



# The BT CIO report 2016.

The digital CIO.





## Foreword.

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 exciting. Technology is fast reshaping our world and has the potential to change everything – people, businesses, communities and nations.

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 limitless.

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.

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 their 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 eco-system 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 and BT is ready to help you do that.

**Luis Alvarez,**  
**CEO, Global Services**

## Executive summary.

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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 more business aligned KPIs compared to 12 months ago.

The majority of companies now have a chief digital officer (CDO) to help drive their digital transformation agenda. Sometimes this is the CIO, but not always, and the roles have a significant overlap in their responsibilities. Whichever role leads, cooperation and collaboration with the rest of the business is a must and something that our research highlights is one of the major changes that the CIO and their team are getting to grips with.

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.

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.

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.

“ 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**

“ 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**

“ 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**

Survey results.

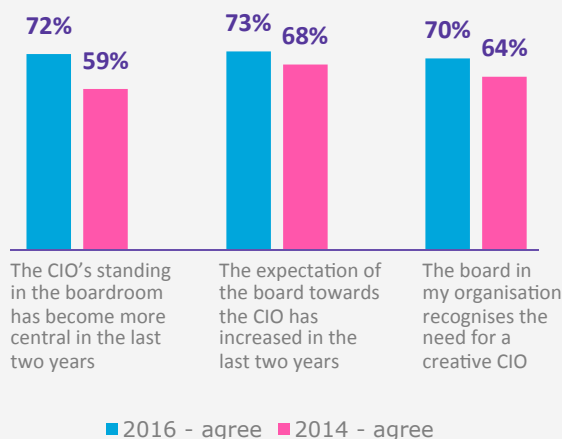
# Lead, challenge, disrupt: champions of positive change.

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. Seventy per cent of boardrooms expect their CIO to be an innovative force and creative disruptor.

This demand from the boardroom creates both opportunities and challenges for the CIO. It is no surprise that the challenges are, in the main, a direct result of the new opportunities.

## The CIO's increasing importance in the boardroom.



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%

This is reflected in the priorities expressed in the types of skills that the CIO requires. Flexibility around new business models, faster adoption of technology trends and more agile working practices are now regarded as the CIO's crucial assets.

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."

### The skills a digital CIO requires.



“ It is our chairman who is sponsoring digital transformation across the business driven by our Global CIO. The IT priorities are the business priorities, it's more than efficient B2B core services, we have to add innovative B2C value. ”

**Eddy Salinas, Unilever Brazil**

“ 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**

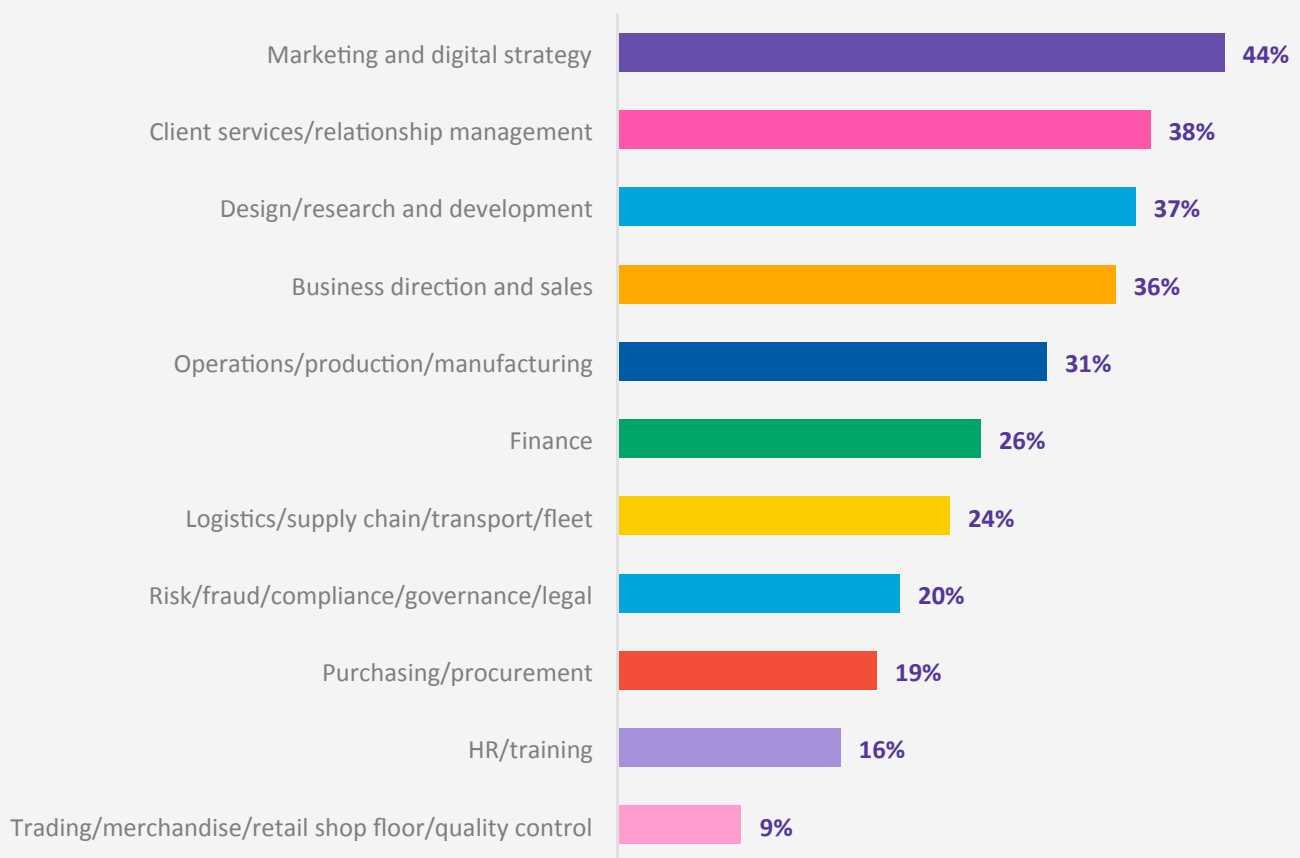
# Embrace the digital revolutionaries.

When we look at where, across the organisation, the pressure for the most digital and technology change is driven from we see that marketing (44 per cent), client services (38 per cent) and R&D (37 per cent), are leading the charge so collaborative working with these departments are particularly key.

“ The business transformation effort is the most exciting aspect because it creates the opportunity for IT to bring business solutions to the table. ”

**Gary Cantrell, VP and CIO,  
Jabil Corporation**

## Departments most ambitious for digital and technology change.



### Organisations that have appointed a CDO.

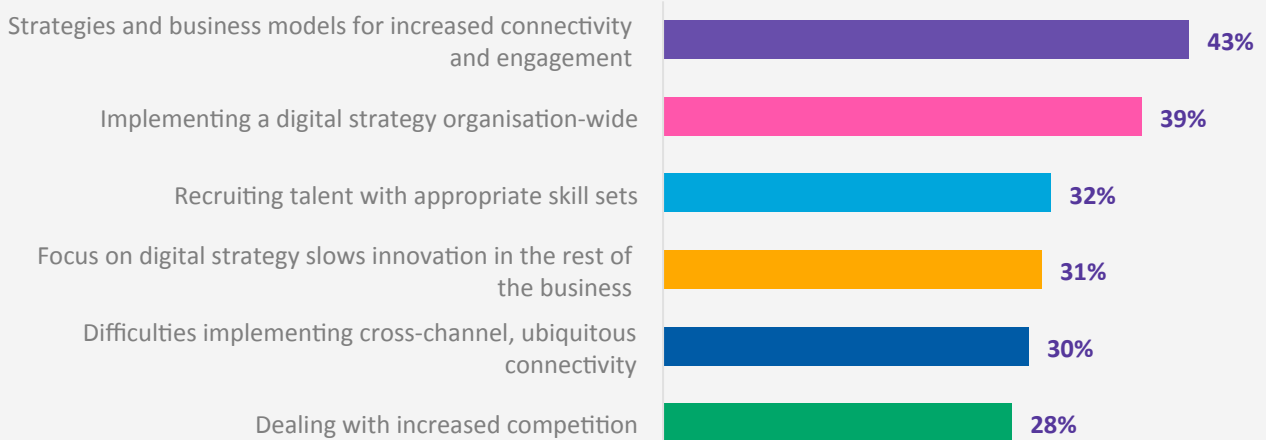


Globally, 86 per cent of large companies have now appointed a chief digital officer (CDO), whose role differs from the CIO in two main ways; sole responsibility for leading digitisation initiatives (50 per cent) and focus on innovation (38 per cent).

The extent of change driven by digital thinking is significant, with challenges ranging from new business models, increased competition, new skills and security.

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), pushing out digital strategy organisation-wide (39 per cent), and recruiting talent with appropriate digital skills (32 per cent).

### Challenges when addressing digital transformation.



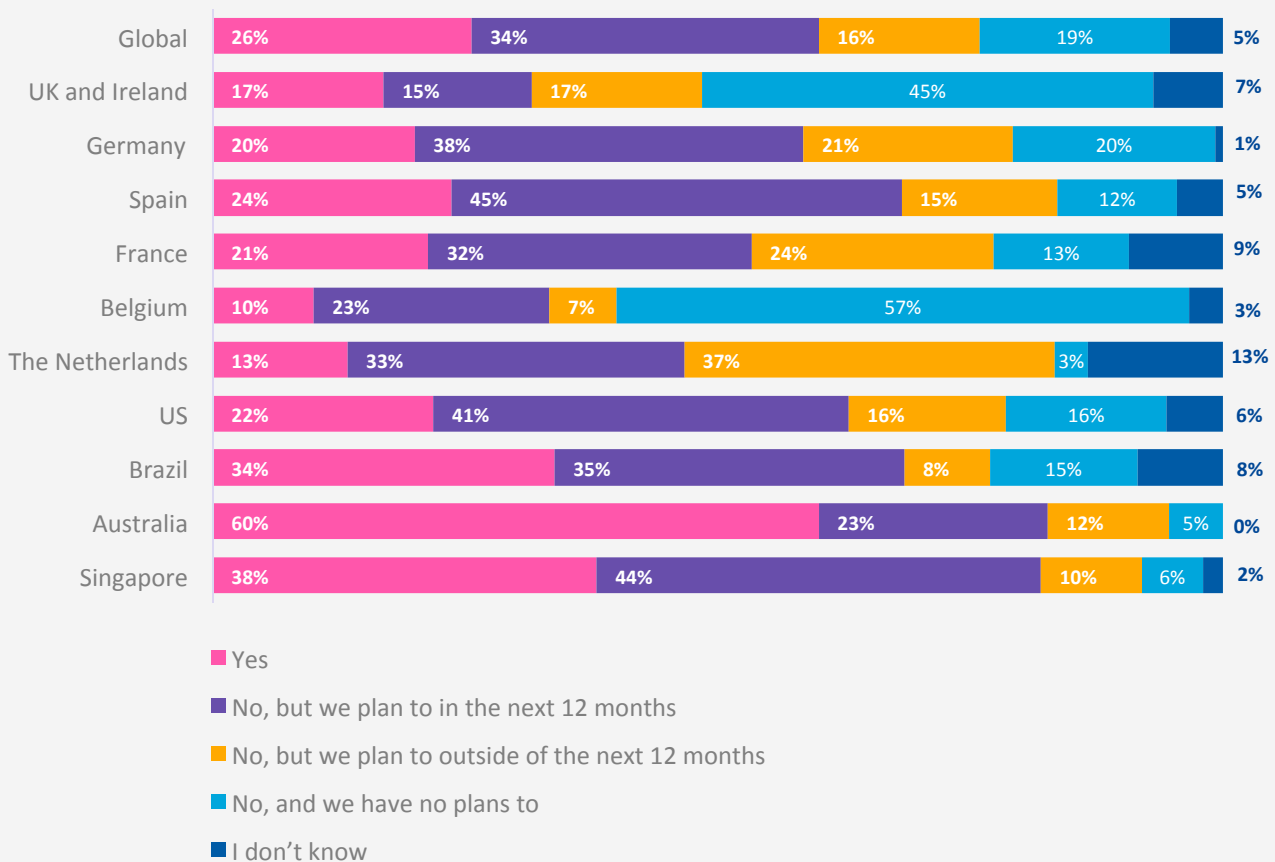


As a result of digital programmes, multi-speed IT models are becoming established across IT functions, with a significant increase in using this as a planned approach within the next 12 months. Over three quarters (76 per cent) of large organisations across the world have, or plan to adopt, a multi-speed approach to technology-led initiatives.

“ In our business, moving quickly with intelligence-driven consumer marketing and big data analysis for operational efficiencies are critical for success. To do that we need flexible implementation models to fast track key projects. ”

**Eddy Salinas, Unilever Brazil**

### Organisations operating a multi-speed IT model.



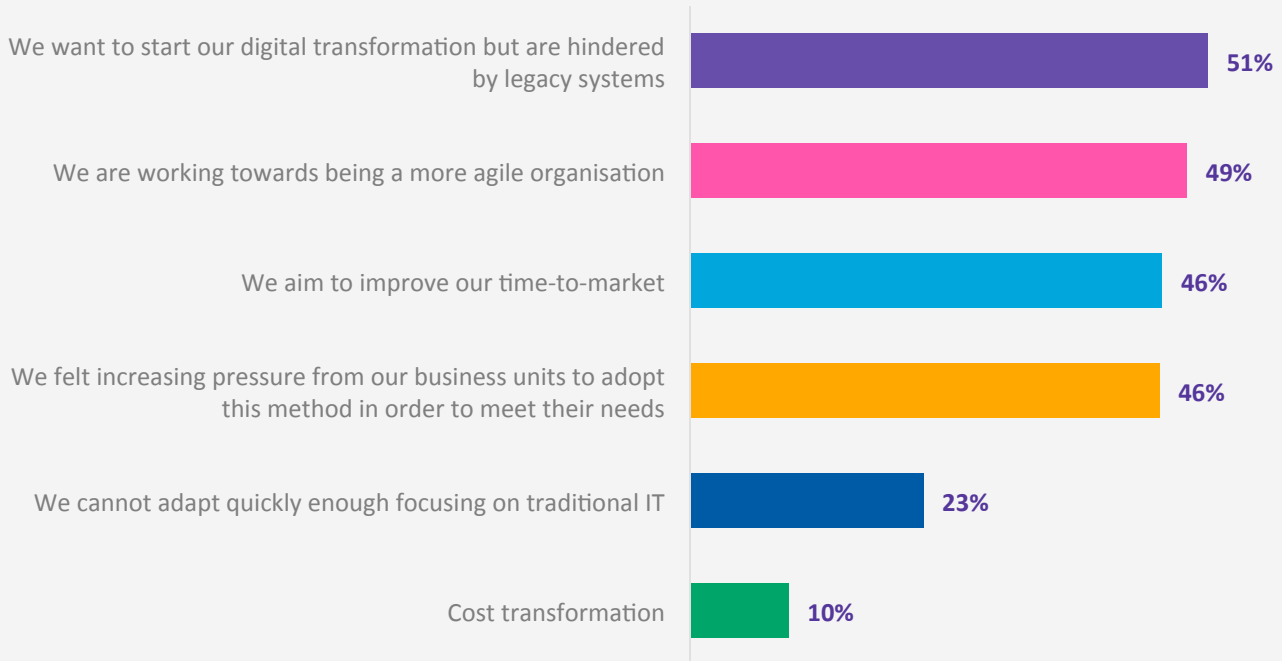
Those already using or adopting a multi-speed approach aim to sidestep the difficulties of legacy IT (51 per cent), make their organisation more agile (49 per cent) and improve time-to-market (46 per cent).

Although multi-speed programmes are popular in accelerating innovative projects, meeting the need for speed consistently in every IT programme is the true challenge CIOs face in the future.

“ 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**

### Why has your organisation adopted a multi-speed IT model or why is it planning to?



# Be an IT business partner: 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**

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. Singapore (94 per cent), Australia (85 per cent) and the Netherlands (83 per cent) see it most, while IT functions in the UK and Ireland (58 per cent) and Germany (54 per cent) see it less.

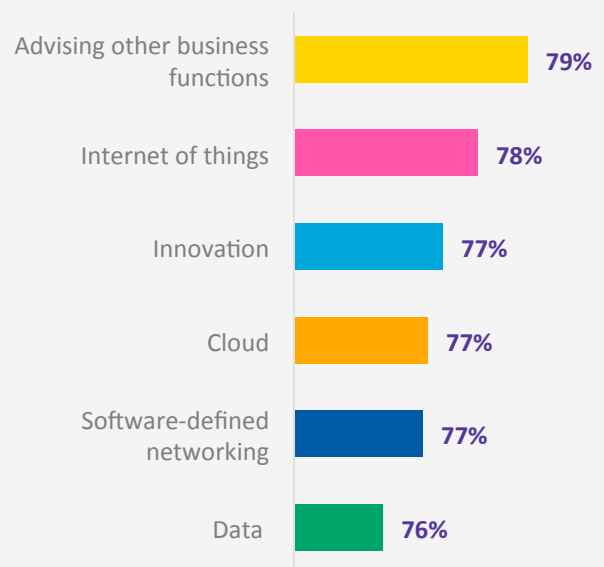
With so much technology procurement taking place outside of the IT function, it is not surprising to learn that 80 per cent of senior IT decision makers in those organisations feel that they are losing control of the IT estate (up from 76 per cent two years ago).

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.

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.

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 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.

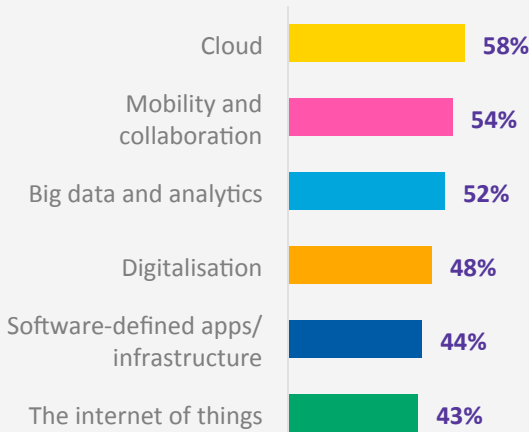
## Key skills lacking in IT functions.



# 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) big data and analytics (52 per cent).

## Most disruptive technology trends.



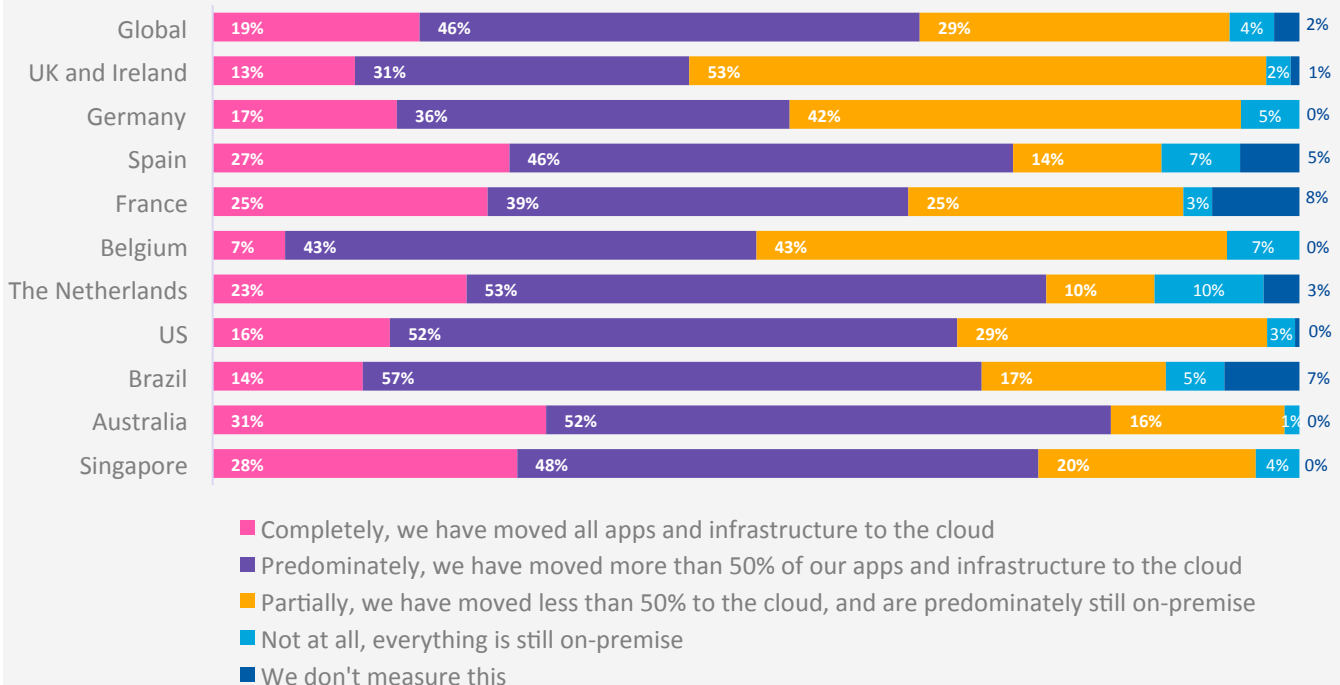
CIOs are driving significant cost reduction and efficiencies, seeing benefits from increased agility, and viewing cloud as a key source of competitive differentiation.

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.

While security is flagged as the primary challenge stalling further cloud adoption,

“ 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**

a third (33 per cent) of organisations actually recognise that the move to the cloud can be a catalyst to improve security.

Increased IT security continues to be the top requirement CIOs look for help with from their technology partners, according to 50 per cent of senior IT decision makers.

Also as an increasing number of applications and infrastructure are migrated to the cloud, 43 per cent of organisations state that they are looking for a single cloud solution that offers centralised management.

“ 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**



## 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.”

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.

“ Digital transformation enables us to deliver value with digital solutions through new business models. IoT brings many opportunities to the table and provides data that can significantly impact insight which we can then feed back to customers. ”

**Gary Cantrell, VP and CIO,  
Jabil Corporation**

“ 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 in March 2016, with more than 1000 senior IT decision makers working for multinational organisations. The research provides deep insight from BT's technology and advisory experts in addition to IT decision makers in organisations with over 1000 employees across seven core industry verticals:

- Financial services
- Retail and consumer goods
- Energy and resources
- Travel transport and logistics
- Manufacturing and automotive
- Professional services
- Pharma and healthcare

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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