

HOW THE CLOUD MODEL IS CHANGING THE FACE OF UNIFIED COMMUNICATIONS

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THE FUTURE OF THE ENTERPRISE

The world of work is changing rapidly as cloud, mobility and social collaboration technologies re-define-the way that we work and collaborate. A number of key themes are combining to create new ways of working – and creating what Frost & Sullivan terms the “Office of the Future” (see figure 1).

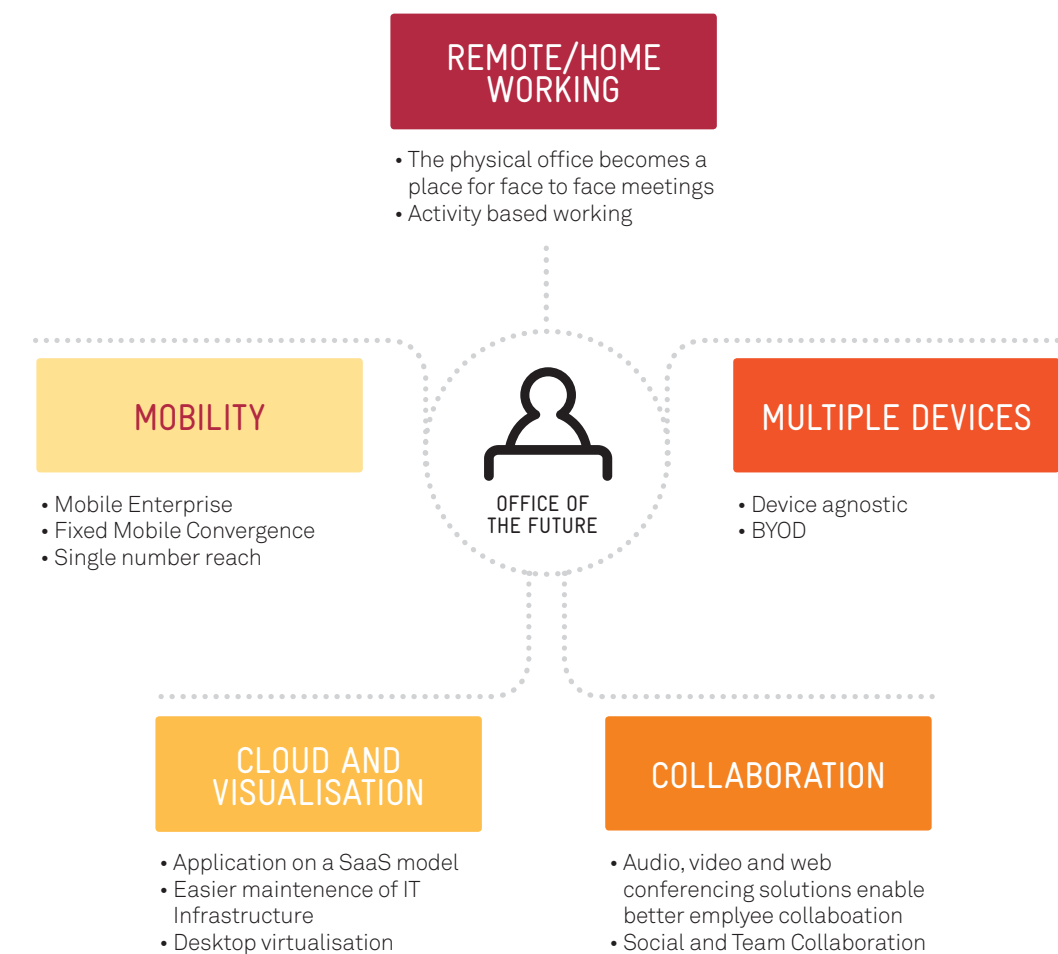
These themes include the trend to multiple device ownership, as it becomes increasingly common for employees to own and use three or more devices for business purposes – such as smartphones, tablets and laptops. Employees are also becoming increasingly mobile, as technology provides the ability for them to be productive outside a fixed office location – whether that is at home or on the road. The application store concept or “downloading an app” is an emerging theme in the workplace, and cloud based applications are now commonly deployed across all main

business functions. These cloud applications include SaaS (software as a service), IaaS (infrastructure as a service) and PaaS (platform as a service) solutions. Unified Communications as a Service (UCaaS) is another emerging theme, as provision of unified communications (UC) solutions increasingly moves from an on-premise to cloud hosting model. The cloud and hosted models for UCaaS delivery offer significant benefits and, in the longer term, Frost & Sullivan believes most organisations will opt for a complete UCaaS solution

This whitepaper discusses the development of the UCaaS delivery model. We discuss the main drivers for the emergence of UCaaS, how UCaaS technologies will be delivered in a cloud based model and the impact that the UCaaS model will have on organisations. Data for this Whitepaper has been taken from several published Frost & Sullivan reports including the 2012 Australian Unified Communications report, the 2012 Australia State of Cloud Computing report and the 2012 Australia Unified Communications Services report.



FIGURE 1: THE OFFICE OF THE FUTURE



CLOUD COMPUTING IS NOW MAINSTREAM

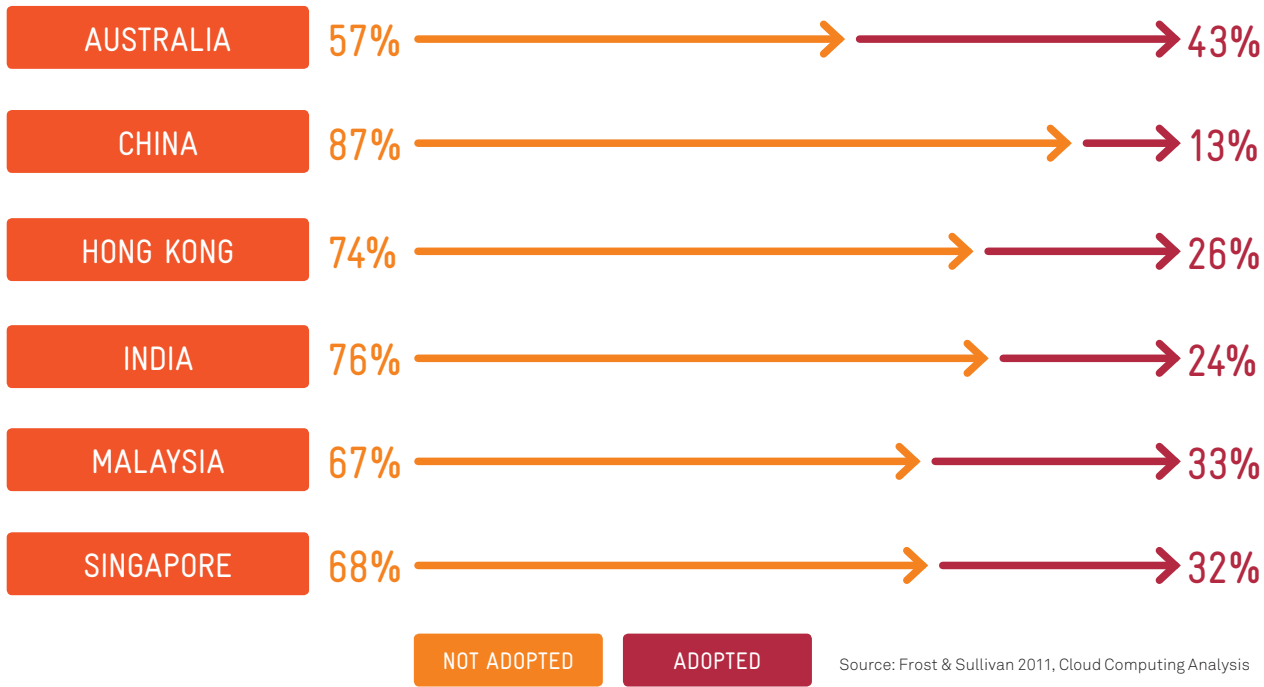
Over the past couple of years, take-up of cloud computing in Australia has grown substantially with well over 40% of organisations now accessing some IT resources via the cloud. Enterprises in Australia are constantly evaluating the potential adoption of cloud computing to improve business agility, increase standardisation of IT infrastructure and to lower the cost of delivering IT services. While SaaS adoption has been steadily growing in the past decade, the adoption of IaaS and PaaS has been more recent with very strong uptake over the past 2 years.

Whilst there is a common perception that cloud computing is more appropriate for smaller organisations, in Australia it is larger organisations (300+ employees) that are leading the adoption of cloud services. Whilst take-up of cloud is more advanced in Australia than in many other countries, Frost & Sullivan still expects continued growth over the next few years. For example, the federal and state governments are increasingly migrating applications to the cloud and are at varying stages of adoption.¹

Australia currently leads other APAC countries in the adoption of cloud-based solutions and services.² Despite lagging more mature markets such as the United States, Australia has been at the forefront of cloud adoption in Asia Pacific as a result of the following factors:

- 01. A relatively high level of server virtualisation which has created the right foundation for delivering cloud services;
- 02. A high propensity for IT outsourcing;
- 03. A shortage of IT labour and the need to compliment in-house IT teams; and
- 04. Challenging economic conditions that have led to a distinct shift from capital expenditure (CAPEX) based to operational expenditure (OPEX) based model of IT spending.

FIGURE 2: CLOUD ADOPTION BY COUNTRY, 2011



1. For example, Victoria's Department of Business and Innovation has rolled out a cloud-hosted CRM application to 450 staff. This is reportedly on track to deliver a 40% cost saving over 5 years when compared to a custom-built option (source: Victoria Government ICT Strategy, 2013 to 2014).
2. Frost & Sullivan State of Cloud Computing Report Australia, 2012

THE GROWTH OF UNIFIED COMMUNICATIONS AS A SERVICE

Although definitions of unified communications differ, at its heart UC involves the integration of real-time and non real-time communications services, with a unified user interface and experience across multiple device types. It enables a user to improve productivity by accessing multiple communication services through a single platform. The UC market is a dynamic one, with a number of key trends:

01

THE RISE OF HOSTED VOICE SERVICES

Voice remains paramount as a communications medium. With cloud based technologies becoming increasingly commonplace, more and more organisations in Australia are moving their voice solutions towards a hosted telephony model. More service providers and vendors are now offering hosted voice solutions on a pay per use model, with attractive price points for users. Decreasing hardware prices and improved voice quality resulting from advances in codecs are some of the factors driving growth in hosted voice services. Additionally many companies do not want to be locked into expensive voice maintenance contracts and the cloud/hosted voice model allows companies to realise significant costs savings. For example Telstra has experienced successful uptake of its Telstra IP Telephony (TIPT) hosted voice solution. We expect more service providers will offer hosted voice solutions in 2013 as leading UC vendors such as Cisco and Microsoft are increasing their hosted voice offerings. Although small-to-medium businesses (SMB's) are often early adopters of hosted voice solutions, more large organisations are also moving towards a hosted cloud model for their voice services.

02

THE SWITCH TO END TO END MANAGED SERVICES FOR UC

One of the main advantages for an organisation in adopting a hosted and cloud based model for its communication services is reduced IT and resource overheads. By handing over the responsibility for hosting, delivering and maintaining applications to a third party, an organisation can focus on its core business activities. End to end managed services allows organisations to own the equipment, while a service provider handles the day to day running and maintenance of the UC solutions. However most organisations tend to adopt a phased approach in shifting to a fully hosted or cloud based model. Australia is one of the fastest growing markets in the Asia Pacific region for these managed services.

We are also seeing the emergence of managed services in videoconferencing. The nature and complexity of videoconferencing often necessitate on-premise advisory services and a dedicated team to run and manage the service. This function is being increasingly handed over to a specialist service provider. The growing base of videoconferencing systems makes offering managed services more viable, whilst for users the ability to reduce in-house IT overheads is attractive. Telecom service providers are particularly well positioned to offer managed services for videoconferencing as they can also bundle in carriage.

03

VIDEO AS A SERVICE (VAAS) MODELS ARE EMERGING

Video is another communications service that is migrating to a cloud and hosted model, through the Video as a Service (VaaS) concept. Although in its early stages of growth, VaaS will become more prominent in the years to come. A significant issue with videoconferencing today is that companies often own multiple end points, from desktop systems to room based systems. Allowing video communications services over one standard communications platform will solve many of the interoperability issues involving multiple end points. Video as a Service endpoints are delivered by videoconferencing vendors such as Polycom and Cisco. Channel partners and telecommunications service providers such as Telstra play a major role in enabling these multiple communications systems to communicate with each other seamlessly. Video as a Service also allows an organisation to leverage the managed video network from the telecommunications service provider it is working with. This reduces the time for expensive network upgrades. Other benefits offered by service providers include the ability to provide secure hosting and external bridging to connect parties outside the client organisation

04

BYOD AND MOBILITY ARE DOMINANT THEMES

As employees increasingly wish to use their own personal devices (such as tablets and smartphones) for business purposes, the Bring Your Own Device (BYOD) theme has added another interesting dynamic to corporate IT management, especially as a high proportion of all corporate-managed devices are likely to be on a BYOD basis within the next few years. Whilst BYOD can stimulate productivity and reduce costs of ownership for organisations, it also creates challenges. For an organisation facing the challenges of BYOD, working with the right service provider will be critical, as BYOD creates many complexities in applications, the network, security, fleet management, policy management and other related services.

Mobility is another key theme, with organisations increasingly wanting employees to be as productive outside the office as they are within it. IT Managers and CIOs are therefore looking to develop enterprise wide mobile UC strategies, including allowing UC technology solutions such as voice, e-mail, instant messaging (IM), video, audio, web conferencing and collaboration to be accessed through mobile devices such as tablets and smartphones. With the sharp growth in ownership of iOS and Android devices, as well as with Microsoft's push in the Enterprise Mobility market, CIO's will face the challenge of supporting various platforms in a seamless manner. Allowing for a single user experience across multiple platforms will also be critical when supporting multiple operating systems.

05

CONTACT CENTRES MOVING TO THE CLOUD

Contact centres are a fundamental aspect of many organisations' communications infrastructure. We are seeing the early stages of a transformation the contact centre model from on-premise to third party managed solutions. Consequently many organisations are also becoming increasingly open towards deploying hosted and cloud based solutions for their contact centres. The usage based payment option allows organisations to avoid upfront investment in licenses, while also providing the flexibility to adjust to periodic increases in call volumes. Contact centre users can plan for unexpected demand in peak periods by contracting for the necessary applications only over the period of peak demand. Additionally, the cloud contact centre model supports the ability of agents to work at home.

As the cloud based model for contact centres matures, it will drive the adoption of solutions such as business continuity, disaster recovery and mobility. The cost of in-house deployment and complexity of maintenance are among the main challenges currently faced by organisations in having a business continuity and disaster recovery plan in place. However as cloud based contact centre solutions become more widespread, such contingency plans will become much easier to implement as the solution provider handles the responsibility for continuity of services in the event of unexpected disruptions.



UC IS ONE OF THE MAIN APPLICATIONS BEING MIGRATED TO THE CLOUD

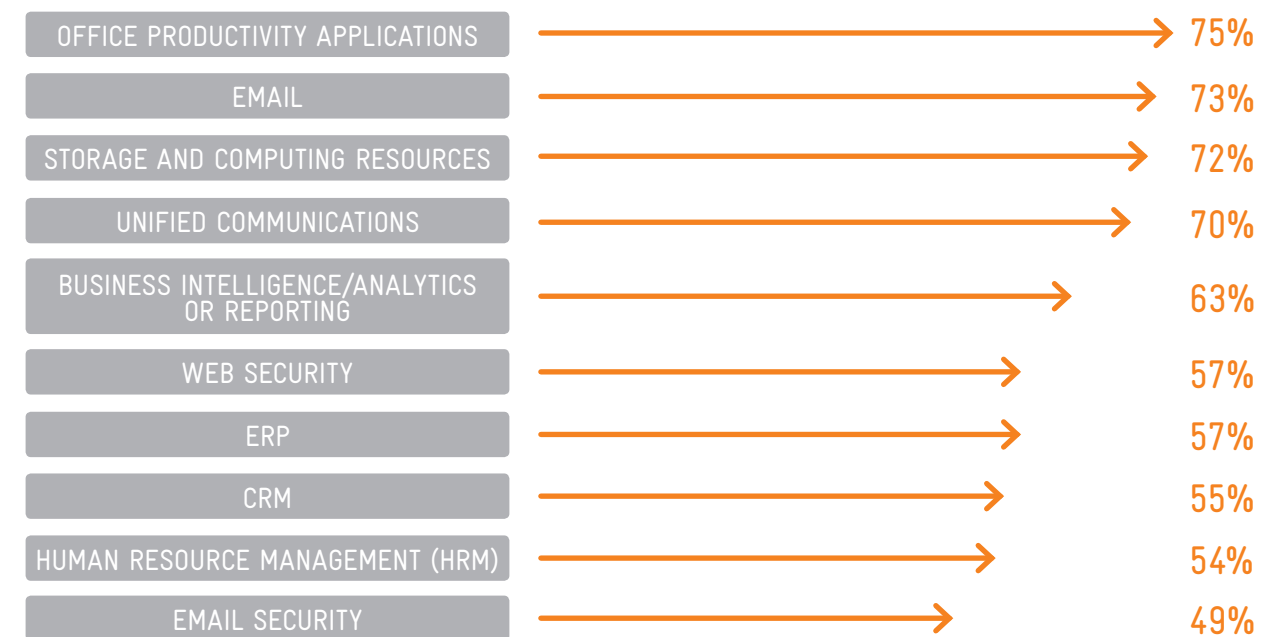
The cloud delivery model is potentially suitable for a broad range of IT services, with an estimated 70% of IT expenditure potentially transferrable to the cloud.³ The cloud model is most commonly used, at least initially, for applications utilised by staff in mobile environments for whom the productivity benefits of being able to access business systems from any device whilst out of the office are important. These include applications such as e-mail, storage & compute (to access backed-up documents), unified communications and

CRM. An increasing number of case studies have emphasised the productivity improvements that can be obtained from migrating these applications to the cloud. Several large and medium sized organisations have now moved e-mail from an on-premise architecture to a 100% based cloud solution. Google was one of the vendors that helped to drive this change through its Gmail product.

A survey of IT decision makers that Frost & Sullivan undertook in 2012 identified that

70% of organisations are planning to move their UC solutions to the cloud over the next 12 to 18 months. Some of the key applications that will be migrated include web conferencing, collaboration, e-mail, IM and presence. Hosted voice solutions such as those provided by the local carriers are also witnessing strong take-up in the Australian market and will experience even greater penetration in years to come as the price points reduce and the quality of service improves.

FIGURE 4: PLANS TO DEPLOY CLOUD SOLUTIONS OVER NEXT 12-18 MONTHS, BY APPLICATION.



Source: Frost & Sullivan 2011, Cloud Computing Analysis

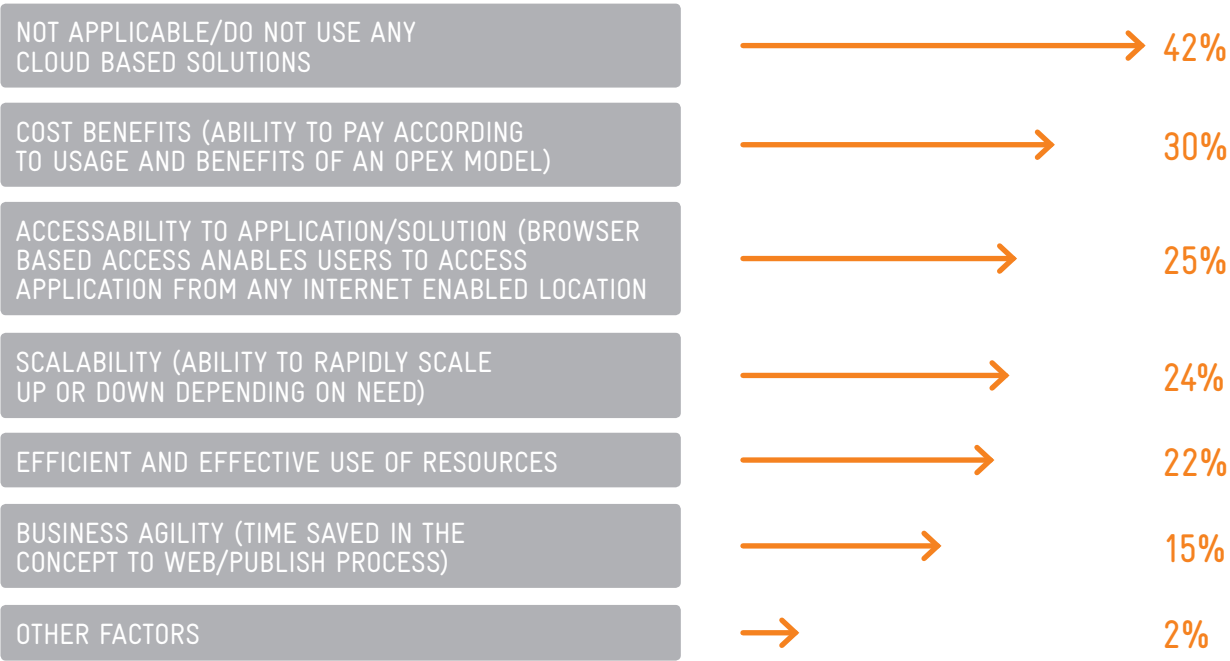
KEY BENEFITS OF ADOPTING UC AS A SERVICE (UCAAS)

Frost & Sullivan identified that over 40% of organisations currently do not use any form of cloud or hosted solution for their UC needs, but we expect take up of cloud solutions to continue to increase driven by the cost and flexibility benefits that they offer. As competition in the cloud market increases, providers will offer a greater

range of pricing options to suit a range of customer requirements. The single most important reason for adopting a cloud based UC Model is cost savings. Cloud based solutions offer the ability to adopt new technology in areas such as voice and videoconferencing without the hefty upfront capital expenditure of an on-

premise solution. Cloud solutions also mean that when a new technology becomes available, users do not have to wait for the end of the existing product lifecycle before switching. The cloud model also allows IT Managers not to lock themselves into expensive maintenance contracts for on-premise solutions.

FIGURE 3: KEY REASONS FOR ADOPTING CLOUD BASED SOLUTIONS FOR UC SERVICES



Source: Frost & Sullivan UC Services Report 2012, n=342

The convenience of being able to access an application from any internet enabled device/browser is another major advantage that organisations value in cloud based UC solutions. About one-quarter of organisations consider this to be the main advantage of using cloud based applications. In the traditional

license based model, the user is required to install a client application on the computer and is therefore typically tied to this device for access. The cloud based model allows applications to be fully detached and independent of devices, allowing the user to access the application from any internet enabled

device (laptop or tablet). With the productivity and increased mobility benefits that this offers, this is another major advantage for cloud-based UC solutions. Although cost is currently a key driving factor for adoption, flexibility and operational agility are emerging as equally important factors for organisations.

MAIN SELECTION CRITERIA FOR EVALUATING CLOUD BASED UC SOLUTIONS

Frost & Sullivan's research identified that when evaluating a UC as a Service solution, factors such as security, reliability, data sovereignty and costs are identified as particularly critical by organisations.

SECURITY

The perceived loss of control in handing over the management of data and infrastructure to a third party results in security being the top concern for organisations evaluating a cloud based solution. Organisations are also concerned about the lack of visibility when migrating data to a third party managed location. Recognising these concerns, cloud service providers are focusing on providing greater control and visibility to improve an organisation's view of security. Control is offered through high levels of availability, greater recovery speed, comprehensive access control and data usage guidelines that define the lifecycle of data being moved into the cloud. Visibility is provided into the cloud's risk management frameworks, policies that ensure compliance to relevant regulations and governance measures that ensure adherence to policies and procedures.

RELIABILITY

Hosting cloud based solutions in data centres that meet the highest standards in terms of redundancy and infrastructure ensures maximum uptime and reliability. Data centres with very high levels of

reliability are sometimes referred to as tier 3 or tier 4 facilities⁴, and cloud service vendors generally provide data centres rated at least as tier 3. Additionally, many customers are looking for service providers who can offer both hosting and network capabilities. Vendors capable of addressing both these requirements are often perceived as offering greater flexibility and scalability than pure hosting providers.⁵ Going forward, a number of vendors and service providers offering UCaaS solutions are expected to invest in improving their data centre capabilities to offer greater reliability levels. Voice and contact centre solutions, for example, require high levels of back up and redundancy as they are both mission critical in nature

LOCALLY HOSTED FACILITIES

Many IT Managers and CIOs in Australia express a strong preference for service providers with local hosting capabilities, i.e. with data centres located within Australia. This gives customers greater confidence in the security levels and reliability of their service provider and minimises the potential challenges involved in offshore hosting such as non-compliance with local regulations

(especially those pertaining to the handling of customer data). Cloud providers with no hosting capabilities in local markets will find it hard to secure large client wins especially in the public sector and financial services industry. The majority of state governments have their own set of guidelines and frameworks around data sovereignty and cloud providers in general. As a result, a number of global cloud service providers are strengthening their presence in Australia by building local data centres.

COMPETITIVE PRICING

As cost savings is one of the main reasons for adopting cloud computing, organisations are seeking service providers that can offer competitive and flexible pricing plans. This tends to favour the larger public cloud service providers, which are able to achieve greater economies of scale through their multi-tenant model, thereby passing the savings back to customers through lower prices.

As adoption of cloud computing continues to grow in Australia, specialised cloud service providers offering the highest levels of security and reliability and with local hosting capability will be advantageously positioned.

4. Tiers are defined in terms of the maximum permitted annual downtime of a facility (source: Uptime Institute)

5. Three of the top five rated local cloud service vendors in Australia offer both hosting and network capability (Macquarie Telecom, Telstra, Optus). Source: The State of Cloud Computing in Australia, Frost & Sullivan, July 2012

FROST & SULLIVAN'S LAST WORD

The Software as a Service model for delivery of business applications is continuing to become more popular in Australia, with applications such as e-mail, collaboration, storage, compute, office applications, HR and payroll applications widely moving to a cloud deployment model. Unified Communications is another application that is increasingly migrating to the cloud, with 70% of organisations planning to move their UC solutions to the cloud in the next 12-18 months. IT decision makers are therefore seeing the benefits that a cloud-based UC service offers in terms of flexibility, scalability and the ability to lower operational costs. We are also seeing more market participants offering cloud-based UC solutions, with system integrators, vendors and service providers offering cloud and hosted UC solutions. With an increasing variety of service providers, customers will need to work with the right service provider that can deliver a reliable as well as a robust UCaaS

platform with multiple layers of redundancy. With many UC applications being mission critical in nature, ensuring minimal disruption in the event of an outage is fundamental. The growth of Bring Your Own Device (BYOD) and increasing employee mobility are also driving the move towards UCaaS adoption. Working with the right service provider will therefore be critical, as delivering a solution can be complex, extending beyond just devices to include applications, the network, security, fleet management, policy management and other related services.

UCaaS (UC as a Service) is seeing significant growth in the Australian market. Frost & Sullivan expects the market for UCaaS to grow at a Compound Annual Growth rate (CAGR) of almost 14% from 2011 to 2018. Strong demand for end-to-end managed services, cloud and hosted solutions are the main factors that will drive this growth. Whilst smaller organisations have often been the early

adopters of hosted UC solutions, we are also now seeing many large organisations starting to move from the on-premise model to the cloud/hosted model.

Telecommunications service providers are often in the best position to deliver UCaaS. They tend to have the deep knowledge and expertise to provide advisory services at the network level which is important when organisations are embarking on a cloud initiative. For example Telstra is one of the leading UCaaS vendors in the Australian market, with much of its success derived from its TIPT hosted voice platform. However Telstra's UC services offerings now extend beyond voice to encompass video, collaboration and mobility solutions. Telstra has alliances with all the major market participants in the UC and contact centre sectors. Frost & Sullivan expects that the ability of telecommunications service providers to offer a broad range of end-to-end managed services for UC will allow them to win an increasing share of the UCaaS market.

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