

# CLOUD INDUSTRY FORUM

## **Breaking new ground with cloud**

How cloud is poised to take businesses to a new level of digital transformation

# Executive summary

We've come a long way since the birth of cloud computing. In the 1990s, the internet was often portrayed as cloud on diagrams, and some used this to describe distributed computing. However, it was an internal Compaq document that first coined the term "cloud computing" back in 1996.

Since then, the technology – and pay-as-you-go model – has become a fixture in many organisations, with the core advantages now very clear to the overwhelming majority of businesses using it. It's also clear from our research that we now live in a hybrid cloud/multicloud environment.

Identifying ways to further fine-tune and optimise current cloud capabilities will always be a key objective for IT and business leaders. However, given how far we have come in terms of cloud adoption and maturity, now is the ideal time to start thinking even bigger.

The rise of artificial intelligence, machine learning and generative AI – with tools such as ChatGPT occupying a prominent place in technology discourse – seems inexorable, and cloud has a significant role to play in helping drive this technology forward. At the same time, organisations are engaging in ESG and sustainability pursuits with more rigour than ever before. Again, cloud can be instrumental in helping businesses achieve these goals.

This year's edition of the Cloud Industry Forum research report will delve deeper into cloud's enduring promise, and its continued presence as a vital cog in the technology ecosystem. To do this, we will also need to examine once again where organisations are on their cloud journeys, and frame these within current global economic challenges affecting how IT and business leaders are approaching technology projects.

We believe 2023 is the start of an exciting time of evolution for the cloud, and a new wave of technologies coming to prominence. Generative AI, mixed and virtual reality experiences, IoT, edge computing, blockchain, NFTs, and a more decentralised, distributed web will all combine to transform business and our user experience. Cloud computing is the enabler for all of these, showing its ability to evolve and move with the times, while at the same time staying true to what made it so successful in the first place.

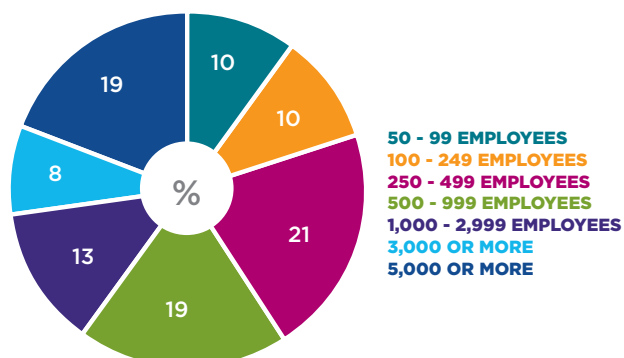
It's time to explore how to break new ground with cloud.

**David Terrar – CEO – Cloud Industry Forum**

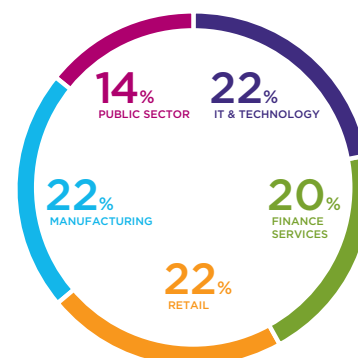
## Methodology and sampling

In early 2023, Vanson Bourne conducted a major research project on behalf of the Cloud Industry Forum, designed to assess where companies are in terms of cloud maturity, any further challenges they are having with the technology, and how cloud can support wider business initiatives such as AI adoption or ESG. The survey polled 250 senior IT and business decision-makers in large enterprises, small to medium-sized business (SMEs) and public sector organisations. All of those represented have UK operations.

*How many employees does your organisation have globally?*



*Within which sector does your organisation operate?*



# Cloud computing

As the sophistication and scope of cloud computing has grown, its definition has evolved to cover many different things. It might be used to describe hosted IT services or outsourcing of any type, or it can be defined as something more specific, such as data storage or application management. However, for the purposes of this report, we have stuck with the tried-and-trusted definition of cloud put forward by the National Institute of Standards and Technology (NIST):

*Cloud computing is a term that relates to the IT infrastructure and environment required to develop/host/run IT services and applications on demand, with consumption-based pricing, as a resilient service. Communicating over the internet and requiring little or no client end components, it provides resources and services to store data and run applications, from many devices, anytime, anywhere, as-a-service. The services can, in turn, be scaled up and down as needed to meet a customer's variable operational needs, ensuring maximum cost efficiency.*

## Summary of key findings

### Cloud remains crucial in driving overall business effectiveness:

- Cloud continues to offer a variety of advantages, with respondents mentioning greater agility (48%), scalability (40%), flexibility in IT spend (32%), and cost savings (31%)
- 55% currently operate a hybrid approach to cloud, while 42% are now embracing a cloud-first strategy
- 96% say their cloud strategy has delivered against expectations, although only 43% say it has delivered totally against expectations so far
- 66% say cloud helps make their organisation more secure in some way, while over 90% believe it has helped improve in terms of digital transformation and general business effectiveness, and 79% think it has helped enhance revenue generation

### Cloud is now helping organisations deliver more ambitious IT projects:

- 62% have implemented key cloud infrastructure and are migrating applications, while 14% have completed both infrastructure implementation and application migration, and are now moving forward with their AI strategy
- Machine learning is considered either very important or critical to 90% of respondents, while 86% say the same about AI
- 82% consider ESG and sustainability credentials as important when choosing a cloud provider, and 85% would reject a provider if their credentials weren't in good order
- Despite this, other factors such as price, reliability and trustworthiness still rank ahead of AI projects and ESG/sustainability in terms of priority

### Challenges to maximising cloud's potential remain:

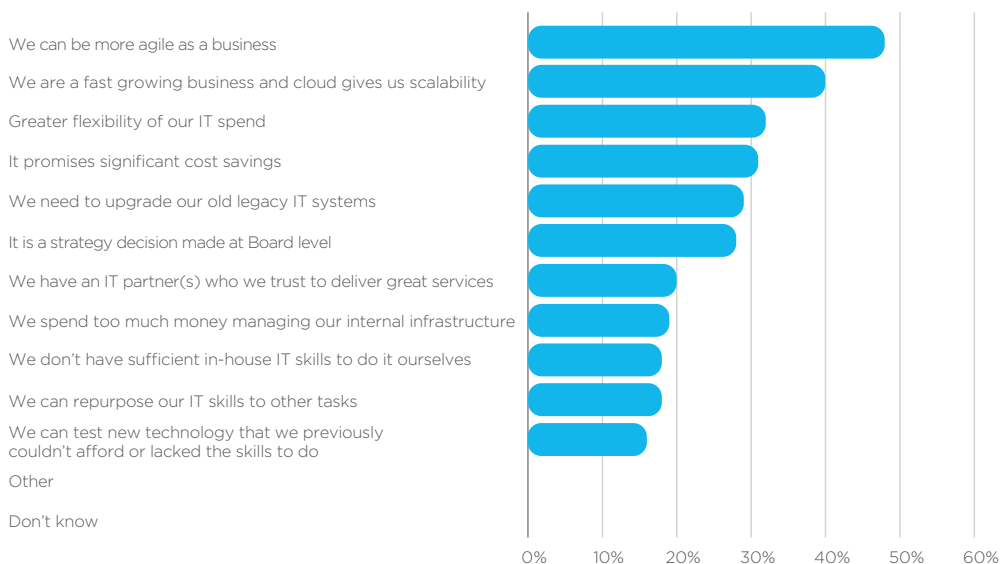
- Current economic challenges are affecting IT spend in 67% of businesses, although 31% have seen no negative impact
- 41% cite budget constraints as holding back further cloud adoption, while 38% mention difficulties migrating, 34% lack of skills or resources, and 34% poor integration with legacy technology
- Complexity of migration is the leading cause of cloud projects falling short of expectations, cited by 65%

# 1 Where we are with cloud

## Cloud adoption

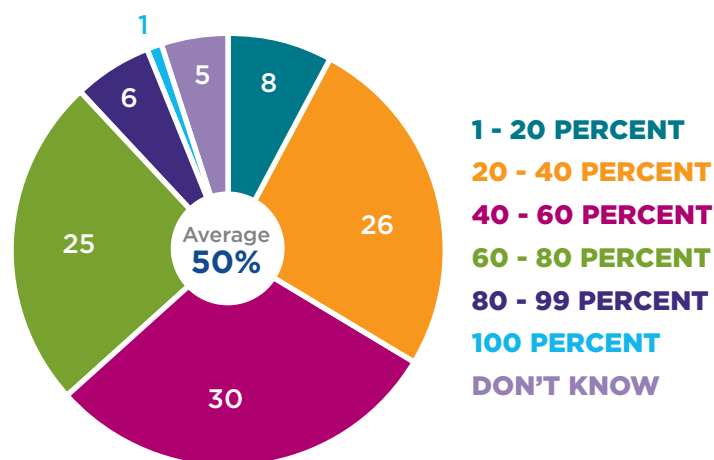
Before we explore what's next for cloud, it's a good idea to set the scene and provide an update on how cloud adoption is looking in 2023. The simplest statistic of all speaks volumes: 95% of respondents have cloud-based services in place at their organisation today. As far as this metric is concerned, we're arguably at a saturation point, but the depth and breadth of cloud deployment within businesses continues to move fast.

### *Why is your organisation utilising cloud-based services?*



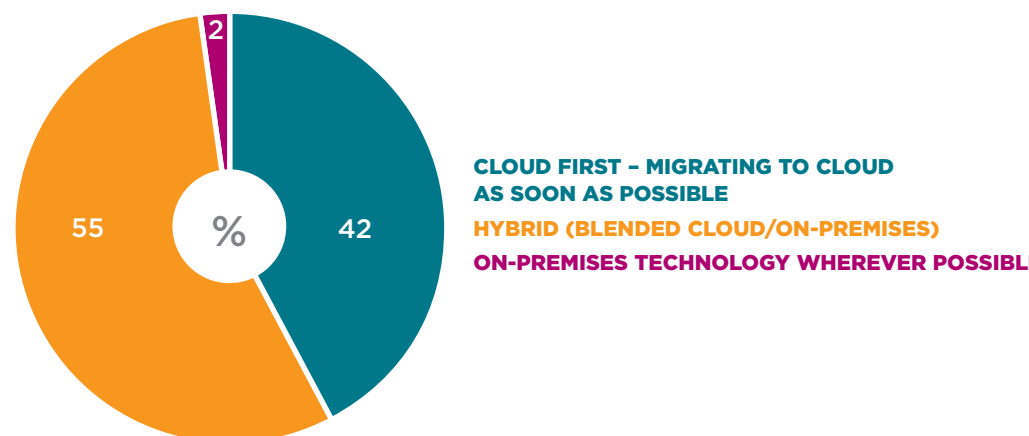
Respondents' motivations for using cloud vary widely, but the agility it offers leads the way, cited by 48%, followed by scalability on 40%. Just under a third (32%) mention increased flexibility in IT spend, while 31% appreciate the cost savings that cloud brings. These are all generally what we would expect when looking at the high-level benefits of cloud, and, with the exception of cost savings, have not significantly changed since the outset. They underline how the technology is still successfully delivering on what it promised when it first came to the fore in the world of IT.

*What proportion of your organisation's IT infrastructure is hosted in the cloud?*



Cloud is clearly a popular choice in organisations, but the above chart underlines how hybrid approaches have become very much a favourite for leaders. The average proportion of IT infrastructure located in the cloud is 50%, which is a slight increase on last year's figure of 48%, but the same as the 2020 figure. The increase, although small, could be due in part to the easing of some late pandemic pressures. The fact the average has stayed around the same level for the last three years also suggests there remain some hurdles to further cloud adoption.

*What is your organisation's current cloud technology approach?*

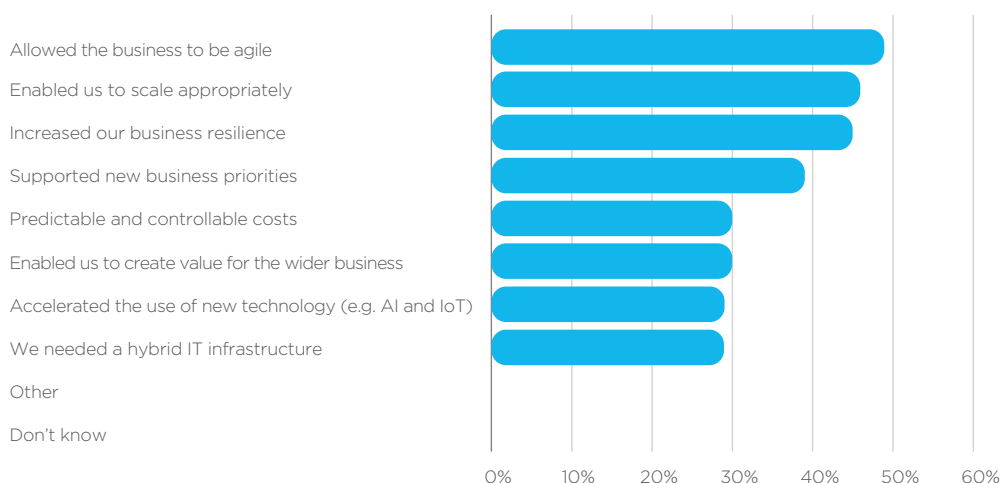


The above assertions are borne out by this chart which confirms a preference for hybrid approaches, with 55% of respondents choosing this arrangement and 42% embracing a cloud-first strategy.

However, an interesting point to make here is that the figure for hybrid has dropped from 60% last year, while the cloud-first number has increased from 36%. This suggests that confidence in cloud as a full replacement for on-premise is continuing to grow.

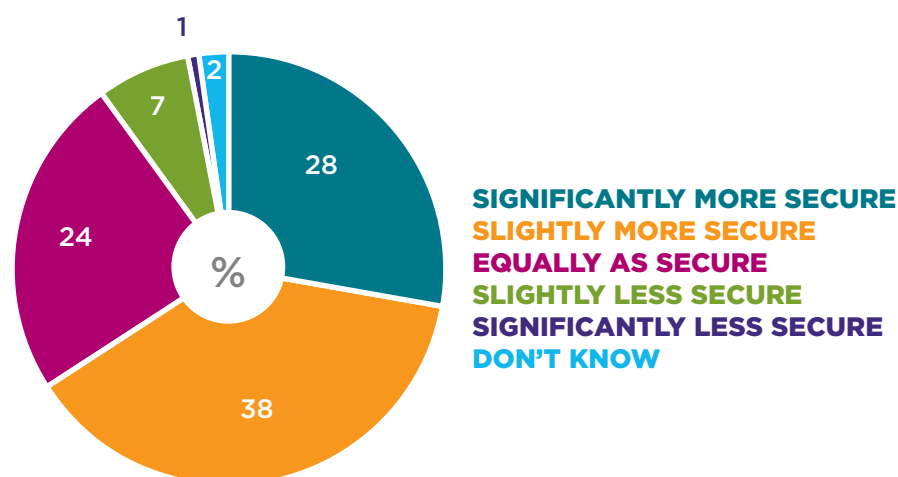
## Cloud successes

*How has the use of cloud helped your organisation?*



When asked the basic question about how cloud has helped their business, the benefits cited by respondents broadly reflect their primary motivations for adopting cloud in the first place. Agility leads the way here (49%), closely followed by scalability (46%) and increased business resilience (45%). Accelerating new projects such as AI is further behind at this stage (29%), but it is prominent in the minds of decision-makers, and there is compelling data later on in this report that underlines cloud's growing presence in this area.

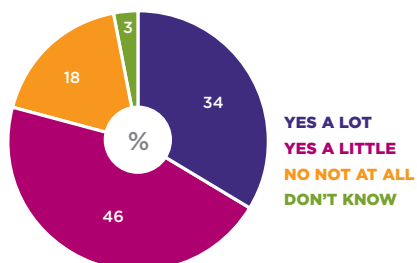
*Do you feel your organisation is/ would be more or less secure if it is/ were using cloud services?*



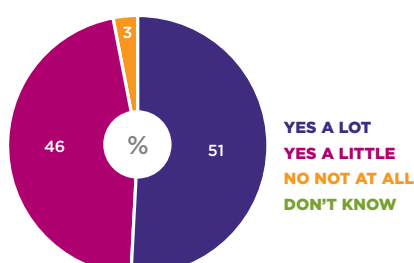
Cloud also continues to be held in high regard for its security capabilities. A total of 66% say cloud makes their organisation more secure in some form, while only 8% believe it makes the business less secure. However, almost a quarter (24%) think cloud has neither a positive nor negative bearing on security, which implies there is still more to be done to promote cloud's security qualities to would-be adopters.

*Has the implementation of cloud improved the following aspects of business performance at your organisation?*

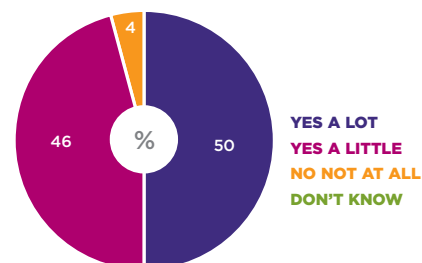
**Revenue generation**



**Digital transformation**

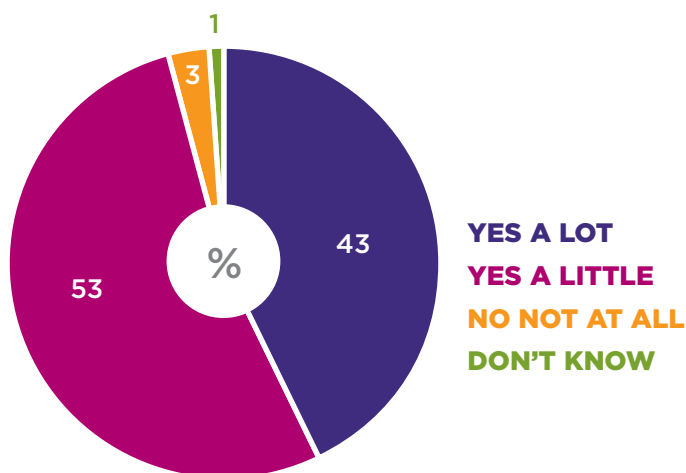


**Business effectiveness**



In short, cloud is extremely effective at helping businesses perform better. Well over 90% of respondents say that it has helped them improve in some way in terms of both digital transformation and general business effectiveness, while 79% say it has contributed to enhanced revenue generation. The latter figure is higher in businesses with under 1,000 employees, which suggests the financial benefits of cloud take a little longer to filter through larger companies.

*Has your organisation's cloud strategy delivered against its expectations?*



Overall, cloud is doing a good job in living up to its billing, with 96% saying it has delivered against expectations. That said, over half (53%) say it has so far only partially met its promise, which shows there is plenty more room for it to go further in terms of its capabilities. As more business leaders start to use cloud for increasingly aspirational projects, we expect this figure to climb further.

**SUMMARY**

It's very clear that cloud is still helping organisations achieve great things. Adoption remains high, leaders are fully aware what the benefits are to their business, and most seem to have a settled preference for hybrid arrangements – although cloud-first is on the rise too.

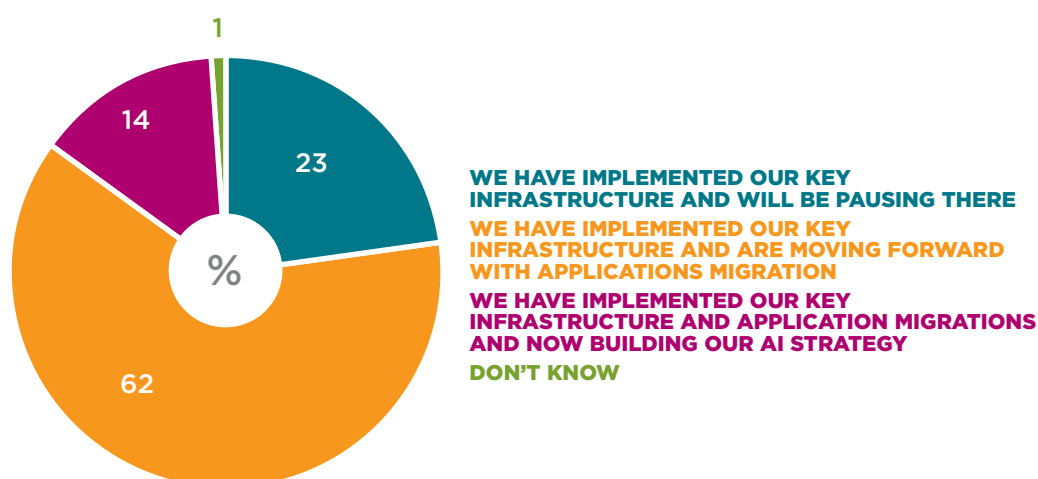
There are also clear areas where cloud can up its game even further. Companies' expectations of cloud are high and are generally being met, but providers now need to ensure they are helping their customers reach new heights with the technology.

## 2 Where cloud is breaking new ground

Now that we're clear on what cloud is delivering for businesses right now, the next step is to examine what it could help organisations achieve in the future. While there are lots of areas where cloud could make its mark in the coming months and years, we have identified two where its potential is particularly exciting: AI/machine learning, and ESG and sustainability.

### AI and ML growth

*What most closely describes the stage your organisation is at on its cloud journey?*

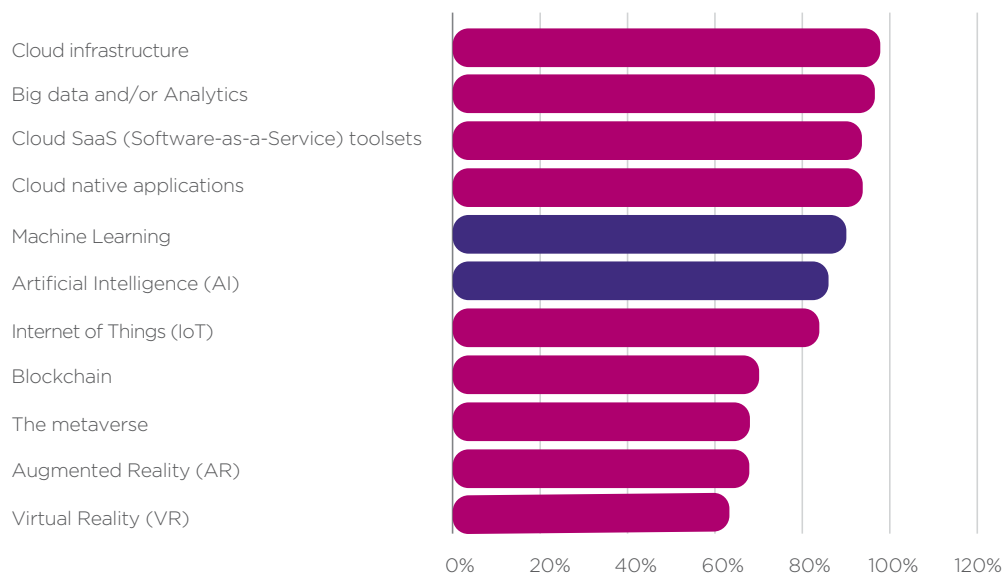


On the whole, few businesses are content to rest on their laurels as far as their cloud journey is concerned, which is an encouraging sign despite an uncertain economic climate. A majority (62%) are still very much in a stage of growing cloud maturity, having made key infrastructure changes and now in the process of migrating applications.

However, a significant minority (14%) have now completed both of those steps and are using cloud to help build their AI strategy. This could well be the genesis of something far bigger, where cloud evolves further to become an important enabler for the most advanced IT projects.



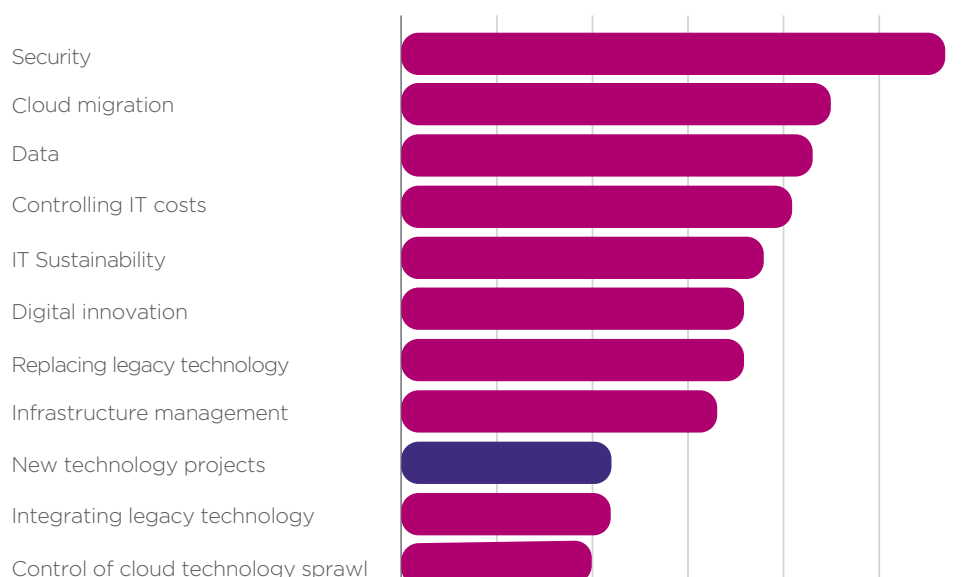
*How important will the following technologies be to your organisation in the next five years?*



As the above graph shows, AI and ML both rank highly in the list of technologies considered most important to the future of the business, with AI named as either important or critical by 86% of respondents, and ML cited by 90%. Most of the technologies ahead of them in this list are the more mature, established offerings such as cloud infrastructure or data analytics, which are generally more familiar to decision-makers.

Both AI and ML have experienced a steady increase in popularity in the last few years, with the same figure for AI being just 73% in 2018, and the number for ML being 78%. This points to a gradual yet consistent change in mindset, where leaders are turning their attention towards new projects.

*Which of the below are your organisation's most important IT projects?*



The previous chart suggests that we perhaps shouldn't get too far ahead of ourselves in terms of our expectations just yet. In the immediate term, new technology projects such as AI rank lower down the list in terms of priority, mentioned as a priority by 22% of respondents. This puts it some distance behind other considerations, such as cloud migration (45%), data projects (44%) and the age-old issue of security (57%).

There are lots of potential reasons for the disparity between short-term priorities and long-term thinking. Businesses are still under a range of economic pressures which may be having a knock-on effect both on time and finances. Our hope is that once the current uncertainty has abated, decision-makers will embrace AI and ML – and cloud's role as part of these – more readily.

In the meantime, cloud providers need to ensure they support their customers closely throughout this period, meaning they can embrace more ambitious projects sooner rather than later.

## ESG and sustainability

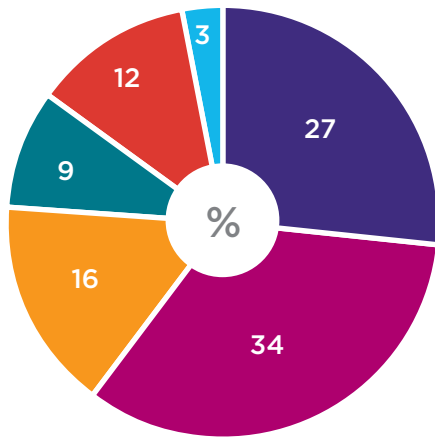
*How would you describe the sustainability of your organisation's IT emissions?*



According to the above chart, most organisations (63%) consider themselves in the “middle ground” in terms of their sustainability credentials, while only 16% think they are ahead of the competition. This presents an opportunity for IT suppliers, including cloud vendors: focus on services that have sustainability at heart, and environmentally minded companies will come calling.

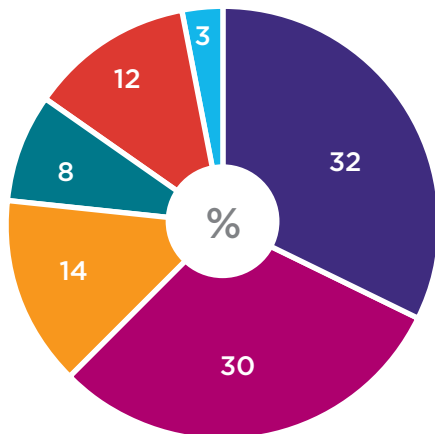
How would you describe the sustainability of your organisation's IT emissions?

**Cloud**



**YES - FOR MORE THAN 12 MONTHS**  
**YES - WE HAVE ACTIONED THIS WITHIN THE LAST 12 MONTHS**  
**NO - BUT WE PLAN TO WITHIN THE NEXT 12 MONTHS**  
**NO - BUT WE PLAN TO AFTER THE NEXT 12 MONTHS**  
**NO - AND WE DON'T HAVE PLANS TO**  
**DON'T KNOW**

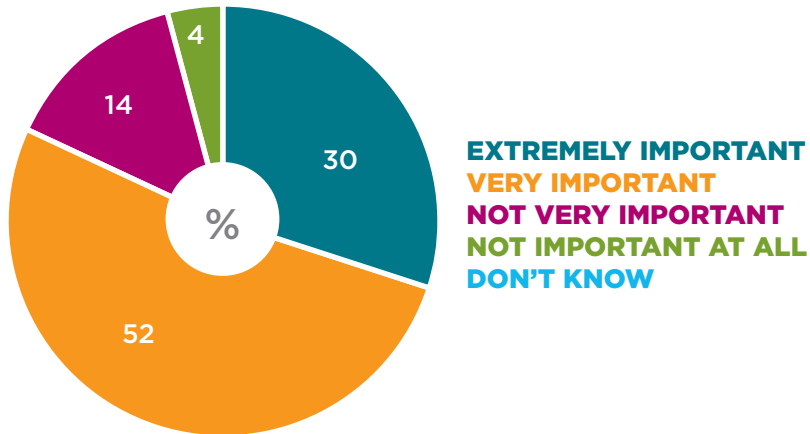
**On-premises**



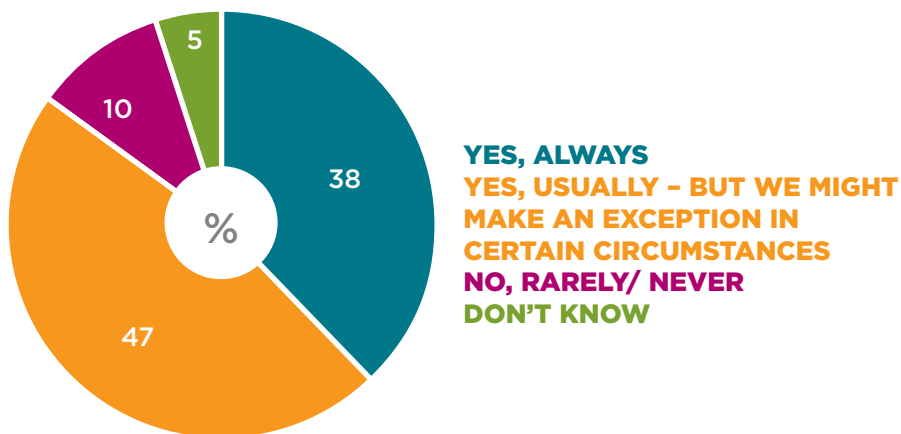
**YES - FOR MORE THAN 12 MONTHS**  
**YES - WE HAVE ACTIONED THIS WITHIN THE LAST 12 MONTHS**  
**NO - BUT WE PLAN TO WITHIN THE NEXT 12 MONTHS**  
**NO - BUT WE PLAN TO AFTER THE NEXT 12 MONTHS**  
**NO - AND WE DON'T HAVE PLANS TO**  
**DON'T KNOW**

The above demonstrates that organisations take carbon emissions seriously, both for cloud and on-premise arrangements. For cloud infrastructure, 61% are currently measuring their carbon footprint, while for on-premise this is 62%. There's an evident shift towards gaining greater visibility of environmental impact, which all would-be suppliers should be aware of.

*How important is environmental, social and governance (ESG) and sustainability to your organisation when deciding on which cloud vendors to use?*



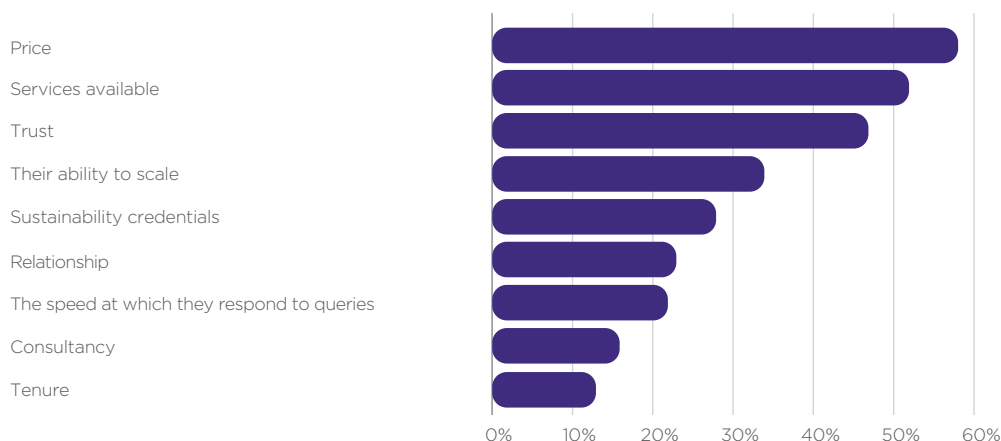
*How important is environmental, social and governance (ESG) and sustainability to your organisation when deciding on which cloud vendors to use?*



Cloud vendors, take note. A large majority of respondents (82%) hold ESG and sustainability in high regard when choosing a cloud provider, with 30% citing it as extremely important. In a similar vein, 85% would reject a prospective vendor if their ESG and sustainability credentials weren't in good order, with 38% saying they would always do this regardless of any mitigating circumstances.

We like to see this as less of a warning to cloud providers, and more of an opportunity to vastly increase their appeal if they fully commit to ESG and sustainability.

*Which of following priorities are most important for your organisation when thinking about working with a cloud managed service supplier?*



As with the statistics on AI, context is key, so it is important that we examine how ESG and sustainability rank among other factors when choosing a cloud supplier. The above graph shows it occupies something of a middle ground, mentioned by 28% as one of the top priorities. This ranks comfortably behind price (58%), availability of services (52%), trust (47%) and ability to scale (34%).

In many respects, this isn't much of a surprise. Cost considerations almost always come first for business decision-makers, as do things like reliability and trustworthiness of a cloud provider. However, this does not diminish the importance of ESG and sustainability: as the figures earlier in this section have shown, these credentials can and do figure prominently in the process of choosing technology suppliers. In comparison to the same question in our research a year ago though, sustainability credentials has moved up the ranking, so it is clear that this is gaining traction.

## SUMMARY

Businesses always have lots of plates to juggle when it comes to IT, so prioritisation is key. For this reason it is completely understandable that a decision-maker might still consider projects such as cloud migration ahead of AI, or have something like price front of mind ahead of ESG when selecting a cloud provider. Times are tough for many organisations, so they need to do what is best in the short term.

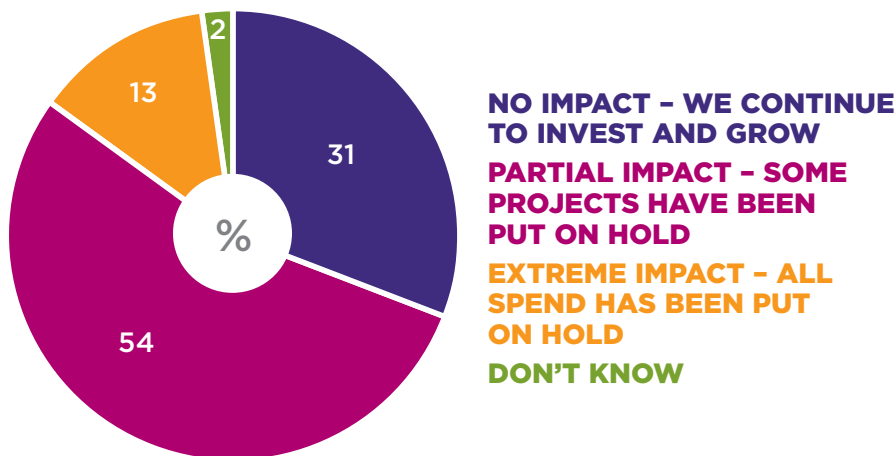
It is in the longer term where cloud has the potential to go much further. Leaders are interested in and committed to technologies such as AI/ML, as well as ensuring their practices are environmentally sound. Once current economic pressures have eased, expect enthusiasm for these initiatives to grow even further. Cloud providers that can deliver on both fronts are the ones that will prosper.

### 3 Challenges and future

As previously mentioned, organisations are grappling with a host of economic challenges, many of which will take a long time to fully recede. At the same time, for all its advantages, there remain areas where cloud itself still has room for improvement.

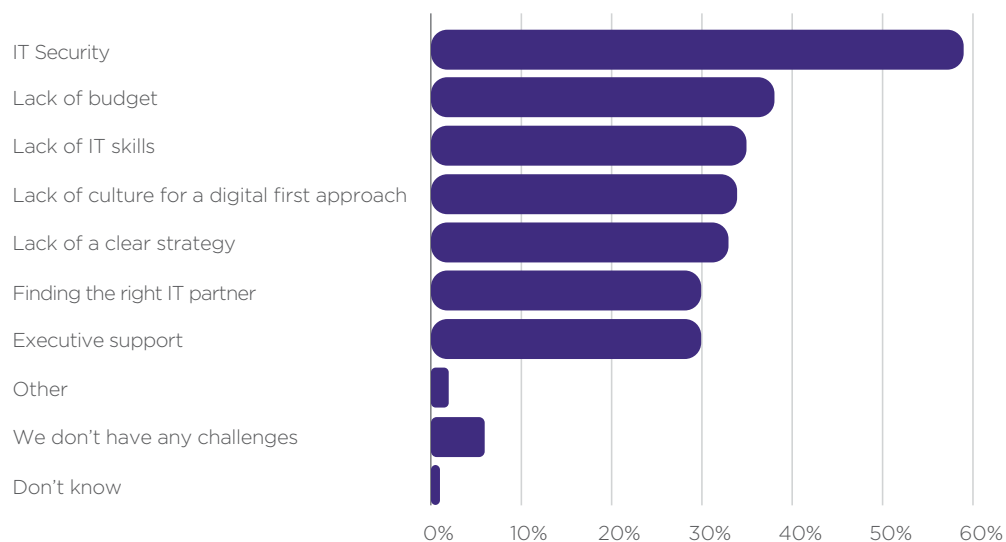
#### A tough economic picture

*How do you think the current global economic climate will impact your organisation's IT programme?*



For 67% of businesses, the current global economic climate is having at least some impact on their IT programme, leading to projects being put on hold. For 13%, the effects have been severe, leading to a complete halt in IT spend. Luckily, there is some cause for optimism too, as 31% have seen no impact and are continuing to invest in new initiatives. That said, cloud providers should be mindful of the tough times customers are experiencing, and should be prepared to adapt their offerings as a result.

*What are your department's top three challenges over the coming 12 months?*

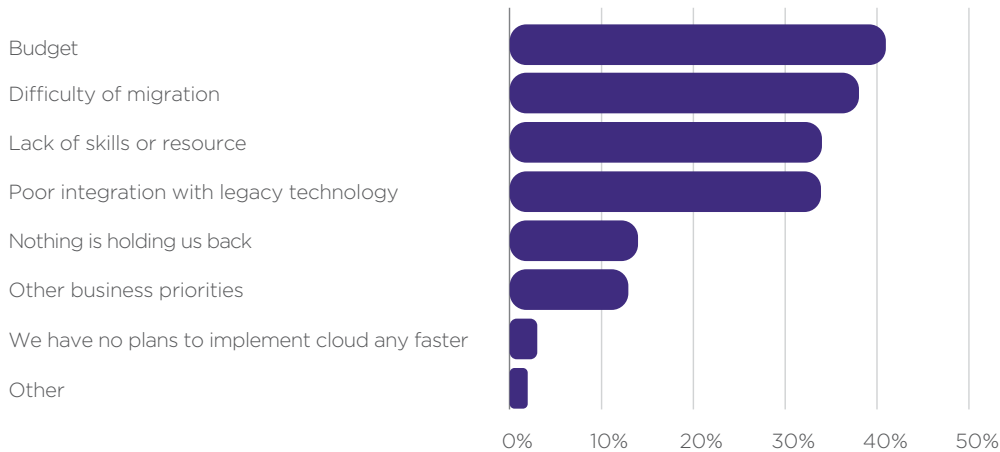


Security is by far the most commonly cited major challenge for IT departments, mentioned by 59% of respondents. This shows little change on the 2021 figure of 58%, underlining its status as a perennial challenge regardless of economic circumstances. Given the 38% rise in global cyberattacks in 2022 compared to 2021, it is sensible for this to be front of mind for decision-makers.

Other difficulties include lack of budget (38%), lack of IT skills (35%), lack of culture for a digital-first approach (34%) and lack of a clear strategy (33%). All of these are prone to being affected by changing economic conditions, so cloud providers should think closely about where they can bring the expertise needed to fill these gaps. This is especially pertinent given 30% say finding the right IT partner is a big challenge.

## Cloud challenges

*What is holding your organisation back when it comes to faster cloud implementation?*



<sup>1</sup> <https://www.securitymagazine.com/articles/98810-global-cyberattacks-increased-38-in-2022>

When focusing on cloud in particular, budget constraints are the main factor holding organisations back from faster implementation, cited by 41% of respondents. Other hurdles include difficulties migrating (38%), lack of skills or resources (34%) and poor integration with legacy technology (34%).

The migration figure in particular has risen from 26% in 2021, suggesting things have regressed somewhat in this area. Cloud providers should be mindful of these challenges, especially against the backdrop of current economic struggles.



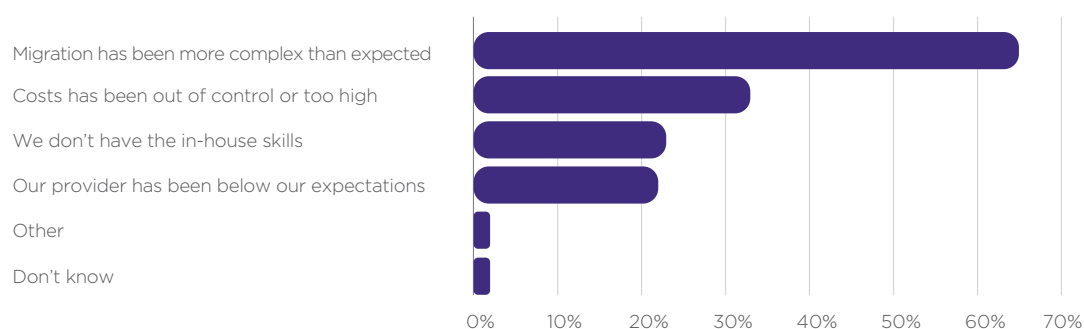
### Why, if at all, have cloud migration projects failed in your organisation?



The good news coming from the above graph is that 30% of respondents say cloud migration projects haven't failed in their organisation, which is a promising indicator of growing maturity. However, there are clear areas where further progress is needed.

Incompatible legacy technology is the leading cause of failure for cloud projects (28%), followed by lack of skills or resources (24%) and budgetary issues (22%). All of these point to a need for trusted cloud partners that can provide the necessary experience and expertise, while helping companies keep their IT costs down.

### Where has cloud strategy fallen short of expectations within your organisation?



When looking at why cloud falls short of general expectations, it largely boils down to complexity of migration (mentioned by 65% of respondents), well ahead of excessive costs on 33%. This is a reminder of the need for cloud providers to educate their customers in detail on the myriad challenges of migration, and to be honest about the scale of the task. This is especially important given the current global economic situation.

## SUMMARY

Economic certainty has been a rare thing over the last few years, and businesses are feeling the effects. The good news is there remains a strong appetite to engage in new IT projects, so cloud providers should be doing everything in their power to facilitate this.

It's also vital to acknowledge that cloud is not yet perfect. Challenges with migration and implementation remain and are amplified in periods of economic difficulty, so it's up to cloud providers to ensure they continue refining their offerings and adapting to suit the fast-changing needs of their customers.

All this needs to be done while keeping pricing competitive and reasonable, as out-of-control costs are an issue for many. This is a likely driver of FinOps as a key discipline, and underscores the need for private and hybrid cloud options to help companies manage expenditure.

# Conclusion

Just as the major impacts of the pandemic subside, a host of new economic challenges come along to give business and IT leaders something new to think about. The good news is cloud remains pivotal to the way organisations manage their major technology projects, with growing maturity meaning companies are now starting to use it to realise the full benefits of AI and machine learning, and get ahead in terms of ESG and sustainability.

The coming year will be an interesting time to observe how the global economic situation pans out, and how this affects investment in IT. If the outlook improves rapidly – and we manage to stave off a recession – we may well see organisations accelerate their AI and ML projects and invest even more heavily in sustainability initiatives.

In the meantime, businesses must focus on the here and now. This means continuing to carry out both the essential and aspirational IT projects, while keeping costs to a minimum and ensuring things are done as efficiently as possible. At the Cloud Industry Forum, we encourage providers to understand the state of flux that many organisations find themselves in, and ensure their offerings are adapted to suit these evolving circumstances.

There is a golden opportunity to guide customers through this period and make new waves with cloud. The providers that achieve this are the ones who will reap the richest rewards in the next year.



**Alex Hilton**  
Director and former CEO  
Cloud Industry Forum

# CLOUD INDUSTRY FORUM

## About

**The Cloud Industry Forum (CIF)** is a not-for-profit membership driven trade body established in 2009 as a direct response to the evolving supply models for the delivery of cloud based software and IT services.

The Cloud Industry Forum advocates the use of online cloud services and as the market continues to mature, CIF continues to represent the digital community by bringing both cloud and business leaders together to educate and shape the world of Digital Transformation.



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