



2018 Global Big Data Analytics
Customer Value Leadership Award



2018
BEST PRACTICES
AWARDS

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Background and Company Performance

Industry Challenges

The Big Data analytics (BDA) market can be divided into two major categories: data discovery and visualization (DDV) and advanced analytics (AA). Both these categories have captured the interest of investors globally and have attracted millions of dollars in funding committed to product enrichment, new sales, and distribution partnerships. Major consumers in the market range from insurance providers, banks, retailers, hospitals, health service and delivery, biotech companies to government, defense and technology-based companies. Across these industries, customers are beginning to understand the operational advantages of utilizing big data to make better business decisions, identify risks and resolve issues in a timely manner while delivering a more personalized experience.

One of the biggest challenges in doing so is data silos that make it difficult for organizations to build a big data picture. Thus, to make better business decisions and truly draw the benefits of BDA technology, organizations need to move away from operational, infrastructure, organizational and vendor silos. To obtain a coherent view of the data flowing into all the systems within a company, these silos must be replaced with a central platform that is well integrated.

Additionally, growth in the BDA market is hindered by home-grown solutions. BDA vendors are unable to make a business case to sell purpose built third-party solutions to potential customers who have invested so heavily in legacy solutions. These solutions usually do not have advanced functionality, are unable to integrate with newer BDA technology, and are difficult to scale. As a result, organizations often find themselves locked into point solutions with limited interoperability, restricting investment in the BDA market.

While vendors have become more proactive at promoting Big Data case studies and applications across many diverse industries, there is still a general lack of guidance to help customers gauge if those use cases could be applied in reality. Several vendors are marketing vertical-centric solutions, but successful application depends on various factors including effective data management, availability of skilled resources, industry or vertical expertise, budget and of course the actual business problem to be solved.

Despite all the challenges discussed above, there are vendors that have successfully overcome them and have developed powerful solutions for end-users across various industry verticals. Guavus' Reflex[®] platform delivers advanced analytics capabilities with rapid time-to-market and mission critical reliability, turning data into informative insights. The following criteria highlight the factors on which Guavus was assessed in order to identify the company as a Customer Value Leader in the global BDA market.

Customer Impact and Business Impact

Financial Performance

Guavus' machine learning and operational and behavioral analytics technologies are transforming the efficiency, scale and security with which customer data is managed and insights are drawn. Founded in 2006, the company has a strong foothold in the BDA communications service provider space. It has an enviable customer portfolio which includes six of the seven largest telecommunications providers worldwide and three of the four top cable operators in the world.

Recognized for its predictive maintenance, cyber security, network and telecom systems optimization capabilities, and subscriber intelligence, Guavus was acquired by multinational tech provider Thales for \$215 million in 2017 and is now a part of Thales group of companies. This acquisition is expected to help Thales better serve the BDA needs of their customers across the aeronautics, space, rail signaling, defense and security verticals.

Customer Service Experience

One of the key market challenges that limits growth in the BDA market is data silos. Organizations with silos usually operate with multiple technology solutions that are not interoperable, making it difficult for them to have a holistic view of their networks and customers to build a big data picture. Guavus is directly attacking the data silo challenge discussed above by offering a single solution, an advanced analytics platform that pools together network, machine and sensor generated data and provides context with customer experience and enterprise data.

Prior to adopting Guavus, a leading cable operator received a large number of customer service calls and the care operations team was unable to quickly differentiate between customer premise, cable modem termination system (CMTS), or video server equipment issues. Technical support teams would be dispatched to the homes of customers, only to realize that they were not equipped to resolve the issue, resulting in high customer dissatisfaction. Utilizing the Guavus Reflex platform with Guavus Live Ops customer care operations analytics, the cable operator was able to pinpoint the real issues more quickly and their customer satisfaction improved dramatically. By identifying customer issues accurately and resolving them in a timely manner, the cable operator was able to reduce \$70 million in operational costs in the first year alone.

Growth Potential

The Guavus platform streams real-time BDA, applies machine learning and AI to service provider requirements, operates analytics for networks, customer care, security and internet of things and subscriber analytics to deliver a personalized customer experience.

The Reflex platform processes over 510 billion records on a daily basis, monitors 500 million devices and analyzes over 5000 terabytes of data each day. The BDA vendor delivers its analytics solutions to more than 450 million subscribers across multiple industry verticals and use cases.

In the communications Industry, the BDA vendor has expanded its customer portfolio to include 6 of the 7 leading communications providers. One of Guavus' telecommunication customers was unable to understand customer preferences and provide advertisers with accurate information to run effective marketing campaigns. They were unable to correctly categorize internet traffic, track Ad-IDs and match it with subscribers to build accurate customer profiles. The Reflex platform provided content categorization on a per subscriber basis that was utilized by the telecommunications vendor to create personalized and relevant promotional offers. Guavus used machine learning algorithms to automatically categorize web pages and was able to achieve over 94% accuracy in terms of internet traffic categorization. The BDA vendor also managed to match individual behavior with subscriber information to build rich customer profiles and, as a result, improve the effectiveness of the telecommunication operator's marketing efforts.

Customer Ownership Experience

Across industry verticals, Guavus empowers organizations with customer analytics to create a more personalized experience and improve the efficacy of their marketing campaigns. The BDA vendor recently assisted a Tier 1 mobile vendor to improve customer conversion rates for a marketing campaign. The mobile operator was required to send messages to consumers' mobile phones, encouraging them to download a restaurant's free app. These marketing messages were initially sent to large audience segments, which made it costly and yielded a poor result of approximately 0.6 app downloads per every 100 messages sent. Utilizing Guavus' platform the, the mobile operator was able to segment the market effectively using both demographics and customer content interest. Based on this information, personalized marketing campaigns were launched increased the percentage of consumers who clicked on app download link from 2% to 8%. Additionally, the percentage of consumers who downloaded the application went up from .6% to 4.24%, resulting in a 7x increase in conversion rate.

Conclusion

The Big Data Analytics market is expected to grow at a CAGR of 29.7% through 2023. As a result of rapid market growth and the barriers to entry being incredibly low, there are several new vendors entering the DDV and AA segments. In order to thrive in this highly competitive space, a vendor needs to have a combination of the right technology, effective organizational and product strategy, efficient distribution and sales channel strategy as well as a sound go-to market strategy.

In this fragmented market, Guavus has delivered valuable services to customers across multiple verticals and use cases, resulting in a rapid expansion of its customer portfolio in a relatively short span of time compared to many of its peers.

For its strong overall performance, Guavus has earned Frost & Sullivan's 2018 Customer Value Leadership Award.

Significance of Customer Value Leadership

Ultimately, growth in any organization depends upon customers purchasing from a company and then making the decision to return time and again. Delighting customers is, therefore, the cornerstone of any successful growth strategy. To achieve these dual goals (growth and customer delight), an organization must be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.



Understanding Customer Value Leadership

Customer Value Leadership is defined and measured by two macro-level categories: Customer Impact and Business 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 Value Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Customer Impact and Business Impact—according to the criteria identified below.

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

Business Impact

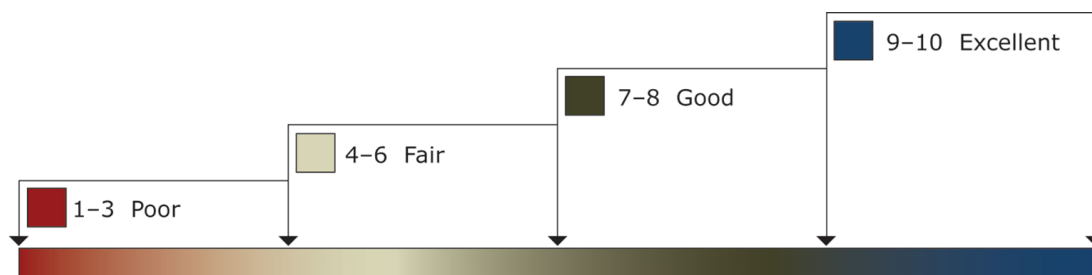
- Criterion 1: Financial Performance
- Criterion 2: Customer Acquisition
- Criterion 3: Operational Efficiency
- Criterion 4: Growth Potential
- Criterion 5: Human Capital

Best Practices Award Analysis for Guavus

Decision Support Scorecard

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard. This tool allows our research and consulting teams to objectively analyze performance, according to the key benchmarking criteria listed in the previous section, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation. Ratings guidelines are illustrated below.

RATINGS GUIDELINES



The Decision Support Scorecard is organized by Customer Impact and Business Impact (i.e., These are the overarching categories for all 10 benchmarking criteria; the definitions for each criterion are provided beneath the scorecard.). The research team confirms the veracity of this weighted scorecard through sensitivity analysis, which confirms that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

The results of this analysis are shown below. To remain unbiased and to protect the interests of all organizations reviewed, we have chosen to refer to the other key

participants as Competitor 2 and Competitor 3.

<i>Measurement of 1-10 (1 = poor; 10 = excellent)</i>			
Customer Value Leadership	Customer Impact	Business Impact	Average Rating
Guavus	9	9	9
Competitor 2	8	8	8
Competitor 3	7	7	7

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.

Business Impact

Criterion 1: Financial Performance

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

Criterion 2: Customer Acquisition

Requirement: Customer-facing processes support the efficient and consistent 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: Customer focus strengthens brand, reinforces customer loyalty, and enhances growth potential.

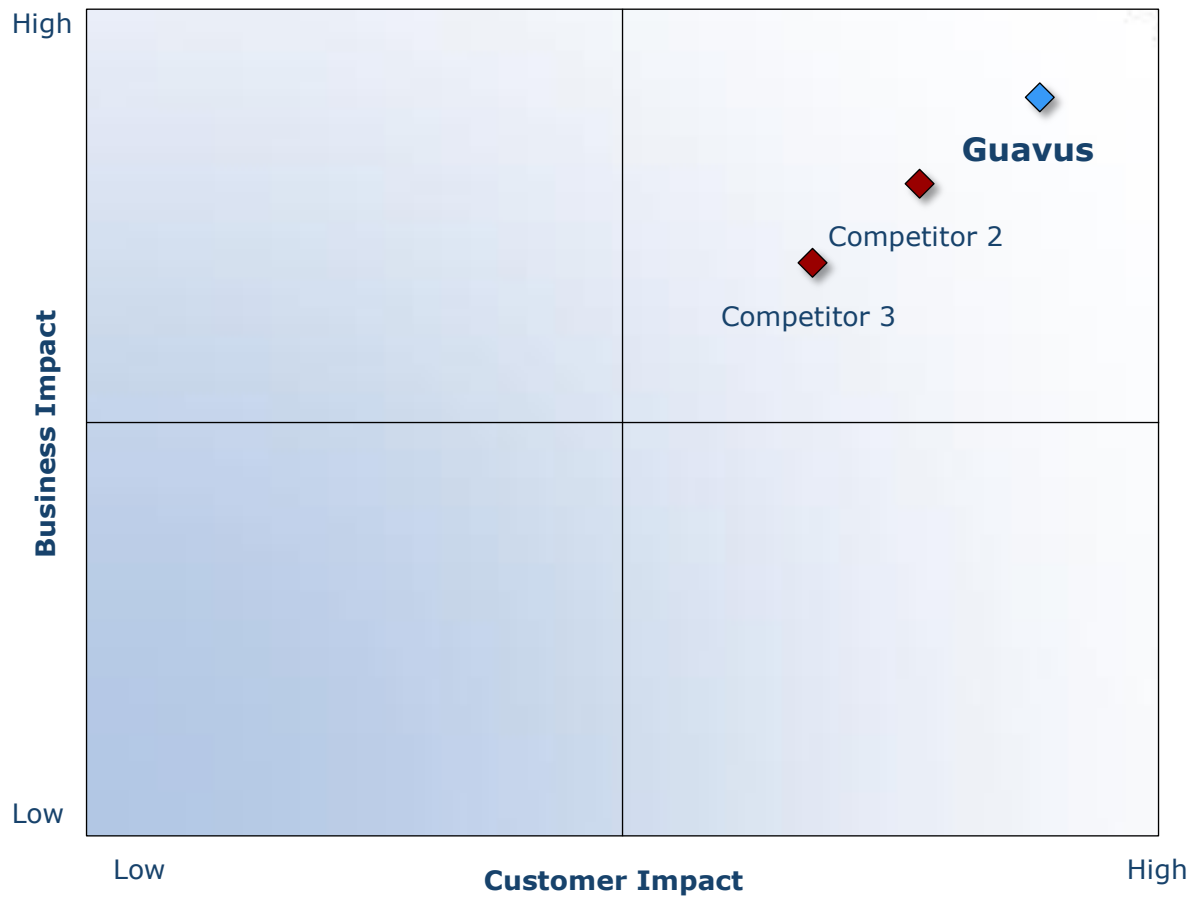
Criterion 5: Human Capital

Requirement: Company culture is characterized by a strong commitment to quality and

customers, which in turn enhances employee morale and retention.

Decision Support Matrix

Once all companies have been evaluated according to the Decision Support Scorecard, analysts then position the candidates on the matrix shown below, enabling them to visualize which companies are truly breakthrough and which ones are not yet operating at best-in-class levels.



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 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 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.



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>.