

Solid solutions for
a dynamic world

The Way Forward: Customised UC Ecosystems

Whitepaper

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Introduction

Unified communication (UC) took root in 1980/90s and has continued to redefine itself as the world incrementally converts to digital ways of working and living. The core benefit of 'digital' technologies is the convergence they enable and the possibilities this unleashes.

For instance, certain generations just assume that workflow, data, and communications have always co-existed. TikTok, Snapchat and Instagram have cemented expectations for certain functionality and user experience. Others will still recall siloed worlds only accessible through separate applications with minimal interoperability.

As a pioneering expression of digital technologies, UC has always offered the possibility of an ecosystem that 'just works.'

- IP telephony, presence and messaging expanded possibilities a generation ago.
- Then UCaaS met the urgent need to pivot into remote work as COVID shut down physical workplaces.
- Now Generative AI offers the latest version of making it easier to get things done. This time by enabling more actionable outcomes from team collaboration and refocusing individual work patterns on higher value productivity.

While these more recent generations of UC may have arrived in some organisations, 'the future' remains unevenly distributed. UC's adoption path is not linear and never will be.

For instance, the marriage of cloud services and UC does not equal UCaaS for everyone. In some instances, existing infrastructure is fine. It still works, is paid for, and has a viable support strategy for the immediate future.

Pioneering Digital Ecosystem



Unified Communications

IP telephony, presence and messaging expanded possibilities a generation ago.



Remote Working

Then UCaaS met the urgent need to pivot into remote work as COVID shut down physical workplaces.



Artificial Intelligence

Now Generative AI offers the latest version of making it easier to get things done. This time by enabling more actionable outcomes from team.

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In other cases, a hybrid solution better matches the needs and risk profile in certain sectors. We will explore these options in greater detail later. But in terms of current trends, it is becoming clear that future growth of UC is about tailored solutions that go beyond one-size-fits-all. That said, there are a common set of market drivers that continue to influence UC's roadmap in terms of its scope and role. These include:

- 1. Changing Workforce Demographics:** Gen Z is now the dominant workforce cohort. They are mobile first, digitally confident, and self-serve orientated.
- 2. Hybrid Working:** Post COVID demand for greater work flexibility combined with geographically distributed teams across multiple time zones are catalysing organisations to source their own answers to 'the future of work' debate. In addition, global organisations have cultural diversity to consider e.g. North America favours in-office setups, Western Europe opts for hybrid, and APAC leans toward remote work. While all organisations must respond to differing career needs and priorities.
- 3. Technological Advancements:** The emergence of 5G, AI, and IoT continues to raise expectations for more sophisticated and intelligent communication tools.
- 4. Digital Transformation Initiatives:** Many organisations are undergoing digital transformation, driving the need for more integrated and advanced communication solutions.
- 5. A New AI Wave:** Generative AI combined with other AI breakthroughs is being baked into customer and colleague focussed platforms at extraordinary speed. This opens new opportunities to consolidate the worlds of communication, collaboration, and customer lifecycle management.

If there is one message that stands out from this trends overview, it is that finding the right UC solution must start with understanding needs and the challenges in satisfying them.

Unified Communications Roadmap



Changing Workforce Demographics



Hybrid Working



Technological Advancements



Digital Transformation Initiatives



A New AI Wave

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User Needs and Expectations

UC solutions not only have to remain relevant, but they must also keep users engaged. The rise of BYOD and more recently the unsanctioned use of consumer Generative AI services at work are examples of a core truth in user design. People always take the path of least resistance to get something done. UC is no exception and must prove itself fit for purpose as expected by users.

So here are some core criteria on what 'good' looks like amongst stakeholders.

As stated earlier, most employees use personal experience of social media apps as their intuitive benchmark for functionality and user experience. These platforms offer highly evolved capabilities based on optimising user engagement and eliminating cognitive effort. Ideally their UC solution feels like more of the same.



Such users are going to expect a consistent and intuitive interface. One that enables easy switching between voice, video, messaging without disrupting the conversational flow.

This needs to be securely accessible on any device, in any location or situation. Even more so now that flexibility has become such an important criterion in talent acquisition and retention with widespread expectations for an effective '*work from anywhere*' option.

As omni-channel contact centres have shown, user satisfaction is based on more than just channel choice. It's about enabling end-to-end workflows and outcomes. So, collaboration tools like file sharing, screen sharing, and virtual whiteboards need to be embedded into the UI for easy access. As will GenAI's summarisation and '*go find*' services when introduced.

Access to knowledge and data also matters. This will be role specific. Sales teams might need CRM related access. In-field support teams might need access to scheduling and knowledge management. Internal teams using agile methodologies will have their own workflow, templates, and reporting needs.

As a design principle, lower effort translates into reduced learning curves, faster adoption, and happier users. Therefore, UC ROI is boosted in human centred design cultures meaning that UC deployment teams are more effective when membership is diverse and inclusive of these design skills.



Key user expectations of an effective UC Solution

Intuitive user experience on any device

Easy switching between voice, video, and messaging apps

Seamless workflow and collaboration tools

Fully integrated AI

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What matters to IT and security teams?

Some are looking for cloud-based UC solutions to reduce on-premises infrastructure and management overhead. Often motivated by the need for scalability, (due to rapid growth, seasonal fluctuations, or restructuring), cost-efficiency, and easier maintenance. As mentioned earlier, others will prioritise differently.

Security and compliance continue as top concerns. Especially in response to a new generation of AI powered cyber threats and a growing body of data protection regulations. Core needs include end-to-end encryption, access controls, and data sovereignty options.

As stated above, users expect access to existing applications and workflows. As a result, UC needs plenty of integration capabilities and options: whether used as a hub or a spoke within the broader digital workplace plan.

Those responsible for hybrid work strategies need UC to provide equitable meeting experiences for both in-office and remote participants. This arises from the challenge of creating inclusive collaboration environments in hybrid settings.

UC tools must also integrate with space management and room booking systems to optimise office space utilisation in hybrid work models. These teams often work across different time zones and schedules, so UC must support both synchronous and asynchronous communication modes.'



Key user expectations of an effective UC Solution

Access to data, scheduling, sale tools, and marketing content

Scalability and cost-effective

Security and compliance

Simple integration with 3rd party tools

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How AI adds Value to UC

Just as AI redefines the operating model for contact centers by turning data into a real-time asset for personalised routing, agent assist, micro learning, and other forms of actionable insight, so too AI has equivalent promise for the world of organisational communication and collaboration.

Again, it will be interesting to watch which AI powered consumer services are adopted based on real-world value over the next few years. These will help set the next generation of expected functionality and user experience in the workplace as our story of social media showed earlier.

Meanwhile in line with the advancing multi-modal capabilities of Generative AI, there are many ways work life can improve. Here's an overview of use cases that will resonate with different cohorts in the workforce.



Just as many people value the commute benefits of noise cancelling headphones, collaboration is made easier when conversations remain crystal clear, and participants are easy to see.

An algorithmic boost can make all the difference when conditions are noisy and Wi-Fi signals less than required. And assuming those in control see the cultural benefit, having a choice of video filters and backgrounds can add fun and social connection into those gruelling schedules of back-to-back meetings!

Generative AI is versatile. It can create content (chat, documents). It can refine content (chat, email, documents). It can transcribe content (meetings, calls, voice mail). It can translate content (meeting captions, chat, documents). It can summarise content (chat, emails, meetings, calls, documents). Finally, it can also query this growing archive of content and summarise salient points in response.

Having now listed GenAI's major functionality as currently embedded into UC, it's worth revisiting an earlier point about the overall benefit this offers.

Generative AI offers the latest version of making it easier to get things done. This time by enabling more actionable outcomes from team collaboration and refocusing individual work schedules on higher value productivity.



The versatility of generative AI and how it can help manage with

Creating new content

Refine existing content

Transcribe existing content

Translating content

Review and refine existing content

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For instance, Large Language Models (LLMs) can analyse the transcript of a meeting and extract the most valuable information, actions, decisions, and follow-up items.

This makes it easier for everyone to recall the discussion points, track action items, and share summaries and outcomes with others who were not present. Latecomers also benefit with a summary of what's already discussed. Transcripts can be queried afterwards for those needing particular details.

As a word of caution though, user education and policy must keep up. Never assume 100% consistency or accuracy of generated output. Even a well-trained LLMs in poor acoustic conditions is going to be challenged.

For instance, a summary might leave out a noted exception, assign attributes from one item to another or simply hallucinate. The downstream impact on perception and decision making could have significant consequences.

This means project managers who have not attended meetings should not get into the habit of sending out Generative AI summaries to the project team. Instead, make sure that notes and summaries are reviewed before being forwarded. Human oversight remains key.

Assuming the right habits become engrained early on, the promise of Generative AI in a UC context is that people spend less time looking for information, find it easier to understand and consume information and have more effective meetings.

This can help accelerate time to proficiency in a role or project which then drives improved employee engagement and motivation. These are outcomes that will interest many stakeholders.



Generative AI makes it easier to get things done. Enabling better team collaboration, efficient scheduling, and higher value productivity.

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Deployment Options

As mentioned earlier there is growing demand for hybrid deployments that combine public cloud, private cloud, and on-premises UC solutions. Each have benefits and drawbacks. This simplified summary captures the core decisions and trade-offs that UC leaders need to make.

Solution Type	Benefits	Drawbacks
Public Cloud <i>Shared application and infrastructure used by multiple organisations</i>	Lower upfront costs with pay-as-you-go/subscription pricing models	Less control over data and security
	Rapid deployment and easy scalability	Potential compliance challenges for regulated industries
	Automatic updates & maintenance handled by the provider	Possible performance issues. due to shared infrastructure
	Accessibility from anywhere with an internet connection	Limited customisation options
	Built-in disaster recovery and business continuity	-
Virtual Private Cloud <i>Operates on private application used by a single organisation, running on a shared infrastructure used by multiple organisations</i>	High control of virtual server environment	Some customers in certain industries may reject shared infrastructure due to perceived security risks
	Built-in redundancy and recovery options	Potential compliance challenges for regulated industries
	The cloud provider handles the majority of maintenance, updates, and patching	Lack of control over the timing of updates or patches to the infrastructure
Private Cloud <i>Operates on private network with dedicated infrastructure. Typically hosted off site.</i>	Greater control over data, security, and compliance	Higher costs compared to public cloud
	Customisation options to meet specific business needs	Requires more in-house IT expertise
	Dedicated resources for better performance	May have longer deployment times than public cloud
	Scalability and flexibility similar to public cloud	-
On Premise <i>Physically located on the organisations' premises</i>	Complete control over data, security, and compliance	Less control over data and security
	Direct physical access to servers and equipment	Requires significant IT resources for management and maintenance
	Performance can be optimised for specific workloads	Less scalable and flexible compared to cloud options
	Ability to customise extensively	Enabling remote work can be more challenging
	No reliance on internet connectivity for internal communications	Responsibility for upgrades and disaster recovery falls on the organisation

On-premises offers maximum control and customisation but requires upfront investment and ongoing maintenance.

Private cloud provides greater flexibility, scalability and cost-efficiency while still maintaining a high-level of security and control.

A virtual private cloud delivers scalable and flexible cloud resources within a secure, isolated environment on shared infrastructure, providing a flexible commercial model while ensuring strict network segmentation and control. Public cloud solutions (UCaaS) remove capital investment and ongoing maintenance considerations. They also outperform in terms of dynamic scalability and offer an ongoing pipeline of innovation to keep up with market and user expectations.

Which is best?

That depends on needs, priorities, and in vogue market perceptions. For instance there is growing consensus that sectors needing audit level control over their data such as healthcare, finance and government favour private cloud solutions.

Right now, hybrid on-premises/cloud architectures are becoming the new black while others see the logic in opting for dedicated on-premises UC or pure UCaaS.

In addition to purely technology considerations, there is the need to consider user behaviour. As our trends review showed, each generation bring new habits. For some, phones and fax machines belong in the past. This cohort won't dial to talk to a customer. Instead, they'll hop onto a collaboration platform. Outside work, they mirror this by using WhatsApp when and if they need to talk.

This might be where society is heading, but there's always a long tail to change. Even though early 2027 is when BT closes down the PSTN, deep rooted habits remain. DECT devices are forecasted to grow at 5% globally over the next five years in the enterprise space. Dedicated devices still matter. Understandably, organisations want to go at a pace that suits them.

Then there is the growing complexity of data security and sovereignty driven by an evolving framework of global legislation around the storage and processing of data and regulation around the impact of Generative AI.

Contact centres are often at the centre of the competing demands put upon solution designers to balance security with personalised, easy interaction for customer and colleague. Already Generative AI has transformed cyber-crime for the worse and contact centres should expect more sophisticated fraud attacks as a result.

As a result, IT leaders will need flexible UC options to integrate into their own multi-layered defences. Now a hallmark of modern organisation security.



Public Cloud

Shared application and infrastructure used by multiple organisations.

Virtual Private Cloud

Operates on private application used by a single organisation, running on a shared infrastructure used by multiple organisations.

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Flexible options also apply in the context of how organisations consume LLM driven AI services as they relate to Collaboration. Even though the compute requirements for the training and deployment of LLM models suggests a public cloud only option, private cloud solutions have quickly gained ground as cost uncertainty and fears of AI data leaks influence CIO concerns.

Our earlier analysis of benefit against drawbacks applies here as well.

For instance, in the need for better control as shown in private cloud's ability to configure for low latency performance: something essential for real-time AI applications. Private cloud also provides greater assurance in data privacy and security to ensure compliance with data protection laws and maintain data sovereignty.

However, large-scale AI is expensive since it requires specialised hardware and needs extensive power and cooling which challenges in-house approaches to private cloud. In response expect the rapid rise in a new type of third-party private cloud provider. One already invested in these capabilities.

Going forward, hybrid solutions are likely to dominate as organisations refine their AI deployment options. For instance, some might use public cloud for initial testing and development then move to private cloud for production workloads.

Others might use private cloud for sensitive data and workloads, while leveraging public cloud for less sensitive tasks or for accessing pre-trained models. This ability to pick and mix between deployment options make sense.

Not just for the AI component but for a complete UC ecosystem. In today's world. this means integrated communication and collaboration operationally integrated into workflow, systems, and data.

Theoretically any combination of on-premises, private or public cloud could work, assuming sufficient integration. Happily, some vendors have recognised this and now offer pre-integrated solutions which remove another adoption barrier and accelerates time to value.



Private Cloud

Operates on private network with dedicated infrastructure. Typically hosted off site.

On Premise

Physically located on the organisations' premises.

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Meeting Sector Specific Needs

If deployment options are part of what customises a UC solution to the needs of sectors and organisations, then adapting to daily operational needs of a sector is the other characteristic. Put another way, integration makes UC more useful.

Here are some examples.

Think about organisations that have in field teams for service, installation, or emergency repairs. This could be someone fixing a broken beer pump, a burst water main, completing train track maintenance, or providing an onsite Wi-Fi upgrade.

The efficiency of these teams depends on access to systems updates, consulting installation guides, logging outcomes, chasing up issues with in-office colleagues, staying in contact with the rest of the in-field team or knowing who else is available when someone calls in sick.

In-house teams have equivalent needs. Maintenance and security teams looking after workplaces. Front of house teams in hotels or holiday complexes. Staff who operate schools and similar institutions. All need to access people, information, and knowledge.

Customer service teams are often at the centre of things providing a point of access for customers who want to know where their order is or why their Wi-Fi has stopped working. These teams have the same need to tap into information and get in contact.

Or consider healthcare and the complexity of matching demand and supply in a GP practice, a hospital A&E, or other triage scenarios. Efficiency and effectiveness are about quickly finding an available person with the right skills. All first responder services have the same core needs to connect, discuss and act with speed.

Then there are sector specific devices that enable communication such as bedside infotainment terminals in hospitals which allow patients to communicate directly with their nurses and doctors, even if they are off-site.

Key Sectors

Financial Services

Public Sector

Education

Healthcare

Local Government

Social Housing

Retail

Utilities

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Conclusion

It is easy to frustrate customer and colleagues when everyday tasks become unnecessarily complex forcing them into work arounds and extra effort. This is why people leave organisations.

To this end, many organisations are on a long-term mission to simplify and deliver better customer and colleague experiences. A UC ecosystem is central to this aim by consolidating and integrating communication, workflow, and data so that things *'just work.'*

It's becoming a journey with an increasing choice of routes to the same goal.



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