THE COMPUTING 2018 CLOUD SKILLS REPORT

QA
transforming performance
through learning

Introduction

There's no going back with cloud – once identifiable as an IT 'trend', then a 'movement', the cloud is now simply normality.

Most UK organisations are now using some form of cloud technology or platform in their daily activities.

But if the technology is now in place – or at least getting there – are the skills around to match?
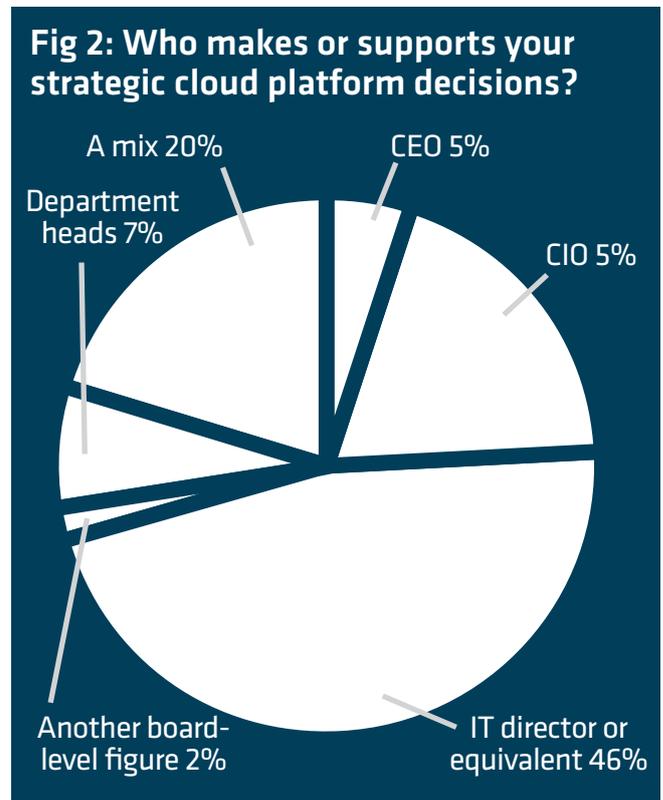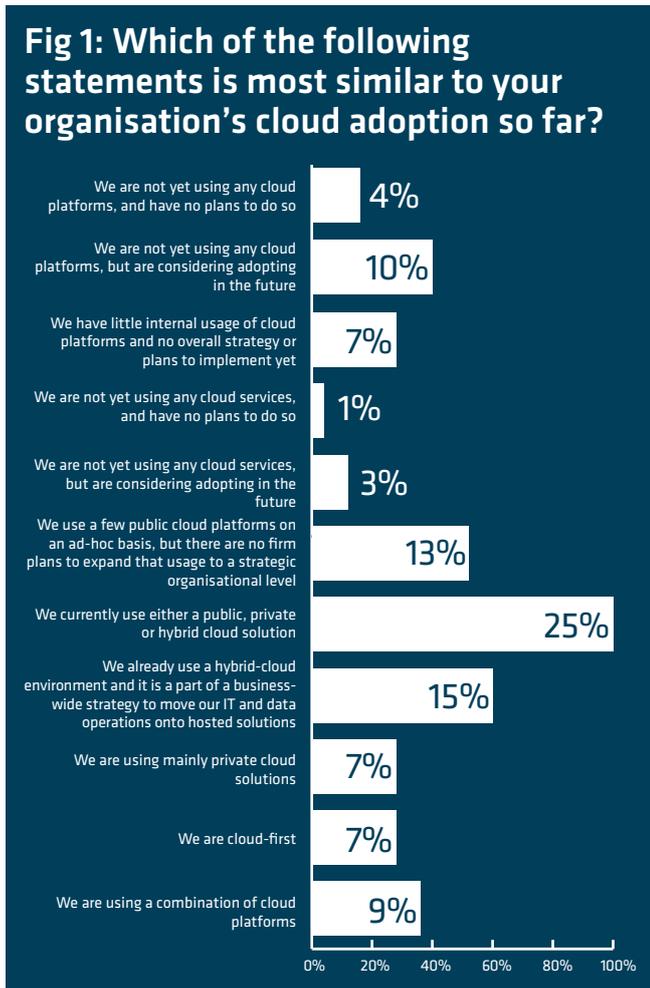
Cloud skills in 2018

To begin, we asked just over 240 UK IT decision-makers, with experience of procuring and managing cloud services, to tell us a little more about their organisation's cloud adoption in 2018. We defined 'cloud platforms' as platforms such as Amazon Web Services (AWS), Microsoft Azure and Google Cloud Platform (GCP). We defined cloud services as Salesforce, Office365, ZenDesk and so on.

Fig 1: Which of the following statements is most similar to your organisation's cloud adoption so far?

Statement	%
We are not yet using any cloud platforms, and have no plans to do so	4%
We are not yet using any cloud platforms, but are considering adopting in the future	10%
We have little internal usage of cloud platforms and no overall strategy or plans to implement yet	7%
We are not yet using any cloud services, and have no plans to do so	1%
We are not yet using any cloud services, but are considering adopting in the future	3%
We use a few public cloud platforms on an ad-hoc basis, but there are no firm plans to expand that usage to a strategic organisational level	13%
We currently use either a public, private or hybrid cloud solution	25%
We already use a hybrid-cloud environment and it is a part of a business-wide strategy to move our IT and data operations onto hosted solutions	15%
We are using mainly private cloud solutions	7%
We are cloud-first	7%
We are using a combination of cloud platforms	9%

The results show quite a spread indeed, but what immediately stands out is the revelation that 14 per cent of organisations are, in fact, still not using the cloud at all. Although 10 per cent of that total are looking at adopting in the future, this is still a relatively high number of organisations opting out in 2018.

Spread of respondents confirming use of cloud runs wide across the board, but the standout segment is in those organisations using public, private or hybrid cloud solutions. It's that quartile of the full vote that we'll bear in mind as we explore topics around skills.

Next, it would interesting to know who in an enterprise actually makes – or supports – decisions on cloud platforms. So we asked exactly that:

Fig 2: Who makes or supports your strategic cloud platform decisions?

- A mix 20%
- CEO 5%
- Department heads 7%
- CIO 5%
- Another board-level figure 2%
- IT director or equivalent 46%

Perhaps the results aren't incredibly surprising, but it's a neat confirmation of the modern truth – the CIO isn't buying in this sort of new technology. The IT director mostly is.

So we know how many people are using cloud and who's in charge of it, but what sort of clouds are people using?

The results are actually, potentially, quite surprising. A massive 40 per cent of our respondents are now

using Microsoft Azure. That's compared with only 14 per cent on AWS. Next is VMWare at 11 per cent, with the likes of Citrix, Cisco, Red Hat and Oracle Enterprise Manager picking up the odd remaining two-three per cents of the vote.

It's perhaps worth comparing these results briefly with our report in 2017, in which only 25 per cent were on Azure, though AWS still claimed the exact same 14 per cent. It was largely VMWare that lost out, its 22 per cent of 2017 halved in 2018.

Why has Microsoft Azure accelerated in popularity over the last year? One theory is that Microsoft has, at this point, crafted something that's not only familiar to users on a UX level across its real estate (and let's face it, who's *not* using Office 365?). Beyond the visual appeal, Azure's Platform-as-a-Service (PaaS) offerings still tend to outweigh AWS, as there's so much infrastructure at the backend to support developers. The learning curve is also considered to be a little gentler.

If the above suggestion holds, much of it ties into skills, in fact. Which is fortunate, this being the *Computing 2018 Cloud Skills Report.*
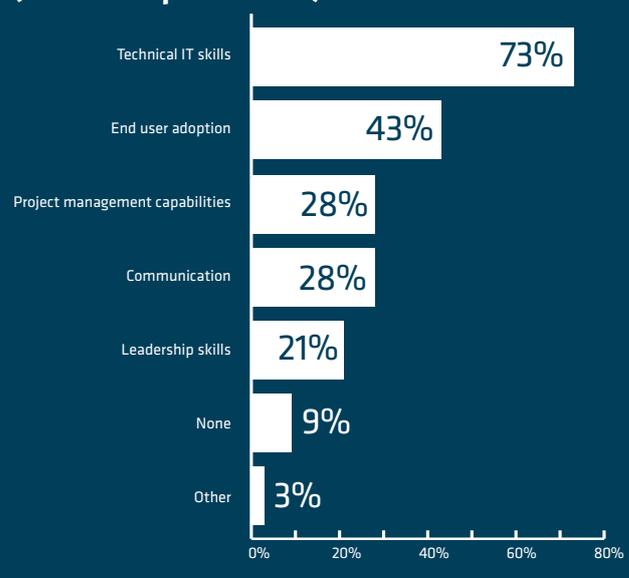
Skilling me softly

When it comes to assessing skills gaps, lo and behold, technical IT skills accounted for 73 per cent of the score here. Not to mention 43 per cent noticing a lack of end user adoption (Figure 3).

With project management capabilities and communication scoring nearly 30 per cent a piece, a picture emerges: organisations are lacking a high degree of IT skills, end users don't like what's being brought in, and many people are having trouble actually doing any meaningful work on what's been introduced.
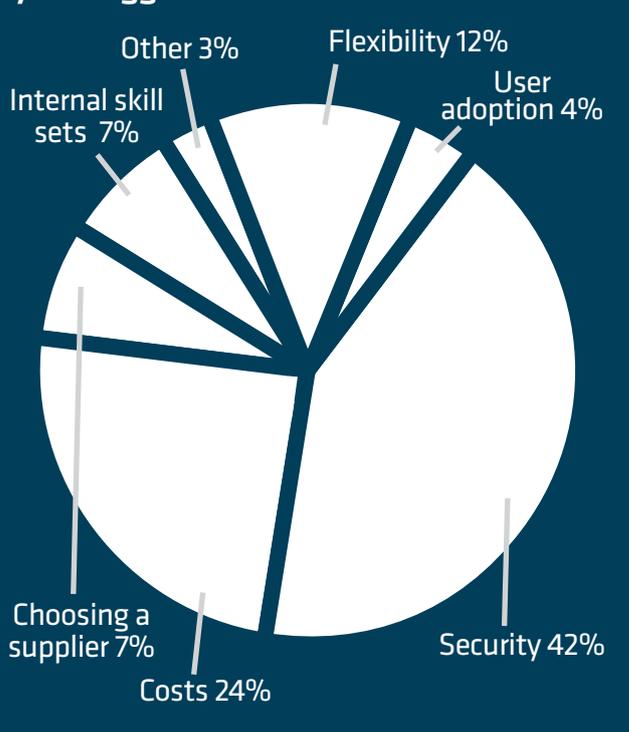
We went on to ask which of these skills gaps respondents were most concerned about, and a raft of responses ensued from the list. But unsurprisingly, technical skills ran away with the vote overall.

We also asked what particular concerns affect decisions when putting a cloud platform into an organisation (Figure 4). It's obviously most immediately interesting that while 43 per cent of respondents cited end user adoption as a skills gap, only four per cent identified this as an adoption concern. In fact, security is far and away the biggest

Fig 3: What skills gaps can you identify, either in people or the organisation, when thinking about the adoption of cloud technologies? (choose up to three)

Technical IT skills	73%
End user adoption	43%
Project management capabilities	28%
Communication	28%
Leadership skills	21%
None	9%
Other	3%

Fig 4: When making the decision to implement a cloud platform, what was your biggest concern?

Other 3%
Flexibility 12%
Internal skill sets 7%
User adoption 4%
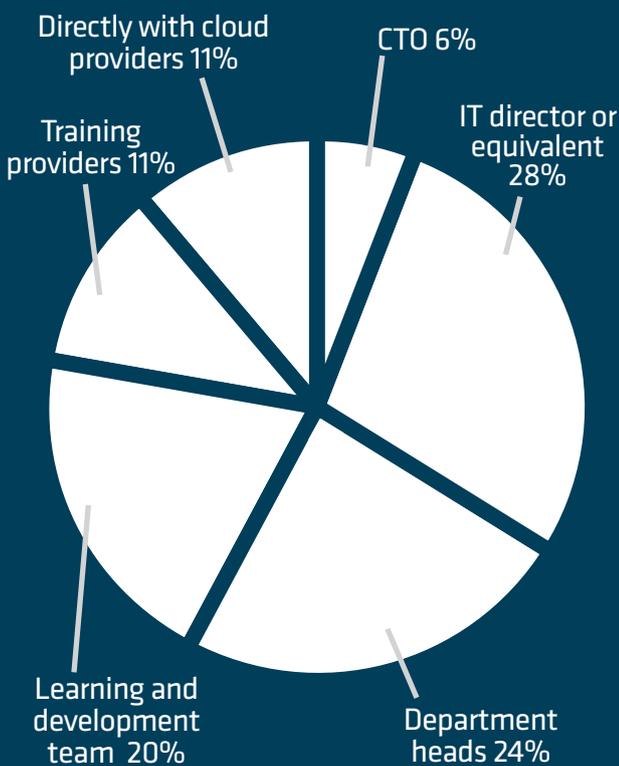Choosing a supplier 7%
Costs 24%
Security 42%

concern for an organisation when adopting cloud. We've of course seen no end of terrifying headlines over the last couple of years about the ransacking and certain destruction of infrastructure at the hands of phenomena such as WannaCry and NotPetya, but in 2018 equating adopting cloud and instant security problems is still a bit of a reach.

Still, overall, it's possible to theorise that, perhaps, Azure is growing in popularity to try and plug a few of these skill gaps, fears and simple shortcomings in the average organisation. But is that a genuine solution for the long haul?

We asked if a training plan was in place to facilitate a smooth transition to the cloud generally. This got a firm 45 per cent saying no, with only 20 per cent saying yes, and 34 per cent saying plans were in play.

Comparatively, we asked respondents if they were considering carrying out formal cloud training at their organisation for a platform that had already been installed, or a career already begun, and 40 per cent said yes. Meanwhile, 31 per cent were thinking about it, but 29 per cent aren't planning any at all.

Fig 5: Who would you work with to put a training plan in place?

Directly with cloud providers 11%

CTO 6%

Training providers 11%

IT director or equivalent 28%

Learning and development team 20%

Department heads 24%

In answer to the above question (Figure 5), there's pleasing overlap with Figure 2's decision-making question. It's obviously positive that those putting the technology in are also engaged in training end users to actually use it.

But another interesting thing to notice is the spread of training across the organisation now. Whatever's being put in, it seems that the ordained ability to train people to use it varies wildly. This of course could be down to simple use case, but with Figure 3 reminding us that skills and willingness to adopt are still relatively low, is it at all possible that the plans laid out above may owe some of their existence to historic business practice?

Back in the day, you may have attended Mandatory Excel Training by a man with unusual sideburns called Roger, who you'd never seen before, even though you'd worked at the company for two years. He was quite stern, and wouldn't let you play on the internet "because of security".

Roger was probably from the in-house 'training team' – just as comfortable educating you in correctly lifting boxes as logging into an accounting database, and he'd been taught the absolute basics of all this stuff by somebody else.

A combined 22 per cent of respondents, however, would still defer to training providers or even be trained directly by their actual cloud vendor. There's some degree of sense to that logic.

Conclusions

It seems unarguable that cloud is now (finally) here, and here to stay, with the vast majority of the UK enterprise using cloud routinely, every day and probably widely dispersed enough across the business that most end users are interacting with it in some way on a regular basis.

We've discovered that there's still clearly a defined cloud skills gap, though, and that this skills gap may be directly affecting procurement of services, as well as training.

But we've also discovered some spectacularly erroneous results, too. If end user adoption is a genuine problem, why is it still such a low concern when evaluating a cloud platform?

Also, why is training being carried out in such varied destinations across the business?

It's possible there is still a disconnect between IT decision-makers – be they the CIO, an IT director or even put together by committee in middle management – and the rest of the company in terms of disseminating training and engagement.

Historical choices such as in-house 'training teams' may be particularly to blame here. While you could argue that the software and systems required to access your cloud platform should be simple enough to be understood by a generic training team, that huge IT skills gap also exists for a reason – getting the most out of a cloud platform is never going to be a totally straightforward process.

Bespoke, formalised technological training is available, and as well as improving the daily lives of end users, may also open up new and interesting opportunities for procurement as the Azure march continues.

With specific, high-quality and technical training, the average end user may still be able to see beyond the Office 365 UX and a little further into the future.

Finally, with such a high percentage (as seen in Figure 4) of decision-makers concerned about security when implementing cloud, it's recommended that, should formal training take place, an organisation-wide cyber security skills policy should also be enacted.

With GDPR also now a concern in areas of data sharing – which can easily be affected by bad cyber security hygiene – skilling up in cyber security skills is now becoming an expected, rather than desirable, enterprise IT staple.

About the sponsor, QA

QA has over 30 years' experience in helping individuals and organisations achieve their potential through world-class training and learning solutions. QA offers an extensive Cloud and Cyber curriculum, with courses suitable for businesses and individuals at every level. We partner with the leading Cloud providers including Google Cloud Platform, Amazon Web Services and Microsoft Azure. Our expert trainers are authorised and accredited to deliver their official curriculums.

QA also offers end-to-end Cyber training and certifications from Cyber Awareness to deep dive Cyber Programmes and solutions; from Cyber Investigations, Cyber Crisis Management, Proactive Security to Offensive Defence. QA only employs world-leading Cyber trainers who have the expertise to deliver bespoke Cyber solutions, GCHQ accredited courses and proudly the CyberFirst programme. This is all to support in tackling the UK's National Cyber Security skills shortage.

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