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Frost Radar in the North American Hosted IP Telephony and UCaaS Industry

A Measurement System to Spark Companies 2 Action (C2A) – Innovation that Fuels New Deal Flow and Growth Pipelines



Global Digital Transformation Research Team at Frost & Sullivan

Industry Overview

Steady Growth Trajectory

- The North American hosted Internet Protocol (IP) telephony and unified communications-as-a-service (UCaaS) market is experiencing steady growth as the small-business customer segment gradually matures and penetration in the mid-market and enterprise segments accelerates. Evolving technologies and business models, along with increasing customer awareness of cloud communications benefits, are driving adoption across different business sizes and industries, creating growth opportunities for service providers.
- Businesses can choose from an expanding array of options as providers of various backgrounds and skill sets launch hosted IP telephony and UCaaS offerings to address growing customer demand. Providers differentiate based on brand; technology foundation; UCaaS feature set, price, and service performance; broader portfolio; network footprint; customer service and support; and other factors. However, UCaaS buyers are increasingly savvy and are applying greater scrutiny when selecting their providers.

Customer Purchasing Criteria

- A Q4 2018 Frost & Sullivan's survey of U.S.-based UCaaS investment decision makers reveals that buyers
 are well informed about existing UCaaS solution and provider options. UCaaS providers' fervent sales and
 marketing activity is raising overall UCaaS awareness and determining individual provider mindshare and
 adoption among businesses.
- Vendor reputation ranks highest among factors playing the largest role early in the UCaaS provider selection process. UCaaS adopters—25 percent of current users and 34 percent of future users—identify vendor reputation as an important criterion in initial provider evaluation.

Industry Overview (continued)

- UCaaS buyers report four critical factors in their final vendor selection, as follows:
 - reliable service (53 percent of current users; 56 percent of future users)
 - security (52 percent of current users; 61 percent of future users)
 - good user interface (47 percent of current users; 41 percent of future users)
 - cost per seat (41 percent of current users; 31 percent of future users)

Shifting Innovation Frontier

- Unwavering commitment to innovation and a robust growth vision can determine a provider's ability to
 address elevated customer requirements and succeed in the increasingly competitive hosted IP telephony
 and UCaaS marketplace. Innovation scalability (i.e., solid innovation processes), size of research and
 development (R&D) investment, breadth and depth of solutions portfolio, mega trends leverage, and
 customer alignment (i.e., integration of customer feedback into solution design) play a critical role in enabling
 a provider to deliver innovative solutions and a strong value proposition.
- As provider ability to launch new hosted IP telephony and UCaaS features gradually plateaus, the innovation frontier is shifting toward the employment of flexible application programming interfaces (APIs) to integrate communications functionality into third-party software and devices. This is giving rise to the "new UC"—e.g., productivity UC, vertical UC, Internet of Things (IoT) UC, and so on.
- Other areas of significant provider focus also include:
 - cognitive and contextually-enhanced user experiences
 - rich, yet intuitive user and admin portals augmented with advanced analytics, artificial intelligence (AI) and machine learning (ML) capabilities
 - o enhanced service performance: reliability, security and regulatory compliance

Industry Overview (continued)

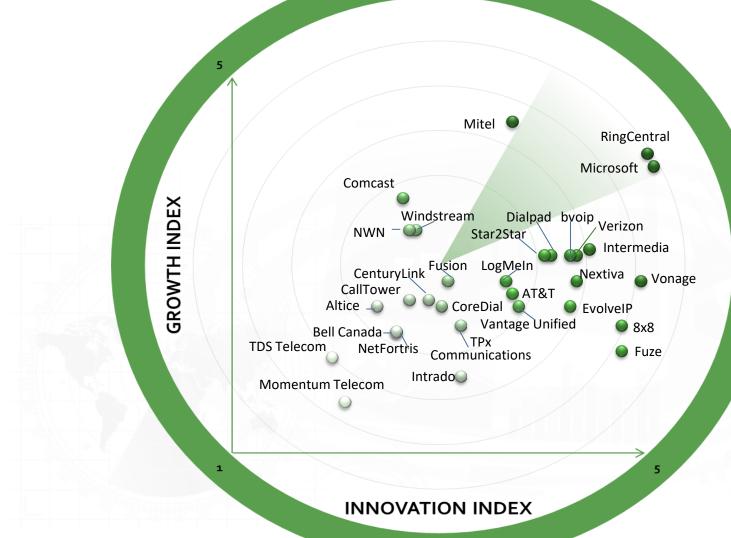
Key Growth Strategies

- Current market shares and historical growth rates determine a provider's present market power. A solid
 growth pipeline, a visionary growth strategy and effective sales and marketing execution will determine the
 provider's ability to sustain or boost market share and future growth rates.
- A strong UCaaS offering and a broad portfolio of additional services—such as contact center, broadband, multi-protocol label switching (MPLS), software-defined wide area network (SD-WAN), content collaboration, network, security—enable providers to capture a more substantial share of the customer's wallet. However, organic technology development and growth are often insufficient to withstand intensifying competition.
- Many UCaaS providers are engaging in mergers and acquisitions (M&A) to augment their product portfolios, in-house expertise, and market presence (e.g., customer base, network reach, data centers, support and sales resources). Going forward, M&As will continue to supplement internal product development and growth efforts.
- To accelerate growth and scale, providers are also leveraging various sales channels, including direct sales, agents, resellers, and white/private-label partners. Indirect channels enable providers to reach larger geographic areas and a broader spectrum of customers, as well as deliver valuable additional products and services including: end-user devices; networking equipment; assessment, implementation and life-cycle services; vertical software; and more.
- To fully capitalize on the unique skill sets and other benefits that various channel partners bring to UCaaS
 deployments, providers must offer compelling partner programs with a variety of sales incentives, marketing
 collateral, training, sophisticated partner portals, and more.



The Frost RADAR®

North American Hosted IP Telephony and UCaaS Market



Frost Radar—Description of Companies Plotted

Competitive Distribution

- The North America hosted IP telephony and UCaaS competitive landscape is highly fragmented with more than 120 brands vying for customer attention and investment. Service provider market shares fluctuate constantly due to the continued evolution of provider visions and strategies, execution, as well as ongoing M&A activity.
- Due to the highly distributed competitor market power, Frost & Sullivan's first North American hosted IP telephony and UCaaS Radar delivers analysis of 30 providers, a relatively large number of market participants. RingCentral received the highest combined growth and innovation score. Microsoft, Mitel, Intermedia, and Vonage round out the top five in terms of providers' total individual scores.

Innovation Leaders

- Providers that scored highly (greater than 4 out of 5) on the innovation index include Microsoft, RingCentral, Vonage, 8x8, Fuze, Intermedia, Verizon, Nextiva, bvoip, and Evolve IP, respectively by total individual score. Most of these providers own, either fully or partially, the technology stack that provides the foundation for their UCaaS offerings. They all demonstrate relentless focus on innovation and offer highly differentiated services or functionality. Some of the unique and/or highly valuable capabilities offered by these companies include:
 - integrated cloud platforms supporting UCaaS, contact center-as-a-service (CCaaS), communications platform-as-a-service (CPaaS), and/or other cloud services (e.g., Evolve IP, Intermedia Unite, Microsoft Office 365 and Teams, Nextiva NextOS, Vonage One)
 - mobile-first offerings (e.g., Verizon One Talk)
 - custom integrations and applications (e.g., bvoip)

Frost Radar—Description of Companies Plotted (continued)

Growth Leaders

- Growth leaders include Mitel, RingCentral, Microsoft, Comcast, Windstream and NWN, ranked by their total individual scores. Provider growth scores are based on both historical performance (i.e., installed user market shares and growth rates) and perceived ability to sustain growth in the future.
- Certain providers, such as RingCentral, Microsoft, Comcast, and NWN have maintained high growth rates primarily organically, whereas Mitel and Windstream have significantly boosted their market shares through strategic M&A. Going forward, provider installed user and revenue growth rates will depend on their ability to:
 - Address the needs of multiple customer segments
 - Develop vertical strategies
 - Expand internationally
 - Tailor services for different user roles and job functions
 - Maintain or increase average revenue per user (ARPU) through advanced features and value selling
 - Improve customer retention rates (i.e., lower churn)
 - Expand reseller channel
 - Build strong brand equity

Future Outlook

 Provider positioning on Frost Radar can change in the future as a result of new strategies or vision, changes in execution, M&A, or other factors. Ongoing provider consolidation is continually offset by the entry of new market participants, which increases the pressure on existing participants to innovate faster, maintain competitive prices and constantly seek to differentiate and offer ever-greater customer value.

Vonage

- Vonage has a long history in delivering Internet telephony services.
 Through pioneering technology and aggressive marketing,
 Vonage's brand has become synonymous with next-generation, IP-based communications.
- Vonage's UCaaS growth has been sustained by several strategically acquired and effectively positioned platforms.
- Vonage recognized early that a programmable communications cloud that incorporates UCaaS, CCaaS and CPaaS could provide greater value to customers.
- Leveraging Nexmo's platform, Vonage reimagined Vonage Business Cloud to attain higher levels of scale and flexibility.

COMPANY DIAGNOSTIC



FROST RADAR POSITIONING



- Aggressive, yet disciplined M&A and strong organic growth have enabled Vonage to quickly become one of the top five hosted IP telephony and UCaaS providers in North America. Vonage also ranks among the top five providers on Frost Radar in terms of combined growth and innovation scores.
- Vonage has a strong track record as a technology innovator and has truly reinvented itself under the OneVonage platform strategy to deliver fully programmable solutions across voice, video, SMS and other types of messaging.
- Going forward, Vonage is well positioned to accelerate revenue growth due to its unique ability to deliver more holistic communications solutions combining CPaaS, UCaaS and CCaaS.

- Its Business Cloud, based on the microservices-architected cloudnative OneVonage platform, leverages UCaaS and communication APIs, team messaging, and the Integration Suite to seamlessly blend with mission-critical software to address diverse customer needs.
- CPaaS allows businesses to personalize the customer experience and/or create specific integrations with third-party software for seamless, contextual communications.
- UCaaS with an integrated contact center helps provide a one-stop shop to businesses looking to outsource both.
- Vonage Business Cloud's SD-WAN service branded SmartWAN optimizes connections over a public network to improve redundancy, reliability, and uptime across locations for businesses relying on high volumes of voice, video, and data.



STRENGTHS



OPPORTUNITIES

- Focus on the reseller channel to expand customer reach and accelerate growth.
- Increase penetration among larger businesses to reduce customer churn and improve margins.
- Continue to expand internationally to scale and better serve multinational businesses.
- Boost ARPU with CCaaS and other advanced applications (e.g., conferencing).
- Leverage CPaaS strength to address specific use cases and deliver differentiated customer value.
- Capitalize on the fully integrated platform based on programmable communications cloud to enable a holistic approach to customer communications transformation needs.

The Last Word—Key Takeaways

1

Rapid growth rates in the North American hosted IP telephony and UCaaS industry will continue to attract new providers, who will challenge existing market participants with compelling solutions and business models. Competitive pressures will foster innovation and creativity with regard to solution functionality, packaging and pricing, as well as provider go-to-market strategies. This will result in continued shifts in provider market shares and overall competitive positioning.

2

In addition to organic innovation and growth, providers will leverage M&As to boost technology know-how and market power. M&As can have unanticipated effects on competitors and the rest of the ecosystem. However, with overall hosted IP telephony and UCaaS penetration relatively low in North America and many untapped opportunities around the globe, market participants can sustain growth through innovation, international expansion and channel partnerships, despite the disruptive impact of competitor consolidation.

3

To succeed in a highly dynamic marketplace, participants must closely watch mega trends—changes in customer and user demographics and technology requirements, organizational structure, macro-economic conditions, and so on—and adapt their portfolios and strategies accordingly. They must also monitor competitor technology and business model development and respond with differentiated offerings and unique value propositions.

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Frost Radar—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.

- GI1: Market Share (previous 3 years): Market share relative to its competitors in a given market space for the previous three years.
- GI2: Revenue Growth (previous 3 years): Revenue growth rate for the previous three years
 in the market/ industry/ category that forms context for the given Frost Radar.
- GI3: Growth Pipeline: This is an evaluation of the strength and leverage of the 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 the company is making in new products and markets consistent with the stated vision?
- GI5: Sales and Marketing: This is a measure of effectiveness of a company's sales and marketing efforts in helping the company drive demand and achieve its growth objectives.

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Frost Radar—2 Major Indices, 10 Analytical Ingredients, 1 Platform (continued)

Horizontal Axis

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

- II1: Innovation Scalability: This determines whether the 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 the company's product portfolio, focusing on the relative contribution of new products to its annual revenues.
- 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.
- II5: Customer Alignment: This evaluates the applicability of a company's products/services/solutions to current and potential customers (7-year horizon) as well as how its innovation strategy is influenced by evolving customer needs.

INNOVATION

