t find qualified people.’ I reply, ‘Well, maybe it’s because you and the hiring managers are all looking for the same people. There are only so many unicorns to go around,’” says Ms Payton, CEO of cybersecurity firm Fortalice Solutions. Ms Payton was also formerly the CIO at the White House under George W Bush’s presidency from 2006 to 2008—and the first woman to hold that position.

Instead, Ms Payton recommends that CIOs start by considering the personal qualities they’re looking for in new hires, what she calls “non-negotiables”. The rest, she maintains, can be gained with training.

Ms Payton practices what she preaches and has implemented a mentor-protégé programme at her cyber-security firm. She explains the rationale: “Take advantage of your own amazing people and have them be responsible for some of the retooling and retraining of your workforce. Make it part of their workday. Build it into your resource plans that you’re going to train, coach and mentor the next generation. Doing that creates that cross training, that *esprit de corps*.”

Ms Payton also works hard to keep her own skills and knowledge up-to-the-minute. While working in Washington, DC, she got into the habit of waking at 3:30 am to read and make other preparations before the day’s first briefing. “You have to constantly be a student of the job,” she says. “Stay close to the business, and stay close to the technologies.”

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Theresa Payton
CEO, Fortalice, and former CIO,
White House

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