CLOUD INDUSTRY FORUM®

Cloud UK

Paper twelve

UK Cloud trends and the rise of Hybrid IT

12

Introduction

The fact that Cloud Computing has achieved a mainstream deployment status across the UK market can be of little doubt these days. The latest research reported in this White Paper demonstrates that 69 per cent of organisations have formally adopted (i.e. via the IT function) at least one Cloud-based service within their business, and satisfaction with the use of Cloud solutions remains high with 91 per cent of users stating satisfaction with their decision to deploy a Cloud service.

Looking to the future, the trajectory of growth looks equally healthy with 68 per cent of current Cloud service users claiming they will extend the use of Cloud solutions within their business over the next 12 months, and almost a third (31 per cent) of organisations that don't use a Cloud service today saying they intend to adopt the first service during the next 12 months. In fact, less than 4 per cent of organisations in a detailed survey of 250 stated they had no intention of adopting a Cloud service. A further sign of health of Cloud is that 78 per cent of organisations stated that they actively consider whether a new or replacement IT service should be delivered as a Cloud service versus on-premise (i.e. it is considered a credible deployment model on a case-by-case basis).

So is Cloud the nirvana of IT deployment models? Will everything transition to the Cloud? Are we facing the terminal demise of on-premise IT? The short answer to all these questions is clearly, NO! The slightly longer answer is you simply can't lump together every IT need and every type of business and map out a common IT deployment model for them all, it is neither practical nor reasonable nor necessary. In fact in the case of the research, when asked if the participants had any plan or intention to move all services to the Cloud around 50 per cent said they would, but with caveats as to when, whilst the other half had no intention to move everything online. For the foreseeable future, IT will be a truly hybrid environment for most organisations, hence we will see the formalisation of disciplines around the management of **Hybrid IT**!

As a basic rule of thumb, the practicalities that hinder the universal migration to a Cloud-based environment fall into four primary spectrums of influencers or inhibitors of Cloud adoption:

1. **IT Maturity:** That is, the age of the organisation, the level of IT adoption and enablement, and the degree of legacy investment that has been made into the IT operations play a central role in choice of future IT deployment. The younger the business, and the less integrated the IT capability is today, the easier it is to move toward Cloud Services as a means of driving operational agility and competitive edge. The more mature the business, Cloud is still attractive but barriers about migration of legacy, or levels of integration required etc impact the speed and deployment options open to them.

2. **Economics:** The level of existing investment in IT, constraints in capital or operational expense budgets and ability to assess the wider business impacts to calculate a return on investment all influence decision making for or against the Cloud. When looking at the Cloud model, you have to look beyond the direct costs of infrastructure and software as was the case for on-premise IT and consider the broader impact on the business in terms of reducing maintenance activity, improving time to market, increasing agility etc to demonstrate the true benefits. Traditional models of IT investment often do not provide for the longer term and slightly tangential benefits that Cloud offers and as such old financial models become inhibitors of progress through poor assessment and decision criteria.

3. **Operating Environment:** Some organisations struggle to access high-speed internet at an acceptable level of performance or affordable cost. Others operate in regulated or constrained environments (or provide services to firms that do), where issues related to data security, data sovereignty or data protection will impact or constrain (at least the perception) the deployment options open to them. Whilst regulation is typically not the primary cause of such restrictions when compared to internal procedure or perceived risk, many organisations are cautious or confused about the legal implications and conditions surrounding their accountability to legal obligations such as the Data Protection Act for example. Clarity and scope of the operating environment conditions and access to high speed internet are essential in making confident and effective deployment decisions.

4. **Emotion & Education:** Trust is a hard thing to establish and for changing IT delivery models, imbuing confidence and enabling effective control over distributed IT is not just about tools and processes, but about attitude, comfort, confidence and ability to weed out hype and FUD. Arguably, experience is the greatest assistance in building trust, but it also requires trust to make the first step. The biggest inhibitor to Cloud adoption in some organisations can be the intangible attitude of the ultimate decision-maker (be that the Board or the IT head) who for reasons of fear, misunderstanding or prejudice can block any change. The challenge for the industry therefore is to educate, reassure and build confidence in the Cloud business model.

So with so many influences on decision-making, what does this mean for the future of IT delivery? Well we can conclude that most organisations will continue to use a mixture of deployment models for the foreseeable future, and that the combination of on-premise, hosted and Cloud Services, along with the productisation of bring your own device (BYOD) mean that the future challenges for an Executive managing IT delivery relate more to the distributed nature of the IT platforms. **The real challenge for the CIO in the near future** is ensuring good governance and effective delivery across a range of in-house and out sourced services is the new norm – or in other words, **building, controlling and sustaining an effective Hybrid IT estate**.

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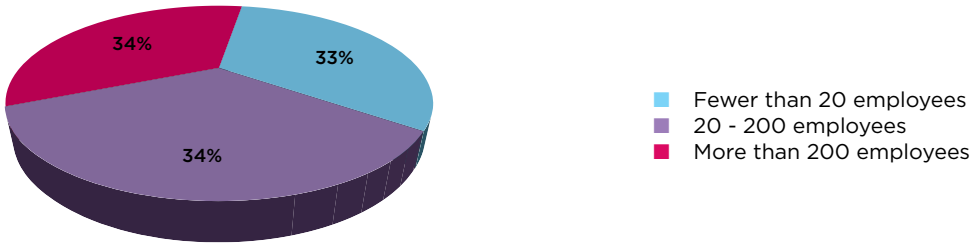
Methodology and sampling

In September 2013 Vanson Bourne conducted the fourth annual body of research on behalf of the Cloud Industry Forum 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 250 senior IT and business decision-makers in enterprises, small-to-medium businesses (SMBs) and public sector organisations. The organisations participating all had UK based operations.

How many employees work in your organisation?

Total

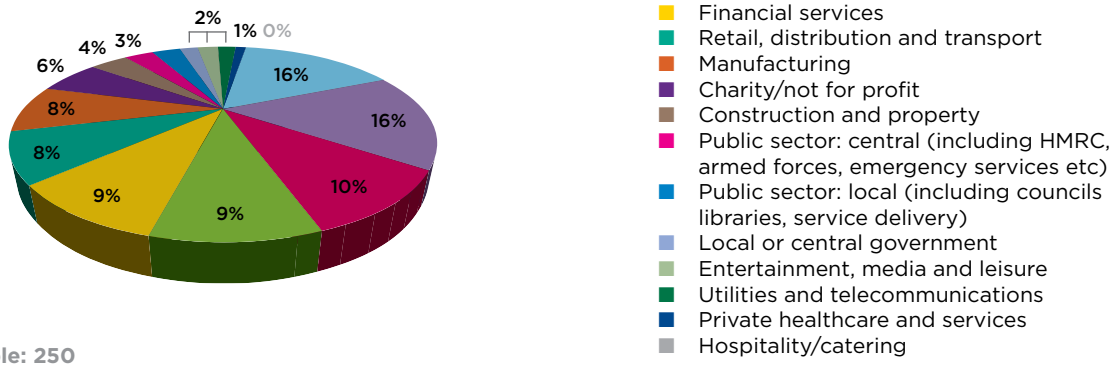


Sample: 250

Of the 250 end user organisations questioned, 16 per cent came from the IT and technology sector, 16 per cent from business and professional services, 8 per cent manufacturing, 9 per cent financial services and 8 per cent from retail and logistics. A further 27 per cent comprised of public sector organisations ranging from central and local government, education and healthcare.

In which sector does your organisation primarily operate?

Total



Sample: 250

This White Paper summarises the results of this research and examines the drivers for adoption of Cloud Services by end user organisations; the changing business rationale for migrating to the Cloud; and the factors that impact purchasing and deployment decisions. In addition the results are compared and contrasted to the results of three similar bodies of research carried out annually since 2010 to determine emerging trends and extrapolate what may occur in 2014.

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1. UK Cloud adoption trends

This survey polled 250 respondents responsible for IT decision-making, from a broad and representative cross section of industries. The most widely-represented sectors included IT and services; education; business professional services; manufacturing; financial services; and retail, distribution and transport. The public sector was also well represented, with a third (84) of total respondents.

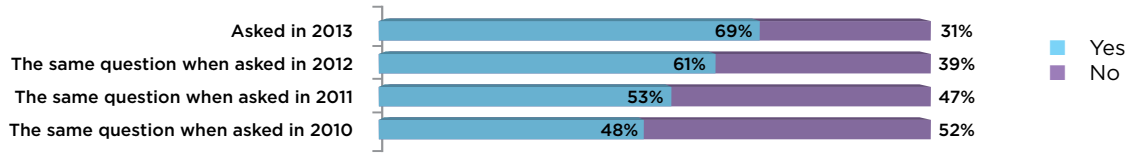
The results of the survey continue to validate that Cloud Services are accepted as a viable IT deployment model in the majority of organisations across the UK, and that its rate of adoption is being maintained at a healthy 15 per cent per annum.

Does your company have any hosted or Cloud-based services in use today?

All respondents	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Yes	**69%**	65%	71%	70%	69%	69%
No	**31%**	35%	29%	30%	31%	31%
Base	**250**	82	84	84	84	166

Well over two thirds (69 per cent) of all organisations interviewed already consciously use Cloud Services formally for at least one application area within their organisation, this is an 8 point increase or 15 per cent growth in the last year, and a compound growth of 44 per cent since the original survey at the end of 2010.

Does your company have any hosted or Cloud-based services in use today?



When further analysis is undertaken it is clear from the findings of the research that outside of the smallest firms, adoption rates are actually hitting 70 per cent+ and there is no material difference in adoption rates between public and private sector overall.

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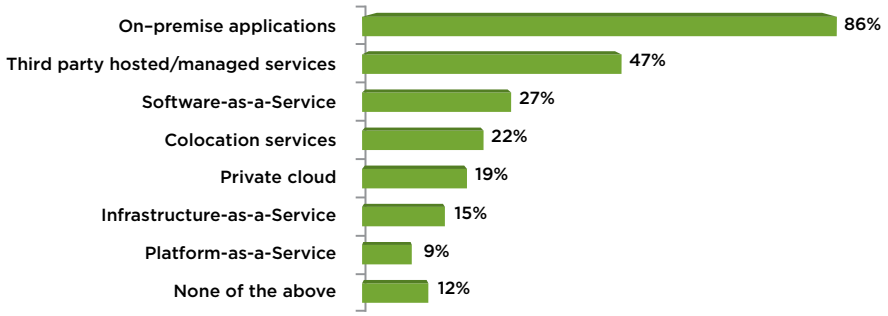
Defining the organisational environment is critical to further our understanding. The research highlighted that the majority of organisations (86 per cent) operate an on-premise server room or data centre and as such are well invested in on-premise IT when they make a Cloud service decision. In fact, today the typical end user has a Hybrid IT estate comprising a range of Cloud, on-premise and hosted services as reflected in the table below.

Which of the following deployment models are included in your IT estate today? Showing the total (all respondents)



Sample: 250

69% of all organisations interviewed already consciously use Cloud Services formally for at least one application area within their organisation

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In addition to Cloud being pervasive across all organisational sizes and verticals, it is equally diverse in terms of the spread of application areas being accessed as a Cloud service as reflected in the table below. The table also shows the timeline associated with adoption of Cloud Services and for the majority of application areas reflects that the rate of adoption in the last six months is higher than the preceding periods, reinforcing a broadening in scope and pervasiveness of Cloud.

Do you use hosted or Cloud-based services for the following applications?

All respondents	No	Not yet, we plan to	Yes, in the last 6 months	Yes, in the last 6-12 months	Yes, in the last 12-18 months	Yes, more than 18 months ago
Accounting and finance applications	67%	16%	5%	6%	2%	5%
Advertising and online marketing services	21%	23%	17%	17%	8%	15%
Collaboration services	29%	20%	20%	11%	9%	13%
CRM	40%	21%	13%	11%	10%	4%
Data backup/disaster recovery services	37%	20%	13%	11%	6%	14%
Data storage services	34%	16%	15%	12%	12%	12%
Document management	47%	20%	14%	8%	8%	5%
Email services	22%	19%	22%	12%	9%	16%
eShop services	24%	12%	16%	16%	16%	16%
Infrastructure-as-a-Service	28%	11%	28%	11%	17%	6%
IT asset management services	41%	18%	17%	11%	5%	9%
IT operations management	47%	17%	14%	9%	4%	8%
IT security services	40%	18%	12%	12%	5%	13%
Managed IT services	33%	19%	13%	11%	10%	14%
Office automation/productivity	54%	31%	7%	3%	3%	2%
Partner relationship management	23%	18%	32%	18%	5%	5%
Personnel and payroll	63%	3%	11%	11%	5%	6%
Portal services	33%	15%	15%	7%	18%	13%
Sales management	35%	16%	19%	19%	3%	6%
Service management/help desk services	40%	21%	11%	12%	2%	14%
Test & QA services	47%	26%	15%	6%	3%	3%
Unified communications	28%	31%	19%	19%	3%	0%
Video conferencing	41%	14%	18%	11%	4%	13%
VOIP	49%	21%	11%	6%	6%	6%
Webhosting	13%	13%	19%	14%	13%	28%
Workflow systems	40%	26%	12%	12%	0%	9%
Niche vertical applications	67%	33%	0%	0%	0%	0%
Other	0%	0%	0%	0%	100%	0%

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When looking at the adoption of Cloud Services it is noteworthy that they are considered both for new workloads previously not available to the organisation as well as upgrading or replacing existing on-premise solutions. Whilst there are some logical trends such as Collaboration services and video conferencing being primarily adopted as new services the chart equally reflects users are comfortable with replacing established on-premise capabilities with Cloud Services across the board.

Where applicable, was the Cloud service implementation a new service or a service that existed on-premise that had to be migrated?

Combination grid showing the respondents who answered 'a new service / an existing service that had to be migrated'

Only asked of respondents whose organisation uses hosted or Cloud-based services for one of the following applications	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Accounting and finance applications	**45% / 55%**	60% / 40%	44% / 56%	38% / 63%	50% / 50%	42% / 58%
Advertising and online marketing services	**67% / 33%**	63% / 38%	73% / 27%	63% / 38%	64% / 36%	69% / 31%
Collaboration services	**52% / 48%**	71% / 29%	56% / 44%	38% / 62%	33% / 67%	60% / 40%
CRM	**48% / 52%**	50% / 50%	58% / 42%	29% / 71%	71% / 29%	40% / 60%
Data backup/disaster recovery services	**44% / 56%**	55% / 45%	42% / 58%	33% / 67%	54% / 46%	41% / 59%
Data storage services	**43% / 57%**	43% / 57%	38% / 63%	50% / 50%	54% / 46%	39% / 61%
Document management	**41% / 59%**	55% / 45%	20% / 80%	33% / 67%	0% / 100%	45% / 55%
Email services	**32% / 68%**	23% / 77%	44% / 56%	29% / 71%	41% / 59%	28% / 72%
eShop services	**63% / 38%**	80% / 20%	67% / 33%	40% / 60%	50% / 50%	70% / 30%
Infrastructure-as-a-Service	**45% / 55%**	50% / 50%	100% / 0%	38% / 63%	50% / 50%	44% / 56%
IT asset management services	**67% / 33%**	100% / 0%	56% / 44%	64% / 36%	80% / 20%	59% / 41%
IT operations management	**30% / 70%**	67% / 33%	30% / 70%	9% / 91%	27% / 73%	31% / 69%
IT security services	**37% / 63%**	70% / 30%	27% / 73%	20% / 80%	33% / 67%	38% / 62%
Managed IT services	**47% / 53%**	38% / 63%	53% / 47%	45% / 55%	64% / 36%	38% / 62%
Office automation/productivity	**67% / 33%**	100% / 0%	67% / 33%	33% / 67%	33% / 67%	83% / 17%
Partner relationship management	**77% / 23%**	100% / 0%	50% / 50%	60% / 40%	100% / 0%	75% / 25%
Personnel and payroll	**45% / 55%**	43% / 57%	63% / 38%	36% / 64%	54% / 46%	38% / 63%
Portal services	**59% / 41%**	50% / 50%	67% / 33%	60% / 40%	50% / 50%	63% / 37%
Sales management	**40% / 60%**	43% / 57%	33% / 67%	40% / 60%	50% / 50%	36% / 64%
Service management/help desk services	**41% / 59%**	25% / 75%	60% / 40%	38% / 62%	44% / 56%	38% / 62%
Test & QA services	**33% / 67%**	100% / 0%	0% / 100%	20% / 80%	0% / 100%	43% / 57%
Unified communications	**67% / 33%**	100% / 0%	67% / 33%	63% / 38%	20% / 80%	90% / 10%
Video conferencing	**80% / 20%**	100% / 0%	89% / 11%	60% / 40%	63% / 38%	88% / 12%
VOIP	**53% / 47%**	100% / 0%	40% / 60%	45% / 55%	60% / 40%	50% / 50%
Webhosting	**48% / 52%**	48% / 52%	52% / 48%	44% / 56%	45% / 55%	48% / 52%
Workflow systems	**50% / 50%**	50% / 50%	29% / 71%	64% / 36%	43% / 57%	53% / 47%
Niche vertical applications	**0% / 0%**	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%
Other	**0% / 100%**	0% / 100%	0% / 0%	0% / 0%	0% / 0%	0% / 100%

Looking into the drivers for first time Cloud adoption, the flexibility of Cloud as a delivery model continues to be cited as the most common primary reason for adoption, with operational cost savings and 24/7 service dependence following in joint second place, and scalability, lack of in-house skills and low cost of adoption sharing a close third place.

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Which of these were reasons for adopting hosted or Cloud-based services?

Combination grid showing the respondents who answered **"This was the primary reason"**

Only asked of respondents whose organisation uses hosted or Cloud-based services	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
24/7 service dependence	**9%**	6%	10%	10%	9%	9%
Avoiding additional capex	**2%**	0%	2%	3%	0%	3%
Flexibility of delivery	**13%**	13%	13%	14%	14%	13%
Lack of in house skills	**8%**	8%	7%	10%	10%	7%
Limited internal resource priorities	**4%**	9%	2%	2%	2%	5%
Low cost of adoption	**8%**	15%	8%	2%	10%	7%
New service – no experience	**6%**	6%	8%	3%	5%	6%
Operational cost savings	**9%**	11%	8%	8%	12%	8%
Policy decision	**5%**	4%	3%	7%	9%	3%
RoI vs. on-premise	**3%**	4%	2%	3%	2%	4%
Scalability	**8%**	6%	8%	10%	2%	11%
Temporary project	**1%**	0%	3%	0%	0%	2%
Time to market deadline	**0%**	0%	0%	0%	0%	0%
Other	**3%**	2%	5%	3%	7%	2%
Base	**172**	53	60	59	58	114

It is also interesting to note that when looking retrospectively at which objectives were realised in implementing Cloud Services, the picture follows a fairly consistent pattern as shown in the table below with flexibility of access to technology and improving uptime and availability leading the list. One objective that is clearly achieved but that was not cited as a reason for initially adopting Cloud Services, was in regard to reducing the risk of loss of data.

Which of the following were the desired business objectives of migrating to the Cloud? And if so, which have you achieved?

Combination grid showing the respondents who answered
"This was an objective, and one we have achieved without difficulty"

Respondents whose organisation uses hosted or Cloud-based services	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Improving cash flow	**11%**	13%	10%	10%	10%	11%
Improving service levels of IT	**28%**	26%	30%	27%	31%	26%
Improving uptime/reliability of IT	**31%**	40%	25%	31%	33%	31%
Increasing flexibility of access to technology (i.e. ability to increase or decrease use)	**33%**	28%	35%	34%	34%	32%
Increasing speed of access to technology	**27%**	32%	30%	20%	26%	28%
Reducing capital expenditure	**24%**	25%	25%	24%	26%	24%
Reducing the pressure on IT staff within the company	**21%**	23%	22%	19%	22%	20%
Reducing the requirement for number of skilled personnel in-house	**16%**	23%	12%	14%	14%	17%
Reducing the risk of lost data	**30%**	25%	35%	29%	28%	31%
Base	**172**	53	60	59	58	114

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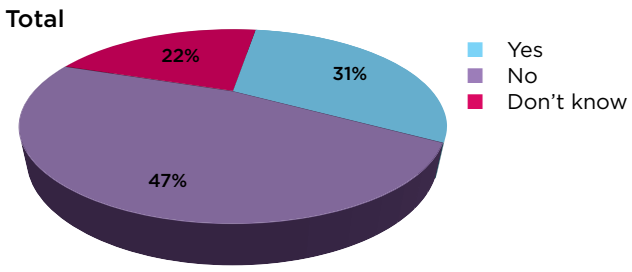
In terms of the initial targets that were set for improvement adopting through to the Cloud Services that were not achieved by the organisations participating in the research, the highest correlations (although all minority positions) centred on failing to reduce the pressure on IT staff (19 per cent), failing to increased speed of access to technology (17 per cent), and failing to improve IT Service Levels (17 per cent).

68% of current Cloud service users expect to increase use over next 12 months

Outlook

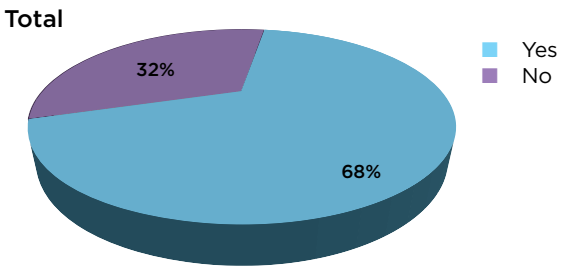
Looking forward into 2014, in regard to the 31 per cent of companies not yet making use of Cloud Services, a third of them (9 per cent of the whole base) stated they expected to make use within the next year. Only 4 per cent of companies in the total research project did not expect to make use of Cloud-based services in the delivery of their IT strategy at any point.

Do you anticipate Cloud Services being adopted by your organisation within 12 months?



Sample: 78

Do you expect your adoption of Cloud Services to increase over the next 12 months?



Sample: 172

For those that already use Cloud Services, satisfaction with the results of that use remained very healthy at 91 per cent of end users being satisfied with their decision to use Cloud Services. This is further reinforced by the fact that 68 per cent of these organisations expect to increase their use of Cloud Services over the coming year.

91% of Cloud users are satisfied with their experience to date

Arguably the research confirms in terms of attitude toward adoption of Cloud Services is moving on from mere understanding and acceptance of the delivery model to the practicalities of making the transition. A key point of evidence for this stems from the response gained when asked if Cloud Services were now formally considered as an option for deployment of a new or replacement solution. Those already engaged in Cloud Services had largely moved beyond the notion of a proof of concept to one of weighing up the options on a project by project basis, 78 per cent of the CxO's involved were comfortable to include Cloud as an option. It is also noted that the majority of decision are technically led (66 per cent) versus business led (34 per cent).

Does your company include consideration for Cloud Services within its wider IT strategy?

Respondents whose organisation either uses or plans to use Cloud Services	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Yes	**78%**	71%	79%	83%	80%	77%
No	**22%**	29%	21%	17%	20%	23%
Base	**201**	63	68	70	66	135

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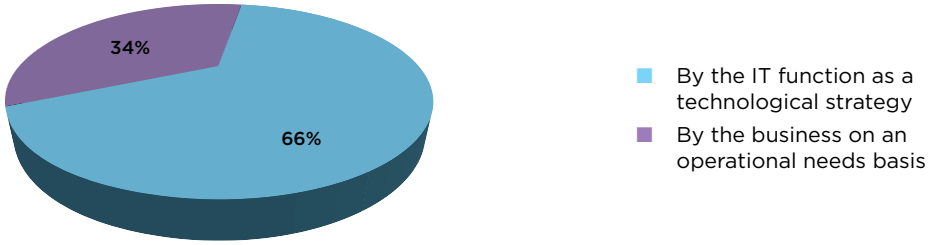
Is Cloud adoption driven within your business principally by the IT function as a technological strategy, or by the business on an operational needs basis?

Total



Sample: 157

So how can we summarise Cloud adoption in the UK in that second half of 2013? This picture is of increasing growth, with the majority of UK businesses now adopting at least one Cloud-based service and that number is forecast to grow to almost 80 per cent by mid 2014. Satisfaction levels remain high and two thirds of ends users operating a Cloud service today expect to extend their footprint of Cloud Services over the coming year. Equally Cloud is seen as a viable deployment model within the context of an organisations IT strategy, but it is not seen as the only viable model and most organisations foresee the continued use of on-premise IT alongside Cloud-based services for the foreseeable future resulting in a prevalence of Hybrid IT estates.

This picture is of increasing growth, with the majority of UK businesses now adopting at least one Cloud-based service and that number is forecast to grow to almost 80% by mid 2014

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2. Hybrid IT – the new norm?

Hybrid IT, is hardly a new phenomenon as it relates to the co-existence of multiple IT deployments models, which has been true for most business since the move away from mainframes in the 1980's, however, most have been the product of a transition process rather than an explicit strategy. Arguably this is not the case today and to further test the extent to which on-premise will continue to co-exist alongside Cloud-based services, we asked participants that already use Cloud Services if they would ever consider moving their entire IT estate to the Cloud. The results were quite enlightening in that 50 per cent of firms could see themselves one day being wholly based in the Cloud, however, this fluctuates based upon the size of the company with the larger end of the market being more reticent than the small end users. Furthermore, to put it in practical context only 12 per cent saw this as an immediate possibility for their organisation, with a further 17 per cent stating that they would consider doing so under a programme of product refresh cycles, and the balance of 22 per cent saying that they did not believe the Cloud could offer them a full solution at this time even though they were open to the prospect of moving entirely to the Cloud. So in reality 29 per cent of firms believe a practical transition is possible, 50 per cent believe it is not possible for them to achieve that goal and 22 per cent remain open minded but not convinced of the solution maturity for their business needs as shown in the table below.

Do you foresee that you will ever move your entire IT estate to Cloud-based or third party hosted services?

Respondents whose organisation uses hosted or Cloud-based services	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Yes: as soon as practical	**12%**	13%	18%	3%	21%	7%
Yes: based on refresh of applications	**17%**	21%	15%	15%	16%	18%
Yes: although the Cloud proposition is not ready for us to make this move yet	**22%**	23%	22%	20%	19%	23%
No: we intend to keep specific applications on-premise	**50%**	43%	45%	61%	45%	53%
Base	**172**	53	60	59	58	114

The rationale for those not yet willing to move everything to the Cloud covers a wide variety of concerns as set out in the following table with potentially mis-placed as well as practical perceptions of lost efficiencies, security concerns, existing on-premise investments and data protection concerns driving the most opinions. Of course, as has been explored in previous White Papers these issues can be adequately addressed in a Cloud-based approach with appropriate due diligence. However, the topic is broad and opinions run deep and reflects a need for the market to provide greater transparency and comfort to the market in order to be trusted to transition a broader range of services to Cloud solutions.

The topic is broad and opinions run deep and reflects a need for the market to provide greater transparency and comfort to the market in order to be trusted to transition a broader range of services to Cloud solutions

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What are the primary reasons for not wishing to move specific applications to Cloud Services?

Respondents whose organisation aims to keep specific applications on premise	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Efficiency	**53%**	48%	67%	47%	42%	58%
Security concerns	**52%**	35%	52%	64%	69%	45%
Investments already made in on-premise	**41%**	52%	44%	31%	38%	42%
Data protection concerns	**40%**	30%	26%	56%	65%	28%
Legacy technology restrictions	**33%**	26%	26%	42%	35%	32%
Proprietary technology	**28%**	26%	30%	28%	35%	25%
Protection of intellectual property	**24%**	35%	7%	31%	19%	27%
Retention of key skills	**17%**	13%	15%	22%	23%	15%
Other	**8%**	13%	4%	8%	8%	8%
Base	**86**	23	27	36	26	60

Taking this one step further, to understand the nature of data that organisations were most concerned about transitioning to the Cloud, employee data still topped the bill followed closely by accounts/financial records.

For which IT services would your business not consider using Cloud Services?

Only asked of respondents whose organisation would not consider using Cloud Services for all aspects of their business	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Employee information	**56%**	62%	59%	48%	56%	56%
Accounts/financial data services	**50%**	54%	53%	45%	51%	50%
Internal file sharing	**40%**	41%	29%	48%	37%	41%
File/print services	**26%**	30%	26%	23%	29%	24%
Email	**21%**	30%	15%	18%	17%	23%
Data storage/backup	**19%**	11%	26%	20%	32%	11%
IP/patent data	**19%**	5%	21%	30%	29%	13%
IT support	**18%**	14%	29%	13%	24%	14%
Client/third-party data	**15%**	16%	18%	13%	5%	21%
Core applications	**18%**	22%	21%	13%	22%	16%
Core/mission-critical data	**11%**	5%	24%	5%	10%	11%
Other	**5%**	5%	3%	5%	5%	4%
Base	**111**	37	34	40	41	70

One positive development in the battle against FUD (Fear, Uncertainty and Doubt) being peddled is that organisations are becoming more savvy in regard to the practical issues around data sovereignty. The number of organisations that perceive they have a regulatory requirement to store data locally has reduced to 37 per cent from 44 per cent in late 2012.

Looking in closer detail, when asked if any application areas required data to be stored in a specific location, whilst a wide range of solutions still scored quite highly, it was pleasing to note that in aggregate all application areas saw a decrease in perceived risk over the last 12 months as exemplified in the chart over leaf.

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Is your organisation required to store data for the following applications in a specific location?

Combination grid showing the respondents who answered **"Yes"**
The comparison between White Paper 8 / White Paper 12 (Greater% / Smaller%)

All respondents (respondents only saw the applications that they currently use)	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Accounting and finance applications	**58% / 52%**	46% / 37%	58% / 57%	67% / 59%	65% / 67%	54% / 44%
Collaboration services	**51% / 35%**	44% / 27%	43% / 29%	58% / 40%	48% / 43%	52% / 30%
Data backup/disaster recovery services	**62% / 56%**	55% / 50%	68% / 58%	63% / 60%	63% / 65%	62% / 52%
Data storage services	**65% / 55%**	65% / 53%	57% / 48%	72% / 62%	68% / 64%	64% / 49%
Document management	**59% / 46%**	48% / 34%	48% / 56%	74% / 49%	65% / 59%	56% / 39%
Email services	**54% / 43%**	49% / 28%	52% / 51%	61% / 49%	55% / 53%	54% / 38%
eShop services	**65% / 47%**	67% / 55%	73% / 29%	59% / 50%	50% / 70%	74% / 36%
Infrastructure-as-a-Service	**52% / 16%**	50% / 33%	60% / 0%	50% / 14%	44% / 17%	58% / 15%
IT asset management services	**50% / 46%**	32% / 38%	47% / 33%	59% / 54%	63% / 59%	42% / 37%
Partner relationship management	**56% / 23%**	100% / 25%	50% / 67%	50% / 13%	67% / 20%	54% / 24%
Personnel and payroll	**64% / 50%**	60% / 40%	64% / 51%	66% / 58%	70% / 63%	60% / 44%
Test & QA services	**56% / 17%**	60% / 13%	60% / 17%	50% / 19%	63% / 23%	53% / 15%
Niche vertical applications	**88% / 53%**	100% / 0%	100% / 50%	75% / 67%	83% / 57%	100% / 50%

In regard to the interpretation of where the data was required to be stored 84 per cent of respondents who believed they had a restriction or obligation required the data to be stored in the UK with over half of those (48 per cent in whole terms) still being preferred to be kept in some form on-premise and the balance of 36 per cent being hosted within the UK. Only 13 per cent of organisations believed they would or should store their data elsewhere in the EEA despite being under the same umbrella legislations and only 2 per cent saw that regions outside of the EEA were acceptable.

In regard to the data that you are required to store in a specific location, where are you required to store it?

Respondents whose applications require data to be stored in a specific location	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
On-premise	**48%**	51%	53%	42%	46%	50%
Hosted within the United Kingdom	**36%**	39%	29%	42%	41%	33%
Hosted within the EEA	**13%**	7%	15%	15%	10%	15%
Other	**2%**	2%	3%	2%	3%	2%
Base	**168**	41	62	65	68	100

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Other practical constraints identified by end users as issues that impact their choice of deployment model relate to:

- The levels of Integration between applications - which if significant may limit use of public Cloud Services.
- The degree of flexibility in scale of use that is required over time - the more flexible the need, the more pro-Cloud the outcome.
- The perception of risk associated with the sensitivity of the data - the higher the risk the more typically organisations avoid public Cloud solutions.

The table below sets out the summary of responses by application area.

Do the following applications have specific requirements that impact deployment considerations?

Combination grid showing the respondents who answered "Yes"

All respondents. Respondents only shown answers selected in sheet 5	Application Integration	Flexible scale	Higher Security risk
Accounting and finance applications	**68%**	32%	43%
Advertising and online marketing services	**47%**	39%	5%
Collaboration services	**58%**	51%	17%
CRM	**75%**	52%	33%
Data backup/disaster recovery services	**49%**	55%	53%
Data storage services	**54%**	67%	55%
Document management	**66%**	56%	31%
Email services	**58%**	54%	31%
eShop services	**66%**	44%	25%
Infrastructure-as-a-Service	**42%**	58%	26%
IT asset management services	**44%**	37%	13%
IT operations management	**48%**	47%	24%
IT security services	**52%**	37%	48%
Managed IT services	**37%**	42%	12%
Office automation/productivity	**55%**	40%	10%
Partner relationship management	**58%**	46%	15%
Personnel and payroll	**49%**	26%	51%
Portal services	**62%**	39%	18%
Sales management	**61%**	43%	18%
Service management/help desk services	**57%**	32%	7%
Test & QA services	**38%**	32%	9%
Unified communications	**51%**	47%	11%
Video conferencing	**24%**	25%	0%
VOIP	**29%**	37%	6%
Webhosting	**35%**	46%	17%
Workflow systems	**68%**	42%	18%
Niche vertical applications	**93%**	87%	47%
Other	**50%**	50%	0%

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CIF are committed to driving transparency of regulatory and legal constraints and education the market on best practice in order to ensure end user perceptions are based on factual information and proportionate to the issues so that rational decisions can be made. However, this takes time to become the accepted wisdom and due to a prevailing combination of practical, logical, emotional and mis-informed opinions it is a very brave (and maybe foolish) person who would today state that Cloud will be the only deployment model in use in the foreseeable future. The reality is Cloud use will continue to increase its penetration of the market both in terms of new users and extended use within existing users. It will continue to grow in all areas of application capability and will be deployed in private and public forms and consumed as infrastructure, platform and software as a service. It will not, for the majority though, replace all on-premise capabilities even though 50 per cent of the market (and notably in the smaller end of the market) attitudes are opening up to the possibility in greater numbers.

Whether influenced by bandwidth restrictions, local site process sensitivity, data security, privacy or sovereignty or even an internal or external sense of regulation and governance, Hybrid IT is the increasing norm for the typical CIO, bringing with it new challenges for managing and governing IT in a distributed and often multi-party environment.

Operational complexity Influences the choice of IT deployment model 48% of Cloud users still prefer to keep some of their data on-premise

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3. The practicalities of managing a Hybrid IT estate

When making the first tentative steps in the use of a Cloud service for the first time, organisations favour an approach of try-before-you-buy to get confidence that the solution experience (more than the feature set) and the solution provider meet their operational needs and service level expectations. 58 per cent of users claimed to have conducted a pilot/trial before contracting formally for the service. Cloud Service Providers are best placed if they ensure that such capabilities (whether completely free or a paid for time limited pilot) are made available within their go-to-market strategy in order to demonstrate transparency of practice and capability which in turn assists the establishment of trust between the parties.

Did you trial Cloud Services before committing to purchase?

Respondents whose organisation uses hosted or Cloud-based services	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Yes	**58%**	45%	63%	64%	64%	55%
No	**42%**	55%	37%	36%	36%	45%
Base	**172**	53	60	59	58	114

End users continue to express a range of concerns when considering the appropriate deployment model for an IT solution. The internal concerns that had to be investigated and allayed as part of the transition to use Cloud Services were in line with previous research undertaken by CIF and are set out over leaf with the issues of Data Security and Privacy topping the concerns followed by the practicalities of access to, and bandwidth of, internet connections. After these generic issues the focus really turns to establishing trust with CSP's in order to have confidence control, reliability, and avoiding commercial issues like lock in. Whilst these concerns are not seen as fundamental blockers for Cloud adoption, well prepared CSP's will proactively advise their customers and prospects that they are aware of such concerns and provide transparency as to how their solutions remediate these issues.

The focus really turns to establishing trust with CSP's in order to have confidence control, reliability, and avoiding commercial issues like lock in

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What "concerns / most significant concerns" were expressed during the decision-making process to migrate to the Cloud?

Respondents whose organisation uses hosted or Cloud-based services	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Data security	**69% / 57%**	53% / 44%	73% / 63%	80% / 61%	69% / 62%	69% / 54%
Data privacy	**51% / 51%**	30% / 46%	53% / 54%	68% / 51%	66% / 58%	44% / 47%
Dependency upon internet access (availability and bandwidth)	**37% / 29%**	30% / 30%	35% / 28%	44% / 30%	36% / 27%	37% / 30%
Fear of loss of control/manageability	**36% / 28%**	32% / 24%	33% / 26%	42% / 34%	36% / 24%	36% / 30%
Contract lock-in	**28% / 26%**	36% / 21%	23% / 29%	25% / 29%	26% / 26%	29% / 27%
Cost of change/migration	**24% / 25%**	17% / 22%	20% / 25%	34% / 29%	26% / 30%	23% / 23%
Confidence in the reliability of the vendors	**24% / 18%**	17% / 16%	23% / 16%	31% / 23%	22% / 14%	25% / 21%
Regulatory constraints	**23% / 19%**	9% / 14%	15% / 18%	42% / 24%	33% / 24%	18% / 16%
Data sovereignty/jurisdiction	**21% / 26%**	21% / 29%	17% / 21%	25% / 30%	26% / 29%	18% / 25%
Contractual liability for services if SLA's are missed	**20% / 14%**	25% / 14%	12% / 16%	24% / 13%	19% / 11%	20% / 16%
Lack of clarity of impact of Cloud Services on business processes	**19% / 15%**	19% / 16%	10% / 12%	29% / 17%	22% / 11%	18% / 17%
Confidence in the clarity of charges (i.e. will they be cheaper than on-premise)	**17% / 14%**	15% / 17%	13% / 18%	22% / 7%	17% / 14%	17% / 14%
Confidence in the vendors business capability	**14% / 13%**	13% / 10%	12% / 10%	17% / 19%	12% / 11%	15% / 14%
Confidence in knowing who to choose to supply service	**13% / 9%**	15% / 8%	8% / 9%	15% / 10%	14% / 9%	12% / 9%
Lack of confidence in the business case to need Cloud Services	**12% / 5%**	19% / 5%	10% / 7%	7% / 3%	7% / 5%	14% / 5%
Lack of clarity in most appropriate Cloud deployment model	**11% / 8%**	17% / 11%	3% / 4%	14% / 9%	12% / 5%	11% / 10%
Lack of clarity in most effective service delivery model	**9% / 6%**	21% / 13%	2% / 3%	7% / 4%	7% / 5%	11% / 7%
Lack of any advice from within the company to adopt	**7% / 4%**	6% / 6%	3% / 3%	12% / 4%	9% / 5%	6% / 4%
Lack of any promotion or awareness by the people we buy IT from	**3% / 1%**	8% / 2%	0% / 1%	3% / 1%	2% / 2%	4% / 1%
Other	**2% / 0%**	2% / 0%	0% / 0%	3% / 1%	3% / 2%	1% / 0%
Base	**172**	53	60	59	58	114

Once the internal concerns are overcome and the solution piloted or trialled, the practical experiences of implementing a Cloud service need to be taken in to consideration. It is noteworthy that 43 per cent of end users relied on the CSP to provide implementation and migration services, a further 31 per cent contracted with a third party company to manage the implementation, and only 23 per cent of end users managed the migration process on their own.

Reflecting on their experiences, and with the benefit of hindsight, only 23 per cent of end users claimed to have no issues with their Cloud implementation, with the balance commenting on a range of unplanned experiences such as the complexity of the migration, challenges with the internet access, extended time to implement etc.

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Which, if any, of the following difficulties did you experience when migrating to a Cloud solution?

Respondents whose organisation aims to keep specific applications on premise	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Complexity of migration	**34%**	25%	32%	44%	43%	29%
Dependency on internet access	**30%**	26%	37%	25%	29%	30%
It took longer than we had originally allocated time for, or been quoted	**22%**	23%	15%	29%	22%	22%
Data sovereignty concerns	**22%**	19%	13%	32%	31%	17%
Vendor lock in	**19%**	15%	18%	24%	17%	20%
Contractual issues such as liability	**15%**	15%	10%	20%	14%	16%
Lack of advice from within the company to adopt	**15%**	9%	20%	15%	12%	17%
The actual cost was more than we had originally envisaged, or been quoted	**15%**	13%	12%	19%	19%	12%
Confidence in the clarity of charges (i.e. will they be cheaper on-premise)	**13%**	9%	10%	19%	12%	13%
Lack of business case to need Cloud Services	**8%**	4%	5%	14%	9%	7%
Lack of confidence in vendor	**8%**	6%	12%	5%	5%	9%
We did not experience any difficulties	**23%**	34%	20%	17%	22%	24%
Base	**172**	53	60	59	58	114

Those that did experience difficulties during the migration to the Cloud expressed the impact of those difficulties in terms of lost productivity, delays in time to market, and some negative impact on customer experience. That said, as we saw earlier 91 per cent of end users remain satisfied with their Cloud service, and 40 per cent of end users believe they will be able to implement further Cloud Services more cost effectively based upon their initial experiences.

What was the business impact of these difficulties? Showing the total

Respondents whose organisation faced difficulties when migrating to a Cloud solution

Sample: 132

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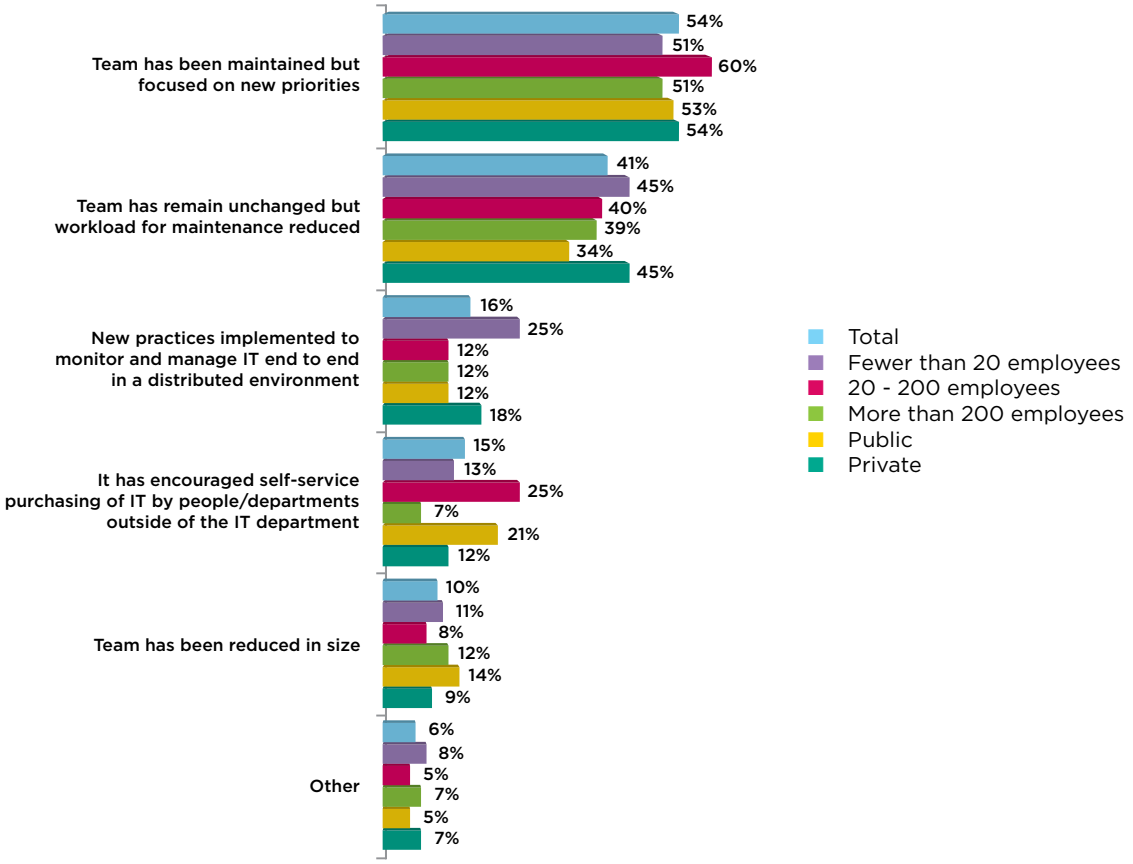
Bearing in mind that much of the fear associated with the use of Cloud-based services is often associated with a perception that the IT department will be cut back, it is clear from the evidence provided in the research project that 90 per cent of firms do not reduce head count in IT. Rather, than increase their focus on new projects, ease the burden on over-stretched resources and implement new service enhancing practices. Only 10 per cent of firms specifically cited staff reduction as a direct correlation to the adoption of Cloud-based services.

What impact has Cloud migration had on the structure of the IT department in your organisation?



When accepting that a Hybrid IT estate is the typical outcome for most organisations, the challenge becomes one of clarity around how to manage and govern IT in this new and increasingly diverse world.

Some of the key findings in the research reinforce this position in that:

1. 67 per cent of organisations are seeking to operate a single governance model regardless of IT deployment models used. 32 per cent believe they have this practice in operation today.
2. 85 per cent of organisations want their IT department to maintain overall control of the entire IT stack, regardless of whether it is delivered on premise or via service providers.
3. 79 per cent of organisations want a single monitoring solution to oversee all IT operations, but only 30 per cent perceive they have that capability today.
4. Only 5 per cent of organisations believe they have a single management platform in operation today that can manage workloads on-premise and in third party Cloud solutions even though 58 per cent wish to manage their IT as one resource.

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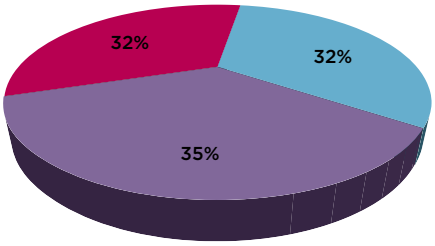
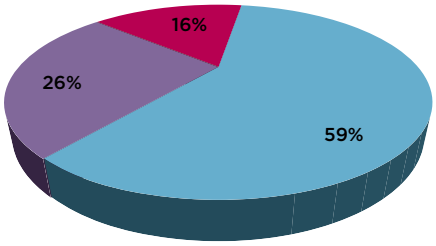
Do you set out a single IT governance framework that oversees all IT regardless of deployment model?

Total



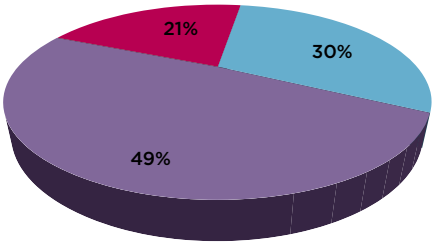
Does your IT function maintain overall control of application service levels regardless of deployment model?

Total



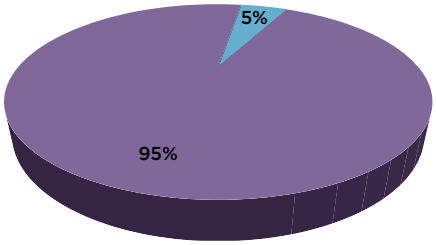
Do you have a single reporting capability that provides executive overview and operational management information across all your IT solutions?

Total



Do you have an IT management platform that enables you to manage IT workloads that are on-premise and Cloud-based?

Total



Yes, something we currently do | No, but something we intend to do | No, and we do not intend to do this

Sample: 250

So the clear intent of the organisations surveyed is to embrace Hybrid IT as an outcome and to invest in their governance, monitoring and management solutions to enable them to master the complexity that arises in this prevailing environment. When asked to state their concerns about the issues they face in managing the complexity of Hybrid IT, the issues that came to the surface were related to the risk of inefficiency and error associated with data replication, protection, control, interoperability and migration, along with the financial inefficiency that poor execution could incur.

What are the biggest challenges you face in managing IT across multiple deployment models?

Respondents whose organisation uses hosted or Cloud-based services	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Avoiding data replication	**41%**	55%	45%	25%	31%	46%
Managing data protection	**39%**	28%	35%	53%	55%	31%
Having a single view of the IT estate to make informed decisions	**38%**	25%	43%	46%	43%	36%
Mitigating costs	**37%**	40%	30%	42%	38%	37%
Enabling data transfer and interoperability	**34%**	40%	33%	31%	34%	34%
Migrating workloads between platforms	**19%**	17%	18%	20%	19%	18%
Ensuring service level transparency and attainment	**15%**	15%	8%	22%	14%	16%
Other	**1%**	4%	0%	0%	0%	2%
Base	**172**	53	60	59	58	114

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Finally, it was encouraging to note that in seeking to source credible CSP's end users expressed by a substantial majority (65 per cent) that they would prefer to work with Vendors who are publicly certified against an industry Code of Practice. Today CIF operate the only certified CoP and it exists as an independent benchmark of best practice and key credentials that credible CSP's should be able to measure up to and provide sufficient assurance of transparency, capability and accountability to the market.

Do you see value in working with CSP's who sign up publicly to an industry CoP that is independently audited over those that have no public accountability?

All respondents	Total	No. employees Fewer than 20	20 - 200	More than 200	Public	Private
Yes	**65%**	70%	57%	69%	68%	64%
No	**35%**	30%	43%	31%	32%	36%
Base	**250**	82	84	84	84	166

The majority of organisations seeking to use Cloud Services would prefer to work with Certified CSP's

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4. Future trends: an outlook to 2014

We have now conducted 4 research projects over 36 months looking at Cloud adoption in the UK, and as such have a sound basis for assessment and evaluation of trends. The following statements have been updated and put forward as market forecasts from the Cloud Industry Forum based on the extrapolation of empirical trends seen to date and reflecting on current and emerging attitudes toward Cloud Services and innovation. Clearly, the past is not always an accurate predictor of the future, but these statements reflect a pragmatic assessment of likely outcomes.

- First time adoption of Cloud Services will increase by 11 points (20 per cent in real terms) by the end of 2014, meaning that 80 per cent of all businesses in the UK will be formally using at least one Cloud service by that time.
- 15 per cent of businesses will report a primary Cloud based IT strategy, 15 per cent will remain entirely on-premise and 70 per cent will have a Hybrid IT environment. Meaning that the majority of companies will continue to invest in on-premise IT alongside Cloud solutions.
- Secondary adoption (i.e. existing users expanding their Cloud Services) will exceed 80 per cent of existing Cloud users by the end of 2014, meaning 4 out of 5 Cloud users will have increased their expenditure on Cloud Services.
- Growth by application will likely be higher for application areas covering line of business applications, collaboration solutions, productivity suites, IaaS/storage, data back-up and disaster recovery.
- Convergence of fixed / mobile, voice / data communications and IT will continue to be a core enabler of effective Cloud adoption both in terms of Cloud applications and device function.
- Key technology innovation around platform independent monitoring, management and governance of a Hybrid IT estate will grow in prominence and will be instrumental to supporting IT strategy for CIO's.
- The maturity of process in selection of Cloud based solutions within an IT strategy will be based on broader considerations of transparency, reputation, interoperability and governance rather than point process benefits.
- Cloud Service contracts will become more standardised as awareness of the complexities of the supply chain and of data portability at end of contract become more prominent. Key topics covered in agreements will include data sovereignty, data protection, back-to-back supply chain agreements, service levels and business continuity options, liability and data recovery at contract end.
- The ability to try-before-you-buy will become the norm focusing on service experience and performance. Trials will be a mix of both free, no-obligation trials and short term paid proof of concepts.
- Service led consultancies and resellers will become critical enablers of Cloud adoption and win market share, establishing trust and reputation with companies moving to the Cloud through on-boarding and management services.
- Standards relating to interoperability between platforms and providers will still be immature with competing perspectives. Commercial transparency and adoption of best practice will be the primary test of credibility for CSP's within this timescale.

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5. Conclusions

Hybrid IT is the new norm. Whilst the evolution and innovation of Cloud technology will continue at a pace, we will in the not-too-distant-future see the complexities and challenges of monitoring and management of Hybrid IT environments subside as inter-operation between platforms improve, commercial policies and practices for data migration simplify and technical standards normalise and mature. Today only 30 per cent of organisations have a common monitoring platform that can oversee their entire IT capability (on and off premise), which is perhaps more than coincidentally aligned to the number of organisations that have a common governance model and practices in place (32 per cent) regardless of deployment models used. However, whilst the maturity of practices may be low as a percentage (only 5 per cent of organisations surveyed believed they had the capability to manage their IT systems through a common management platform today), the general intent is much higher with almost two thirds of organisations (59 per cent) making the IT department accountable for all applications used by the business, which in turn emphasises the gap to close in monitoring capability as the market evolves, otherwise inefficiency and error will creep in where multiple tools are used to oversee diverse platforms.

In this new era of Hybrid IT environments, it is essential that we look beyond pure deployment models to understand that IT is evolving as an enabler of business agility and transformation rather than a cost centre to deliver applications and devices. Contrary to common misconceptions, IT staffing levels are maintained in a Cloud enabled world (in 90 per cent of organisations), but more focus of the IT team is placed on delivering new projects and priorities as opposed to investing the time in keeping on top of maintenance schedules as in on-premise solutions. More emphasis also appears to be placed on self-service procurement rather than using an intermediary to reduce costs and improve time to market.

So what can we learn from all this research and data points? The reality is Cloud is a proven and acceptable IT deployment model, but for most organisations it is one of many that will be used, and as such most organisations will operate a Hybrid IT environment for the foreseeable future. The benefits of adopting Cloud alongside on-premise are proven and monitoring and governance models are improving ahead of a common management platform, but that this gap does not hinder adoption or progress. So Hybrid IT is a natural and unstoppable evolution in the IT landscape and will evolve and enhance business outcomes with the continued investment of time and innovation.

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Computacenter Services & Solutions
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TREND MICRO
CSS CORP
TRUSTMARQUE INFRASTRUCTURE & SOFTWARE SOLUTIONS
DIGITAL REALTY Data Centre Solutions
UKFAST
Databarracks
uk PLC
DELL
UNIT4 BUSINESS SOFTWARE
FAST Federation Against Software Theft
vmware
webroot
fasthosts
zynstra
INGRAM MICRO

The Cloud Industry Forum (CIF) was established in direct response to the evolving supply models for the delivery of software and IT services. Our aim is to provide much needed clarity for end users when assessing and selecting Cloud Service Providers based upon the clear, consistent and relevant provision of key information about the organisation/s, their capabilities and operational commitments.

We achieve this through a process of self-certification of vendors to a Cloud Service Provider Code of Practice requiring executive commitment and operational actions to ensure the provision of critical information through the contracting process. This Code of Practice, and the use of the related Certification Mark on participant's websites, is intended to provide comfort and promote trust to businesses and individuals wishing to leverage the commercial, financial and agile operations capabilities that the Cloud-based and hosted solutions can cover.

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