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BEST PRACTICES

AWARDS

FROST & SULLIVAN

2020 BEST PRACTICES AWARD



**2020 GLOBAL AUDIO COLLABORATION
TECHNOLOGY INNOVATION LEADERSHIP AWARD**

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Background and Company Performance

Industry Challenges

While the need for digital collaboration technologies has been on the rise for many years, the COVID-19 pandemic has forced organizations to step on the accelerator. 2020 will be a watershed year for businesses to embark on rapid digital transformation and improve business continuity.

The future of work and education is marked by disruptive shifts. Centered on agility and resiliency, the post-pandemic future has been redefined by the emergence of hybrid work and hybrid education that allows people to communicate from anywhere—in the office or classroom, at home, or on-the-go. There is a strong imperative for IT and business leaders to fully embrace the next big transformation by investing in robust audio, video and content collaboration tools that keep people fully connected and productive in the new normal.

According to Frost and Sullivan, audio, video and content sharing technologies are on a fast growth track. The total audio video collaboration market is forecast to grow at a compound annual growth rate (CAGR) of 12.1 percent from 2018 to 2023 to reach \$13.82 billion by 2023.¹ COVID-19 has left an indelible impact on remote work and remote learning. Frost & Sullivan strongly believes that the transformation of meeting rooms and classrooms will be pivotal to the way we work and learn in the future.

In the past, employees mostly worked with their team members in a single physical location. Collaboration between teams often involved bringing stakeholders together into a meeting room to brainstorm, sketch ideas and accelerate decision making. In today's remote working and remote learning environment, employees, students, educators and other users are dispersed in multiple locations. They need new seamless ways to connect virtually. However, often distributed teams have to compromise on the quality of communications leading to ineffective outcomes and lower productivity. In a 2019 survey of IT decision makers and business leaders, 29.4% or almost one out of three respondents cited audio quality issues as a major concern for conferencing adoption².

Hybrid work and hybrid education is here to stay. For people working and learning from dispersed locations, a set of tools that allow them to virtually collaborate, whether they are in their homes or in traditional offices and meetings rooms, much the same way as they did before in-person. The importance of crisp, clear audio quality is really starting to emerge in this "new normal". Poor sound quality, excessive background noise and other audio disruptions not only negatively impact concentration, efficiency and cognitive processing but also lead to meeting fatigue and increased stress.

Nureva realizes the many challenges that exist today when it comes to best-in-class audio experiences. It has an unwavering focus on developing high quality robust audio technologies for meeting rooms and online/hybrid classes. Nureva leads with the notion

¹ Global Video Conferencing Market Analysis, Forecast to 2023: A Holistic Evaluation of Market Trends and Opportunities, Frost & Sullivan, January 2019

² End-User Priorities in Communications and Collaboration Investments, Frost & Sullivan February 2020

that robust audio is a fundamental requirement for any communication experience to be effective. Its patented Microphone Mist™ technology, which fills a room with thousands of virtual microphones, creates a top notch audio experience. Nureva's cutting edge innovation and a broad portfolio of audio conferencing solutions, combined with leading technology partnerships, are improving the user experience for thousands of users.

Customer Impact and Business Impact of Nureva

Headquartered in Calgary, Canada, Nureva Inc. (Nureva) is an audio software, hardware and services company. Nureva founders, who built SMART Technologies to put interactive whiteboards into millions of classrooms and boardrooms around the world, have been successfully launching new products under the Nureva name since it was founded in 2014. With more than 130 employees, who are primarily highly skilled software and hardware engineers, Nureva has continued to grow at a rapid pace.

Today, Nureva supports a spectrum of global Fortune 500 companies, government agencies, and universities by using its audio conferencing solutions to help them improve remote communication by providing true full-room coverage even when in-room participants are spread out in the space and enable faster innovation.

In addition to Nureva's audio conferencing profile, the company recently launched Nialli, a wholly owned subsidiary focused on enabling the digital transformation of processes used by collaborative teams. Nialli's first product, Nialli Visual Planner, is a cloud-based application that makes it easy to digitally transform the paper-based planning processes used in lean construction. The product entered the market in September 2020 and already has several high profile construction customers.

Nureva's Unique Industry Leading Audio

Nureva's innovations in audio are based on its unique patented Microphone Mist™ technology that fills a room with thousands of virtual microphones so everyone can be heard no matter where they are in the room. A virtual microphone is essentially an audio pickup point that is created when two or more physical microphones work together to focus sound pickup on a distinct zone. Microphone Mist™ technology listens to each virtual mic simultaneously and optimizes it for a natural listening experience. Using sophisticated algorithms to process sound simultaneously from all virtual mics at once, provides remote participants with a natural and high-quality listening experience, enabled by continuous auto-calibration, echo cancellation and sound masking. Moreover, unlike conventional systems, there are no lapel mics or podium mics to sanitize in between meetings or classes providing an additional level of safety in the current environment.

Unlike the widely available traditional beamforming audio that may leave dead zones where people can't be heard, Microphone Mist™ technology provides true full-room coverage.

Exhibit 1: Nureva’s Microphone Mist™ Technology Compared with Traditional sound Technologies

<p>Intelligent Sound Targeting (IST), a feature of Microphone Mist™ technology versus post-sound technology</p>	<p>IST uses intelligent sound identification to alleviate the negative impact of unwanted sounds like HVAC so remote participants hear voices better and do not hear the ambient noises. IST takes a “pre-sound” approach and uses adaptive learning algorithms to preemptively identify and learn unwanted sounds and then simply stops picking them up.</p>	<p>Traditional systems use “post-sound” filters to suppress unwanted noise. However, these require substantial processing resources and are not always effective.</p>
<p>Microphone Mist™ technology Compared with Beamforming technology</p>	<p>Microphone Mist™ technology fills a room with thousands of virtual microphones or individual “pickup points”. No matter where the meeting participants are in a room or where they walk, a virtual mic is always close by and there are no dead zones. Its advanced processing power enables Microphone Mist™ technology to listen to each virtual mic simultaneously and zero in on the predominant sounds, optimizing them for clear conversations.</p>	<p>Beamforming technology picks up sound in defined “lobes,” usually pointed at fixed positions around a meeting room table. If meeting participants happen to move outside the lobes to present at a display or connect with one another, they may enter a zone where audio pickup can be diminished making it difficult for a remote participant to hear. And if a talker is between lobes, the audio may drop off or rise sharply, which can lead to meeting fatigue for remote participants.</p>

Nureva’s broad portfolio of audio collaboration solutions covers meeting spaces and classrooms of all sizes –

- **HDL200 SYSTEM** – Designed for small spaces and huddle rooms as well as flex rooms, the HDL200 was launched in early 2020. An all-in-one plug and play system, it has 4,096 virtual mics and is ideal for spaces up to 18' x 18'. Its DIY installation takes less than an hour.
- **HDL300 SYSTEM** – Designed for mid-size spaces, the HDL300 system has 8,192 virtual mics. It provides full-room audio coverage in spaces up to 25' x 25'. Its DIY installation takes less than an hour.
- **Dual HDL300 SYSTEM** - With 16,384 virtual mics and precision speakers, the Dual HDL300 is designed for large meeting rooms, training rooms and classrooms up to 30'

x 50'. Its DIY installation takes less than an hour.

The Nureva audio conferencing product line is supported by Nureva Console, a cloud-based platform that allows IT staff to deploy and manage all Nureva systems at scale from a web-based dashboard.

Nureva believes that there is no reason for users to accept poor audio experiences that hamper meeting effectiveness and productivity. With continued improvements and developments to its industry leading audio know how, the company is constantly pushing the boundaries of technology to stay on the leading edge in solving the age-old problem of bad audio in conference calls and virtual classrooms.

Nureva's Technology Partnerships Enhance the Collaboration Experience

Nureva's audio systems seamlessly integrate with 3rd party conferencing and collaboration to meet the growing needs for high quality and effortless collaboration in physical meeting spaces as well as to connect distributed remote workers. Nureva's audio conferencing systems are compatible with leading UC&C platforms like Microsoft Teams, Zoom, Cisco WebEx, Lifesize and many others. Users can simply connect to their in-room PC and set Nureva as the default audio device to benefit from its best in class audio experiences in the video meeting of their choice. The HDL300 and Dual HDL300 systems were recently certified for Barco ClickShare Conference.

User experience (UX) is pivotal to technology-enablement. Nureva's audio conferencing solutions accommodate the need for physical distance in today's hybrid working and learning environments – spaces that require participants to be at least six feet apart, while still providing remote participants with a clear and natural listening experience. With innovation in its DNA, the Nureva team is constantly looking to disrupt the audio market and create products that provide significant value to its customers.

Conclusion

Hybrid work and hybrid classrooms are the new normal that has impacted how people work and learn in the foreseeable future. Yesterday's clunky and sub-par audio technologies are not acceptable anymore as they lead to impersonal and broken communications and learning environments. Nureva's ability to identify market gaps and address them through technological innovation and its laser sharp focus on customer needs in the audio conferencing market have helped the company create distinguished competitive differentiators.

For its strong overall performance, Nureva has earned Frost & Sullivan's 2020 Technology Innovation Leadership Award in the global audio visual collaboration market.

Significance of Technology Innovation Leadership

Technology-rich companies with strong commercialization strategies benefit from the demand for high-quality, technologically innovative products that help shape the brand, resulting in a strong, differentiated market position.



Understanding Technology Innovation Leadership

Technology innovation leadership recognizes companies that lead the development and successful introduction of high-tech solutions to customers' most pressing needs, altering the industry or business landscape in the process. These companies shape the future of technology and its uses. Ultimately, success is measured by the degree to which a technology is leveraged and the impact it has on growing the business.

Key Benchmarking Criteria

For the Technology Innovation Leadership Award, Frost & Sullivan analysts independently evaluated 2 key factors—Technology Leverage and Business Impact—according to the criteria identified below.

Best Practices Award Analysis for Nureva

Technology Leverage

Criterion 1: Commitment to Innovation

Requirement: Conscious, ongoing development of an organization's culture that supports the pursuit of groundbreaking ideas through the leverage of technology.

Criterion 2: Commitment to Creativity

Requirement: Employees rewarded for pushing the limits of form and function by integrating the latest technologies to enhance products.

Criterion 3: Technology Incubation

Requirement: A structured process with adequate investment to incubate new technologies developed internally or through strategic partnerships.

Criterion 4: Commercialization Success

Requirement: A proven track record of commercializing new technologies by enabling new products and/or through licensing strategies.

Criterion 5: Application Diversity

Requirement: The development of technologies that serve multiple products, multiple applications, and multiple user environments.

Business Impact

Criterion 1: Financial Performance

Requirement: Overall financial performance is strong in terms of revenue, revenue growth, operating margin, and other key financial metrics.

Criterion 2: Customer Acquisition

Requirement: Overall technology strength enables acquisition of new customers, even as it enhances retention of current customers.

Criterion 3: Operational Efficiency

Requirement: Staff is able to perform assigned tasks productively, quickly, and to a high quality standard.

Criterion 4: Growth Potential

Requirements: Technology focus strengthens brand, reinforces customer loyalty, and enhances growth potential.

Criterion 5: Human Capital

Requirement: Company culture is characterized by a strong commitment to customer impact through technology leverage, which enhances employee morale and retention.

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 select 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 Nureva candidates from around the world	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 Nureva	<ul style="list-style-type: none"> • Review analysis with panel • Build consensus • Select recipient 	Decision on which company performs best against all best practices criteria
9 Communicate recognition	Inform Nureva of recognition	<ul style="list-style-type: none"> • Announce 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	<ul style="list-style-type: none"> • 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 players 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 practice 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>.