FROST & SULLIVAN

Selecting the Right UC Solution in the Adaptive IT Era

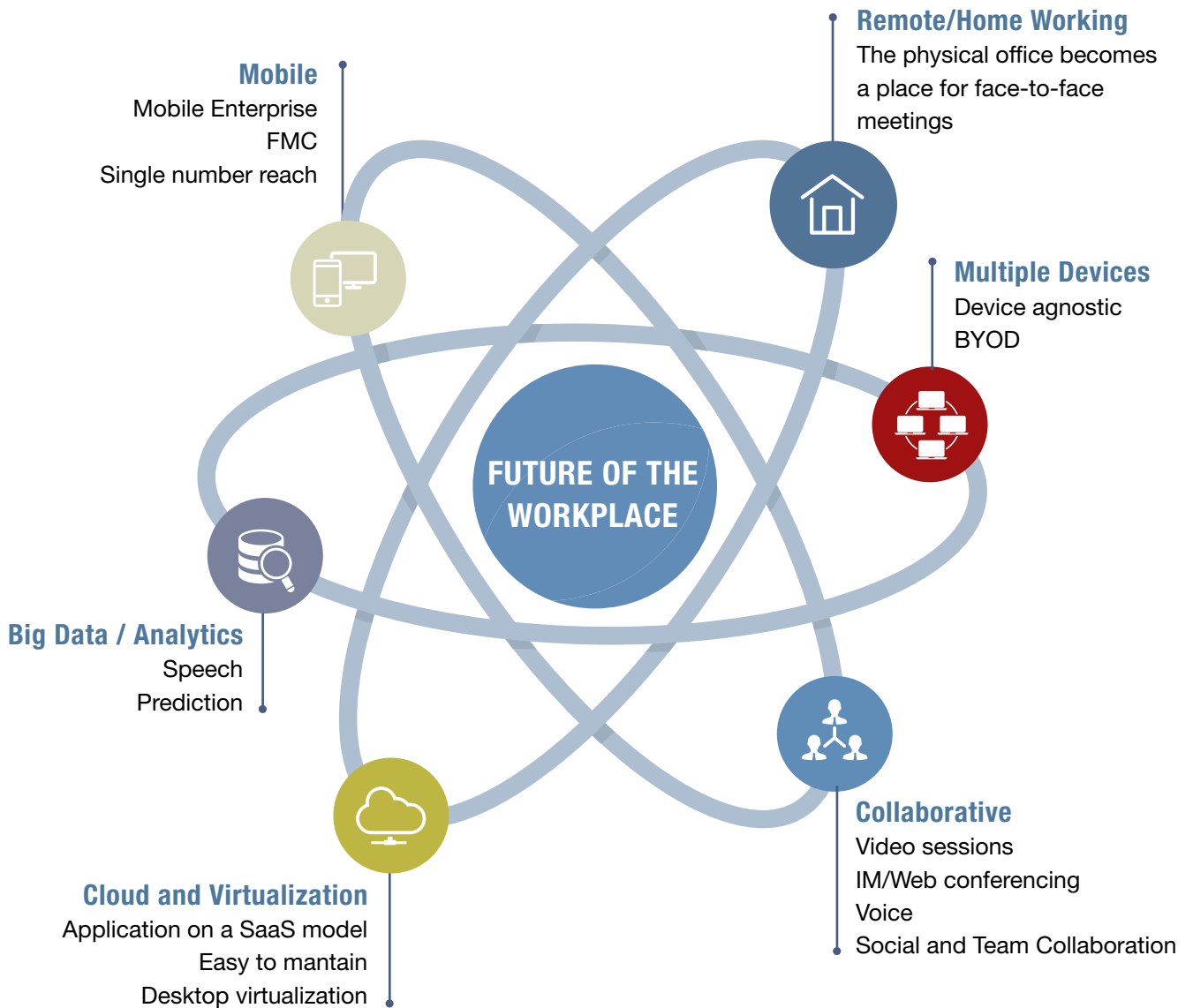A Frost & Sullivan White Paper   www.frost.com

NEC

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ENTERING THE ADAPTIVE IT ERA - FUTURE OF THE WORKPLACE

Workplaces today are experiencing a substantial shift from the traditional physical office environment to one that embraces mobility. Modern technologies are allowing organizations to benefit from the agility of cloud services and BYOD (Bring Your Own Device), forcing enterprises to rethink their ICT strategy to allow for more modern ways of working. These technologies have disrupted the whole ICT industry and paved the way for a new workplace to evolve in what Frost & Sullivan calls the "Future of the Workplace" (Figure 1).

Figure 1: Future of the Workplace

Mobile
Mobile Enterprise
FMC
Single number reach

Remote/Home Working
The physical office becomes a place for face-to-face meetings

Multiple Devices
Device agnostic
BYOD

FUTURE OF THE WORKPLACE

Big Data / Analytics
Speech
Prediction

Collaborative
Video sessions
IM/Web conferencing
Voice
Social and Team Collaboration

Cloud and Virtualization
Application on a SaaS model
Easy to mantain
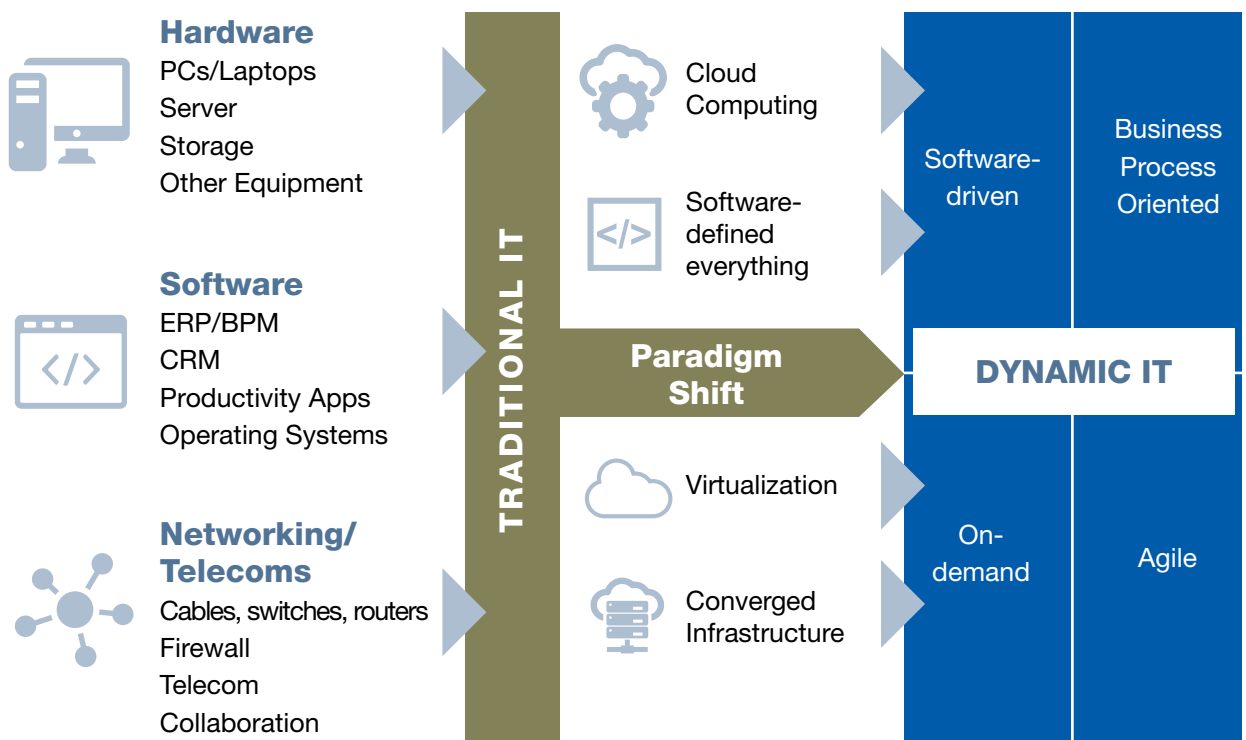Desktop virtualization

Source: Frost & Sullivan

Remote working is becoming the norm adopted either entirely or partially by enterprises. In time, more enterprises are envisaged to allow employees to work from home or other remote locations. As such, there is expected to be a significant drop in the number of employees reporting daily to work. Employees are likely to come to the office only when there is a meeting that requires them to attend in-person. Along with this shift, smartphones and tablets are becoming the preferred choice for employees to conduct their business. This trend is projected to grow and be supported by cloud and virtualization services allowing for greater use of unified communications solutions delivered over smartphones and tablets. Enterprise applications, downloadable from app stores and WebRTC will make the workplace borderless, allowing employees to work from anywhere and from any device. To embrace the "Future of the Workplace" enterprises will need to transform to Smart Enterprises.

This White Paper examines how Unified Communications (UC) trends are likely to impact the UC industry; challenges enterprises may face in deploying UC; how to evaluate UC vendors in the Adaptive IT era; and three UC use cases. The report aims to help enterprises create a compelling UC solution purchasing strategy that is ready to meet the demands of the Adaptive IT era. To explore this new era of work, first we have to take a look at the idea behind the Adaptive IT.

ADAPTIVE IT

While the traditional IT infrastructure continues to be most common set-up in organizations globally, emerging disruptive technologies such as cloud computing and software-defined networking present new solutions that reduce costs and enhance operational efficiency. The disruptive technologies challenge the traditional IT set-up, forcing it to transition to the next phase of IT evolution. Simultaneously, demand from enterprises is changing as they view IT as an enabler and innovation driver. Emerging technologies coupled with evolving demands are pushing traditional IT to the next level: the creation of an Adaptive IT infrastructure.

Figure 2: IT Infrastructure Transformation from Traditional to Dynamic

Hardware
PCs/Laptops
Server
Storage
Other Equipment

Software
ERP/BPM
CRM
Productivity Apps
Operating Systems

Networking/ Telecoms
Cables, switches, routers
Firewall
Telecom
Collaboration

TRADITIONAL IT

Cloud Computing

Software-defined everything

Paradigm Shift

Virtualization

Converged Infrastructure

DYNAMIC IT

Software-driven

Business Process Oriented

On-demand

Agile

Source: Frost & Sullivan

In a nutshell, the Adaptive IT infrastructure is an overhaul of the traditional IT set-up powered by emerging technologies; it is scalable, simple, flexible, reliable and more business focused.

The Adaptive IT infrastructure proposes a unique perspective towards the usage of collaboration suites – as a collaboration that is integrated with business functions and delivers value by ensuring business agility. In contrast, the traditional IT infrastructure views collaboration as just an application deployed by IT/telecom team for users to use when required. The Adaptive IT infrastructure makes systems more intelligent as features such as intelligent routing, selection of the shortest path and one-touch services become an integral part of the infrastructure. These features of Adaptive IT support smooth and seamless collaboration by supporting any delivery model (on-premise, hosted and hybrid) and device (laptops, desktops, smartphones, and tablets).

CONVERGENCE FOR DIGITAL TRANSFORMATION

To realize the Future of the Workplace vision, enterprises need to adopt converged technologies that bring together dynamic IT, beyond UC and business processes.

Figure 3: Convergence of UC, Business Processes, and Dynamic IT
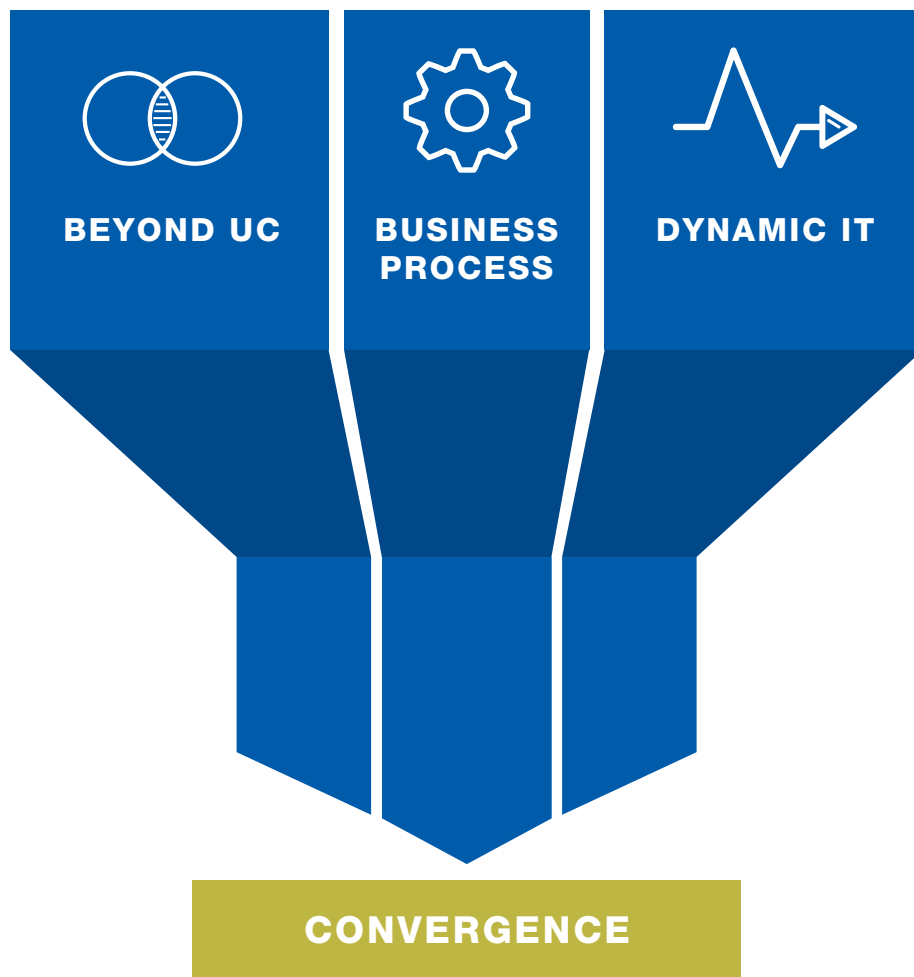
Source: Frost & Sullivan

Convergence will help realize enhanced advantages from a UC deployment, compared to benefits that would have been derived if the UC were deployed in a silo, without considering IT and business process integration. To take convergence to the next level, it is important to implement a solution that is developed from scratch using a Mobile-first and Cloud-first vision.

Another significant trend transforming the workplace is the growing importance of innovation to drive enterprises to new levels of growth. To achieve this, enterprises need to create an environment that encourages cross-team engagements through a mix of physical office and virtual collaboration spaces using technology. Social tools and virtual team rooms act as catalysts to facilitate cross-team environments within organizations. As we evaluate these transformations, let us review the trends currently impacting the UC industry.

SIX TRENDS RESHAPING THE UNIFIED COMMUNICATIONS LANDSCAPE

The UC market is witnessing trends that are likely to impact the overall industry significantly.

BEYOND UNIFIED COMMUNICATIONS

UC is moving from just being delivered as a solution to a one that delivers a business outcome. Therefore, it is imperative to take UC from its traditional deployment use case and user profiles to business processes and all the employees' profiles within the enterprise. For example, integrating UC into business processes such as CRM and ERP help to achieve business outcomes relatively easier than just delivering UC as a standalone solution.

DELIVERING UC AS A SERVICE (UCAAS)

Unified Communications delivered as a service is projected to become the preferred choice of deployment for workplaces of the future; well supported by the availability of UCaaS from service providers, through managed or Pure cloud solutions or Pure cloud and hosted solutions. The cloud and hosted model for UCaaS delivery offers extensive benefits and, in the longer term, Frost & Sullivan believes most organizations will opt for a complete UCaaS solution.

MOBILITY TO DRIVE ACTIVITY-BASED WORK IN UC

To address the growing trend of staff working away from their designated desks to a location of their choice, employers are providing a more flexible working environment for employees and reducing the actual number of desks in the office. More offices are expected to migrate away from fixed desks to hot

desks. As such, the need for physical endpoints will be reduced, giving way to softphones, UC clients and mobile clients. This is likely to result in declining sales of IP Phone sets and digital phones in the near future.

SOCIAL ENTERS THE ENTERPRISES

The usage of social networks to communicate has become pervasive in employees' personal lives. Employees now look to use social networks in the office. Vendors are embracing the change by offering social networks that integrate with communications tools to potentially take team productivity to a higher level.

ANALYTICS TO BOOST CONTACT CENTRE SERVICES

Enterprises looking to deliver a richer customer experience are starting to add customer interaction analytics tools that integrate with contact centre solutions and business processes. This allows enterprises to differentiate themselves from their competitors.

GREATER ADOPTION OF INTEGRATED CONFERENCING AND COLLABORATION IN THE ENTERPRISE

Enterprises are moving beyond audio conferencing to incorporating video and web conferencing solutions. The ability to use all technologies simultaneously plays a critical role in how employees interact and collaborate with internal and external stakeholders. The integrated whiteboard and ability to share the screen has boosted employee productivity to much higher levels than standalone audio conferencing only.

UC is becoming a business optimization tool rather than just a simple productivity or cost-cutting technology. Enterprises are looking for converged and interoperable UC suites to help them create a competitive advantage.

CHALLENGES ASSOCIATED WITH UC IMPLEMENTATIONS

Unified Communications solutions primarily offer cost-savings and productivity increases. Despite these benefits, enterprises have been slow to adopt UC solutions. The reasons associated with the low adoption include longer deployment cycles, failed implementations and uncertainties relating to legacy systems.

1.   LEGACY SYSTEMS DILEMMA

One of the challenges associated with legacy systems is that it is maintenance heavy. In addition, the independent audio and video conferencing solutions restrict enterprises from fully adopting unified communications. Though the question of what to do with the legacy system is relevant, the bigger question is whether enterprises can continue to stay less productive and absorb the legacy system's high maintenance costs. A phased UC solution deployment is an effective solution to this situation as it allows enterprises to adopt UC at their own pace. The new SIP-compliant interoperable UC system offers open integration with third-party UC vendors enabling enterprises to maintain their legacy systems. However, the question of low productivity and high cost of maintenance and integration with legacy systems remains.

2.   SCALABILITY AND INTEGRATION WITH BUSINESS PROCESSES

While contact center solutions are integrated into telephony systems, it is still difficult to integrate billing and CRM systems. Enterprises continue to debate these issues: "Does the adoption of UC promise similar integration with existing business processes?" "Can this integration be extended to other processes not connected to the business processes and allow enterprises to be agile and reduce their time to make decisions?"

3.   SELECTING THE RIGHT DEPLOYMENT MODEL

In the past, the choice of a full-feature UC deployment was limited to an on-premise solution. Nowadays, there are several options available such as adopting UC as a service, hosting UC in a private cloud, or adopting a hybrid deployment where an on-premise UC solution is deployed in the headquarters while remote offices are supported via a cloud model.

4.   SUPPORTING DYNAMIC IT

Enterprises with insufficient infrastructure to support a UC deployment can result in higher cost and delay in deploying UC. Therefore, it is important that the UC solution can be deployed as on premise and virtualized solutions to support branches. For this to be successful, enterprise would need to have an IT infrastructure that supports the virtualization layer. Additionally the enterprises' IT environment should support the entire feature set necessary for the IT to be dynamic.

5.   COLLABORATION BETWEEN IT AND TELECOM MANAGERS

While the IT manager is responsible to develop a reliable IT infrastructure with relevant hardware and software, the network/telecom manager is tasked with the deployment of UC solutions. However, in organizations without a network/telecom manager, the UC implementation becomes an added responsibility of IT managers, and not their core responsibility. As both these departments purchase solutions independently, this results in a situation where the IT infrastructure is not fully compatible with the UC infrastructure, leading to the underutilization of UC suites. IT and telecom managers should effectively collaborate and choose UC solutions that can be integrated into the Dynamic IT infrastructure.

SELECTING THE RIGHT UC VENDOR/SERVICE PROVIDER

Selecting the right UC vendor /service provider is the key to a successful UC deployment. As such, it is critical to carefully evaluate vendors based on their solutions and technical expertise. Other assessment parameters include experience with UC technologies, integration with adaptive IT, degree of integration to business processes, total cost of ownership, deployment options offered, and support for existing legacy systems that can be adapted to fit the organization's style of working.

1.   SELECTING THE RIGHT DEPLOYMENT MODEL

Decision-makers should consider a number of factors when choosing the right platform for deployment, whether it is on-premise, cloud or a hybrid model. While security and cost are essential determinants, the solution's ability to work seamlessly with different deployment models is also critical. If this factor is not carefully considered, it can potentially defeat the purpose of the UC deployment aligning well with the organization's IT roadmap. The key to selecting the right platform should ideally keep a single goal in mind, that is developing a competitive advantage for the business.

2.   INTEGRATING UC WITH BUSINESS FUNCTIONS

Collaboration is typically viewed as a solution that facilitates any business function. However, a true dynamic IT environment should have UC solutions built into its business functions. For instance, a CRM system should have UC functionalities built into the software to promote collaboration amongst colleagues and external parties. The productivity derived out of built-in collaboration features enables business outcomes to be achieved at a faster pace. However, many organizations have yet to start while others that want to do it have difficulty finding the relevant solutions.

As UC applications are built into the business processes, open APIs remain difficult to maintain. Hence, vendors need to develop vertical-specific solutions to prevent any discrepancies in integration while supporting full functionalities. This way, end-users can focus on their core business, and through collaboration, be able to do it better.

3.   EXTENDING COLLABORATION OUTSIDE THE ENTERPRISE

While internal collaboration is part of an employee's daily routine, collaboration that extends beyond the enterprise has a long way to go. Systems need to be highly available, secure and scalable to boost organizational productivity by allowing employees to arrange meetings with partners and customers easily.

4.   FOSTERING INNOVATION THROUGH COLLABORATION

Once the challenges above are addressed, this can lead to the development of a simple, secure and scalable UC-enabled IT platform to help employees become more productive. As this happens, enterprises will be able to collate a group of experts who can collaborate better to foster innovation. In today's dynamic world, the best advantage an organization can possess is actionable innovation. This innovation is only possible when the resources are flexible, agile and productive. As collaborative workspaces empower resources to do so, it is safe to assume that enterprises can develop a competitive advantage based on collaboration that supports a dynamic IT infrastructure.

"Convergence is a key trend in the UC market. While it is essential for UC products to be good, it is equally important that the products work in complete sync with existing IT infrastructure. In essence, an infrastructure that is agile and allows changes to the IT environment without disturbing the other solutions attached to it."

VENDOR ASSESSMENT ON UC PURCHASING CRITERIA

In making a purchasing decision, enterprises need to look at a UC solution developed from the ground up to match their needs and go beyond the UC market. The UC solution should offer flexibility in deployment, help converge IT and UC together, and provide support to the agile IT environment. Large multinationals work with multiple vendors to procure IT solutions and require a solution that natively integrates with third-party endpoints and gateways. Ease of use and manageability are essential aspects enterprises should evaluate in making their buying decision. Considering the total cost of ownership (TCO) should ensure that the purchased UC product is not only high on features and integration, but also delivers the most cost-competitive solution. In addition, enterprises should select a vendor or service provider that offers a wide range of products and services that encompass not only voice and UC solutions, but other IT products and services that complement its IT roadmap.

When making a purchasing decision, it is vital to consider all of the parameters mentioned above and assess the ones that apply to a particular business. Frost & Sullivan evaluates the top 4 Global UC vendors on critical parameters enterprises should consider when making a UC purchase decision.

Table 1: Vendor Assessment on UC Purchasing Criteria

Top 4 UC Vendors	Support to Adaptive IT	Provides native Integration to Business Processes	Adapts to enterprises' way of doing work	Experience with the technology	Low Total Cost of Ownership	Supports legacy systems	Offers choice of deployment
NEC	HIGHEST	HIGHEST	HIGH	HIGHEST	HIGH	HIGHEST	HIGHEST
Cisco	HIGHEST	HIGH	HIGH	HIGHEST	MEDIUM	MEDIUM	HIGH
Avaya	HIGHEST	HIGHEST	HIGH	HIGHEST	MEDIUM	HIGH	HIGH
Microsoft	MEDIUM	HIGHEST	HIGH	HIGH	HIGH	MEDIUM	HIGH

Source: Frost & Sullivan

The four vendors above appeal to the unique needs of different customer segments. However, NEC provides the IT Framework with a broad set of products, such as Servers, Storage, SDN, and Virtualization. On top of the framework, NEC provides UC products such as UNIVERGE 3C and UNIVERGE 3C Contact Centres. Additionally, NEC provides APIs to integrate with business processes while its in-house team provides excellent integration capabilities to enterprises. NEC's products readily support and integrate with Software-Defined Networking (SDN) and Virtualization technologies. While its latest UNIVERGE SV9000 release offers an advanced voice platform as a solution for the smart enterprise and it is an option for enterprises looking to deploy UC on top of their adaptive IT network or are likely to embrace adaptive IT in the future. The NEC UNIVERGE SV9000 also offers a range of options for a UC deployment; enabling enterprises to deploy it as an on-premise, cloud or as a hybrid solution. With over three decades of experience in developing UC solutions, NEC offers one of the lowest total cost of ownership (TCO) in the industry.

NEC through its UNIVERGE SV9000 Series brings converged unified communications and collaboration together to support desk-bound and desk-less employees. It does this by offering mobile client and web-based solutions that enable UC to be accessed from mobiles or any other device with web-based access. Central to its solution is the consistent user interface across all the devices that allow easy integration with business processes.

To help enterprises in their buying decision, Frost & Sullivan presents three use cases of UC deployments.

UNIFIED COMMUNICATIONS USE CASES

The driving factor for UC adoption depends not only on an organization's requirements, but also on the size of the organization. UC solutions are best deployed by aligning business outcomes with the needs of the various industries. The following section discusses how UC boosts team engagement, delivers a richer experience to guests in hotels and improves productivity in hospitals.

ENABLING GREATER TEAM ENGAGEMENT AND COLLABORATION

Key differentiators for enterprises are the ability to innovate and the speed of taking the solutions to market. This requires tools that enhance team collaboration by enabling any device to use tools such as web conferencing and content sharing solutions at any time and the ability to add team members to the conversation through audio, web and video applications.

> *Unified communications solutions such as the NEC UNIVERGE SV9000 enables team collaboration by providing a web conferencing platform (UNIVERGE 3C) that allows content-sharing and various choices to the team conversation sessions. It also provides an integrated directory to add members to the conversation on an ad-hoc/planned basis. Integration with business applications such as CRM allows teams to access information in real-time to enable quick decision-making.*

UNIFIED COMMUNICATIONS DELIVERS A RICH EXPERIENCE TO CUSTOMERS IN THE HOSPITALITY SECTOR

Unified Communications can be delivered via soft client/mobile clients to hotel guests and staff. Guest experience is enhanced as the solution enables them to communicate with hotel staff over the softphone delivered to guests' mobile devices. The app can be used to communicate (Instant Messaging and Voice) from outside hotel premises and lead to faster resolution of guests' queries. For staff, the mobile client enables instant messaging and voice communications between staff members. The integration

with the hotel management system helps mobile staff access real-time information and deliver accurate information to guests. Additionally, the use of speech-to-text helps to reduce instances of miscommunication, making staff more productive.

> *NEC excels in providing unified communications solutions to hotels worldwide by packaging features from the hotel management system, networking, and unified communications into one single solution (UNIVERGE H10000 series). The solutions can also be integrated into NEC's Digital Signage systems.*

UNIFIED COMMUNICATIONS INCREASES PRODUCTIVITY IN HOSPITALS

Timely, accurately-delivered communications are critical prerequisites for hospitals. Unified communications delivered over mobile devices can help nurses to reach out to doctors in the fastest way, depending on the doctor's availability. If a doctor is not available, the nurse could use non-real time communications such as 'Push-to-talk' or instant messaging and if the doctor is available, the nurse can use real-time communications such as chat, voice or video. Needless to say, this makes nurses more productive by focusing on what they do best rather than on spending time reaching out to doctors through different means of communications. As UC is delivered over mobile devices, finding a specialist near you (using geo-tracking) and available (Instant messaging status) is simpler. Integration with the hospital's patient information management system enables doctors to stay up-to-date on critical patients' health condition and take proactive steps to keep patients in good health.

> *NEC through its integration team can integrate the hospital's patient information management system to its unified communications solution and deliver it to any device at any time. NEC also offers DECT/ Wi-Fi phones and Innovative desktop telephone (UT880) to support the use of employees' personal smartphones for communications.*

THE LAST WORD

The ICT industry is witnessing major disruptive forces such as mobility, BYOD, big data, cloud computing, and virtualization. Disruption is expected to transform the existing physical office into the Future of the Workplace; one that empowers mobile workers through strong collaborative and device-agnostic platforms. The Office of the Future will bring together a dynamic IT infrastructure, business processes and move beyond UC to form a converged solution.

The shift towards the Future of the Workplace is positive as current developments such as SIP trunking, profile-based collaborative suites and business outcome-driven messaging continue to boost the uptake of UC solutions. UC vendors are working to develop solutions that go beyond just UC to support all platforms, facilitate desk-less environments, make video as the new voice; giving a new definition to the concept of collaboration. However, challenges such as the existence of legacy systems, scalability, interoperability, choice of deployment models and differences between IT and telecom managers inhibit the adoption of UC.

Enterprises looking to purchase a UC solution should carefully evaluate vendors that offer UC solutions that are built from the ground up to support the mobile-first and cloud-first vision as well as natively support integrations with business processes and third-party vendors. The UC solution should be future-ready and support adaptive IT and all possible types of deployment. More importantly, UC solutions should be aligned with organizational goals and functions, and adapt to the way business is conducted to provide a competitive edge for the organization.

Frost & Sullivan believes that NEC helps address the challenges associated with a UC deployment. Its UNIVERGE SV9000 is built as an enterprise business application, enabling enterprises to embrace adaptive IT and make full use of the benefits available as part of virtualization. The solution integrates with business processes and can be deployed as an on-premise, hybrid or cloud solution. The built-in high availability, security, and scalability features enable NEC to deliver a solution that is ready for business continuity. In summary, the UNIVERGE SV9000 is a solution built for the smart enterprise.

To realize the full potential of a UC deployment, enterprises should consider not only future technologies but also address the challenges that currently exist in their business environment. Enterprises need to select UC vendors that fully support Adaptive IT to help them realize positive business outcomes from the UC deployment.

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