



# Defining the Mobile Cloud

Infusing Mobility throughout the Modern Enterprise

An eBook by



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# Introduction

Research into the mobile enterprise conducted by mobilesquared, as commissioned by Mitel, confirms that in almost one-third of enterprises, mobile is now at the core of the business, cloud has become an integral component of the strategy, and millennials are shaping communications trends and behaviours.

Mobility, fuelled by devices, the cloud, and advanced communications, has become the great enterprise leveller, positioning SMEs on a technological equal footing as large enterprises for the first time. Business communications that were once the preserve of large enterprises are available to every enterprise – and every smartphone user.

The findings are based on one of the largest multi-national research projects of the enterprise, involving 600 IT decision-makers, 3,000 consumers (that work for an enterprise, and referred to as “employees” throughout), and over 40 mobile network operators (MNOs).

Enterprises and mobile network operators are under increasing pressure to deliver richer, higher-value contextual services to their mobile workforce and mobile first customers. The requirement of mobility within an enterprise is a reflection of how mobile has transformed both personal and professional lives, and changed the way we communicate.

Millennials are spearheading this evolution to a richer communications experience which is permeating into – and in a lot of instances, educating – both older and younger user groups alike. In doing so, real-time communications (RTC) is becoming a key differentiator for enterprises seeking to deliver an exceptional, optimized customer experience. Enterprises of all sizes that fail to recognise and respond to user behaviours will be left behind.

Mobile first, RTC-based services like Apple’s FaceTime are becoming mainstream and have opened the door for richer and immersive forms of communications to be implemented throughout enterprises. Rich services such as these are becoming the cornerstone upon which all enterprises must now develop their ongoing communications strategy, not just for millennials, but the next generation of employees that have grown up with smartphones, high-speed connectivity, and rich forms of communications.

As part of their mobile enterprise strategy, businesses of all sizes are transitioning to cloud services for business functions and promoting and managing BYOD (Bring Your Own Device) as remote working has become the norm for enterprises. Productivity and efficiency gains can only be achieved by advancements in communication and collaboration between not just the workforce, but customers too.



Enterprises must extend their existing mobility strategy and operate an application driven, device optimized, seamless user experience incorporating RTC.

### Enterprise classification

Small enterprise = 2-100 employees

Medium enterprise = 101-500 employees

Large enterprise = 500+ employees

Business communications have evolved over the past decade from voice-over-IP (VoIP) to unified communication and collaboration (UCC), which in turn is becoming RTC. Similarly, the cloud is becoming the mobile cloud.

Enterprises not keeping pace with these developments will not only lose customers, but also lose employees, intent on working in an environment that meets their immersive and mobile-centered communications' needs.

RTC represents a significant transformation of the communications industry, which will only be exacerbated with the advent of 5G in the coming years, and greater expectations placed upon enterprises to deliver ever-richer services and communications, and on carriers to support such developments. RTC is becoming the engagement benchmark for enterprises, not only in how they communicate with their customers, but how they communicate internally.

As this eBook will highlight, RTC usage is already prevalent among consumers which has resulted in a strong crossover with how consumers communicate in their personal and professional lives. And there are signs that enterprises are responding, with web and video conferencing expected to overtake conference calls within enterprises in 2016 as part of an overall mobile first strategy.

With cloud-based services offering a diverse set of voice features and UCC applications, enterprises of all sizes and no longer just large enterprises have a wide range of choices and flexible deployment models to meet their communication requirements. Consequently, demand for increased productivity, the growing adoption of BYOD, and fragmentation of unified communications capabilities creates complex scenarios.

To capitalize on these opportunities, enterprises must extend their existing mobility strategy and operate an application driven, device-optimized, seamless user experience incorporating RTC to ensure they maintain – or even exceed – customer expectations.

It is the consumers that are now dictating how enterprises communicate. This is the consumerization of business communications.



# Executive summary

**One in three enterprises believe they are mobile cloud ready, according to extensive multi-national research conducted by mobilesquared, as commissioned by Mitel.** Large enterprises are leading the charge toward the mobile cloud, with 34% mobile cloud ready in 2016, followed by medium enterprises (30%) and small enterprises (23%).

## What is the mobile cloud?

An outdated definition of the mobile cloud is that it is an extension of existing traditional fixed cloud-based services to a mobile device, such as access through an app. This fails to capture the technological advances that have transformed the capability and functionality of mobile devices, and are now present and driving mobility across enterprises.

We define the mobile cloud as an “application driven, device-optimized, seamless user experience within a secure environment accessed over any internet connection worldwide. It creates a dynamic subscriber experience as the services are native to the mobile device, by connecting directly to the service provider’s IMS (IP multimedia subsystem) network”.

Enterprises have identified the top five mobile cloud features as: location awareness, charging framework, authentication framework, published APIs for app integration, and localization of customer data.

The importance of the cloud cannot be underestimated. The research shows that **89% of enterprises believe the cloud is important to their business.** Yet the cloud is an app-centric, connected device-driven model, with a retroactively-fitted mobile user experience. In contrast, **the mobile cloud is a device-centric, application-driven model designed**

**to optimise the user experience.** The distinguishing business benefits derived from the mobile cloud compared to the cloud will be an optimized user experience, device awareness, network integration for location awareness, as well as enhanced security and identity management. Moreover, the mobile cloud will drive enterprise-wide adoption, as opposed to the cloud which has primarily been the utilized by large enterprises.

## The Importance of an agile network

The optimized user experience of the mobile cloud will be achieved by the enterprise connecting directly to the service provider’s IMS network. Already, 40% of MNO respondents will be able to deliver a mobile cloud offering in 2016.

The survey results also revealed that at least two-thirds of MNOs have updated their access and core networks, with LTE and IMS launched across 89% and 61% of MNOs, respectively. At least one-third of MNOs are equipped to launch a mobile cloud offering, correlating with the number of MNOs that have launched the service, and can develop services based with a newfound “start-up-like” agility.

As MNOs upgrade to LTE and IMS and continue their migration to a dynamic virtualized SDN (software-defined network), they too are reaping the benefits of not only the cloud, but the mobile cloud which has already generated new revenue streams for MNOs from enterprises. Consequently, enterprise customers are now demanding greater innovation from their MNOs.

**An agile, cloud- and software-based network model allows rapid service deployment and results in highly-competitive MNOs.**



## Mobile first

To utilise the mobile cloud, enterprises need to become “mobile first” by making mobility the core of their business and future investments. The importance of the various components of mobility varies throughout enterprises based on the mobile worker segmentation.

Knowledge workers, such as engineers, executives, and sales people, have a high dependence on communications and collaboration tools and low dependence on traditional telephony services, typically have an office with the option of remote working.

Whereas service workers have a high dependence on mobility and low dependence on collaboration, as they are not desk-based, such as delivery drivers and field service personnel. Real-time communications (RTC) can dramatically increase efficiency and productivity, by ensuring deliveries completed first time and appointments are achieved on time.

Information workers, for instance nurses and contact center agents, sit in the middle, with a medium dependence for collaboration and telephony.

The research indicates that transition to mobile first will require an evolutionary mind-set shift for three-quarters of enterprises. Presently, 13% of enterprises claim to be mobile first, however, 51% state that they will soon consider themselves mobile first, as their mobile strategy is deeply ingrained within their business and investments are increasingly mobile focused.

To bolster the migration toward mobile first, the research revealed enterprise investments in mobility will continue in 2016. Almost three-quarters of enterprises plan to increase their investment in mobility this year.

Large enterprises have embraced technology and spearhead the use of mobile (and the cloud), while small enterprises represent the least developed mobile strategy, but now identify with the benefits that mobility will deliver. 99% of SMEs now have a mobile strategy.

### What is IMS?

The IP multimedia subsystem (IMS) is a standards-based framework for implementing all-IP telephony and multimedia services. Mobile operators with an IMS core will operate an all-IP network to deliver converged services to enterprises and consumers.

## Build for the smartphone and go backwards

Investments in mobility are fully justified given that mobile devices have evolved to become the single most important device used by the enterprise workforce. The research highlighted that 100% of enterprises have a mobile strategy of varying degrees. Of this, smartphone penetration is 89%, laptop penetration at 68%, and tablet at 60%.

Application driven, device-optimized services are rapidly becoming the norm. WhatsApp adopted a mobile first strategy when it developed its app specifically for the smartphone. Similarly, services that have effectively migrated from the PC to a smartphone app to deliver an optimized user experience include eBay and Facebook.

Almost every enterprise (97%) provides at least a smartphone, tablet or laptop to its employees, which reaffirms the need for enterprises to adopt an application driven, device-optimized communications offering. But also confirms that mobile devices are the tool for all enterprises.

The research reveals that bring your own device (BYOD) is prevalent across the enterprise, with 35% of employees using their own smartphone, 34% using their own tablet, and 9% their own laptop.



96% of enterprises experienced a positive uplift following the introduction of UCC.

BYOD has accelerated across all enterprises in the last 24 months. **88% of enterprises now operate a BYOD policy, with the number of enterprises migrating to BYOD to utilize the cloud-based application opportunity accelerating in the last 24 months.**

While cost reductions have been and remain the primary driver for BYOD, an app- and service-oriented motivation is increasing among enterprises, and will continue to grow as an increasing number – SMEs in particular migrate toward mobile first.

### Remote working approaching total penetration

The rise of mobility has also greatly enhanced the remote working opportunity. The research highlights that 92% of enterprises offer their employees the opportunity to work remotely. Given this mobile workforce, just 12% of employees work remotely on a permanent basis, although 76% of employees have the option of working remotely.

The impact of remote working is not just being felt by enterprises, but also by their employees. 92% of employees have identified a positive impact in their job function as a direct result of remote working, with 54% of employees stating that they work more efficiently, and 38% identifying an increase in their productivity.

Positive results from remote working can be attributed to providing the employee with the tools and services required to successfully complete their job function, but also access to their colleagues and clients via unified communications and collaboration (UCC). The research shows that 89% of enterprises have a UCC strategy, with the majority of enterprises having implemented UCC between 2012 and 2014.

### The path to real-time communications

Like mobility, UCC is becoming deeply ingrained within enterprises and workforce behaviour, having filtered its way down from large enterprises to medium, and finally, small enterprises. Increased productivity is the biggest impact experienced by all enterprises that have introduced UCC, as well as reduced IT expenditure, increased competitiveness and enhanced remote working. In fact, **the introduction of UCC has resulted in 96% of enterprises experiencing a positive uplift, such as increased widespread multi-channel communications and engagement among employees.**

Mobile in conjunction with the cloud, has delivered a business solution such as UCC which was formerly used exclusively by large enterprises, to enterprises of all sizes, in what is another example of mobile being the primary catalyst in levelling the technology available to every business.

MNOs have also identified the benefits of UCC, with **53% claiming that UCC has increased productivity and revenues for their enterprise customers.** A similar number of MNO respondents (55%) believe there is greater demand for mobility as a direct result of remote working, coupled with UCC encouraging employees to use richer forms of communications included within the real-time communications portfolio, such as video calls and web and video conferencing.

UCC is just one component of real-time communications, but it is the ability for an enterprise to communicate and respond immediately to a customer over any channel that will set it apart from its competition.

Again, as just highlighted by UCC now being available to every enterprise, the smartphone penetration and subsequent increase of RTC usage by consumers in both their personal and professional lives, has penetrated business communications and how they define their communications strategy.



# Web and video conferencing will become the most popular RTC service (after voice) among enterprises in 2016.

RTC (including voice, voice over Wi-Fi, video calls, conference calls, web and video conferencing, group VoIP, chat, and group chat) is being widely adopted by enterprises of all sizes, with an average of 44% enterprises utilizing the services.

Voice has a 90% penetration across the enterprise, after which the most used RTC services are conference calls (45%), web and video conferencing (40%), and chat and video calls (both 39%).

Large enterprises have the most advanced RTC strategy, with 48% on average having implemented RTC, compared to small enterprises with the least advanced RTC strategy and lowest penetration (37%).

Group VoIP is expected to experience the most implementation across enterprises during 2016 with year-on-year growth of 71%, but it will be web and video conferencing that will replace conference calls as the most popular RTC service (after voice) by the end of 2016.

Enterprises are seeking richer forms of communications, with almost two-thirds of large and medium enterprises using web and video conferencing by the end of 2016, as well as almost half of small enterprises. It also supports the popularity of remote working and is a further indication of the workforce collaborating in a richer environment as networks such as LTE and Wi-Fi can now deliver a consistent user experience.

The expected increased uptake of RTC by enterprises in 2016 highlights the heightened importance of communicating in real-time with colleagues and customers.

The proliferation of smartphones, coupled with the blurring of boundaries between professional and personal usage, has resulted in a highly mobile-savvy workforce accustomed to using richer communication apps on their device regardless of location. 32% of employees said that they used the same apps to communicate at work as non-work, or enjoyed the same communications experience at work as non-work (40% of employees).

Millennials were most critical of employer communications strategy, citing a superior consumer communications experience compared to the services provided by their employers, as well as stating their employer's range of communications and collaboration tools were limiting.

## Millennial focused

Millennials are users accustomed to communicating in a multitude of ways over multiple channels and now expect the same communications practices to be adopted by their employer. More than half of millennials consider themselves a "truly mobile" employee, yet 40% state that their employer does not understand the communications tools they require to work remotely.

Clearly, when an employer provides sufficient communications tools, millennials are the early adopters. The survey highlighted that millennials are quick to grasp new apps and concepts, are more app-oriented in their communications usage than colleagues, and will utilize all aspects of **RTC** at work.

Throughout the workforce, millennials are the most likely to use web and video conferencing tools, group VoIP, chat and group chat, file sharing, screen sharing, video calls, VoWiFi, conference calls, image and video sharing, and presence and status availability.

The survey revealed that employees aged 35 and over believe that millennials are more app oriented in their communications usage and could help educate the less app-oriented employees.

Millennials are the early adopters of real-time communications within the workplace, and app-based communications in particular.

This affirms millennials' ability to grasp new communications concepts, including continuity of service – being able to seamlessly switch between devices to communicate.



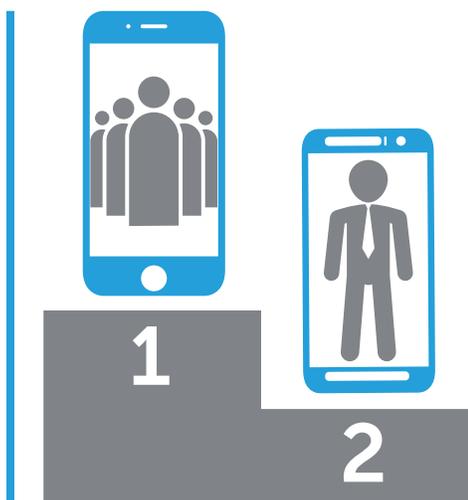
Millennials are most likely to use the service, and are also the demographic that acknowledged the importance of the service to both personal and professional lives.

Not only are millennials using RTC services, they are switching between channels during the same session, from chat to group chat, and voice call to video call, with one tap on their smartphone.

On average, 85% of enterprises recognize that their millennial employees communicate differently to the non-millennials (those over the age of 35).

A smart enterprise will use its millennial workforce to its advantage. The research shows 44% of enterprises say millennials are helping to educate their non-millennial workforce with regard to RTC, and a further 20% claim millennials are shaping how the rest of the employees communicate, potentially leading to even greater levels of increased productivity and enhanced remote working.

In doing so, a millennial focused strategy will potentially help transform an enterprise into mobile first by reducing the necessity for mobile training across the workforce.



**Employees are mobile first well ahead of their enterprise employers.**

### Training required?

The research uncovered **65% of employees have not received full mobility training from their employer within the last 12 months.**

Yet, this is not to the detriment of enterprises. The consumer research revealed that the lack of mobility training was only negatively impacting 2% of employees, whom claim they cannot complete their tasks without training.

In fact, this development potentially eases the pressure on enterprises, even though 46% claim employee training is the biggest challenge to plan for when developing remote working. Enterprises underestimate how mobile savvy their workforce is, **leading to the belief that employees are mobile first well ahead of their enterprise employers,** which will hasten their employer’s migration to mobile first and ultimately utilizing the mobile cloud.

Alternatively, enterprises are now recognizing employees as mobile first and training is not required in an app-oriented, smartphone environment delivering an intuitive optimized user experience: Users instinctively know to tap their smartphone to activate a call, or add an additional caller to an existing call, compared to the equivalent and arduous on-screen button search and accompanying mouse-clicking process on the desktop to make an OTT call or conference call.

### Mobile + cloud + enterprise: let’s get started

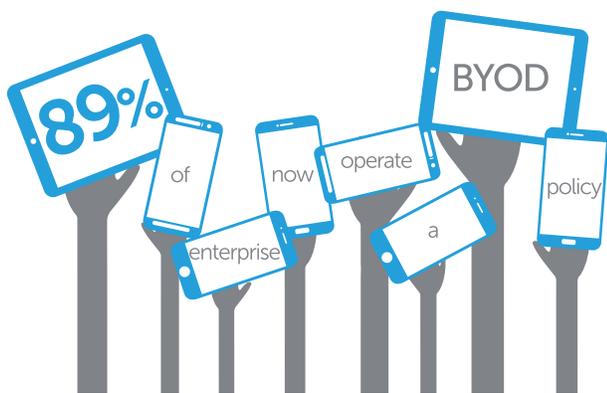
The study reveals that 98% of enterprise employees are primed to go mobile first, if indeed they are not already. And with 89% of enterprises identifying varying degrees of importance with the cloud, not to mention the transformational role millennials will have on the way the workforce communicates, all-in-all **enterprises of all sizes are well equipped to become mobile first, cloud-enabled, millennial focused.**

# Section 1: Developing a mobile enterprise strategy

There are two key objectives every business must undertake when developing a successful mobile enterprise strategy. First, entrust their employees with the correct mobile device. Then, provide access to critical business solutions and applications via the cloud.

Mobile devices have evolved to become the single most important tool used by the enterprise workforce. Smartphone penetration is close to reaching 100% within enterprises, and laptop and tablet penetration are gaining traction.

In total, the research revealed 89% of the enterprises use a smartphone, 68% use a laptop, and 60% use a tablet. Almost every enterprise (97%) provide at least a smartphone, tablet or laptop to their employees, and 14% provide all three devices. On average, just under two-thirds of businesses now have a defined mobile enterprise strategy.



**88% of enterprise now operate a BYOD policy, with the number of enterprise migrating to BYOD to utilise the cloud-based application opportunity accelerating in the last 24 months.**

A breakdown of the research results of the enterprises reveals that medium enterprises are most likely to provide employees with a smartphone, medium and large enterprises are most likely to provide employees with a tablet, while large enterprises are most likely to provide their employees with a laptop.

As business leaders look to drive down costs and drive efficiencies throughout their company, this has resulted in an acceleration of Bring Your Own Device (BYOD) across all enterprises in the last 24 months, to such an extent that 88% of the enterprises now operate a BYOD policy.

While BYOD has historically been linked to the use of mobile phones, it now incorporates both tablets and laptops as well. The research shows that a total of 35% of employees use their own smartphone in the workplace, 34% use their own tablet, and 9% use their own laptop. This data would tend to indicate that laptops will be the next mobile device to be adopted as part of the BYOD initiative as enterprises look to further drive down costs.

BYOD remains a cost-driven initiative throughout enterprises, with 41% of businesses citing the need to reduce costs as the primary driver for adopting the strategy.

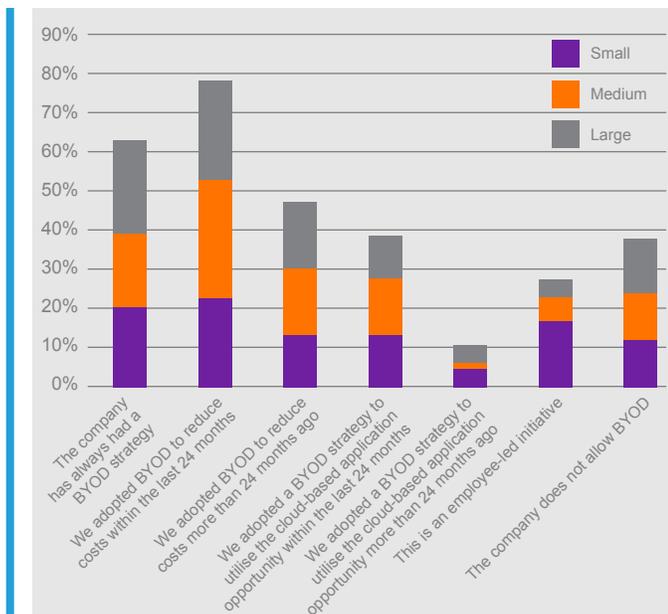
The migration to BYOD to utilize the cloud-based application opportunity has also gained momentum, and highlights the growing awareness of the cloud and its associated benefits throughout enterprises. Of the 16% of enterprises that have migrated to BYOD in order to utilize the cloud-based application opportunity, the majority have done so in the last 24 months.

Cost reductions have been – and remain – the main priority behind BYOD for businesses of all sizes, but an app- and service-oriented motivation for BYOD has experienced a four-fold increase among enterprises and will continue to grow as more embrace their mobile strategy and migrate toward becoming mobile first.



Only 5% of enterprises have security concerns regarding BYOD.

**Fig.1: Which best describes your company's Bring Your Own Device (BYOD) strategy?**



**Source: Mobilesquared research**

Medium and large enterprises lead the way with 82% operating BYOD, compared to 72% of small enterprises not surprising given that medium and large enterprises were the most likely to adopt a BYOD strategy more than 24 months ago.

### Cloud-enabled

The mobile workforce requires access to business solutions and data that will allow for, and ease, the fulfilment of their job function. And as mobility continues to grip enterprises, so will the reliance on cloud-based architectures to deliver these business solutions increases in tandem.

The research shows a total of 89% of enterprises believe the cloud is important to their business, with 32% saying it has increasing importance, and 57% stating it is important or very important. This is in contrast to the 44% of employees who recognize the importance of the cloud and thereby indicates that employees place less importance on the cloud than their employers.

Similarly, 52% of mobile network operators believe the cloud is important or very important to their business, yet more recognized the value the cloud delivers to their enterprise customers with 58% saying the cloud is important or very important to their enterprise customers.



**89% of enterprises believe the cloud is important to their business.**



### How important is the cloud to enterprises?

72% of large enterprises believe the cloud is important to their business, ahead of medium (50%) and small (42%)

Increasing importance: large (22%), medium (39%), small (38%)

Source: *Mobilesquared research*

Almost three-quarters of large enterprises recognize the importance of the cloud to their business, compared to around half of medium enterprises and just over one-third of small enterprises.

This highlights that SMEs have been slow to adopt the cloud and associated business benefits. It also provides an indication that the level of mobility operating throughout SMEs is on the rise based on the percentage of SMEs that now acknowledge the increasing importance of the cloud.

A total of 79% of businesses across the enterprise have migrated a minimum of 21% of their IT infrastructure and applications to the cloud. In fact, almost two-thirds of enterprises have migrated between 21-60%, as they look to capitalize on the cost reductions provided by a virtualization and software-based model.

Large enterprises have been the most active, with 59% migrating more than 40% of their IT infrastructure and applications to the cloud, compared to 47% of medium enterprises, and 35% of small enterprises.

Just 16% of large enterprises are yet to migrate 0-20% of their IT infrastructure and applications to the cloud, compared to 30% of small enterprises and 22% of medium enterprises. This again emphasizes the slow migration to the cloud by SMEs.

The research reveals that small enterprises that have completed the migration of at least 20% of IT infrastructure and applications to the cloud will maintain the rate of migration during 2016. However, 29% will still not have completed between 0-20% of their migration by the end of 2016 compared to 13% of large enterprises and 16% of medium enterprises.

Large enterprises have undoubtedly moved more swiftly to utilize the cloud opportunity, and small enterprises the slowest. However, the research data suggests that the benefits of the cloud are now gradually filtering down throughout the SME community as they look to embrace available technology to boost productivity and associated efficiency gains, and enjoy cost reductions.

**Fig 2. What percentage of your IT infrastructure and applications does your organization intend to move to the cloud in 2016?**

	Small	Medium	Large
0-20%	30%	22%	16%
21-40%	36%	32%	24%
41-60%	23%	30%	37%
61-80%	10%	12%	16%
81-100%	1%	5%	6%

Source: *Mobilesquared research*

By the end of 2016, 40% of small enterprises will have 40% or more of their IT infrastructure and applications in the cloud, up from 35%, while medium enterprises will experience similar growth from 47% to 52%. Large enterprises with 40% or more of their IT infrastructure and applications in the cloud will remain constant at 59% between 2015 and 2016, although the percentage that would have migrated over 60% of their IT infrastructure and applications will increase from 25% to 32%.



## Remote working approaching 100% penetration of enterprise

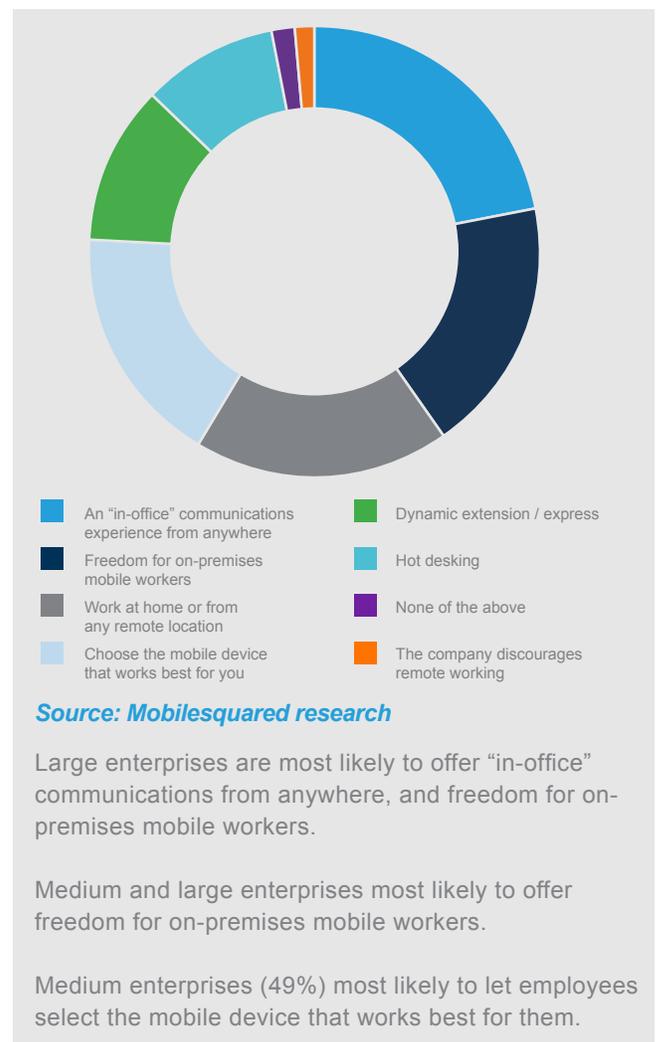
The versatility of the cloud to provide access to mission critical business information is a prerequisite for a successful remote working strategy. This allows the mobile workforce to perform job functions regardless of location whether at the office, home, café, or airport.

The rise of mobility and adoption of the cloud has had an unequivocal impact on remote working. The research reveals that 92% of enterprises now offer the opportunity for employees to work remotely. Presently, 12% of employees work remotely on a permanent basis, although 76% have the option of working remotely, with almost half of these employees (40% of the total) positively encouraged by their employers to work remotely. That leaves just 4% of employees (of the 92% that can work remotely) that are yet to take up the option of working remotely.

The availability of remote working throughout the enterprise directly correlates with scale. On average, across all remote working categories available for selection, large enterprises are the most likely to provide remote working for their employees (47%), followed by medium enterprises (43%) and small enterprises (35%).

Almost one-third of enterprises (31%) believe between 21-40% of their workforce can work remotely, while only 7% claim to have 81-100% of their workforce remote working driven by small enterprises. Clearly it is easier to mobilize a smaller workforce.

Fig.3: How do enterprises encourage remote working?





76% of consumers work remotely on an occasional basis at least.

12% are remote workers on a permanent basis.

A remote working strategy is not without its problems, with device security identified as the single largest challenge to plan for when developing a remote working strategy, followed by employee training, data back-up and recovery, and mobile data loss.

Given the proliferation of BYOD and mobile device management, coupled with the cross-app compatibility and associated mobile application management, enterprise mobile management could be expected to be viewed as one of the largest challenges. Following the combination of investments made developing mobile and cloud strategies by a significant proportion of enterprises, mobile management-based challenges were of mid-concern, as were regulatory compliance and the seamless integration of core communication services.

Adequate support skills and lack of budget were also of minimal concern to the enterprises.

### Meaningful impact of the right remote working strategy

When an enterprise gets its remote working strategy right, its impact is not just being felt by the business, but also by the employees. The research has revealed 92% of employees have identified a positive impact in their ability to successfully perform their job function as a direct result of remote working. A successful remote working strategy has resulted in 54% of employees stating that they work more efficiently, 38% identifying an increase in their productivity, and 32% saying they communicate more with colleagues.

Positive results from remote working can be attributed to providing the employee with the mission-critical business tools and services required to successfully complete their job function, including access to their colleagues and clients via communications and collaboration services.

The research reveals that 89% of enterprises have a unified communication and collaboration (UCC) strategy, with the majority having introduced the services between 2012 and 2014. In the last 12 months, the adoption of UCC has been driven by SMEs, again demonstrating further evidence that technology previously deployed by large enterprises is now being adopted by all enterprises, as the division between large enterprises and SMEs reduces. UCC penetration among large enterprises stands at 96%, compared to 92% for medium enterprises, and 84% small enterprises.



**53% of MNOs claim that UCC has increased productivity and revenues for their enterprise customers.**



47% of large enterprises claim the whole company has embraced UCC; small enterprises (32%) are least likely for the whole company to have embraced UCC.

MNOs have also identified the benefits of UCC, with 53% claiming that UCC has increased productivity and revenues for their enterprise customers. A similar number of MNO respondents (55%) believe there is greater demand for mobility as a direct result of remote working, coupled with UCC encouraging employees to use richer forms of communications included within the real-time communications (RTC) portfolio, such as video calls and web and video conferencing.

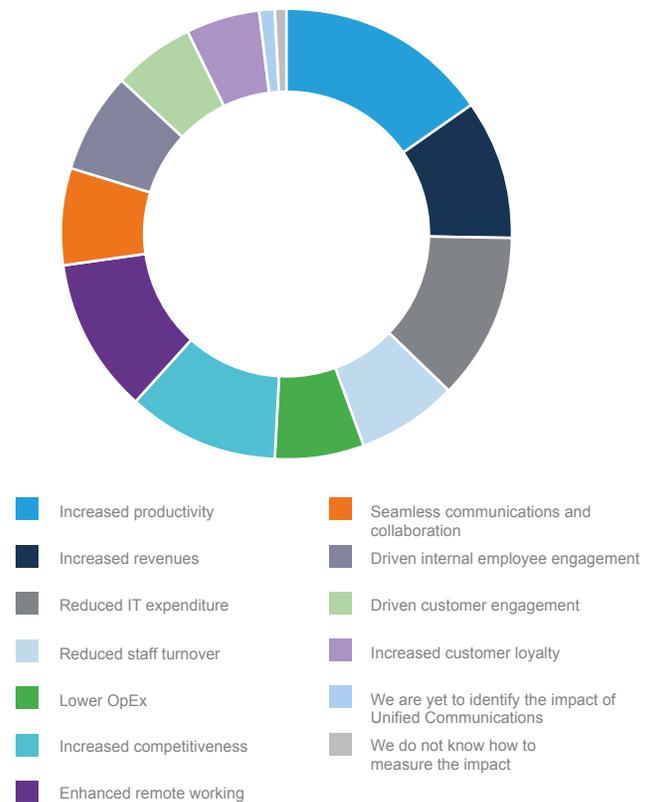
This suggests that businesses that continually expand their mobile enterprise strategy will create a positive, self-perpetuating cycle that will ultimately drive improvements in productivity and efficiency.

**47% of large enterprises claim the whole company has embraced UCC; small enterprises (32%) are least likely for the whole company to have embraced UCC.**

**57% of large enterprises believe their company now communicates via multiple channels on a regular basis.**

**26% of small enterprises now believe their UCC platform guarantees employees can complete their functions regardless of location.**

**Fig.4: What impact has unified communications had on the company?**



**Source: Mobilesquared research**

# Section 2: Becoming truly mobile

## Mobile first

Mobile first is when mobile has become the core of the business, with investment in communications and applications all starting from the mobile device outwards across all areas of the business. Such a development will be closely aligned with cloud adoption in the short term, and mobile cloud adoption in the longer term, as early adopters look to gain competitive advantage.

The importance of the various components of mobility varies throughout enterprises based on the mobile worker segmentation. Knowledge workers, such as engineers, executives, and sales people, have a high dependence on communications and collaboration tools and low dependence on traditional telephony services, typically have an office with the option of remote working.

Whereas service workers have a high dependence on mobility and low dependence on collaboration, as they are not desk-based, such as delivery drivers and field service personnel. Real-time communications can dramatically increase efficiency and productivity, by ensuring deliveries completed first time and appointments are achieved on time.

Information workers, for instance nurses and contact center agents, sit in the middle, with a medium dependence for collaboration and telephony.

The research reveals that 100% of enterprises now have a mobile strategy of sorts, with the lowest classification being a mobile device used for work calls. As with the adoption of the cloud, there is a direct correlation between company size and perceived mobile strategy. In total, 13% of enterprises claim to be mobile first: A breakdown of that figure reveals that 17% of large enterprises claim to be mobile first, 12% of medium, and 7% of small. Perhaps more telling, is that 51% state that they will soon consider themselves mobile first, as their mobile strategy is deeply ingrained within their business and investments are focused on mobile.

Once again scale is an influential factor, with 59% of large enterprises operating a deeply-ingrained mobile strategy, followed by 52% of medium enterprises, and 38% of small enterprises. In total, 76% of large enterprises claimed to be mobile first or have a deeply ingrained mobile strategy, ahead of medium enterprises (64%), and small enterprises (45%).

### Which enterprises claim to be mobile first?

17% of Large enterprise  
12% of Medium enterprise  
7% of Small enterprise

*Source: Mobilesquared research*

43% of MNOs correctly identified that between 0-20% of the enterprises were mobile first. Whereas employees held a more negative view of their employer's mobile strategy, with 9% claiming their company was mobile first, and 33% believing their company was becoming mobile first.

The enterprises believe their mobile strategy is more advanced than their employees.

For the majority of employees, their understanding of mobile first reflected a simplistic mobile enterprise model of "the company provides devices for its employees." This was also the favoured definition of SMEs.

Large enterprises defined mobile first as "the company is committed to investing in mobile solutions in all areas of the business". While identifying a definition more aligned to a company operating a deeply-ingrained mobile strategy, it at least demonstrates a broader understanding of how mobile can influence a business, as opposed to the simplistic provision of devices.



The research reveals that the transition to mobile first will require an evolutionary mind-set shift for three-quarters of enterprises, with particular emphasis focusing on SMEs which are the most likely to be in the early phases of their mobile strategy development. This will have the added benefit of influencing the enterprises' understanding of the mobile cloud, and potentially fast-tracking their adoption.

### Mobility strategy

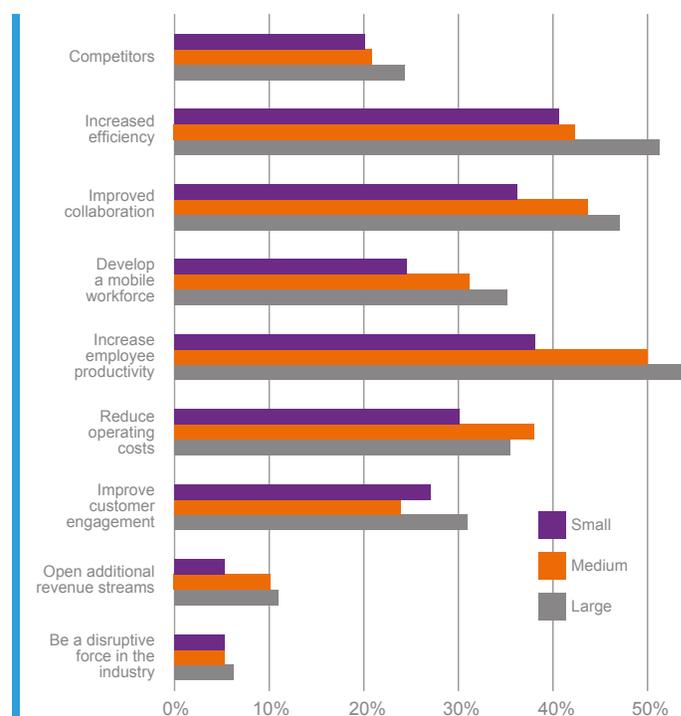
Almost half of the enterprises described their mobile strategy as having “invested in a robust, secure platform.” The importance of mobility within the enterprises was also exemplified with almost three-quarters stating that they plan to increase their investment in 2016, of which, 29% will increase their investment by 20% or more.

Driving this investment in mobility is an increase in employee productivity, efficiency, and collaboration. Therefore advantages of investing in a mobile strategy are now experienced across all enterprises, big and small. Mobile devices are now delivering the same advantages to SMEs that large enterprises have enjoyed for a considerable period. Mobile is one vital component that is levelling the playing field between the cost advantages previously enjoyed by large enterprises, and small enterprises.

The majority of enterprises believe their IT department is driving their company’s mobility strategy, with sales playing an influential secondary role. When broken out by company size, the research shows that IT departments exert the most influence in the decision-making process within large enterprises, and the least influence in small enterprises. Further, the decision-making process is spread across five departments within SMEs, and is largely confined to the IT department and CXOs within large enterprises.

The number of decision makers in SMEs could present an explanation as to the relatively slow adoption of particular mobility and cloud services. In larger enterprises this process is tasked to a small number of stakeholders focused on achieving technology advancements in productivity and efficiency where delays will cost the business financially. Within an SME, the speed of technological advancement is unlikely to have the same financial implications. Nevertheless, the decision-making process will once again be tested as pressure to adopt a defined mobile strategy increases.

**Fig 5: What is driving the company's mobile strategy internally?**



Source: Mobilesquared research



53% of MNOs, 61% of enterprise and 53% of employees, identified either the mobile cloud or the carrier mobile cloud.

### What is the mobile cloud?

An outdated definition of the mobile cloud is that it is an extension of existing traditional fixed cloud-based services to a mobile device. This fails to capture the technological advances that have transformed the capability and functionality of mobile devices, and are now present and driving mobility across all areas of enterprises.

We define the mobile cloud as an “application driven, device-optimized, seamless user experience within a secure environment accessed over any internet connection worldwide. It creates a dynamic subscriber experience as the services are native to the mobile device, by connecting directly to the service provider’s IMS (IP multimedia subsystem) network.”

A clear understanding of what the mobile cloud is across the enterprise ecosystem is not as transparent, as the research reveals.

The majority of enterprises (40%) and employees (33%) identified the correct definition of the mobile cloud, while 40% of MNOs selected the carrier mobile cloud.

The carrier mobile cloud was defined as “a private cloud environment, tightly integrated with a particular MNO’s network facilities, leveraging assets such as security and identity management.”

In essence, carrier mobile cloud services are based on MNOs leveraging cloud technologies to create an agile, more flexible infrastructure for the evolution of new services, as well as creating an environment that is more cost effective, and fundamentally more efficient for the delivery of traditional services.

One-fifth of both enterprises and employees also selected the carrier mobile cloud. In total, 58% of MNOs identified either the mobile cloud or carrier mobile cloud, 61% of enterprise, and 53% of employees, indicating that the enterprise ecosystem has a sound understanding of the cloud which has been applied to their perceived understanding of the mobile cloud.

Therefore, education outlining the difference between the mobile cloud and the cloud to distinguish between the two is required but not critical: Around 43% of MNOs, enterprises and employees all believe that the cloud and the mobile cloud are the same thing, or that the mobile cloud was a subset of the cloud that is only connected to mobile devices.

**Fig.6: Which definition best describes the mobile cloud?**

	Small	Medium	Large
Mobile cloud is device-based, app driven	33%	39%	47%
Cloud and mobile cloud are the same thing	33%	28%	24%
Carrier mobile cloud	19%	24%	20%
Mobile cloud is a subset of the cloud only connected to mobile devices	15%	9%	9%

**Source: Mobilesquared research**

Large enterprises demonstrated the greatest understanding of what the mobile cloud is with almost 50% of respondents. Although small enterprises demonstrated the least understanding of what the mobile cloud is, one-third were correct.

The description of the cloud can be refined to an app-centric, connected device-driven model with a retroactively-fitted mobile user experience. In contrast, the mobile cloud is an application driven, device-optimized, seamless user experience within a secure environment designed to optimize the user experience.



By placing the device at the center of the enterprise environment, the mobile cloud becomes a reflection of the role that mobile now plays in both our professional and personal lives and indeed the blurring of these two worlds.

The research has revealed that an optimized and seamless user experience has been identified as the key distinction between the mobile cloud and cloud by MNOs and enterprise alike. Therefore, the mobile cloud delivers a user-optimized experience developed for mobile devices enabling employees to complete a specific task, regardless of time or location.

Enterprises have identified five key features of the mobile cloud location awareness, charging framework, authentication framework, published APIs for app integration, and localization of customer data. Secondary features from an enterprise perspective were legal intercept, prioritised QoS, and geofencing.

MNOs selected published APIs for app integration, authentication framework, location awareness, prioritized QoS (Quality of Service), and geofencing as their prioritized features for the mobile cloud. Secondary features were localization of customer data, and charging framework. Both MNOs and enterprise agreed that legal intercept was not a priority.

Location awareness is a key feature for all enterprises within the mobile cloud offering. SMEs in particular believe a charging framework and localization of customer data will be key for their businesses. Large enterprises identified authentication framework and published APIs for app integration, as well as localization of customer data as key.

The distinguishing business benefits derived from the mobile cloud compared to the cloud, as outlined by both enterprise and MNOs alike, will be an optimized user experience, device awareness and network integration for location awareness.

- An application driven, device-optimized, seamless user experience within a secure environment accessed over any Internet connection worldwide
- Device awareness will be critical for big data and employee analytics descriptive, predictive, prescriptive or cognitive allowing each enterprise to monitor the productivity and efficiency of their workforce
- Network integration for location awareness will allow enterprise to identify which network a device has been connected and where an application has saved data.

Enterprises were united in their belief that an optimized user experience is the prioritized business benefit the mobile cloud can deliver compared to the cloud. To supplement these business benefits, the mobile cloud would also deliver enhanced security and identity management.



**One in three enterprises believe they are mobile cloud ready.**



29% of enterprises are mobile cloud ready in 2016, and this figure will increase to at least 35% in 2017.

### What is mobile cloud ready?

Mobile cloud ready has been applied using the research to make the distinction between those enterprises operating a mobility strategy, and those enterprises that have become mobile first, cloud-enabled, millennial focused, and serve as an indicator for those enterprises with the greatest proclivity to evolve to the mobile cloud.

Mobile first – as already highlighted – is defined as when an enterprise makes mobile the core of its business, with investment in communications and applications emanating from the mobile device inwards across all areas of the business providing employees. From the research, 23% of enterprises claim to have placed mobile at the core of their investment strategy, coupled with 13% of enterprise that claim to be mobile first.

Cloud-enabled is when an enterprise views the cloud as important or very important, has migrated more than 60% of its IT infrastructure and applications to the cloud, and operates a remote working strategy. The research revealed that 57% of enterprises view the cloud as important or very important, 18% have migrated more than 60% of their IT infrastructure and applications to the cloud, and the average remote working strategy is 42% across all enterprises.

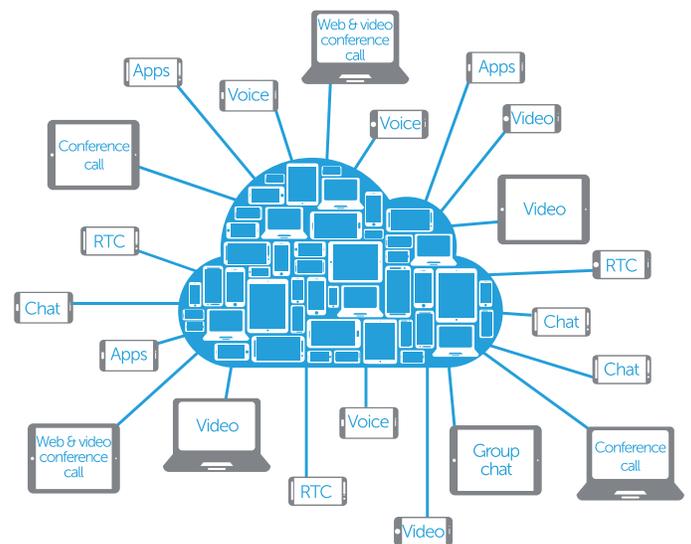
Millennial focused acknowledges the impact millennials are having on their business, such as helping to educate non-millennials with regard to UCC (44% of enterprise), and shape how the rest of the employees adopt UCC (23% of enterprise). Millennials' adoption of real-time communications will inevitably drive adoption and usage of RTC in the enterprise.

When the mobile first, cloud-enabled, millennial focused research findings are combined it reveals that 29% of enterprises are mobile cloud ready in 2016, and this figure will increase to at least 35% in 2017.

Large enterprises are leading the charge toward the mobile cloud, with 34% mobile cloud ready in 2016, followed by medium enterprises (30%) and then small enterprises (23%). By 2017, 35% of enterprises will be mobile cloud ready, with 40% of large enterprises ready to evolve, 36% of medium, and 27% of small enterprises.

**Fig. 7: Enterprise mobile cloud readiness 2015-2016**

	Total enterprise	Small	Medium	Large
2015	29%	23%	30%	34%
2016	35%	27%	36%	40%



**An agile, cloud- and software-based network model allows rapid service deployment and results in highly-competitive MNOs.**



## The Importance of an agile network

The optimized user experience of the mobile cloud will only be achieved by the enterprise connecting directly to the service provider's IP multimedia subsystem (IMS) network. Already, 40% of MNO respondents will be able to deliver a mobile cloud offering in 2016.

### What is IMS?

The IP multimedia subsystem (IMS) is a standards-based framework for implementing all-IP telephony and multimedia services. Mobile operators with an IMS core will operate an all-IP network to deliver converged services to enterprises and consumer customers.

Just over one-third of MNOs (37%) believe they now operate and leverage a software-defined network (SDN), although just 19% of MNOs believe the operation of their SDN is "dynamic". A further 44% state their network is in the process of transitioning from a hardware-based, static network to a dynamic software-defined one.

This suggests MNOs have made the investment toward a dynamic network but are yet to complete the transition by controlling and implementing the software using a combination of network function virtualization (NFV) and SDN technologies.

Nevertheless, MNOs in the survey believe that the dynamism injected into their networks from the implementation of IMS and LTE (including VoLTE) has established new enterprise-based revenue streams, such as the mobile cloud, and the provisioning of open APIs.

Equally, enterprises are also recognizing the enthusiasm emanating from MNOs. By capitalizing on their SDN, enterprises are demanding greater innovation from their MNOs. One such innovation will be the ability to provide new services natively to the device, which will not only prove a powerful offering to the enterprise as part of their UCC offering, but will also be a game changer in terms of how the MNOs compete against the Over-The-Top (OTT) communications providers.

Nevertheless, NFV/SDN-based IMS solutions for 4G LTE and Wi-Fi networks will also greatly reduce time-to-market for service launches, which represents a fundamental shift for the MNO, as it removes the necessity for them to wait for the ratification of standards before rolling out new services. For a highly-competitive MNO it will mean it will be able to launch new services quickly, and respond to the service innovation demands placed upon it by enterprise customers.

Presently, 39% of MNOs said they were dissatisfied with their rollout of advanced communications services, such as VoLTE and native video calling, and this will no doubt hold negative connotations for its enterprise customers.

Ultimately, an agile, cloud- and software-defined network model allows for the rapid service deployment and results in highly-competitive MNOs. So much so, that MNOs unable to compete in delivering innovative communications and collaboration solutions will experience enterprise customer churn.

Meeting the enterprises' demands in the mobile cloud ecosystem will fundamentally change the MNO landscape. For example, 57% of MNOs said they can now offer improved QoS/QoE to their enterprise customers. This is clearly viewed by MNOs as a competitive advantage in the delivery of communications and collaboration services utilizing OTT providers, and especially real-time communications.



But this could prove a tough sell into enterprises, which have not only become accustomed to using OTT communications services for work, but also stated in the enterprise survey that they deemed QoS as a secondary feature of the mobile cloud.

This indicates that enterprises' view of communications is that of a service that is increasingly becoming cloud-based. A development that presents serious ramifications for MNOs in the short-term, as they could potentially find their traditional MNO communications services engulfed even further by IP, but conversely, it holds significant opportunities as this will prove a key driver in the deployment and commercialization of VoLTE, but also opens the door for RTC.

**Fig. 8: Which communications and collaboration apps do you use for work?**

	% of consumers that use apps for work	% of consumers claiming app is good / excellent for work
Company app	75%	54%
Skype	60%	44%
Facebook	55%	42%
WhatsApp	54%	54%
Facebook Messenger	51%	38%
Google	48%	48%
Twitter	44%	44%
Dropbox	43%	30%
Apple iMessage	41%	29%
Viber	38%	23%
Pinterest	35%	35%
Snapchat	32%	32%
BBM	31%	18%
Vine	29%	17%

Source: *Mobilesquared research*

## The path to real-time communications

Like mobility, UCC has become deeply entrenched within enterprises, and subsequently, workforce behaviour. Increased productivity has been singled out by all enterprises (46%) as the biggest impact the introduction of UCC has had on their business, followed by reduced IT expenditure, increased competitiveness, enhanced remote working, and increased revenues. Around one-fifth of enterprises also identified reduced staff turnover, lower Operational Expenditure, as well as an increase in internal employee engagement and external customer engagement.

Large and medium enterprises are most likely to experience a positive impact from the introduction of UCC, compared to small enterprises, which is to be expected given UCC is most widely established within large and medium enterprises.

In fact, 96% of enterprises have experienced a positive uplift across their business following the introduction of UCC. This impact ranges from enterprises believing their company now communicates via multiple channels on a regular basis, their company has embraced unified communications, and UCC has improved remote working and encouraged the use of richer services, such as video and web conferencing.

UCC is one component of RTC, but it is the ability for an enterprise to communicate and respond immediately with a customer that will set it apart from its competition.

Real-time communications (including voice, voice over Wi-Fi, video calls, conference calls, web and video conferencing, group VoIP, chat, and group chat) is being widely adopted by enterprises, with an average of 44% enterprises utilizing the services.

Voice has a 90% penetration across enterprises, after which the most used RTC services are conference calls (45%), web and video conferencing (40%), and chat and video calls (both 39%).



## 32% of employees said that they used the same apps to communicate at work as non-works

Large enterprises have the most advanced RTC strategy, with 48% on average having implemented RTC, compared to small enterprises with the least advanced RTC strategy and lowest penetration (37%).

Group VoIP is expected to experience the most implementation during 2016 with year-on-year growth of 71%, but it will be web and video conferencing that will replace conference calls as the most popular RTC service (after voice) by the end of 2016.

Enterprises are seeking richer forms of communications, with almost two-thirds of large and medium enterprises using web and video conferencing by the end of 2016, as well as almost half of small enterprises. It also supports the popularity of remote working and is a further indication of the workforce collaborating in a richer environment as networks such as LTE and Wi-Fi can now deliver a consistent user experience.

The expected increased uptake of RTC by enterprises in 2016 highlights the heightened importance of communicating in real-time with colleagues and customers.

The proliferation of smartphones, coupled with the blurring of boundaries between work and personal usage, has resulted in a highly mobile-savvy workforce accustomed to using richer communications apps on their device regardless of location. 32% of employees said that they used the same apps to communicate at work as non-work, or enjoyed the same communications experience at work as non-work (40% of employees).

The research highlighted that 54% of employees welcomed the choice of communications services available to them. A trait which has clearly influenced their expectations of their employer. For instance, 29% of employees claimed their consumer experience for communicating was superior to work, while 20% said the range of communications

provided by their employer was limited. In contrast, only 4% of employees believe their workplace communications experience is superior to their consumer experience.

Millennials were most critical of employer communications strategy, citing a superior consumer communications experience compared to the services provided by their employers, as well as stating their employer's range of communications and collaboration tools were limiting.

### Millennial focused

Millennials are users accustomed to communicating in a multitude of ways over multiple channels and now expect the same communications practices to be adopted by their employer. More than half of millennials consider themselves a "truly mobile" employee, yet 40% state that their employer does not understand the communications tools they require to work remotely.

Clearly, when an employer provides sufficient communications tools, millennials are the early adopters. The survey highlighted that millennials are quick to grasp new apps and concepts, are more app-oriented in their communications usage than colleagues, and will utilize all aspects of RTC at work.

Throughout the workforce, millennials are the most likely to use web and video conferencing tools, group VoIP, chat and group chat, file sharing, screen sharing, video calls, VoWiFi, conference calls, image and video sharing, and presence and status availability.

The survey revealed that employees aged 35 and over believe that millennials are more app oriented in their communications usage and could help educate the less app-oriented employees.



Millennials are the early adopters of RTC within the workplace, and app-based communications in particular.

This affirms millennials' ability to grasp new communications platforms, including continuity of service – being able to seamlessly switch between devices to communicate. Millennials are most likely to use the service, and are also the demographic that acknowledged the importance of the service to both personal and professional lives.

Not only are millennials using RTC services, they are switching between channels during the same session, from chat to group chat, and voice call to video call, with one tap on their smartphone. The RTC services millennials use in their personal life will inevitably influence how they communicate for work, and ultimately influence the company's communications strategy.

On average, 85% of enterprises recognize that their millennial employees communicate differently to the non-millennials (those over the age of 35). The employee research highlights that not only do employees (83%) have a similar view as their employers regarding how millennials' communicate, millennials themselves (86%) agree that they communicate differently.

A smart enterprise will use its millennial workforce to its advantage. The research shows 44% of enterprises say millennials are helping to educate their non-millennial workforce with regard to RTC, and a further 20% claim millennials are shaping how the rest of the employees communicate, potentially leading to even greater levels of increased productivity and enhanced remote working.

In doing so, a millennial focused strategy will potentially help transform an enterprise into mobile first by reducing the necessity for mobile training across the workforce. Furthermore, a millennial focused strategy will also expedite the rollout of RTC throughout the company.

Millennials account for up to 40% of the workforce in 53% of enterprises

Millennials account for between 41-60% of the workforce in 33% of enterprises, and more than 60% or above of their workforce in 14% of enterprises.

The research discovered that millennial communications requirements are most likely to be constrained within small enterprises which has a greater propensity to treat its workforce the same, whereas large enterprises are most likely to embrace millennial communications needs.

This could potentially limit the appeal of small enterprises to millennials. As a mobile first consumer, millennials are most likely to enter the workplace with a technology predisposition in terms of their preferred communications and collaboration services, not to mention a preference for OS and device. Millennial-focused enterprises will provide solutions to seamlessly suit that use case, leading to satisfied and engaged employees able to fit into their technology framework support. At present, large enterprises are accommodating these needs the most.

Employee strategy will develop into competitive advantage for millennial-focused enterprises seeking the best recruits. Accommodating millennials' communicative predispositions, technological preferences, as well as how they want to work and engage, will result in a healthier millennial workforce leading to higher engagement, productivity and efficiency gains.



## Training required?

The research uncovered 65% of employees have not received full mobility training from their employer within the last 12 months.



Yet, this is not to the detriment of enterprises. The consumer research revealed that the lack of mobility training was only negatively impacting 2% of employees, whom claim they cannot complete their tasks without training.

In fact, this development potentially eases the pressure on enterprises, even though 46% claim employee training is the biggest challenge to plan for when developing remote working. Enterprises underestimate how mobile savvy their workforce is, leading to the belief that employees are mobile first well ahead of their enterprise employers, which will hasten their employer's migration to mobile first and ultimately utilising the mobile cloud.

Alternatively, enterprises are now recognizing employees as mobile first and training is not required in an app-oriented, smartphone environment delivering an intuitive optimized user experience: Users instinctively know to tap their smartphone to activate a call, or add an additional caller to an existing call, compared to the equivalent and arduous on-screen button search and accompanying mouse-clicking process on the desktop to make an OTT call or conference call.





## Reasons to be encouraged

The top-line research results are very encouraging for the continued rise of the mobile enterprise, whether BYOD, remote working, or the mobile cloud. Presently, 98% of enterprise employees are primed to go mobile first, if not already, 89% of enterprises identify varying degrees of importance with the cloud, and 85% of enterprises recognize that millennials communicate differently, and will drive the workforce transformation. Enterprises are well equipped for mobile first, cloud-enabled, millennial focused.

As the research has highlighted, key developments in the enterprise clearly filter down from the large enterprises to the small enterprises. Almost three-quarters of large enterprises recognize the importance of the cloud to their business, compared to around half of medium enterprises and just over one-third of small enterprises. Based on the percentage of SMEs that now acknowledge the increasing importance of the cloud, it provides an indication that the level of mobility operating throughout SMEs is now experiencing exponential growth.

The impact of the smartphone and subsequent mobility is positively affecting every enterprise. Large enterprises will inevitably adopt the mobile cloud first, but with SMEs in acceleration mode to the cloud, the lag between large and small enterprises utilizing the mobile cloud will be significantly reduced in comparison.

As the migration to the mobile cloud gains momentum, the criteria applied in the short-term to identify the enterprises most likely to be the early adopters will be relaxed as a widespread understanding of the mobile cloud benefits infiltrates all enterprises. Potentially, the SMEs yet to invest in a cloud strategy have the agility to migrate directly to a deeply ingrained mobile strategy incorporating BYOD, remote working, and the mobile cloud.

Technology, in the form of mobile devices and the cloud, have become the great enterprise leveller, providing SMEs with access to the productivity and efficiency gains, and cost reductions originally enjoyed by large enterprises.

Such developments have also transformed business communications. Shaped by widespread consumer adoption of RTC services, every enterprise can now develop an RTC strategy to develop an optimized user experience and use advanced communications as a key differentiator.

The mobile cloud, remote working, and mobility will be as appealing to the large global enterprises as the small merchants and start-ups around the world and that is transformational for businesses.

All enterprises are well equipped to become mobile first, cloud-enabled, millennial focused.

## Section 3:

# How do we deliver to the enterprise?

Accessing mission-critical RTC services and apps is how the mobile cloud will be transformational for every enterprise big and small. Inadvertently, the cloud predominantly became a solution for large enterprises. But the real mobile cloud transforms mobile from an access point to the nucleus of the cloud proposition, driving productivity, efficiency, and engagement across every enterprise. And that, along with the optimized user experience, is the fundamental distinction between the cloud and mobile cloud.

The Mitel view of the mobile cloud delivers a cost-effective monetization strategy for mobile enterprises and dynamic mobile operators alike.

The Mitel mobile cloud solution is tightly integrated with the mobile operator's IMS (IP multimedia subsystem), leveraging mobile operator assets such as security and identity management, to provide a ubiquitous connectivity to mission-critical RTC services and applications to support the enterprise and evolve their remote working capability. Mitel's mobile cloud solution positions the mobile operator at the center of enterprise communications.

The network integration places RTC services natively on the device — typically those services that until now have been associated with OTT providers — and just one tap away for the user. This greatly enhances the user experience as they can tap their smartphone to activate a video call, and can then tap the screen again during the call to seamlessly convert into a voice call. Similarly, a chat session can become group chat in one tap.

By placing communications services natively on the device, it substantially increases the reach within the mobile operator's subscriber base (or enterprise workforce), without the need for cumbersome app downloads and associated frustrating updates. What's more, this native approach to communications also removes a lot of the complexity associated with mobile device and app management for the enterprise.



**Enterprises are well equipped to become mobile first, cloud-enabled, millennial focused.**

And with Mitel's continuity of service solution, that same call or message into the smartphone can also be answered, or responded to, via their tablet or laptop, taking the user experience to another level.

Continuity of service is one of the many RTC-based services being adopted by millennials. These users recognise the importance of RTC to the enterprise as part of a mobile cloud solution.

By nurturing their ability to grasp new communications concepts, enterprises can reap the rewards by using millennials to educate colleagues and capitalize on the productivity and efficiency gains from a deeply ingrained RTC model.



But this cannot be achieved without a robust, agile network. Mitel's proven enterprise solution for service providers, is software-based and enables flexible deployment and go-to-market options as a white-label and multi-tenant cloud communications solution. It delivers a cloud-based RTC and collaboration solution for all enterprise segments.

Controlling the network using network function virtualization (NFV) and software-defined network (SDN) technologies provides the MNO with a newfound versatility, comparable with the start-up OTT providers that have stolen a march on the delivery of IP communications.

The Mitel mobile cloud solution enables mobile operators to deliver innovative software-defined services (SDS) to enterprises of all sizes in weeks, or months, but not years. This is a real game changer for mobile operators. It is a sign of their re-emergence as communications trailblazers, which is evident from enterprises approaching them for innovative cloud-based solutions.

Nevertheless, these solutions become the catalyst for service innovation and new revenue streams for mobile operators across their consumer and enterprise customer base. Service providers can deploy these solutions in their IMS, legacy circuit-switched networks, Telco-clouds, or hosted cloud from Mitel. The cloud-based mobile network technologies can be operated either by the enterprise or on behalf of the enterprise as a cloud solution by Mitel. This allows the enterprise to take control of what services are implemented and how well integrated they are with their existing IT infrastructure.

## The long term view

To meet the needs of all mobile enterprises in the long term, mobile operators will need to develop the concept of network segmentation and micro segmentation. This will allow an enterprise with the opportunity to effectively access a slice of the mobile operator network as their own private virtual network.

Therefore, the mobile cloud could see the emergence of the Private Virtual Network Operator (PVNO), and would allow a large enterprise to effectively become its own mobile operator, and to offer consistent, global services based on the integration of their collaboration services and RTC with mobile devices. Equally, the PVNO would provide a graduated scale of sophistication dependent on the size of the enterprise to meet the needs and requirements within available budget.

As part of a mobile operator's mobile cloud offering, they would be able to provision thousands to tens of thousands of PVNOs, each delivering RTC and collaboration services, with custom virtual networks to address end-to-end devices, each with a different QoS associated with them to meet the needs of both large enterprises and SMEs.

By improving and focusing on the RTC services within enterprises and how the services are delivered to each mobile device will provide the return on investment (ROI) in terms of workforce productivity and their effectiveness.

Mobile cloud has the opportunity of providing something that enables a mobile first enterprise to conduct all of its business using the mobile device, and in doing so creates value that can be monetized by the mobile operator.

# Methodology

## **mobilesquared were commissioned by Mitel to conduct extensive research into the mobile enterprise.**

To do this, mobilesquared conducted quantitative research based on three online surveys, targeting IT decision-makers, consumers that worked within an enterprise of 2 or more employees, and carriers.

In total 600 IT decision makers took part in the research based in US (200 respondents), France (100), Germany (100), Spain (100), and the UK (100). The enterprise survey was carried out in December 2015, by Lightspeed GMI, part of Kantar.

3,000 consumers aged between 18 and 65 took part in the research (labelled as “employees” throughout the eBook). The breakdown was US (1,000), France (500), Germany (500), Spain (500), and the UK (500). The consumer survey was carried out in December 2015, by Lightspeed GMI, part of Kantar.

The carrier research was conducted by mobilesquared December 2015 and January 2016. Primary research involved an online survey of 40 mobile operators, with a further 36 being screened out.

Job roles of respondents partaking in the MNO 2016 research was split out by Marketing (XX%), Strategic Planning (XX%), Operations/Network (XX%), Product Management (XX%),

Carriers partaking include Ooredoo, EE, Bouygues Telecom, Orange Group, Vodafone Group, 3 UK, BT, Talk Talk, STC, Telecom Italia, Telefonica Group, Inmarsat, Telecable, Hrvatski Telekom, AT&T, WIND, Vimpelcom, US Cellular,

# About Us

## About mobilesquared



mobilesquared provides intelligence and insight on the mobile sector. We've been analysing the mobile space for two decades, so our expertise has been earned, not learned. Our instinctive ability to ask the right questions uncovers invaluable nuggets of insight, which we interpret to help shape truly effective strategy for our clients. Our experience is recognised by the industry - we sit on judging panels for the prestigious GSMA Awards, EMMA awards, and the MEFFYs.

For more information go to [www.mobilesquared.co.uk](http://www.mobilesquared.co.uk)

## About Mitel



A global market leader in enterprise and mobile communications powering more than 2 billion business connections and 2 billion mobile subscribers every day, Mitel (Nasdaq:MITL) (TSX:MNW) helps businesses and mobile carriers connect, collaborate and provide innovative services to their customers. Our innovation and communications experts serve more than 60 million business users in more than 100 countries, and 130 mobile service providers including 15 of the top 20 mobile carriers in the world. That makes us unique, and the only company able to provide a bridge between enterprise and mobile customers. For more information, go to [www.mitel.com](http://www.mitel.com) and follow us on Twitter [@Mitel](https://twitter.com/Mitel).