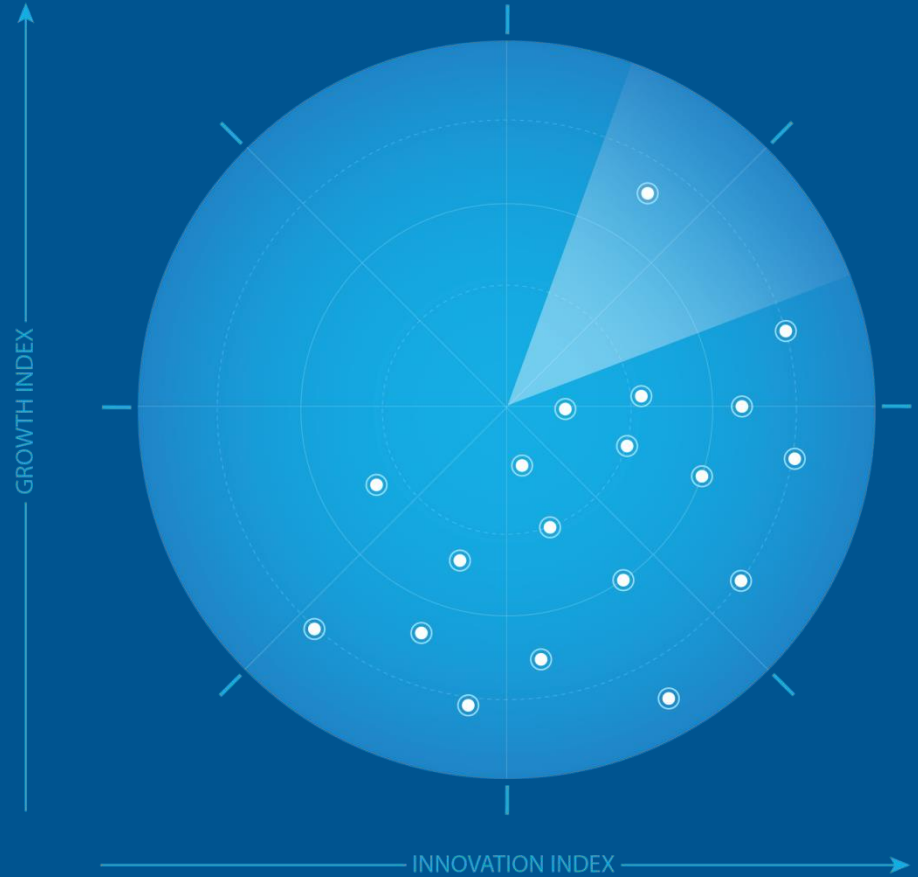


Frost Radar™: North American UCaaS Providers, 2023

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



Strategic Imperative

- Cloud PBX and UCaaS solutions have firmly established themselves as viable alternatives to premises-based communications systems, providing both flexibility and cost-efficiency benefits to organizations of all sizes, verticals, and geographies. As cloud communications increasingly penetrate mainstream buyers, customer requirements become more diverse, creating challenges and opportunities for service providers.
- A service provider's background, solution portfolio, and skill set determine whether it straddles the full spectrum of customer needs or focuses on the unique requirements of specific customer segments. However, certain common trends are determining long-term success among UCaaS market participants regardless of their customer focus and market strategy:
 - Full-stack UCaaS, comprising calling, meetings, and messaging services, has become the norm for most organizations evaluating cloud communications solutions. Frost & Sullivan data from a 2023 decision-maker survey show that 33% of North American organizations “prefer to buy,” and another 51% “would consider purchasing” a full UCaaS stack from the same provider. When providers cannot natively offer compelling meeting and messaging capabilities on their cloud PBX platforms, they must provide robust integration with third-party collaboration solutions.

Strategic Imperative (continued)

- Integrated platforms delivering UCaaS, CCaaS, and communications platform as a service (CPaaS) are the foundation of next-generation business communications solutions. Providers must leverage integrated, microservices-based platforms with flexible application programming interfaces (APIs) to address customer needs holistically and tailor functionality for different user personas.
- The disintegration of the value chain (applications + connectivity) creates new challenges and opportunities for service providers. Provider strategies must capitalize on their core competencies to deliver both complete UCaaS and tangential services (e.g., connectivity, direct inward dial [DID] numbers, calling plans, and managed services) for third-party UCaaS.
- Fixed-mobile convergence (FMC) is in the spotlight again with the rise of highly distributed organizations. Each UCaaS solution must provide some form of FMC, whether app-based or native/core-based, to enable access to communications anywhere, anytime.
- AI is a true game changer that is creating entirely new markets. It revolutionizes business operations, enhances workflows, and fosters better customer and employee experiences. AI drives much of the innovation in meetings and team collaboration software and devices. Going forward, the focus will be on speed of execution to deliver true, measurable benefits of AI.

Strategic Imperative (continued)

- Security and data privacy have always ranked high among customer communications solution selection criteria but have become even more important with the pervasive adoption of flexible work models and the use of multiple communications modalities (e.g., voice, video, and messaging). The growing risk of cyberattacks and evolving regulations and policies drive many organizations to choose solutions that keep their data private and secure. UCaaS providers must constantly update their security and compliance postures as they evolve.
- Vertical strategies focusing on frontline worker enablement and bridging departmental silos create new opportunities for service provider differentiation. Previously, technology providers focused primarily on one main persona— the white-collar knowledge worker. Leading providers are now tailoring solutions for different users and business lines across various industries, such as healthcare, education, government, retail, hospitality, utilities, and manufacturing. In addition, providers offer composability through a broad set of APIs and no-code/low-code platforms that allow businesses to create their apps and integrate cloud communications with important workflows.

Growth Environment

- A global Frost & Sullivan survey of IT/telecom decision makers in January 2023 revealed that 86% of North American organizations will have adopted cloud or mobile PBX solutions to some degree by the end of 2025. However, even three years from now, only 9% will be managing entirely cloud-based telephony environments. Three-quarters of organizations expect to manage hybrid environments with cloud-based and premises-based solutions in 2025. Service providers should expect a slow and gradual customer migration to cloud communications, which may indicate lower cloud PBX and UCaaS growth rates in the near term but an opportunity to sustain a growth trajectory for a longer time period.
- Frost & Sullivan survey data indicate that 51% of North American organizations expect communications and collaboration budgets to increase in 2023 compared with 2022, while 42% expect no change. However, service providers and channel partners report lengthier sales cycles and increased restraint in technology spending. Volatile political and macroeconomic conditions and supply chain disruptions, primarily in the aftermath of the COVID-19 restrictions and the Russo-Ukrainian War, have restrained technology investments throughout most of 2022 and 2023

Growth Environment (continued)

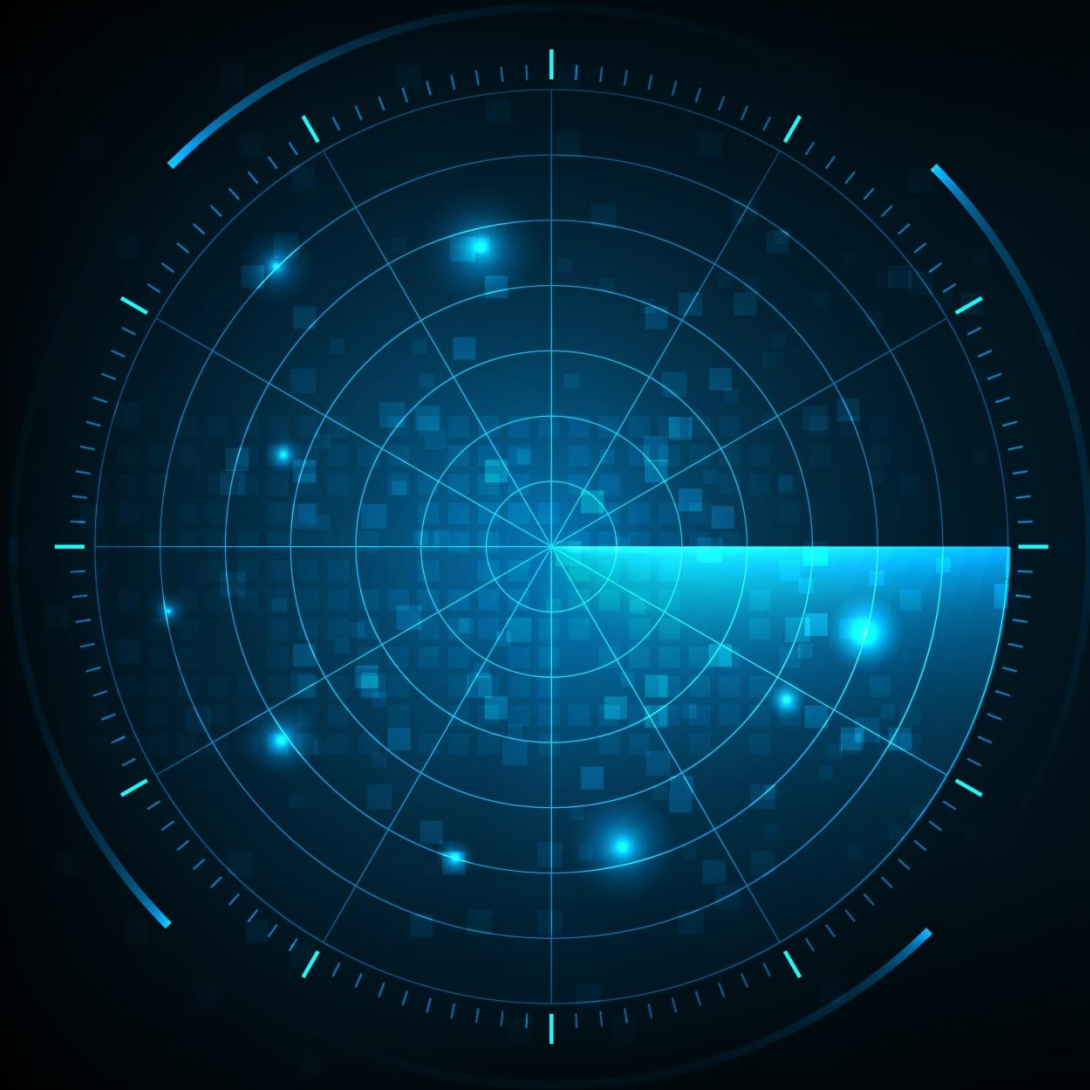
- Evolved work models are among the leading drivers for cloud communications adoption. Organizations embracing flexible work styles and supporting many remote and hybrid workers are leveraging UCaaS and cloud collaboration solutions to enable flexible and cost-effective connections among employees and between employees and various external parties.
- Enhanced value propositions, including vertical/frontline workflow improvements and talent utilization optimization, boost UCaaS adoption in organizations pursuing broad digital transformation. Improved security, reliability, and quality of service (QoS) performance because of the leverage of SD-WAN services, redundant data centers, and maturing technologies enhance UCaaS appeal among more demanding buyers.
- Diverse features, price, design, and architecture offerings—including mobile UCaaS and highly customizable solutions—are driving broad penetration within the entire customer spectrum. Diverse business models, including fully digital customer journeys, white-glove customer engagements, and various reseller/partner models (agency, white-label wholesale, strategic partnerships, and BYOC), also expand providers' market reach.

Growth Environment (continued)

- UCaaS adoption will remain strong, although annual growth rates will continue to decline as the market matures further. Customer churn among UCaaS providers is expected to be relatively high; however, churn away from UCaaS to other types of solutions (e.g., premises-based enterprise telephony systems, consumer services, or cloud meeting/messaging solutions) will remain low.

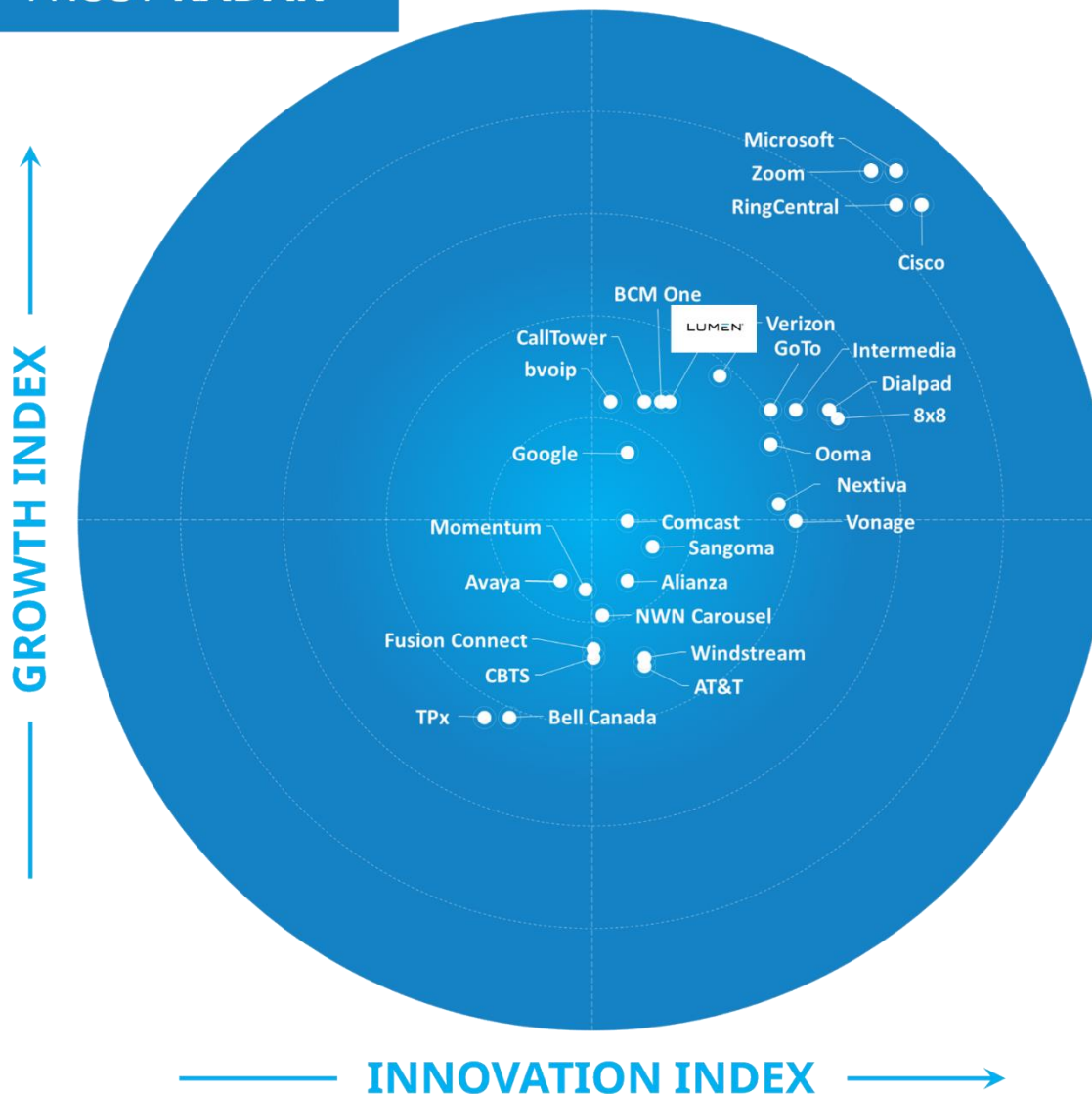
Frost Radar™

**North American
UCaaS Providers,
2023**



Frost Radar™: North American UCaaS Providers, 2023

FROST RADAR™



Frost Radar™

Competitive Environment

- The North American UCaaS market remains highly fragmented.
- On the Frost Radar, providers operating their proprietary platforms are positioned more favorably on the Innovation Axis because of their ability to control their innovation roadmaps.
- Intensified M&A activity over the past few years helped consolidate market power and create new levels of competition. M&A activity slowed in 2022 and 2023 because of harsh macroeconomic conditions and volatile company valuations.
- Further consolidation activity is expected in the future. Providers must seek opportunities to enhance their portfolios, scale, and tap into new market segments through M&A.
- Frost & Sullivan expects mixed-provider UCaaS environments to become more common. These will include scenarios in which multiple providers jointly power the UCaaS user experience. For evaluation, Frost & Sullivan considers all parties involved to reflect the evolution of the value chain.

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.

Companies to Action: Lumen

INNOVATION

- Lumen's UCaaS portfolio leverages industry-leading collaboration technologies from partners such as Alianza, Cisco, Microsoft, and Zoom. Lumen stands out from other providers through its broad array of hosted IP telephony offerings for different customer types. The provider aims to deliver compelling end-to-end digital customer experiences for businesses, including its Lumen Cloud Communications, Lumen Solutions for Webex Calling, Lumen Solutions for Microsoft Teams Phone, and Zoom Phone customers.
- The UCaaS portfolio is complemented by Lumen Enablement Services (LES) for UC&C—a suite of services that assists customers through planning, design, implementation, and management of their UC&C and voice platforms. Customers can choose a bundled service offering (package) or individual services.

GROWTH

- Lumen's steady growth rates in the past few years prove the effectiveness of its growth strategy and execution. In 2022, the provider saw a 43% increase in its North American cloud PBX installed seats—one of the highest growth rates in the region.
- With diverse UCaaS offerings and an evolving CCaaS portfolio, Lumen addresses the full customer spectrum: SMB, mid-market, enterprise, and government organizations. Adding popular UCaaS solutions such as Lumen Solutions for Cisco Webex Calling and Zoom Phone to the portfolio has been an important growth driver in the past year. The new Alianza relationship creates additional opportunities for Lumen to migrate its large POTS base to next-generation technologies and offer a compelling UCaaS solution to businesses.

FROST PERSPECTIVE

- Lumen's transformation journey in recent years is paying off, and the results are evident in its UCaaS portfolio performance as well. Ongoing organizational restructuring, vision, and strategy honing may further improve Lumen's performance across the company's strategic product areas.
- Lumen Enablement Services for UC&C greatly simplify the move to cloud-based communications services and reduce customer investment in capital or resources. Distinct, prepackaged enablement services for each of the top three cloud PBX platforms, Microsoft Teams, Zoom, and Webex by Cisco, are key to Lumen's UC&C enablement strategy success.

Companies to Action: Lumen(continued)

INNOVATION

- Lumen's UCaaS portfolio is complemented by meeting and messaging solutions, including Webex Meetings and Messaging; Zoom Meetings, Webinars, and Events; and Lumen Solutions for Contact Center based on Talkdesk and Genesys Cloud. Lumen SIP trunking, Voice Complete, Direct Routing for Microsoft Teams, and Lumen Cloud Communications Specialty Lines round out its portfolio and position it as a convenient one-stop shop for businesses' comprehensive voice and UC services requirements.

GROWTH

- A strong position in the VoIP access and SIP trunking space provides value in premises-based and hybrid deployments and creates opportunities for Lumen to migrate these customers to UCaaS. Lumen is also poised to capitalize on growth opportunities in providing connectivity services in bring-your-own-carrier (BYOC) scenarios with third-party UCaaS solutions. While such services do not help grow Lumen's share of UCaaS seats, they enable Lumen to capture a larger portion of UCaaS revenues.
- A strong network, security and edge capabilities, and a large geographic footprint provide market power to Lumen. Automated ordering and quoting mechanisms are accelerating growth rates for Lumen UCaaS, including Zoom and Microsoft Teams.

FROST PERSPECTIVE

- Lumen must work closely with technology partners to enhance its hosted IP telephony and UCaaS offerings with new features and endpoints, additional certifications, and third-party software integration.
- Lumen can leverage its comprehensive Lumen Enablement Services offering to address the demand for one-stop shopping of multiple cloud services. Bundled managed services administered through integrated services portals and leveraging integrated analytics across different services can be particularly effective in the underpenetrated mid-market.
- Lumen can use its FedRAMP certification and Cisco UCM Cloud for Government solutions to get ahead of competitors in the government vertical.

Companies to Action: Lumen(continued)

INNOVATION

- Lumen differentiates from UCaaS-centric providers through a robust portfolio of adjacent managed solutions such as connectivity, cloud, and IT services. It has made significant strides toward establishing itself as a diversified technology solution provider, shifting away from its legacy as a traditional telco. To achieve its stated mission of digitally connecting people, data, and applications quickly, securely, and effortlessly, Lumen relies on its robust network infrastructure and its platform powering managed application orchestration, hybrid cloud diversity, and software-defined networks with integrated security.

GROWTH

- Continued international expansion and new offerings—such as Lumen Solutions for Microsoft Teams, Zoom Meetings, and Phone, and an expanded partnership with Cisco to include Webex Calling Dedicated Instance—broaden Lumen’s customer reach.
- Operational improvements driven by the new company leadership and encompassing portfolio, IT system, and business process optimization; increased focus on collaborating and co-creating with customers; iterative product development; a shift from voice to UC sales; and company culture and performance management transformation may become essential growth drivers in the future.

FROST PERSPECTIVE

- Lumen can capitalize on the demand for automated customer journeys that can be provisioned completely through digital experiences. Such capabilities appeal most strongly to digital-native buyers but have also proved effective during disruptive times such as pandemic lockdowns.
- Lumen must also seek to develop tailored solutions and solution bundles for other verticals leveraging its broad services portfolio and extensive professional and managed services expertise.
- Direct Routing and upcoming Operator Connect services for Microsoft Teams customers provide Lumen with access to Teams-centric customer organizations, where it can deliver connectivity services and potentially UCaaS, CCaaS, and more.

Companies to Action: Lumen(continued)

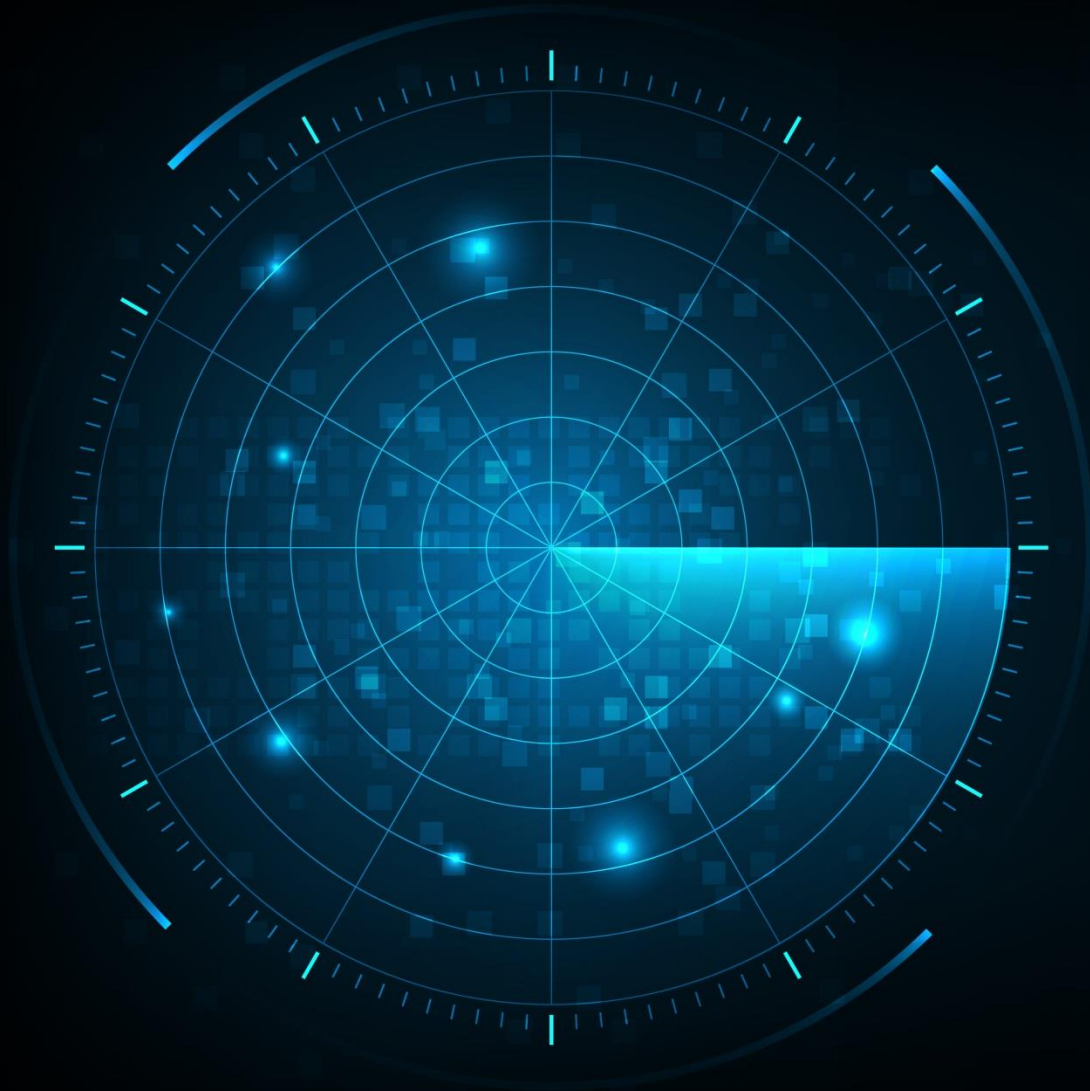
INNOVATION

- Lumen's intuitive Control Center portal enables the provider to effectively manage and support customers through automated provisioning and online customer ordering and management. Automated quoting, provisioning, and support services boost customer value and help differentiate Lumen from competitors. Flexible APIs allow Lumen to control customer number porting and activations easily and cost-effectively.

GROWTH

FROST PERSPECTIVE

- Various calling plans and PSTN connectivity options for Zoom Phone customers will enable Lumen to capitalize on Zoom's increasing popularity as a UCaaS provider.



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Key Takeaways

Key Takeaways

1

The addressable market is segmenting more clearly between organizations and/or users looking for collaboration-rich UCaaS and those who prefer voice-centric cloud communications solutions. Specific workflows, user demographics or job roles, or types of communications approaches (e.g., single vendor versus multivendor/best of breed, and security posture) often determine each organization's choice of a UCaaS solution.

2

Improving the CX, driving growth, and attracting the best talent tops the list of end-user organizations' communications investment objectives. This drives investments in cloud contact centers, CX management solutions, and full-stack UCaaS solutions, including video meetings and team collaboration. Providers with integrated, collaboration-rich UCaaS and CCaaS solutions are better positioned to address pressing customer concerns than those relying solely on a PBX- replacement sales motion.

3

FMC via software applications, WebRTC, or mobile-core-based solutions are appealing as organizations become more distributed. Novel mobile UCaaS solutions address organizations' need for mobile access to secure, reliable, compliant business communications and collaboration. Providers must evaluate the feasibility of providing app-based and native-dialer-based solutions for different users.

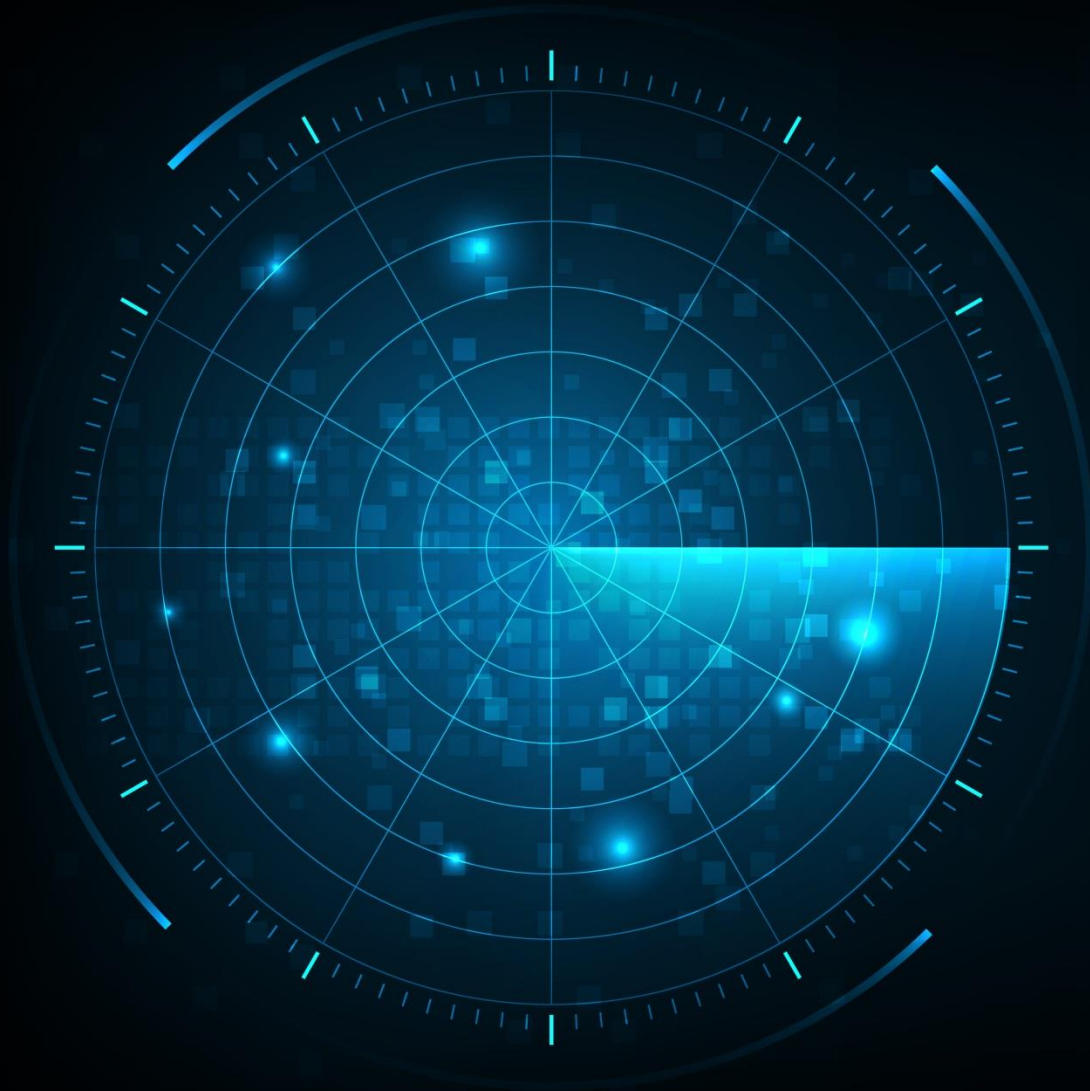
Key Takeaways

4

Technology advancements (e.g., 5G, flexible APIs, and programmability) and UCaaS provider search for growth and differentiation opportunities are powering vertical industry strategies. Increased focus on frontline worker empowerment and workflow optimization drives communications integration with productivity, business, and vertical software and services.

5

A robust 76% of IT/telecom decision makers surveyed by Frost & Sullivan in January 2023 stated that empowering frontline workers is an important driver for their communications and collaboration investments. Providers with a strong focus on APIs and communications integrations into workflows are poised to capitalize on vertical growth opportunities.



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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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