



## Control Cloud Contact: Shaping the cloud around your business requirements

Cloud Cloud Cloud. Over the last few years, 'Cloud', and all things related to it, has received a huge amount of hype and commentators believe that the Cloud will fundamentally change the software industry, enabling companies to introduce new applications to increase productivity, without incurring high costs. Market research indicates that cloud adoption rates are reaching 50% in medium sized companies. Much of the initial take up has been for back office functions like HR and finance and, increasingly, customer relationship management (CRM). But now companies are looking at whether it is possible to realise these benefits in more complex, high-value areas like contact centres with voice, multi-media handling and CTI just becoming types of application offered on a SaaS basis in the Cloud.

It is an exciting development for the contact centre industry, providing an opportunity for organisations to deploy leading communication technology and business applications without the upfront capital costs and IT implementation hassle of onsite deployments. However, according to recent research by consultancy firm Proviti, 74% of IT leaders are opposed to the Cloud. What are their concerns? Often security, performance and resilience are cited as reasons; in reality, the main barrier is typically that common Cloud applications prescribe capability and force customers to mould their requirements around them. The simple fact is that few contact centres fit neatly into these pre-packaged solutions. To ensure agent compliance, and so achieve the dual targets of reducing costs whilst improving the customer experience, the Cloud system must be easy to use and do what the specific organisation needs which is to retain bespoke functionality. This paper will explain what Cloud means in the context of contact centres, discuss the common concerns and how they can be addressed.

### 1. What do we mean by 'Cloud Contact'?

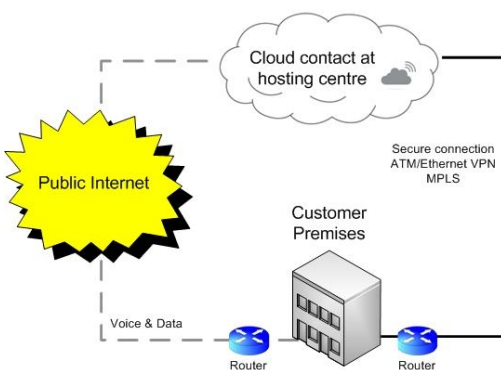
Cloud computing is commonly defined as **the delivery of computing as a service rather than a product, whereby shared resources, software and information are provided as a utility (like the electricity grid) over a network (typically the Internet)**. In the context of contact centres, Cloud enables a range of communications technologies and business applications to be provided in this utility model.

#### What makes this model appealing?

**Service** – rather than an up-front or capital investment in a product, a business pays an on-going service fee, typically per month. In the case of a contact centre, the payment would be per feature per month. This illustrates the first fundamental benefit of the Cloud model; the business can spread its contact centre investment over several years. The investment changes from a capital expenditure to an operational expenditure.

**Shared** – computing becomes a shared resource and so the provider/vendor can spread their infrastructure and support costs across customers and the service is provided from a hosted infrastructure. A shared resource can represent security concerns; however, hosting can allow organisations of any size to take advantage of Enterprise Class IT, which provides far superior security and resilience facilities to those in house.

**Over a network (typically the internet)** - illustrating a common misconception, Cloud does not necessarily mean that your service is provided over the public internet. Use of the public internet lies at the root of many concerns over the Cloud – “does this mean I will have performance, latency and security issues?” This is not necessarily the case; access to the hosting centre can be provided over dedicated circuits or secure virtual connections over which Carrier Class 99.999% availability can be provided and security can be assured within network design. Many legacy Cloud computing projects are accessed over the public internet and this is reflected in IT managers' perceptions of the Cloud



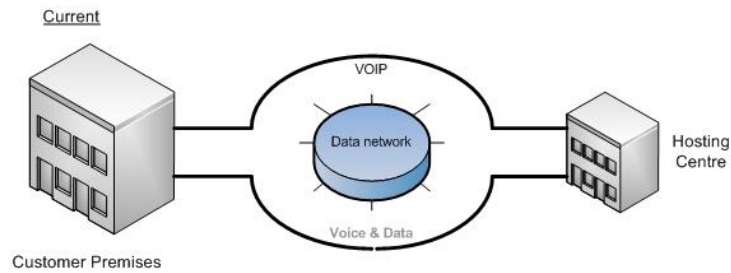
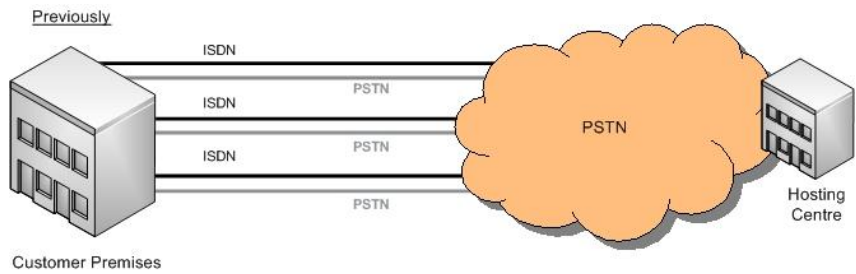
...voice traffic can be routed over data networks or the internet at a fraction of the cost of dedicated voice connections...

**Is this new? Haven't hosted services been around for ages?**

Yes, the Cloud definition and terminology are new but the concept of businesses purchasing call routing, ACD (Automatic Call Distribution) and business applications on a hosted basis is not. Business Centrex provided a common alternative to PBXs for businesses to access a large range of hosted telephony capabilities in the 90s and hosted contact has been offered as a solution for over 10 years.

What is different now is that voice, email handling, IVR (interactive voice response), speech recognition, ACDs and skills based routing are just other examples of Cloud applications. SIP Trunk Technology from all the major network providers is making ISDN and Physical E1 Connections expensive legacy technologies.

Businesses can access large amounts of secure bandwidth required to connect themselves to hosting centres more cost effectively. In addition, voice traffic can be routed over data networks or the internet at a fraction of the cost of dedicated voice connections, meaning call routing and handling capabilities can be easily hosted.



**Types of Cloud Computing**

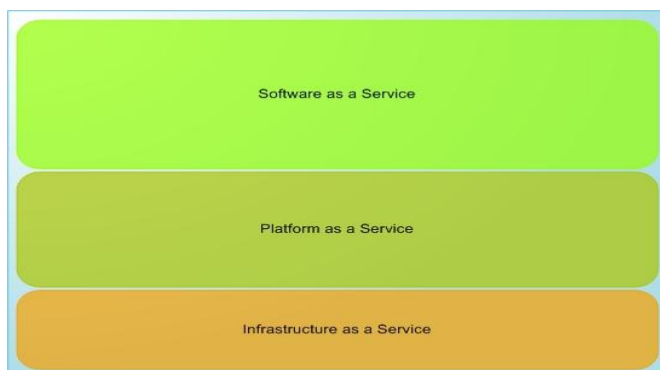
The Cloud Computing stack is currently defined by three levels: SaaS, PaaS and IaaS.

**Software as a Service (SaaS)**, the most mature of these segments, is comprised of end user applications such as CRM, lead management, HR and social media.

**Platform as a Service (PaaS)** is the service and management layer of the Cloud platform and is evolving dynamically to include things such as intelligent provisioning as well as application and network management.

**Infrastructure-as-a-Service (IaaS)** is the foundational layer of Cloud Computing and includes raw storage, compute, backup, disaster recovery, databases and security.

When deploying Cloud within the contact centre, configurable contact technology (ACD, IVR, skills based routing etc.) and customer experience applications can be provided simply as applications, accessible on a SaaS basis from the Cloud, so that no platform or infrastructure is required by the customer.



...for the business that is trialling a new product or entering a new market sector ... a per seat payment model can de-risk their investment.

## 2. What does this mean in the context of the Contact Centre?

**i) Rapid deployment** – the Cloud enables contact centre functionality and business applications to be purchased on a per-seat per feature basis. The infrastructure and software exists at the hosting centre so a business can pick and choose the functions they require and capability can be provided in a matter of days. In 2010, Ford Retail was looking for a contact centre solution to support its online car sales; it needed a package to blend telephony and email handling and introduce a lead management system. As the business was expanding rapidly it needed a solution quickly with the minimum of IT hassle. The customised Cloud solution they chose manages every customer contact according to their pre-defined business rules including phone calls, emails and web enquiries ([Watch the video case study.](#))

**ii) Minimise IT costs** – with the Cloud model, as the infrastructure is already up and running at the hosting centre, IT implementation costs are minimal.

*“Many of our customers are amazed at the cost reduction potential for IT and Telecoms when putting the business case together for a new contact technology project.” - Paul White, CEO, mplsystems – “Modern SIP technology is making traditional ISDN and Specialist Hardware based solution look like dinosaurs – their extinction is inevitable. In addition to the cost savings cloud based solutions can be scaled in minutes rather than the typical 1-2 months lead-times of traditional solutions”.*

ARAMARK implemented an end-to-end contact solution comprising Cloud and mobile field working technology, for its clients in Northern Ireland, a solution which not only saved them money during set up as they were able to use existing facilities and Cloud capabilities and as a result is saving 40% of management time.

**iii) Scale/de-risk the solution** – when an organisation is anticipating growth in their seat requirements for the contact centre, it need not worry about accurately predicting how and when to scale. A minimal number of lines can be purchased on day one and then increased or decreased as and when demand dictates. This is especially useful for the business that is trialling a new product or entering a new market sector where a per seat payment model can de-risk their investment.

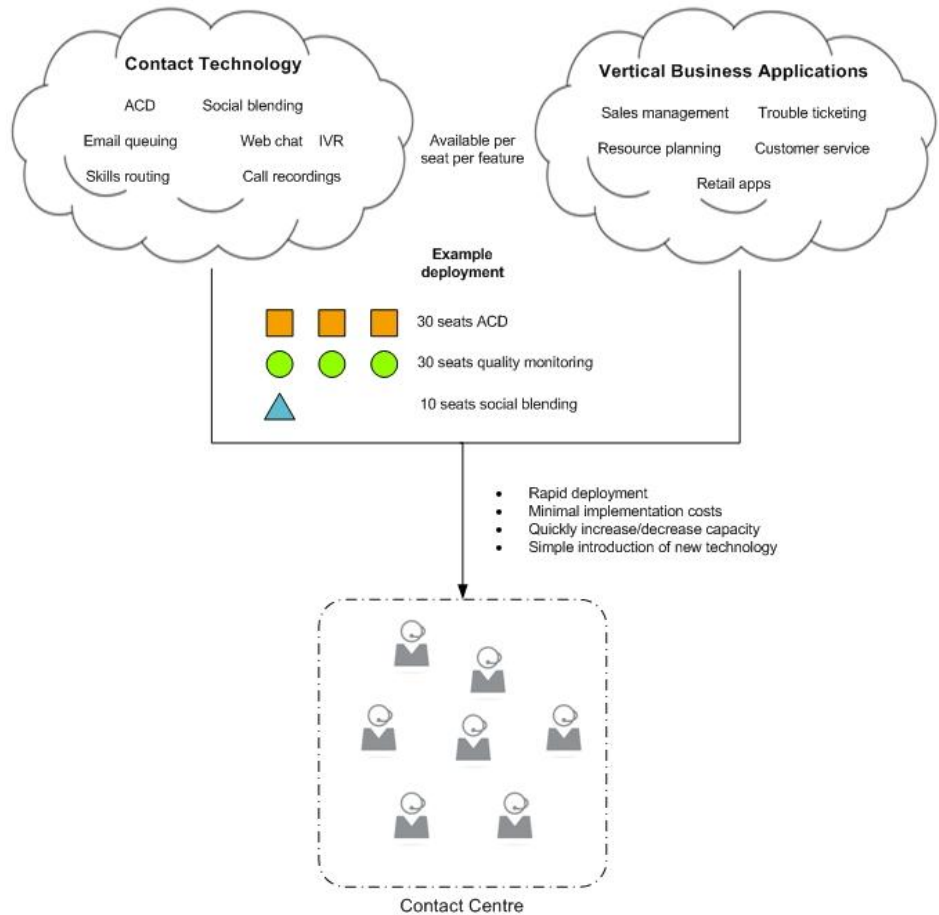
When innovative mobile provider, Tru, launched a new product, Local Anywhere, it needed a network of contact centres offering support within different countries across the world. The contact handling platform and customer service applications they chose would need to evolve to support these centres from a central infrastructure. A Private Cloud enabled Tru to introduce local contact centres and scale seat size as demand for the product dictated. ([Read the case study.](#))

**iv) Stay at the forefront of technology** – the Institute of Customer Service estimates that business leaders expect to lose 10% of their customer base by 2020 due to lack of upfront investment in customer service. (“[Return on investment in Customer Service: the bottom line report](#)”). Technology has become a critical element of competitive differentiation in the contact centre environment where it can improve the customer experience and reduce costs.

But technology advances continuously and, to stay ahead of the competition in service delivery and costs, organisations need to continually invest. This is where the Cloud really comes into its own; traditional on premise contact centre hardware is difficult and expensive to upgrade and often needs to be replaced in order to introduce new technology. In contrast, with a Cloud model, as new technology is developed, new features can be introduced into the contact centre immediately on a per seat basis without needing to replace any hardware. Taking the Ford Retail example again, if the contact centre wants to introduce social media handling this can be easily added into the system and trialled on a low number of seats with minimal investment



In the contact centre, Cloud can offer businesses the opportunity to add the capability to handle new communication channels, such as email or social media, alongside their existing telephony infrastructure without replacing these systems. This can be done on a trial basis initially. Customer history, skills based routing and dynamic scripting can be added across both new and legacy channels thus giving the agent access to cross-channel knowledge to quickly track and resolve issues. This can only be achieved on a system which supports other channels alongside telephony; some Cloud contact solutions are telephony only and do not include a customer experience management element.



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Cloud allows enables the business to add new customer experience focussed applications into the contact centre and to integrate these applications into existing technology; for example, lead management, booking, customer service, trouble ticketing and resource planning tools can be quickly and easily brought into an integrated agent desktop environment.

### 3. What are the issues and barriers to cloud deployment?

According to recent research by consultancy firm Proviti, 74% of IT leaders are opposed to the Cloud. So, why are some businesses hesitant to choose the Cloud? In a traditional Cloud model, virtualisation is used to segment servers across customers to take advantage of economies of scale. Network access to the hosting site may also be shared. These factors lead to concerns over security, performance and resilience, but how real is this concern? Let's look at each in turn.

If the network and processes are designed correctly then security can be as good as if not better than the existing on premise deployment.

## Security

How can you be sure that your customers' data and your own data remain secure? The answer is that security is less to do with whether it is in the Cloud or not and more to do with the policies and procedures of the individual Cloud providers, the hosting environment and the network design and access. Just because data is on-site does not necessarily mean that it is more secure. Outsourcing IT allows the organisation to take advantage of Enterprise Class IT and 24 monitoring and support which is often far superior to that in place in their own premises.

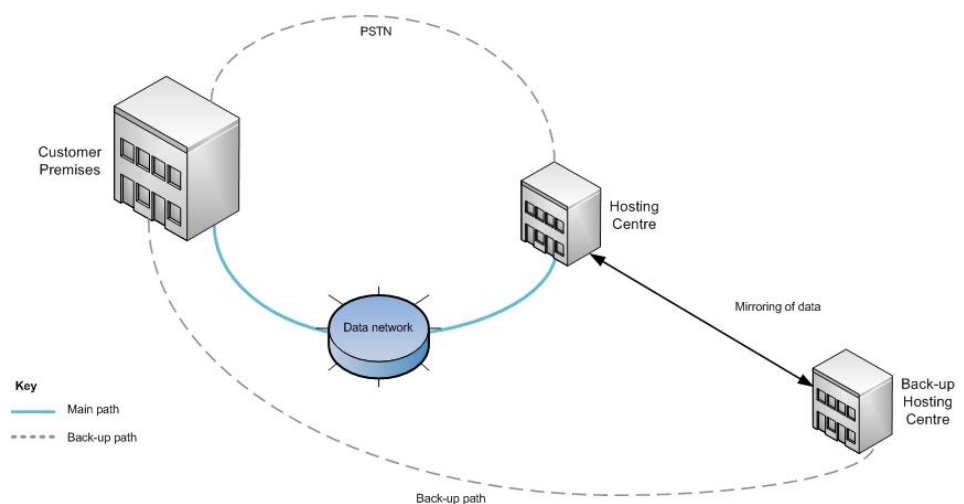
The questions to consider when reviewing Cloud security include:

- Is the hosting infrastructure shared or dedicated; how is it partitioned; is data security authentication/passwords applied?
- Who is hosting the servers; do they have good physical and network security?
- What type of network is used to access the cloud computing facility; is the connection provided over the public internet or is the network secured at layer 3 (network level e.g. IP VPN Virtual Private Network), layer 2 (data link layer e.g. ATM, MPLS or Ethernet VPN) or at the physical layer 1 (private circuit or wavelength e.g. IP VPN, (Internet, VPN or Private network)?
- Do you use encryption and secure user/password processes?
- Are other authentication mechanisms like Secure ID used?
- Is constant monitoring provided and are proactive tools employed?
- Does the platform adhere to European standards for data protection?
- Is there a business continuity plan; how is that data backed up?

## Performance

Performance is dictated by the type of network connection over which the hosting environment is accessed, how that access is shared which determines the availability and the performance of the hosting infrastructure. As is the case with security, if specified correctly, performance and quality of service can be guaranteed.

Concerns over the performance of Cloud Computing are reinforced by deployments across the public internet, where the bandwidth available and latency of the network can be reduced by congestion at certain times of the day or when the local network is busy. Private or virtual private circuits (layer 1 or 2) as described above can prevent latency and quality of service issues. For example, IP VPNs can be used and Quality of Service (QoS) can be applied at the gateway to the network to prioritise contact centre traffic over less time sensitive data traffic. Alternatively, a dedicated circuit at layer 2, such as an ATM circuit or more cost effective Ethernet VPN, guarantees bandwidth and prevents performance issues and can offer Carrier Class 99.999% availability.



Business continuity, back-up, recovery and resilience can all be provided in a Cloud environment

### Resilience and Business Continuity

Typical onsite deployments involve a single server or single IT location. What happens if there is a fire, flood or, more typically, equipment or power failure within this environment? Few on-site deployments have a back-up or mirrored location and, even if this is present, often there is no diverse routing to the backup location to avoid network issues.

Business continuity, back-up, recovery and resilience can all be provided in a Cloud environment but its efficacy depends on the vendor and how much attention is paid to detail. Synchronous data mirroring can be provided at a back-up site and diverse connectivity provided between sites, thus achieving far superior levels of business continuity to an onsite deployment. The type of network connection provided to link the contact centre to the hosting environment will also impact on the resilience of the service and this should be considered at the specification phase.

Resilience, security and performance are all concerns for Cloud in the contact centre, reinforced by software-as-a-service type deployments over the public internet. But, through appropriate Cloud engineering by the vendor, these can be overcome and exceed on-site deployments.

### What is a Private Cloud and what benefits can it provide?

The Proviti research, mentioned earlier in this paper, found that a third of the firms quizzed planned to introduce Cloud over the next 3 years, with 16% opting to build a Private Cloud because they believe that it will offer them greater protection from security breaches.

A Private Cloud is infrastructure operated solely for a single organisation; this can be managed internally or by a third-party and hosted internally or externally, also referred to as Hosted, single tenant. The significant element is that, whereas in a Public Cloud computing and communications capability is shared between customers, in a private Cloud it is dedicated.

This is often the model of choice for an organisation that has several regional or global contact centres and chooses to support each contact centre from a central hub. Rapidly expanding companies, such as BIW Technologies and Tru, who wish to provide local product support for customers with an in-country or regional product support desk, do not want the hassle of locating new technology on premise in each country. A Private Cloud gives the opportunity to rapidly and cost effectively establish in-country contact centres by supporting these new centres from the pre-existing central hub location.

A private Cloud deployment involves a dedicated deployment and so the economic benefit that makes Cloud so appealing - lack of up-front costs and rapid deployment - is diluted. The contact technology can be shared across sites within a single organisation. However before service commences the infrastructure must be purchased and deployed.

## 4. Control and shaping the Cloud

Cloud has the potential to transform the contact centre but many businesses remain reluctant to make the investment, often because 'software as a service' is perceived to be inflexible and difficult to tailor around the agents' tasks. Take a typical SaaS CRM package; it offers a multitude of features, tabs and screens but this just makes the agent's life slower and even more complex.

More and more affordable off-the-shelf contact centre solutions are appearing; whilst these may seem like an ideal solution they can cause even more confusion. The simple fact is that few contact centres fit neatly into these pre-packaged solutions.

Smaller companies have fewer IT resources to implement new systems, so standardised solutions with complex feature sets are totally inappropriate. According to a business software review undertaken in summer 2011, over the next 5-10 years, mid-market companies are expected to put all of their applications into the Cloud but, crucially, still expect to retain bespoke functionality. The conclusion drawn was, therefore, that a pure SaaS solution would not be favoured for many applications.



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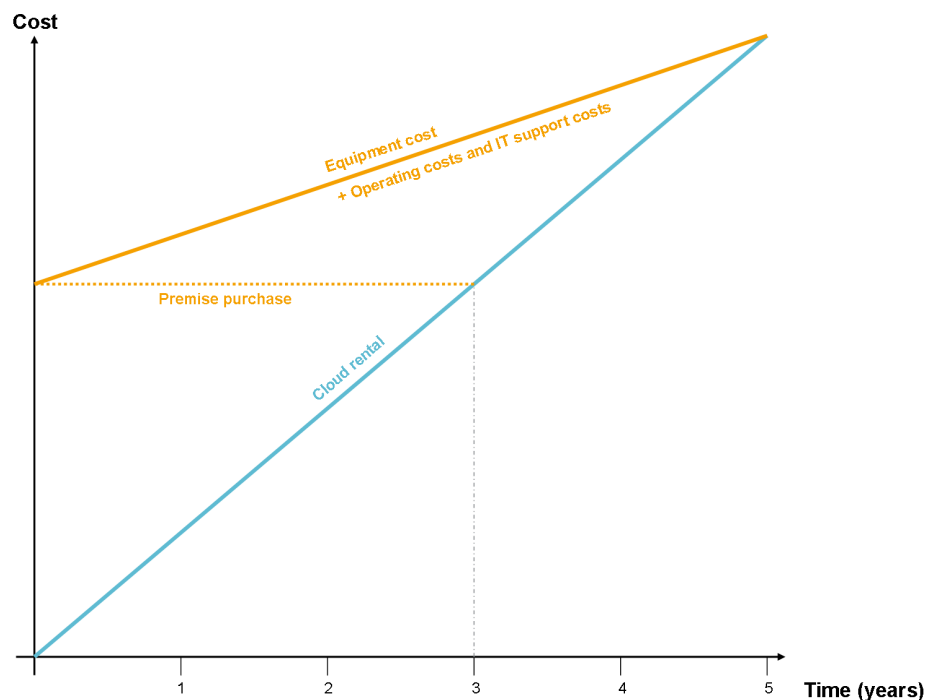
Technology, be it Cloud or premise based, is a weapon to address businesses leaders' dual concerns of cutting costs and improving the experience within the contact centre. But the weapon must be used appropriately. Too many implementations fail because off-the-shelf functionality offers a complex feature set which is inflexible and very difficult to implement. Consultants see many companies who have invested in expensive communications or CRM projects with highly featured systems, but these actually make the agent's life more complex by introducing more systems and functions for them to deal with during a call. The agent actually takes longer to resolve the customer issue, negatively impacting the customer experience and, in many cases, agents actually end up bypassing the new system.

Agent compliance can be addressed by a program of training and culture change to give them the skills and confidence to use new software. But, to a greater extent, compliance depends on finding a system that is easy to use and does what it should. The most important issue with Cloud contact centres is finding one that is customised to your specific business needs or vertical applications. It's not just about breadth of feature set or complexity of requirements, it's whether they fit into existing processes and link into entire business. The focus must be on delivering a simple screen to the agent, designed around their specific tasks and integrated with existing systems rather than adding new ones.

When looking for Cloud solutions, organisations should ensure that the vendor will understand both their requirements and existing processes and give them bespoke capability and the freedom to modify and adapt applications as the contact centre's campaigns evolve and change.

## 5. Will I pay more?

The Cloud model is appealing due to the lack of up-front costs but many organisations are wary that it could mean being tied into a long term contract which will soon cost more than the on-site equivalent. This is subject to the individual vendor but breakevens are typically 3 years based on equipment costs. However, any cost comparison must factor in savings IT implementation, support costs, the housing of servers and equipment in environmentally controlled locations as well as power, and so when the overall TCO of the system is analysed, it is at least 5 years before the on-site model starts to become more cost effective.



The new software and communications technology that Cloud offers means organisations can...meet contact centre managers' and customer service directors' dual targets of reducing costs and improving customer experience.

After 5 years, on-site technology is dated; a Cloud scenario ensures that technology can be continually refreshed without replacing infrastructure. New technology also requires experienced IT resources; do you have the IT support skills onsite or is training and recruitment required?

By taking advantage of server virtualisation and hosted communication, the Cloud must, in theory, be a win-win situation for both vendor and customer because functionality can be provided to multiple customers at a lower equipment and operational cost.

## 6. Conclusion

For most businesses, the main driver toward the Cloud model is to get the latest and greatest technology, rapidly, without upfront costs and deployment headaches. Commonly cited concerns over the Cloud, namely, security, performance and resilience, can be overcome by engineering the network and infrastructure appropriately and can offer far improved levels than the existing on-site facilities. This is not a risky new concept: contact centre functionality and communications has been available in a hosted form for many years.

The new software and communications technology that Cloud offers means organisations can, in theory, meet contact centre managers' and customer service directors' dual targets of reducing costs and improving customer experience. But, to ensure agent compliance and to achieve these targets fully, the system must be easy to use and provide what that specific organisation needs which is usually to retain bespoke functionality. The most significant issue with the contact centre in the Cloud is finding one that can be customised to your current business needs and give you the freedom to modify to your future need.



### About mplsystems

mplsystems provides multi-channel contact centre technology, customer experience software and mobile field service technology for sales, service and mobile workforce operations. With over 15 years of contact centre practitioner experience, mplsystems now works with more than a thousand clients globally in the financial services, facilities management, retail, healthcare and leisure sectors, enabling them to gain a competitive edge by extending customer contact throughout the organisation and automating business processes around a single client view.