Nash Squared

Nash Squared **Digital Leadership Report 2022**



in collaboration with:

CIONET
What's next.

NOW IN OUR 24TH YEAR

Making Difficult Choices



It's never been easy being a digital leader, but as organisations become even more reliant on their technology, the consequence of choices made, or not made, is growing significantly.

The challenge for many digital leaders is to balance what's urgent and what's important, and for many, dealing with cloud, cyber and resourcing is enough of a job to be getting on with. But what this research shows, and has shown over its many years of running, is that the successful digital leaders look beyond what is immediately in front of them.

Welcome to the 2022 Nash Squared Digital Leadership Report in collaboration with CIONET.

Now in its 24th year, this report brings you the widest-ranging insights into the world of digital leaders and the paths they are taking that are transforming their organisations.



Bev White
CEO
Nash Squared

5 THINGS TO DO WITH THIS REPORT

Review your business aims

See what boards are looking for technology to address on page 6

Become more innovative

Discover the barriers to innovation on page 15

Make remote work, work

Find out what strategies work best on page 24

Refine your career

Read insights from a CIO executive search consultant on page 28

Compare your sector

Read our sector/location league tables on page 34

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About the survey

1,785
respondents

150,000
data points



82
countries

24
years of data

About this Report

The 2022 Nash Squared Digital Leadership Report is the world's largest and longest-running survey of senior technology decision-makers. Launched in 1998 and previously called the CIO Survey, it has been an influential and respected indicator of major trends in technology and digital for over two decades. This year a survey of almost 1,800 digital leaders took place between 20 July and 10 October 2022, across 82 countries.

What You Need to Know

A world of disruption

Almost nine in ten digital leaders believe that major global change is happening faster than ever.

Where once disruption might have been a term reserved for new entrants in the market or a competitor's new products, it now comes from all directions including geopolitics, supply chains and 'the great resignation'. As the world grows more interconnected, one region can have direct implications for other geographies.

Budgets drop, but remain high

Digital leaders are facing economic pressure, those expecting budget growth has dropped from six in ten to just over half. That said, this remains the third highest reading in the 17 years we have been measuring it. When it comes to the economy, technology has a role to play both when the sun shines, and when the clouds gather.

Cybercrime increases

Managing cybersecurity has never been more challenging. The increased use of the cloud and global unrest have led to 40% of our respondents fearing an attack from foreign powers – over three times what it was in 2018. Overall, major cyberattacks have jumped by almost a fifth in the last 12 months, and only around a third of organisations consider themselves 'very well' positioned to deal with the challenge.

Skills shortages

There is no let-up in the war for talent. Up to 70% of this year's digital leaders state that a skills shortage prevents them from keeping up with the pace of change; the highest we have seen since we started reporting 24 years ago. Six in ten feel the rising cost of living has made salary demands unsustainable. However it isn't all doom and gloom, remote working has enabled a quarter of organisations to start recruiting talent from overseas. The market for talent is now global.

Spend on emerging tech dips

Tech spend on cloud remains strong, but it has slowed in emerging tech like artificial intelligence (AI), automation and big data, threatening opportunities to innovate through global economic instability. Although almost two-thirds of digital leaders think that big data and analytics will be in the top 2 technologies to deliver competitive advantage in the next year, only a fifth feel that they are effective at using data insights to generate more revenue.

Is remote working, working?

During the depth of the pandemic, technology that enabled remote working kept many organisations alive. But is the honeymoon period over? Work-life balance remains a key positive of hybrid working, but productivity has dropped significantly this year. Many organisations are thinking very carefully about how they support their employees as they move into a hybrid working model, and many are targeting wellbeing and mental health, with some success.

Gender diversity is good news

At last, some positive news in gender diversity – almost a quarter of the tech team is now female, and the pipeline is improving, with 28% of new hires being female. Female digital leader respondents to our survey are now at the highest level there has ever been, but the figure is still low (14%), and the overall pace of change in female participation is slow.

Making difficult choices

It's never been easy being a digital leader. The challenge for many is to balance what's urgent and what's important, and for many, dealing with cloud, cyber and resourcing is enough to be getting on with.

But what this research shows over its 24 years of running, is that the really successful digital leaders look beyond what is immediately in front of them. While cloud will keep you alive today, it is data, innovation and diversity that will help you flourish in the future.

Key insights from the Digital Leadership Report

www.nashsquared.com/dlr

MAKING DIFFICULT CHOICES

1,785 Digital Leaders responded

82 Countries

14% Female

BUSINESS LANDSCAPE

52% expect a budget increase

58% expect a headcount increase

46% expect major or radical changes to their products and services

33% fear the impacts of economic downturn to a great extent

SUSTAINABILITY

43% think technology has a big part to play

22% are using tech to measure their carbon footprint

SKILLS AND TALENT

All time high for skills shortages **70%**

WANTED

Top 3

1. Cybersecurity experts
2. Big data analysts
3. Technical architects

11% is the average churn of the technology team
74% feel that their government could do more to tackle the digital skills crisis

GENDER DIVERSITY IS IMPROVING
Almost a **quarter** of tech team is female and **28%** of new hires

IN THE EYE OF A STORM

9/10 expecting major disruption

40% fear an attack from foreign powers

60% feel that salary demands are unsustainable

1/3 very concerned about economic downturn

62% feel they will never have enough technology staff

58% concerned about supplies of hardware or chips

CYBERSECURITY

28% suffered a major cyberattack in the last two years

41% feel that the cloud has complicated security

40% concerned by attacks from foreign powers

The bigger the organisation the more likely it is to be attacked

Digital Leaders still seeking cyber expertise as a priority

WHERE TO SPEND?

Investment in emerging tech is down despite budgets increasing

52% are asked to build new ways to realise potential

46% expect major or radical changes to their products and services

53% tasked with supporting innovation

DRIVING DIGITAL

PRIORITIES FOR DIGITAL LEADERS

Top 3

1. Improving operational efficiency
2. Improving customer experience
3. Developing new products

39% identify as digitally excellent

Less likely to have a seat on the table when tech is cloud-based

FINDING DATA TREASURE

Data volumes are increasing exponentially

64% think that big data and analytics are the way to deliver competitive advantage

Digital Leaders are less confident in their ability to handle data than last year

Only 1 in 5 are using it to deliver increased revenue

WORKING FROM HOME

2-3 typical number of days expected in the office

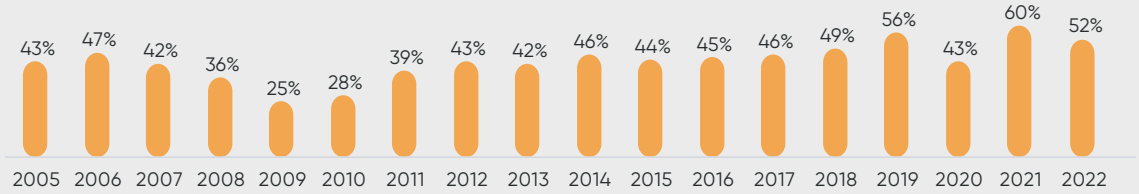
Hybrid working is the new normal and continues to improve work-life balance

Productivity has fallen year on year

Mental wellbeing is still a casualty

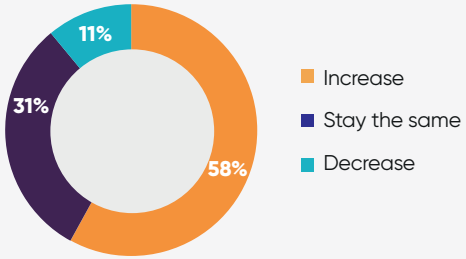
1. BOARD PRIORITIES AND INVESTMENT

Expecting technology budget increases



Organisations expecting tech budget increases in next 12 months

Organisations plan for headcount



How do you expect your headcount to change in next 12 months

Top 3 aims technology must address

2022

Improving operational efficiency

Improving customer experience and accessibility

Developing new products and services

Budgets and headcount

Organisations are having to deal with more disruption than ever before, as our increasingly interconnected world means fewer things happen in isolation. Technology is clearly the lifeblood of most organisations and continues to warrant growing investments, but with economic headwinds what strategies should digital leaders take? 'Make do and mend' or continue to innovate?

It is no secret that global unrest, supply chain instability, soaring inflation, and the long shadow of the pandemic have all lowered expectations for growth in the future. A slowdown in technology spending mixed with unpredictable employment trends will make it difficult to navigate planning and budgeting for everyone in 2023, not least digital leaders.

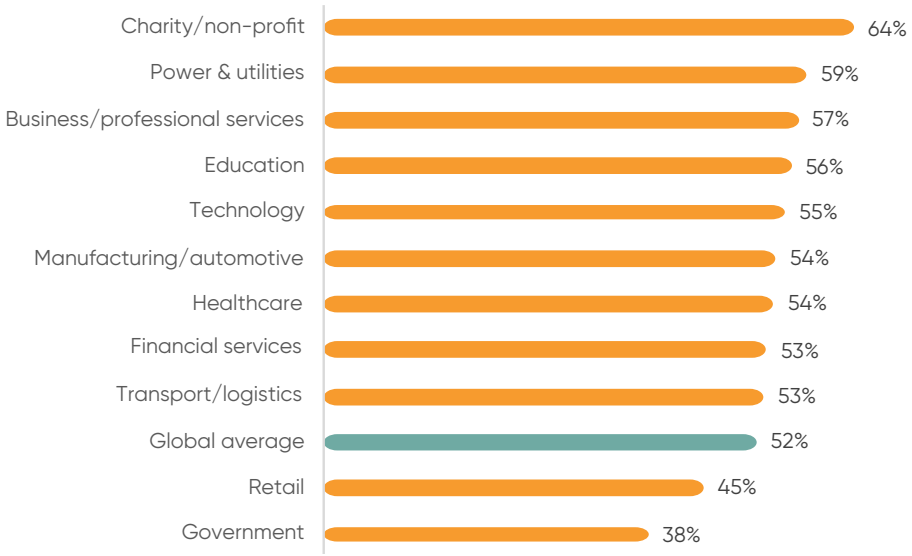
The global IT spend on devices, data centre systems, enterprise software, and communications services amounted to US$4.26 trillion in 2021 and is expected to increase to around US$4.67 trillion in 2023.[1] However, our research shows that given the numerous disruptions to the technology industry – including a global supply chain crisis and Russia's invasion of Ukraine, digital leaders' budget expectations for the coming 12 months reflect a degree of concern around IT expenditure.

Our research signals that, over the long term, technology is becoming increasingly viewed as a business enabler, rather than an operational cost. Alongside this, the definition of technology is also changing. How can organisations really know what they have spent on digital when digital is everywhere?

1. Statista, Information technology (IT) spending forecast worldwide from 2012 to 2023, by segment, 2022.

Growth across sectors

Organisations expecting a budget increase by sector



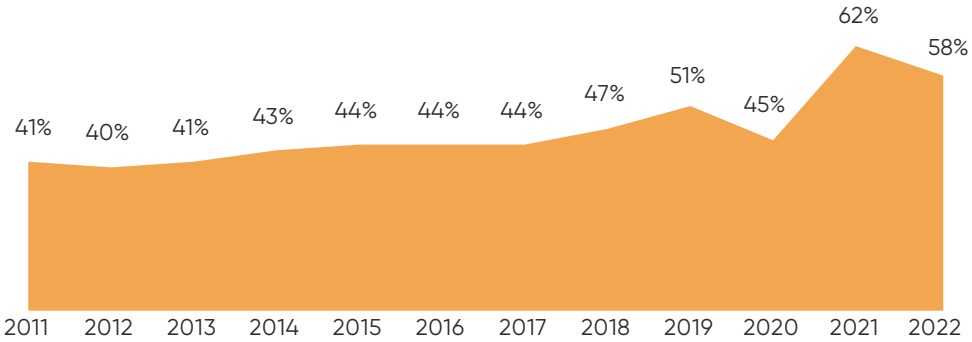
Looking forward, over the next 12 months, do you expect your overall IT/technology budget to…? 'Increase'.

Despite a less positive economic outlook, at least half of digital leaders (52%) across the majority of sectors remain optimistic about increasing their technology spend in the face of economic pressures, the third-highest reading in the 17 years we have been measuring it. When it comes to the economy, technology has a role to play both when the sun shines, and when the clouds gather.

According to our data, the charity sector is the most likely to be expecting to spend more on digital, likely as their fundraising activities and their retail offerings increasingly move online. Other optimistic sectors are power and utilities (possibly linked to the drive for green tech), business and professional services, and education and technology, which are all under more pressure to keep up with the pace of digital advances. The least optimistic are respondents working in government, who may be most concerned with potential fiscal challenges and decreased tax revenues, given the recent geopolitical and economic disruption.

Headcount

Expecting technology headcount increases



Over the next year how do you expect your IT/technology headcount to change? 'Increase'.

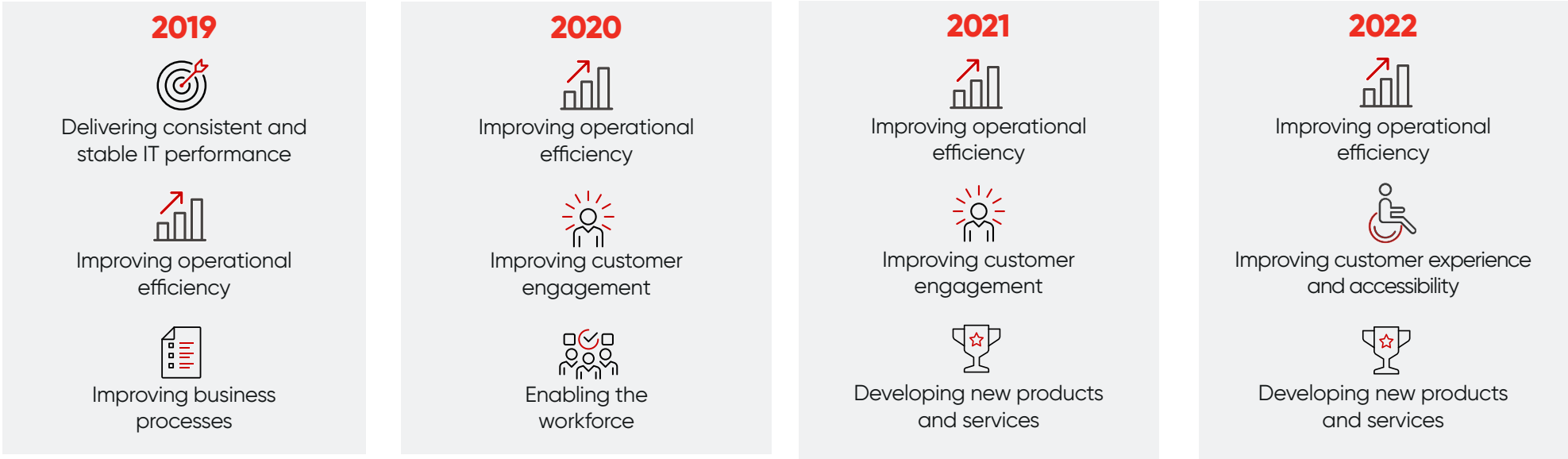
Some businesses boomed while the world was in lockdown and forced people to move online, but now that things have reopened, some firms have reviewed their headcount. For example, this year, Canadian e-commerce firm Shopify announced a 10% cut of its global workforce and acknowledged that its rapid expansion, driven by a Covid surge in business, had not worked out. That said, the drop in predicted headcount increase from last year is a small one, and the 58% of digital leaders expecting to expand their technology headcount in 2023 is the second highest it has been for a decade, just behind last year. Sectors optimistic about growing the team significantly more than the average are power & utilities, technology and healthcare.

Board priorities

According to our research, the top priority of technology leaders since 2019 has been 'improving operational efficiency'. The drive for efficiency and productivity through technology has been a common theme in this report over the years, but many digital leaders have struggled to deliver clear, measurable benefits. Many tell us that 'efficiency' is a moving target. Relentless business change and advancements in technology all mean that what works one year might not be so effective the following year. How do digital leaders now deliver on their top remit from the board without measurable returns on investment (ROI)?

Last year we saw the 'development of new products and services' jump significantly up from position ten, into the top 3 where it remains this year. Digital leaders clearly have a crucial role to play in driving the new business and sources of revenue that technology either enables or accelerates.

Top 3 aims technology must address



What are the top 3 business aims that your management/board is looking for technology to address?

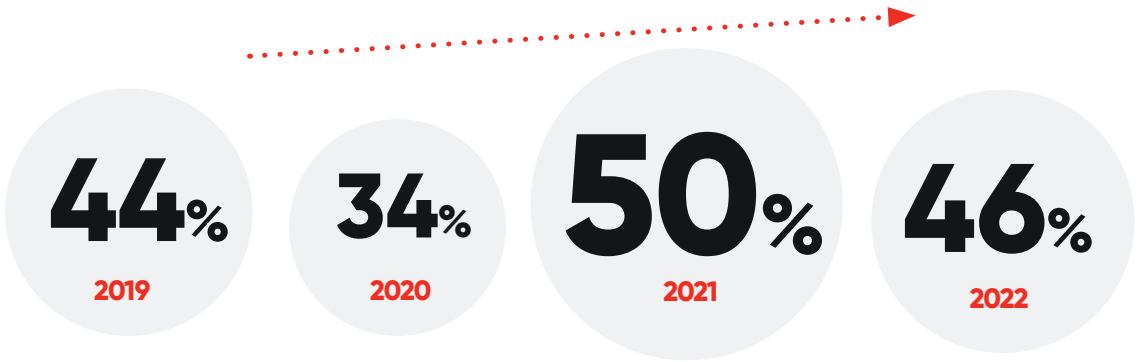
Transformation

If you put ten digital leaders into a room and asked them 'what is digital transformation?' you would get ten different answers. However, they would agree on one thing – transformation is happening everywhere and at a faster pace than ever. Digital is now touching almost every part of personal and business life and the smartphones we keep in our pockets have become the driver of almost three-quarters of online sales.[2]

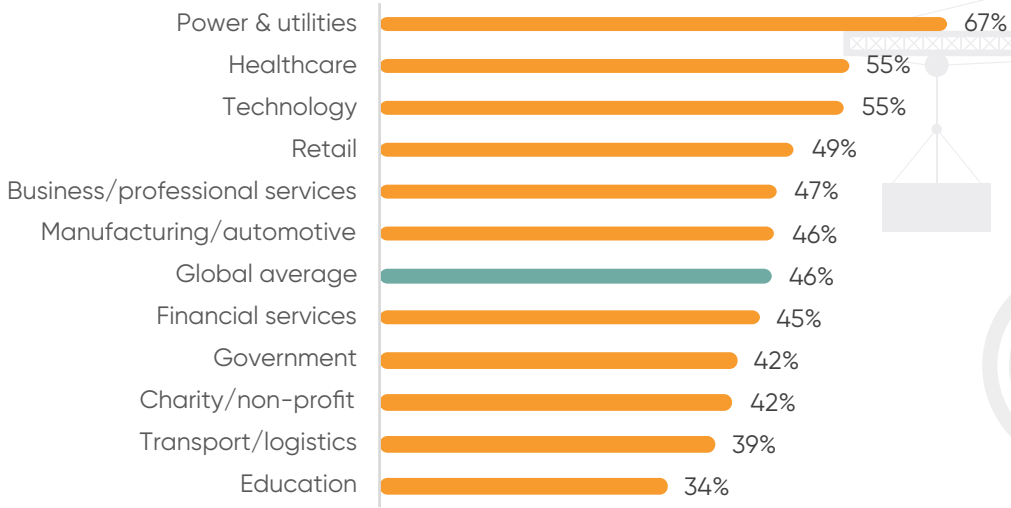
Digital transformation is here to stay. Before the 2020 pandemic almost half (44%) of organisations expected 'major' or 'radical changes' through new products and services, or entirely new revenue models. During the pandemic of 2020 we saw this drop as many organisations focused on keeping the lights on, and then in 2021, we saw a big bounce back as organisations began to get back to 'normal'.

This year sees transformation down a little, but still greater than the pre-pandemic level. Power and utilities is the sector most likely to be planning major change, and the education sector the least.

Transformation plans that include new products, services or revenue models



Sector plans for transformation



To what extent, if at all, do you believe your organisation's primary business activity will transform over the next 3 years? 'Major' and 'radical'.

2. Oberlo, Mobile commerce sales, 2022.

Disruption

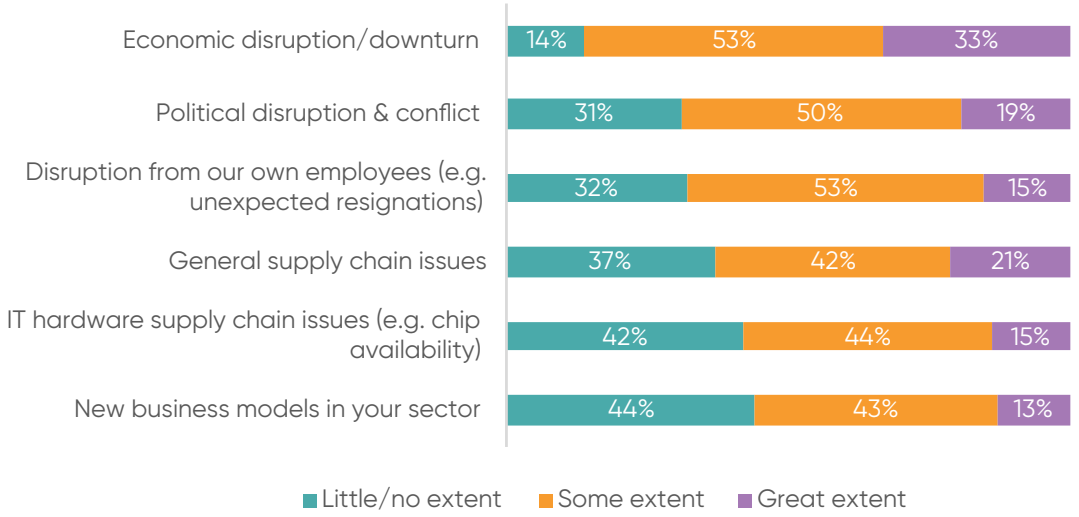
Up to 88% of digital leaders believe that major global change is happening faster than ever. Where once disruption might have been a term reserved for new entrants in the market or a competitor's new products, it now comes from all directions including politics, supply chains and 'the great resignation'.

European respondents are almost twice as likely to be fearing economic downturn and political disruption compared to their peers in the US. That said, as the world grows more interconnected, unrest and strained supply chains in one region have direct implications for other geographies. More than a quarter of our respondents across the globe are rethinking their technology strategy simply as a result of the war in Ukraine.

Digital leaders within the charity sector are most concerned about disruption, in particular around the economy, conflict, and from their employees. Transport and financial services are worried about new business models within their sector; around half of respondents in manufacturing/automotive and the retail sector are worried about their supply chains.

More than half of digital leaders in this report (58%) express concern over the supply of IT hardware including the availability of silicon chips; 15% see it as a critical concern. Geopolitical friction among numerous countries presents its own stumbling blocks to their delivery, as import restrictions make it difficult to source key resources. Russia's restriction on the sale of noble gases like neon, which is important to silicon fabrication, Japan's tightening of control over the supply of high-purity hydrogen fluoride, and similar trade issues are likely to exacerbate the chip shortage in the short term unless these issues can be resolved.

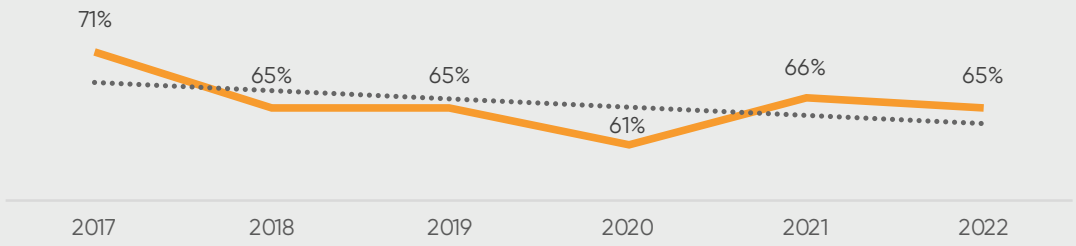
The nature of expected disruption



To what extent do you expect the following disruptors will directly impact your organisation?

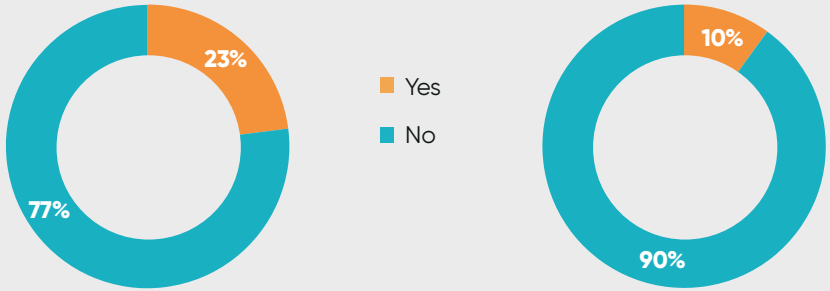
2. THE ROLE OF THE CIO AND DIGITAL LEADER

Digital leader membership of the board/executive management team



Are you a member of the operational board/executive management team of your organisation?

Is it possible to successfully run a company without a CIO



All respondents

CIO respondents

The role of the digital champion

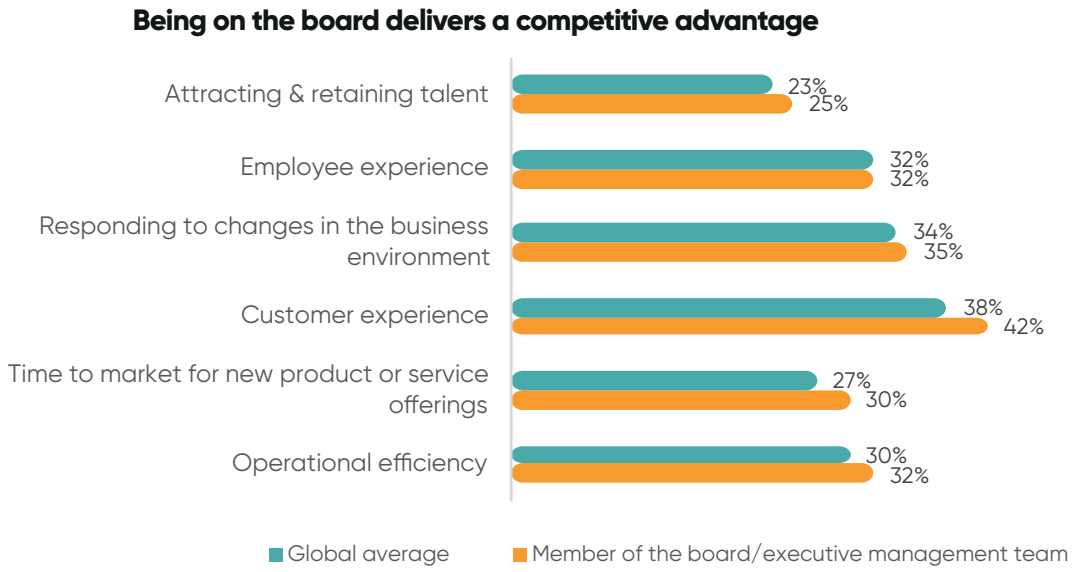
Increasingly technology is being seen as a tool for competitive advantage, and digital leaders – in all their forms and job titles – are becoming more important to organisations. One particular digital leader, the CIO, has been affected most by this change. CIOs were traditionally associated with owning all of digital because it was from their 'wheelhouse' that technology innovations were born. But as digital becomes more pervasive, where does the CIO stand in all of this?

In digital nothing stands still for very long; its leaders play a crucial role as new technologies appear, get implemented and bed in before the cycle starts over again.

That said, this year we see a levelling out of digital leader board membership at 65%, and a long-term drop from 71% five years ago.

Having fewer digital leaders, including CIOs, on the board/executive team appears counterintuitive if technology is genuinely crucial to the business – and in what business is it not crucial these days? Of course, digital leaders have a key role to play in creating a robust, efficient business that can withstand and respond to sudden changes and disruption, but they also have the ability to provide a future vision to their organisations about the potential of existing and emerging technologies.

It is widely established that tech-savvy enterprise boards perform better than their less knowledgeable counterparts and this can be seen in our research. When we look at performance metrics for organisations in comparison to their competitors it clearly demonstrates that having a digital leader on the board delivers small but significant benefits. The digital leader has a key role as an educator and enables the C-Suite leadership to see the broader digital agenda.



Currently, how does your organisation perform relative to its competitors on the following metrics? 'Better'.

The role of the CIO

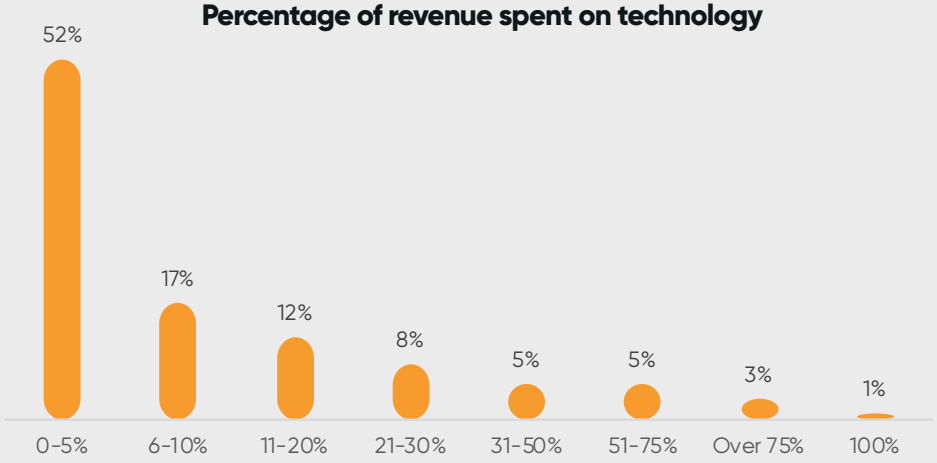
Almost a quarter (23%) of digital leaders we questioned think it is possible to run a successful organisation without a CIO. Unsurprisingly, 90% of CIOs disagreed. This begs the question of whether CEOs are fully understanding the breadth of the role of the CIO, what they do with cloud or business-managed IT. Certainly our research shows that having technology in the cloud encourages organisations to believe that they can do without a CIO. A third of businesses with 100% cloud-deployed tech believe it is perfectly possible to operate without a CIO. That said, 70% of those same companies have a digital leader that sits on the board or the executive team.

The role of the CIO is changing, just like the technology they are responsible for. But just because technology applications are becoming 'easier' to deploy because of the cloud, it's a mistake to suggest technology itself is easier. Each year new innovations arrive, and new complexities present themselves. Maybe buying a licence for a software as a service app in the cloud is 'easier' than developing it in-house but managing multiple applications across a whole host of cloud providers becomes a new technology challenge.

The point is that there will always need to be someone whose role has technology at its heart. Someone who will take time to understand what is, for instance, blockchain, AI, or data analytics, and explain its use to the board. This is not the role of gifted amateurs who have migrated into tech from somewhere else, but someone where tech is their passion. And while they will need to be confident, articulate and visionary, they will also - dare we say it - not shy away from the term 'nerd'.

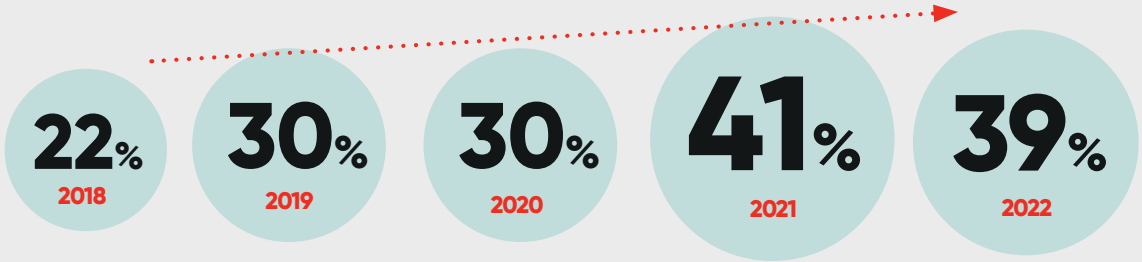
3. DRIVING BUSINESS PERFORMANCE THROUGH TECHNOLOGY

Percentage of revenue spent on technology



What percentage of the overall revenue of your organisation is spent on technology?

Leaders identifying as digitally excellent



'Very' and 'extremely effective' at using digital technologies to advance their business strategy.

How much should you spend on technology?

Where the cloud was once an emerging technology delivering competitive advantage, big data analytics and AI have stepped into its shoes. Digital leaders are being tasked with getting their teams organised and thinking creatively to make a difference. Their biggest asset is a plethora of data, but how can they translate it into business insight without breaking the bank?

So how much should you spend on technology? It's a common discussion at board level, but despite its prevalence the answer is not always clear.

What defines 'technology spend' is a point of debate. Most would agree spending on IT infrastructure is technology spend. Most would agree spending on Google adverts is not. But in the middle ground sit applications like customer systems, new technology products and apps. Is even defining it as 'technology spend' helpful? The mean spend for all digital leaders is 15% of their organisational revenue. Perhaps surprisingly, this figure is not affected by whether a digital leader sits on the board or not.

Digital excellence

Spend is one part of the equation of digital, what you do with that spend is another part. Up to 39% feel that they are 'very' or 'extremely' effective at using digital technologies to advance their business strategy (what we call digital excellence). Intriguingly, digital excellence is slightly down on last year. Excellence is a moving target in technology. What was excellent last year (for instance, moving all operations to the cloud), becomes the norm a year later. This searing edge of technology, the drive to find new ways to gain competitive advantage and not become the 'norm', is a driving force for many digital leaders.

Data alchemy

Digital leaders appear fairly decisive about the types of technology they expect to keep them ahead of their peers in the coming year. Almost two-thirds (64%) of the digital leaders we surveyed think that big data and analytics will be in the top 2 technologies to deliver a competitive advantage in the next year.

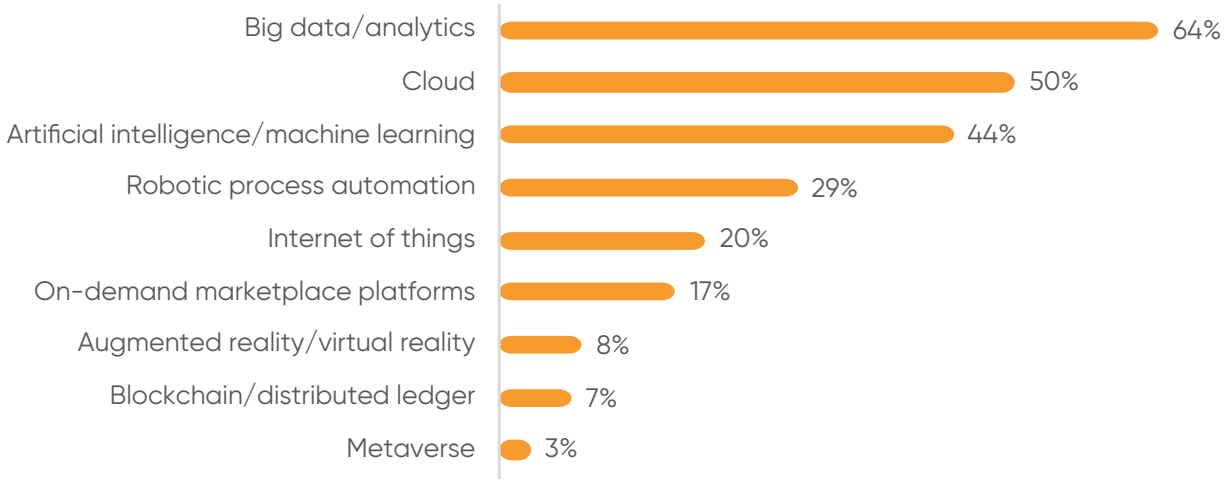
Despite this, just 21% of our digital leaders feel that they are 'very' or 'extremely' effective at using data insights to generate more revenue and fewer than a quarter feel they are using it effectively to help guide their product or service offering. Both of these figures are down compared to last year's report suggesting that big data is getting bigger in all senses of the word, including its complexity.

If there is one challenge that this report highlights needing more attention, it is realising the potential of data. This is no easy task, partly because data itself is like a never-ending, overflowing porridge pot. During 2020, the total amount of data generated and consumed during that year was 64.2 zettabytes, over 30 times the amount generated in 2010. This is expected to rise to 180 zettabytes by 2025. [3]

Another challenge is getting the right skills; 43% of digital leaders are hampered by a skills shortage in big data and analytics. And yet the benefits are board-pleasingly obvious. Those organisations that say they are 'very' or 'extremely effective' at using data to inform their product or service offering are significantly more likely to fall into the category of digital excellence. They are also more likely to be expecting to grow their IT headcount and to be building new ways to realise potential.

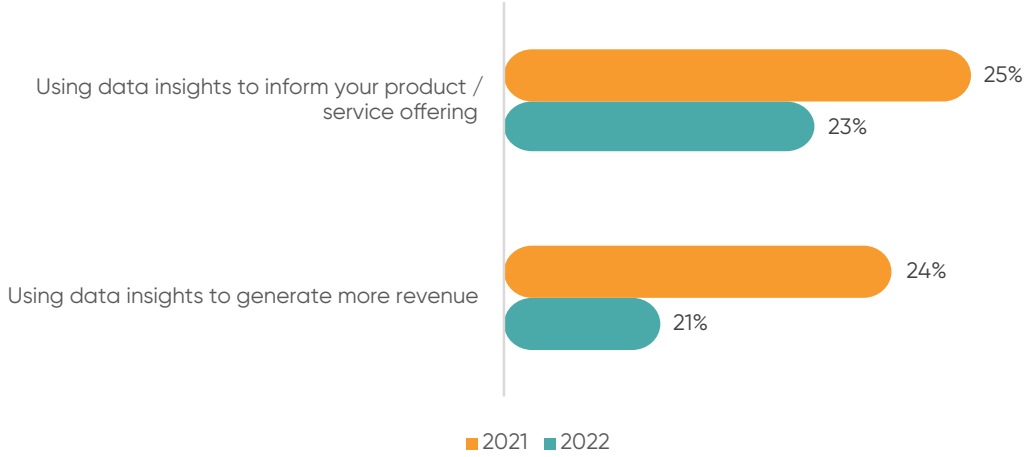
3. Statistica, Big data - Statistics & Facts, 2022

Technology initiatives backed to drive competitive advantage



Which of the following technologies are most likely to give your organisation a competitive advantage in the next year? Select top 2.

Leaders creating data gold



Overall, how effective has your organisation been in...? 'Very' and 'extremely effective'.

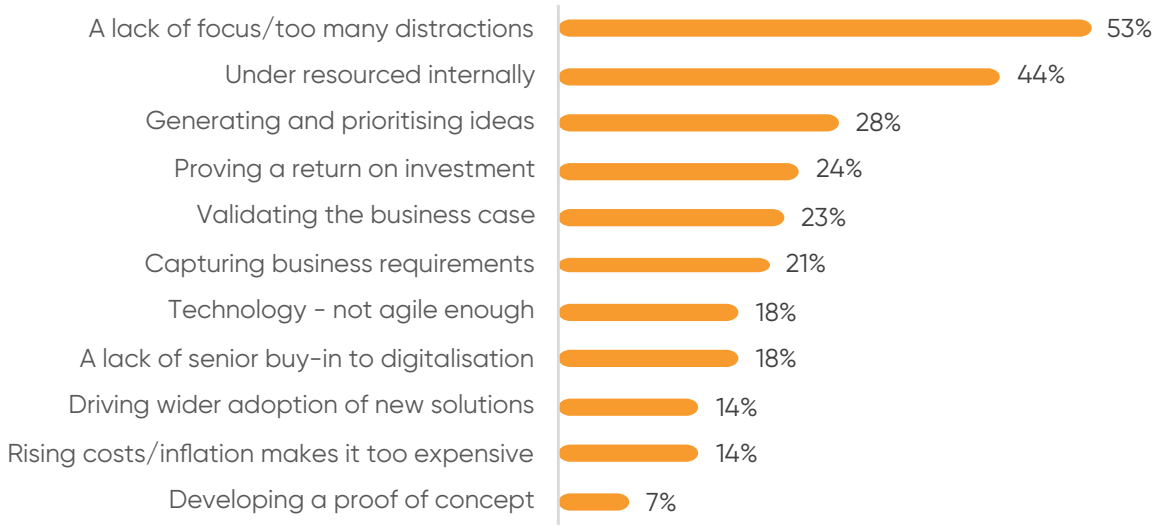
Innovation

In the survey we asked a simple two-part question: what's more important, building new ways to realise potential, or realising the potential already there? More than half of digital leaders (52%) are being asked to build new ways to realise potential, suggesting the primary focus of digital is around change and innovation. It's a difficult balance to achieve; most digital leaders know that within their existing technology estate there is significant untapped potential. Even basic things are important like ensuring internal messaging and collaboration systems (like Microsoft Teams) are set up and used effectively.

So, turning to innovation, our research this year asked digital leaders about what holds them back. Perhaps surprisingly, it is less about costs and proving ROI than it is about getting their house in order and resourcing. More than half of digital leaders cite suffering from a lack of focus and too many distractions, and this fact remains true whatever the size or geography of their organisation. It is even true for the digitally excellent.

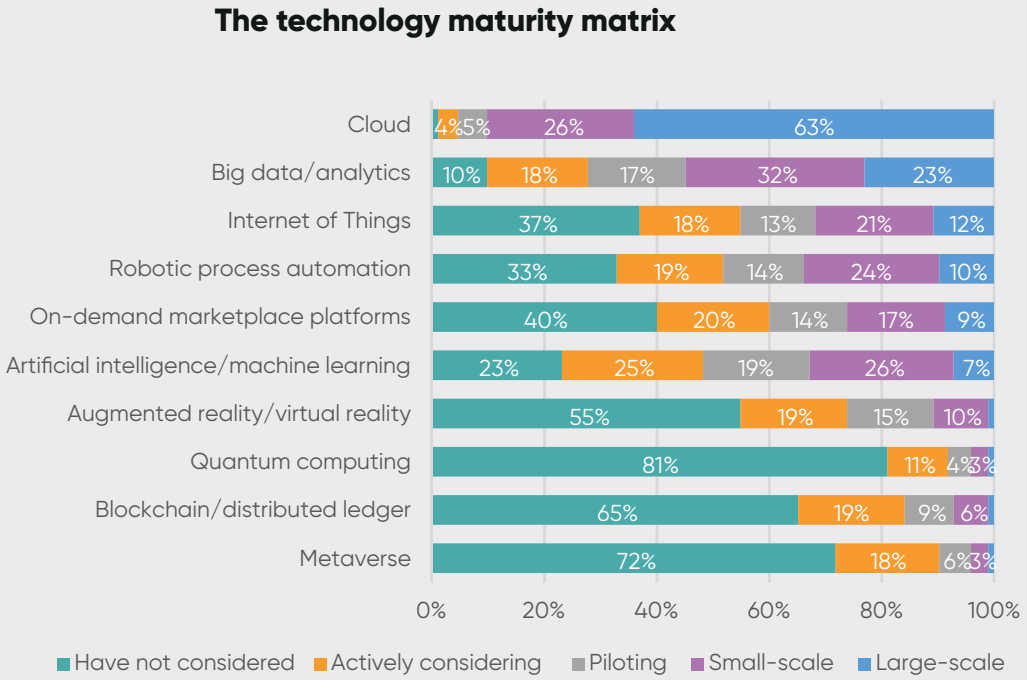
The education sector is the most likely to be looking to generate new ideas, and the power and utilities sector are suffering the most from too many distractions. In the education sector more than a quarter (28%) of digital leaders feel that senior leaders are not sold on the idea of digitisation.

The barriers to digital innovation



What are the biggest barriers to driving digital innovation in your organisation? Select up to 3.

4. MANAGING TECHNOLOGY



How would you characterise your organisation's usage of the following technologies?

The technology maturity matrix

A squeeze on budgets is pointing to reduced investment in cutting-edge technology. But what is cutting edge today could be tomorrow's competitive advantage; just think about the cloud of a decade ago. What will be the next big thing that digital leaders need to focus on to maintain agility and stay ahead of the competition?

Innovation and the use of emerging technologies are inextricably linked. The Digital Leadership Report has been asking questions about these technologies for many years, so many years in fact that many of the emerging technologies we have tracked would be better considered now as 'emerged' – the cloud for instance.

While investment in emerging technology is not always a recipe for success, what we do know is that it is at this 'edge' where competitive advantage can be achieved. Organisations have a choice to lead or be fast followers. There is no third choice; slow followers tend to not be around for too long, just ask Kodak.

What our research tells us is that this year investment in emerging technology has stepped back compared to previous years, except for one – the cloud – where large-scale implementations have grown from 60% last year to 63% this year.

One useful way to look at the table is to compare the ratio between 'small implementations' and 'large implementations'. The smaller the ratio, the more the technology is breaking free from small-scale use into wider use; suggesting that the business case is being proved.

Cloud unsurprisingly leads the table. Of the other tech, big data is the most successful with a ratio of 0.66, followed by the internet of things at 0.5. Quantum computing also looks successful, but is from a very low sample, so it is hard to make clear conclusions.

The benefits of the cloud are relatively well-established and almost two-thirds of digital leaders now have large implementation projects. Arguably, AI and robotic process automation (RPA) have the most potential for improving customer experience and reducing costs.

Surprisingly, 39% of our respondents believe that AI bots will be sentient (capable of experiencing things) within the next five years. While this sentiment may be contended, it does show the enormous potential that digital leaders feel lies in emerging technology.

When looking at how spending has changed on emerging technologies it appears the only real movement is cloudification (moving everything to the cloud). The cloud can offer many valuable things for a business, such as agility and scalability, but it is quickly becoming a utility. The gem in the digital economy is 'the data' and this seems to be an elusive endeavour for most legacy organisations. The big obstacles look to be strategic vision (innovation) and qualified resource (for example, data scientists).

Even the quick wins seem to be slow in coming forward. Surely workplace automation (for example, RPA and AI bots) can cut out swathes of meaningless tasks? Some estimate up to a third of office roles.

Stepping back on investing in these areas may make short-term sense under the pressure of tight budgets, but longer-term competitiveness and productivity is at risk.

The cloud

Nearly all organisations are well into their cloud journeys and understand notionally the opportunities that the cloud offers. Half of our respondents expect the cloud to deliver them competitive advantage over the coming 12 months. However, anecdotally many still wrestle with how to capture the full value that the cloud offers. The cost of implementation is still a barrier to cloud adoption for more than a third of our digital leaders. Similar numbers are finding a lack of expertise and the security aspects of distributed software is difficult to overcome.

The fundamental issue is that some digital leaders are still looking at the cloud as a source of IT productivity improvements rather than as a source of transformative value. They need to master cloud economics and target business areas that can benefit from the cloud's advantages of speed, flexibility, and scale. Perhaps we will see a new role emerge in the face of such complexity and potential – the chief cloud officer?

Emerging tech spend - how it has changed

	2022 Implementations	2021 Implementations	Year-on-year change
Quantum computing	5%	3%	2%
Cloud	89%	90%	-1%
Blockchain/distributed ledger	8%	9%	-1%
Augmented reality/virtual reality	12%	13%	-1%
Artificial intelligence/machine learning	33%	37%	-4%
Internet of Things	33%	38%	-5%
On-demand marketplace platforms	26%	33%	-7%
Robotic process automation	34%	42%	-8%
Big data/analytics	55%	65%	-10%

How would you characterise your organisation's usage of the following technologies? 'Small implementation' and 'large implementation'.

Three-year vision for the structure of the cloud deployment



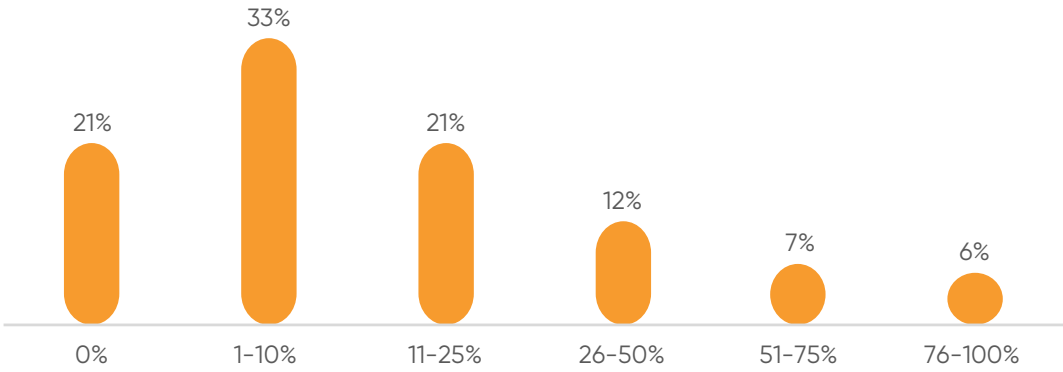
Thinking in 3 years, how do you expect your cloud usage to be organised?

Business-managed IT

In this Digital Leadership Report, we like to focus on what changes year by year, so it may be a surprise to our regular readers that – given business-managed IT is the same this year as it was last – we are still reporting on it.

We have reported before that, when managed in the right way, business-managed IT isn't a threat to technology capability, but actually an enabler. And over time we have seen its usage rise. This year's stall either suggests business-managed IT has now reached its peak, or that some rocks have got onto the track of progress. Many digital leaders tell us that the pandemic, and the rush to push apps online in one single initiative, has reversed a trend of decentralisation, and put more projects back into the hands of IT. Only time will tell whether this blip is temporary or not. We think it is temporary.

Technology spend controlled outside of the IT department

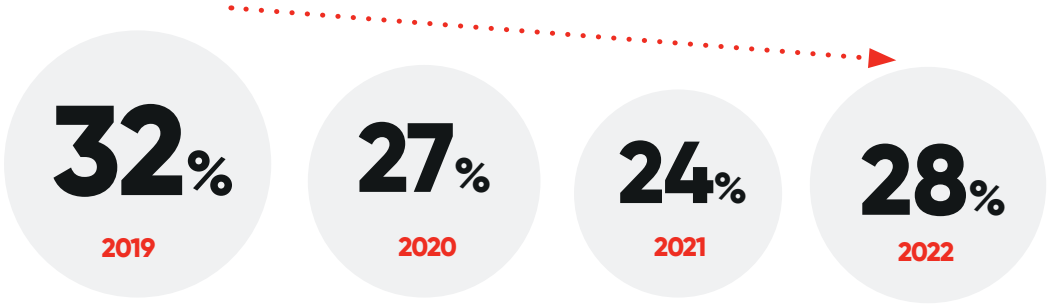


What proportion of the overall spend on IT is controlled by/managed outside the IT organisation/ department.

Cybersecurity

Managing cybersecurity has never been more challenging. The increasing threat environment, expanding attack surface, and continuous stakeholder demands for transparency are only adding to the challenges. Global unrest and a growing awareness of the politicisation around cyber warfare alone has led to 40% of our respondents fearing an attack from foreign powers, up dramatically from 12% in our survey of 2018 – and that figure rises with the company size, reaching 56% for large organisations (total IT budget >US$250m). Less than a third (29% of all digital leaders feel very well positioned and that all reasonable risks are covered, and this is on a par with last year's results.

Major attacks experienced in the last 2 years



Has your organisation been subjected to any major IT security or cyberattacks in the last 2 years?

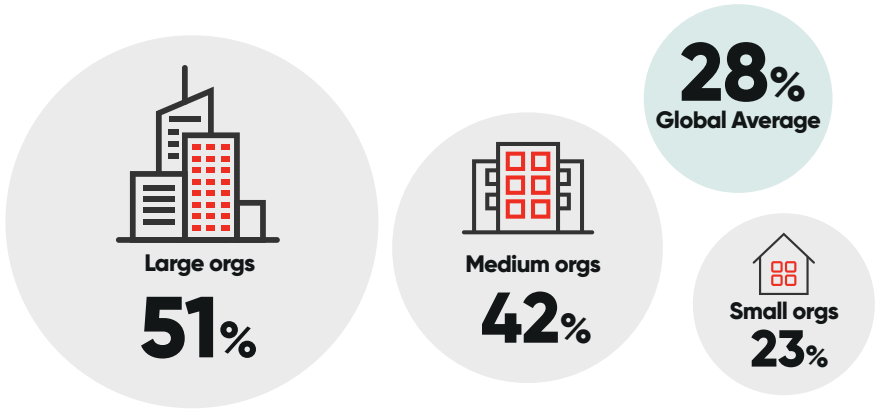
While our research shows that on the face of it major attacks have generally been on a downward trajectory, admittedly with a slight jump up this year, the answers may be distorted by a change in definition over the years in what exactly constitutes a major attack. It is entirely possible that what felt like the end of the world to digital leaders in 2019, now feels like a minor annoyance in 2022. More than half of digital leaders in large organisations (total IT budget >US$250m) report having had a major attack (52%), more than twice as many as their peers in small (total IT budget <US$50m) organisations. Sectors that are more likely than their peers to have suffered a major breach are education, government, and power and utilities.

The fact is that the tide has risen across all parts of the cybersecurity spectrum and for all organisations, big and small. Attackers are exponentially sophisticated, low-level attacks are more frequent and the losses are more catastrophic when they happen. Certainly, our data shows that although less data is being lost during major attacks, significantly more revenue is being lost. Setting this against the ubiquity of a shift towards distributing software across the cloud makes for more security headaches.

Up to 41% of our respondents state that the cloud has complicated cybersecurity, yet almost half (48%) of all digital leaders state that digital transformation was accelerated after an attack, which is a contrast that needs unpicking. There are three possible responses to dealing with cybersecurity attacks: accept, remedy, or move the risk elsewhere. It would appear that digital transformation in this case could be precipitating a move to the cloud and thereby shifting major risks to an external provider.

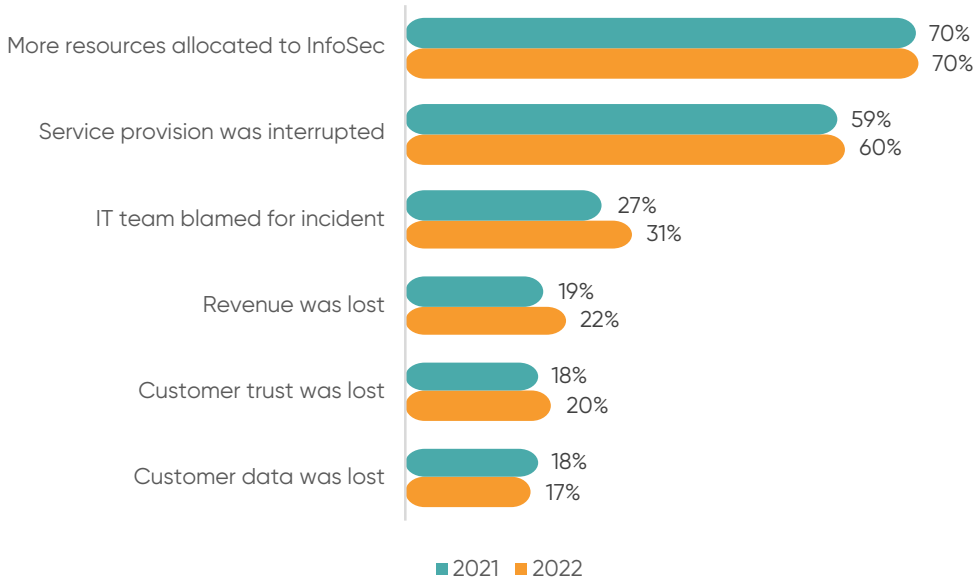
Cloud or not, organisations are still only an authenticated password away from disaster as the attacks on Uber and Rockstar Games highlighted in September this year. The simple parts of security have become as much of an issue for digital leaders as the complicated bits they may have offloaded elsewhere.

Major attacks experienced in the last 2 years



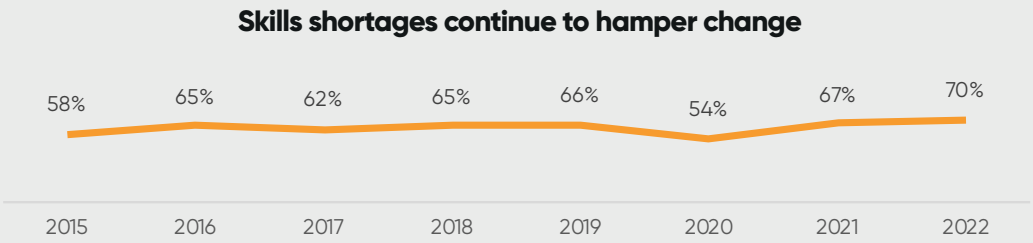
Has your organisation been subjected to any major IT security or cyberattacks in the last 2 years?

Consequences of a major attack

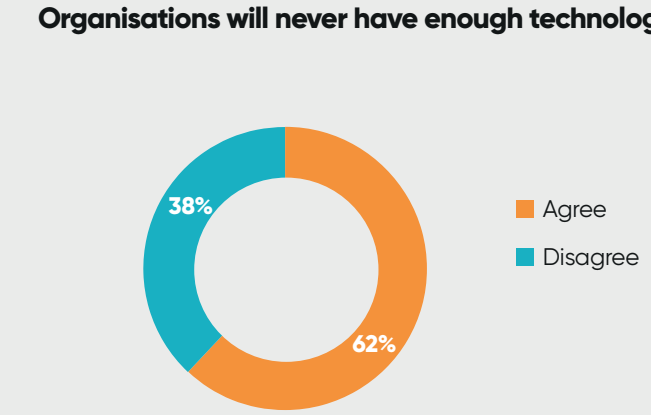


If yes, please indicate the extent to which the following happened as a result.

5. MANAGING THE TECH TEAM



Does a skills shortage prevent your organisation from keeping up with the pace of change? 'Yes'.



Organisations will never have enough technology staff? 'Agree'

Talent shortage

Finding talent remains one of the top headaches for digital leaders. And with increasing salary demands, even the talent already employed is raising cause for concern. But work is also changing, and new flexible and remote working practices could be key to attracting and keeping talent. But there are downsides to this. How are digital leaders finding the right balance?

There is no let-up in the war for talent. Around 70% of this year's digital leaders state that a skills shortage prevents them from keeping up with the pace of change; the largest we have seen since we started reporting. Great tech talent can have the largest impact on an organisation's ability to generate value and yet 62% of our respondents think that organisations will never have enough technology staff.

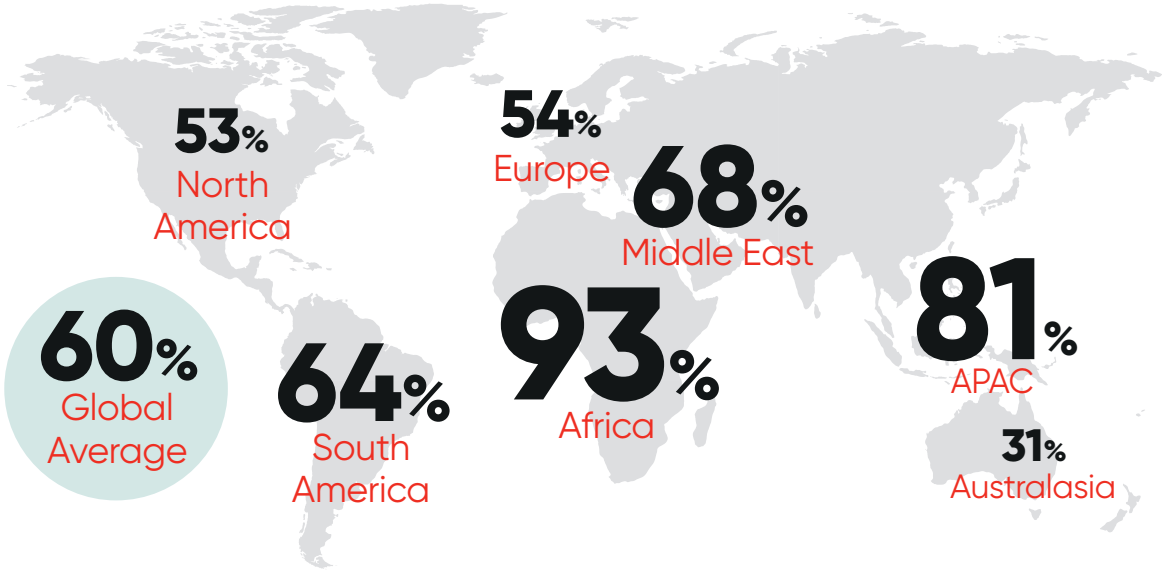
In echo of last year's results: the top 3 skills being sought are data analysts, cybersecurity specialists and technical architects. Not only is the shortage of talent a problem but the talent available comes with a high price tag. Six in ten of our respondents feel that the rising cost of living has made salary demands unsustainable.

It is possible that digital leaders will be forced into increasingly creative rather than monetary means to attract and retain their staff. Our survey shows that the temptation of unlimited annual leave and enhanced perks are helping to boost talent attraction above that of the competition.

Every year, digital leaders are losing on average 11% of their tech team and as many are comfortable with this as not. Around a quarter are losing more. Since our research started, chasing a higher salary remains the number one reason for people leaving, with the UK being the most likely to report this.

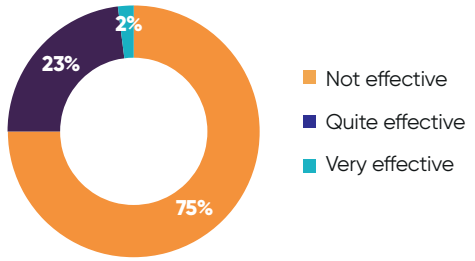
On average, a staggering 74% of respondents feel that their government's policies are completely ineffective in tackling the digital skills shortage. Respondents from the Asia-Pacific region are four times as likely to have very effective policies in place compared to their peers in other locations. Governments know that access to technology talent will be key to their competitiveness, but it's clear that many are struggling to make a difference on the ground. Education, migration, and cross-training are all key, but many digital leaders tell us government-led initiatives are slow, and don't respond to the rapidly changing world of technology.

Rising cost of living pressure on salary demands



The rising cost of living has made salary demands unsustainable? 'Agree'.

How effective is the government in tackling the technology skills shortage



How effective is your country's government at delivering policies for tackling the tech skills shortage?

Equity, diversity and inclusion

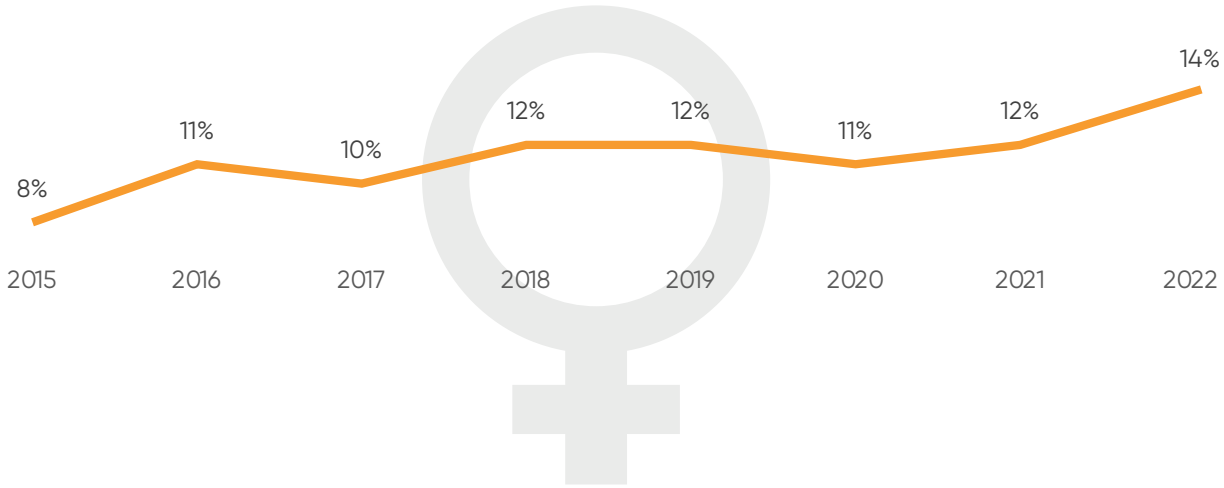
Arguably, today's business landscape makes the need for diversity more urgent than ever. Only by training and recruiting people from different, underrepresented backgrounds can organisations address inequality, make better products, and tackle the skills-gap crisis. Are digital leaders finally getting the message?

Here, there is some good news. At last, female respondents were up to 14% this year so it seems that women are slowly filtering through the ranks – albeit at a snail's pace. Almost a quarter (23%) of the tech team is now female and 28% of new hires. This does seem to indicate an improving pipeline.

Diversity should be self-propelling however our research shows that female digital leaders are slightly less likely than their male counterparts to have recruited as many women as men in the last two years. Role models play a central role in shaping a young professional's career and are especially important if you belong to an underrepresented group. Poor representation in the workplace can lead to feelings of isolation and lack of confidence, and lower levels of productivity and satisfaction, which will act as a barrier to career progression.

When looking at diversity on a wider level, while the technology team has often been seen as quite embracing to all kinds of people, around 19% of tech teams have no representation of ethnic minorities. The average proportion of ethnic minorities in a team globally is 21%. Clearly, whether this is a good or bad figure depends on the ethnic makeup of that country, but digital leaders tell us that there is still more to do here. Digital leaders are also talking more about other factors, like neurodiversity and sexual orientation. These will be topics for our report next year.

Female digital leaders



What is your gender? 'Female'.

50:50 hiring depends on the leader's gender



Male digital leaders

Female digital leaders

What proportion of new hires into your tech team were female in the last 2 years? 'At least 50%'.

Remote and hybrid working

It is no surprise that our research shows that the remote and hybrid working models rapidly deployed during the pandemic are here to stay, as workers value flexibility and organisations benefit from wider access to talent. Almost a third (32%) expect staff to work in the office one day a week or less. Fewer than one in ten (8%) expect them in every day. Being office based for around 2 to 3 days is the typical requirement.

The majority of digital leaders (80%) have a work-from-home policy that their employees are happy with, but almost one in ten have one their employees dislike. Around 63% of respondents feel that they offer the right office experience to attract employees back to the office. Certainly, 38% of digital leaders have less permanent office space than before the pandemic and anecdotally there have been many organisations reconfiguring that office space to encourage collaboration and fluidity of working styles.

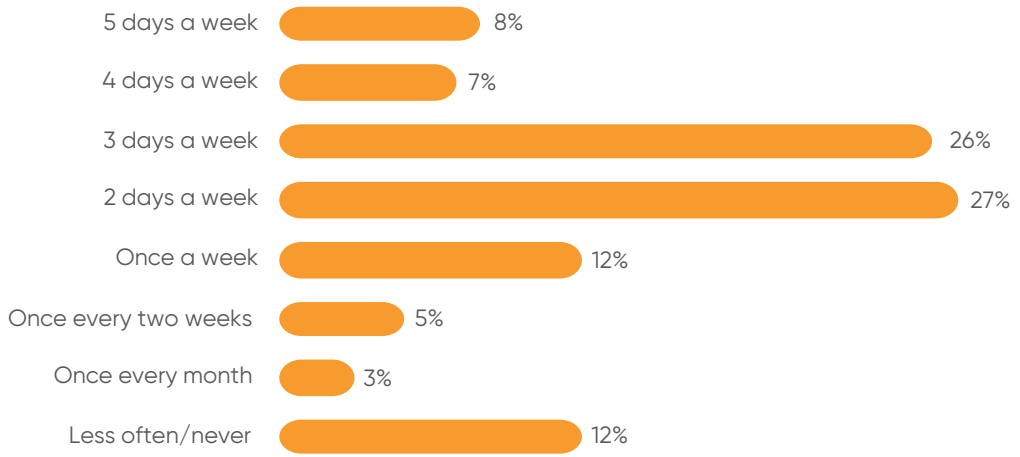
Our research shows that a much-improved work-life balance for the tech team is the biggest gain from hybrid working, with 65% reporting an increase, building further on last year's result of 60%.

But here is where the good news story around hybrid working gets more complicated. While more than four in ten report an increase in productivity from hybrid working, this is in decline from last year's results where half of all digital leaders saw a boost.

Our research tells us that hybrid working has been bad for mental wellness, with over a third of respondents saying it has declined. However last year this figure was almost six in ten, suggesting that many organisations are making big leaps in how they look after the wellbeing of their people.

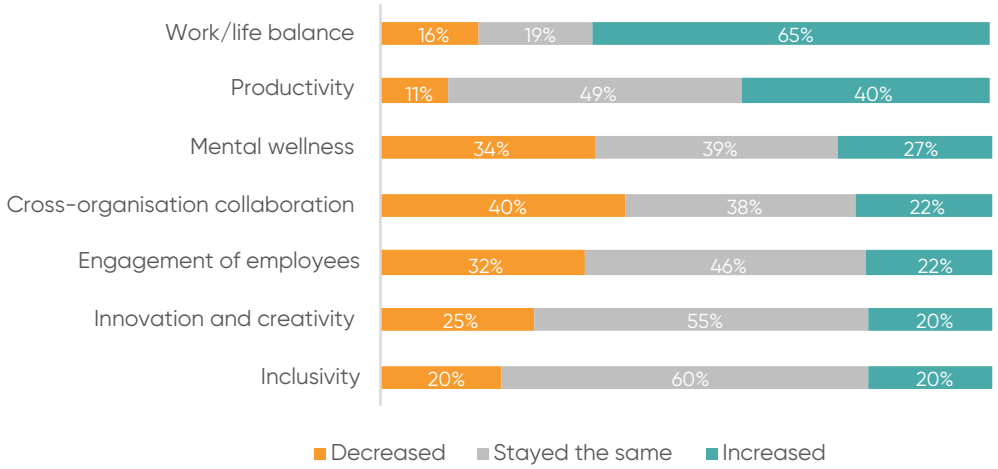
It all suggests that talent leaders need to really think hard about how they engage with their employees. It is not enough to simply do what was done in previous years, as it's likely the train will roll off the tracks.

How often is the team expected in the office?



Thinking about your whole organisation, how many days per week are you expecting staff to work from the office?

The impact of new ways of working



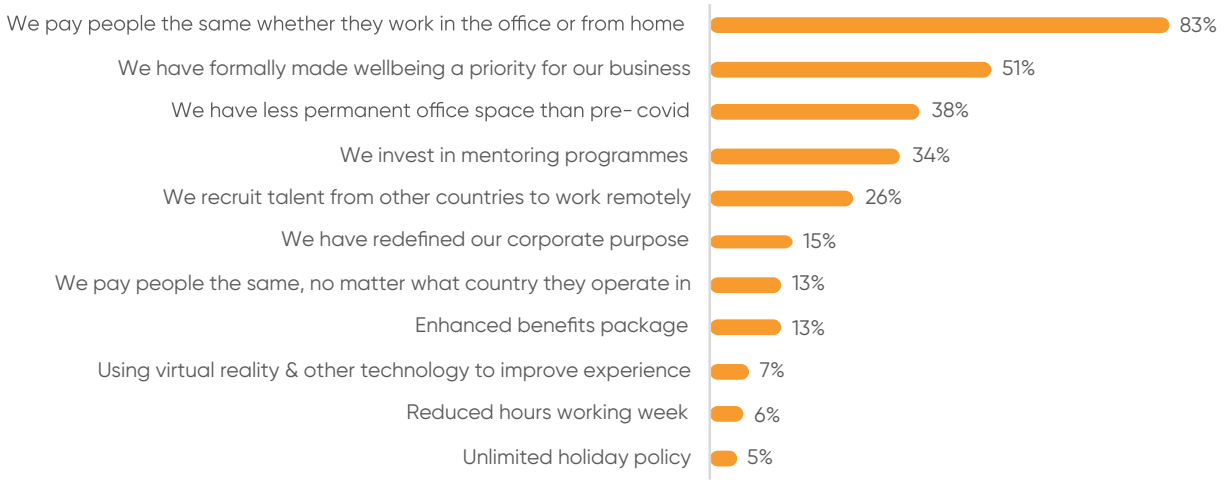
How has the Covid crisis and hybrid and flexible home working affected?

Perhaps as a reaction to the ever-increasing talent shortages in technology, more than a quarter (26%) of digital leaders are recruiting talent from other countries to work remotely. A significant number of digital leaders, four in ten, are seeing a decrease in cross-organisational collaboration and while not great it is a slight improvement in the deterioration witnessed last year. Unfortunately, little about holding a meeting online encourages unstructured or reflective conversations and these tend to be where the best ideas happen, people bond and feel engaged with the purpose of their organisation.

Finding a balance between offering the flexibility demanded by scarce talent and requiring people to be in the office all together to cross-pollinate their ideas and initiatives is a tricky one. Since the advent of hybrid working, tumbleweed offices can be commonplace on a Monday and Friday.

Just over half of respondents have reacted to the decline in mental wellness that either started, or at the very least became visible, during the pandemic and have made wellbeing a priority for their business. Certainly, there is an additional burden on leadership to touch base with their reports to ensure their status in terms of communications, awareness and wellbeing in ways that were simpler when meeting face to face most days.

Responses to new ways of working



Which of the following are you doing to attract, retain and engage your employees in a hybrid environment? Tick all that apply.

Digital labour

Unsustainable salary demands, difficulties in recruiting talent, increased cost of people operations – if there was ever a time when automation should 'have its day', it would be right now. But will automation be able to plug the gap in the talent market in any significant way? Although growing at a slower pace than in previous years, the worldwide RPA software market is projected to continue to experience double-digit growth in 2023, growing 17.5% year on year.[4] Almost a third (29%) of digital leaders think that automation will be a critical requirement in gaining a competitive advantage over the next 12 months.

Our research shows that digital leaders are planning on using digital labour to automate an average of 16% of the workforce over the next five years. And 7% plan on automating at least half of their workforce and this rises to 13% in the largest organisations.

We only have to look back at the results of our survey in 2018 to see just how pervasive digital labour has become today - implementations have increased significantly across all departments. While in 2018 customer support was the second biggest area of automation after IT, today finance takes that position. We have also seen a big jump in HR automation.

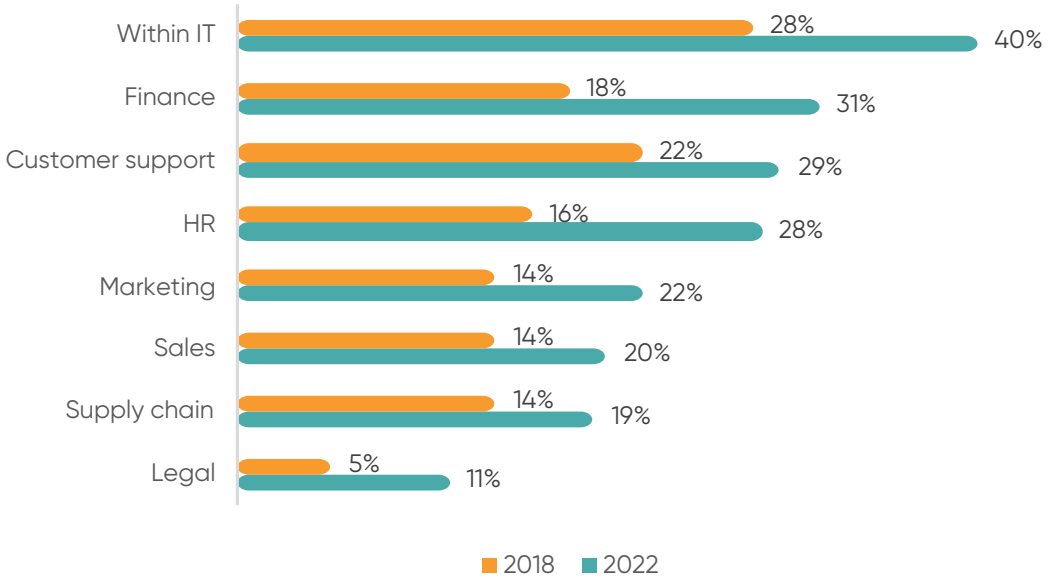
The biggest obstacle to automation is cultural resistance. The challenge with automation is that it is commonly seen as a threat to jobs. Perhaps the narrative needs to change; most organisations are looking for automation to supplement, not supplant their people.

Digital leaders have also been surprised by the complexity of automation; another top 3 obstacle. What may have at first seemed like a simple process to automate, can quite quickly turn out to be a spaghetti of logic branches. Jobs done by humans have a tendency to become human jobs, involving all the subtlety, subjectivity and sometimes plain insanity that make us human beings.

It needs a good deal of expertise to make sense of it all, but lack of that is the second biggest obstacle!

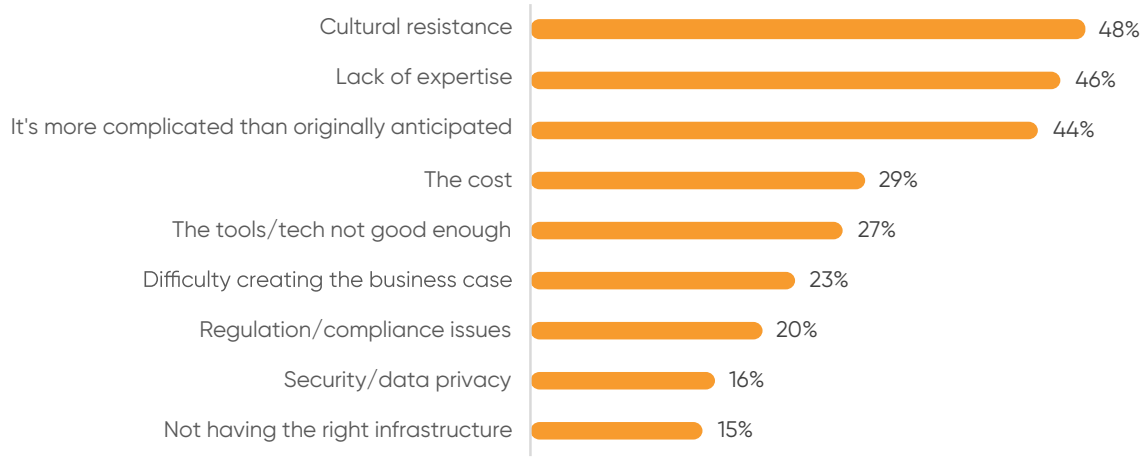
4. Gartner, Gartner says worldwide RPA software spending to reach US$2.9 billion in 2022, 2022.

Where digital labour being used



Are you planning to implement, or have you implemented, digital labour in the following departments?

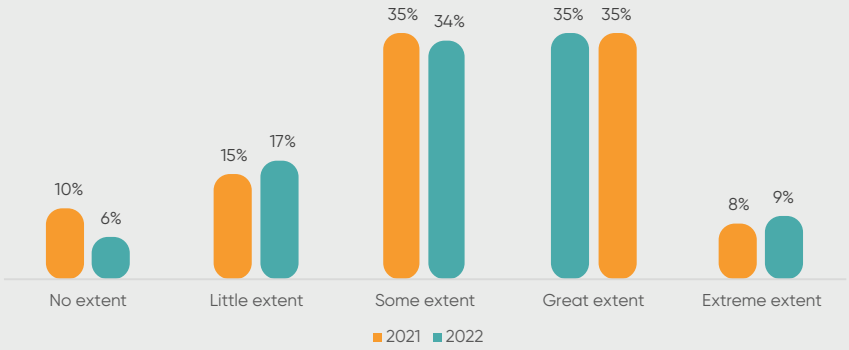
The obstacles to an automated world



What are the main obstacles to automation? Select top 3.

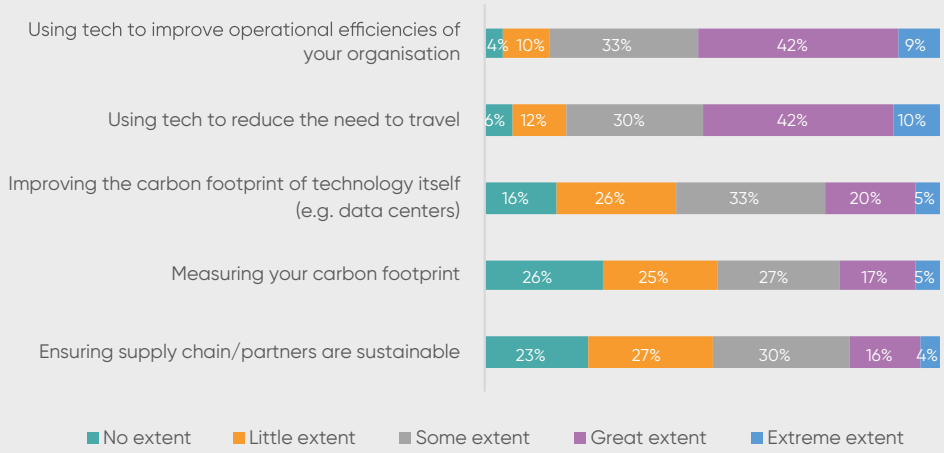
6. BUILDING A SUSTAINABLE FUTURE

Does technology play a crucial part in sustainability



To what extent does the board recognise technology as crucial to improving your organisation's sustainability/carbon footprint?

How technology is helping



To what extent is your organisation realising the potential of technology?

How important is sustainability?

Putting your technology into the hands of a cloud provider is one way of reducing your direct carbon footprint. But does devolving responsibility really help the environment? Are digital leaders becoming complacent about the impact of technology on the climate?

A McKinsey survey found that 83% of C-Suite leaders and investment professionals expect that environmental, social, and governance (ESG) programmes will contribute more to shareholder value in five years than they do today.[5] So, with nearly all organisations having a technology backbone, it was a surprise to see how boards view technology's part in sustainability.

We expected to see it playing a greater role than when we measured it last year when in fact it appears little has changed. A quarter of our respondents think it has only a negligible or no part to play in 2022. Was reducing travel costs through enabling remote working a tick in the box and done? Do digital leaders have their heads firmly in the sand or is the board not focusing them on this?

Sustainability has historically neither been a revenue-generating exercise nor a cost-containment one. It is an activity that is led by either voluntary or, in some cases, mandatory disclosure requirements as per government or corporate policies. Given the urgent global movement toward integrating sustainability into core business operations as well as the customer proposition, it is important that digital leaders have a dual-lens on sustainability. Firstly, by designing and implementing sustainability tools and secondly anchoring sustainability into company values, products and services.

A quarter of organisations state that they have a head of sustainability but up to a third of respondents state that their CEO is directly responsible for the carbon footprint of the organisation. Less than a quarter are using technology to measure the carbon footprint to any great extent, which is surely a bare minimum involvement. More than half (53%) state they are using tech to improve the operational efficiencies of the organisation, but this feels too vague to indicate that digital leaders are really acknowledging the impact technology can have on the environment. Perhaps the cloud is delivering the same shifted risk for ESG as it is for cybersecurity? One report showed nearly 80% energy savings from running business applications in the cloud rather than on on-premises infrastructure.[6]

Is the company carbon footprint now somebody else's problem?

5. McKinsey sustainability, The ESG premium new perspectives on value and performance, 2020.
6. Eco-Business, The carbon reduction opportunity of moving to the cloud for APAC, 2021.

Special Reports and League Tables



Nash Squared Viewpoints

Your career – the future has never been so bright



Lily Haake,
Head of CIO Practice, Harvey Nash, part of Nash Squared

When recruiting CIOs and CTOs in the past, we used to say it was imperative that technology leaders could 'speak the language of the business'. If you came across as too 'techy' or inward-looking then you would be unlikely to land a board-influencing role. Now, technology is the backbone that underpins nearly all business operations, in nearly every sector. Entire industries are pivoting, and even 'traditional' companies are transforming into technology-led businesses, with entirely new operating models and revenue streams. Sectors like financial services were early to transform, but others like logistics and professional services are quickly following suit.

What does this mean for the future of the digital leader?

Where, historically, technologists needed to develop their skill set to be more commercial, the paradigm is shifting. It's business leaders who now must understand tech, or transformation will fail. As a result, we're seeing many technology leaders move beyond the previous ceiling of CIO/CTO, into COO, NED and even CEO roles. We anticipate that this trend will only continue as businesses become ever more digitised.

"Entire industries are pivoting, and even 'traditional' companies are transforming into technology-led businesses"

So what should digital leaders do to position their career for a broader executive role?

Firstly, diversify: accept any opportunity that comes your way to learn about different business operations, new sectors and business models. Consider your professional development, whether that's an internal leadership programme or even considering doing an MBA. Seek every opportunity you can for more exposure to the boardroom; if you're a CIO without a seat at the table, it might be time to look for a new job. A good way to get your first exposure to the board is to accept pro-bono board-advisory or NED work and expand from there. Keep networking, particularly in your sector. Attend industry events and conferences – it's amazing what opportunities can arise from a fortuitous meeting here.

Finally, nurture your relationships with headhunters! We're here to advise you on your personal brand, your CV and your qualifications. We can introduce you to peers or mentors in the industry, and one day we might just find you that dream role.

How to flourish in an increasingly dangerous world



Jim Tiller,
Chief Information Security Officer, Nash Squared

The increasing sophistication of threats, growing number of vulnerabilities, and constantly transforming environment have ushered in an unprecedented time in cyber risk. As every aspect of the business becomes more data-driven, a wide array of technologies are being rapidly adopted and are adding layers of complexity to an ever-expanding attack surface.

Ultimately, complexity is security's greatest weakness as it provides greater opportunities for avenues of attack. Add to this war and the implications of failure, there are times when cybersecurity seems like a battle for survival.

Flourishing in the new world

The key to thriving and not simply surviving are to focus on what matters from a business perspective, to fully utilise what you already have, and to know that people are your greatest asset.

To flourish, cybersecurity must first recognise that the business is at the centre of the universe, not cybersecurity. From this perspective, it is far easier to evaluate risks and effectively prioritise, and so greatly minimising distractions. For the executive community, cyber risk is simply one of many they face, therefore prioritisation within the complexion of the business is essential.

Important to thriving is putting to work the full spectrum of what you already have. For example, the quality of threat intelligence is unprecedented. Combined with such tools as the MITRE ATT&CK framework, it is now possible to prioritise based on the threat modus operandi as they relate to your business conditions. Moreover, with digital transformation comes new capabilities to better locate and classify assets ensuring that security is aligned with what matters.

It's all about people

Finally, leverage one of your greatest and typically most underutilised assets in cybersecurity – people. Unlike years ago, everyone at a personal level is exposed to cyberthreats. By helping people understand the value of good practices they can help themselves, their friends and family, and your company. Critically important is embracing diversity. Cybersecurity is a complex and dynamic problem that demands innovative approaches, new ideas, and perspectives that must be shared and discussed in a safe and accepting environment. Without this most fundamental foundation, survival is the best you can hope for.

The agility mindset



Jon Last,
Head of UK Delivery, NashTech, part of Nash Squared

As this year's report amply demonstrates, change and unpredictability are all around. Digital leaders need more agility and nimbleness than ever before. From a technical perspective, this means embracing the cloud, adopting agile development methods, and having a loosely coupled architecture such that discrete functions can be optimised without affecting the rest of the stack.

It's all about data

It also means having access to the right data for bold, in-the-moment decision-making – something that's still a real challenge for many. Two thirds of digital leaders think that data and analytics will be in the top 2 technologies to deliver competitive advantage in the next year, but fewer than a quarter feel they are using data effectively to help guide their product or service offering. A lack of granular, reliable data creates hesitancy at the leadership level – cramping organisational agility.

Solving these technical issues is part of the digital transformation journey that so many businesses are at different stages of. But agility is not just a technical question. Crucially, and as we frequently reflect on in discussions with clients, it's the result of a mindset too.

Leading agility

This starts with leadership – having leaders who are open to new ways of doing things, who empower their teams to experiment with different approaches, and trust in their ability to deliver. It manifests itself too in the approach to recruiting talent – such a vital area given the acute digital skills shortages we all know about. Agile leaders will be open-minded about where talent is based, embracing remote working. It's no surprise that more than a quarter of businesses are recruiting talent from other countries to work remotely.

When these elements come together, you get a culture of agility that diffuses itself across the business like oil lubricating an engine.

In today's super-disrupted environment, that's exactly what's needed to navigate change and stay ahead.

"Digital leaders need more agility and nimbleness than ever before."

Effective Qualities of Leadership for Uncertain Times

CIONET Special Report



Roger Camrass,
Global Research Director, CIONET

Established in 2005, CIONET is today, the largest private network of CIOs internationally. We have established leading communities of practice in 25 countries across Asia, Europe and the Americas. With the active support of our national advisory boards, we have built a flourishing community of 10,000 technology executives.
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Five characteristics that define successful digital leadership

Digital leadership is more important than ever before. As the pace of digital transformation continues to quicken, the best leaders rely on five key characteristics that help them turn the threat of disruption into an opportunity. They use these traits to lead the creation of new technology-enabled business models that generate a lasting competitive advantage.

These five traits are distinct, yet they interlink when it comes to leadership style. Digital leaders display all these traits, but they adopt and adapt them in a way that creates great results for them as individuals, for the people they lead, the businesses they work for, and the customers they serve.

Here are the five defining characteristics of leadership based on individual experiences and case studies.

1. CURIOUS

The best digital leaders stimulate business innovation in a timely fashion
The best digital leaders have a passion for everything new. They constantly search for the very first signs of opportunity, whether that's emerging technologies or fresh business trends. As Sanjay Patel, group CIO at Tate & Lyle, a British-based multinational, suggests, curiosity is an essential trait for effective digital leadership.

Curiosity isn't a solo activity. Successful digital leaders engage closely with people and parties across and beyond the IT department. They explore and research weak signals internally and externally with colleagues and customers. By spotting these signals quickly, and then testing their strength, digital leaders stimulate business innovation in a timely fashion.

Digital leaders focus their attention on the user experience, whether that's in terms of the end customer or the employee. They work with line-of-business managers and deliver great products and services that meet customer demands.

They also exploit information. They use data to elucidate trends and inform decision-making processes. They also use data analytics and AI to personalise customer experiences across channels. Digital leaders who build such credibility are equal partners at the boardroom table.

2. IMAGINATIVE

The best digital leaders are open-minded to diverse perspectives from anywhere
Long gone are the days when a digital leader was defined by their ability to keep technology systems up and running. The best leaders look far beyond the enterprise firewall and are open-minded to diverse perspectives across an ecosystem of peers and partners.

IT can accelerate business innovation by providing new tools, digital platforms and skills. In fact, the imaginative use of innovation can involve entire shifts in business models. It might also involve the more tactical use of imagination, such as the creation of a dedicated innovation unit within an existing business, such as at German insurance company Munich Re, or the use of hackathons.

Continual experimentation takes on many forms, yet imagination always relies on openness. US multinational software company RedHat CDO fosters an open culture that encourages collaboration across organisational silos. Koen Vermeulen, group CIO at Orange Group, uses open sourcing and processes to support a culture of collaboration.

One thing is certain: ongoing digital transformation means the pressure is on digital leaders to evaluate emerging technologies quickly. Corporate survival will depend on imaginative interventions to embrace these advances and fend off newcomers.

3. PURPOSEFUL

The best digital leaders ensure corporate cultures align with the emerging digital world
Organisational culture is one of the most important factors separating successful digital transformations from unsuccessful ones. The traditional IT structures and methods of the past are not fit for the fast-developing business requirements of tomorrow.

The watchword is purpose: digital leaders identify clear business outcomes and create a purposeful IT organisation where they, their teams and their ecosystem partners understand what needs to be achieved. Reaching these targets is satisfying for the team and sustainable for the environment.

David Jack, former CTO at customer data science company dunnhumby, says top-down intervention is not the best way to orchestrate change. Instead, digital leaders need teams of trusted experts who have autonomy, creative licence, and accountability for delivering change. Digital leaders enable this shift through automation: let machines do the repetitive work, while employees focus on the high-value activities.

Perhaps the most visible development in modern IT practices is to employ an Agile system. By applying lean thinking and Agile methods, such as short sprints for getting work done, digital leaders are ensuring success in the projects they undertake.

4. AUTHENTIC

The best digital leaders lead successfully by encouraging and inspiring others
When new challenges arise, people within the IT department and across other lines of business look to digital leaders for guidance. People trust these leaders to make the right decisions because they're authentic – and their passion for their role shines through.

Crucially, authentic leaders don't dictate the direction of travel. The best leaders show humility. They lead by encouraging and inspiring others, working across silos to eliminate blockers to change. Digital leaders use terms like conductor, orchestrator and connector to describe this proactive approach.

Successful leaders explain digital transformation in terms the rest of the business understands. When people know what you're saying, they think of you as an authentic leader. So, instead of talking about 'technology stacks', Kensington Mortgages COO Mark Foulsham focuses on business terms, such as earnings and customer impact.

5. DYNAMIC

The best digital leaders adjust rapidly to fast-changing circumstances
If change is now the overriding constant in business, whether that's responding to crises, adopting digital services or switching business models, then adopting flexible business structures based on open sourcing and Agile development methods is key.

Digital leaders who break free from the old world of legacy systems and waterfall techniques create the dynamic IT department that a modern business requires. Instead of a proliferation of data silos, digital leaders bring services together on modern, cloud-based platforms. They help the business procure its own solutions safely and securely.

New challenges continue to emerge. Cindy Hoots, CDO and CIO at AstraZeneca, says her team supported the development of the coronavirus vaccine. Automation tools, such as robotic process automation and artificial intelligence, helped human talent meet stretched goals.

Incredible results in extreme circumstances show the value of a dynamic approach. Digital leaders must love the problem, not the solution. Technology is simply the conduit to reaching business objectives – and the more flexible the platforms, the better for all concerned.

CONCLUSION

New challenges bring new opportunities
The best digital leaders aren't just experts within their own domain but are capable business executives who help their organisations embrace the myriad of challenges that define the modern world. They go above and beyond the technology department. These leaders possess characteristics that help them change their businesses for the better.

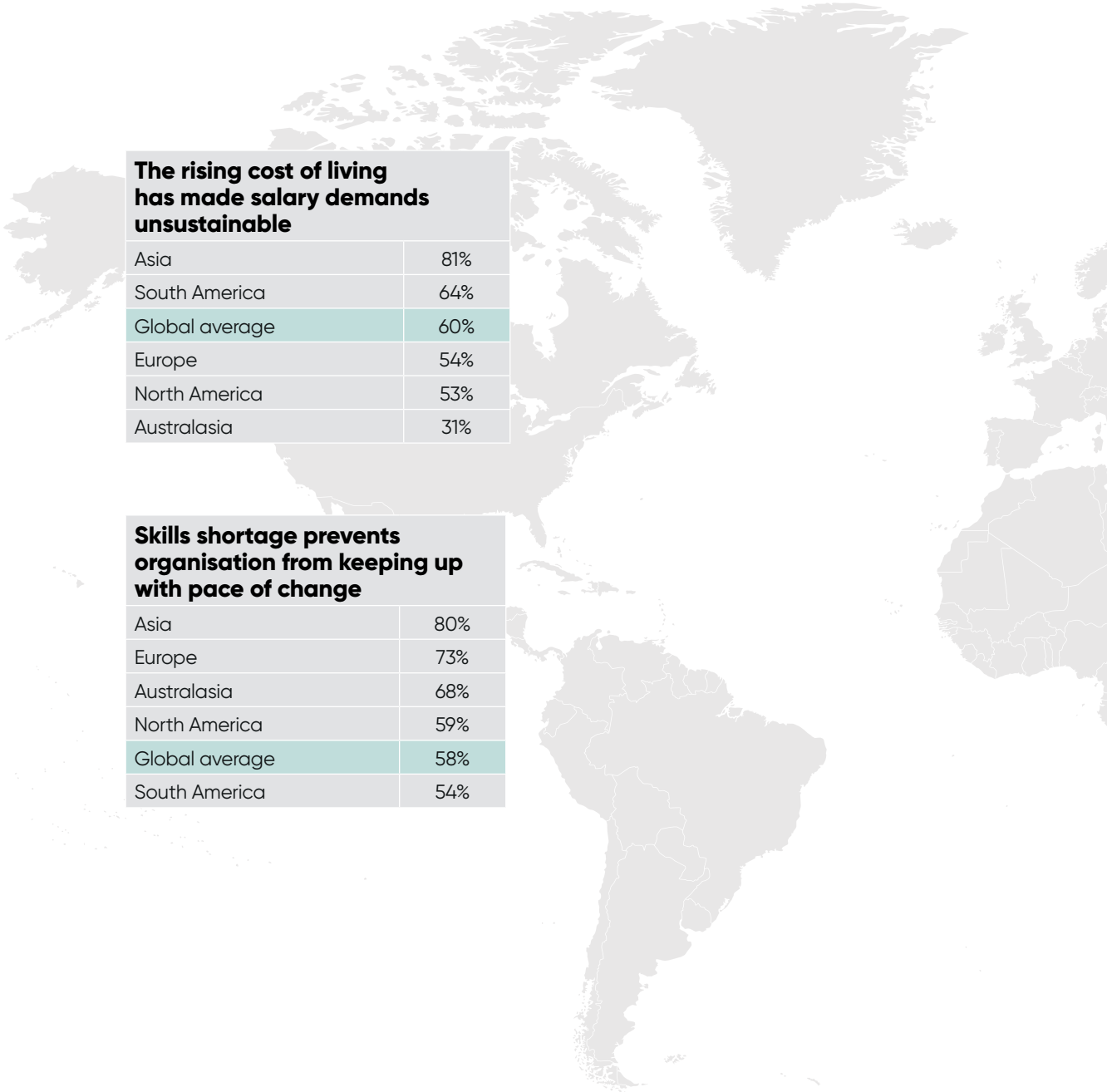
Regional league tables

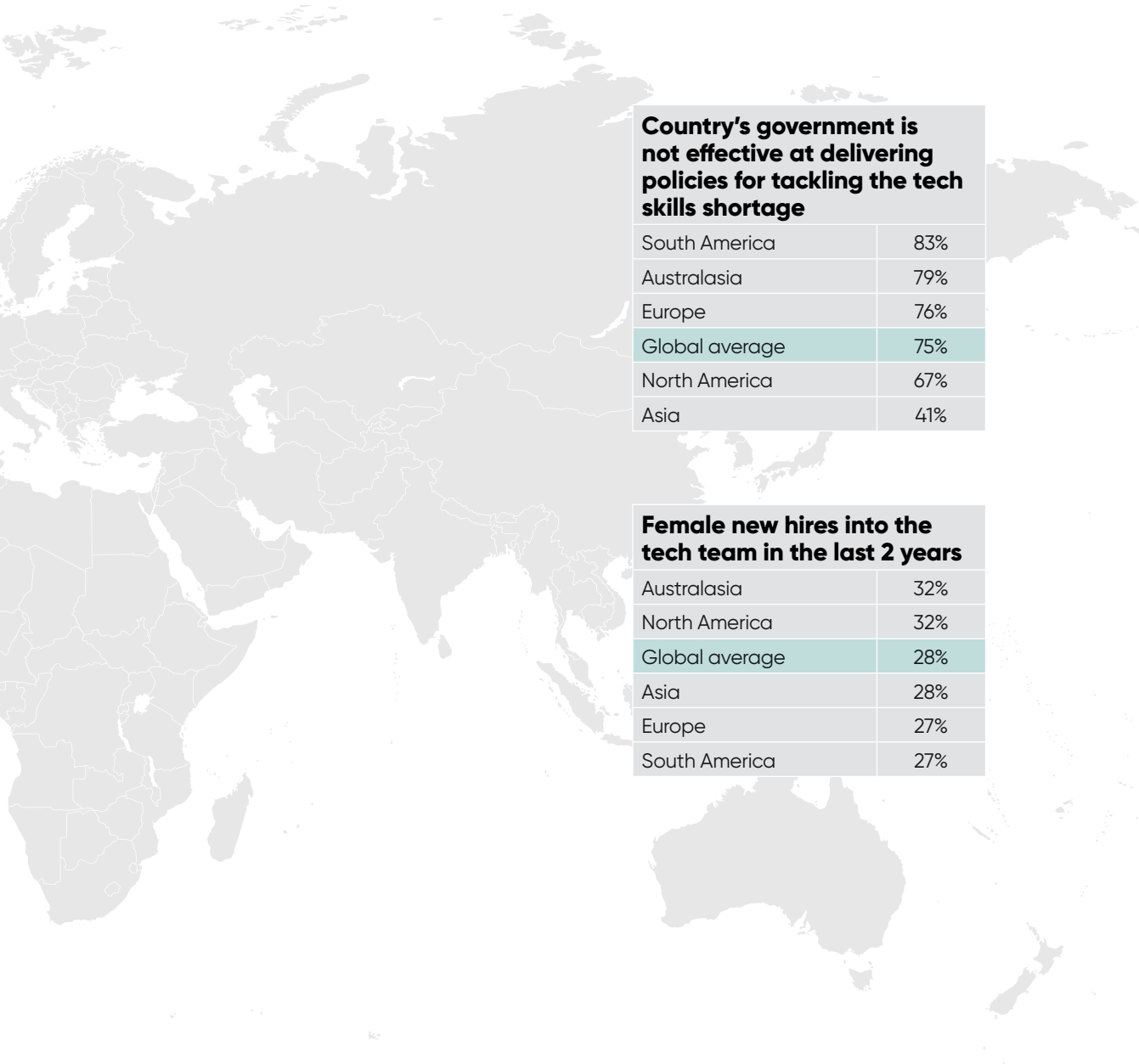
Expecting a budget increase in next 12 months	
Asia	54%
Global average	52%
Australasia	51%
Europe	51%
North America	49%
South America	46%

Expecting an increase in IT/ tech headcount	
South America	64%
Asia	63%
Europe	60%
Global average	58%
Australasia	56%
North America	50%

The rising cost of living has made salary demands unsustainable	
Asia	81%
South America	64%
Global average	60%
Europe	54%
North America	53%
Australasia	31%

Skills shortage prevents organisation from keeping up with pace of change	
Asia	80%
Europe	73%
Australasia	68%
North America	59%
Global average	58%
South America	54%





Country's government is not effective at delivering policies for tackling the tech skills shortage	
South America	83%
Australasia	79%
Europe	76%
Global average	75%
North America	67%
Asia	41%

Female new hires into the tech team in the last 2 years	
Australasia	32%
North America	32%
Global average	28%
Asia	28%
Europe	27%
South America	27%

Organisation has had a major cyber attack in the last 2 years	
Asia	32%
Europe	31%
Global average	28%
North America	26%
Australasia	25%
South America	20%

Board recognises technology as crucial to improving organisations sustainability/ carbon footprint to an extreme or great extent	
Australasia	44%
Global average	43%
Asia	42%
North America	39%
Europe	38%
South America	38%

Sector league tables

Expecting a budget increase in next 12 months	
Charity/non-profit	64%
Construction/engineering	63%
Leisure	60%
Power & utilities	59%
Business/professional services	57%
Education	56%
Technology	55%
Healthcare	54%
Manufacturing/automotive	54%
Financial services	53%
Transport/logistics	53%
Global average	52%
Pharmaceuticals	50%
Retail	45%
Telecommunications	42%
Government	38%
Broadcast/media	25%

Expecting an increase in IT/tech headcount	
Power & utilities	66%
Technology	66%
Healthcare	63%
Education	61%
Leisure	60%
Business/professional services	59%
Retail	59%
Global average	58%
Construction/engineering	57%
Charity/non-profit	55%
Financial services	53%
Government	53%
Manufacturing/automotive	53%
Transport/logistics	52%
Broadcast/media	50%
Telecommunications	44%
Pharmaceuticals	42%

Skills shortage stops keeping up with pace of change	
Government	86%
Leisure	83%
Charity/non-profit	77%
Education	77%
Manufacturing/automotive	77%
Power & utilities	75%
Retail	75%
Transport/logistics	74%
Broadcast/media	73%
Telecommunications	73%
Global average	70%
Financial services	69%
Construction/engineering	67%
Healthcare	67%
Technology	60%
Business/professional services	59%
Pharmaceuticals	58%

Proportion of tech team that's female	
Government	29%
Healthcare	28%
Pharmaceuticals	28%
Business/professional services	26%
Education	25%
Power & utilities	25%
Financial services	24%
Technology	24%
Charity/non-profit	23%
Global average	23%
Retail	22%
Broadcast/media	21%
Leisure	21%
Telecommunications	20%
Construction/engineering	19%
Transport/logistics	18%
Manufacturing/automotive	17%

Diversity and inclusion approach is improving quality of hires	
Construction/engineering	71%
Pharmaceuticals	70%
Business/professional services	69%
Government	69%
Technology	69%
Power & utilities	68%
Charity/non-profit	66%
Global average	64%
Financial services	63%
Transport/logistics	62%
Education	61%
Retail	59%
Healthcare	58%
Broadcast/media	57%
Leisure	57%
Manufacturing/automotive	50%
Telecommunications	50%

Overall revenue of your organisation spent on technology	
Technology	27%
Telecommunications	26%
Government	22%
Financial services	19%
Global average	15%
Healthcare	13%
Education	12%
Business/professional services	11%
Pharmaceuticals	11%
Broadcast/media	10%
Power & utilities	9%
Charity/non-profit	8%
Leisure	8%
Manufacturing/automotive	8%
Transport/logistics	7%
Construction/engineering	6%
Retail	4%

Organisation has had a major cyber attack in the last 2 years	
Leisure	44%
Education	42%
Broadcast/media	41%
Government	40%
Telecommunications	39%
Power & utilities	38%
Construction/engineering	33%
Retail	32%
Transport/logistics	32%
Manufacturing/automotive	29%
Global average	28%
Pharmaceuticals	27%
Financial services	26%
Business/professional services	23%
Technology	19%
Healthcare	18%
Charity/non-profit	17%

Tech crucial to improving sustainability/carbon footprint	
Telecommunications	61%
Transport/logistics	56%
Technology	52%
Business/professional services	48%
Charity/non-profit	47%
Financial services	47%
Healthcare	44%
Global average	43%
Power & utilities	43%
Pharmaceuticals	41%
Broadcast/media	38%
Leisure	36%
Manufacturing/automotive	36%
Education	35%
Retail	33%
Construction/engineering	32%
Government	32%

Where talent meets technology

Nash Squared is the leading global provider of talent and technology solutions.

We're equipped with a unique network, that realises the potential where people and technology meet.

For over three decades we've been helping clients solve broad and complex problems, building and scaling their technology and digital capability:

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