



The BT CIO report 2016.

The digital CIO.





Introduction.

We're standing on the threshold of what the World Economic Forum, of which BT is a strategic partner, has called the "fourth industrial revolution." The prospect is exhilarating. Technology is fast reshaping our world and has the potential to change everything - businesses, communities, nations and the wider world.

Digital transformation is under discussion at board level, in IT and operational teams, in every organisation and in every industry. That's exactly how it should be. Because the scope of what is digitally possible is uncertain.

Every enterprise is working out their unique approach of adapting in this digital era and already using technology in new and creative ways to transform their business. And it's not just the traditionally technology-oriented industries, like banking or retail, who are investing. Some of the most radical and inspiring projects we are seeing are in manufacturing and energy and resources.

So what does this 'digital possible' mean for the CIO? BT's previous report into the modern CIO showed the role was becoming more strategic, creative and consultative. This year, based on interviews with more than 1000 CIOs around the world, it is clear the role is changing further as they lead their organisations into the digital future.

This report shows CIOs are becoming ever more central to the boardroom and overall business strategy. The creative use of technology is absolutely accepted as a differentiator, not just in transforming costs or efficiency, but in improving customer experience and enabling disruptive growth. And the network is at the heart of that. As one client commented "the network is everything, it's like the skeleton or the nervous system for our business." Choice, agility, speed, flexibility, reliability and security are key.

BT's Cloud of Clouds investment is a powerful combination of network, cloud services, professional services skills and security expertise. It allows an organisation to connect easily and securely to the applications and data it needs, regardless of where they're hosted and where the organisation is based, right across BT's ecosystem of partners. This means that an organisation can confidently let its people discover their own, and the company's, digital possible.

If there's one key message from the report, it's that there is no blueprint for any of this. The challenge is knowing the right questions to ask when, as well as knowing what matters and what doesn't. We all need to have an open mind. The constraints of technology are lifting, enabling people to achieve more.

Executive summary.

CIOs are clear on the three most disruptive technology trends – cloud, mobility and collaboration, and data.

Reflecting the level of transformation within companies around the world, a fifth of organisations surveyed already describe themselves as completely cloud-centric.

Without exception, every CIO considers the digitisation of business to be a personal priority – whether it's disruptive new revenue streams, digital elements to customer experience, or the transformation of internal processes. And as a result, CIOs are measuring the success of their organisation against different KPIs compared to 12 months ago.

Many business leaders from outside of IT are leading the charge for digital transformation. Indeed almost a fifth of IT spending will come from outside of the IT function within the next two years.

The relationship between IT and the increasingly empowered end-user is more complex.

However, CIOs are not threatened by this and see it as an opportunity for IT to work better in partnership with other parts of the business.

As champions of positive change, CIOs are seeing their IT function become a key enabler across the business. The IT team's new role sees it adapt to allow the business freedom while ensuring data security, robust infrastructure and efficiencies of scale across the organisation.

Today's CIO is strategic, creative, growth-minded and cost conscious. Understanding both technology and people, and balancing control with empowerment. The most successful CIOs are embracing change rather than resisting it.

The digital CIO is one of the most demanding roles in business.

“ Technology is the primary driver of growth and productivity in this century. Almost everything we do is enabled by technology. Online and mobile channels allow us to do more work with the same number of people and effectively communicate with our guests and employees. ”

Robert Webb, CIO, Etihad Aviation Group

“ Intelligent users are our greatest asset. Necessity is the mother of invention and this starts with our users – they know what they want and we listen to them to define the path of our innovation. ”

Kaveh Pourteymour, CIO, Seadrill

“ The acceleration of our digital transformation journey is a key priority for us. It is the foundation of how we will deliver our company ambitions and win with our consumers. ”

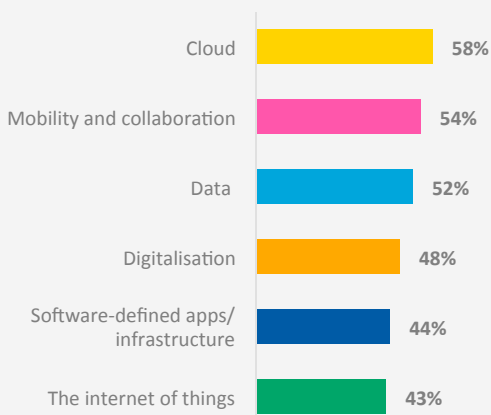
Filippo Catalano, CDO, Nestlé

Survey results.

Change the premise of IT.

The three truly disruptive technology trends that our respondents cite as driving the most profound change within large organisations across the globe are cloud (58 per cent), mobility and collaboration (54 per cent) and data (52 per cent).

Most disruptive technology trends.



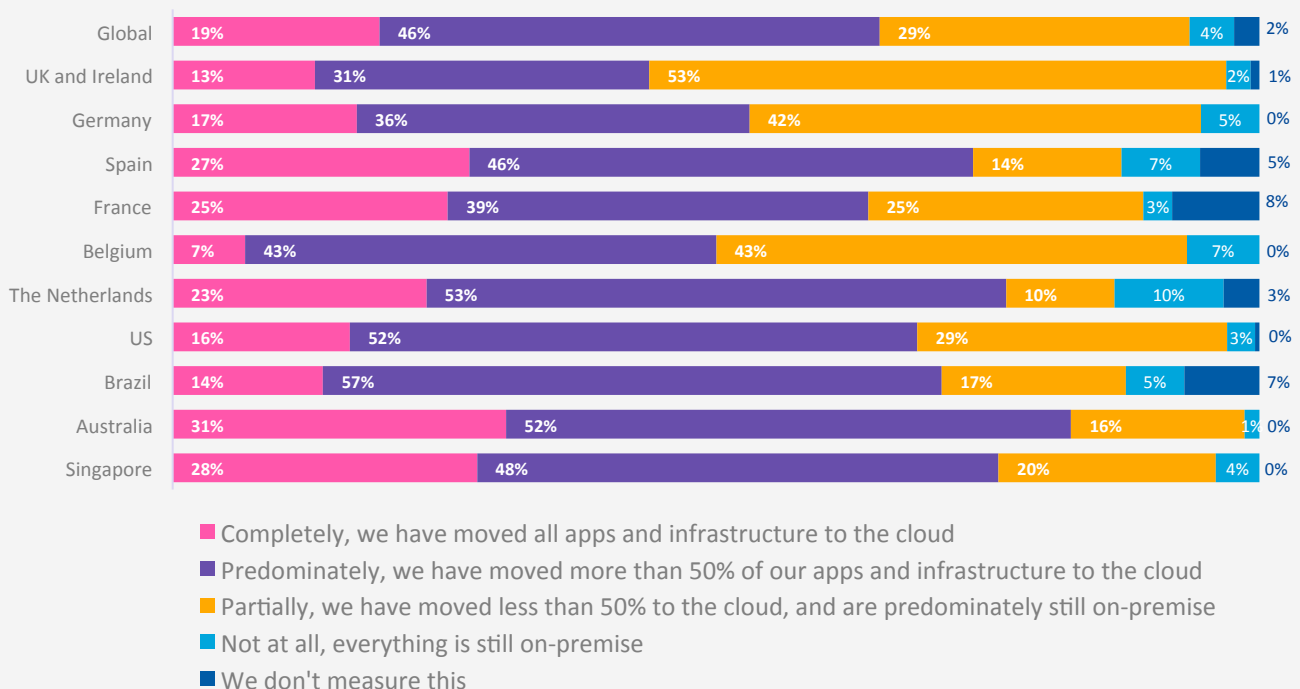
CIOs are driving significant cost reduction and efficiencies, seeing benefits from increased agility, and viewing cloud as a key source of competitive differentiation.

Already almost one fifth (19 per cent) of organisations describe themselves as completely cloud-centric, with all applications and infrastructure in the cloud. A further 46 per cent are predominately cloud-centric, with more than half of their applications and infrastructure in the cloud. Just four per cent are still fully on-premise.

“ We’re rapidly embracing world-class cloud-based capabilities, that give our airlines the strong competitive advantage of moving quickly to better serve our guests. ”

Robert Webb, CIO, Etihad Aviation Group

The cloud-centricity of organisations.





The pressure to further embrace the cloud is evident, as 65 per cent of organisations report that their current infrastructure is struggling to support the rapid adoption of digital technologies.

While demand and desire clearly exists, some are still battling to migrate their applications and infrastructure to a cloud model. Perceived security concerns (49 per cent) and legacy systems (43 per cent) are the primary challenges, although lack of time (40 per cent) and budget (37 per cent) are also significant factors.

“ The business and our clients make cloud services an essential part of the IT value chain. The job of the CIO is to make sure these services are secure, integrated and provide a flawless user experience. ”

Kaveh Pourteymour, CIO, Seadrill

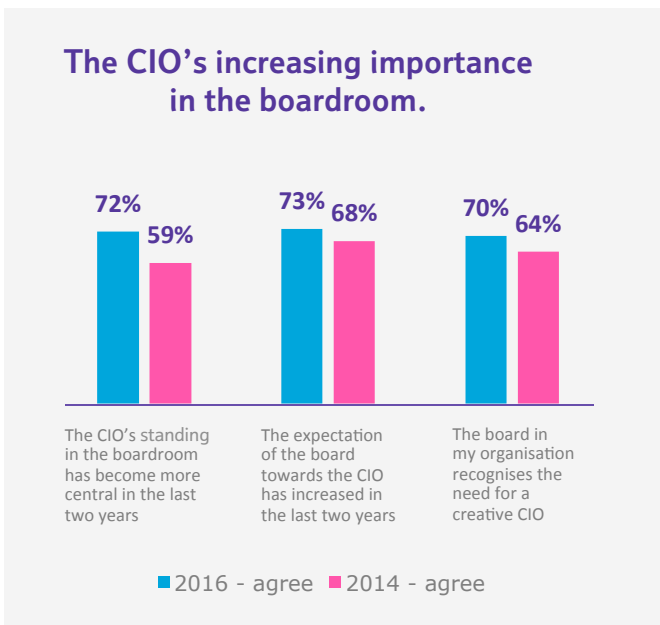
While security is flagged as the primary challenge stalling further cloud adoption, a third (33 per cent) of organisations actually recognise that the move to the cloud can be a catalyst to improve security.

“ The traditional security perimeter has dissolved. Cloud computing and mobile devices have the potential to make organisations more agile, efficient and competitive. They can also introduce a multiplicity of new security risks. But handled carefully, changes can be an opportunity to re-think the risk, and better protect the organisation and its people. ”

Mark Hughes, Chief Security Officer, BT

Lead, challenge, disrupt: digital is a licence to transform.

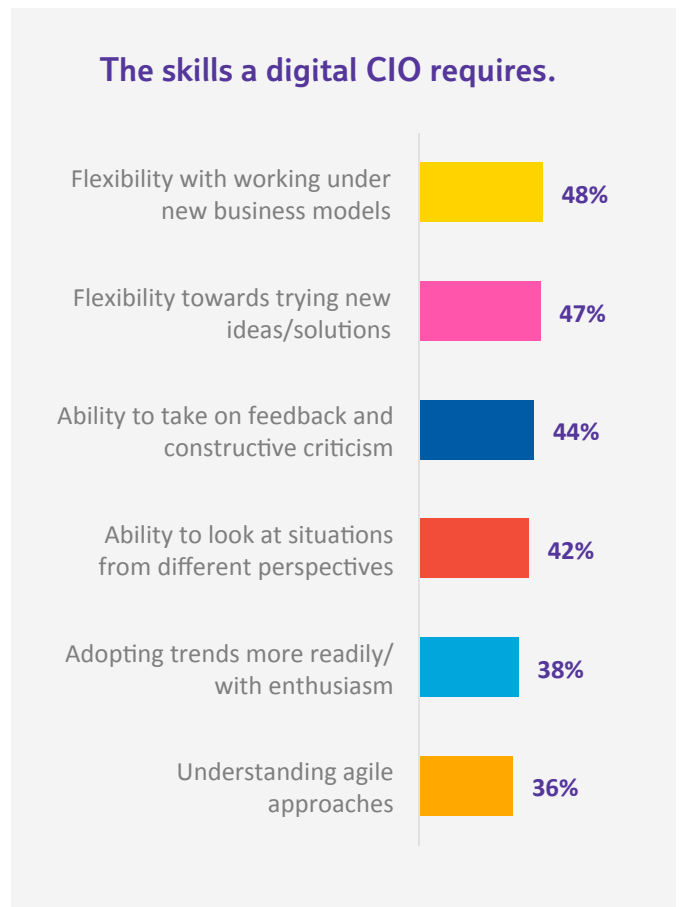
The importance of the CIO at boardroom level continues to rise, with 72 per cent of senior IT decision makers reporting that the CIO has become more central in the boardroom over the preceding two years (up from 59 per cent in 2014).



The CIO is also leading the strategic application of technology across the business. Almost three quarters (70 per cent) of boardrooms expect their CIO to be an innovative force and creative disruptor.

The disruptive impact of cloud, mobility and collaboration, and data, requires a CIO skill set that embraces faster-paced change. The CIO and IT team are transforming to be more of an enabler and innovator than a command and control centre.

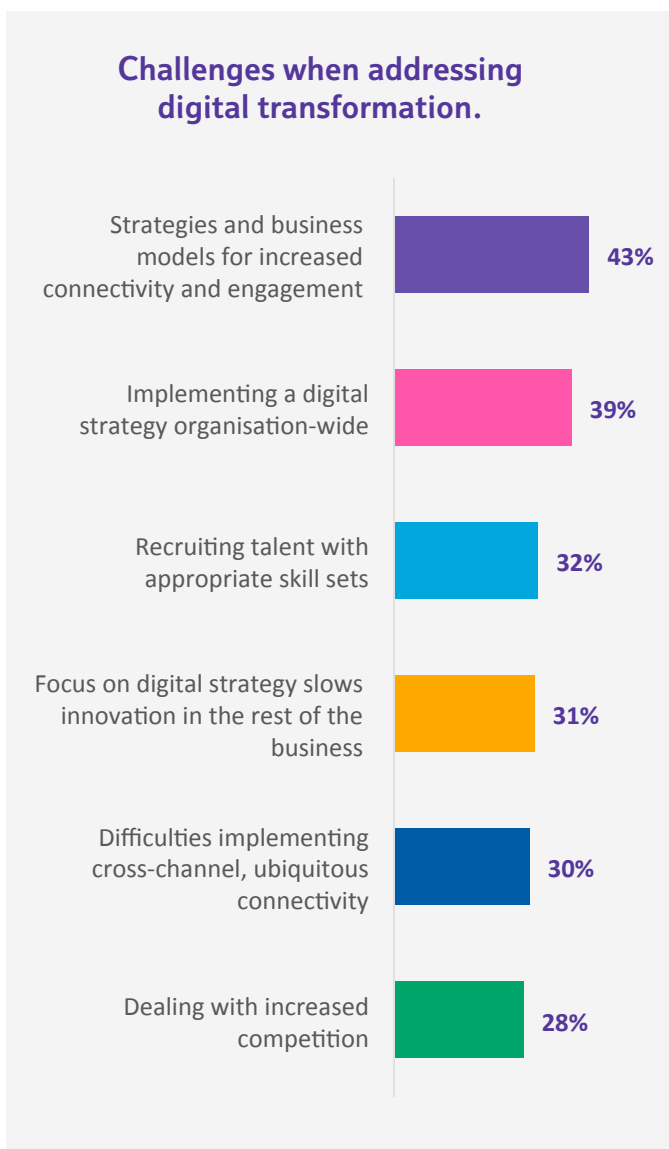
Internally leading, leveraging and managing the rapidly growing ecosystem of partners and vendors is critical. Flexibility around new business needs, faster adoption of technology trends and more agile working practices are now regarded as the CIO's crucial skills.



Although the CIO role continues to change dramatically, the old practicalities and pressures remain. Close to two-thirds (61 per cent) of senior IT decision makers feel the CIO is forced to spend more time maintaining current IT systems than searching for new solutions. That is a drop from 2014, when the figure was 74 per cent, but shows that the CIO is still operating with, as one respondent said, "one foot firmly trapped in the server room door."

Positive changes to the CIO role.	
Greater influence on the board/ in business and strategy decisions	51%
Greater opportunity for adding value to the business	47%
Greater opportunity for innovation/creativity	45%
Greater opportunity to formalise and consider company-wide IT policy	41%
An introduction of multi-speed IT	40%
Less time spent on maintaining legacy IT	37%

Biggest challenges to the CIO role.	
More time spent dealing with corporate issues	43%
Greater difficulty at getting multiple parties to buy into the adopting of new technologies	36%
Less time for developing creative/innovative solutions for the business	36%
Staff training pressures	34%
Too many responsibilities	29%
Lack of knowledge around new technologies	21%



Senior IT decision makers said the pressures of digital transformation are creating new challenges for the CIO such as developing new business models to cope with increased connectivity and engagement (43 per cent), implementing digital strategy organisation-wide (39 per cent), and recruiting talent with appropriate digital skills (32 per cent).

Perhaps the biggest shift is the way in which CIOs are thinking about success in the digital world. Two-thirds (65 per cent) of CIOs are measuring the success of their organisation against different KPIs than 12 months ago, as a direct result of digital transformation.

“ In IT, we will always measure component availability, operational efficiency and architectural reliability. But increasingly our KPIs are oriented firmly towards members’ and colleagues’ experience of service. That’s the only thing that really matters. That is what the whole organisation cares about, and that my team is here to support. ”

Debra Bailey, CIO, Nationwide

The consulting horizontal: create a secure environment to support growth and sensible risk taking.

Two years ago, around 13 per cent of the IT budget was outside of the IT function. Currently that figure stands at 15 per cent.

In two years' time, almost a fifth (18 per cent) of IT spending will come from outside of the IT function.

“ Trying to keep complete control of anything digital will fail. All parts of the business have great ideas. It's about building the right relationships and becoming their trusted advisor. Then they will come to you to plan and implement those great ideas. You've got to be open, agile and flexible. ”

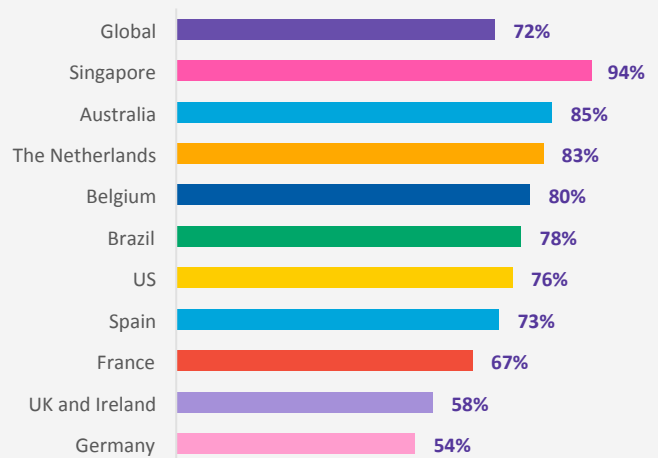
**David Heppenstall, CIO,
De Beers Group of Companies**

With so much technology procurement taking place outside of the IT function, it is not surprising to learn that 80 per cent of senior IT decision makers in those organisations feel that they are losing control of the IT estate (up from 76 per cent two years ago).

What is notable, however, is that concerns around the issue have reduced compared to two years ago. It suggests that the IT function is growing more comfortable with providing an overall enablement role, with a particular focus on data security, a suitably powerful infrastructure and ensuring there are no duplications of effort across the organisation.

In most organisations (72 per cent) multiple departments are sourcing and commissioning core IT products and services without the involvement of the IT function. However there are notable differences between countries. Brazil, Australia and Spain see it most, while IT functions in the UK and Ireland and Germany less.

Countries where departments independently source IT.



Many CIOs see cross-functional working through technology as an opportunity for successful collaboration. If decisions are made as part of a business-led initiative, with the support and guidance of IT, then it becomes proof of a positive working relationship.

Embrace the revolutionaries.

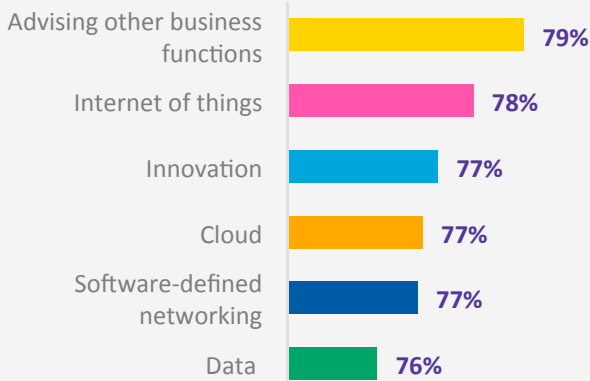
As various parts of the business develop their growth plans they are pushing the IT function for new technology solutions to support their initiatives. The business areas that are most ambitious for support are marketing (44 per cent), client relationship management (38 per cent), R&D (37 per cent) and sales (36 per cent).

“As I speak with our clients, I’m seeing increasingly innovative approaches to working with partner ecosystems. That’s one reason at BT that we invest, with our partners, in our own customer innovation centre Adastral Park, and our global network of showcases. Without fail, the CIOs I meet recognise the partner ecosystem as increasingly critical to business success.”

**Jo Scarlett, CDO,
BT’s Global Services division**

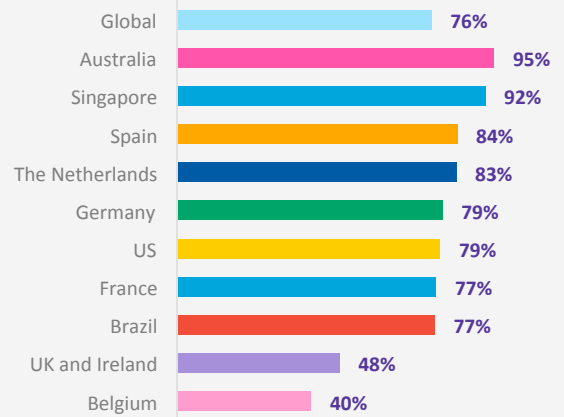
Those already using or adopting a multi-speed approach aim to sidestep the difficulties of legacy IT (51 per cent), make their organisation more agile (49 per cent) and improve time-to-market (46 per cent).

Key skills lacking in IT functions.



Over three quarters (76 per cent) of large organisations across the world have, or plan to adopt, a multi-speed approach to technology-led initiatives.

Organisations operating a multi-speed IT model.



“We are currently piloting an innovative agile development approach to delivering change to our mobile applications. With dedicated resource and new investment models that allow “empowered business owners” to make fast decisions. It’s really exciting to see the positive impact on our members and colleagues.”

Debra Bailey, CIO, Nationwide

As CIOs adjust to these changes, they also acknowledge there will be gaps in their team’s skills that need to be addressed. The consulting ability to advise other business functions is the skill set most lacking within the IT function, according to 79 per cent of senior IT decision makers. There is also a lack of capability around the internet of things, innovation, cloud and software defined networks.



Conclusion: welcome to the digital CIO.

Digital technology has changed the way we live - shopping, banking, travelling, working and interacting with each other. And it will continue to evolve at lightning pace. For businesses, there is a clear need to embrace the rate of change, empower new growth and reorganise for speed.

The smartest CIOs are bridging the gap between business and technology, and responding to both employees and customers expectations simultaneously. Technology has never been more important, and as one CIO said “this is the age of the network.”

At BT is excited to be supporting creative and innovative CIOs as they are powering new business models, transforming customer experience, and digitising their businesses.

Their views are driving BT’s ongoing Cloud of Cloud investments to support CIOs and their organisations in the digital era.

“ Like many of the CIOs referenced in this report, I’m enjoying the increased focus, attention and collaboration by partners across the business, as they work with my IT consultants to use technology to transform our business. With our CMO for example we’ve transformed the end-to-end sales and marketing platforms and digitised key processes, putting real-time customer data in the hands of the customer facing people who need it most. And by working in new agile ways, with the business and with best of breed external partners, we did it in 100 days. ”

Chris Cochrane, CIO, BT’s Global Services division



Report methodology.

This global report is based on research conducted with more than 1000 senior IT decision makers working for multinational corporations, and the insight from BT's technology and advisory experts. A representative number of senior IT decision makers were interviewed across 11 countries: Australia, Belgium, Brazil, France, Germany, the Netherlands, Singapore, Spain, the UK and Ireland and the USA. The interview elements of the research were conducted on behalf of BT by Vanson Bourne, an independent market research firm.

Offices worldwide

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