Videoconferencing Trends

TRANSFORMING THE WAY PEOPLE WORK, LEARN, AND CONNECT IN THE FUTURE

Collaboration is rapidly evolving as videoconferencing platforms become the standard throughout hybrid workplaces and across the education sector. According to the Gartner Magic Quadrant for Meeting Solutions 2021, the virtual visual canvas will become the center of 30% of meeting experiences by 2024, jumping from just 5% today, as focus shifts to enabling collaboration equity to drive interactive and dynamic engagement.

Colleagues who once gathered in person now collaborate across unified communications (UC) platforms, and classmates are learning alongside one another in hybrid learning environments. In the near future, technologies like artificial intelligence (AI), cloud services, augmented reality (AR) and virtual reality (VR), spatial audio, gamification, and UC integration will again transform the way people collaborate with one another — both in person and across distances. Here's how these videoconferencing trends will shape the way people work, learn, and connect in the future.

AI

Videoconferencing is more intuitive and user-friendly than it ever has been, but people still often have to manage some of the workflow involved with a meeting or a class — for example, finding a meeting time that works for a large number of participants across multiple time zones, taking notes, and sending out follow-up emails with action items or homework assignments. AI will soon lend businesses and higher education institutions a helping hand, allowing meeting participants to focus on the contents of the meetings themselves.

According to TechTarget, AI-enabled chatbots can schedule meetings, provide real-time audio transcription, and capture action items for later view, freeing humans from having to meticulously jot all of those details themselves. Facial recognition features can quickly identify participants as they enter a meeting room, even recognizing a meeting organizer and offering to start their scheduled videoconference as they arrive. Meeting room analytics can also give facilities managers crucial insights on meeting room usage, enabling them to optimize the meeting spaces that are increasingly crucial to today's hybrid workplaces.

Some AI features are already allowing businesses, colleges, and universities to have more productive meetings and classes. **Bose Work**

solutions include best-in-class echo-cancelling features that screen out disruptive background noise, so colleagues and students who have joined remotely can clearly understand what is being said. Those remote participants can take advantage of AI-enabled noise cancelling for better clarity, too. **Bose Noise Cancelling Headphones 700 UC** include instantly adjustable noise cancellation that lets them personalize what they hear from their surrounding environment.

Cloud Services

As organizations have digitally transformed, they have migrated more of their critical applications to the cloud — and videoconferencing is no exception. Rather than purchasing and maintaining complicated on-premises videoconferencing systems, many businesses and schools are instead transitioning toward flexible UC platforms that easily scale up or down, are simple to administer, are more cost-effective, and integrate with other business applications.

Cloud-based videoconferencing is perfectly suited to today's hybrid workplace. Employees can participate in a videoconference from a computer or mobile device while traveling or working from a home office, for example. Alternatively, they can join the conference from a fully integrated meeting room system in a traditional office space or classroom setting, where both proper acoustics and high-quality video are especially crucial for meaningful communication to take place.

For example, using solutions like the Bose ES1 Ceiling Audio Solution, employees in boardrooms or conference rooms can effectively collaborate with their remotely located colleagues via UC solutions like Microsoft Teams, Google Meet, and Zoom. The same is true for hybrid learning settings, in which some students are remotely joining while others are present in a physical classroom.

There are important considerations to keep in mind when deploying these systems. First, it's essential to design the solutions to meet the specific requirements of each space. For instance, what may work well for a small huddle room will not be nearly as effective for a large meeting room, especially when it comes to **acoustics for meeting room videoconferencing**. Strong network performance across all meeting locations is also essential for productive and satisfying cloud-based videoconferencing sessions.

AR and VR

As speculation about the metaverse heats up, organizations are looking for innovative ways to collaborate using AR and VR. These two technologies, while related, are distinct from one another. AR adds a virtual layer on top of the real world — i.e., highlighting a specific object in an office or classroom and presenting detailed notes about it within smart glasses or a mobile device app. VR, which is also known as immersive telepresence, creates an entirely computer-generated visual and audio experience using a headset.

Once primarily used for gaming, AR and VR are expected to eventually transform videoconferencing as well.

While most colleagues and classmates aren't congregating in AR or VR environments yet, they may soon begin convening in these digital spaces. Because VR is immersive and involves avatars interacting with one another, participants could find it even easier to interpret body language and other subtle gestures that aren't always visible via the camera on a traditional videoconference.

VR could also potentially eliminate the kinds of distractions often encountered in hybrid meetings. People wouldn't notice where the edges of a virtual background in Zoom meet their

colleague's face, for example, and they wouldn't hear background noise filtering in from the office hallway. Students could join a VR lecture from an expert on archaeology located halfway across the globe, virtually visiting a site alongside the lecture and experiencing it with them in real time.

Some UC providers are already blending VR into their solutions. Microsoft Teams is working on 3D avatars that will be compatible across VR, AR, and traditional 2D spaces, allowing colleagues to participate in calls using their avatars instead of their real faces. Zoom is also integrating VR into its solution, enabling employees to join Zoom meetings and whiteboarding sessions from within VR environments.

VR and AR show promise, but they will require even more bandwidth and robust network performance than traditional videoconferencing solutions. Because smart glasses and headsets are sometimes heavy and uncomfortable to wear, they tend to only be used for short periods of time.

Spatial Audio

Spatial audio is another trend that will have a significant impact on videoconferencing. In a traditional in-person gathering, colleagues and classmates can intuitively tell where the sound is coming from and who is speaking. This is harder to do in the flat, 2D environment of a videoconference, and it means participants have to keep mental track of the same information on their own. This distraction contributes to Zoom fatigue and can result in lower engagement during videoconference meetings.

With spatial audio, people can hear sound coming from distinct locations, more closely approximating the experience of a real-world meeting room or classroom. When coworkers or classmates are able to identify the sources of sounds in a virtual meeting room and intuitively place themselves in relation to those sounds, they are better able to focus and concentrate on what's being discussed or presented.

This technology also makes videoconferences more comfortable by diminishing background noise, presenting each speaker with a consistent volume (as opposed to having one presenter come through at an especially high volume), and making it easier to hear the conversation when there's cross-talk. The beam-steering microphones and auto EQ found in **Bose Videobar devices** can provide similar benefits, helping remote meeting participants identify who is speaking and follow what is being said.

Gamification

Even when a videoconference is easy to follow and comfortable to join, engagement can sometimes falter. People may become distracted and check their email or switch to another window — and then they are no longer present in the same way. This is a common challenge in hybrid workplaces as well as distance learning environments. Gamification offers organizations a way to spark engagement, incentivizing participants to stay active and contribute to the meeting or class.

Gamification can take many forms. It may involve giving participants a reward like a badge or a coveted spot on the leaderboard. It could also take the form of a brief quiz. Some organizations use team competitions to keep their videoconferences lively, while others regularly weave interactive segments into meetings in order to keep everyone's interest. Some UC solutions like Zoom feature breakout rooms where teams can meet privately and come up with answers for a particular challenge.

Unified Communications Integration

Many organizations use cloud-based unified communications (UC) platforms to streamline their internal business communications. These platforms, also known as Unified Communications As a Service (UCaaS) solutions, bring voice calling, audio and videoconferencing, and messaging together under a single umbrella. Employees can access these features from anywhere using a computer or mobile device and a broadband internet connection.

Now that UC adoption has become mainstream, organizations are realizing even greater value from their investment by integrating their UC platforms with other business applications. According to the Gartner Magic Quadrant for Unified Communications As a Service, Worldwide 2021, "A capability that has seen increasing market demand is the integration of UC capabilities with business applications that make workflows more efficient. Examples of such integration include customer relationship management (CRM) applications, contact centers, workgroup applications, and line-of-business applications."

These integrations reduce context switching, for example, by allowing sales representatives to call customers from within the CRM platform using a click-to-dial feature and then having sales calls automatically logged. In higher education settings, faculty members and administrators whose UC systems are integrated with business productivity suites like Microsoft Office 365 or Google Workspace can easily schedule meetings and initiate video calls without leaving the application where they're already working.

Videoconferencing solutions like the **Bose Videobar devices** also integrate with popular UC solutions like Microsoft Teams and Zoom, minimizing the learning curve required for effective hybrid workplace collaboration while also providing maximum flexibility for meetings in smaller spaces. Any organization that relies on integrated UC solutions, especially where their video and audio conferencing features are concerned, will require robust network connectivity that adheres to service level agreements (SLAs) for performance.

5G

High-quality videoconferencing relies on all participants having access to abundant, reliable broadband internet connectivity. Network latency can quickly disrupt and degrade the video and audio elements of a meeting, making it difficult for colleagues or classmates to hear what is being said or resulting in someone's face being frozen on a screen. For this reason, 5G will play an essential role in hybrid workplace videoconferencing in the years to come.

5G represents the fifth generation of cellular broadband internet connectivity, and major carriers are in the process of rolling it out in the United States. 5G offers higher speeds, lower latency, and faster downloads than its 4G LTE predecessor, particularly in the C-band range of the cellular broadband spectrum.

5G makes it possible for people to more easily collaborate with one another, particularly across distances or from locations where wired internet access or Wi-Fi are not available. For example, according to the World Bank, some universities are already using 5G to improve the quality of videoconferencing and strengthen immersive learning experiences via AR and VR.

Conclusion

Although the ways we work and learn already profoundly changed in the past few years, videoconferencing trends ranging from AI to 5G stand ready to transform them once more. Digital assistants will schedule meetings on our behalf and provide real-time audio transcriptions during videoconferences, even sending out meeting notes afterward. 5G connectivity will be crucial to these experiences, providing smooth videoconferencing connections to colleagues and classmates where wired broadband isn't available. While all of these technologies hold great promise for organizations, there are key considerations that IT leaders must keep in mind when integrating them into collaboration workflows. Accordingly, the time to prepare for the future of videoconferencing is now.

Resources
Bose Work solutions (AI section)
Bose Noise Cancelling Headphones (AI section)
Bose ES1 Ceiling Audio Solution (Cloud Services section)
Bose Videobar VB1 and VB-S (Spatial Audio section)
https://pro.bose.com/en_us/products/conferencing/videobars.html

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