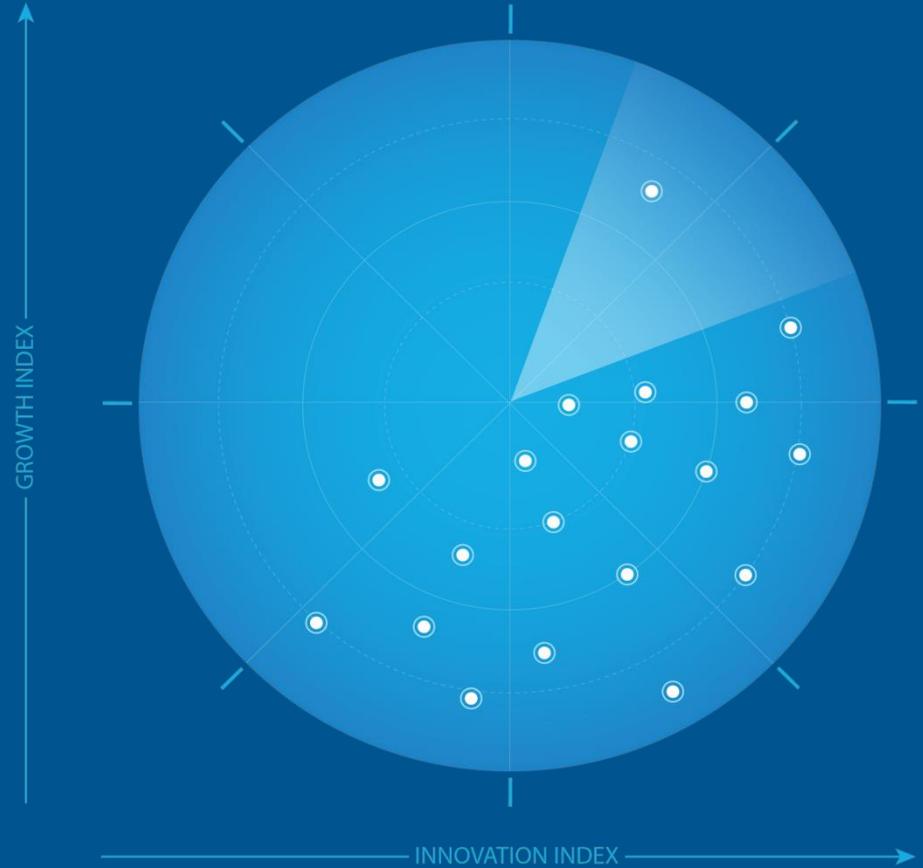


Frost Radar™: Cloud Meetings and Team Collaboration Services Market, 2021

A Benchmarking System
to Spark Companies to
Action - Innovation That
Fuels New Deal Flow and
Growth Pipelines



FROST & SULLIVAN

Strategic Imperative and Growth Environment



Strategic Imperative

- The current transition to hybrid work ranks among the most impactful transformations in work practices in a century. Emerging workplace trends have heightened demand for flexibility and a rethinking of how organizations effectively communicate, collaborate, innovate and connect with customers.
- The hybrid workplace is much more complex than having to support remote offices and employees. Now employee work locations and hours can change on a daily basis as expectations of when and where work gets done are more fluid.
- In the new era of hybrid work, employees want and need to work from anywhere, in their own style, and at their own pace. Many don't want to go back to their pre-COVID lives entirely.
- The post-pandemic world is likely to be an extended version of the present workplace trends—whereby not only field teams, but everyone can be remote and yet stay connected and conduct business effectively.
- Those working from home can no longer be treated as second-hand corporate citizens; businesses will need to leverage technology to enable more flexible, inclusive and immersive remote meeting experiences, as well as track and sync actions pre-, during, and post-meetings.
- Empathetic leadership has proven to be critical to both ensure employee wellbeing and retain and attract the best talent. The metrics that businesses have applied to gauge customer success—engagement, acquisition, and retention—are now being applied to employees.
- Today, more organizations are adopting collaboration tools that best support these efforts, and bring leadership closer to employees—giving them the tools to both speak and listen, and build and share an open company culture.
- In a competitive market for scarce talent, advanced cloud meetings and team collaboration services are critical to business success, as they drive employee engagement and power excellent customer experiences.

Source: Frost & Sullivan

Strategic Imperative (continued)

- Today, video meetings and collaboration spaces are where company culture lives, helping workers feel connected, keeping morale up, and maintaining a strong company culture.
- Businesses have realized that community is essential. This means an increasing need to connect everyone in the company with the right type of communications and collaboration tools. Business leaders are enabling employees to connect in real time and maintain a free flow of conversation, across departments, countries and time zones.
- Frontline workers haven't always received the same employee experience as those based in offices and this has had to change quickly. Connecting with everyone in an organization and making them feel part of the community is a higher priority than ever before and employees are demanding that companies provide the necessary technology to deliver these experiences.
- The importance of providing all types of workers with tools that support the new ways to work has never been greater. In that regard, meetings need to be regarded as part of a continuum of collaboration activities and not just one-off collaboration events.
- It has become clear that users need solutions that deliver better outcomes. It's well known by now that people are experiencing fatigue with video meetings. Technology developers must foster innovation beyond just video meetings to support multiple synchronous and asynchronous modes of connectivity and collaboration, without losing the context or the continuity.
- Rich, persistent messaging applications and workspaces that support internal and external collaboration equally well and within the same instance; the delivery of advanced AI functionality to capture, surface and analyze data and information; pre- and post-meeting capabilities; crowdsourcing and audience engagement tools; and seamless integration of collaboration tools into existing workflows and vice versa are all important capabilities that help businesses to embrace continuous/workstream collaboration.

Source: Frost & Sullivan

Strategic Imperative (continued)

- The pandemic and new remote-work practices have driven the need to address employee isolation issues by introducing spontaneous spaces that can re-create the serendipity moments of actual physical workplaces.
- New audio and virtual 2D/3D online spaces are emerging with the objective of creating bonding, relationships, and camaraderie with coworkers, partners, and customers—positive experiences that have been reduced recently. Examples of spontaneous audio-first spaces include Slack Huddles, RingCentral Team Huddle, and Dialpad Channels. Examples of virtual 2/3D online spaces include BlueJeans Spaces, Gather, Kumospace, SpatialChat, and Teamflow.
- Delivering different meeting experiences for in-person and remote participants is no longer acceptable. Achieving meeting equity is now a key business and digital transformation objective.
- With businesses worldwide embracing hybrid work, it is imperative to provide meetings solutions that address the mix of in-person and remote participants across geographies with different native languages, and that are adaptable to different work styles.
- Connectivity and experience parity, no matter where an individual works, has become essential. This means being browser-agnostic, having mobile experiences on par with desktop experiences, being able to quickly and seamlessly switch between modalities, and more.
- Meeting and messaging equity is also achieved through the notion of inclusivity, leveling of the playing field across demographics, user abilities, work styles, geographies and locations.
- Features such as real-time transcriptions and translations; interpretation and gesture recognition; new inclusive layouts to foster a deeper connection between in-person and virtual participants; and new ways of encouraging self-expression, such as setting skin tones for emojis and adding name pronunciations and pronouns in team collaboration spaces are all helping to make meetings and messaging tools more engaging and inclusive.

Source: Frost & Sullivan

Strategic Imperative (continued)

- For hybrid work modes to be sustainable, the fidelity of interactions will matter too, which means businesses will move past solutions that are just “good enough”. How well the audio and video experiences scale to various form factors (conference rooms, home office, PC, mobile), how well they perform when there are four participants versus a large number of participants (>500), how flexible and customizable the interaction layouts are, how well they support lightweight and low-fatigue modes, are all aspects of meeting solutions that will matter.
- Additionally, this new way of working centers around work/life balance, with automation and productivity tools top of mind, and presence, mobility, and integrations as key focal areas. Organizations are seeking solutions that work across remote and office environments, such as collaborative whiteboarding, where content persists and can be accessed across time and space for future collaboration.
- Like the future of work, the future of events will be hybrid. Going forward, event organizers will take on the new responsibility of creating events that combine the best of in-person and virtual event experiences – offering high engagement while successfully reaching large audiences.
- Most in-person events will add a virtual dimension to them, gaining expanded reach and engagement opportunities.
- Event use cases will continue to proliferate, including virtual town halls, marketing webinars, virtual and hybrid trade shows, second-screen experiences in sports/entertainment, video content publishing, etc.
- Live streaming solutions and network optimization are allowing businesses to tap larger audiences without crashing the enterprise internet network. Cloud meeting solutions and live streaming markets are merging to provide all-in-one solutions for small and large meetings.

Source: Frost & Sullivan

Strategic Imperative (continued)

- Due to the COVID-19 pandemic, organizations of all sizes and across every industry have adopted meeting solutions. Indeed, as organizations raced to adjust to new realities, meeting solutions were used for more than just the standard meeting and event use cases. They were employed for specialized use cases like telehealth visits, distance learning, tele-justice, tele-government, citizen outreach, frontline and field workers, second-screen sports and entertainment experiences, and to help connect virtual audiences for the trade show industry.
- While standard meeting solutions covered many of the needs in a time of crisis, the industry has learned from the experience that purpose-built solutions—that factor in use-case-specific workflows, data needs, user experience, connectivity, devices, and application integrations as well as industry-specific security and compliance requirements—will enable better user experiences, and create adoption and monetization opportunities for providers.
- The cloud meetings services market is expected to evolve over the next years, with different buyers choosing from horizontal and vertical solutions, as well as creating custom applications and experiences using communications platform as a service (CPaaS) capabilities to adapt their early-pandemic work styles to incorporate fit-for-purpose workflows and also meet the need for hybrid and work-from-anywhere experiences.
- Technology innovation will enable businesses and programmers to embed real-time communications within user applications, without installing any additional products or managing separate log-ins. Software development kits (SDKs) and application programming interfaces (APIs) are expected to democratize audio and video.
- Providers will need to embrace the concept of composability. To support the innovation needs of today, organizations require granular, modular applications, and application integration. Through a combination of packaged applications and application building blocks such as exportable data, APIs and low-code/no-code systems, businesses would be able to easily embed communications and collaboration functionalities into their business workflows.

Source: Frost & Sullivan

Strategic Imperative (continued)

- Physical workspaces are being reconfigured as employees work flexible hours and blend in-person and remote work. To address these challenges, businesses will re-design physical offices, with facilities budgets moving partially towards equipping them to support hybrid collaboration.
- Solutions that provide seamless and consistent experiences across physical workspaces, PC and mobile devices will find high appeal among organizations adapting to new work modes.
- Integrating hardware and software capabilities that span a variety of work modes, from home offices, to mobile workers, conference rooms, office workstations, shared spaces, and board rooms is key. This includes capabilities such as easy pair, share, control, move calls between applications and devices, co-creation (e.g. whiteboarding) between applications and devices, etc.
- Features like device hotdesking will be important to manage the emerging complexities of workers who move between offices and home offices from day to day.
- With hybrid/flexible work also comes the need for rock-solid privacy and security mechanisms, as well as comprehensive management and analytics.
- An architecture that has baked-in security will have a stronger appeal compared to bolted on security features. End-to-end encryption, compliance, privacy, data loss prevention, and cloud access security brokers (CASB) integrations are examples of what customers will seek to ensure peace of mind.
- Additionally, IT will be managing thousands of home offices as opposed to just dozens of campus buildings. Providing them with comprehensive management and troubleshooting tools that can also deliver advanced proactive insights will be key.

Source: Frost & Sullivan

Growth Environment

- The Frost & Sullivan Radar is a robust analytical tool that benchmarks companies' innovation focus and growth performance in a given market. The dynamic solution offers consistent rating and positioning of companies that are agitating, contending or revolutionizing the industry.
- The Frost Radar of the global cloud meetings and team collaboration services market analyzes providers offering cloud meetings and team collaboration services leveraging public, multi-tenant infrastructures.
- The vertical Y-axis displays the company's Growth Index (GI). This index is a measure of a company's growth performance and track record, along with its ability to develop and execute a fully aligned growth strategy and vision; a robust growth pipeline system; and effective market, competitor, and end-user focused sales and marketing strategies.
- For growth performance and track record, the Frost Radar of the global cloud meetings and team collaboration services takes into account the growth rates and annual recurring revenues of public, multi-tenant cloud meetings and team collaboration offerings from 2018 to 2021. These metrics were added to three other qualitative metrics, including growth pipeline, vision and strategy, and sales and marketing, to come up with the company's positioning on the vertical axis.
- The horizontal X-axis measures the company's Innovation Index (II). This index is a measure of a company's ability to develop products/services/solutions (with a clear understanding of disruptive Mega Trends) that are globally applicable, are able to evolve and expand to serve multiple markets, and are aligned to customers' changing needs.

Source: Frost & Sullivan

Growth Environment (continued)

- This study includes public-cloud multi-tenant web/video meetings and team collaboration/messaging services as offered by the original service provider and do not include sales of third-party solutions.
- The inclusion criteria for cloud meetings-centric providers comprise:
 - Support for in-meeting desktop content sharing and multi-party video feeds
 - Support for in-meeting text chat
 - Support for at least 100 individual participants
 - Support for integrated VoIP audio
 - Support for participant join and host control from mobile devices
 - Provider revenues above \$10M in CY2020 or an installed base of at least 200K paying licenses
- The inclusion criteria for team collaboration-centric providers comprise:
 - Support for persistent chat rooms (channels) that can be organized by topics, groups, or messages
 - Support for point-to-point video and audio
 - Support for file sharing
 - Support for reliable search functionality
 - Support for user access from mobile devices
 - Integration with third-party applications
 - Provider revenues above \$ 10M in CY 2020 or an installed base of at least 100K paying licenses

Source: Frost & Sullivan

Growth Environment (continued)

- The inclusion criteria for UCaaS providers offering cloud meetings and/or team collaboration services comprise:
 - Solution must at least have one full year of service commercialization.
 - Service procurement does not necessarily require the activation of a telephony license. Therefore, the provider has both stand-alone versions as well as telephony-integrated versions of their meeting or collaboration solution.
 - The providers have an installed base of at least 200,000 paying licenses enabled with cloud meetings and/or team collaboration functionality across stand-alone and telephony-integrated solutions.
- For UCaaS providers, Frost & Sullivan includes the paying licenses enabled with cloud meetings and/or team collaboration functionality of both stand-alone and telephony-integrated solutions.
- The research only includes cloud meetings services that are delivered from multi-tenant infrastructure. On-premises solutions and dedicated private-cloud services, as well as sales of software/media servers sold to service providers are excluded from the study.
- The study includes revenues from cloud meetings, as well as revenues from:
 - Webinars and webcasting services when offered by cloud meeting providers
 - Cloud room licenses
 - All audio conferencing integrated with cloud meetings

Source: Frost & Sullivan

Growth Environment (continued)

- The study excludes:
 - Revenues from stand-alone audio conferencing services
 - Device-related revenues
 - Managed services revenues
- Frost & Sullivan's revenue estimates shown for each provider reflect annual recurring revenues of cloud meetings, team collaboration or combined cloud meetings/team collaboration services.
- Revenue estimations exclude any workload component not directly related to meetings and team collaboration (e.g. telephony, productivity apps, CRM, contact center, etc.)
- The study excludes mobile-centric consumer messaging services which require users to provide a standard cellular mobile number for registering with the service, including WhatsApp by Facebook, WeChat by Tencent, and DingTalk by Alibaba.
- The study excludes project or task-management applications that do not have a comparable team collaboration service which follows the guidelines that Frost & Sullivan has highlighted. Examples of project management applications include Asana, Atlassian Jira, monday.com, Redbooth, and Trello, among others.

Source: Frost & Sullivan

Growth Environment- Forecast Analysis

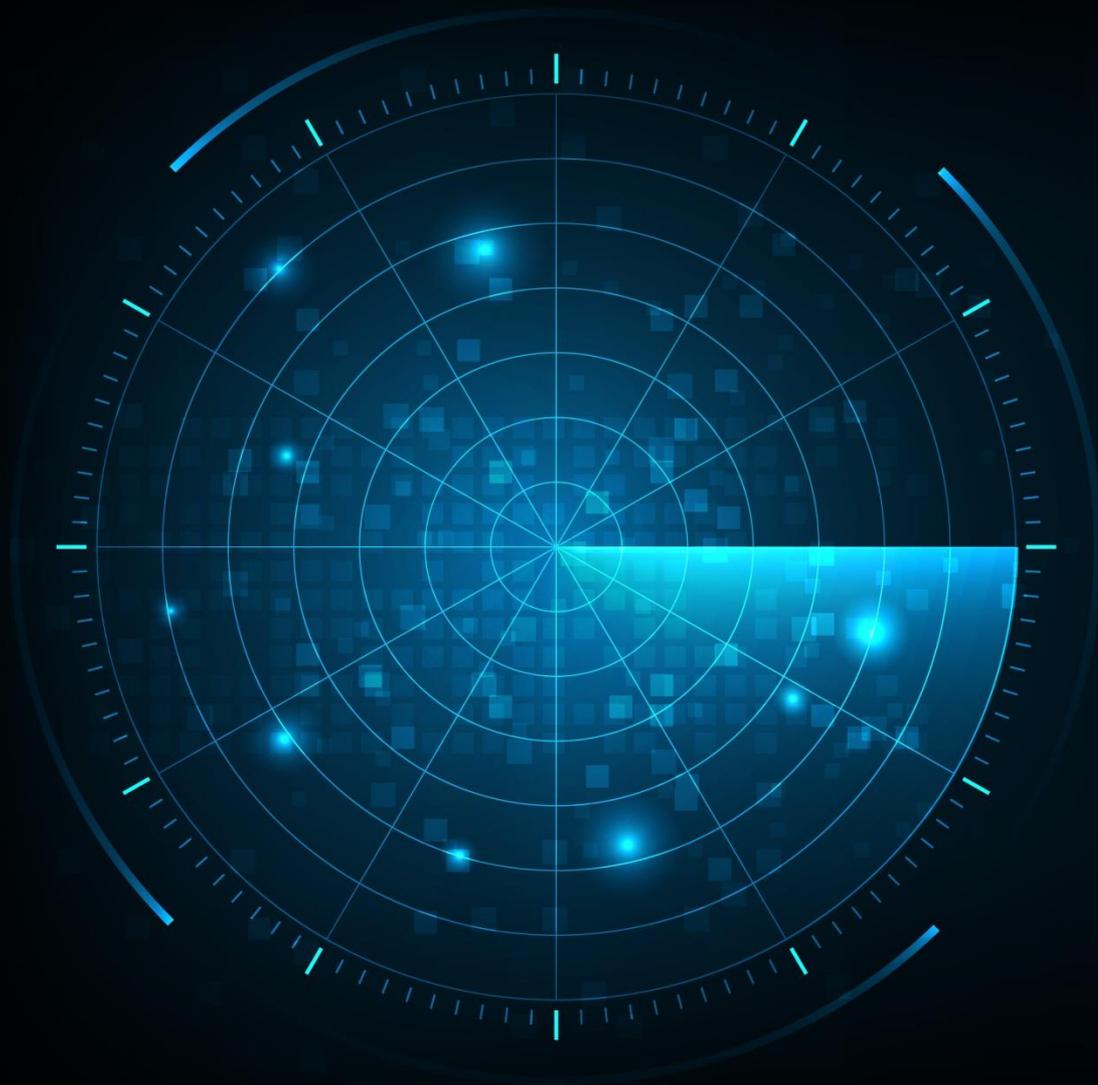
- In 2021 the global cloud meetings and team collaboration services market is expected to earn revenues of \$14.78 billion, a 23.7 percent increase over an already fantastic 2020 year.
- The installed base of paid cloud meetings and team collaboration paid licenses is expected to grow by 28.8 percent in 2021 to 241.5 million.
- Main growth drivers in the cloud meetings and team collaboration space include:
 - The need for businesses to expedite digital transformation
 - Empowering individuals for a new world of hybrid work through the delivery of smart collaboration services
 - The need for vertical-specific experiences
 - The rise of virtual events
 - Equipping rooms for hybrid work
 - The expansion of communications and collaboration use cases and solutions into the frontline workforce
 - User need for human connections and ad-hoc collaboration, creating new use cases for cloud meetings and team collaboration
 - General technology improvements, including robust cloud solutions and internet networks in some regions of the world (WiFi/5G), full online and WebRTC solutions, and live interactive features.

Source: Frost & Sullivan

Growth Environment – Forecast Analysis (continued)

- From 2021 to 2027, the cloud meetings and team collaboration services market is expected to grow at a compound annual growth rate (CAGR) of 7.2 percent in terms of revenues and 20.0 percent in terms of the installed base of paying licenses.
- Revenue growth will be negatively impacted by a confluence of factors including: continuous extension of free services; COVID-19 uncertainties around company work styles; the commoditization of the space; and challenges related to compatibility and integration, security and privacy, scalability, and compliance.

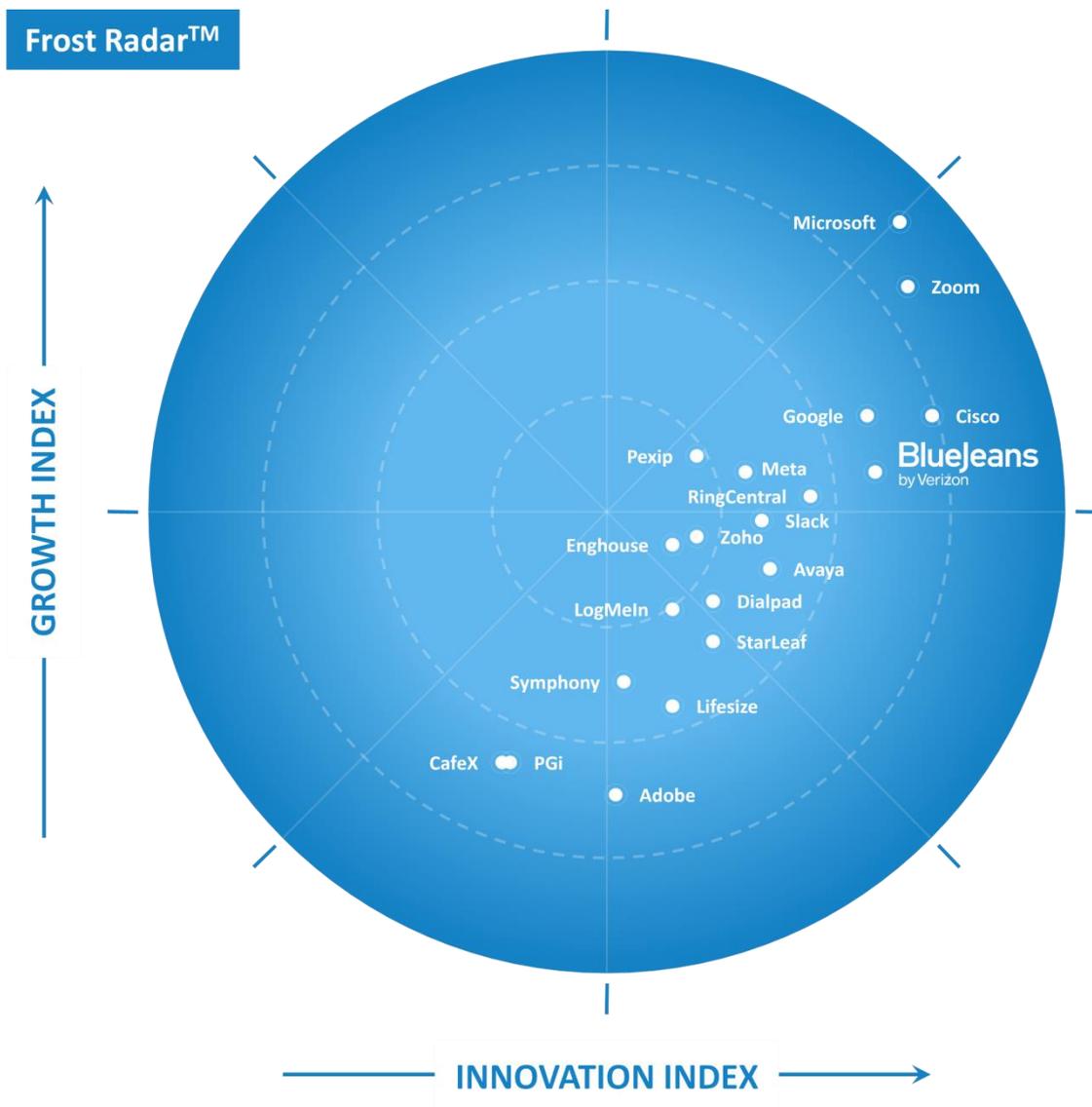
Source: Frost & Sullivan



Frost Radar™

**Cloud Meetings and
Team Collaboration
Services Market**

Frost Radar™: Cloud Meetings and Team Collaboration Services Market



Note: BlueJeans is BlueJeans by Verizon. Enghouse is Enghouse Systems. CafeX is CafeX Communications. Symphony is Symphony Communications. Source: Frost & Sullivan

Companies to Action:
Companies to Be Considered First for
Investment, Partnerships, or Benchmarking

BlueJeans by Verizon

INNOVATION

- BlueJeans has visibly accelerated its pace of innovation after its acquisition by Verizon Business Group in May 2020.
- Some of BlueJeans' key past year product updates include: BlueJeans Gateway for Microsoft Teams; BlueJeans Telehealth, a purpose-built solution to streamline telemedicine experiences; extended mobile features such as mobile WebRTC support, new features for iPadOS, iOS, and Android, and the new Motorola one 5G smartphone loaded with BlueJeans Meetings; updated BlueJeans Events features and partner integrations; a BlueJeans bundle for remote learning; and a complete redesign of the BlueJeans platform. The next-gen BlueJeans offers expanded scalability and flexibility; BlueJeans Spaces, a 2d/3d virtual immersive office with dynamic audio and integrated messaging; and BlueJeans Collaboration Board, an evolution of the company's whiteboarding capabilities.

GROWTH

- BlueJeans is used by over 40,700 customers, ranging from small enterprises to a large percentage of the Global 2000.
- BlueJeans saw a threefold increase in cloud meetings bookings and usage in the first half of 2020.
- For full calendar-year 2020, BlueJeans customers hosted more than 100.0 million meetings and spent more than 14.00 billion minutes on the platform.
- In May 2020, BlueJeans became part of Verizon's \$30.00 billion Verizon Business Group, enlarging the growth opportunities of the cloud meetings and team collaboration business.
- BlueJeans by Verizon is today a full-fledged platform that includes BlueJeans Meetings, Events, Rooms, and Mobile.
- During October 2021, BlueJeans by Verizon announced license growth of 377.0% and new bookings of 174.0% year-over-year.

FROST PERSPECTIVE

- Verizon and BlueJeans synergies have already been paying off with BlueJeans leveraging Verizon resources to improve video quality and reliability; accelerate innovation through integrated engineering teams; leverage the Verizon network to deliver experiences requiring high bandwidth at the edge; enable UCaaS integration with Verizon OneTalk; and expand BlueJeans' APIs and SDKs.
- New company updates such as the launch of the next-gen BlueJeans Spaces; announcement of different fit-for-purpose vertical solutions; broadening of BlueJeans Rooms capabilities via device partnerships; and extension of its video reach to frontliners via a new native meeting experience for Google Glass Enterprise Edition 2, are all expected to bode well for future growth.
- Going forward, BlueJeans can consider offering a freemium option, as well as broaden its AI and analytics capabilities.

Source: Frost & Sullivan

**Strategic
Insights**



Strategic Insights

1

Supporting work from home can no longer be an after-thought, and technology needs to support new work modes by enabling users to host more flexible, supportive, and inclusive video calls. The market must stop delivering different meeting experiences for in-person and remote participants. Achieving meeting equity is, therefore, key.

2

Innovation beyond just video meetings to support multiple modes of communications and collaboration, without losing the context or the continuity, including synchronous and asynchronous, as well as scheduled and spontaneous interactions, is paramount.

3

The cloud meetings and team collaboration services market is expected to evolve over the next years with different buyers choosing from horizontal and vertical solutions, as well as creating custom applications and experiences using CPaaS capabilities.

Source: Frost & Sullivan



**Next Steps:
Leveraging the Frost
Radar™ to Empower
Key Stakeholders**

Significance of Being on the Frost Radar™

Companies plotted on the Frost Radar™ are the leaders in the industry for growth, innovation, or both. They are instrumental in advancing the industry into the future.

GROWTH POTENTIAL

Your organization has significant future growth potential, which makes it a Company to Action.

BEST PRACTICES

Your organization is well positioned to shape Growth Pipeline™ best practices in your industry.

COMPETITIVE INTENSITY

Your organization is one of the key drivers of competitive intensity in the growth environment.

CUSTOMER VALUE

Your organization has demonstrated the ability to significantly enhance its customer value proposition.

PARTNER POTENTIAL

Your organization is top of mind for customers, investors, value chain partners, and future talent as a significant value provider.

Source: Frost & Sullivan

Frost Radar™ Empowers the CEO's Growth Team

STRATEGIC IMPERATIVE

- Growth is increasingly difficult to achieve.
- Competitive intensity is high.
- More collaboration, teamwork, and focus are needed.
- The growth environment is complex.

LEVERAGING THE FROST RADAR™

- The Growth Team has the tools needed to foster a collaborative environment among the entire management team to drive best practices.
- The Growth Team has a measurement platform to assess future growth potential.
- The Growth Team has the ability to support the CEO with a powerful Growth Pipeline™.

NEXT STEPS

- **Growth Pipeline Audit™**
- **Growth Pipeline as a Service™**
- **Growth Pipeline™ Dialogue with Team Frost**

Source: Frost & Sullivan

Frost Radar™ Empowers Investors

STRATEGIC IMPERATIVE

- Deal flow is low and competition is high.
- Due diligence is hampered by industry complexity.
- Portfolio management is not effective.

LEVERAGING THE FROST RADAR™

- Investors can focus on future growth potential by creating a powerful pipeline of Companies to Action for high-potential investments.
- Investors can perform due diligence that improves accuracy and accelerates the deal process.
- Investors can realize the maximum internal rate of return and ensure long-term success for shareholders
- Investors can continually benchmark performance with best practices for optimal portfolio management.

NEXT STEPS

- **Growth Pipeline™ Dialogue**
- **Opportunity Universe Workshop**
- **Growth Pipeline Audit™ as Mandated Due Diligence**

Source: Frost & Sullivan

Frost Radar™ Empowers Customers

STRATEGIC IMPERATIVE

- Solutions are increasingly complex and have long-term implications.
- Vendor solutions can be confusing.
- Vendor volatility adds to the uncertainty.

LEVERAGING THE FROST RADAR™

- Customers have an analytical framework to benchmark potential vendors and identify partners that will provide powerful, long-term solutions.
- Customers can evaluate the most innovative solutions and understand how different solutions would meet their needs.
- Customers gain a long-term perspective on vendor partnerships.

NEXT STEPS

- **Growth Pipeline™ Dialogue**
- **Growth Pipeline™ Diagnostic**
- **Frost Radar™ Benchmarking System**

Source: Frost & Sullivan

Frost Radar™ Empowers the Board of Directors

STRATEGIC IMPERATIVE

- Growth is increasingly difficult; CEOs require guidance.
- The Growth Environment requires complex navigational skills.
- The customer value chain is changing.

LEVERAGING THE FROST RADAR™

- The Board of Directors has a unique measurement system to ensure oversight of the company's long-term success.
- The Board of Directors has a discussion platform that centers on the driving issues, benchmarks, and best practices that will protect shareholder investment.
- The Board of Directors can ensure skillful mentoring, support, and governance of the CEO to maximize future growth potential.

NEXT STEPS

- **Growth Pipeline Audit™**
- **Growth Pipeline as a Service™**

Source: Frost & Sullivan

FROST & SULLIVAN

Frost Radar™ Analytics



Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

VERTICAL AXIS

Growth Index (GI) is a measure of a company's growth performance and track record, along with its ability to develop and execute a fully aligned growth strategy and vision; a robust growth pipeline system; and effective market, competitor, and end-user focused sales and marketing strategies.

GROWTH INDEX ELEMENTS

- **GI1: MARKET SHARE (PREVIOUS 3 YEARS)**
This is a comparison of a company's market share relative to its competitors in a given market space for the previous 3 years.
- **GI2: REVENUE GROWTH (PREVIOUS 3 YEARS)**
This is a look at a company's revenue growth rate for the previous 3 years in the market/industry/category that forms the context for the given Frost Radar™.
- **GI3: GROWTH PIPELINE**
This is an evaluation of the strength and leverage of a company's growth pipeline system to continuously capture, analyze, and prioritize its universe of growth opportunities.
- **GI4: VISION AND STRATEGY**
This is an assessment of how well a company's growth strategy is aligned with its vision. Are the investments that a company is making in new products and markets consistent with the stated vision?
- **GI5: SALES AND MARKETING**
This is a measure of the effectiveness of a company's sales and marketing efforts in helping it drive demand and achieve its growth objectives.

Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

INNOVATION INDEX ELEMENTS

HORIZONTAL AXIS

Innovation Index (II) is a measure of a company's ability to develop products/services/solutions (with a clear understanding of disruptive Mega Trends) that are globally applicable, are able to evolve and expand to serve multiple markets, and are aligned to customers' changing needs.

- **II1: INNOVATION SCALABILITY**

This determines whether an organization's innovations are globally scalable and applicable in both developing and mature markets, and also in adjacent and non-adjacent industry verticals.

- **II2: RESEARCH AND DEVELOPMENT**

This is a measure of the efficacy of a company's R&D strategy, as determined by the size of its R&D investment and how it feeds the innovation pipeline.

- **II3: PRODUCT PORTFOLIO**

This is a measure of a company's product portfolio, focusing on the relative contribution of new products to its annual revenue.

- **II4: MEGA TRENDS LEVERAGE**

This is an assessment of a company's proactive leverage of evolving, long-term opportunities and new business models, as the foundation of its innovation pipeline. An explanation of Mega Trends can be found [here](#).

- **II5: CUSTOMER ALIGNMENT**

This evaluates the applicability of a company's products/services/solutions to current and potential customers, as well as how its innovation strategy is influenced by evolving customer needs.

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