# The History & Future of
Unified Communications
Introducing Unified Communications

The worker of the future is virtual. Far from wanting a 100% telecommuting, work from home experience, this new breed of worker wants to be plugged into the office 24 / 7 regardless of time or location, and still be able to attend a communal office space where and when needed.
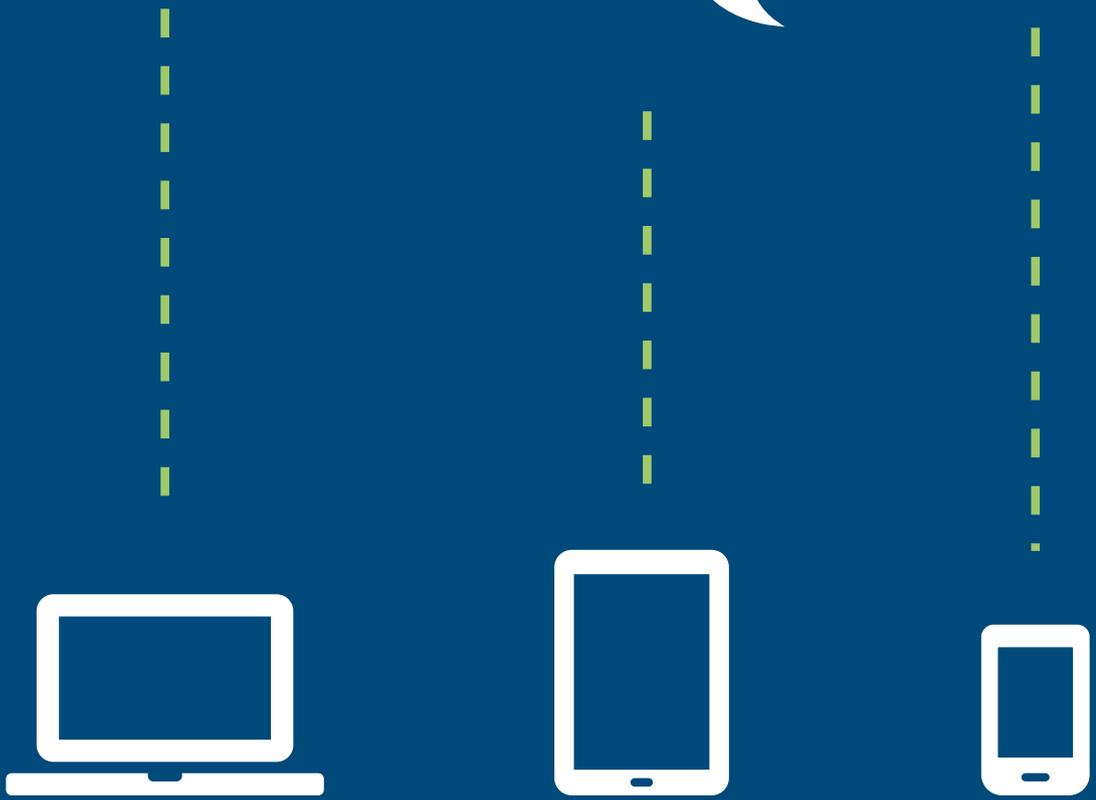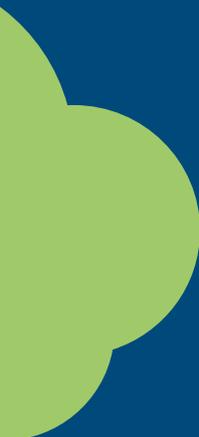
Introduction

The global marketplace has dramatically increased the potential customer base for any business trading today. But with this opportunity comes a challenge – the ease with which your clients can connect with your competitors.

In the past, simply lowering prices was an effective means of raising customer loyalty, but buyers now demand more for their money – generally in the form of better service. And they expect your business to be available whenever and wherever *they* choose.

Contents

75% of shoppers faced with an automated telephone system will **not leave a voicemail**.

85% of those people **never call back**.

Please leave a voicemail after the tone...

Alternatively ring back between the business hours of...
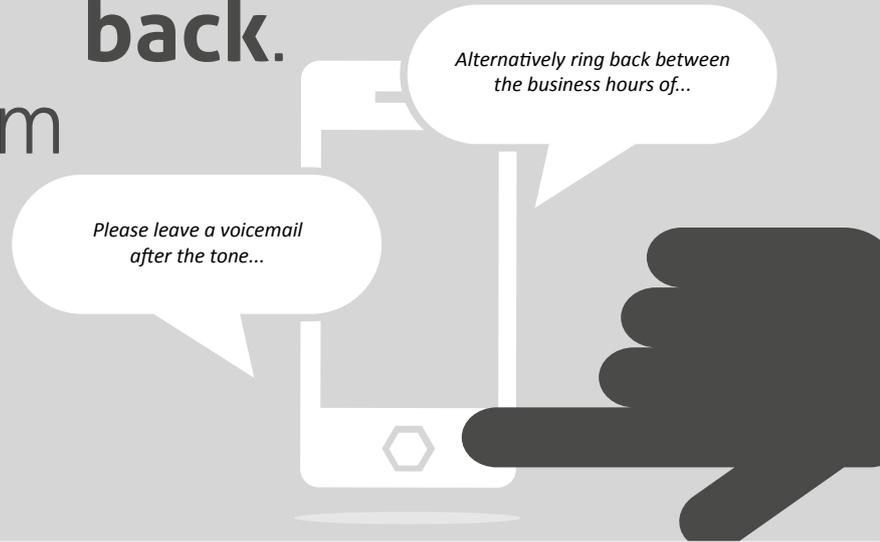
Improved communications are at the heart of any attempt to raise customer service standards, boost business process efficiency or cut operational costs. Unified Communications platforms provide a comprehensive toolkit to improve internal and external communications, allowing organisations to deliver on all of these goals and more.

Unified Communications (UC) centralises common communications channels – like telephone, email, video calling, instant messaging (IM) and even fax – with other functions like shared workspaces, secure file transfer and presence, and provides the ability to see a colleague's availability instantly. As well as improving communications, UC also boosts productivity and simplifies remote and mobile working.

With the ability to contact any employee, any time, using any device, businesses are able to dramatically improve their internal efficiency. Improved availability helps remove the bottlenecks that introduce latency into business processes, delay decision-making or prevent customers from getting the answers they need. These efficiency gains have a direct impact on the profit and turnover, helping to explain the increasing popularity of UC solutions.

Business spending trends show that the Unified Communications market is growing at a phenomenal rate. The global UC market was worth $26.39 billion in 2013, but Grand View Research predict that the US UC marketplace alone will be worth over $22 billion by 2020. Unified Communications are here to stay, and will soon be a standard tool in every business.

SO WHERE DID Unified Communications COME FROM, AND WHAT DOES THE FUTURE HOLD FOR THESE TECHNOLOGIES?

The Early Years: Voicemail is King

In the days before mobile phones, remote workers were completely reliant on finding a landline and calling back to the office to collect their messages. The wide adoption of onsite PBX (private branch exchange) solutions that offered voicemail functionality during the 1980s helped to streamline the process, particularly once Interactive Voice Recognition (IVR) technology came online, allowing remote workers to dial into the company phone system remotely to collect their own voicemail messages.

Although these early PBX systems helped to unify Voice Communications, they were still fully reliant on landlines. At the time there was also no provision for integrating channels like email. Other communications methods like instant messaging had not even been invented.

Maturing:
Integrating Other Channels ▼

The first patent for "Unified Messaging" was granted in 1989, although vendor VMX had been offering a telephony-based "email reader" since 1985. Despite the basic principles of the technology having been already established, it took several more years before products that could centralise multiple channels made it into the mainstream.

PBX developments introduced the ability to forward voicemail messages as email attachments, and this formed the basis of Microsoft's flagship email server, Exchange. Released in the 1990s, Microsoft Exchange Server provided employees with access to their voicemail anywhere that they could collect their email using the Outlook desktop client.

And just like older voicemail systems, users could also dial into the Exchange server to retrieve voicemails, or to have their emails read aloud to them. However, the high cost of server resources and network provisioning meant that unified messaging was used only by the very largest businesses who could justify the required levels of investment.

Yet despite everything being centralised and aggregated, the available unified messaging systems did not operate in real-time – users had to connect to the server collect messages when they could, because there was no facility to forward calls and faxes to them in real-time.
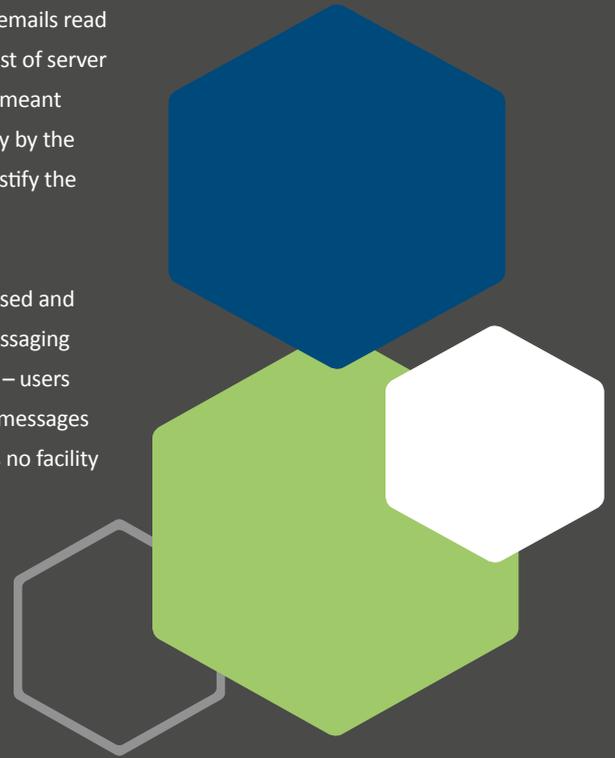
Increasing Adoption ▼

In the early 2000s, developments in voice over IP (VoIP) technologies also saw many legacy PBX units retired in favour of cheaper, more scalable alternatives. Simplified implementation lowered the cost of deployment, helping to further accelerate the adoption of unified messaging solutions in business.

Increased network bandwidth availability, more powerful server hardware and advances in software revolutionised the corporate messaging environment by finally making real-time communications a possibility.

As technology evolved to support real-time communications, the term "Unified Communications" became more popular.

In addition to email, telephony and fax messaging, solutions like Microsoft Office Live Communications Server (initially released in 2003), brought video calling, instant messaging, application sharing and collaboration tools to the desktop.

Widespread broadband Internet Connectivity ensures that most offices and homes in the UK now have sufficient bandwidth to conduct IP voice and video calling without any noticeable drop in call quality. Coupled with ubiquitous WiFi availability in homes and public areas (coffee shops, libraries, planes and trains etc) mean that employees are able to "hook into" Unified Communications systems from anywhere in the world.

The explosion in smartphone ownership has helped speed up Unified Communications adoption on two fronts. First, increasingly powerful handsets have made it easier to build and deploy Unified Communications apps to users.

Secondly, advances in mobile network technologies have made truly ubiquitous communications possible. First 3G, and more recently 4G, connectivity has greatly increased available bandwidth and network speeds so that the user experience improves exponentially.

With UC vendors developing client apps for all of the major mobile platforms there are few technical barriers to deployment to any employee, regardless of whether they work on the road, or are typically based in the office. In many respects, Unified Communications has been one of the key drivers for the uptake of BYOD policies, and vice versa.

"71% of businesses view mobile integration as very important when choosing a Unified Communications solution."

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Looking to the Future ▾

Unified Communications will continue to grow in importance, particularly as the very nature of work itself continues to change. Flexitime and remote working are becoming increasingly popular with businesses that need to find a way to fulfil the round-the-clock demands of their global customer base; buyers expect your business to be available when they choose.

Unified Communications platforms provide the flexibility needed to connect workers any time, any place using any device. Connecting with new employees half-way across the globe is often as simple as creating a user account and inviting them to download the relevant UC app for their smartphone.

The maturing of Web Real-Time Communication (WebRTC) technologies will help businesses move away from the current app-centric UC model. Instead any web browser on any device will become the portal by which employees communicate, simplifying implementation and deployment still further. Expect to see WebRTC applications arriving in early 2016, triggering another surge in UC uptake.
The BYOD paradigm will also become easier to manage. Using geo-fencing and location-aware applications, businesses will be able to automatically trigger a "work" mode that activates office-related UC apps and availability on a worker's device as they enter the local office. The same technology will switch those

apps off when the employee ends their shift and goes home.

Unified Communications will also become increasingly consumerised as smartphone users continue to drive the agenda by choosing apps and services that allow them to do their jobs more efficiently and effectively. BYOD is rapidly evolving into BYOA (bring your own app), forcing IT departments and strategic decision makers to identify and implement "authorised" solutions if they are to retain control of their corporate communications.

Where IT departments lack the resources or skills to implement their own UC solutions, they

that potentially exposes corporate data to third parties.

This simplification/consumerisation of Unified Communications will drive uptake of the technologies by smaller businesses. Service providers will be able to offer SMEs a cost-effective, fully managed UC platform that requires no onsite IT provisions, allowing them to gain the same efficiencies and savings as their larger competitors.
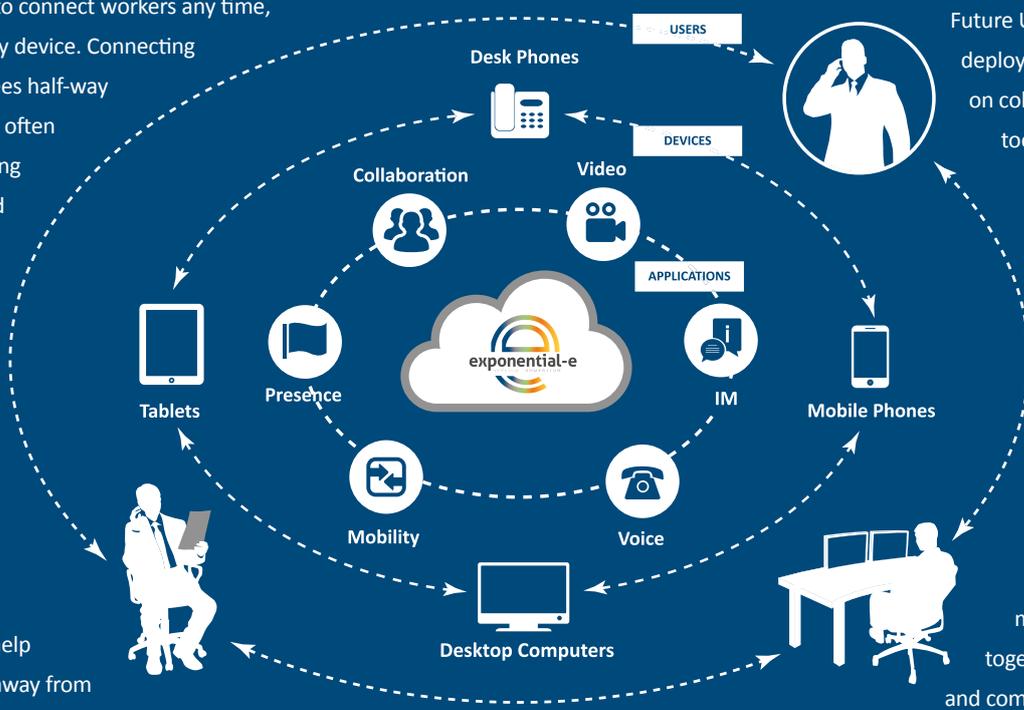
Future Unified Communications deployments will focus more on collaborative technologies too. As well as being able to "talk" through UC, businesses are increasingly expecting to "work" through the same platforms. In future, UC systems will offer improved document and application sharing capabilities making it easier to work together to solve problems and complete tasks. Improved integration provisions will also allow organisations to link virtually any application

USERS
Desk Phones
DEVICES
Collaboration
Video
APPLICATIONS
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Presence
IM
Tablets
Mobile Phones
Mobility
Voice
Desktop Computers

> ## "Less than a third of millennials expect to work regular office hours."

will need to identify a suitable partner who can design and deploy a solution that meets their employees' needs. They must do this before workers source their own apps, creating an unmanageable, insecure, shadow IT system

into their UC platform; giving them the custom communications system their business processes demand.

In terms of technological advances, much depends on ever-increasing bandwidth. Voice and video calling remains adequate on WiFi and 4G connections, but such provisions are not available consistently globally. The release of 5G cellular networks, and the corresponding fall in costs for 3G and 4G technologies, should see the rest of the world catching up in time.

As more bandwidth becomes available, 4K video cameras will become more commonplace, allowing for ultra-high definition (UHD) video calling. Improved imagery will assist with giving the impression of being "present". Further into the future there is every likelihood that conferences will take place in 3D virtual environments, possibly using holographic imagery to render participants.

Predicting the future is notoriously difficult, but with Unified Communications, one thing is certain – technology that simplifies and streamlines communications and collaboration will continue to evolve; and in doing so businesses will find it easier to boost their profit margins and internal efficiencies.
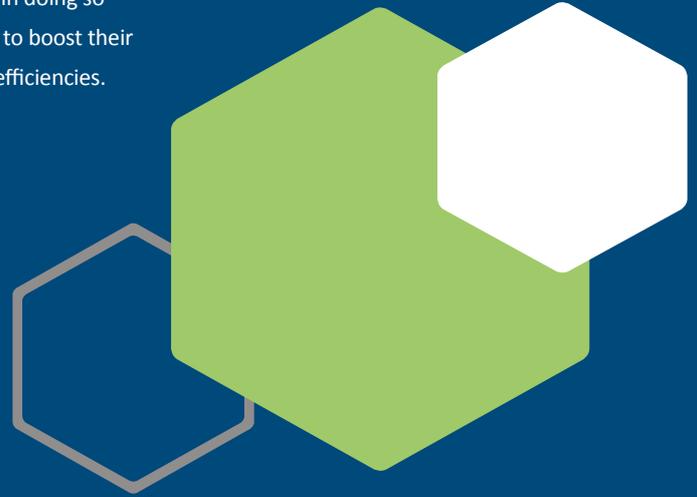
How can Exponential-e help you?

We can help customers to…

- **Increase productivity**, by enabling fast and fluid communication that boosts agility, speeds up idea-sharing and decisions and makes your company more efficient.

- **Give remote workers access** to the same functionality as their office-based colleagues, enabling them to collaborate as if they were at the next desk.

- **Save time and money on travel** by introducing UC applications like audio and video conferencing and desktop sharing over the Cloud.

- **Enjoy better business continuity**, with services and features kept safely in the Cloud so that communications remain untouched in the event of a disaster on-site.

- **Access the latest communications technology** over the Cloud, without the need for investment in infrastructure, systems or equipment, with impressive savings over legacy PBXs and phone lines.

- **Deliver new functionality in real-time** to quickly meet changing needs, without having to maintain levels of technical expertise in-house.

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