



2018 Global Big Data Analytics for Test & Measurement
Customer Service Leadership Award



2018
BEST PRACTICES
AWARDS

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Background and Company Performance

Industry Challenges

Big Data analytics for test and measurement continues to experience dynamic development due to the growing demand from businesses for interactive analysis and insights. Predictive analytics provides a measurable impact on a company's bottom line and a substantial competitive advantage. Big Data analytics detects patterns and extracts abnormalities benefiting companies in a variety of ways. Specifically, companies can improve operational efficiency and testing processes averting additional costs and saving investments. With real-time customization, productivity improvement, and resource optimization, companies can improve decision-making, minimize risks, and make better management decisions.

Frost & Sullivan forecasts the Big Data Analytics for test and measurement market growing at a compound annual growth rate of 28.2% from \$969.5 million in 2017 to \$2.4 billion in 2021.¹ Information accumulation and the need to improve operational efficiencies fuel the exponential growth.² Frost & Sullivan predicts that North America and Europe will more actively embrace Big Data analytics, with Asia Pacific and Latin American countries following suit by 2022. Also, the automotive, aerospace, and energy industries will reap the benefits from big data analytics by 2020.³

Despite the burgeoning demand for Big Data analytics across different sectors of the global economy, significant pitfalls and hurdles preclude many industry participants from increasing their market share.

Initial cost consideration is one of the most critical factors hindering the Big Data analytics market for test and measurement. C-suite executives are reluctant to invest in Big Data analytics when in-house systems, managed by their information technology departments, are available.

Wariness on the reliability of Big Data analytics presents another crucial challenge. In spite of growing awareness of its advantages, many companies are skeptical of big data analytics' reliability. At the same time, security concerns make companies reluctant to share their test data with Big Data analytics providers.

¹ See Frost & Sullivan's *Global Big Data Analytics Market*, NFAD-01, December, 2015; Frost & Sullivan's *Global Big Data Analytics Market for Test and Measurement*, NF7D-01, September, 2015; Frost & Sullivan's *Global Data Analytics for Industries Report, 2017-2023*, K096-01, April 2017; Frost & Sullivan's *Predictive Analytics in the Real World*, 9A37-00-23, October 2015

² Ibid

³ Ibid

DiagSense's Quality of Customer Service and Customer Impact

Excelling in the Big Data Analytics for Test and Measurement Market

Founded in 2013 in Tel Aviv, Israel, DiagSense quickly built-up an excellent reputation in the market by providing cutting-edge predictive maintenance solutions across multiple industries ranging from engines and pumps to automotive and pipelines. With its hands-on experience and excellent software expertise, the company demonstrates active development, determination, and agility to meet and exceed the distinct needs of its customers.

Today, DiagSense is an effective predictive software provider, ensuring its customers greater operational efficiency and reliability and also lower financial costs to companies operating plants or installations with critical electromechanical equipment.

At the heart of company's success is its diagnostic software technology based on a statistical algorithm consisting of such elements as artificial intelligence, machine learning, and data mining helping to process data from sensors more effectively. Unlike its competition, DiagSense offers scalable software without the need to install additional sensors or equipment and can address such pressing problems like overfitting, miss detection, and high level of false alarm. The company enables its customers to upgrade their monitoring system with real-time online prediction tools which identify any evolving failures in their systems at an early stage of development. The DiagSense's robust monitoring system runs 24/7 and does not require recalibration or changes in the monitored systems. At the same time, its system is self-adaptive to the changes in operating environment and can alert in case of sudden failures much faster than any existing monitoring system.

Several case studies prove the company's software quality and efficiency.⁴ For instance, in 2015, company's predictive software technology helped a national infrastructure corporation in Israel, with leakage detection in one of the longest oil pipelines in Israel.⁵ Due to DiagSense's monitoring system, the leakage detection time was less than 30 seconds in comparison to the in-house system which took over 5 minutes. It became possible due DiagSense's ability to monitor several signals of different pressures and flow.

Providing Superior Predictive Software Service

DiagSense offers a range of services designed to detect evolving malfunctions in mechanical systems and pipelines for power, chemical, pharmaceutical, and oil and gas operators and manufacturers.

The company's main services include offline predictive maintenance tools, leakages and abnormality detection, and cutting water loss.

⁴ <http://www.diagsense.com/wp-content/uploads/2015/07/DiagSense-presentation.pdf>

⁵ *ibid*

Offline predictive maintenance tools supply online comprehensive analytical reports on systems condition and potential risks of failure by analyzing historical Row Data. In turn, leakages and abnormality detection services allow to swiftly acquire data from sensors to analyze and make decisions about any potential abnormalities in the operating environment. At the same time, these services allow to quickly predict any evolving failures in mechanical systems and pipelines without incurring extra costs for their identification.

Finally, the DiagSense's cutting water loss service presents a comprehensive solution to reducing water loss in a timely and efficient manner. Firstly, it enables conducting field surveys to study existing water networks. Secondly, it helps to monitor and analyze water consumption data, maintain minimal water consumption, and spot and repair any potential water leakage in the system. Thirdly, it allows defining consumption zones and installing local meters and acoustic loggers.

Conclusion

The Big Data analytics market for test and measurement is very competitive. In a space where economic and technological hurdles limit many industry participants from increasing market share, DiagSense excels at offering top-notch preventive software solutions designed to detect malfunctions in mechanical systems and pipelines with precision and reliability. The company's diagnostic software technology ensures a high level of reduction in false alerts, effective performance in transient states, and 24/7 online operation without any need for calibration.

With its strong commitment to innovative practices and strong customer-oriented approach, DiagSense earns Frost & Sullivan's 2018 Global Customer Service Leadership award in the Big Data analytics market for test and measurement.

Significance of Customer Service Leadership

Ultimately, growth in any organization depends upon customers purchasing from a company and then making the decision to return time and again. The service experience is, therefore, a critical component of a company's efforts to retain customers over the long term. Through successful retention, companies enhance their brand, increase demand for their products, and differentiate themselves from the competition.



Understanding Customer Service Leadership

Customer Service Leadership is defined and measured by two macro-level categories: Quality of Customer Service and Customer Impact. These two sides work together to make customers feel valued and confident in their products' quality and long shelf life. This dual satisfaction translates into repeat purchases and a high lifetime of customer value.

Key Benchmarking Criteria

For the Customer Service Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Quality of Customer Service and Customer Impact—according to the criteria identified below.

Quality of Customer Service

- Criterion 1: Empowerment
- Criterion 2: Leverage of Customer Feedback
- Criterion 3: Speed/Timeliness
- Criterion 4: Frictionless Interaction
- Criterion 5: Technological Investment

Customer Impact

- Criterion 1: Price/Performance Value
- Criterion 2: Customer Purchase Experience
- Criterion 3: Customer Ownership Experience
- Criterion 4: Customer Service Experience
- Criterion 5: Brand Equity

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 recipient 	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"> • Inspire the organization for continued success • Celebrate the recipient's performance 	Announcement of Award and plan for how recipient can use the Award
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 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>.