CLARANET RESEARCH REPORT

ADOPTION TRENDS IN CLOUD COMPUTING

2011 - 2014

claranet

hosting | communications | networks

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EXECUTIVE SUMMARY

Cloud computing, a delivery model that is playing an increasingly important role in helping IT leaders meet their objectives, is bringing new opportunities and capabilities to businesses. When combined with the shift toward mobile computing, (enabled by the now ubiquitous smart device) cloud computing is transforming the way businesses view their IT and their expectations of the value it will bring.

It is clear from our findings that the majority of UK businesses have recognised the opportunity and have their sights firmly set on cloud computing. A 20 per cent rise in the number of businesses adopting some form of cloud computing between 2011 and 2013 is just one of many indicators that cloud computing is no longer confined to the early adopters and early majority and has truly hit the mainstream.

The motivational factors expressed by respondents indicate that this widespread adoption is not simply down to the advances in technology seen over the three year time period examined, and is in fact more closely linked to business transformational goals. Factors such as the need to roll out new business processes quickly, respond more nimbly to changing market conditions and enable flexible working practices are playing an important role in driving cloud adoption. Experience has also had a part to play, with early adopters of cloud emboldened by initial successes. Positive experiences with cloud projects continue to drive the adoption rate up and allay concerns.

The break out of cloud into the mainstream, however, is only one piece of an increasingly complex puzzle, and the data suggests that IT leaders are choosing to adopt a combination of different types of cloud services depending on specific requirements. Businesses, regardless of size or industry, are evolving mixed cloud IT estates, combining traditional on-premises IT with public or private clouds or both as suits a particular need or workload.

This mixed cloud is bringing with it significant benefits, with businesses able to pick and choose the types of IT that they feel most comfortable with, and that are most appropriate for their individual applications. Embracing this made to measure approach is giving businesses the flexibility to construct an IT estate that will feed into the needs of the organisation, evolving as-and-when required.

The mixed cloud does however create its own set of challenges: as companies adopt different forms of IT, maintaining an integrated and functional infrastructure will become more complex. As IT estates continue to evolve over the next 12 months, decision-makers will need to work more closely with their cloud providers to migrate and integrate their services as effectively as possible. Having an effective strategy in place to manage this evolution is vital, without which complexity and management issues will hamper progress.

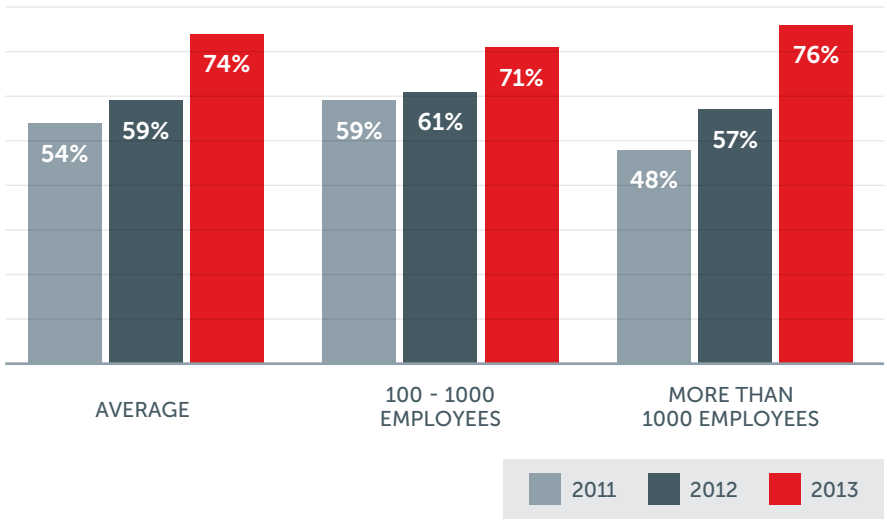
CHAPTER ONE: CLOUD GOES MAINSTREAM

It is clear the benefits from utilising cloud - scalability, resiliency, efficiency and agility – are outweighing the concerns businesses have previously expressed. The growing presence of cloud computing in business was undeniable in 2013, with significant rises in the adoption of cloud services across the board regardless of size or industry (see Figure 1.).

Today, 74 per cent of UK businesses have declared that they are using some form of cloud service, up from around half (54 per cent) in 2011. The cloud message is clearly getting through to enterprises, with a substantial 28 per cent rise in those reporting to use some form of cloud since we first asked them in 2011, leapfrogging the adoption rates seen in the midmarket (100-1000 employees) who experienced a 12 per cent growth in cloud adoption in the same time period.

74%
of UK businesses use some form of cloud service

Figure 1. CLOUD ADOPTION BY ORGANISATION SIZE



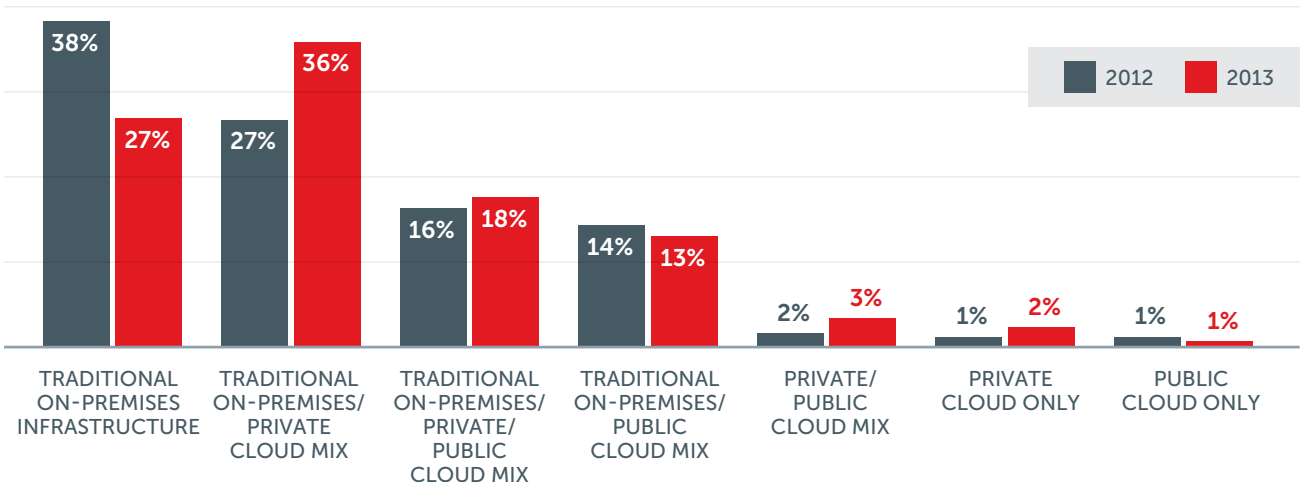
This remarkable shift in cloud adoption by the enterprise segment supports the idea that the benefits of cloud are now widely understood and that this mainstream awareness is spurring large enterprises to launch concerted programs to use cloud environments. At the same time there is evidence to suggest the diversity of cloud computing services now available is helping to drive midmarket cloud adoption with companies of all sizes able to find solutions that fit their needs and budgets.

The most popular infrastructure configuration amongst UK businesses is now an on-premises/private cloud hybrid model with 36 per cent of respondents describing this as their solution

Looking a little closer at the types of cloud infrastructure being chosen by IT leaders it becomes obvious that much of the overall growth in cloud adoption has been in private cloud, either on its own, or more commonly combined with legacy in-house IT (see Figure 2.). A combination of on-premises infrastructure and private cloud is now the most common form of infrastructure, with 36 per cent of respondents stating that this describes their solution. IT decision-makers have been clearly pursuing a best-of-both worlds approach, combining the benefits of cloud computing with what they feel is a more secure, controlled deployment model.

Figure 2.

WHAT TYPE OF INFRASTRUCTURE HAVE YOU ADOPTED IN YOUR ORGANISATION?

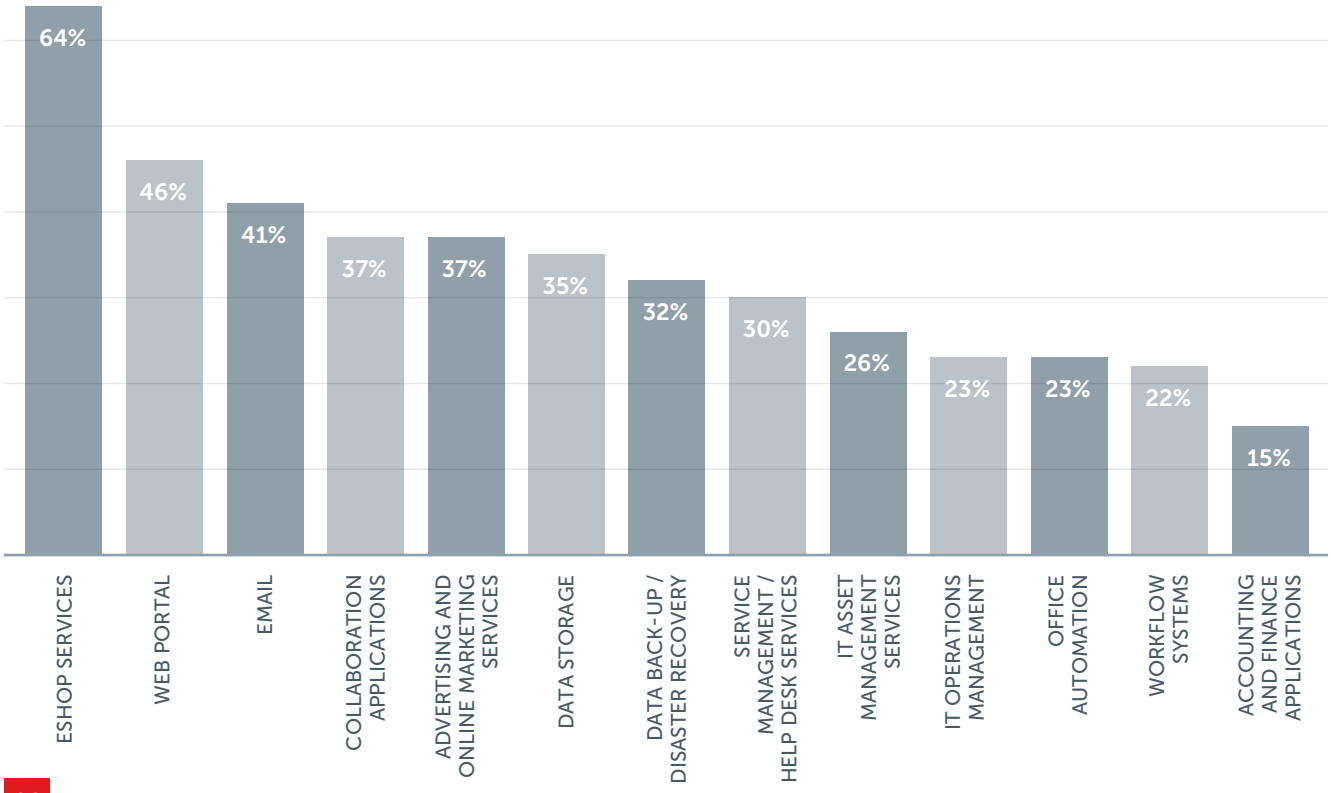


The benefits and risks related to moving to cloud can vary depending on the nature of the application. Careful consideration is needed by IT decision-makers before deploying any workload to the cloud, particularly those carrying personally sensitive data (typically subject to national regulation) or confidential business information. This complex decision-making is reflected in the wide variation in adoption rates between application types (see Figure 3.). Factors such as migration complexity, peak processing requirements and data security are clearly, and quite rightly, playing a role in determining the speed and efficacy of cloud adoption in each instance.

The function of an application dictates how likely it is to be based in the cloud: eShop services are the most likely to be cloud based, while accounting and finance applications are the least likely

The applications most likely to be cloud-based are eShop services (64 per cent), web portals (46 per cent) and email (41 per cent) reflecting the widespread awareness and acceptance of the real and tangible benefits of using cloud to deliver these applications. eShop and web portals are good examples of applications where capacity demand tends to spike at certain times and so benefit hugely from the variable pricing and resourcing available through highly scalable cloud environments. The ubiquity of access and reduced upfront costs of cloud-based email is another example where cloud's clear and tangible business benefits over traditional methods are driving high rates of adoption.

Figure 3. CLOUD ADOPTION BY APPLICATION



CHAPTER TWO: IMPEDIMENTS TO ADOPTION

Ignoring or rejecting cloud services is simply not an option for any organisation given the overwhelming benefits they offer - both in reducing the cost-base and improving organisational agility and performance. This is not to say, however, that it's a simple decision. Companies must take a measured approach.

Concerns about data security and data privacy remain, as in previous years, by far the two most significant inhibitors to cloud adoption with over 70 per cent of cloud-users citing them as key concerns (see Figure 4.). Fears related to data sovereignty also rank highly, with just over half (53 per cent) stating this as a concern. This is particularly relevant when companies are considering public cloud services where the geographic location of data can sometimes be obscured.

Figure 4. HOW GREAT A CONCERN DID THE FOLLOWING CAUSE YOUR ORGANISATION DURING THE DECISION TO MIGRATE TO THE CLOUD?

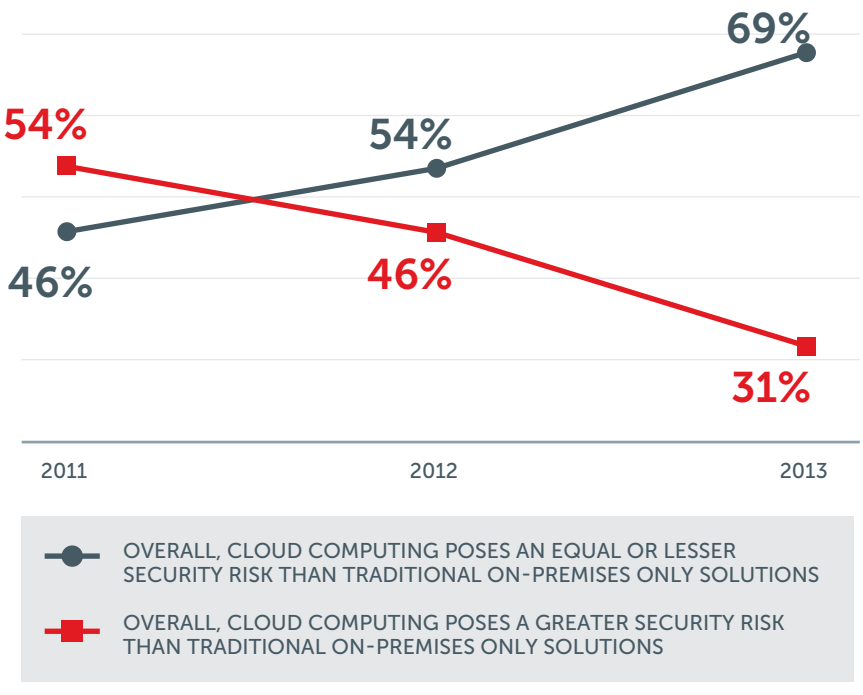
	TOTAL
DATA PRIVACY	72%
DATA SECURITY	71%
DATA SOVEREIGNTY/JURISDICTION	53%
COST OF CHANGE/MIGRATION	53%
DEPENDENCY UPON INTERNET ACCESS (AVAILABILITY AND BANDWIDTH)	53%
FEAR OF LOSS OF CONTROL/MANAGEABILITY	47%
CONFIDENCE IN THE RELIABILITY OF VENDORS	47%
CONTRACTUAL LIABILITY FOR SERVICES IF SLAS ARE MISSED	47%
REGULATORY CONSTRAINTS	42%
CONTRACT LOCK-IN	40%
LACK OF CLARITY OF IMPACT OF CLOUD SERVICES ON BUSINESS PROCESSES	36%
LACK OF CLARITY IN MOST APPROPRIATE CLOUD DEPLOYMENT MODEL	29%
LACK OF CLARITY IN MOST EFFECTIVE SERVICE DELIVERY MODEL	28%

Despite these concerns, the rapid pace of cloud adoption across the board over the last two years indicates that they are not preventing businesses from migrating to cloud services. In fact, our research points to an increase in trust in cloud computing (see Figure 5.). In late 2012, just under half (46 per cent) of respondents said that cloud computing posed a greater security risk than in-house infrastructure. The latest results have seen this figure decline to 31 per cent, pointing to a shift in attitude as more companies have experienced the realities of cloud adoption.

While 2012 was the tipping point where the majority of IT leaders first saw cloud computing as equal or less of a security risk than traditional solutions, 2013 saw the most significant change in attitudes to date with a 15 per cent increase in those viewing cloud as at least as safe as on-premises IT

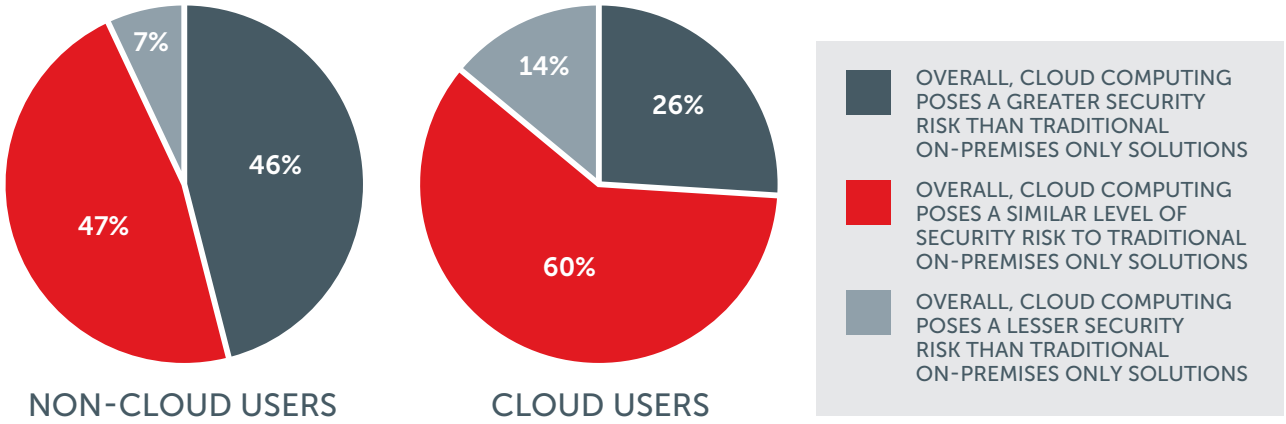
Figure 5.

DOES CLOUD COMPUTING POSE A GREATER RISK THAN ON-PREMISES IT?



Interestingly, if we look even closer and compare attitudes towards the security of cloud computing held by those with some experience of it and those with none, the importance of this point is underlined (see Figure 6.). While around half (46 per cent) of non-cloud users view cloud computing as inherently less secure than in-house infrastructure, just one in four (26 per cent) of cloud users deem this to be the case.

Figure 6. PERCEPTIONS OF CLOUD SECURITY



It is clear from these findings that data security in all its forms will continue to be the prime concern for those considering cloud. Although this is the case, rather than acting as a deterrent, businesses are incorporating these concerns into criteria for choosing appropriate cloud architectures and selecting cloud service providers. In addition, the findings demonstrate a clear correlation between the perceptions of risk and actual cloud adoption, with experience playing an important role in improving levels of trust in cloud services overall. As experience with cloud increases, it is sensible to conclude that it will act as a catalyst in further accelerating the rate of adoption.

CHAPTER THREE: CLOUD USER SATISFACTION

Perhaps surprisingly in light of the high levels of concern expressed in this study around data security and a lack of well understood standards governing cloud migrations, businesses using cloud services report high levels of satisfaction. Three quarters (75 per cent) of respondents who have adopted cloud are happy with their cloud technology and around two thirds (65 per cent) express contentment with the level of customer service they receive from providers (see Figure 7.). These high rates of satisfaction amongst adopters stand in marked contrast to the cynicism expressed amongst some commentators in the media in relation to the "marketing hype" promoting the benefits of cloud adoption.

Figure 7. HOW SATISFIED HAVE YOU BEEN WITH YOUR CLOUD SERVICE PROVIDER(S)?

	TOTAL
TECHNOLOGY	75%
CUSTOMER SERVICE	65%
BREADTH OF SERVICES	59%
SLAS	59%
SUPPORT	56%
ROI	55%
COST	45%

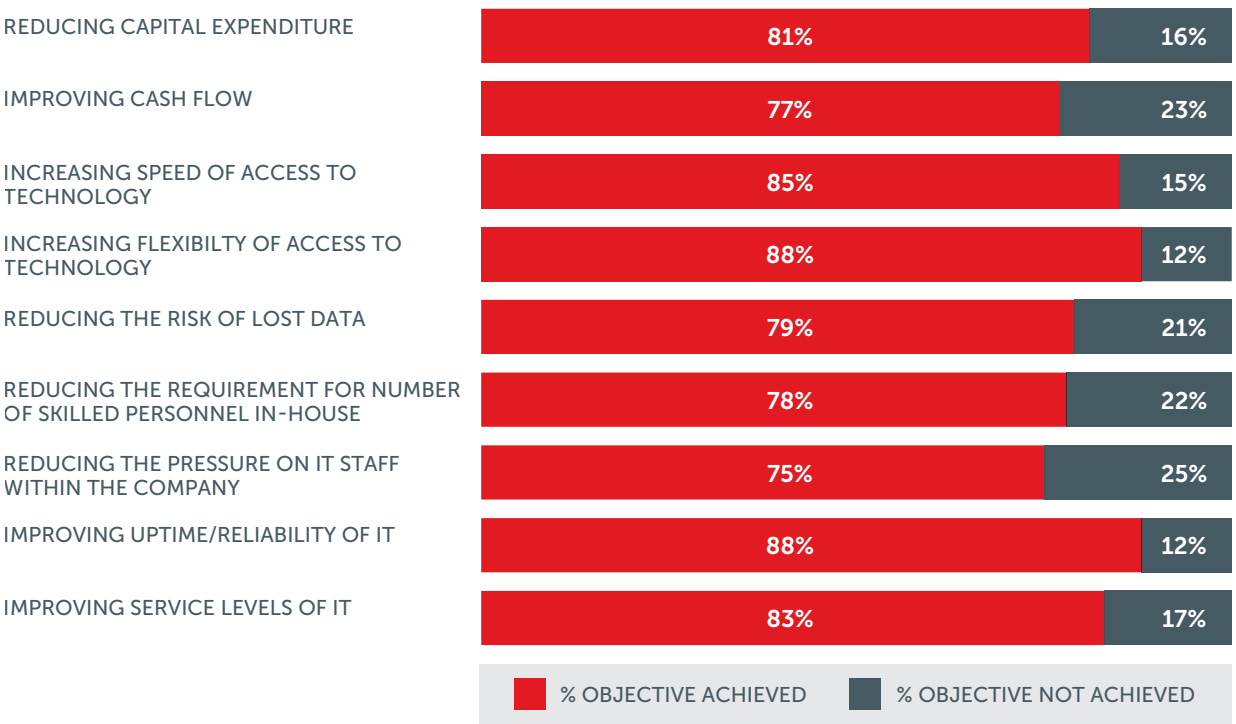
75% of respondents are happy with the technology provided by their cloud service provider

This positive sentiment towards cloud can, in large part, be attributed to the broadening and accelerating rate of cloud adoption seen earlier in this report, combined with the fact that early adopters are now clearly realising the tangible benefits of cloud projects that were kicked off over the past few years. A tipping point in market attitudes appears to have been reached, leading to the expression of more nuanced and positive views.

Our study shows that high levels of cloud migration objectives were achieved, with no objectives having a success rate lower than 75 per cent. Of respondents to our study who cited reducing capital expenditure as an objective of their cloud migration, 81 per cent achieved it; 88 per cent whose aim it was to improve uptime and reliability have managed to do so, and 75 per cent have successfully reduced pressure on their IT departments. The successful completions of these objectives, many of which are well-publicised benefits of cloud, are proof of cloud's real ability to deliver tangible business goals.

81%
of respondents reduced capital expenditure as a result of cloud migration

Figure 8. ACHIEVED CLOUD MIGRATION OBJECTIVES



This overwhelmingly positive response and satisfaction with cloud services should not obscure the fact that businesses still face significant challenges when migrating to cloud. Our research found that just 18 per cent of those that migrated to cloud were fully satisfied by their chosen method for migration (see Figure 9.). This can be explained by a lack of preparation in some areas, namely understanding regulatory constraints (only 47 per cent felt well prepared), the impact of legacy technology (53 per cent felt well prepared), and how to integrate new cloud services with existing on-premises solutions (just 46 per cent)(see Figure 10.).

Figure 9.

HOW SATISFACTORY HAS YOUR CHOSEN METHOD FOR MIGRATING TO THE CLOUD BEEN?

	TOTAL	FEWER THAN 100 EMPLOYEES	100 - 250 EMPLOYEES	251 - 500 EMPLOYEES	500 - 1000 EMPLOYEES	1001 - 3000 EMPLOYEES	MORE THAN 3000 EMPLOYEES
1 – NOT AT ALL SATISFACTORY	1%	0%	0%	4%	0%	0%	0%
2	2%	4%	0%	4%	0%	2%	2%
3	27%	30%	26%	30%	24%	24%	28%
4	52%	43%	56%	43%	55%	55%	56%
5 – COMPLETELY SATISFACTORY	18%	22%	19%	17%	21%	19%	14%
AVERAGE (OUT OF FIVE)	3.86	3.83	3.93	3.65	3.97	3.90	3.81

Figure 10.

HOW PREPARED WERE YOU IN THE FOLLOWING AREAS WHEN DEFINING THE USE OF CLOUD SERVICES WITHIN YOUR ORGANISATION?

	TOTAL	FEWER THAN 100 EMPLOYEES	100 - 250 EMPLOYEES	251 - 500 EMPLOYEES	500 - 1000 EMPLOYEES	1001 - 3000 EMPLOYEES	MORE THAN 3000 EMPLOYEES
UNDERSTANDING OF THE IMPACT OF CLOUD SERVICES	62%	66%	61%	57%	56%	58%	73%
UNDERSTANDING OF BUSINESS PROCESS AND CHANGES REQUIRED	57%	57%	57%	54%	47%	58%	66%
KNOWLEDGE OF CLOUD SERVICE PROVIDERS	56%	54%	64%	39%	50%	56%	68%
UNDERSTANDING OF LEGACY TECHNOLOGY – RESTRICTIONS OF CURRENT SOLUTIONS (IF BEING MIGRATED)	53%	43%	43%	46%	50%	60%	66%
UNDERSTANDING OF REGULATORY CONSTRAINTS	47%	23%	57%	39%	50%	38%	75%
UNDERSTANDING OF HOW TO INTEGRATE CLOUD SERVICES WITH EXISTING HOSTED OR ON-PREMISES SOLUTION	46%	49%	43%	54%	26%	48%	52%

CHAPTER FOUR: A PRAGMATIC APPROACH TO CLOUD ADOPTION

IT leaders are choosing to adopt a combination of different types of cloud depending on specific requirements on a case by case basis

What has come across loud and clear in our findings is that businesses have in general been migrating to the cloud in a piecemeal fashion, with each IT project being assessed on its own merits and informed by differing business requirements. Businesses are finding there is no such thing as "one size fits all" when considering the cloud.

This pragmatic approach has the obvious advantage of enabling IT leaders to avoid many of the risks of concerted all-encompassing IT projects, which can be expensive and difficult to coordinate. However, it also appears in part to be a result of the democratising and empowering effect of cloud computing on decision-makers outside of the traditional IT department.

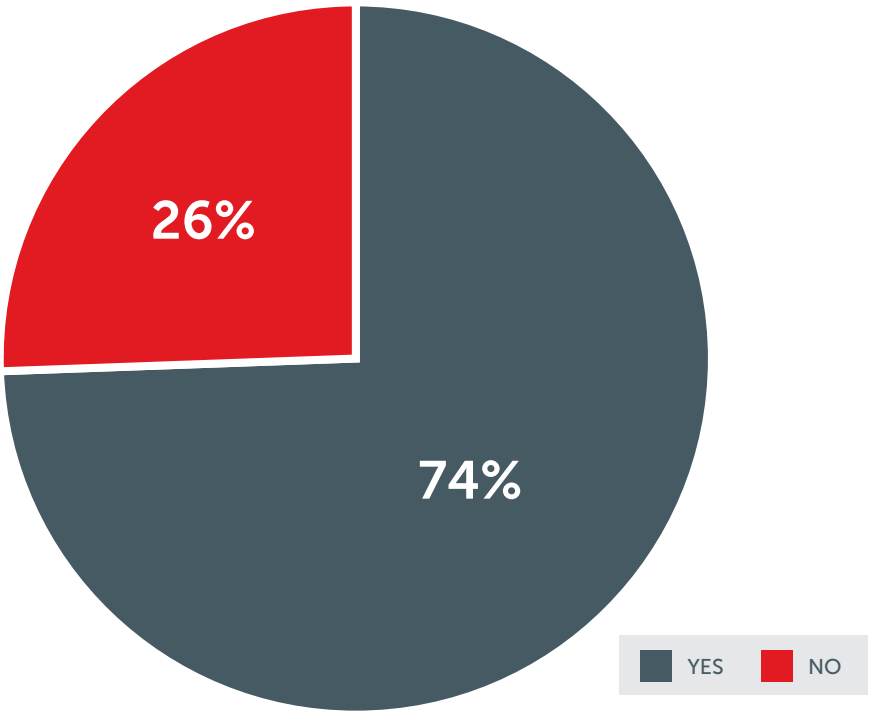
74%

of cloud-users outsource to a cloud service provider

Though a minority of businesses manage their own in-house cloud services, the majority are increasingly dependent on outsourced help to manage their IT. 74 per cent of cloud-users outsource to a Cloud Service Provider (CSP). Of those that have partnered with a CSP, 53 per cent were completely or heavily guided by their provider on their migration path (see Figure 11.).

Figure 11.

THE PERCENTAGE OF CLOUD USERS OUTSOURCING TO A CLOUD SERVICE PROVIDER



However, the research found that over a third (36 per cent) were very concerned about a lack of clarity on the impact of cloud services on business processes during the decision-making process to migrate to the cloud, and 28 per cent were unsure about the most appropriate cloud model to deploy.

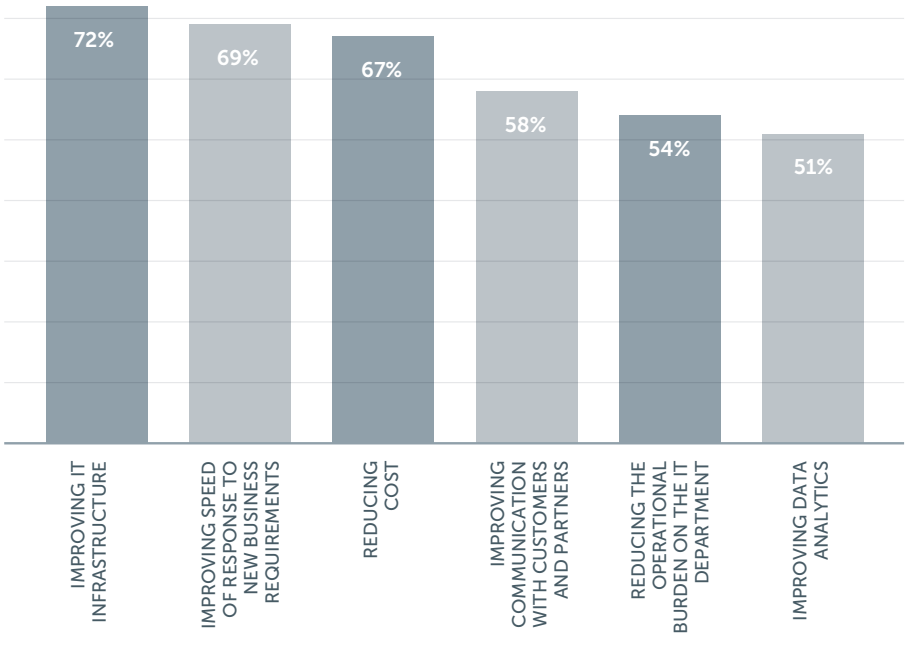
Increasingly cloud providers need to act more like business consultants, working alongside IT decision-makers to understand the needs of different parts of the organisation. No two migration and integration plans will be the same, so it is important to develop strategic partnerships to achieve the most effective results.

CHAPTER FIVE: BROADENING THE SCOPE

The rapid adoption of cloud services seen over the last three years and the high rates of satisfaction found amongst adopters has moved the debate beyond one focused on reducing capital expenditures and IT complexity, to one more focused on business enablement. As early cloud adoption projects were seen to deliver the real tangible benefits adopters were targeting, such as lowering the cost-base and simplifying systems, they have also learned how it can be utilised to deliver the much talked about but in reality less anticipated business transformational benefits. This hands-on experience with cloud services is now informing a clear, more ambitious and informed agenda for IT leaders going forward.

Improving IT infrastructure is the number one priority for IT leaders in 2014 (cited by 72 per cent of respondents) suggesting that as they anticipate relying on the cloud going forward for more mission-critical internal and customer-facing applications they recognise that investing in the appropriate mix of supporting cloud infrastructure is key (see Figure 12.). Most businesses will consciously pursue "mixed cloud" strategies for their IT infrastructure to suit specific needs and it is likely that we will see increased investments in "managed private clouds" to support IT leaders migrating applications deemed to require high levels of control and security.

Figure 12. RATE THE FOLLOWING IT PRIORITIES IN TERMS OF IMPORTANCE TO YOUR BUSINESS



Significantly and encouragingly, improving speed of response to new business requirements (69 per cent) is the second most important priority and points to evidence of an overall focus on increasing business agility from IT leaders. The promise of agility is a well promoted benefit of cloud computing so it is to be expected that this desire will drive new investments. Key to understanding the wider impact of these cloud investments on businesses in the coming years will be whether they are simply optimising IT processes or targeting the delivery of business agility in its broadest sense.

IT leaders and businesses who take a holistic view stand to benefit much more than those taking a narrower financial, short-term view. Rolling out new business processes, supporting customer communities or detecting potential business continuity threats are examples where cloud investments can enable businesses to become significantly more agile. Establishing and quantifying key performance indicators to track business agility objectives will be critical in ensuring IT investments are not undermined by short-termism.

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RECOMMEND-ATIONS

IT leaders need to learn how to guide IT purchase decisions outside of the IT department

In an era where cloud and smart devices are enabling bottom-up purchasing of IT services - outside of the IT department – IT leaders must find new ways to influence these decisions. For example, if the CMO is selecting a new cloud marketing automation tool or CRM or the HR Director a new HRM system, the IT leader needs to be at the table, otherwise the danger is that a poorly planned, poorly integrated and insecure IT estate will develop. Organisations implementing a piece-by-piece strategy should seek out service providers that offer high standards in migration and integration, and have experience in managing and hosting a range of business applications effectively.

Organisations should take a flexible approach to adopting cloud, based upon business needs

Terms such as "public cloud", "private cloud" and "hybrid cloud" were at one time useful in pointing end-users to the different types of contracting models but they were also responsible for creating a false sense of one "right" choice of cloud that IT decision-makers had to make for their organisations. However, it is now clear that there is no "one size that fits all" approach to cloud. The onus is on the end-user company to find the right mix of cloud based services for them.

IT decision makers need to become informed consumers

There has been a fundamental shift in the way that businesses manage their IT. Cloud providers are now playing an increasingly important role in guiding IT decision-makers in their cloud adoption. Even so, many businesses still remain critically uninformed about migration, integration, on-going management and the crucial role of the network for access and application performance. IT decision makers should become informed consumers and partner with their cloud service provider to develop roadmaps and plan migrations to support their current and future needs.

Select a partner you can build a trusted relationship with

As end-user companies take advantage of technological innovations to focus more on their core business, they are increasingly relying on the cloud and managed services companies for mission-critical internal and customer-facing applications. This is why over the next decade the ability of customers and managed service providers to develop trusted relationships will be the key to their mutual success and satisfaction.

A CUSTOMER'S PERSPECTIVE: SIFT

BY BEN HEALD
CEO, SIFT

JOURNEYING TO THE CLOUD- MIGRATING AWAY FROM A LEGACY PLATFORM

A few years ago a venture capitalist told me the secret of success when growing a technology business was to sell the company within a single technology cycle. His reasoning was that you really didn't want the hassle and risks of transitioning your platform from one paradigm to the next. This story is for those of us with longer term aspirations.

In our case, the project started in 2007 and culminated six years later with Sift's CIO Chris Wood switching off our servers at Verizon just before Christmas 2013 consolidating everything with Claranet and Amazon.

We started hosting with Verizon in 2002. Out of necessity, we'd constructed a proprietary platform (CMS, ad delivery, reporting, email, user DB, task-tracking, etc) with 60+ physical machines and managed all the infrastructure ourselves – effectively trying to be experts in everything. And we had almost as many servers again in the office running internal systems, development environments, etc. There were single points of failure, complex spaghetti and many hidden dependencies. All this took significant time to maintain and support, and there were many risks we just had to accept (or ignore).

The on call guys had regular trips in the middle of the night to restart servers and crawl under racks. There was also the time soon after Chris Wood started at Sift in 2005, when he came to tell me Verizon had advised to shutdown the racks due to dangerously high power usage – a 16 amp fuse had welded shut on the main power board and the systems were pulling 30 amps!

The benefits of moving to a modern managed services provider such as Claranet, is not just the obvious (multiply redundant internet connections and professional management of the physical servers), but having a modern technology partner; in contrast to a dumb hosting environment. So now we can have conversations with Claranet about how we can adopt some hybrid cloud solutions with Amazon and the like, or the latest developments in server architecture or how to improve business continuity scenarios.

There are also cost efficiencies. Our total costs with Claranet last month were 50 per cent of what they were two years ago (a six figure saving). In addition, our capex costs are now significantly lower.

We started moving some sites to Claranet in 2008 soon after we adopted Drupal as our development platform. It was relatively easy to move Sift Media's titles over as they're fully within our control. Sift Digital's clients were also fairly straightforward as new clients went straight to Claranet from 2008 and we've gradually moved the older sites as they've been redeveloped, or switched them off as we've lost them as clients (it happens). The most difficult area though was the PracticeWEB platform, used by 1,000 of our accountancy clients. If you delve beneath the surface of many businesses transitioning to a full SaaS approach, there will be some thorny legacy issues. Not only was the old PracticeWEB platform running Perl spaghetti, each client site had its own separate domain and unique design.

First of all we had to rebuild the platform in Drupal, which involved putting a six man team in a room offsite for 18 months. By the middle of 2010, we were able to start migrating clients to the new platform (now branded as "Landscape"). From a practical perspective, we were able to script much of the migration, with our outsourcing partner in Sri Lanka cutting up the designs manually; but from a client perspective the workflow (UX) of the admin of the new platform was utterly different. So it made no sense to present clients with a new site for their firm, which looked the same, but had a completely new engine; when what they wanted was a new look and feel, and were only marginally excited about having better administration functionality. We therefore took a much slower approach, working our way through the clients, offering them redesigns and new product options.

Finally, there was the complication of getting the clients to make the necessary adjustments to point their sites at the new platform (changing the A records). In order to hit the internal deadline of Christmas 2013, some of the customer services team were ready to visit client premises to physically arm-twist the laggards!

The wider transition of services to the cloud goes on. In April this year, we'll ditch our internal Microsoft email infrastructure and move to Google. I didn't realise until recently that those that want to can still use Outlook as an email client. And internally many of the company are already fully on Google Docs.

PracticeWEB's development team is constantly developing the Landscape platform, but thankfully this can now happen on a rolling monthly release cycle, which doesn't require any actions by the clients!

ABOUT SIFT

Founded in 1996, and with 135 staff, Sift is one of the UK's leading digital media experts; working with over 1,500 organisations; helping them to deliver effective online business solutions

ABOUT THE CLARANET RESEARCH PROGRAMME

The Claranet Research Programme seeks to explore not just how IT leaders configure their technology, but also examine the reasons that lie behind their strategic decisions. The research reports are focused on helping businesses make informed technology decisions by gathering, developing and disseminating informative content based on real market insight.

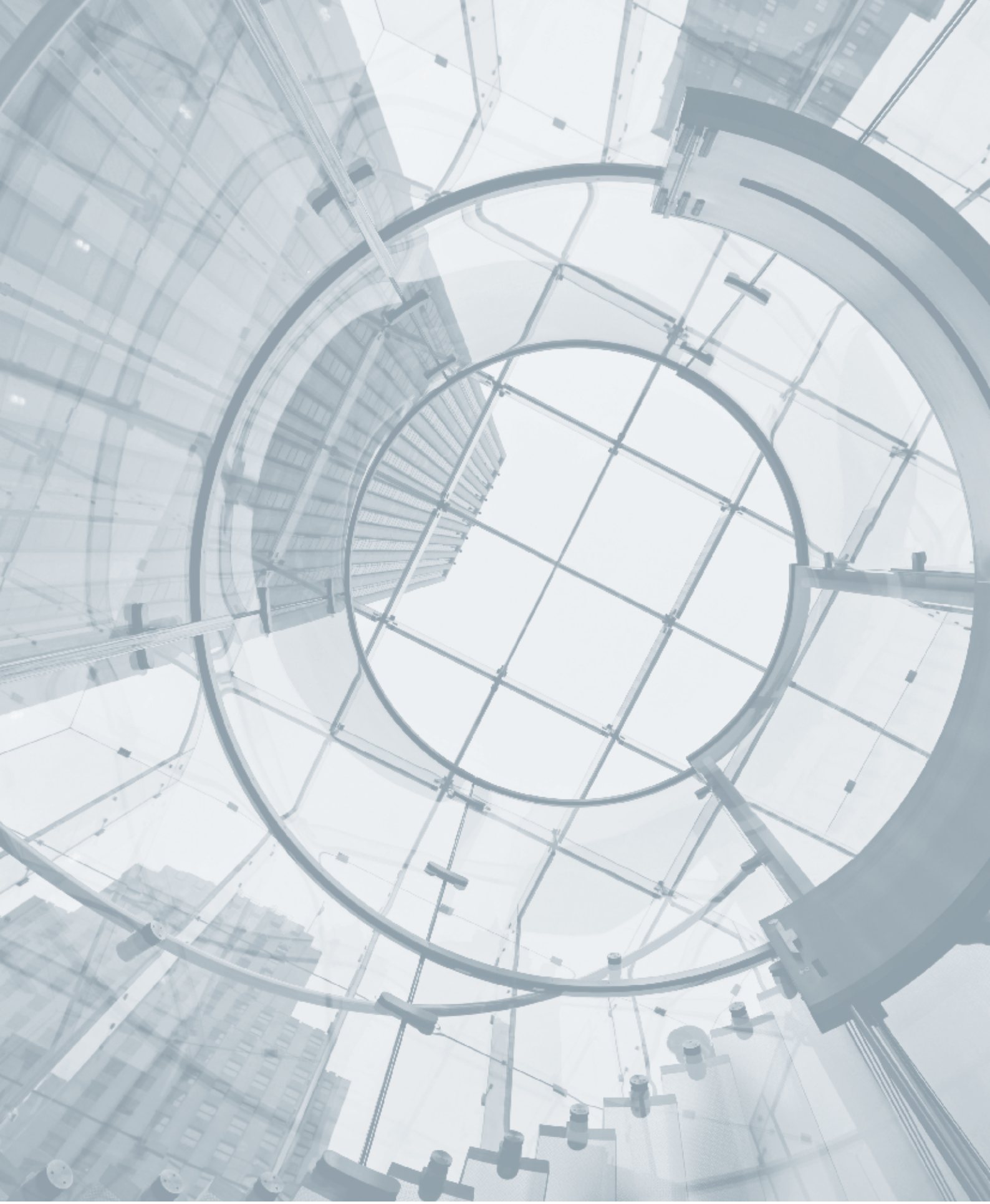
METHOD-OLOGY

In September 2013, independent market research company Vanson Bourne conducted Claranet's third annual survey to determine the level of cloud adoption among participants, and to gain insights into attitudes, experiences, and trends across the UK end-user community. The research polled 300 senior IT and business decision-makers from enterprises and small-to-medium businesses (SMBs). This follows on from surveys in 2012 and 2011 which similarly polled 300 senior IT decision-makers each.

Of the 300 end-user organisations questioned in the 2013 study, 26 per cent came from the professional services sector, 21 per cent from financial services, 20 per cent from retail, distribution, and transport, and 14 per cent from media, leisure, and entertainment. The remaining 20 per cent identified themselves as operating in other commercial sectors.

17 per cent of organisations employ fewer than 100 people. 14 per cent have between 100 and 250 employees; 13 per cent, 251-500; 14 per cent, 500-1,000; 20 per cent, 1,001-3,000. The remaining 21 per cent of organisations have more than 3,000 employees.

All data is from the September 2013 survey except where it is stated otherwise.



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