There’s a major shift taking place in the role of the CIO: you’re bound to have noticed. Like tectonic plates moving slowly over time, we are currently experiencing a historical shift in the responsibilities, position and strategic influence of the senior IT leader.

Their role is changing in response to business demands, as the enterprise calls for faster, more fluid, and more tailored, linked-up processes.

It’s also coming in response to customer-led computing: both internal and external expectations to adopt and support consumer-centric apps and devices.

And it’s also down to a combination of increasing market pressures - time, cost, disruptive competitors, sophisticated consumers, they have all combined to force a change in the IT organisation.

Consequently, the modern CIO is evolving into a position that prioritises innovation, rather than just managing IT. There is an expectation on them to stay abreast of fast-emerging technologies, and to select the best ones for the good of the company.

Of course, this has always been their responsibility, but what has changed is the way that innovation is now at the forefront of organisational thinking, whereas before it was an additional factor, added on as long as the business was ticking over as it should.

Meanwhile, CIOs are expected to have a deep knowledge of business and organisational leadership and not just emerging and disruptive technologies. They are taking part in high-level strategic meetings, where technology has the power to completely transform processes, departments, and, in fact, whole businesses.

Technology has always had the potential to do this. But, whereas before, it would take a year or two to pilot and install a new ERP, CRM or content management system, today, you can do it in months - or even weeks.

**CIOs NEED TO INNOVATE**

So, why are these changes happening, and why are they so important? CIO, in collaboration with Nutanix, surveyed 100 enterprise CIOs to get their views, experience and advice on the current state of play.

The number one thing they identified as defining the role of the modern CIO was innovating business, and introducing IT initiatives; this was cited by 78% of respondents.

The second most important factor, mentioned by just under half of the CIOs, was having a deep knowledge of the business and organisational leadership.

The third thing also related to the business, and this was helping technology teams to understand the business (41%), followed by profiling IT to the business (33%).

**WHAT DEFINES THE ROLE OF THE MODERN CIO?**

- **Innovating business/IT initiatives**: 78%
- **A deep knowledge of the business and organisational leadership**: 49%
- **Helping technology teams to understand the business**: 41%
- **Staying abreast of emerging technologies**: 33%
- **Being an expert in change management**: 32%
- **Developing a long-term IT management strategy**: 26%
- **Profiles IT to the business**: 18%
- **Having a strong core IT knowledge**: 10%

**HOW STRONGLY DO YOU AGREE THAT THE ROLE OF THE CIO HAS CHANGED FROM MANAGING IT TO BECOMING AN INNOVATION PARTNER?**

- **Strongly agree**: 52%
- **Agree**: 46%
- **Disagree**: 2%
- **Strongly Disagree**: 2%
It is clear that the majority of technology leaders now recognise how strategic and business-centric their role has become. They also understand that they have an important role to play in helping the business to innovate in its industry, by introducing new ideas, new processes and new ways of working.

98% of respondents agreed to the question: “how strongly do you agree that the role of the CIO has changed from managing IT to becoming an innovation partner?”, with more than half agreeing strongly. One IT leader comments, “Make sure you ‘keep the lights on’ and help the business deliver innovation whilst maintaining a robust modern IT platform.” Another says, “Stable services give you a mandate for innovation.”

Our CIOs have a lot to say on the topic of innovation. One of them comments, “Be an innovative person. Advise management to automate processes.” Another says: “Look for innovative ways of getting the business to understand IT problems.”

The consensus is to bring new ideas, but in the context of stable IT operations. “My advice would be to never forget the importance of delivering great day-to-day IT, as this greatly improves your ability to deliver innovation when the opportunity arises,” says one CIO.

YOUR INNOVATION TOOLKIT

Today’s IT leader has a huge range of digital tools at their disposal, through which to introduce innovation to the business.

The consumerisation of technology is, without doubt, the biggest IT shift change that CIOs have observed in the last 10 years (according to 33% of our respondents). It has given rise to huge areas of innovation and growth, including: BYOD, mobile business apps, Shadow IT, and revolutionary changes in user interfaces.

A third of respondents cited cloud computing as the next big IT shift-change over the last decade, which is interlinked with technology consumerisation, being its core delivery platform.

A fifth of CIOs identified mobile working as the most significant change, with IoT, more powerful analytics and software-defined data centres also being noteworthy.

Taken as a whole, these emerging trends combine to create an agile infrastructure that can deliver highly usable apps to workers wherever they want to work from. Disruptive tools such as cloud, analytics, and mobile, can be powerful ways to enact change. “Change happens so embrace it, adapt and improve,” quips one CIO.

However, another IT leader says it’s important to look beyond the technology itself: “You should be a business leader who understands how to bring IT and the business together. Be about the business and don’t focus on running IT.”

TECHNOLOGY BECOMES MORE HUMAN

So, with change now being a given, we asked our survey respondents what they thought would be the biggest challenges for CIOs in five years’ time. A large proportion (19%) thought that IT automation and intelligence would present the biggest challenges.

These hot topics are frequently explored through sci-fi programmes like the Terminator or Humans, where AIs present both opportunities and threats. But for IT professionals, the opportunities and threats will really boil down to whether you can get business value from these disruptive technologies, and how easy they are to manage and secure.

In reality, automation and intelligence have been used for some time in leading-edge industries such as manufacturing, aerospace and finance, to make supply chains or trading more efficient and profitable. They will increasingly be adopted in other sectors such as retail, health and education, as automation and intelligence solutions become more mainstream and their value becomes more apparent.

This will also be the case with disruptive technologies such as analytics, which will increasingly deliver greater business value from diverse data; and the IoT network of connected sensors, a technology which many industries are yet to fully investigate.
In many ways, IoT is currently going through the hype cycle, with some industries, notably healthcare, energy, and auto manufacturing, starting to experience the benefits, whilst mitigating problems such as the recent, massive DDOS attacks on IoT endpoints.

However, in five years time, the computing landscape is likely to look very different from today, considering the rate at which devices are becoming both intelligent (self-managing and self-healing) and interconnected. This will create both advantages and problems for CIOs, as they determine which parts of the IT operation they want to integrate with the organisation’s core network and operations, and which ones could generate enterprise security or data privacy difficulties.

Another challenge that CIOs feel is going to be an issue over the next five years is how they manage a broader set of relationships and partnerships. This was identified by 19% of respondents. Once again, this is nothing new: businesses have been outsourcing operations for many years now, working with service providers, software vendors, outsourced data centres, and so on.

What is new is that this trend will grow rapidly, with partner relationships multiplying as more and more services become cloud-based, and mainstream compute workloads become managed by external service providers. There will particularly be concerns over data privacy and ownership, and service quality and uptime.

Managing IT complexity will also emerge as a new problem, as more and more apps become cloud native: integrating closely with numerous other cloud-based apps, databases and IoT networks.

Other issues that IT leaders have their eye on over the next five years are: IT leadership inside and outside the organisation (17%), security management (16%) and articulating how IT can generate revenue (13%). Others were concerned about the customer experience, and the redundancy of human capital.

TEAMWORK WITHIN SHRINKING TEAMS

With declining human capital in mind, we noted that as companies digitise their operations, and shift from on-premise infrastructure to cloud service provision, they are also scaling back their IT teams. This is happening in both traditional businesses and web pure plays. An extreme example is Whatsapp, which supports 125m users but only employs 55 people.

CIOs are split on whether it’s a good thing that their IT teams are being scaled back. Over half (52%) feel it’s a good thing, but 38% do not.

Nevertheless, many IT leaders commented on the importance of developing a strong team. “Build a strong team and then trust them to get on with it,” says one. Another comments, “Ensure you get good people underneath you to take care of the basics.” One CIO maintains that, “communication with peers is the best driver for performance,” with another advising: “Defend your team no matter what.”

THREE MOST IMPORTANT FOCUS AREAS FOR ORGANISATIONAL CHANGE

<table>
<thead>
<tr>
<th>Focus Area</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Improved agility across the business (internal and external)</td>
<td>88%</td>
</tr>
<tr>
<td>Customer engagement</td>
<td>50%</td>
</tr>
<tr>
<td>Talent acquisition, nurture and management</td>
<td>46%</td>
</tr>
<tr>
<td>Enabling/devising new business models</td>
<td>42%</td>
</tr>
<tr>
<td>Speed of programme delivery</td>
<td>40%</td>
</tr>
<tr>
<td>Accelerating revenue through data</td>
<td>34%</td>
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With smaller IT teams being an economic reality, CIOs are still expected to spearhead organisational change and deliver competitive advantage. The vast majority (88%) believe the best way to do this is through improved agility across the business, using digital processes both internally and externally.

Half of our respondents consider customer engagement as being an important focus for them in delivering organisational change and competitive advantage, an acknowledgement of the customer/service-centric nature of today’s marketplace as well as the workplace.

Talent acquisition, nurture and management was cited by 46% as being important, indicating that soft skills and effective management of human capital are still core strengths of the modern CIO.

As for how CIOs are currently delivering organisational change and competitive advantage, the majority (61%) mentioned public, private and hybrid cloud environments as being significant enablers.

Linked with this was data analytics, cited by 50% of our respondents. Other important vehicles were bespoke apps (37%) and CRM services (30%). A significant minority referenced marketing and advertising platforms (17%) and IoT technology (13%).

WORKING CLOSELY WITH THE BUSINESS

In order to better understand the different components of the CIO role today, we asked our respondents how they spend their time. The results confirmed that the modern IT leader is incredibly relational, highly strategic, and deeply involved with the business. One CIO notes: “Get to know the mechanics of the business, how it works, how it makes money, and how it all fits together.”
In general, CIOs spend most of their time in strategic and future planning. The second major activity is working with Director or C-Level personnel.

Working on IT and process innovation comes third, followed closely by managing people and teams; and working with LOB leaders and managers. “Get buy-in from all departments before implementing change,” one CIO comments. Another says, “Be seen as part of the business, take some risks and get on with it!”

Other activities which take less time, but are still important parts of the CIO role, are: managing technology and operations, personal development, education and training; and spending time with IT vendors and service providers.

The majority of CIOs we surveyed feel it is vitally important to work more closely with the business, particularly the board. “Your relationship with the board is essential - invest time in this business engagement,” says one CIO.

However, relationships with senior business leaders vary greatly. Some CIOs have a board that’s technically minded and fully supportive of their initiatives. Others struggle to see the IT perspective, or largely see IT as merely a cost centre. This can cause problems when it comes to explaining, envisioning or funding IT-driven change.

One CIO mentions that their board holds a view that digital technology is different to IT. Another says, “there are still some unrealistic expectations around speed of delivery and resilience.”

There is also benign indifference, testifies one CIO: “In my particular company, the board has little interest in IT, but it does have a high level of trust in my team and are allowing us to shape the strategy and address our issues internally.”

In another, there is support but coupled with a lack of knowledge: "The board understands the impact and strategic importance of what we do - it probably does not understand medium to long-term concerns," comments one IT leader.

Overall, 57% of respondents say their board does understand IT’s perspective and concerns - generally. Only 22% say their board either doesn’t, or mostly doesn’t understand; and 11% believe they have limited understanding.

RESPONDING TO BREXIT

One major event that CIOs are currently grappling with is Brexit: and particularly the implications on the IT organisation as Great Britain leaves the European Union. It has implications for the IT team’s talent pool, sourcing strategies and costs, among other things.

In general, CIOs are a pragmatic breed, facing change with a positive attitude, and dealing with emerging issues with a cool head. The first point to note is that a large minority, 20% of CIOs, said that Brexit would have no impact on their IT purchasing, services or provisioning. A handful said it’s too early to tell.

However, of the remaining 80%, there were concerns around market uncertainty and rising costs. “We have already seen price rises,” observes one CIO, with another referencing hardware prices rising around 10%.

Many note that exchange rate fluctuation and the falling pound against the dollar are causing problems for them, particularly when it comes to purchasing US technologies and services. “The only issue we have seen so far is the increase in costs due to the crash of the pound against the dollar. I can’t see this getting better soon, so make provision for cost increases where possible,” urges one IT professional.

There are some solutions, however. One CIO says Brexit creates an “opportunity for our own trade agreements with US to bring costs down.” Another CIO is “fixing low pricing to generate cost certainty for future years.”

Other Brexit-related issues are: data storage, sovereignty and privacy; changes or revocations of legal frameworks; new legislative regulations; and the length and implication of current contracts.

Regarding the talent pool, one CIO comments, “We have always been a centrally managed, yet geographically leveraged team, so my concern remains one of gaining access to talent across all our markets.”

Another is concerned about the limited staff and skill movement that UK firms might face, and fears non-harmonisation across territories. One is already responding to Brexit: “We stopped hires in the UK for any senior staff, and until the outcome is know in two years, are holding our position.”

On the plus side, several CIOs recognise the greater opportunities that global trade deals and demand could provide the country, and business in general.

THE BUSINESS-SAVVY CIO

The evidence is clear: the role of the CIO is changing, as IT professionals take on a more business-centric and strategic perspective; a position that prioritises innovation, rather than just managing IT.

Moving forward, modern CIOs need to be innovation partners and business leaders, embracing disruptive technologies and working closely with a broad range of stakeholders across and outside the company.

Whilst their teams may be shrinking, their influence certainly is not. As a result, as challenges arise, whether they come from automation, intelligence or IT complexity - or Brexit - the business can trust them to introduce and manage change confidently and pragmatically. It’s a new era for CIOs.