

F R O S T & S U L L I V A N

BEST PRACTICES

AWARDS

F R O S T & S U L L I V A N

2020 BEST PRACTICES AWARD

HUGHES[®]

An EchoStar Company

**2020 INDIAN VSAT SERVICE PROVIDER
COMPANY OF THE YEAR AWARD**

Contents

Letter of Congratulations.....	3
<i>Industry Challenges.....</i>	<i>4</i>
<i>Visionary Innovation & Performance and Customer Impact of Hughes Network Systems</i>	<i>6</i>
<i>Conclusion.....</i>	<i>8</i>
Significance of Company of the Year.....	9
Understanding Company of the Year.....	9
<i>Key Benchmarking Criteria</i>	<i>10</i>
<i>Visionary Innovation & Performance</i>	<i>10</i>
<i>Customer Impact</i>	<i>10</i>
Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices	11
The Intersection between 360-Degree Research and Best Practices Awards.....	12
<i>Research Methodology</i>	<i>12</i>
About Frost & Sullivan	12

Letter of Congratulations

I am proud to present you with this year's award for Company of the Year in the Very Small Aperture Terminal (VSAT) service provider industry.

Frost & Sullivan's global teams of analysts and consultants research a wide range of markets in multiple industries and regions, and identify companies that are true industry leaders, delivering best practices in growth, innovation, and leadership. These companies have a keen eye on the future and drive innovation that meets upcoming needs before they become commonly visible, often being first to market with new solutions. They focus on delivering the best products at optimal prices to maximize customer value and experience. Identifying these companies involves extensive primary and secondary research across the entire value chain of specific products and/or markets. Against the backdrop of this research, Frost & Sullivan is pleased to recognize Hughes Communications India Pvt Ltd as the Company of the Year in the VSAT service provider industry.

Delivering excellence worthy of the Company of the Year recognition is never an easy task, and it is made even more difficult considering today's competitive intensity, customer volatility, and economic uncertainty—not to mention the difficulty of innovating in an environment of escalating challenges to intellectual property. In this context, your receipt of this award signifies an even greater accomplishment.

Moreover, Frost & Sullivan recognizes that this accomplishment is the result of many employees, customers, and investors making daily choices to support the organization and contribute in a meaningful way to its future.

I enthusiastically acknowledge and celebrate these achievements, and wish you great success in the future. Frost & Sullivan is here to support you on any future endeavor.

Sincerely yours,



David Frigstad
Chairman

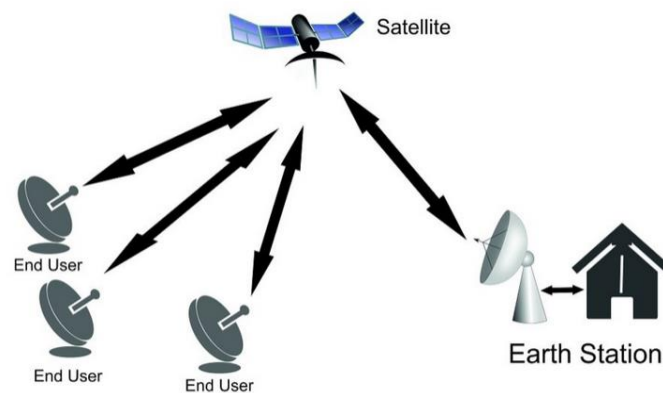
Background and Company Performance

Industry Challenges

Very small aperture terminal (VSAT) describes a satellite terminal that facilitates both one-way and two-way communications. With a small dish size, VSAT leverages both narrow and wide-band frequencies to support a wide range of services, including internet, local area network, conferencing, and video and data communications, among others.

One crucial advantage of VSAT is its ability to circulate data among remote hubs and terminals at any place around the Earth. Due to this transmission capability, Frost &

VSAT Communication System



Source: [corporatefinanceinstitute.com](https://www.corporatefinanceinstitute.com)

Sullivan recognizes VSAT to play significant roles in numerous applications, especially in the emerging markets. For instance, to roll out a high-speed broadband connection in rural areas, a fiber cable network would be very impractical as it cannot be stretched and will require re-amplification after every 40 to 60 miles. In addition, fiber networks are costly and require concrete deployment planning and extra budget and workforce for installation.¹ VSAT can bridge this connection barrier as it can directly transfer/receive data via satellites, eliminating the considerable cost and complexity of fiber installation. The VSAT equipment itself is cost-friendly, and with the deployment of low earth orbit, spot-beam, and high throughput satellites, the bandwidth has increased exponentially, while remaining cost-efficient. VSAT services are also playing a significant role in connecting remote and far-flung areas for applications such as banking transactions, high-speed maritime connections, military communications, and direct television, among others. Research from Frost & Sullivan emphasizes the importance of VSAT services, especially to the Army and Marine Corps' rapid deployment operations for communications with troops in hostile environments.² With massive technological advancements in satellite technology in recent years, the VSAT industry is booming.

¹ <https://info.aldensys.com/joint-use/3-challenges-of-fiber-deployment-and-how-to-improve-the-process>

² *US DoD Satellite Communications, Forecast to 2024* (Frost & Sullivan, February 2020)

In India, the department of telecommunications regulates VSAT services. In recent years, few global and domestic players have been operating in the VSAT space. After realizing the role of VSAT technology in areas such as maritime communication, in-flight connectivity, rural network coverage, and oil and gas, the Indian government has eased the regulatory restrictions in these areas, granting new licenses to expand the VSAT industry in India. Still, as most telecom companies import VSAT technologies, operating risks loom in the VSAT space. Indian Space Research Organization's Antrix provides the transponder space for VSAT equipment; however, the contracts are in foreign currencies, making it susceptible to fluctuations. In addition, even though aero and maritime connections have huge market potential in India, their approvals are dependent upon the government, and any changes in the regulatory environment can pose a significant threat to their development.

Besides maritime connections, the Indian banking industry also faces infrastructural challenges relating to a lack of connected infrastructure, high infrastructural cost, and irregular service distribution. VSAT services could greatly benefit the banking sector, allowing seamless satellite connections to distant areas. However, with approximately 70% people living in rural areas in India³, the majority of the rural population are either under-served or deprived of banking services. Furthermore, VSAT technology and equipment itself can pose a challenge during deployment. One of the significant limitations is latency, and the communications that require frequent back and forth could experience detrimental lags. Moreover, India lacks trained and skilled labor force in the satellite space, exacerbating the major problem regarding the lack of rigid satellite infrastructure in the country. As VSAT is an ideal choice for seamless connectivity in remote areas, the VSAT industry must focus on visionary and forward-looking innovation to circumvent the challenges surrounding them.

Visionary Innovation & Performance and Customer Impact of Hughes Network Systems

Hughes Communications India Pvt Ltd (Hughes), a majority-owned subsidiary of Hughes Network system, LLC (headquartered in Maryland, USA) and established in 1992, provides top-notch broadband satellite networks and services to the government and businesses across multiple vertical markets. Being a prominent player in the VSAT industry, the company has strengthened and supported multiple Indian sectors over the years, including banking, defense, telecom, education, and retail.

³ <https://www.thehindu.com/news/national/About-70-per-cent-Indians-live-in-rural-areas-Census-report/article13744351.ece>

Revolutionizing India's VSAT Market through Best-in-class Implementation

With the policy restructuring in India through economic reforms and privatization in 1991, Hughes was the first company to acquire a VSAT license in 1995. Since then, the company has been providing top-notch VSAT solutions and services for multiple private businesses and the government. Today, the company has positioned itself as one of the leaders in the VSAT industry, creating a significant impact on many industries. For instance, to circumvent the age-long remote connectivity challenge in the banking industry in India, the company provides fully managed and high-speed VSAT service. With the service, Hughes remotely connects the branches of more than 30 nationalized and private banks and offers last-mile connectivity to more than 50,000 branches across India. As a result of Hughes' highly reliable satellite connectivity to the rural branches, people residing in or around those areas can easily withdraw money even during the COVID-19 pandemic. In addition to bank branches, the company ensures rural access to banking and financial services by powering more than 60,000 off-site and on-site automated teller machines across urban and rural India. The company accomplishes an exceptional feat of addressing unmet rural connectivity needs by decentralizing its services across India and fostering a uniquely innovative culture.

Moreover, Hughes' VSAT services have revolutionized the Indian film industry over the past 15 years. Conventional movie distribution increases movie piracy, which causes heavy losses to the Indian media and entertainment industry every year. By creating a robust and secure movie distribution channel, Hughes' cutting-edge satellite technology leverages the second generation of digital video broadcasting (DVB-S2) technology standard to ensure high-quality satellite movie distribution to theatres across India. Today, its distribution network caters to more than 8,000 theatres in India. By adopting Hughes' state-of-the-art satellite solutions, the theatres witnessed revenue growth of up to 90%, while impressively cutting the piracy rates by more than 20%.⁴ The company exhibits a dominant market share in the digital cinema distribution category by partnering with large digital cinema networks such as UFO Moviez and Qube Cinemas.

Hughes is also the first company in India to obtain a flight and maritime connectivity license that allows the company to provide high-speed satellite connectivity to previously unconnected regions on land, air, and sea seamlessly. Besides these crucial areas, Hughes connects other sectors, including defense, oil & gas, and e-learning, with its leading-edge high-speed broadband connectivity via satellite communications. With an exceptionally innovative ability to deploy best-in-class satellite technology to the Indian masses, Hughes witnessed revenue of approximately an outstanding 400 crore rupees in the fiscal year 2019-20. Despite COVID-19's impact on the economy, the company grew at 14% year-on-year and occupied 40% of the Indian VSAT market share. It expects to capture 67% of the total VSAT market in India by the end of 2020 through synergistic partnerships with Indian telecom giants such as Airtel and Reliance Jio, among others.

⁴ <https://www.hughes.in/services/network-services/satellite/digital-cinema>

Frost & Sullivan commends Hughes for providing high-quality VSAT solutions to multiple application areas, gradually transforming the Indian satellite services sector to reach unprecedented heights.

Managed VSAT Services Maximizes Value and Enhances Customer Service Experience and Brand Equity

Hughes is gradually addressing the challenges in the satellite communications space in India. Hughes' best-in-class JUPITER™ system is a VSAT platform that leverages the wide-band standard, DVB-S2 extended, to achieve a throughput of a massive 300 Mbps. Enabling very high efficiency and capacity across Ka-band, Ku-band, and C-band, the system also proficiently supports backhauling for all generations of cellular technology. In India, the JUPITER™ system supports fourth generation long-term evolution backhaul for more than 100 sites, allowing high-speed connectivity, even in remote and rural areas. In addition, the company also provides satellite backhauls to more than 6,000 remote locations in India as a substitute to wired fiber technology for last-mile connections, thereby providing an exceptional connectivity advantage without requiring complicated installations. By enabling top-notch value transmission to customers, the company aims to provide very low latency satellite services in India, decreasing the latency from half a second to an outstanding 50 milliseconds.

Hughes also pioneers the deployment of managed wireless services in India. Through its HughesON service, the company leverages software-defined networking in a wide area network to manage network services over the cloud. To maintain cost-effectiveness, the company offers à la carte subscriptions to allow customers to customize their services according to their needs and requirements. Furthermore, Hughes leverages a highly skillful team of network and system engineers to provide centralized monitoring through its in-house network monitoring system called ProMonSys. The system provides a comprehensive status of network devices and also offers encyclopedic information regarding bandwidth usage at each node. For instance, in India, Hughes' managed services connect more than 25,000 petrol pumps through satellite, allowing seamless automation and value for the price at a mere \$15 – \$20 per month.

Furthermore, Hughes leverages various government initiatives and public-private partnership opportunities to provide remote connectivity through voice and broadband in India. The company aims to bring HughesNet® service to India soon, which witnessed an outstanding success in the United States of America, providing satellite internet service to more than 1 million subscribers. Besides its pioneering satellite services, the company fosters brand engagement through events and webinars, one of such examples being Hughes "Innovation Day". Recently, its webinar entitled "Innovation Day: What is Happening at the Edge" received enticing participation of more than 200 attendees across 100 organizations, even during the pandemic. Undoubtedly, the massive participation confirms Hughes' impact in the satellite space in India and in a global scenario. By nurturing innovative work culture, supporting local manufacturing and supply chain, and maintaining an exceptional quality-cost balance while offering its products and services, Hughes fosters long-lasting brand loyalty and equity among customers.

Frost & Sullivan applauds Hughes for its remarkable ability to provide maximum value to customers in terms of price and quality of service and believes that its innovative and high-quality offerings in the VSAT space has enhanced customer service experience and enabled brand loyalty.

Conclusion

Although companies operating in the satellite communications space consider India a prominent market in the very small aperture terminal (VSAT) space, the country faces considerable deployment challenges. One of the paramount challenges is regulatory restrictions and delays, making satellite licensing difficult. Also, India lacks sufficient skilled engineers to deploy and diagnose VSAT technologies. Traditional VSAT technologies suffer high latency and may pose problems to connections requiring frequent two-way communications.

Hughes Communications India Pvt Ltd (Hughes) offers top-notch VSAT services by maintaining an exceptional fusion between cost and quality. The company has revolutionized satellite communication experience across multiple market verticals and segments and has provided high-speed and low-latency wireless services to remote parts of India. It also effectively collaborates with the government and various businesses to seamlessly connect the under-connected areas and segments.

For its pioneering innovation, top-notch customer acquisition capability, and exceptional value propagation ability, Hughes earns Frost & Sullivan's 2020 India Company of the Year Award in the VSAT service provider industry.

Significance of Company of the Year

To receive the Company of the Year Award (i.e., to be recognized as a leader not only in your industry, but among non-industry peers) requires a company to demonstrate excellence in growth, innovation, and leadership. This excellence typically translates into superior performance in three key areas—demand generation, brand development, and competitive positioning—that serve as the foundation of a company’s future success and prepare it to deliver on the 2 factors that define the Company of the Year Award: Visionary Innovation and Performance, and Customer Impact).



Understanding Company of the Year

Driving demand, brand strength, and competitive differentiation all play critical roles in delivering unique value to customers. This three-fold focus, however, must ideally be complemented by an equally rigorous focus on Visionary Innovation and Performance to enhance Customer Impact.

Key Benchmarking Criteria

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated each factor according to the criteria identified below.

Visionary Innovation & Performance

Criterion 1: Addressing Unmet Needs

Requirement: Implementing a robust process to continuously unearth customers' unmet or under-served needs, and creating the products or solutions to address them effectively.

Criterion 2: Visionary Scenarios through Mega Trends

Requirement: Incorporating long-range, macro-level scenarios into the innovation strategy, thereby enabling "first-to-market" growth opportunity solutions.

Criterion 3: Implementation of Best Practices

Requirement: Best-in-class strategy implementation characterized by processes, tools, or activities that generate a consistent and repeatable level of success.

Criterion 4: Blue Ocean Strategy

Requirement: Strategic focus on creating a leadership position in a potentially "uncontested" market space, manifested by stiff barriers to entry for competitors.

Criterion 5: Financial Performance

Requirement: Strong overall business performance in terms of revenues, revenue growth, operating margin, and other key financial metrics.

Customer Impact

Criterion 1: Price/Performance Value

Requirement: Products or services offer the best value for the price, compared to similar offerings in the market.

Criterion 2: Customer Purchase Experience

Requirement: Customers feel they are buying the most optimal solution that addresses both their unique needs and their unique constraints.

Criterion 3: Customer Ownership Experience

Requirement: Customers are proud to own the company's product or service and have a positive experience throughout the life of the product or service.

Criterion 4: Customer Service Experience

Requirement: Customer service is accessible, fast, stress-free, and of high quality.

Criterion 5: Brand Equity

Requirement: Customers have a positive view of the brand and exhibit high brand loyalty.

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 practice 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 globe	<ul style="list-style-type: none"> Conduct in-depth industry research Identify emerging sectors Scan multiple geographies 	Pipeline of candidates who potentially meet all best-practice 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-practice 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-practice 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-practice 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-practice Award recipient	<ul style="list-style-type: none"> Review analysis with panel Build consensus Select winner 	Decision on which company performs best against all best-practice criteria
9 Communicate recognition	Inform Award recipient of Award 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 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 future 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 our 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, leading to 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, enables clients to 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 more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.