CLOUD CALLS FOR CONTINUOUS LEARNING

Today’s skills may not apply tomorrow
Introduction

Within just a few short years, cloud computing has become an essential component of the IT infrastructure in almost every organisation, large and small, public and private, ancient and modern. It is probably no exaggeration to say that cloud is the primary crucible of innovation today, supporting rapid innovation and experimentation, taking on more and more workloads that were previously managed in-house, while at the same time spawning whole new permutations and combinations at an ever-increasing rate. It’s a full time job just to keep up with it all.

Over the years, cloud services have matured. Security is no longer the blocker that it once was. The risks are better understood and services have become more standardised and compliant. That said, issues around security still feature highly if you talk to any CIO, but these days it is more about finding the right mix of cloud solutions to ensure important data is kept secure rather than rejecting cloud outright.

Increasingly, what is troubling organisations when they look at how they can get the best from the cloud is the skills gap. In a recent Computing survey of more than 250 IT decision-makers, the talent shortage was found to be most acute in those with technical skills, in which 69 per cent of IT decision-makers reported a likely shortfall. The types of skills, experience and qualifications required to run a traditional data centre infrastructure may or may not be transferable to the cloud environment, but it is likely that at least some retraining and refreshing will be required in most cases. Meanwhile, the new areas being opened up by cloud will require whole new skill sets of their own.

Research from other bodies has also highlighted the technical skills shortage facing this country. The House of Commons Science and Technology Committee stated in 2016 that an extra 745,000 workers with digital skills would be needed by this year alone. Others have found that the skills gap is as high as it was a decade ago during the financial crash and subsequent recession. For individual organisations the shortage of cloud skills invariably means that existing staff have to work even harder to plug the gap. They tend to spend more time fire-fighting, meaning a reduced focus on strategic tasks and greater levels of stress, burn-out and attrition. Nobody wins in this scenario.

Of course, organisations may choose to outsource technical skills to third-party organisations, but this can introduce management difficulties of its own. Moreover, many businesses do not want to relinquish important decisions to cloud providers or consultants. They want to retain the capacity to make informed decisions for themselves based on their own best interests, and even when outsourcing is a part of the picture, this requires a firm grounding in the technology.

Since cloud is as much about strategic decision-making as it is about technology, there are other areas of expertise that might prove hard to fill too. For example, 38 per cent of our respondents identified a lack of project management capabilities, with 22 per cent citing the challenge of finding broader leadership skills. “Technical staff are generally very willing to learn new technologies, but leadership can sometimes be harder to achieve. Without drive from the top, major strategic change in unlikely to work,” said one senior IT leader.

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Technical staff are generally very willing to learn new technologies, but leadership can sometimes be harder to achieve. IT support skills will need revisiting, too. User-facing cloud projects are doomed to failure if they are rejected by those they are intended to serve, and end-user adoption was seen as a potential hurdle by a significant proportion of respondents. Communicating the impetus for cloud adoption and smoothing over any teething troubles is an important undertaking in itself, and employees with the right level of softer skills play a crucial role here.

“It can be hard to get across to users what the benefits would be,” and “People just don’t like change,” were two typical comments.

Who decides?

Decisions about infrastructure strategy affect every part of an organisation. Arguably this applies even more so in the case of cloud. It follows that cloud strategy decisions should involve more than just the IT department, particularly as SaaS applications can be procured and operated with a minimal amount of technical understanding.

However, Computing’s research found that by and large strategic cloud platform decisions are still made in IT. Indeed, department heads were mentioned by just six per cent (Fig 2). But these broad categories hide what’s really happening: as business technology becomes more consumerised, everyone is becoming more of a technologist. So while IT is still in the driving seat, there has been a broadening out in what are considered IT skills, with the IT team composed of more than just hardcore techies and developers. The panellist quoted below is probably typical of the IT-led approach in which old categorisations are breaking down.

“We’ve consolidated – we had a market-based set of development teams and people doing automotive, people doing stuff around consumer electronics, or whatever our various markets were, and IT doing the sort of more traditional stuff and now we just have a technology team and probably more people work in our technology team than there were.” Head of operations, Media

A common complaint is that the techies themselves need to learn more soft skills in keeping with the age of cloud and digital in which everyone, even those in back office and technical roles, needs to present a friendly face to the customer or at least be more service oriented.

As the technology itself becomes more flexible and agile, so those who work with it are having to do the same. Long-term contracts are melting away, and with them the sort of predictability associated with many technical and strategic roles. Some find this liberating and relish the opportunity to expand their horizons; others less so, but most realise by now that change is a constant and that adaptability is a most desirable quality.

Head in the clouds

There seems to be a degree of wishful thinking behind cloud adoption. While 69 per cent see that attaining or retaining the necessary technical skills is likely to present difficulties (see above) with project management and leadership roles also a concern, barely one quarter of users (27 per cent) said they have a training plan in place to facilitate a smooth transition to the cloud (Fig 3). And while 21 per cent were making plans for training, a huge 52 per cent of respondents had no such plan at all.

Above all else, cloud calls for a culture of continuous learning
Unless they are planning to recruit all the skills they need from outside, it is hard to square these findings. Hoping to muddle through, based on the apparent user-friendliness of cloud-based solutions, is likely to end in tears, as the slick interface merely conceals layers of operational complexity. What’s more, the landscape is changing fast, meaning that today’s skills may not serve the organisation so well tomorrow. Above all else, cloud calls for a culture of continuous learning.

On a personal level, however, our respondents were more proactive. Forty per cent were considering formal training as a way to get more out of their individual cloud platforms and/or careers, while a further 24 per cent were seriously thinking about it (Fig 4). In the cloud era, more than any time before, fortune favours those who are looking ahead.

![Fig 3: Do you have a training plan in place to facilitate a smooth transition to the cloud or once using a cloud solution?](chart)

**Yes 27%**

**No 52%**

**We’re making plans at the moment 21%**

![Fig 4: Have you considered formal training as a way of getting more from your cloud platform or career?](chart)

**Yes 40%**

**Thinking about it 24%**

**No 36%**

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