Hype Cycle for Unified Communications and Collaboration, 2023

Published 24 July 2023 - ID G00791005 - 90 min read

By Analyst(s): Tapan Upmanyu, Pankil Sheth

Initiatives: Digital Workplace Infrastructure and IT Operations

Hybrid work has changed the way employees use UCC applications. Organizations are focusing on employee experience and UCC portfolio optimization. Infrastructure and operations leaders can use this Hype Cycle to redefine their UCC architecture to address the new ways of working.

Strategic Planning Assumptions

- By 2026, 70% of enterprise employees will prioritize collaboration tools and mobile devices over unified communications (UC) telephony.
- By 2027, 80% of organizations will use their existing cloud office/collaboration platforms for enterprise telephony, which is a major increase from 20% in 2023.

Analysis

What You Need to Know

The unified communications and collaboration (UCC) market is driven primarily by its traditional use cases — enterprise telephony, meetings and instant messaging (IM). However, hybrid work has accelerated the use of collaboration tools that promote new ways of working such as collaborative work management applications, visual collaboration applications and workstream collaboration applications.

To support the new ways of hybrid working, organizations have significantly invested in their UCC portfolio. This leads to a complex arrangement of applications where tools from various vendors have overlapping capabilities; and organizations needing to pay for two or more solutions with similar capabilities, resulting in cost and IT landscape inefficiencies.

Simultaneously, technology vendors are enhancing their tech capabilities, like a meetings vendor adding telephony and contact center capabilities. This gives IT buyers the option of consolidating vendors, while also reducing costs.

Employee requirements for communication and collaboration are evolving with emphasis on asynchronous methods — enabling employees to collaborate as per their time convenience and reducing the digital overload on them. But their needs are constantly changing and will continue to influence UCC application procurement strategies.

As organizations settle into the hybrid work mode, their priorities must be:

- Elevating the employee experience, enabling employees to work to their highest productivity and with minimum digital friction/fatigue.
- Optimizing the UCC portfolio for expenditure reduction (see Lower Your UCaaS Spending by Leveraging Digital Workplace Tools and How to Optimize Your Meeting Solution Portfolio and Improve the Meeting Experience).

The Hype Cycle

This Hype Cycle highlights the transition of traditional communication methods, like cloud UC (UCaaS) and meeting solutions, toward mainstream adoption. These applications have reached or are reaching maturity.

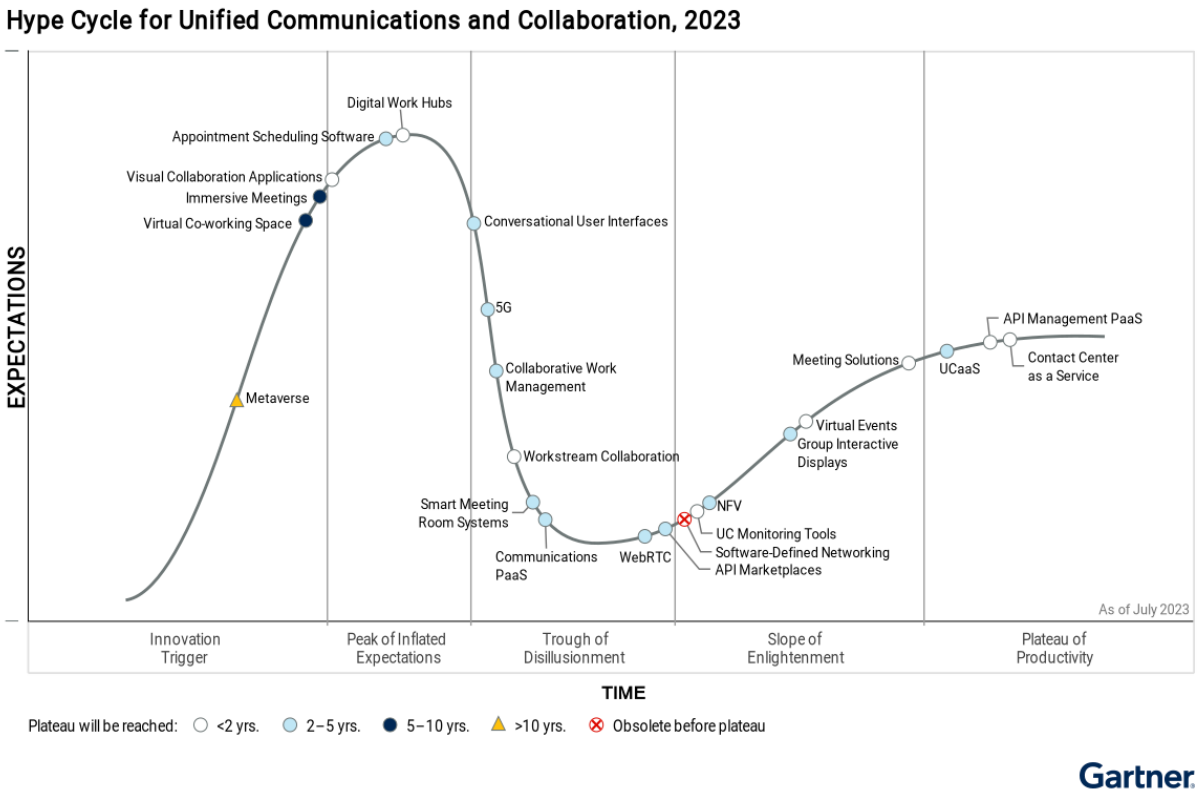
The emerging priority to elevate the meeting experience means that tools such as visual collaboration applications, group interactive displays and smart meeting room systems are gaining in popularity. This has also led to telephony becoming a declining service for many employees in the organization. To improve the meeting scheduling experience, appointment scheduling software is becoming a consistent requirement among the workforce.

According to Gartner's Digital Worker Survey 2022, digital workers find hybrid meetings less productive than in-person meetings and virtual meetings that use audio and video. Only 17% of the respondents ranked hybrid meetings as their first choice for improving productivity and meeting business goals. [1] Employees attending hybrid meetings frequently experience overload and fatigue, and organizations are seeking asynchronous methods of collaboration. Collaborative work management tools, workstream collaboration applications and visual collaboration tools are proving to be handy in these scenarios.

Organizations are also evaluating the capabilities of augmented reality (AR) and virtual reality (VR) through virtual coworking spaces and immersive meetings for a better employee experience during onboarding, internal events and hybrid social gathering.

This Hype Cycle reflects many mature, but critically important, capabilities that provide foundational communications and collaboration services to cover hybrid work, traditional in-office work, frontline work, and field service work and related emerging technologies. UCC also includes wide sets of technologies such as digital work hubs, virtual events and communications PaaS. These technologies continue to evolve incrementally and provide a high level of benefit to digital workplaces that look to leverage existing investments.

Figure 1: Hype Cycle for Unified Communications and Collaboration, 2023



The Priority Matrix

The Priority Matrix maps the benefit rating for each profile to the time required to reach mainstream adoption. The framework can be used to strategize the investments as per the collaboration requirements of the organization in comparison with the benefits they can reap.

Meeting solutions and cloud UC are still high-value technologies but, as they near maturity, the complementary applications, like visual collaboration and workstream collaboration, can be invested in to uplift the employee experience in hybrid work. These tools not only enable asynchronous methods of collaboration but, when combined with cultural transformation, can also help in reducing meeting overload in employees' calendars. Employees can now dedicate free time to more important business tasks or to a better work-life balance.

Technologies like metaverse and AR/VR in the form of immersive meeting and virtual office spaces are yet to find their applications in mainstream, but are a common conversation topic among Gartner clients. Organizations want to leverage them to enrich the employee connection and to enable a stronger sense of presence, nuanced body language and gestures.

Digital work hubs should be constantly evaluated as they address changing team productivity and collaboration applications created for employees with diverse needs.

Table 1: Priority Matrix for Unified Communications and Collaboration, 2023

(Enlarged table in Appendix)

Benefit	Years to Mainstream Adoption			
↓	Less Than 2 Years ↓	2 - 5 Years ↓	5 - 10 Years ↓	More Than 10 Years ↓
Transformational		Conversational User Interfaces		Metaverse
High	Digital Work Hubs Meeting Solutions UC Monitoring Tools Visual Collaboration Applications Workstream Collaboration	5G Collaborative Work Management Communications PaaS UCaaS WebRTC	Immersive Meetings	
Moderate	API Management PaaS Contact Center as a Service Virtual Events	API Marketplaces Appointment Scheduling Software Group Interactive Displays NFV Smart Meeting Room Systems		
Low			Virtual Co-working Space	

Source: Gartner

Off the Hype Cycle

The following technologies have been renamed:

- Ambient Social Meetings as Virtual Co-working Space
- Cloud UC (UCaaS) as UCaaS
- Web Real-Time Communications as WebRTC

The following technologies have been removed from the Hype Cycle for Unified Communications and Collaboration this year:

- Bots
- Content Collaboration Tools

- Intercarrier Service Automation
- Team Collaboration Devices
- Virtual Assistants

On the Rise

Metaverse

Analysis By: Marty Resnick, Matt Cain, Tuong Nguyen

Benefit Rating: Transformational

Market Penetration: 1% to 5% of target audience

Maturity: Emerging

Definition:

Gartner defines a metaverse as a collective virtual 3D shared space, created by the convergence of virtually enhanced physical and digital reality. A metaverse is persistent, providing enhanced immersive experiences. Gartner expects that a complete metaverse will be device-independent, and will not be owned by a single vendor: It will have a virtual economy of itself, possibly enabled by digital currencies and non-fungible tokens (NFTs).

Why This Is Important

A metaverse is the next level of interaction in the virtual and physical worlds. It will allow people to replicate or enhance their physical activities. This could happen either by transporting or extending physical activities to a virtual world or by transforming the physical one. Although the goal of a metaverse is to combine many of these activities, there are currently many emerging metaverses with limited functionality.

Business Impact

Enterprises can expand and enhance their current businesses in unprecedented ways, opening up innovative opportunities. The following are examples of opportunities that metaverse offers to enterprises:

- Spatial computing (e.g., real-time shopping recommendations)
- Gaming (e.g., collaborative “serious games” for training)
- Digital humans (e.g., customer service representatives)
- Virtual spaces (e.g., live virtual events)
- Shared experiences (e.g., immersive meetings)
- Tokenized assets (e.g., NFTs)

Drivers

There are three drivers for the metaverse:

- **Transport:** The ability to "go and immerse oneself" in a virtual world. That world may be a 3D simulation and/or in virtual reality.
- **Transform:** Bringing digital to the physical world. This allows the user to have access to real-time information, collaboration and experiences in the physical world.
- **Transact:** The economic foundation of the metaverse through the use of cryptocurrency, NFTs and blockchain.

Some of the main activities for the metaverse that will require one or more of these drivers are:

- **Collaboration:** Encouraging collaboration and participation from a diverse group of stakeholders, wherever they may be located.
- **Engagement:** Employees and customers are often disengaged. The metaverse facilitates a feeling of presence ("being there") as if the participants were in-person, turning their focus to the task at hand with less distraction.
- **Connectedness:** Metaverse enables us to connect in a more immersive way with shops, work environments, schools and communities of interest — regardless of where or if they exist in the physical world.

Ultimately, people desire to enhance and/or augment their lives in digital and physical realities.

Obstacles

- The adoption of metaverse technologies is nascent and fragmented. Furthermore, this is a time of learning, exploring and preparing for a metaverse with limited implementation. The financial and reputational risks of early investments are not fully known, and caution is advised.
- Current manifestations of metaverses are siloed, app-based, noninteroperable experiences that do not satisfy the decentralized and interoperable vision of the metaverse. This current, walled-garden approach also strongly limits users' control of experiences.

- While technology plays a key role in achieving a mature metaverse, another challenge involves establishing user-centric guidelines for ethics and governance covering different aspects of the metaverse. This must include topics like privacy, data sovereignty, acceptable terms of use, accountability, identity and legal protections.

User Recommendations

- Task a specialized innovation team and/or vendors to look for opportunities where metaverse technologies could optimize digital business, or create new products and services.

- Identify metaverse-inspired opportunities by evaluating current high-value use cases vis-a-vis your product or service (internally and externally). Focus on ways the metaverse can enhance an experience and can accomplish engagements the physical world may find impossible.

- Be careful when investing in a specific metaverse, as it is still too early to determine which investments will be viable in the long term.

- Remember that the metaverse is an evolutionary stage. Similar to the shift from the original web to Web 2.0 and to Web3, it does not indicate a formal change in the nature of the web, or in this case, digital interactions and digitization in general, but describes a general change that will happen over time.

Sample Vendors

Animoca Brands (The Sandbox); Decentraland; Linden Lab; Meta; Microsoft; NVIDIA; Roblox

Gartner Recommended Reading

Emerging Tech: Top Enabling Technologies for Metaverse

Top Strategic Technology Trends for 2023: Metaverse

Building a Digital Future: The Metaverse

Infographic: Impact Map of the Metaverse

Emerging Tech Impact Radar — The Metaverse

Virtual Co-working Space

Analysis By: Christopher Trueman

Benefit Rating: Low

Market Penetration: 1% to 5% of target audience

Maturity: Emerging

Definition:

A virtual co-working space (VCS) is a real-time collaboration tool that supports interactions over a network between team members to more closely approximate a real-world office experience. VCSs are often positioned as creating a “virtual office” environment by using always-on meeting rooms/channels with rich presence or gamified, social spaces to connect colleagues via video. In this way, VCSs make video an omnipresent part of the work environment.

Why This Is Important

Virtual co-working spaces emerged from the meeting solutions market in response to the unique needs of remote/hybrid workers. VCSs’ persistent video channels or gamified virtual office spaces better enable ad hoc collaboration. VCSs promote more social and collaborative work styles and encourage spontaneous meetings — the virtual equivalent of chatting to someone in the office. Most organizations should treat a VCS as a complement to, not a replacement for, existing meeting solutions.

Business Impact

VCSs add new ways to engage remote/hybrid workers. They are useful for IT leaders and managers seeking to increase social collaboration and foster team unity. This engagement style can:

- Build team unity
- Mitigate feelings of isolation
- Raise intent to stay
- Improve responsiveness
- Foster serendipity

- Create more productive work styles

Teams spread across different time zones (i.e., more than four to five hours difference) will see a reduced impact due to VCSs' reliance on real-time communication.

Drivers

- Workers ranked virtual meetings as less productive than in-person meetings, but more productive than hybrid meetings. The 2022 Gartner Digital Worker Survey shows they would prefer to spend 48% of their time in virtual meetings, 35% of their time in-person, and only 18% of their time in hybrid meetings, on average.
- Organizations know video meeting tools are fundamental to maintaining productivity and team cohesion in a hybrid or remote-first work environment.
- Meeting solutions allowed structured and planned collaboration activities to continue, but spontaneous real-time interactions have proven difficult to replicate. As a result, IT leaders and managers have explored alternative solutions, such as VCSs.
- VCSs provide new capabilities to make spontaneous and unstructured conversations more tenable than traditional meeting solutions. They do this in one or both of the following ways: (a) by creating persistent, video-enabled, virtual rooms or channels. Entering a channel is analogous to opening your office door, inviting colleagues to drop in throughout the day; or (b) by introducing spatial video capabilities, where users can only hear/see those in close proximity to them within the app. Users are represented as an icon or avatar and can either click on colleagues to join them or can roam a 2D virtual space. All VCSs provide rich presence features and visually show the meetings taking place within a team or group, raising transparency.
- Most of the technological hurdles have been solved by the conferencing and meeting solutions that preceded today's VCS vendors.
- A VCS can greatly benefit teams or groups whose activities require frequent contact or are conversationally driven.
- Even hybrid teams with infrequent conversation needs may find a VCS necessary to bridge the gap created by moving work out of the office.
- VCSs are not immersive (virtual reality) technology; however, many VCS apps have rebranded as 2D metaverse applications amid the surrounding hype.

Obstacles

- Most IT organizations prefer to minimize the number of collaboration tools they support. The value a VCS can bring has had difficulty resonating with enterprise IT buyers as VCSs are unlikely to replace traditional video conferencing tools. Gartner clients report purchasing decisions are primarily led by line-of-business leaders or adopted by teams in a grassroots fashion.
- The use of VCSs is still very new. Cultural and work style changes will be required for successful adoption of a VCS at most organizations. This means that strong messaging and example setting from leadership/team managers will be needed. Customers and VCS vendors will evolve together. In a market this new, a customer with heavy usage can influence the product roadmap.
- VCSs are built around real-time video capabilities. VCSs do not work well for teams spread across time zones that are more than four or five hours apart.
- Due to the emerging nature of this market, privacy, security and compliance concerns persist.

User Recommendations

- Evaluate VCSs as a means for achieving collaboration equity, engagement and increasing visibility of remote workers by first piloting them as social gathering spaces.
- Align your organization's use cases for VCS with the most appropriate vendor(s) by assessing each vendor's strengths and weaknesses. Some VCS vendors specialize in internal, team collaboration, while others specialize in education or social gatherings.
- Don't become locked into an individual VCS vendor early as this is an emerging market. Be prepared to switch vendors as the market evolves. Gartner has seen vendors enter and exit the market (through acquisition or insolvency), and expects to see more churn over the next few years. Additionally, a number of established vendors (such as Zoom and RingCentral) are adding VCS capabilities to their product suites.
- Avoid unnecessary purchases by evaluating alternatives. Community and peer networking tools, and workstream collaboration apps may overlap with VCS for some use cases.

Sample Vendors

Bramble; Gather; RingCentral (Team Huddle); Sococo; SpatialChat; Topia; Welo; Zoom (Huddles)

Gartner Recommended Reading

Market Guide for Meeting Solutions

Digital Workplace Applications Primer for 2023

Immersive Meetings

Analysis By: Christopher Trueman

Benefit Rating: High

Market Penetration: Less than 1% of target audience

Maturity: Emerging

Definition:

Immersive meetings involve the use of immersive technology (VR, AR, MR, metaverse) to host meetings and gatherings. Attendees — represented by avatars or holograms of real people — are able to see, move and interact with shared virtual elements and other people in a manner similar to an in-person meeting or social gathering.

Why This Is Important

Immersive meetings provide a more natural meeting experience by providing presence, body language or gestures with virtual representations of people and/or a shared, 3D frame of reference — including physical objects for local participants and digital objects for remote participants. Traditional videoconferencing and meeting solutions do not provide the same level of immersion. Hosting an immersive meeting results in a more casual and human experience, and could ease meeting fatigue.

Business Impact

Immersive meetings range from a few to hundreds of attendees (often spread across multiple instances). Remote collaboration scenarios see the greatest benefits due to their impact on participant engagement. Several added values provided by these technologies over existing videoconferencing and meeting solutions include:

- Greater participant engagement
- Reduced distractions/multitasking (in VR specifically)
- Natural gestures and body language
- Replacement of additional physical meetings in the long term

Drivers

- Employee preferences have shifted in favor of remote and hybrid working, a trend that Gartner expects to continue. Organizations are reevaluating their strategies and processes as a result of this shift, making them open to disruptive new technologies such as immersive meeting tools.
- Immersive meetings provide new capabilities that allow certain meeting use cases to be more effectively digitized, such as training in hazardous environments or design review meetings for physical products. As such, these meetings are more likely to remain virtual, reducing the need to travel and generating potential cost savings.
- Companies seeking to actively reduce travel to meet corporate sustainability goals can tie immersive meeting technology to these key initiatives.
- Proven success stories from organizations pioneering immersive meeting tools will drive more companies to pilot and adopt these solutions.
- The move from in-person meetings to videoconferencing platforms was successful for most meeting types, but informal, social and highly interactive meetings struggled to reach the same level of engagement. There is a growing interest in using immersive technologies to build more engaging virtual meeting experiences going forward.
- Creating a virtual space, or overlaying virtual elements on a real world location, allows meeting organizers, planning teams, advertisers and vendors to leverage their existing skills. Banner advertisements, booths, stages, showrooms, information desks, gathering spaces, signage and other aspects of physical spaces can be recreated virtually.
- Head-mounted display (HMD) technologies will see significant improvements and price reductions in the coming years, reducing the cost of entry, especially for interactions using hands-free or wearable devices.
- Eye-tracking and pupillometry sensors in HMDs can provide unique data and analytics opportunities.

Obstacles

- For multiple reasons, immersive meetings cannot currently replace traditional videoconferencing.
- HMDs are expensive today, and a lack of standardization in display technologies, controllers and input devices means that selected devices can limit or enhance the user experience and make setup difficult.
- Creating custom environments and experiences require specialized skills that most organizations lack. Extensive professional service engagements or commissioned work can inflate costs.
- VR can cause users to experience motion sickness, eye strain, headaches and other physical symptoms. This can make immersive meetings challenging for many users. Some users may see symptoms lessen with increased exposure to the technology, but some never do. Improvements to hardware, devices and VR collaboration software to mitigate these adverse reactions are still in an early, experimental stage, with options varying by platform.
- The long-term value of immersive meetings is as yet unproven.

User Recommendations

- Start any virtual or augmented reality implementation by carefully considering the use cases for immersive meetings within your organization.
- Create a successful initial pilot by targeting an area where there is a clear benefit for immersive meetings over a traditional videoconferencing approach.
- Link immersive meetings to key business initiatives, such as organizational digital transformation, by coordinating your actions with key stakeholders.
- Supplement any lack of skills or experience with immersive meetings within IT by leveraging professional services, training and other resources available from your service providers, partners or third parties.

Sample Vendors

Arthur; ENGAGE; Glue; Kazendi; meetingRoom; MeetinVR; Meta; Remio; Spatial

Gartner Recommended Reading

Quick Answer: What Is a Metaverse?

Quick Answer: How Will the Metaverse Shape the Digital Employee Experience?

Quick Answer: What Emerging Metaverse Capabilities Should Be Prioritized for More Effective Meetings?

Emerging Tech: Impact of Metaverse on Edge Devices and Infrastructure

At the Peak

Visual Collaboration Applications

Analysis By: Brent Stewart

Benefit Rating: High

Market Penetration: More than 50% of target audience

Maturity: Mature mainstream

Definition:

Visual collaboration applications are cloud-based tools that enable teams to communicate and creatively collaborate during both asynchronous and real-time work. They provide a shared digital canvas offering collaboration features and templates for common frameworks, flows, activities and designs.

Why This Is Important

During the pandemic, visual collaboration applications became an essential part of the digital product team's toolset, and have only grown in popularity and impact as organizations return to the office or engage in hybrid work models. The most significant insights, ideas, strategies and designs for leading digital products emerge on the whiteboard of a visual collaboration app. As such, they are seen by many as the place where "the magic happens" for design, product and engineering teams.

Business Impact

Visual collaboration applications make remote and hybrid creative work possible. Without them, the only other viable approach is colocated, workshop-style collaboration that used to be standard practice for digital product teams. In fact, Gartner hypothesizes visual collaboration apps elevate creativity and productivity, regardless of whether they are used remotely or in person, due to the templates they provide, team participation they promote and traceability they enable.

Drivers

- Permanence of remote and hybrid work: The global shift to remote and hybrid work makes visual collaboration applications the "new whiteboard" and a required platform for any digital product or business strategy team, whether used in person or remotely.

- Product team collaboration: Coordinating handovers between product management, design and development can take significant effort, and a misaligned product team results in misaligned products. Visual collaboration apps reduce, and even eliminate, handovers between stakeholders and contribute to the delivery of more cohesive products.
- Design thinking and collaborative creativity: The rise of design thinking and collaborative creativity, in the form of workshops, design sprints, strategy sessions and more, requires a workspace that enables shared ideation, evaluation and decision making.
- Templates: Visual collaboration tools include templates for brand, business, marketing and product strategy methods and techniques that accelerate discovery, exploration and validation of insights, ideas, strategies and designs.
- Integrations: Recent feature enhancements from vendors include integrations with popular product management, user experience (UX) design and software engineering tools.
- Generative AI: With AI completing increasingly more production work, such as screen designs, user flows, and code, the role of the human will shift strongly towards research and strategy activities. Visual collaboration tools will become the single-most important “home” for human creativity in the enterprise.

Obstacles

- Customer perception as a remote-only tool: Many view visual collaboration applications as a solution for remote or hybrid teams only. As organizations transition from fully remote work to in-office or hybrid arrangements, it is possible purpose-built visual collaboration applications (e.g., Miro, Mural, Klaxoon, etc.) will be viewed as expendable by some teams.
- Competition from design and business communication platforms: Collaboration and co-design features (such as a digital whiteboard) in design platforms (e.g., Figma [FigJam]) and business communication platforms (e.g., Microsoft Teams, Zoom Video Communications, etc.) are close to — or on par with — purpose-built visual collaboration tools.

User Recommendations

- Build a platform evaluation and selection process, by ensuring that the needs of all product stakeholders are considered when choosing a visual collaboration application.
- Employ a visual collaboration application as the de facto means for sharing product and design knowledge with development. Plan and execute workshops and design sprints on the selected platform, whether working remotely or in person.
- Use a visual collaboration application to plan and execute user research activities that require real-time, one-on-one facilitation.

Sample Vendors

Bluescape; Figma; InVision; Klaxoon; Lucid; Miro; Mural

Appointment Scheduling Software

Analysis By: Sohail Majumdar, Adam Preset, Tori Paulman

Benefit Rating: Moderate

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Appointment scheduling software are applications that simplify the scheduling process by matching calendars, automating coordination and setting up appointments among internal and external participants. Apart from core features, such as meeting coordination and scheduling, differentiating capabilities typically include notifications, platform integrations, event management capabilities and dashboards for meeting insights.

Why This Is Important

The new ways of working have increased the number and complexity of meetings. Hybrid work's ubiquity has resulted in meeting attendees joining meetings via multiple platforms, devices, locations and time zones. This complexity of meetings coupled with the expectation to provide attendees with an optimal premeeting experience has warranted the implementation of appointment scheduling to reduce back and forth, automate coordination and mitigate no-shows while improving end-user experience.

Business Impact

Adopt the right appointment scheduling software to:

- Reduce back and forth by providing employees the ability to make their available slot visible, reducing manual coordination.
- Save time by informing businesses about time needed for certain types of appointments to avoid overbooking.
- Reduce no-shows via automated email and SMS reminders.
- Improve customer, interviewee, client impact by providing a seamless pre meeting experience via a comprehensive, easy-to-understand and quick-booking page interface.

Drivers

- Appointment scheduling technology is used as a gatekeeper/proxy to cover internal and external attendees for a meeting (e.g., scheduling sales calls, citizen services and patient care).
- The increase in meetings, especially hybrid meetings, is necessitating digital workplace application leaders to address pain points around coordination.
- Vendors specializing in appointment scheduling often solve for industry or experience-specific examples and have developed differentiated features to support key use cases, such as CRM capabilities, automated workflows, Health Insurance Portability and Accountability Act [U.S.]/Department of Health/General Data Protection Regulation (HIPAA/DOH/GDPR) compliance certifications, complex dashboards for meeting behavior insights, resource scheduling, etc.
- Appointment scheduling vendors are differentiating by integrating appointment scheduling with workplace experience aspects like resource scheduling, queue management, wayfinding, visitor management, etc.

Obstacles

- Market maturity in internal meetings: The internal meeting use case has been ingrained in employees' behavior unless application leaders want additional features like meeting behavior insights that could help them optimize their real estate portfolio by merging the data with space usage metrics.
- Time and energy spent onboarding an additional tool: IT does not want to worry about a new tool for meetings as it makes training and supports cumbersome unless there is a solid proof of concept aligned with a specific use case that a new tool solves.
- Potential disruption in the market by existing enterprise suites: The appointment scheduling market can see mergers and acquisitions, and product development across existing players and enterprise suites increasing the risk of getting stuck with a redundant product having signed a long-term contract.

User Recommendations

- Shortlist vendors by matching capabilities (good interface, meeting insights, resource scheduler, queue management, etc.) with employee experience aspects that your organizations must solve. E.g., automated reminders for reducing no-shows, dashboards for meeting insights, automated workflows for simplifying coordination, compliance certifications for added layers of data security, etc.
- Use existing suite offerings to solve coordination use cases using existing features and/or API integrations. For complex industry-specific and/or business-critical use cases, choose third-party specialist appointment scheduling vendors.
- Improve the visitor experience and user acceptance by paying special attention to appointment scheduling software that either has in-built features or can integrate with existing systems to provide workplace experience functionalities like resource scheduling, queue management, wayfinding capability, navigation, etc.

Sample Vendors

Acuity Scheduling; Bookafy; Calendly; Chili Piper; GoodTime; Microsoft; Sign In Solutions; SimplyMeet.me; TIMIFY

Gartner Recommended Reading

Redesigning Work for the Hybrid World: Opportunities for Knowledge Workers

Build Better Meeting Rooms to Support Hybrid Work

Video-Enable Meeting Rooms for Collaboration Equity in Hybrid Workplaces

Market Guide for Workplace Experience Applications

Digital Work Hubs

Analysis By: Joe Mariano, Gavin Tay

Benefit Rating: High

Market Penetration: More than 50% of target audience

Maturity: Mature mainstream

Definition:

Digital work hubs are an assembly of ever changing team productivity and collaboration applications created for employees with diverse needs. It can be augmented with services for development, automation, artificial intelligence (AI) and analytics.

Why This Is Important

Foundational work hub services (e.g., Microsoft 365, Google Workspace, etc.) have peaked in usage. However, gaps in these services continue demand for purpose-built work hub services (visual collaboration, collaborative work management, workstream collaboration, meeting services and content services platforms, etc.). In many cases these services are not deployed enterprisewide. Instead they are implemented at the domain or situational level to meet line of business strategic needs.

Business Impact

The impact of effective work hub usage starts with productivity, but ends with opportunities to reduce cycle time and improve business results arising from more effective collaboration. This coordination via the hub can be especially helpful to citizen developers and business technologists working in fusion teams leveraging work hubs to meet organizational goals.

Drivers

- Foundational work hub services, such as Google Workspace and Microsoft 365, have become the focal point of work hub application portfolios. However, IT leaders, business technologists and fusion teams are beginning to realize that they can't do everything for domain and situational needs. The impact on domain and situational work hub services means updating digital workplace charter to better align with strategic line of business needs.
- Executive leadership wants to exploit the value of work hub services long term, not just for the ROI, but to drive and enable employees' digital skills to help build digital side hustles and develop employees into business technologists.
- 2022 Gartner's Digital Worker Survey found participants on average use 11 different applications to get work done and more than 70% of the digital workers use between 6-25 applications at work. Also almost half of respondents struggled to find the information or data needed to do their job. IT leaders will need to better assess employees' needs and take greater care in creating digital employees and experience that streamline the use of multiple work hubs.

Obstacles

- IT leaders think that a foundational work hub services will meet all their collaborative needs. In fact, best-of-breed services will be needed to meet the contextualized use cases of groups such as frontline workers, marketing and sales.
- The rate of additional functions added to work hub services has accelerated to the point that IT resource and business employees cannot keep up, which is limiting the overall value of tools.

User Recommendations

- Assume that a single work hub vendor will not meet all your needs. In order to meet your digital employee experiences (DEX) goals it will take a combination of both foundational and domain or situational services.
- IT leaders must take on more of a collaborative role, working with business functions to understand the employee needs, especially with business technologists who can help drive new use cases and popularize digital workplace technology rather than IT working with one another.
- Use Gartner's ACME framework to govern usage efforts by focusing on domain and situational needs.
- Assess the technical fitness of your work hub applications to determine fit for purpose. If applications with similar functionality can be merged, better resource allocation can be reached. Deem the work hub to be a source of continuous innovation in a form that is relatively easy to adopt. Tie augmentation services (e.g., everyday AI, cross-tool integration and citizen development tools) to further growth in the value of the services.

Sample Vendors

Alibaba; Google Workspace; Microsoft 365; Monday.com; Salesforce; Slack; Zoho

Gartner Recommended Reading

Video: Use Gartner's ACME Framework to Rationalize Your Digital Workplace Application Portfolio

Tool: Digital Employee Experience Journey Maps

Innovation Insight for Collaborative Workflow Automation

Sliding into the Trough

Conversational User Interfaces

Analysis By: Gabriele Rigon, Stephen Emmott, Van Baker, Bern Elliot, Frank O'Connor

Benefit Rating: Transformational

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

Conversational user interfaces (CUIs) are human-computer interfaces that enable natural language interactions for the purpose of fulfilling a request, such as answering a question or completing a task. The sophistication of a CUI can vary from understanding basic queries to handling complex multiturn dialogs, so CUIs range from Q&A bots to more advanced virtual assistants (VAs). CUIs fundamentally shift the interaction medium from traditional point-and-click to natural-language-driven.

Why This Is Important

UIs provide direct control between the user and the applications they are operating. In a CUI, this responsibility shifts from application-specific controls to conversational controls, and the CUI is determining the intent and acting upon it. This makes CUIs more widespread as agent (acting) UIs for software, devices and the Internet of Things. AI-enabled CUIs can provide a single, intuitive, common interface to multiple application functions across the entire organization.

Business Impact

Training, onboarding, escalations, productivity, empowerment and responsibility all change with CUIs and need to be embraced as part of CUI projects. AI-enabled CUIs can dramatically standardize and improve the usability of a variety of applications across all business functions, such as CRM, the digital workplace and ERP, hence improving efficiency. They can also benefit customer experience when used to automate support in the form of self-service chatbots or VAs.

Drivers

- **Users' expectations and generative AI:** Users increasingly expect to be able to hold conversations with and ask natural language questions of the applications they use. CUIs are beginning to complement or even replace traditional interfaces in a variety of applications, such as search and insight engines, business intelligence platforms and productivity software, such as document and spreadsheet applications. The trend toward the enablement of interactions in natural language between users (customers and employees) and software has been significantly accelerated by the hype around generative AI and ChatGPT.

- **Conversational AI platforms:** The underlying technology supporting custom-developed CUIs (like chatbots and VAs) built on top of conversational AI platforms (CAIPs) has matured significantly in the last few years. Vendors are investing in core AI technologies, such as large language models (LLMs), to improve components such as natural language understanding. They are also expanding their capabilities to support broader use cases beyond self-service chatbots and toward broader B2C and B2E automation.

- **Search:** CUIs will be increasingly used for knowledge search and retrieval based on document ingestion. Some technologies driving this include LLM-enabled enterprise applications, such as Microsoft 365 Copilot, as well as ChatGPT-like Q&A chatbots and LLM-powered VAs. This is also causing the market to be flooded with dedicated add-ons and even new vendors.

- **Multimodal interactions:** Generative AI methods are increasing the availability of multimodal interactions, such as those based on images, videos, audio and other sensory data. As a matter of fact, beyond text, voice is emerging as a primary modality of interaction between users and CUIs. This can add a powerful enhancement to the communications. Multimodality can solve some of the problems of the current generation of LLMs. Multimodal language models will also unlock new applications that were impossible with text-only models.

Obstacles

- Developing CUIs is intrinsically complex and requires more effort than graphical UIs. More sophistication has to be built into VAs' conversational capabilities to deal with a range of users and edge cases. CUIs' predictions about users' intents can be wrong, so the CUI designer has to keep ambiguity in mind.

- Lack of CUI personality, poor accuracy and conversational design, as well as unreliability of answers generated by LLMs, can affect user sentiments negatively and, as a consequence, adoption and ROI.

- CUIs are available from many sources, whether offered by applications, CAIPs or through separate augmentation. For example, transactional conversational AI use cases require capabilities that only platforms can provide. Q&A scenarios may also be supported by architectures primarily leveraging search and LLMs. Understanding the sophistication and the limitations of these and other approaches is not trivial. This may lead buyers to choose the wrong tooling and many CUIs to fail.

User Recommendations

- Treat CUIs as transformative, and plan on them becoming the dominant interaction model between users and applications.
- Prioritize the requirements of your custom CUIs in terms of sophistication, integration and control. Do not underestimate the risks of building CUIs that do not meet enterprise-grade performance, accuracy and security standards.
- Develop your strategy for consolidation upon one or few conversational AI platforms or approaches, avoiding challenges that derive from the proliferation of CUIs deployed by different business units in different regions.
- Educate stakeholders around benefits and limitations of generative-AI-enabled CUIs, and encourage well-informed employees to experiment with such CUIs.
- Prepare for new roles and skills in the enterprise. Dialogue designers and AI trainers, for example, are needed to enable custom CUI initiatives. Citizen developers will acquire prompt engineering and model management skills to leverage generative-AI-enabled CUIs effectively.

Sample Vendors

Amelia; Avaamo; Cognigy; Google; IBM; Kore.ai; Omilia; OneReach.ai; OpenAI

Gartner Recommended Reading

Magic Quadrant for Enterprise Conversational AI Platforms

Critical Capabilities for Enterprise Conversational AI Platforms

Competitive Landscape: Conversational AI Platform Providers

Emerging Tech Roundup: ChatGPT Hype Fuels Urgency for Advancing Conversational AI and Generative AI

5G

Analysis By: Sylvain Fabre

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

5G is the fifth generation cellular technology standard by the 3rd Generation Partnership Project (3GPP). The standard targets maximum downlink and uplink throughputs of 20 Gbps and 10 Gbps, respectively. Latency is as low as 4 milliseconds in a mobile scenario and can be as low as 1 millisecond in ultra reliable low-latency communication scenarios, down to centimeter-level location accuracy indoors, and massive IoT scalability. New system architecture includes core slicing and wireless edge.

Why This Is Important

5G supports the 4th industrial revolution and IoT. Its fast and reliable real-time data transfer will benefit many industries. 5G supports eMBB, URLLC and MIoT — vital for enterprise transformation. 3GPP 5G standards releases deliver incremental functionality in: R15, extreme mobile broadband; R16, industrial IoT (massive IoT, slicing and security) — latest commercially available release; R17, MIMO enhancements, sidelink, DSS, IIoT/URLLC, bands up to 71GHz, nonterrestrial networks; and RedCap R18 is under definition with a planned freeze date in 1Q24.

Business Impact

- 5G enables three main technology deployments; each supports distinct new services for multiple industries and use cases of digital transformation, and possibly new business models (such as latency as a service). These are enhanced mobile broadband (eMBB) for HD video, mMTC for large IoT deployments, and URLLC for high-availability and very low-latency use cases, such as remote vehicle operations.
- Promising applications for 5G use include fixed wireless access, IoT support and private mobile networks.

Drivers

- Over 249 operators have rolled out 5G (see GSA), 30% of public mobile networks, and some form of 5G capability is penetrating lower cost smartphones in vendors' portfolios (with over nine versions of the technology depending on the band and the 3GPP release).
- Gartner estimates that 5G-capable handset penetration in 2025 will reach 54% worldwide, and 78% in Western Europe, with 5G-capable handset share of sales reaching 80% in 2023 in Western Europe from 51% in 2021. North America share will rise to close to 87%.
- 5G capability is starting to deliver value in emerging always-on wearables use cases.
- Increased data usage per user and device requires a more efficient infrastructure.
- Requirements from industrial users value 5G lower latency from ultra reliable and low-latency communications (URLLC) and expect 5G to outperform rivals in this area.
- Demand continues for massive machine-type communications (mMTC) to support scenarios of very dense deployments up to the 5G target of one million connected sensors per square kilometer. While diverse networks can offer adequate and cost-effective alternatives to 5G for many use cases (e.g., LPWA, NB-IoT, LoRa, Wi-SUN), overall total cost of ownership (TCO) and future proofness may not be as good.
- Availability has increased for industry-specific spectrum options (e.g., CBRS).
- Competitive pressures continue, for example, if one CSP launches 5G in the market others usually have to follow or risk losing market share — this includes both public as well as private 5G offerings.

Obstacles

- Issues with availability and cost of spectrum, in particular for industrial private networks, occur in some countries.
- Security concerns arise when using 5G in critical industrial scenarios.
- Availability and pricing of networks and modules for R16 and beyond solutions.
- Upgrade to 5G SA (stand-alone) core is needed for more advanced R16 releases (such as slicing), and commit to the continuous evolution of 5G releases over R17, R18 and beyond.
- Cost of radio network upgrades for 5G coverage and availability may require additional sites.
- Use of higher frequencies and massive capacity requires denser deployments with higher frequency reuse, which could raise network costs.
- Uncertainty exists about use cases and business models that may drive 5G for many CSPs, enterprises, and technology and service providers (TSPs).
- Feedback from some industrial clients mentioned that the majority of their use cases could be serviced by a 4G private network, Wi-Fi and/or NB-IoT, and other LPWA such as LoRa.

User Recommendations

- Enable R16 and above 5G for enterprise connectivity for mobile, nomadic and FWA secondary/tertiary use cases for branch location redundancy, as long as 5G is not the primary link for high-volume or mission-critical sites and unless there are no other options.
- Provide clear SLAs for network performance by testing installation quality for sufficient and consistent signal strength, signal-to-noise ratio, video experience, throughput and coverage for branch locations.
- Ensure backward compatibility to 4G devices and networks, so 5G devices can fall back to 4G infrastructure.
- Focus on architecture readiness — such as SDN, NFV, CSP edge computing and distributed cloud architectures, and end-to-end security — in preparation for 5G.
- Build an ecosystem of partners to target industry verticals more effectively with 5G before your competition.

Sample Vendors

Ericsson; Huawei; Mavenir; Nokia; Qualcomm; Rakuten Symphony; Samsung Electronics; ZTE

Gartner Recommended Reading

Emerging Tech: 5G mmWave at a Crossroads

Infographic: 5 Steps for Vendors to Scope and Run Successful POCs for Enterprise 5G PMNs

Invest Implications: Magic Quadrant for 5G Network Infrastructure for Communications Service Providers

Market Guide for 4G and 5G Private Mobile Networks

Quick Answer: What Vendor Product Leaders Need to Know About MWC Barcelona 2023

Collaborative Work Management

Analysis By: Nikos Drakos

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Collaborative work management (CWM) tools provide task-driven workspaces to enable business users to plan, coordinate and automate their work. They combine task, project, workflow and automation capabilities, with discussions, content publishing, reporting, analytics and dashboards.

Why This Is Important

CWM empowers business users to plan, coordinate, manage and optimize common repeatable work activities and processes. CWM fills a gap between free-form collaboration and business/custom applications. CWM tools play a role in accelerating business-led democratized delivery, which is a key ingredient of digital transformation.

Business Impact

CWM improves activity coordination in a transparent and agile manner. It empowers business users to plan, execute, coordinate, optimize, and increasingly, automate day-to-day work. It makes work visible for all stakeholders and ensures delivery within timelines, budgets or resources.

Drivers

- **Remote and hybrid work.** There is a rise in interest in CWM, consistent with the increase in remote and hybrid work. In-person meetings and conversational channels lack focus and context, and are not enough to provide clarity and alignment. CWM tools are a natural complement to workstream collaboration, visual collaboration tools and meeting solutions.
- **Rising customer demand for a variety of work use cases.** Buyers are recognizing the relevance of CWM and related modeling tools such as collaborative workflow applications in supporting work processes that are collaborative by nature but may not justify purchasing or building new applications. CWM tools empower business users to plan, execute and automate work in scenarios that include everyday projects, case tracking, service operations, product management, strategic operations, goal tracking and work scheduling.
- **Interest from vendors in adjacent markets.** Vendors are entering this market from adjacent markets. These include project management, workstream collaboration, work hub/cloud office suites, employee communications, frontline worker applications, low-code development tools and business applications. Vendors are recognizing an opportunity to position their products as solutions that appeal to a much broader user base.
- **Demand generation tactics.** Vendors are trying to gain market share with freemium products that target business users and small teams directly. They are also trying to tap into departmental budgets with prebuilt work templates such as for marketing work management, objectives and key results (OKR), or intake management. One consequence of this use-case-specific vendor push is that many organizations end up purchasing more than one product, each deployed in a narrow business domain.

Obstacles

- **No enterprise role for steering large-scale deployments successfully.** CWM solutions are often introduced by end users or via small departmental deployments. There is a need for a leadership role to guide broader use that is aligned with business goals, along with guidelines and practices.
- **Lack of experience with governance at scale.** Business users are effectively using CWM tools to build applications for modeling or automating work. This has implications for roles and responsibilities in quality control, data management, release management, maintenance and long-term support.
- **Culture attitudes and skills readiness.** Some business teams/groups are not accustomed to working transparently or do not welcome more autonomy.
- **Vendor and product risk.** Some vendors are relatively small in a market that is changing rapidly where large platform vendors have yet to enter the market. Buyers face a higher vendor and product risk than in more mature markets.

User Recommendations

- Identify and prioritize relevant use cases by focusing on business-led projects and specific business operations, and by identifying stakeholders, participants, work patterns and business context to ensure business alignment.
- Audit current use of CWM tools to find pockets of tactical use and to understand business relevance and impact. Begin to rationalize choices and iterate by testing products and analyzing vendor risk and employee readiness with targeted deployments to ensure that use-case-specific needs are addressed.
- As usage increases, prepare for the long haul by establishing roles, support structures and governance principles to ensure consistency, quality and best practice diffusion across different work activities.

Sample Vendors

Adobe; Airtable; Asana; ClickUp; monday.com; Smartsheet; Wrike

Gartner Recommended Reading

Market Guide for Collaborative Work Management

Quick Answer: How Can the Digital Workplace Drive More Visibility Into How Work Gets Done?

Forecast Analysis: Social and Collaboration Software in the Workplace, Worldwide

Quick Answer: How Can We Use Microsoft 365 to Support Collaborative Work Management?

Quick Answer: What Collaboration Skills Are Necessary for New Ways of Working?

Workstream Collaboration

Analysis By: Mike Gotta

Benefit Rating: High

Market Penetration: More than 50% of target audience

Maturity: Mature mainstream

Definition:

Workstream collaboration (WSC) tools create a persistent, chat-based workspace, divided into channels. Tools integrate direct and group messaging, along with meeting capabilities, file sharing, alerts, activity streams, tasks, bots, search and other plug-ins. They also come with APIs for customized applications.

Why This Is Important

WSC combines channel-based chat with task, meetings, content and application plug-in capabilities, making it a foundation for work hubs and modern teamwork. WSC is broadly deployed to improve productivity, providing means for organizations to broadly leverage generative AI, large language models, and Generative AI (ChatGPT). Advanced use for process-driven, operational or external use cases are emerging as a solution pattern called “collaborative workflow automation.” WSC tools inadequately support frontline workers today.

Business Impact

WSC is a core technology for digital workplace work hubs, often integrated with a variety of apps including visual collaboration and collaborative work management. By reducing digital friction, teams can work more productively to reduce cycle times. WCS tools acts as a policy control point for security, compliance, and overall governance. WCS can be used for a variety of work related to project, service and support, sales, and marketing activities. WSC tools are also used as chat-based “water coolers” to help team unity.

Drivers

- The shift to hybrid working and requirements for effective teamwork when workers are dispersed makes WSC tools a focal point for integration of other tools, such as visual collaboration, into a digital workplace work hub.
- WSC tools form the core for work governance efforts, because they provide a centralized experience for organizations to satisfy communication, information-sharing and work management needs, while enabling IT to centralize policy, security and compliance controls.
- WSC is becoming the launch point for new classes of collaboration experiences that are tightly coupled with teamwork. Examples include visual collaboration apps and collaborative workflow automation (CWA).
- WSC vendors are delivering generative AI/ChatGPT capabilities into their products. AI will help employees summarize chat streams, find information, auto-create posts and discover hidden expertise and experts.
- WSC expectations increasingly include requirements for more-complex work scenarios beyond everyday productivity. Desires for WSC to better support low-code no-code features and the ability to compose business components into the team experience are beginning to emerge as organizations explore CWA use cases.

Obstacles

- WSC tools are primarily designed for everyday productivity. However, some WSC vendors are shifting to address process, operational and frontline scenarios. If organizations deploy multiple tools without clear business value, the result may be increased costs and IT management complexity.
- Vendors are not collaborating on message interoperability. The use of multiple tools can create “chat silos” and lead to tool sprawl. Third-party vendors use public APIs to exchange messages between tools and can raise risk concerns.
- Frontline workers have not adopted WSC tools to the same extent as office workers.
- Employees struggle to socialize in WCS tools. “Water cooler” chat channels may not be easily discovered or sustained, making it difficult for staff to informally network with peers they work with.
- Low-code and no-code development in WSC are still emerging in terms of ease of use and output capabilities. Proprietary approaches can increase lock-in to the platform.

User Recommendations

- Assume incumbent suite vendors (Microsoft or Google) address everyday productivity needs for WSC use. Remain open to adding WSC tools for process-driven, role-based and operational business scenarios based on business use case and value. Consider frontline workers’ needs as being “stretch goals” for WSC vendors.
- Prioritize internal communications, use of influencer networks, analytics, training, and best practice communities to help employees effectively use WCS tools.
- As team managers define the structure for how teams collaborate using WCS, make sure there is a high priority placed on intentional collaboration practices and etiquettes. This includes tactics to reduce “noise.” Generative AI will require additional governance and peer learning for effective use.
- Assess emergence of new capabilities related to superapps, CWA, generative AI, and low-code no-code thoroughly since new technologies, development practices, work hubs, and mobile experiences can present change management and risk issues.

Sample Vendors

Alibaba Group; Coolfire Solutions; Mattermost; Microsoft; Rocket.Chat; Salesforce (Slack); Symphony

Gartner Recommended Reading

Innovation Insight for Collaborative Workflow Automation

Forecast Analysis: Social and Collaboration Software in the Workplace, Worldwide

Quick Answer: How Will AI in Microsoft 365 Copilot Impact the Workplace?

Quick Answer: How Can Digital Workplace Promote Employee Strong and Weak Ties?

Quick Answer: How Does a Superapp Benefit the Digital Employee Experience?

Smart Meeting Room Systems

Analysis By: Lacy Lei

Benefit Rating: Moderate

Market Penetration: 5% to 20% of target audience

Maturity: Early mainstream

Definition:

Smart meeting room systems are made up of a group of audio and video devices that ensure dedicated group collaborative experiences in various meeting spaces. The devices that compose the system provide the combination of multicapabilities, including camera, microphone, speaker, advanced audio and video processing algorithm, meeting application, IoT, wireless sharing and touch control.

Why This Is Important

The need to better support hybrid meeting experiences is driving new investments in videoconferencing and meeting spaces. Improving the meeting technology in the office can make sure both virtual and physical participants have an engaging experience. An efficient and simple meeting experience for attendees in the office also requires a seamless workflow for booking, joining, monitoring and controlling, which can be implemented on the Smart audio and video meeting appliance.

Business Impact

Smart video meeting appliances improve group engagement and interactions in the office workspace. It supports collaboration, creativity and equality between workers in the office and elsewhere. A modern collaboration environment equipped with intelligent room technology is important for business stakeholders to drive communication success, project progress and team productivity.

Drivers

- Hybrid workers face virtual meetings and collaboration while in the office as their teammates are no longer colocated. However, they find it hard for group meetings to hear, talk and see clearly for both in-room and remote participants. Smart video meeting appliances can help close the gap with AI-powered audio and video technology.
- The need to video-enable a wide variety of nontraditional meeting spaces (e.g., huddle rooms) is driving interest in Smart video meeting appliances. Smart video meeting appliances enable these spaces with easy and inspiring interaction with technology such as whiteboard cameras, ultrawide field of view cameras and all-in-one bars.
- Meeting solution vendors, especially Microsoft Teams or Zoom, are aggressively developing their ecosystem of smart meeting room device vendors to package the meeting platform and hardware capability and develop solutions together to maximize the meeting experience.
- Participants who want to join a meeting in the office need an easy flow to book, check, join and control. Smart meeting room device vendors usually have touch control, scheduling displays offered in their portfolio, with AI features such as automatic activation, discovery via ultrasound.
- Instead of traditional AV gear, IT teams want the modern meeting device to be easy to fit into room design, simple to set up and manage. Many all-in-one Smart video meeting appliances integrate and automate the major meeting capability, which reduces the burden of the IT team that manages the rooms.
- Seamless and productive meeting experience requires functionalities that are tailored to different scenarios of meeting. AI technologies that are widely adopted to automate the space such as room environment analysis, auto wake up, speaker tracking camera and noise cancellation.
- Hardware vendors provide a series of room devices for different size and type of space, which enable the users to easily optimize the cost from various options.

Obstacles

- Many meeting rooms have legacy traditional group videoconferencing endpoints in use which have not fully depreciated yet.
- The inconsistent room system deployment and lack of user guidance make the end users and groups prefer to bring and join from their laptop in the conference rooms.
- The advanced meeting experience not only relies on the room devices themselves, but also the extra cost on the meeting room license that is provided by the meeting solution vendor.
- Management and administration of these devices remains challenging. Managing via the meeting solution vendor's admin interface allows only for basic functions such as firmware upgrade and status checking. Hardware vendors provide portals that are more powerful but generally limited to their own hardware. It is hard to commit to one vendor for all the meeting rooms due to the supply chain issues, deployment time frame and large scale of the organization.

User Recommendations

- Build new hybrid working space by evaluating the use of meeting spaces in your offices today and consider Smart video meeting appliances.
- Make the most use of AI functions in the device by enabling them during the configuration process, following the update feature from the vendors and testing new features in a few pilot rooms.
- Select the devices and solutions by testing in the correspondent meeting rooms and comparing the result in live meetings between different options.
- Prepare for long-term administration of these devices by evaluating and choosing wisely between the meeting solution's admin interface, a hardware vendor's specific portal, or a third-party option that can manage and analyze for a heterogeneous estate of devices.
- Find the match devices and solution for different meeting rooms by evaluating the room size and layout; functionality in different use cases; and major meeting solutions used in the organization.

Sample Vendors

Cisco; Crestron Electronics; EPOS; HP Inc. (Poly); Jabra; Lenovo; Logitech; Neat; Yealink

Communications PaaS

Analysis By: Daniel O'Connell

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Communications platform as a service (CPaaS) is a cloud-based middleware on which organizations can develop, run and distribute communications software. The platform offers APIs that simplify the integration of communication modules — including SMS, voice, messaging apps, email, social and video — into applications, services and business processes, complemented with development tools and documentation. A CPaaS vendor may assemble multiple CPaaS modules into richer solutions, such as e-commerce.

Why This Is Important

CPaaS is important because it easily enables organizations to integrate communications into workflows via developer-friendly software APIs. Even organizations with modest IT skills have developers that can deploy SMS, voice and two-factor authentication (2FA) for basic workflows like notifications and appointment reminders. Digital natives and large enterprises have robust developer teams that can build more complex workflows with features such as email, video, payments, web chat and WhatsApp.

Business Impact

CPaaS plays a prominent role in enterprise IT with the influx of developers joining the IT workforce. A developer ecosystem of APIs, software development kits (SDKs) and documentation provides a low-cost toolset for improving operational efficiency and customer experience. CPaaS vendors now offer visual builders so noncoding business analysts can build simple workflows. Most organizations start by deploying CPaaS for a single business unit (BU) use case, from which it is quickly adopted across other BUs.

Drivers

- CPaaS is highly correlated with the 2023 API economy. Many organizations now have a bigger developer workforce compared to 2018. Megavendors like Amazon, Cisco and Microsoft now have a CPaaS play. The companies' entrance certifies the importance of CPaaS, placing CPaaS on the radar screen of IT leadership.
- CPaaS vendors continue to build out their platforms with an expanded set of modules such as video, WhatsApp, security, authentication, email and payments. This, in turn, enables organizations to build more complex workflows, yielding higher CPaaS revenue for vendors, such as e-commerce, telehealth and insurance claims processing.
- A few CPaaS vendors are building out advanced capabilities in bots, AI, customer data platforms (CDPs) and campaign management. Many of these implementations focus on customer experience.
- CPaaS vendors are building systems integrator (SI) partnerships focused on complex vertical use cases. This provides a scaling opportunity as the SIs have strong CIO relationships for building advanced IT workflows.
- Visual builders continue to be rolled out in the market to allow the participation of noncoding business analysts. This expands the total available market (TAM) to users building simple workflows or making modifications to existing workflows.

Obstacles

- The CPaaS market struggles with brand awareness. Many IT decision makers are not sure which CPaaS providers are best-suited to align with.
- Developer talent constrains CPaaS growth. While organizations add developers to their workforce, their schedules may be booked for other projects.
- The CPaaS landscape is complicated as new vendors enter the market and with others repositioning their product offerings. In addition, CPaaS vendors are expanding their capabilities into CDP, contact center as a service (CCaaS) and campaign management.
- 2022 through 2023 economic uncertainty has forced vendors to focus on profitability rather than growth. This has led to industry layoffs, reduced risk taking and a focus on core competencies further hindering CPaaS adoption.
- CPaaS market adoption is strong with mature offerings like SMS, 2FA, and number anonymization. But they are commodities and have poor margins. CPaaS vendors need greater adoption into the newer capabilities — WhatsApp, video, and conversations — in order to restore their financial health.

User Recommendations

- Proceed first with simple solutions centered on SMS, application-to-person (A2P), 2FA, phone number anonymization and voice if you have modest IT skills.
- Explore the advanced communications modalities such as the messaging apps (e.g., WhatsApp), video, email, payments and e-commerce if you have stronger IT skills. CPaaS is now viable for organizations of all shapes and sizes.
- Adopt CPaaS across the entire business. CPaaS often starts in a single BU, before expanding to others — such as HR, operations and supply chain — to achieve maximum benefits.
- Expand the organization's developer workforce to fully leverage CPaaS for competitive edge. IT core competency is not a luxury, but a necessity for survival.
- Hire SIs or boutique CPaaS development firms for initial projects. Have your IT team learn from the third-party CPaaS firm so you can build your own core competency.

Sample Vendors

Bandwidth; CM.com; Infobip; MessageBird; Route Mobile; Sinch; Twilio; Vonage

Gartner Recommended Reading

Market Guide for Communications Platform as a Service

Quick Answer: Why You Need to Deliver on WhatsApp Business Platform for Rich Business Conversations

How to Evaluate and Select CPaaS Providers to Operationalize Customer Experience

Emerging Tech: Turnkey Yet Customizable Solutions Are Transforming Communication

WebRTC

Analysis By: Rafael Benitez

Benefit Rating: High

Market Penetration: More than 50% of target audience

Maturity: Mature mainstream

Definition:

Web Real-Time Communications (WebRTC) is an open-source project that delivers runtime voice, video and data communications directly to a browser and to mobile applications using JavaScript APIs, and without the requirement of additional software or applications. The WebRTC project was initially launched in 2011, following Google's open sourcing of the code it acquired from San Francisco-based Global IP Solutions in 2010.

Why This Is Important

WebRTC enables real-time communications, such as voice, video and digital content, to be delivered via web browsers or embedded web engines in mobile applications and IoT devices without additional software (e.g., browser plug-ins). WebRTC standardization groups in the Internet Engineering Task Force (IETF) and World Wide Web Consortium (W3C) have defined a set of protocols and JavaScript APIs for these services.

Business Impact

The benefit of WebRTC is that voice and video interactions can occur within a web client. By contrast, other solutions require use of installable desktop apps or a personal device like a desk phone or a mobile phone's native calling capability. With embedded voice, video and data channels, a web app, running natively in a browser, can add contextual information on the same browser, delivering a web application experience similar to that of desktop apps.

Drivers

- **Ubiquity:** The ability to make voice and video more widely and easily available on any computing device and operating system that supports web browsers.
- **Administrative simplicity:** The ability to make applications that use voice, video and data services available to users without the requirement of installing or managing desktop or mobile apps.
- **Embeddability:** Web applications such as CRM systems that can benefit from the addition of real-time voice, video or data can more easily be embedded with WebRTC clients.
- **Quality of experience:** The WebRTC standard has mandatory minimum requirements for the voice and video codecs that implementations can select from to ensure a high-quality experience.
- WebRTC allows voice, video, messaging and screen-sharing applications to shift away from desktop clients. This, in turn, allows customers that start on a company's website to stay on the website for voice and video sales, support or collaborative interactions.
- Within contact center operations or communications-enabled business applications, WebRTC can provide voice, video and messaging (chat) objects in webpages where workflows, e-commerce and business process applications could be enriched or optimized.
- WebRTC has significantly impacted the communications industry, since no desktop app or plug-in software is installed to access communications. The codecs that WebRTC currently designates as "mandatory to implement" are G.711 and Opus for audio, and H.264 and VP8 for video. Optional codecs currently supported include G.722, iSAC and iLBC for audio, and VP9 (with SVC) H.265/HEVC and AV1 for video. The wideband and adaptive codecs that have been implemented by leading vendors are designed to provide a high-quality user experience even over best-effort networks (e.g., residential broadband internet service), where end-to-end quality of service cannot be guaranteed.

Obstacles

- The main obstacle to more widespread adoption of WebRTC in browsers has been the inability to achieve 100% feature parity with desktop apps designed specifically for a given operating system. Native Windows desktop apps, for example, still enjoy superior user experience in areas like application navigation (typically driven by an input device like a keyboard or mouse), messaging (chat) and screen sharing.
- Desktop apps also can deliver a better notification user experience as they have access to the built-in notification frameworks of the host operating system (for example, delivering notifications when a PC is locked), as well as a better experience selecting audio and video sources (mic and camera).
- WebRTC, being an open protocol, requires time and consensus among the standardization bodies for enhancements, while proprietary implementations can evolve and innovate much more quickly.

User Recommendations

- Prioritize the use of contact center technology that leverages WebRTC. Contact center offerings that adopt the ability to engage customers with voice, video and chat through the browser will have a competitive advantage. The offerings that support WebRTC clients for agents and supervisors allow for greater flexibility and lower technical complexity.
- Evaluate web-enabled meeting solutions if your organization regularly uses meetings with external parties, as they allow guests to join meetings without installing desktop clients or browser plug-ins on their PCs.
- Compare the desktop client and the web client of applications delivering voice and video focusing most on user experience. Unified communications web apps are less feature-rich than desktop apps, so ensure the features you require are available on WebRTC clients.
- Improve the security posture and lower technical complexity of your organization by prioritizing real-time applications that leverage WebRTC over older communication protocols.

Sample Vendors

Cisco; Google; Microsoft; NICE; Oracle; RingCentral

Gartner Recommended Reading

Magic Quadrant for Unified Communications as a Service, Worldwide

Magic Quadrant for Contact Center as a Service

Market Guide for Communications Platform as a Service

API Marketplaces

Analysis By: Andrew Humphreys

Benefit Rating: Moderate

Market Penetration: 5% to 20% of target audience

Maturity: Adolescent

Definition:

An API marketplace is a platform to share APIs. Consumers, mainly developers, use API marketplaces to discover APIs and, in some cases, may purchase access to them. They can be either public commercial marketplaces with APIs from multiple providers, public with APIs from a single provider, or private marketplaces for promoting an organization's internal APIs.

Why This Is Important

API marketplaces enable organizations to publicize their APIs. Marketplaces are usually associated with external marketplaces, which share APIs with a community of developers and enable partners to implement solutions using the APIs. However, as most APIs are meant for consumption by teams within an organization, marketplaces are more frequently internal. They make it easier to find APIs internally, helping with wider sharing of capabilities between different business units and product and development teams.

Business Impact

API marketplaces increase developer visibility and consumer mind share, drive API usage, and, by extension, increase business impact. API consumers can use marketplaces to simplify finding and comparing different APIs when they are looking for specific functionality but have not selected exactly which API to use. There is typically a cost involved with listing in a public API marketplace, but the benefits include exposure to a larger number of API consumers and access to features to enable monetisation.

Drivers

- The number of APIs within an organization is climbing, driving the need for developers to more easily discover which APIs and services are available.
- Composable business, including composable commerce, relies on the use of API marketplaces to share APIs and packaged business capabilities.
- Increased use of low-code platforms, integration platforms, robotic process automation (RPA) and analytics tooling enables more citizen development using APIs that may be sourced from API marketplaces.

Obstacles

- Public API marketplaces that provide a public directory of APIs from multiple providers have had disappointing results, as developers are more likely to go directly to API providers to sign up for APIs. This has resulted in API marketplaces in the Trough of Disillusionment. However, internal API marketplaces have had more success, since they enable developers to share APIs across multiple teams.
- API portals provided as part of API management platforms are typically basic in nature, resulting in significant customization work to create a customer-oriented API marketplace based on such an API portal.
- New open-source platforms, such as Backstage from Spotify, are driving the creation of internal API catalogs as part of larger developer hubs. If your developers are collaborating on solutions around their APIs already, then a simple catalog may be sufficient and a full marketplace is probably overkill.

User Recommendations

API providers:

- Create an internal API marketplace, focused on the needs of software engineers to share APIs across the organization.
- Examine billing terms to understand what the cost of using the marketplace is when considering commercial API marketplaces.
- When considering a commercial API marketplace, examine listing fees and value to your organization before committing.

API consumers:

- Ensure that you use APIs from trusted marketplaces and trusted API providers, examining usage agreements, licensing and billing terms carefully.
- Investigate whether consuming an API directly from the API provider offers better pricing or usage terms than consuming the API via a marketplace.

Sample Vendors

Achieve Internet; Bump; Postman; Pronovix; Readme; Smartbear (Swagger); Spotify (Backstage); Stoplight

Gartner Recommended Reading

Innovation Insight for Internal Developer Portals

Reference Model for API Management Solutions

Climbing the Slope

Software-Defined Networking

Analysis By: Andrew Lerner, Mark Fabbi

Benefit Rating: Low

Market Penetration: Less than 1% of target audience

Maturity: Obsolete

Definition:

Software-defined networking (SDN) is an architectural approach to designing, building and operating networks that promised increased agility and extensibility. The Open Networking Foundation specifically defines SDN as “the physical separation of the network control plane from the forwarding plane, and where a control plane controls several devices.”

Why This Is Important

SDN products that separate the network control plane from the forwarding plane never achieved mainstream enterprise adoption. Unfortunately, with time, SDN has evolved into an overused marketing term, essentially meaning “new stuff in networking.” However, interest in SDN led to innovations in automation, orchestration and programmability. It paved the way for innovations like software-defined WAN (SD-WAN), microsegmentation, brite-box switching and SD-branch products.

Business Impact

Products that meet the true technical definition of SDN are rare in the enterprise. However, products that are marketed as SDN — but that do not meet the architectural definition of SDN — can have many benefits. They can increase network agility, simplify management, improve security, and lead to reductions in operational and capital expenses, while fostering cross-functional collaboration.

Drivers

- SDN was initially driven by academia, along with large network operators that were looking to innovate on traditional proprietary networking solutions.
- Early SDN drivers aligned with the idea of separating hardware from software, with a view to fostering innovation in both, while increasing agility in order to lower costs.

- Although SDN technology is obsolete, SDN terminology is widely used in vendors' marketing efforts. This use is the main driver of discussions about SDN today.

Obstacles

- There are almost no SDN technologies available in the enterprise that meet the technical definition of SDN. True SDN technologies have not achieved any significant traction in the enterprise market.
- Vendors widely market non-SDN technologies as SDN, which misleads and confuses customers.
- The hope that SDN would enable decoupling of the control plane from network hardware and foster independent software innovation was never fulfilled.

User Recommendations

- Do not fall for vendors' misleading claims that their commercial products are SDN products, nor should you engage in any discussions about deploying them.
- Focus on reducing or eliminating the "human middleware" — that is, manual operation — problem that has plagued traditional network solutions for two decades.
- Execute on SD-WAN, SASE and network automation initiatives to reduce human error, increase quality, improve agility and cut costs.

Gartner Recommended Reading

State of SDN: If You Think SDN Is the Answer, You're Asking the Wrong Question

UC Monitoring Tools

Analysis By: Lisa Pierce

Benefit Rating: High

Market Penetration: More than 50% of target audience

Maturity: Early mainstream

Definition:

Unified communications monitoring (UCM) tools collect, analyze and report on the performance of voice, video, and messaging sessions from vendor-supplied data sources, such as call quality metrics and real-time end-user data from devices/clients. Some tools use standard APIs to extract relevant data from UC vendor databases and repositories. Advanced tools also collect session and packet data, decode voice and video codecs, and employ synthetic session/call testing.

Why This Is Important

UC and unified communications as a service (UCaaS) monitoring and management tools are essential to assure a satisfactory end-user experience, across an array of work environments. These tools must combine both application performance monitoring (APM) and network performance monitoring (NPM), by employing synthetic testing with real-time endpoint and end-user monitoring. UCM tools identify and rectify voice, video or messaging sessions performance problems in real time.

Business Impact

Enterprises initially invested in UCM tools, while migrating from on-premises UC platforms to cloud services, to ensure performance targets were met. These new deployments are mostly cloud-based UCaaS solutions. They also link to APIs, which allow third-party monitoring tools to ingest the data. These tools allow administrators to isolate and anticipate problems across a range of real-time services and worker environments, making them essential to eliminate bottlenecks and challenges that impede productivity.

Drivers

- Deployment of UCaaS has been a major driver of adoption of advanced UCM solutions that use digital experience monitoring (DEM) technologies for synthetic testing, and real-time endpoint and end-user monitoring.
- The use of telework solutions that employ residential broadband service, coupled with the rapid adoption of cloud-based videoconferencing, have revealed the fragility of UC applications' performance. Thus, awareness of and appreciation for the role UCM tools play has escalated.
- Organizations are again supporting remote and hybrid workers, in addition to frequent travelers. UC monitoring tools can assess performance across all these environments.
- Implementing long-term remote work plans requires that infrastructure and operations (I&O) shops must support real-time network and application performance capabilities across diverse work environments. Employees who are traveling or are working from home can no longer be treated with benign neglect, especially since tools are available to help deliver the desired experience.

Obstacles

- Very few UCaaS providers offer advanced real-time and synthetic session or call monitoring capabilities, so clients must employ third-party UCM specialist tools.
- Some UCaaS providers offer monitoring tools for their services. However, their monitoring capabilities may not be as strong as those provided by third-party monitoring specialists.
- Some DEM tools provide both APM and NPM functionality, but these tools are not as comprehensive as third-party specialists.
- Niche vendors focus on providing deeper UC insight, often from specific UC vendors. But they often cannot support other applications, or discern root-cause-absent APM and NPM tools. This results in acquiring and using an increasing number of tools.
- Some UCaaS monitoring tools are cloud-only and they do not look at premises-based UC performance. Others are outgrowths of tools that assess the performance of premises-based UC systems, making them less than ideal for cloud-first services.

User Recommendations

- Use UCM tools that blend APM and NPM (real-time monitoring from endpoints and end-users, and synthetic call agents). These solutions may be supplied by dedicated UCM vendors, broader DEM performance monitoring tools, tools provided by UCaaS providers, or a small number of security and software-defined WAN (SD-WAN) vendors. Clients may also employ these four strategies in combination.
- Validate that third-party UCM tools collect and analyze API data provided by the specific UCaaS provider. Third-party tools are helpful in monitoring multivendor or hybrid UC environments, and may provide superior monitoring functions than those offered by the UCaaS provider.
- Assess DEM suppliers' UCM capabilities against UCM specialists and the monitoring capabilities supplied by UCaaS providers, since DEM is applied to many IT assets.
- Affirm that the chosen vendor supports the required proprietary codecs and protocols, when using browser-based UC applications.

Sample Vendors

8x8; ATSG (Optanix); Catchpoint; ExtraHop; IR; Lakeside Software; Nectar Services; RingCentral; TeleMate; Unisys (Unify Square); Vyopta

Gartner Recommended Reading

Market Guide for Digital Experience Monitoring

Negotiate Your Unified Communications as a Service SLAs, Focusing on These Key Terms

Consider These Key Functional Areas for Application Performance Monitoring and Observability

How to Monitor and Troubleshoot Remote Workers' Application Performance

Market Guide for Infrastructure Monitoring Tools

NFV

Analysis By: Bjarne Munch

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Network function virtualization (NFV) virtualizes network functions such as firewalls, WAN optimization, software-defined WAN and routing, that can be deployed as software on open-server platforms or universal customer premises equipment (uCPE) platforms, as opposed to dedicated physical appliances. Virtual network functionality can be deployed both on-site and off-site in branch offices, internal data centers, providers' point of presence, cloud services, or hosting facilities.

Why This Is Important

NFV and related uCPE are important because these technologies offer enterprises an opportunity to improve their WAN and security deployment by making them more agile, flexible, and scalable.

Business Impact

NFV can improve enterprise network agility because it enables enterprises to add, delete or move virtual appliance functions between platforms or easier change virtual appliance vendors. Network-node-based NFV can facilitate simplification of branch office designs and enable optimized cloud connectivity.

Drivers

- NFV has grown out of the requirement to support and consolidate multiple network functions at the branch WAN edge, by using uCPE with the expectation of increased agility and cost savings.
- The ability to move functions out of branch office and centralized data centers to off-site provider nodes is now a key driver, as it enables simpler branch office design and more scalable solutions.
- Network service providers are embracing NFV in their WAN service delivery for more agile services and co-management options.

Obstacles

- Lack of ROI for NFV, compared to alternative approaches.
- Lack of best practices and standards for the uCPE platform to suit multiple NFVs from different vendors, leading to performance issues due to lack of processing power or memory.
- Insufficient guidelines and standards from vendors, that specify what type of virtual network functions (VNFs) can work together on specific platforms.
- Limitations of standard orchestration systems that lead to cumbersome processes when deploying VNFs on remote uCPE platforms, which also create uncertainty of enterprise client ROI.

User Recommendations

- Prefer off-site network-node-based NFV services — as opposed to on-site — for optimum scalability and cost-efficiency.
- Do not deploy uCPE in-house for on-site deployments without following VNF vendors' precertified configurations, unless there are strong IT resources to perform detailed technical evaluations and full load testing.
- Prefer providers that have preperformed proof of concept or pilot the complete solution instead.
- Ensure that nodes do not impede traffic flow with high network latency for network-node-based NFV intended to "offload" branch office designs.
- Ensure providers embed VNFs within their on-demand services for optimum service agility.

Sample Vendors

AT&T; BT Group; Cisco; Dell Technologies; Juniper Networks; Lanner Electronics; NTT; Orange Business Services; VMware

Gartner Recommended Reading

Transform Service Management at the Cloud Edge With Kubernetes-Based Infrastructure

3 Ways to Adapt WAN Sourcing to Emerging Service Requirements

Critical Capabilities for Network Services, GlobalMagic Quadrant for Network Services, GlobalMarket Guide for Multicloud Networking Software

Group Interactive Displays

Analysis By: Stephen Kleynhans

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Mature mainstream

Definition:

Group interactive displays (GIDs) are large-format (typically, 50-inch to 86-inch) touch displays that include the ability to project content from various devices and enable markup, using touch or special pens. These peripheral devices are usually connected to a PC, but many higher-end units include stand-alone capability.

Why This Is Important

As companies plan for hybrid work with the return to the office, expanding and improving meeting spaces is a priority. Group interactive displays (GIDs) improve the interactive nature of virtual meetings for both local and remote attendees by enabling rich visual collaboration at a range of price points. While typically aligned with either Microsoft Teams or Zoom Video Communications, most can work across multiple collaboration vendors or presentation tools with varying levels of flexibility.

Business Impact

Meeting room technologies have a long life (up to 10 years) and companies must therefore take into account their long-term enterprise needs and future growth. GIDs can enable new approaches for meeting interactions and can play a role in changing how future digital workplaces are designed. By enabling digital whiteboards, GIDs play an important role in facilitating collaboration equity for all meeting participants, whether local or remote.

Drivers

- Hybrid meetings with both local and remote participants require new approaches to interactivity within meetings.
- Decreasing hardware costs for large, full-HD and 4K displays enable more organizations to replace projectors and consider interactive displays.
- Increased use of visual collaboration with digital whiteboard tools can improve the exchange of information, and improve brainstorming, but require a large interactive display to operate in group settings. Often, a GID is paired with a large nontouch display for use in videoconferencing setups.
- GIDs have evolved to include more stand-alone capabilities beyond being just a display. Many GIDs now include basic digital whiteboard software or a conferencing client, but can also still be used with any tool through an attached PC or tablet.

Obstacles

- Large interactive digital whiteboards have been available in the market for more than a decade, but have seen limited traction due to high cost, poor performance and uneven support. This has created a high level of skepticism in the user community about such technology's actual value.
- The experience provided is usually limited to the applications that users are able to run on their devices and is not specifically tuned for a particular meeting or collaborative tool, often resulting in a less-than-optimal user experience. Higher-end units which include embedded software designed for a specific meeting platform, ease some of the challenges but only for the primary tool. Often third-party visual collaboration tools are poorly supported.
- Starting a meeting is often still a multistep process, and this complexity has limited the success of many GID deployments. Recent improvements in meeting room tools are mitigating this challenge to some extent.

User Recommendations

- Investigate GIDs for all meeting rooms requiring digital whiteboard capability.
- Pair GIDs with a third-party whiteboard application and the videoconferencing tool running on a dedicated companion PC or a local meeting attendee's PC to get the full benefit. As an alternative, many GIDs are certified to integrate with specific conference room systems, such as Microsoft Teams Rooms.
- Provide user training, information cards and encouragement to engage with the devices to ensure a successful deployment project; provide simple tools to connect and display from multiple devices.
- Evaluate these large interactive displays for large private offices and, potentially, classrooms or executive briefing facilities — they are not just for meeting rooms. GIDs cost only marginally more than basic large displays but provide significantly more functionality.

Sample Vendors

Cisco Systems; Dell Technologies; DTEN; HP Inc.; Microsoft; Neat; Ricoh; Samsung Electronics; Sharp

Gartner Recommended Reading

Build Better Meeting Rooms to Support Hybrid Work

Video-Enable Meeting Rooms for Collaboration Equity in Hybrid Workplaces

Market Guide for Visual Collaboration Applications

Virtual Events

Analysis By: Christy Ferguson

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Virtual events bring large groups of people together online for short time periods and defined purposes. Organizers use technology to mix content and format types to engage audiences in varying experiences, ranging from large general sessions to interactive activities. Audiences may be internal and/or external to an organization. Planning, operations and production workstreams typically operate in parallel to execute complex events.

Why This Is Important

Enterprises rely on virtual events to achieve demand generation goals, accelerate deals in the pipeline and strengthen customer and employee relationships. A variety of event types are required to support engagement objectives with customers, buyers and in the case of internal events, team members. Virtual events enable teams to execute dynamic content delivery, manage event logistics and integrate with other technologies in order to deliver world-class experiences for participants.

Business Impact

The recovery of in-person events combined with the economic environment has led to enterprises evaluating the need for virtual events. However, business travel and lower-than-prepandemic in-person event attendance have forced enterprises to continue to offer virtual events. As enterprises look to balance their engagement models, virtual events will become a lesser focus than in the recent past.

Drivers

- The move from webinars and in-person events to highly engaging, multisession, multitrack virtual events during the pandemic is evolving. This evolution is now shifting to develop a single strategy that includes events spanning virtual and in-person delivery models. However, these are not “hybrid” events that incorporate both models into a single event.
- Virtual events to support marketing require extensive promotion and campaign development and are resource intensive. Smaller organizations with lesser resources are more likely to focus on in-person events, decreasing their use of virtual events in the marketing mix.
- Large enterprises are still able to reach audiences through virtual events that haven’t or won’t attend in-person events for a multitude of reasons. While the need for virtual events still exists, moving forward, the focus will be on balancing virtual and in-person event needs across these enterprises.
- Virtual events provide hosts with deep visibility into attendee behavior, beyond registration data. This data was often leveraged to not only plan future events but also to support nonevent engagement. To help marketers deliver engaging, relevant experiences, data such as session participation, length of time in a session, engagement rates, areas of interest, and networking data are all in demand even after the return of in-person events.

Obstacles

- As travel budgets for in-person event attendance are impacted by the economy, enterprises will need to determine the most appropriate way to reach virtual audiences. As the market evolves, enterprises should expect to see the growth of all-in-one solutions that can deliver both in-person and virtual events.
- The expansion from adjacent markets and primarily in-person event providers is likely to include well-established meeting solutions that will broaden their offering and/or partner with providers to meet the needs in this market over time.
- Integrations and ecosystems are lacking in this market, impacting the ability of enterprises to leverage attendee engagement data to move attendees along the buyer journey and measure return on investment.

User Recommendations

- Develop integrated marketing strategies that include events, and determine whether an existing meeting solution or webinar tools will meet the needs of one, some or all of your virtual events. Use virtual event vendors when you have multiple tracks, require a high level of engagement, plan various session types or seek to integrate data into a martech stack.
- Develop the skills necessary to consolidate managing both virtual and in-person events into a single function. Seek professional services to close gaps in existing internal capabilities.
- Define expectations for integration to the existing technology stack, including in-person event tools with a focus on attendee tracking. For example, session attendance, view time, survey results, meeting engagement and target account engagement are all metrics to track to inform buyer qualification, predict pipeline health and drive account penetration or upsell/cross-sell efforts.

Sample Vendors

Airmeet; Notified; ON24; Kaltura

Gartner Recommended Reading

Market Guide for Event Technology Platforms

Market Guide for Meeting Solutions

Event Data: An Opportunity to Improve Marketing Performance

Cool Vendors for Event Technology Providers

Meeting Solutions

Analysis By: Lacy Lei, Tapan Upmanyu

Benefit Rating: High

Market Penetration: More than 50% of target audience

Maturity: Mature mainstream

Definition:

Meeting solutions are real-time collaboration tools that support participants engaged in teamwork, presentations, training and webinars. Enterprise offerings perform equally well for desk-based workers (in an office or at home), mobile workers and workers in meeting spaces, thanks to integrated voice, video, messaging and content-sharing capabilities.

Why This Is Important

The meeting solution market emerged from two formerly distinct markets — web conferencing and group video systems — as a response to buyers' preferences for converged solutions. Meeting solutions have core features for video, audio and content sharing to support real-time collaboration between local and remote participants in a hybrid working environment. Meeting solutions also offer audio-video enabled meeting room systems for office spaces like boardrooms and training rooms.

Business Impact

Meeting solutions offer a richer and more flexible experience than audio conference bridges and video rooms. A properly specified meeting solution for workers' activities and needs can:

- Enable faster decision making for internal collaboration and speed up business processes such as sales, interviews, training, etc.
- Reduce travel expenses and geographic barriers in distributed teams.
- Enrich customer experiences, including efficiency, multichannel services, diverse and cross-regional interactions.

Drivers

- Postpandemic, remote and hybrid workplaces have accelerated the need for advanced conferencing and collaboration tools in daily work.
- Modern digital workers from hybrid workplace rely on diverse live interactions to increase engagement, productivity, inclusion and visibility. Meeting solutions come with messaging-based real-time collaboration, content sharing capabilities and virtual whiteboards, either as embedded capabilities or options to integrate with third-party applications.
- Meeting participants need the flexibility to access meeting solutions from different locations and devices. Most vendors support consistent experience to participate in the meetings from personal computers (downloadable applications or browser-based clients), mobile-phone-based applications and meeting room kits.
- Modern meeting solutions include innovations through artificial intelligence (AI) to add a degree of automation to elevate the premeeting, in-meeting, and postmeeting experience for the users.
- Digital transformation initiatives have extended the use cases that require live meetings online such as telehealth sessions, remote banking, education and virtual events.

Obstacles

- Many organizations have complex meeting solution portfolios to meet the various communication requirements when remote work is a must. There are some duplicate capabilities among them covering similar use cases after shifting to hybrid work.
- Some users see meeting solutions as a replacement of audioconference and conference bridge alone. However, they also have additional valuable functions for workstream collaboration, online training and webinars, among others. The users may miss out on leveraging the benefits of these collaboration features.
- The hybrid workers are proficient in using meeting technologies from remote locations, but they now expect a similar group hybrid meeting experience in the office meeting space. More is demanded from the group video system components of meeting solutions to achieve collaboration equity for in-room participants.

User Recommendations

- Prioritize the key meeting scenarios that support hybrid working in the organization and external business need today to rationalize and optimize the meeting application portfolio.
- Improve meeting experiences by first looking at innovations in the meeting products they have already deployed. Experiment with workstream collaboration technology, meeting-related virtual personal assistants, generative AI, audio and video features, digital whiteboards.
- Drive autonomy in hybrid meeting management for digital workers by supporting comprehensive meeting experience such as interoperability across multiple online meeting services, integration with resource scheduling applications and workplace experience applications.
- Optimize the seamless experience for participants by providing dedicated meeting room equipment in the office that ties to the primary meeting solution technology used in the organization as well as personal meeting devices.

Sample Vendors

BlueJeans by Verizon; Cisco Systems; Google; GoTo; Microsoft; Zoom

Gartner Recommended Reading

Market Guide for Meeting Solutions

Infographic: 4 Best Practices to Manage the Hybrid Digital Workplace

How to Optimize Your Meeting Solution Portfolio and Improve the Meeting Experience

Build Better Meeting Rooms to Support Hybrid Work

Entering the Plateau

UCaaS

Analysis By: Rafael Benitez

Benefit Rating: High

Market Penetration: 20% to 50% of target audience

Maturity: Mature mainstream

Definition:

Unified communications as a service (UCaaS) is a cloud-based multitenant offering that integrates enterprise telephony, personal and team messaging, SMS, meeting solutions (web/video conferencing, whiteboarding and content sharing), lightweight contact center, and mobility. Organizations typically buy multiyear agreements and pay a flat per-user per-month recurring charge.

Why This Is Important

Unified communications is a foundational set of capabilities for organizations of all sizes, industries and geographies. In developed economies with reliable and inexpensive data networking services, cloud-delivered UC is preferred over on-premises UC. While cloud-delivered UC is the preferred replacement for premises-based UC, in certain market segments with poor network connectivity, cloud regulatory restrictions or cultural adversity to cloud, migration to UCaaS will occur at a slower pace.

Business Impact

- UCaaS provides organizations with procurement agility as they grow, retrench, acquire or merge with other organizations.
- UCaaS architectures inherently support disaster recovery, as users can be served by many service nodes.
- Hybrid work support is included at no additional charge, has a superior user experience, and does not require additional effort to deploy.
- UCaaS enables capabilities to remain current through easier and more streamlined software updates.

Drivers

- **Modernization:** Although most on-premises UC solutions support messaging, mobility and meetings, UCaaS offerings are superior in these capabilities because integrations with adjacent solutions and the ease of extending software updates promote continuous enhancements. Most leading UC vendors are no longer investing in on-premises UC solution innovation, so modernization is often not possible with these platforms.
- **End of life:** A significant majority of organizations that are facing an end-of-life event and a potential upgrade or replacement of on-premises UC platforms will use this event as a convenient jump-off point to justify migrating to UCaaS.
- **System management and administration:** On-premises solutions typically require engineering-level skill to manage, while UCaaS solutions require much lower levels of technical skill and less effort from the organization.
- **Cost optimization:** Although total cost of operation reduction is often expected by buyers when adopting UCaaS, whether or not savings can be realized not only depends on the price of UCaaS, but also on the current costs of an on-premises system. In some cases, organizations may have exceptionally low costs with an on-premises system, and therefore may have higher costs with UCaaS. Typically, organizations can realize savings or keep costs at a similar level, while benefiting from a more modern set of user experiences and capabilities.

Obstacles

- **Regional availability:** Multinational organizations sometimes find it challenging to find providers that can deliver local/domestic calling service in less-developed countries. Although increasingly rare, organizations that are not multinational but operate in less mature regions may consider UCaaS unsuitable.
- **Telephony feature gaps:** Although UCaaS is mature and can satisfy the telephony requirements of most organizations in developed regions, some organizations still require advanced telephony features (including certain types of queuing or hunt groups) that may not be available from UCaaS providers. This is increasingly rare, but can still limit the ability to migrate to UCaaS for such organizations.
- **Unusually stringent SLA targets:** Some organizations have exceedingly stringent mean time to repair service level targets (for example, stock brokerage companies often require less than one hour), which may not be achievable with typical UCaaS providers.

User Recommendations

- Select UCaaS if your organization is a small and midsize business (SMB) with less than 1,000 users. UCaaS has matured to the point where it meets the telephony requirements of SMBs and has suitable resiliency. SMBs can build a compelling business case for UCaaS by weighing their limited IT resources and skill set, the complexity of supporting remote sites, and the benefits of the high pace of innovation that UCaaS vendors provide.
- Adopt UCaaS if your organization is large (more than 1,000 users) and has locations concentrated in a single developed region. Many public-sector organizations fall into this category and are adopting UCaaS frequently.
- Opt for premises-based UC or hybrid UCaaS/UC if your organization is multinational and operates in regions where reliable data networking services may be unavailable or prohibitively expensive. While multinational organizations should explore UCaaS, less developed countries are also often challenged by restrictive local telecommunication regulations, sometimes making premises-based UC a better option.

Sample Vendors

8x8; Cisco; Dialpad; GoTo; Microsoft; Nextiva; RingCentral; Vonage; Zoom

Gartner Recommended Reading

Magic Quadrant for Unified Communications as a Service, Worldwide

Critical Capabilities for Unified Communications as a Service, Global

API Management PaaS

Analysis By: Mark O'Neill

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Mature mainstream

Definition:

API management PaaS (APIM PaaS) takes an on-demand approach to the delivery of API management by providing an alternative to the installation and management of API management software. APIM PaaS manages API access via provider-hosted API gateway services, and it may also include an API developer portal. In some cases, an on-premises API gateway option will be provided. APIM PaaS may be optimized to be used with PaaS services from the same vendor, such as function PaaS (fPaaS).

Why This Is Important

APIM PaaS takes full advantage of cloud benefits, such as autoscaling, resiliency and robust security. It also allows some vendors to offer per-API-call pricing. APIM PaaS may include the ability to deploy on-premises API gateways, to enable hybrid API management architecture with APIs on-premises and to offer cloud-based API management.

Business Impact

APIM PaaS allows costs to scale with the business value of APIs, reducing the impact of a large outlay as an API program grows. It enables APIs to be managed effectively when API traffic is unpredictable and potentially very large. APIM PaaS also brings business benefits when an APIM PaaS offering is provided as part of the PaaS platforms already in use by an organization, through unified procurement and billing.

Drivers

- APIM PaaS is driven by migration to and adoption of cloud platforms.
- An increasing number of available APIs and a growing volume of API interactions drive organizations to APIM PaaS for its high-scale quality of service, including throughput, high availability, and global access.
- SaaS adoption is also a driver, as organizations wish to use API management without needing to operate and maintain an API management software.
- Serverless computing, including fPaaS (also known as function as a service or FaaS), can act as a major driver for APIM PaaS. This is because fPaaS offerings can make use of API management on their associated cloud platforms. In some cases, they can automatically populate API gateways with endpoints so that fPaaS functions can be called via REST APIs.
- Since many organizations build APIs in the cloud, APIM PaaS is also increasingly used in hybrid and multicloud scenarios.
- Automation is also a driver for APIM PaaS. This is because APIM PaaS itself includes documented APIs in the API management platform. These APIs are used for tasks such as registering APIs. APIM PaaS typically can automatically register APIs built on the same platform.

Obstacles

- APIM PaaS tends to focus on runtime (API gateway) capabilities, with limited support for an API developer portal or other aspects of API management beyond API gateways.
- Network latency concerns impact the uptake of APIM PaaS for managing on-premises APIs. Even in a hybrid scenario, any requirement for the remote gateway to connect to the core platform introduces latency concerns.
- Data residency concerns, such as a storage of API payloads that may contain private information, are also an obstacle to the uptake of APIM PaaS for managing on-premises APIs.
- APIM PaaS can result in higher-than-expected costs as API traffic grows.
- APIM PaaS solutions from cloud hyperscalers are generally tied to their larger PaaS platforms, and are not portable for their use on other PaaS platforms.

User Recommendations

- Investigate the use of APIM PaaS to provide a cost-effective means of providing API management. If some or all of your APIs are on-premises, then investigate a hybrid option.
- For organizations migrating to the cloud, investigate hybrid APIM PaaS options.
- Compare the pricing of APIM PaaS vendors, since not all provide consumption-based pricing.
- Include API PaaS as part of your API strategy, since it can accelerate the time to market of your mission-critical digital initiatives.

Sample Vendors

Alibaba Cloud; Amazon Web Services; Google (Apigee); Huawei, IBM; Microsoft; Oracle; VMware

Gartner Recommended Reading

Magic Quadrant for Full Life Cycle API Management

Reference Model for API Management Solutions

Infographic: Decision Point for API and Service Implementation Architecture

Contact Center as a Service

Analysis By: Steve Blood

Benefit Rating: Moderate

Market Penetration: 20% to 50% of target audience

Maturity: Early mainstream

Definition:

Contact center as a service (CCaaS) is a cloud-based application service platform that enables customer service organizations to manage multichannel customer interactions holistically with prepackaged applications that support the customer and employee experience. CCaaS solutions are used by organizations that need to manage front-office operations such as customer service, telemarketing, employee service and support centers.

Why This Is Important

CCaaS is a growth market, fueling investment in innovation and customer service applications, and surpassing the offers of legacy premises-based or server-based technology. Now that CCaaS is a foundation of multichannel customer service, application leaders can explore the advantages of the suite offer. Leaders can add workforce engagement management and analytics in place of stand-alone applications, offering a more integrated set of services for a lower total cost of ownership.

Business Impact

The business impact of CCaaS is broad and deep:

- CCaaS offers an agile business model for investing in technology for engaging with customers through self- and assisted-service channels.
- A range of packaged applications and marketplace add-ons enables organizations to extend the services offered to customers and employees for improved experiences and lower operational costs.
- Cloud enables organizations to focus on transforming the customer experience, rather than managing the day-to-day technology.

Drivers

- Greater software agility with a lower cost of ownership has always been a key driver for investing in CCaaS. Agility has accelerated in recent years as IT organizations decommission premises-based communications infrastructure and, in its place, invest in specialized cloud services to meet specific organizational use cases for customer and employee experience.
- For most organizations, contact center investment is a cloud-first approach. Customer service leaders are working with IT leaders to consolidate multiple instances of premises-based contact centers and first-generation CCaaS into a common organizationwide platform. This is leading to a greater scale of contract (more than 5,000 user licenses is becoming typical) and broader geographical reach across multiple continents.
- CCaaS platforms are well-placed to manage both voice and digital channels, and are becoming the preferred option when a single skills engine is required to support CSRs trained in multiple modalities.
- Flexible working has become a core work style for customer service organizations and CCaaS platforms provide a superior experience to employees working remotely as well as in the office.

Obstacles

- Organizations with very large numbers of users (10,000+) are still challenged with justifying the costs of migrating users, the shift in operating mode from capital expenditure (capex) to operating expenditure (opex) and demonstrability for CCaaS parity with complex customization needs of premises-based platforms.
- As organizations grow CCaaS to thousands of users, there needs to be a stronger focus on resilience and uptime. While 99.99% uptime rate as a standard service-level agreement (SLA) is acceptable for most organizations, a more mature approach to service credits for nonperformance and service meeting structure is necessary.
- Most CCaaS providers have been focused on replacing legacy PBX-based contact center infrastructure with a core focus on the telephone channel. As organizations adopt a digital-first, self-service strategy, telephony-centric licensing may not look as attractive as offers from digital customer service technology and customer engagement center software providers.

User Recommendations

- Reduce the impacts of transitioning off legacy systems by focusing on providers with referenceable transition frameworks and methodologies for migrating from relevant on-premises systems to their CCaaS offerings.
- Focus on CCaaS solutions that leverage native functionality or are accessed through provider marketplaces that span all four capability areas of the reference model for the customer technology platform — contact routing and interactions, process orchestration, knowledge and insight, and resource management.
- Place increased evaluation weighting on flexible pricing models that can accommodate plans for shifting customer engagement away from live assistance and toward digital self-service, especially as development in generative AI improves the speed to value of self-service.
- Incentivize service uptime by defining tight SLAs and service terms, and agreeing on responsibilities between the CCaaS provider and the business unit for the duration of the contract.

Sample Vendors

8x8; Amazon Web Services; Cisco; Content Guru; Five9; Genesys; NICE; Talkdesk; Vonage

Gartner Recommended Reading

Magic Quadrant for Contact Center as a Service

Quick Answer: What Does a Technology Reference Model for a Customer Technology Platform Look Like?

2023 Strategic Roadmap for Customer Service and Support Technology

How to Choose Your Best-Fit Vendor for Contact Center as a Service

Toolkit: RFP Template for Contact Center and Workforce Engagement Management Applications

Appendixes

See the previous Hype Cycle: Hype Cycle for Unified Communications and Collaboration, 2021

Hype Cycle Phases, Benefit Ratings and Maturity Levels

Table 2: Hype Cycle Phases

(Enlarged table in Appendix)

Phase	Definition
Innovation Trigger	A breakthrough, public demonstration, product launch or other event generates significant media and industry interest.
Peak of Inflated Expectations	During this phase of overenthusiasm and unrealistic projections, a flurry of well-publicized activity by technology leaders results in some successes, but more failures, as the innovation is pushed to its limits. The only enterprises making money are conference organizers and content publishers.
Trough of Disillusionment	Because the innovation does not live up to its overinflated expectations, it rapidly becomes unfashionable. Media interest wanes, except for a few cautionary tales.
Slope of Enlightenment	Focused experimentation and solid hard work by an increasingly diverse range of organizations lead to a true understanding of the innovation's applicability, risks and benefits. Commercial off-the-shelf methodologies and tools ease the development process.
Plateau of Productivity	The real-world benefits of the innovation are demonstrated and accepted. Tools and methodologies are increasingly stable as they enter their second and third generations. Growing numbers of organizations feel comfortable with the reduced level of risk; the rapid growth phase of adoption begins. Approximately 20% of the technology's target audience has adopted or is adopting the technology as it enters this phase.
Years to Mainstream Adoption	The time required for the innovation to reach the Plateau of Productivity.

Source: Gartner (July 2023)

Table 3: Benefit Ratings

Benefit Rating ↓	*Definition* ↓
Transformational	Enables new ways of doing business across industries that will result in major shifts in industry dynamics
High	Enables new ways of performing horizontal or vertical processes that will result in significantly increased revenue or cost savings for an enterprise
Moderate	Provides incremental improvements to established processes that will result in increased revenue or cost savings for an enterprise
Low	Slightly improves processes (for example, improved user experience) that will be difficult to translate into increased revenue or cost savings

Source: Gartner (July 2023)

Table 4: Maturity Levels

(Enlarged table in Appendix)

Maturity Levels ↓	*Status* ↓	*Products/Vendors* ↓
Embryonic	In labs	None
Emerging	Commercialization by vendors Pilots and deployments by industry leaders	First generation High price Much customization
Adolescent	Maturing technology capabilities and process understanding Uptake beyond early adopters	Second generation Less customization
Early mainstream	Proven technology Vendors, technology and adoption rapidly evolving	Third generation More out-of-box methodologies
Mature mainstream	Robust technology Not much evolution in vendors or technology	Several dominant vendors
Legacy	Not appropriate for new developments Cost of migration constrains replacement	Maintenance revenue focus
Obsolete	Rarely used	Used/resale market only

Source: Gartner (July 2023)

Evidence

[1] **2022 Gartner Digital Worker Survey:** This survey sought to understand workers' technological and workplace experience and sentiments. The research was conducted online from September through November 2022 among 4,861 respondents from the U.S. (n = 1,564), China (n = 1,167), the U.K. (n = 1,072) and India (n = 1,058). Participants were screened for full-time employment in organizations with 100 or more employees and were required to use digital technology for work purposes. Ages ranged from 18 through 74 years old, with quotas and weighting applied for age, gender, region and income, so that results are representative of working country populations. We defined "digital technology" as including any combination of technological devices (such as laptops, smartphones and tablets), applications and web services that people use for communication, information or productivity.

Disclaimer: The results of this survey do not represent global findings or the market as a whole, but reflect the sentiments of the respondents and companies surveyed.

Document Revision History

Hype Cycle for Unified Communications and Collaboration, 2021 - 6 August 2021

Hype Cycle for Unified Communications and Collaboration, 2020 - 31 July 2020

Hype Cycle for Unified Communications and Collaboration, 2019 - 8 August 2019

Hype Cycle for Unified Communications and Collaboration, 2018 - 3 August 2018

Hype Cycle for Unified Communications and Collaboration, 2017 - 17 July 2017

Hype Cycle for Unified Communications and Collaboration, 2016 - 21 July 2016

Hype Cycle for Unified Communications and Collaboration, 2015 - 21 July 2015

Hype Cycle for Unified Communications and Collaboration, 2014 - 23 July 2014

Hype Cycle for Unified Communications and Collaboration, 2013 - 31 July 2013

Hype Cycle for Unified Communications and Collaboration, 2012 - 31 July 2012

Hype Cycle for Unified Communications and Collaboration, 2011 - 2 August 2011

Hype Cycle for Enterprise Communication Applications, 2010 - 3 August 2010

Hype Cycle for Enterprise Communication Applications, 2009 - 27 July 2009

Hype Cycle for Enterprise Communication Applications, 2008 - 3 July 2008

Hype Cycle for Enterprise Communication Applications, 2007 - 12 July 2007

Hype Cycle for Enterprise Communication Applications, 2006 - 16 October 2006

Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

Understanding Gartner's Hype Cycles

Tool: Create Your Own Hype Cycle With Gartner's Hype Cycle Builder

Lower Your UCaaS Spending by Leveraging Digital Workplace Tools

How to Optimize Your Meeting Solution Portfolio and Improve the Meeting Experience

Table 1: Priority Matrix for Unified Communications and Collaboration, 2023

Benefit ↓	*Years to Mainstream Adoption*			
	Less Than 2 Years ↓	***2 - 5 Years*** ↓	***5 - 10 Years*** ↓	***More Than 10 Years*** ↓
Transformational		Conversational User Interfaces		Metaverse
High	Digital Work Hubs Meeting Solutions UC Monitoring Tools Visual Collaboration Applications Workstream Collaboration	5G Collaborative Work Management Communications PaaS UCaaS WebRTC	Immersive Meetings	
Moderate	API Management PaaS Contact Center as a Service Virtual Events	API Marketplaces Appointment Scheduling Software Group Interactive Displays NFV Smart Meeting Room Systems		
Low			Virtual Co-working Space	

Source: Gartner

Table 2: Hype Cycle Phases

Phase	*Definition*
Innovation Trigger	A breakthrough, public demonstration, product launch or other event generates significant media and industry interest.
Peak of Inflated Expectations	During this phase of overenthusiasm and unrealistic projections, a flurry of well-publicized activity by technology leaders results in some successes, but more failures, as the innovation is pushed to its limits. The only enterprises making money are conference organizers and content publishers.
Trough of Disillusionment	Because the innovation does not live up to its overinflated expectations, it rapidly becomes unfashionable. Media interest wanes, except for a few cautionary tales.
Slope of Enlightenment	Focused experimentation and solid hard work by an increasingly diverse range of organizations lead to a true understanding of the innovation's applicability, risks and benefits. Commercial off-the-shelf methodologies and tools ease the development process.
Plateau of Productivity	The real-world benefits of the innovation are demonstrated and accepted. Tools and methodologies are increasingly stable as they enter their second and third generations. Growing numbers of organizations feel comfortable with the reduced level of risk; the rapid growth phase of adoption begins. Approximately 20% of the technology's target audience has adopted or is adopting the technology as it enters this phase.
Years to Mainstream Adoption	The time required for the innovation to reach the Plateau of Productivity.

Phase	Definition

Source: Gartner (July 2023)

Table 3: Benefit Ratings

Benefit Rating	Definition
Transformational	Enables new ways of doing business across industries that will result in major shifts in industry dynamics
High	Enables new ways of performing horizontal or vertical processes that will result in significantly increased revenue or cost savings for an enterprise
Moderate	Provides incremental improvements to established processes that will result in increased revenue or cost savings for an enterprise
Low	Slightly improves processes (for example, improved user experience) that will be difficult to translate into increased revenue or cost savings

Source: Gartner (July 2023)

Table 4: Maturity Levels

Maturity Levels ↓	*Status* ↓	*Products/Vendors* ↓
Embryonic	In labs	None
Emerging	Commercialization by vendors Pilots and deployments by industry leaders	First generation High price Much customization
Adolescent	Maturing technology capabilities and process understanding Uptake beyond early adopters	Second generation Less customization
Early mainstream	Proven technology Vendors, technology and adoption rapidly evolving	Third generation More out-of-box methodologies
Mature mainstream	Robust technology Not much evolution in vendors or technology	Several dominant vendors
Legacy	Not appropriate for new developments Cost of migration constrains replacement	Maintenance revenue focus
Obsolete	Rarely used	Used/resale market only

Source: Gartner (July 2023)