FROST & SULLIVAN

FROST & SULLIVAN BEST PRACTICES AWARD

HOSTED IP TELEPHONY AND UCAAS - CANADA

Market Leadership 2019

FROST & SULLIVAN

2019

BEST PRACTICES AWARD

Bell

Contents

Background and Company Performance
Industry Challenges

Canadian businesses are embracing hosted/cloud Internet Protocol (IP) telephony and unified communications as a service (UCaaS) as they pursue the considerable benefits associated with cloud services, including greater business agility, more flexible IT/telecom solutions management and enhanced worker productivity due to faster access to advanced functionality. With lower cloud communications penetration compared to the United States, Canada is ripe for accelerated market growth in the next seven years.

Aging premises-based communications solutions and the need to compete more effectively in a progressively global economy are among the top factors driving the move to cloud communications services. Advanced digital technologies are delivering a competitive edge to early adopters, enabling businesses to operate more efficiently and deliver superior customer value through innovative products, services and business models. This is creating smarter industries and enabling new competitive paradigms. However, deploying advanced IT and communications solutions on premises is costly and opens a business up to risks related to unused capacity and technology obsolescence. Cloud services and on-demand technology consumption models are enabling forward-looking Canadian companies to reduce costs, minimize risks and focus on their core business objectives—while entrusting the management of their communications solutions to an expert third party.

As demand for cloud communications grows, both domestic and international service providers are launching UCaaS in Canada. In addition to the national incumbent carriers, several smaller next-generation Canadian providers and a variety of U.S. providers are vying for Canadian businesses' communications investments. This is creating more options for businesses, but also causing some confusion and hesitation as prospective buyers apply greater scrutiny and take extra time to select their hosted solution and provider.

Increasing UCaaS variety and customer caution are also raising competitive pressures and compelling providers to innovate faster while maintaining affordable prices. Both established and emerging market participants are striving to maintain high growth rates and expand their market shares by continually enhancing their solution feature set, network performance and go-to-market strategies.

To succeed in the Canadian hosted/cloud IP telephony and UCaaS market, providers must either carve out a niche where they can differentiate and offer unique customer value or expand their geographic footprint and offer flexible solutions that span multiple regions and customer segments. Both approaches require a strong vision, excellent execution and targeted investments. However, few providers can deliver services to the full spectrum of Canadian businesses—across business sizes, verticals and technology requirements. Even fewer can capitalize on their strong brands to win customers' trust as they embark on mission-critical digital transformation and cloud migration initiatives.

Achieving market leadership in the Canadian cloud/hosted IP telephony and UCaaS market is predicated on a provider's ability to create solutions that appeal to both technology-

savvy early adopters and more conservative, risk-averse businesses. Leadership is also determined by the provider's ability to choose the right technology foundation and launch well-priced and packaged offerings that meet a broad range of customer requirements. Finally, the market leader not only excels at attracting new businesses with compelling offers, but also at retaining customers with excellent service quality, reliability and security.

Market Leadership of Bell Canada

Bell Canada, a subsidiary of BCE, has achieved market leadership in the Canadian hosted IP telephony and UCaaS market for the fifth consecutive year. This remarkable accomplishment can be attributed to Bell Canada's strong focus on leveraging advanced technologies to deliver value to its customers. Through a combination of well-designed strategy, consistent execution and a powerful brand, the Canadian incumbent carrier has established itself as one of the most innovative providers in the next-generation services space. Bell Canada stands out among competitors with its hosted IP telephony and UCaaS solutions' quality and reliability, affordable pricing and excellent customer purchase and ownership experiences.

Growth Strategy and Implementation Excellence

Bell Canada is not only the largest telecom services provider in Canada, but has also been at the forefront of technology innovation. It was one of the first telecom carriers in North America to launch a hosted IP telephony offering—approximately one decade ago. Throughout the years, Bell Canada has enhanced the solution to better address evolving customer needs.

Bell Canada's strategy for the hosted IP telephony and UCaaS market is based on its vision to offer businesses compelling alternatives to their aging premises-based systems and legacy services, such as the time-division multiplexing (TDM)-based Centrex. Acknowledging Canadian businesses' need to improve mission-critical workflows to compete more effectively, the innovative provider set out to leverage Voice over IP (VoIP) and Session Initiation Protocol (SIP) technologies, as well as a cloud delivery model, to provide modern communications solutions that address shifting customer requirements.

Over the past years, Bell Canada has focused equally on solution functionality and service performance. Initially launched on Bell Canada's industry-leading Multi-label Protocol Switching (MPLS) network to ensure high quality of service, Bell Total Connect quickly gained traction among many national banks and retailers, public sector organizations and other businesses with the need to gain access to more advanced communication features—while keeping costs low and service performance high. Eventually, Bell Canada adapted the solution for delivery over public broadband to address pent-up demand for flexible and cost-effective communications services among small and medium-size businesses (SMBs).

Bell Canada's broader growth strategy over the past decade included several mergers and acquisitions (M&As), which expanded the provider's geographic footprint, addressable market and solutions portfolio, including hosted IP telephony and UCaaS. The acquisitions

of Bell Aliant and MTS, in particular, enhanced Bell Canada's portfolio with two additional hosted service offerings, positioned for specific use cases and/or geographies.

Bell Canada's success with hosted/cloud communications solutions is evident in the rapid growth the provider has experienced in the past five years. From a little over 20,000 users in 2013 to close to 200,000 users in 2018, Bell Canada has grown its installed base almost tenfold. This demonstrates the provider's ability to both attract and retain customers.

Continued product enhancements and company commitment to service quality and customer value are likely to sustain high growth rates for Bell Canada's hosted/cloud communications solutions. Bell Canada is among the top 30 North American hosted IP telephony and UCaaS providers in Frost Radar, which evaluates companies on a 10-factor scale on the basis of growth and innovation. The leading Canadian provider received high marks for both growth and innovation in acknowledgement of its strong track record and effective execution in the past, and robust growth strategy for the future.

Product Quality and Differentiation

Bell Canada leads in the Canadian hosted IP telephony and UCaaS market with Bell Total Connect—a flexible, scalable and feature-rich offering, suitable for small, medium and large businesses alike. Based on industry-leading BroadSoft/Cisco technologies, Bell Total Connect provides a comprehensive applications suite, including cloud Private Branch Exchange (PBX), voicemail, voicemail to email, fax to email, auto attendant, UC client (soft phone, IM/P), mobility (simultaneous ring, mobile voice and UC app), audio, web conferencing, video conferencing, and a web-based admin and user dashboard.

Unlike most of its competitors in the Canadian and U.S. markets, Bell Canada understands that few customers require the extra "bells and whistles"—i.e., sophisticated functionality that either addresses highly specific needs or aims to appeal to the most technology-savvy users or IT staff. However, most customers demand ease of use and management, economical scalability, high service availability and robust security. With 99.9999 percent core platform availability for its Bell Total Connect offering reported in the past four years, Bell Canada truly stands out among industry peers.

Bell Total Connect is supported through five geo-redundant data centres in Toronto, Montreal and Calgary. Geo-redundant instances with hot/hot shelf configurations ensure the highest service availability. In the past year, Bell Canada replicated its service platforms in Toronto and Montreal adding additional sites in the same cities to increase redundancy for application servers and core Session Border Controllers (SBCs) that act as the primary UC servers for many customers. Multiple gateways throughout Canada provide redundant connectivity with the Public Switched Telephone Network (PSTN). Bell Total Connect is typically deployed on Bell Canada's MPLS service to ensure greater quality.

Bell Canada recognizes, however, that a growing number of businesses support mobile workers, as well as small business sites where advanced networking infrastructure is not feasible. Bell Total Connect deploys over public broadband access networks to provide flexibility to such remote workers. Bell Canada has enabled Bell Total Connect delivery

over fibre networks (Fibre to the Node and Fibre to the Business) as well, which further expands its customers' reach and provides more options for business users.

Bell Total Connect deployments also provide physical and virtual separation of customer voice traffic. Traffic is picked up by the Bell Total Connect Enterprise SBC (E-SBC) at a customer site, moves to the Bell MPLS Customer Edge Router via a separate MPLS virtual private network (VPN) connection over the Bell MPLS backbone, and finally terminates at different Virtual Local Access Networks (VLANs) in Bell Canada data centres. If needed, end-to-end encryption at signaling and media layers can be provided to customers with more stringent requirements, on top of the existing traffic separation.

Bell Total Connect security is also enhanced via the use of two layers of SBCs to mitigate VoIP application-layer security concerns such as SIP signaling-layer DoS/DDoS flooding attacks (SIP message flooding, SIP mal-formed message attacks, etc.) and RTP media-layer flooding attacks. An enterprise SBC (Edgewater EdgeMarc SBC) at customer sites provides access protection while allowing customers access to Bell Total Connect services. A core SBC (Oracle SBC) at Bell Total Connect data centres protects the core infrastructure, while providing Bell Canada services to customers.

Bell Canada continues to enhance Bell Total Connect. It is presently the only known provider working closely with Cisco to enable integration of Cisco's innovative Webex portfolio of contemporary messaging and meeting cloud services with Bell Canada's call control platform supporting Bell Total Connect. By next year, the provider expects to be able to deliver one of the most comprehensive UCaaS feature sets to its Bell Total Connect customers.

Customer Purchase and Ownership Experiences

Bell Total Connect is competitively positioned in terms of features and price vis-à-vis other hosted IP communications solutions in Canada. Priced at the lower end of Canadian market prices ranging from $25 CAD to $35 CAD per user per month, for a standard feature set along with local and long-distance minutes, Bell Total Connect offers a compelling value proposition to Canadian businesses. For a small price per site, businesses can add Bell Canada' MPLS services (if not already using them) and thus ensure a superior performance than that of other services delivered over the public Internet. Unlike most U.S. hosted IP telephony providers, Bell Canada does not include long-distance calling minutes in its service packages—instead, it charges competitive per-minute rates. This is based on local customer preferences, especially among mid-size and larger businesses, to pay only for what they consume.

Bell Canada hosted communications solutions are closely aligned with other IP-based offerings including the provider's MPLS network, SIP Trunking and residential VoIP services. With Bell Total Connect and SIP Trunking, Bell Canada provides business customers a choice to deploy an end-to-end hosted IP communications solution or preserve existing investments in premises-based communications systems—while leveraging SIP in the access network for cost efficiencies and other benefits.

Bell Canada is constantly adjusting its product development, marketing and sales approaches to better align with evolving customer needs. Over the past couple of years, it

shifted from selling point products—e.g., connectivity, hosted applications and professional services—to selling solutions that address customer needs more holistically. This is likely to result in greater customer satisfaction, new use cases and accelerated solution adoption.

To ensure that it is delivering excellent customer experiences, Bell Canada conducts satisfaction surveys via email after every significant customer interaction—e.g., new installations or trouble tickets. The feedback from those who choose to respond is used to derive Net Promoter Scores, while comments and feedback are filtered and forwarded to product management for consideration in future product and feature development.

Bell Canada also holds annual meetings of its Customer Advisory Board, which includes senior IT leaders from key customers across different industries. In these private meetings, Bell Canada solicits customers' input on development plans and strategic direction, and gauges its ability to meet customers' needs.

Bell Canada also involves customers in early-availability trials during the Operational Readiness Testing phase of new product introduction projects, where appropriate, to ensure that product deployment and support processes are ready for the market.

Brand Strength

As the leading telecom services provider in Canada, Bell Canada enjoys considerable brand name recognition. It is the incumbent local exchange carrier for telephone and Digital Subscriber Line (DSL) Internet services in much of Canada east of Manitoba and in the Northern Territories, and a major competitive local exchange carrier for enterprise customers in the western provinces. With a broad portfolio of business and residential services and solutions, Bell Canada is truly a "household" name for Canadians.

The strong Bell Canada brand has enabled the provider to successfully market its Bell Total Connect solution and rapidly grow its installed hosted IP telephony user base and related revenues. It would not be an overstatement to say that Bell Canada's market entry has given a boost to the nascent Canadian hosted IP telephony market as it has effectively validated the value proposition of hosted IP communications.

As an established national carrier with a strong track record, Bell Canada is best positioned to address customer concerns over security, regulatory compliance, service quality, provider stability and long-term viability, which are typical challenges in more regulated industries such as government and financial services. Going forward, Bell Canada can capitalize on relationships and customer loyalty in these verticals to accelerate its hosted IP telephony and UCaaS services growth.

Conclusion

Bell Canada continues to show unwavering commitment to technology innovation, while simultaneously maintaining robust growth rates.

With its strong overall performance, Bell Canada has achieved a leadership position in the hosted IP telephony and UCaaS market in terms of user and revenue market share, as well as high total innovation and growth excellence scores in Frost Radar. For these reasons, Bell Canada has been nominated for the 2019 Market Leadership Award.

Significance of Market Leadership

Ultimately, growth in any organization depends on customers purchasing from a company, and then making the decision to return time and again. Loyal customers become brand advocates, brand advocates recruit new customers, and the company grows, and then attains market leadership. To achieve and maintain market leadership, an organization must strive to be best in class in 3 key areas: understanding demand, nurturing the brand, and differentiating from the competition.

Understanding Market Leadership

Driving demand, strengthening the brand, and differentiating from the competition all play critical roles in a company's path to market leadership. This three-fold focus, however, is only the beginning of the journey and must be complemented by an equally rigorous focus on the customer experience. Organizations that demonstrate best practices, therefore, commit to the customer at each stage of the buying cycle and continue to nurture the relationship once the customer has made a purchase. In this way, they build a loyal, ever-growing customer base and methodically add to their market share.

Key Performance Criteria

For the Market Leadership Award, Frost & Sullivan Analysts focused on specific criteria to determine the areas of performance excellence that led to the company's leadership position. The criteria include (although are not limited to) the following:

Criterion	Requirement
Growth Strategy Excellence	There is a demonstrated ability to consistently identify, prioritize, and pursue emerging growth opportunities.
Implementation Excellence	Processes support the efficient and consistent implementation of tactics designed to support the strategy.
Brand Strength	The brand is respected, recognized, and remembered.
Product Quality	The product or service receives high marks for performance, functionality, and reliability at every stage of the life cycle.
Product Differentiation	The product or service has carved out a market niche, whether based on price, quality, or uniqueness of offering (or some combination of the three) that another company cannot easily duplicate.
Technology Leverage	There is a commitment to incorporating leading-edge technologies into product offerings for greater product performance and value.
Price/Performance Value	Products or services offer the best value for the price, compared to similar offerings in the market.
Customer Purchase Experience	Customers feel they are buying the optimal solution that addresses both their unique needs and their unique constraints.
Customer Ownership Experience	Customers are proud to own the company's product or service, and have a positive experience throughout the life of the product or service.
Customer Service Experience	Customer service is accessible, fast, stress-free, and of high quality.

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate award candidates and assess their fit with best practices criteria. The reputation and integrity of the awards are based on close adherence to this process.

STEP		OBJECTIVE	KEY ACTIVITIES	OUTPUT
1	**Monitor, target, and screen**	Identify award recipient candidates from around the world	• Conduct in-depth industry research • Identify emerging industries • Scan multiple regions	Pipeline of candidates that potentially meet all best practices criteria
2	**Perform 360-degree research**	Perform comprehensive, 360-degree research on all candidates in the pipeline	• Interview thought leaders and industry practitioners • Assess candidates' fit with best practices criteria • Rank all candidates	Matrix positioning of all candidates' performance relative to one another
3	**Invite thought leadership in best practices**	Perform in-depth examination of all candidates	• Confirm best practices criteria • Examine eligibility of all candidates • Identify any information gaps	Detailed profiles of all ranked candidates
4	**Initiate research director review**	Conduct an unbiased evaluation of all candidate profiles	• Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles	Final prioritization of all eligible candidates and companion best practices positioning paper
5	**Assemble panel of industry experts**	Present findings to an expert panel of industry thought leaders	• Share findings • Strengthen cases for candidate eligibility • Prioritize candidates	Refined list of prioritized award candidates
6	**Conduct global industry review**	Build consensus on award candidates' eligibility	• Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates	Final list of eligible award candidates, representing success stories worldwide
7	**Perform quality check**	Develop official award consideration materials	• Perform final performance benchmarking activities • Write nominations • Perform quality review	High-quality, accurate, and creative presentation of nominees' successes
8	**Reconnect with panel of industry experts**	Finalize the selection of the best practices award recipient	• Review analysis with panel • Build consensus • Select recipient	Decision on which company performs best against all best practices criteria
9	**Communicate recognition**	Inform award recipient of award recognition	• Present award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance	Announcement of award and plan for how recipient can use the award to enhance the brand
10	**Take strategic action**	Upon licensing, company is able to share award news with stakeholders and customers	• Coordinate media outreach • Design a marketing plan • Assess award's role in strategic planning	Widespread awareness of recipient's award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of the research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, resulting in errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's growth team with disciplined research and best practices models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join Frost & Sullivan's Growth Partnership, visit http://www.frost.com. .