The Changing Role of the CIO

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Executive Summary

No department within an organization has undergone such a profound change as that of IT. The platforms used to deliver IT products and services, the tools-of-the-trade and skillsets required to do the job have changed. On top of all that, the IT function is now being integrated into the company's other operations and is expected to operate as a business-within-a-business. Overseeing this sea change is the CIO. This paper examines how the role of the CIO has been evolving to meet today's new world of IT.

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The shift in the nature of the CIO's role is most influenced by a changing technology and business landscape that encompasses disruptive technologies such as social, mobile, cloud computing and big data and analytics.[1] With the IT landscape undergoing profound changes, the CIO has the opportunity to move from traditional IT roles to become a partner in overall business strategy and innovation.[2]

The time for change is now

The opportunity for the CIO to drive transformation from traditional IT to new roles is upon us now, and this paper examines the following:

- The fundamental shift in how IT provides services

- The new platforms behind digital disruption

- The new sourcing landscape

- Running IT as a business

- The importance of collaboration among top-level management

- The shift in CIO from improver to influencer to transformer

- The talent shortage, skills gaps and knowledge leak

Fundamental shift in how IT provides services

In just the past five years alone, what IT provides, and how the function provides IT has shifted. In its original incarnation, IT provided products and services such as software design, in-house hardware and infrastructure, security, installation and maintenance. Now a significant portion of IT budgets may be devoted to public, private or hybrid cloud-based applications to support the business, replacing dollars previously spent on on-premise hardware and software. Today, IT is required to provide conventional technical services consistently, as well as innovate in a faster, more agile manner to stay ahead of the game.[3] The CIO's role is not just about cutting costs and doing more with less—a successful CIO should also be concerned about issues of importance to the business as a whole, such as increasing sales and contributing to the company's bottom line.[4]

> A successful CIO should also be concerned about issues of importance to the business as a whole

IT, formerly a back-end operation offering services and products to internal users, has rapidly moved to the front lines of business. Whereas the department never faced customers before, its newest priority is customers. In fact, "two-thirds of CIOs are increasing their focus on getting to know the customer better and working with that information to improve the customer experience."[5]

[1] Changing Roles: The CIO as Transformer By Ben Rossi. Information Age, March 2014.

[2] Dell CIO: Pull Shadow IT out of the Shadows by Joe McKendrick. ZDNet, November 2013.

[3] 2014 CIO Agenda: An Education Perspective by Jan-Martin Lowendahl, Anna Maria Nenna and Amos Auringer. Gartner Research, March 20, 2014.

[4] The New Role of the CIO by Ernest Von Simson. Bloomberg Business Week, May 2013.

[5] CIO's Real Boss: The Customer by Peter J. Korsten. InformationWeek, March 2014.

The focus has shifted from technology and vendors to the end customers who buy and use the organization's goods and services. While technology is the differentiator, CIOs must recognize that it's about the process through which technology is harnessed to address what the customer wants and needs.

Digital disruption is both a challenge and a significant opportunity. Today's CIO must embrace innovation and customer engagement. IT can help transform organizations into "highly collaborative, customer-driven organizations" instead of business unit-led companies.[6]

The new platform

IT today is faced with an entirely new platform for delivering IT products and services. In the past, it was very easy to point to a device and say "that is a computer," but today's platform is often hard to identify. Instead of a single identifiable device, today's platform is an assortment of technologies, devices, and services that encompass mobile, cloud computing, social and big data and analytics.

Mobile devices and applications

Mobile has catapulted in importance over the last decade. Today, 84% of CIOs say that mobile technology is at the top of their plans, jumping 20% in the past five years.[7] The CIO has to recognize and react to the importance of mobile devices impacting both consumers and employees. In addition to providing satisfying mobile experiences, CIOs face the challenge of implementing solutions based on a wide array of devices that can be upgraded and replaced at a staggering pace. Even within the organization, Bring Your Own Device (BYOD) policies greatly increase the burden on today's IT organization.

Cloud computing

One of the most significant platform changes affecting IT is the proliferation of cloud computing. In the same study where CIOs spoke of the importance of mobile solutions in their plans, cloud computing "saw an even bigger spike, with 64% of CIOs naming it as part of their visionary plans, a 113% jump since 2009."[8] In reality, there are very few IT functions that are not available in the cloud today.

In order for IT to handle both conventional and innovative IT activities, it must be agile and be prepared to invest in cloud computing. Cloud computing can reduce the burden of in-house systems and free up resources to dedicate to the new opportunities in IT.[9]

Cloud computing is not without its challenges. The most often-cited challenge is securing a cloud-based infrastructure to protect a company's important data and intellectual property. Fortunately, many analysts report that today's major cloud-computing providers offer more secure environments than many in-house organizations can provide. Many analysts recommend a first step of taking some non-mission critical applications and moving them to a cloud-based infrastructure, learning from the experience, and then developing plans for moving more infrastructure and applications to the cloud.

[6] *CIOs Need To Prepare For Cultural And Organizational Transformation by Dan Bieler. Dan Bieler's Blog. Forrester Research, Inc., February 5, 2014.*

[7] *CIO's Real Boss: The Customer by Peter J. Korsten. InformationWeek, March 2014.*

[8] *CIO's Real Boss: The Customer by Peter J. Korsten. InformationWeek, March 2014.*

[9] *Gartner Executive Programs Survey of More Than 2,300 CIOs… Gartner.com, January 14, 2014. < http://www.gartner.com/newsroom/id/2649419>*

Big data & analytics

The "rise of big data, social networking and mobile interactions" has greatly accelerated the amount of information available to the enterprise.[10] A staggering "80% of all data in the world was created in the last two years alone, and data volumes are growing more than 40% per year."[11]

The challenge in housing so much information is no longer how to acquire and store it, but how to analyze the data to derive value for the business. CIOs need to find the best way to translate the value of big data to business in order to use it for fact-based decision making.[12] It's the "speed of insight and action" that sets organizations apart in big data and analytics, with two-thirds of CIOs now reporting real-time insight as a business expectation.[13]

Gartner estimates that by 2017, "33% of Fortune 100 organizations will experience an information crisis."[14] With multiple forms and sources of "both structured and unstructured data" being collected across various channels, including tweets, blogs and videos, the challenge of governing, interpreting and securing enterprise information has increased exponentially.[15] Strategies surrounding big data and analytics must be revised to manage information for business advantage and competitive gain.

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The expectations around big data have led to the confusion that hinders and constrains spending on business intelligence and analytics solutions. If they haven't already done so, CIOs and their teams need to educate themselves on what is reality in big data and analytics and what is just hype.

Social business

Social media and related technologies have given rise to what some are calling "social business." Many customer-facing and internal processes can be enhanced through the use of social technologies.

Social media has already revolutionized customer service, and has the potential to take it even further. Dell CIO Adriana Karaboutis recommends that social media be a key tool for IT teams to use in connecting and engaging with customers. Instead of a "six-to-seven step process for opening up support tickets, for example… scanning social media sites to see how the network is running …and empowering users to solve problems for themselves" is becoming the norm, and in many cases is helping with customers' satisfaction and favorable impressions of organizations.[16]

[10] Gartner Says One Third of Fortune 100 Organizations Will Face an Information Crisis by 2017. Gartner. com, February 27, 2014.
   < http://www.gartner.com/newsroom/id/2672515>

[11] CIO's Real Boss: The Customer by Peter J. Korsten. InformationWeek, March 2014.

[12] Gartner Predicts Business Intelligence and Analytics Will Remain Top Focus for CIOs Through 2017. Gartner. com, December 16, 2013.
   < http://www.gartner.com/newsroom/id/2637615>

[13] CIO's Real Boss: The Customer by Peter J. Korsten. InformationWeek, March 2014.

[14] Gartner. Gartner Says One Third of Fortune 100 Organizations Will Face an Information Crisis by 2017. Gartner.com, February 27, 2014.
   < http://www.gartner.com/newsroom/id/2672515>

[15] CIO's Real Boss: The Customer by Peter J. Korsten. InformationWeek, March 2014.

[16] Dell CIO: Pull Shadow IT out of the Shadows by Joe McKendrick. ZDNet, November 2013.

Running IT as a business

As a driver of organizational change and innovation, the IT organization has to operate as a strong, capable, multi-disciplinary business within the larger company.

The first step in identifying itself as a credible, useful organization is learning "how to better communicate the value of technology"—and therefore shift former perceptions of IT value—to the business overall.[17]

According to Peter Burris of Forrester, the organization's perception of IT is based on two things: its perception of its dependence on technology, and its perception of IT management's competence. The CIO needs to run the IT organization focused on the entire IT agenda—the 'T' representing the technology necessary for running fundamental business processes —and the 'I' representing the unit as an information conduit, enabling analysis and operating process improvements. Value and competence will be displayed with a dedication to a portfolio of IT processes and investments that deliver on business outcomes.[18]

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Knowing it can and should run IT as a business, IT staff doesn't always have the business skills required to do so.

Most IT leaders and staff have technical backgrounds and education and have little business skills training or experience. Most were also recruited from outside the company and have very little knowledge of business or its issues, overall strategies, or goals. IT organizations often struggle to provide a basic level of business, communication, business analysis, project management, management, leadership and other related "non-technical" skills to the IT teams.

This is what makes collaboration with other business units, as well as strategic hiring and training practices, of utmost importance. CIOs need to put time into establishing personal relationships with business peers to take a truly multi-disciplinary, agile approach to running the IT business while they grow talent within their own unit.[19] The CIO must break down any existing barriers between itself and the rest of the C-suite to show marketing, finance, human resources, and the other senior executives that IT services play a role in enhancing each of their respective business units.[20] Partnering with peers and viewing them as valuable assets in experimenting and discovering new solutions to business problems will help IT provide value to the organization as a whole.[21]

CIOs are too often seen as technologists rather than business leaders—to combat this perception, CIOs must back off from day-to-day operations, learn to delegate and focus on the big picture for its internal business.[22]

[17] *Déjà Vu All Over Again, Or Why CIOs Still Fail At Communicating Value by Peter Burris. Peter Burris' Blog. Forrester Research, Inc., February 25, 2014.*

[18] *Déjà Vu All Over Again, Or Why CIOs Still Fail At Communicating Value by Peter Burris. Peter Burris' Blog. Forrester Research, Inc., February 25, 2014.*

[19] *IT trends redefining CIO's role. ITWeb.co.za, March 2014.*

[20] *CIOs Must Become Technology Consultants by Tom Kaneshige. CIO.com, March2014.*

[21] *Dell CIO: Pull Shadow IT out of the Shadows by Joe McKendrick. ZDNet, November 2013.*

[22] *The Digital CIO: How Digital Technology Will Change the Role of IT Leaders by Bill Goodwin. ComputerWeekly.com.*

The CIO as venture capitalist

Tom Galizia and Chris Garibaldi of Deloitte suggest that CIOs, acting within their IT organizations, are well positioned to act as the "venture capitalist" of their company.

In their daily activities, CIOs listen to a slew of technology pitches, make decisions on investing large amounts of funds, and need to continuously assess risks and returns. The only difference? CIOs are not investing their own money, which makes taking innovative leaps even riskier.

Whether or not it's agreed that CIOs are essentially venture capitalists, one parallel should be noted— CIOs truly need to create a diversified portfolio of assets, balancing the valuation of investments in legacy systems, innovation, and even "bleeding-edge" technology. Galizia and Garibaldi argue that CIOs also need to understand and communicate business value and "align talent with the business mission."[23]

From improver to influencer to transformer

Today's CIO is on a path to play an incredibly important role in corporate strategy.

With IT established as a valued, competent business, the CIO has the potential to become a transformer, using the rise of digital technology as an opportunity to drive the digital strategy of their organization. More than just an IT engineer, the CIO and top IT management become business engineers who are actively discovering how to "harness the power of disruptive technology…and pilot new technology in a way that other business units cannot."[24]

A successful CIO that builds an agile, forward-thinking IT function, mastering the basics and focusing on customer-inspired innovation, is set up to be an influencer for the entire organization. However, even with IT on the path for agile performance, if the whole organization isn't on board, its efforts will prove to be fruitless. Organization-wide agility is what will drive performance improvement—IT can act as the influencer for that transformational shift.[25]

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The CIO has the ability to introduce technology solutions that "help break down silos, boost cross-team collaboration, drive the customer experience, and ultimately engage more deeply with customers." Implementing these technology solutions that influence greater change across the organization is guaranteed to be a more successful approach than attempting to directly change habits and culture.[26]

In building its own business, IT will forge stronger ties with customers—both internal and external—by:

- Engaging digitally-savvy customers by teaming up with the CMO, using data to get to know customers better, identifying behavioral patterns and predicting trends, analyzing profitability of products and services so they can be flexible in offerings.

[23] 6 Ways CIOs Can Be More like Venture Capitalists by Joe McKendrick. ZDNet, March 2014.

[24] IT trends redefining CIO's role. ITWeb.co.za, March 2014.

[25] 2014 CIO Agenda: An Education Perspective by Jan-Martin Lowendahl, Anna Maria Nenna and Amos Auringer. Gartner Research, March 20, 2014.

[26] CIOs Need To Prepare For Cultural And Organizational Transformation by Dan Bieler. Dan Bieler's Blog. Forrester Research, Inc., February 5, 2014.

- Mastering the basics before turning to focus on business strategy—minimizing time spent keeping servers running and proactively managing IT risk.

- Boosting collaboration inside and out to not just boost efficiency or cut costs, but craft true partnerships at the top.[27]

The entire organization is facing the challenge that is digital disruption. It's up the CIO to take the reigns, blaze the trail, and act as consultant in leading others on the path to business intelligence, performance improvement and innovation.

New sourcing landscape

Over the last decade or so, many companies outsourced or offshored a significant percentage of their IT talent pool. In order to address the new expectations placed upon IT, many organizations are now looking to bring more skills back in-house. According to a recent study, 70% of CIOs plan to change their technology and sourcing relationships, including bringing IT functions that were previously outsourced or offshored back within the organization, known as "IT reshoring."[28]

Facing a new reality: staffing shortages and skill gaps

As organizations attempt to take advantage of the new IT opportunities, they are faced with a staffing shortage, a situation that is compounded as companies begin reshoring. For CIOs who know what needs to be done to transform their organization, they cannot get far without the right talent backing them up. IT leaders, and organizations as a whole, don't just need to architect objectives, data, and software, but also their people.[29]

According to David Foote, Chief Analyst and co-founder of Foote Partners, senior IT executives and CIOs see the following among the most prominent challenges in IT staffing:

> Senior IT executives and CIOs see prominent challenges in IT staffing including hiring specialized workers with multidimensional skills.

- Difficulty in hiring specialized workers with multidimensional skills

- Inconsistency in job titles

- Tech "gurus" who prefer to stay hands on, rather than transitioning to management roles

- Inaccurate job evaluations, inconsistent career paths and outdated job descriptions that don't keep up with the evolving roles

- Managing for big growth: finding the best organizational models, staffing optimization strategies and human capital practices to get to a point of successful people architecture

- Convincing senior business management of the value in investing in substantial changes in the IT workforce—design, budget and pay structure

[27] Three Things CIOs Can Do To Improve Company Strategy. Forbes, March 2014.

[28] Gartner Says 70 Percent of CIOs Will Change Their Technology and Sourcing Relationships in the Next Two to Three Years. Gartner.com, March 19, 2014. <http://www.gartner.com/newsroom/id/2685515>

[29] How to Handle the IT Skills Shortage: Architect Your People by Rich Hein. CIO.com, March 2014.

"Architecture isn't about tearing down the house and starting with a clean sheet of paper. That's unworkable. What it means is taking the structure that already exists and building a foundation under it, says Foote."[30]

In rebuilding the IT organization from the foundation, Foote recommends rethinking job descriptions, restructuring roles, assessing and consistently reassessing IT skills, investing in training existing staff, building clear tech career paths, setting up a college recruitment program to regularly recruit fresh, moldable talent and ultimately thinking different to break up silos and disparate roles that can handle the ever-growing complexity and rapid development of technology.

Collaborations between other business units as internal partners will be of particular importance for gathering multi-faceted skillsets to create the culture needed while the hunt for talent goes on. Some companies, such as Dell, partner with internal groups for new IT innovation, and focus on what they call "reverse mentoring," where summer interns are assigned to mentor IT executives to provide fresh thinking from Millennials.[31]

In addition to a limited pool of possible hires, organizations are experiencing a significant gap in skills when it comes to the new platforms, which require skills that are not yet prevalent in the workplace but are necessary to addressing the opportunities presented by digital business. Talent gaps most often creep up in big data, analytics and mobile, highlighting the need for companies to use forethought when planning their hiring and retention strategies.

As the new platform rapidly develops and expands in possibilities, even those employees who possess the skills needed today will see them degrade in value over time, a process known as "knowledge leak." According to IDC, "knowledge leak," is the degradation of skills over time currently occurring at every organization, every day. Left unaddressed and using a realistic leakage percentage of 30%—a team will lose 75% of their skills in just 6 years.[32] Organizations need to encourage a process of "continuous learning" to plug the knowledge leaks and to ensure that staff will possess the skills needed in the future.

How Skillsoft can help

Given the fundamental shift in IT discussed in this white paper, the CIO and their teams have the potential to transform the business, as well as the ability to drive the digital strategy of their organization. To combat skill gaps and staffing shortages, Skillsoft offers an engaging cloud-based learning platform that enables IT professionals to fulfill their roles from a business and technical perspective.

Skillsoft's unique combination of practical IT and business content builds talent and helps team members develop and retain the skills they need now and in the future. Skillsoft's coverage for key skills such as vendor certifications, project management, business analysis, current and emerging technologies, as well as communication, management and leadership is available on demand, allowing professionals to access content at their convenience. The majority of the content is mobile-friendly and is updated regularly to ensure continual accuracy.

The range of elearning modalities includes targeted videos, job aids, virtual-live courses, self-paced courses, mentoring and digital books to support varying learning styles and preferences. By offering

[30] How to Handle the IT Skills Shortage: Architect Your People by Rich Hein. CIO.com, March 2014.

[31] Dell CIO: Pull Shadow IT out of the Shadows by Joe McKendrick. ZDNet, November 2013.

[32] The Changing Role of the IT Organization and the Impact of Skills by Cushing Anderson, IDC, October 2012.

a continuous learning environment, organizations can avoid knowledge leak and have the agility to cope with the transformation to the IT field.

Whether it's working with the IT functions at rapidly growing start-ups or helping large enterprises, Skillsoft helps IT organizations implement continuous training solutions that drive business impact.

Learn more

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Watch a short video: The Changing Role of the IT Organization

View our elearning catalog: IT Collections

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Contact Skillsoft: Call 866-757-3177 or visit us at www.skillsoft.com/Contact-us.asp

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Jim's responsibilities include communications and support of Skillsoft's IT elearning offerings in addition to communications with customer subscribers. He has enjoyed a long and varied career in the IT industry. During his 35 years in the industry, Jim has managed technical and marketing projects for a variety of companies including IBM, Fujitsu and Dun & Bradstreet, and he founded and sold three successful startups. Jim started his IT career as a programmer for an environmental engineering firm. Jim is also a successful technology analyst, editor and writer.

Jim graduated Magna Cum Laude with a degree in Natural Science and Math from St. Thomas Aquinas College in Sparkill, N.Y. Follow Jim on Twitter: @jimlzim

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Skillsoft is a pioneer in the field of learning with a long history of innovation. Skillsoft provides cloud-based learning solutions for its customers worldwide, ranging from global enterprises, government, and education to mid-sized and small businesses. Skillsoft's customer support teams draw on a wealth of in-house experience, flexible delivery options and a comprehensive learning e-library to develop off-the-shelf and custom learning programs tailored to cost-effectively meet customer needs. Skillsoft's courses, books and videos have been developed by industry leading learning experts to ensure that they maximize business skills, performance, and talent development. Skillsoft currently serves over 6,000 customers and more than 19,000,000 learners around the world. Skillsoft is on the web at www.skillsoft.com.

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