

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



**2020 GLOBAL AUTOMOTIVE
CLOUD SERVICES PLATFORM FOR MOBILITY
COMPANY OF THE YEAR AWARD**

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Background and Company Performance

Industry Challenges

As the automotive Internet of Things (IoT) market evolves, connected, automated, shared, and electric (CASE) offerings for vehicles will inevitably become the norm. Automotive cloud platforms are increasingly important in providing the connected lifestyle consumers demand at scale. According to Frost & Sullivan, the three most important themes expected to shape the future of mobility are fifth generation (5G) cellular technology, IoT, and human digital life.¹ However, significant tasks lay ahead for original equipment manufacturers (OEMs), Tier I suppliers, and mobility solution providers as they contend with the responsibility of crafting and implementing these services. To achieve success, they must wade through a mire of issues such as choosing from a veritable smorgasbord of platforms from which to proceed, the logistics of innovation and monetizing opportunities, and increasing operational efficiency to launch products quickly. These are but a few facets of the entire gem of CASE offerings.

Frost & Sullivan research analysts believe that automotive cloud and data management platforms will serve as the backbone of digitization initiatives in the industry.² Legacy technologies tend to create more barriers than solutions; they are expensive, typically limit the ability to innovate, take a long time to get to market, and pose further challenges to creating valuable new user experiences. A robust, flexible, and efficient solution is necessary to handle the heavy demands of any unique use cases. Frost & Sullivan concludes that an all-inclusive, customer-centric cloud platform offering a full-bodied collection of services along with reliable customer service, ease of use, and the ability to boost operational efficiency and cut costs, would be well positioned to gain market share.

Visionary Innovation and Performance/Customer Impact

Amazon Web Services (AWS), founded in 2006 by Amazon, is the world's most comprehensive and broadly adopted cloud provider. The company offers more than 175 fully-featured services from a massive ecosystem of data centers on a global scale—76 availability zones across 24 geographic locations—and boasts millions of clients around the world, ranging from startups to large enterprises and government agencies. AWS has delivered game-changing cloud solutions for more than 13 years for a wide variety of use case scenarios. With a large number of vendors and suppliers across an immense ecosystem to provide cloud services for CASE, Frost & Sullivan recognizes the way that AWS nicely bolsters its offerings with a dynamic focus on delivering what customers need.

Establishing Key Differentiators and Client Value

AWS offers a more extensive set of CASE-related cloud services than other competitors, such as AWS IoT, AWS Outposts, and AWS Wavelength. The company features broad and deep capabilities to enable automotive companies, including artificial intelligence and machine learning (ML), IoT, high-performance computing, purpose-built databases, and data analytics. These capabilities reinforce high performance, tight security, continuous

¹ Frost & Sullivan CES 2020 Roundup—A Roadmap for Mobility Packed with a Pinch of Realism, Disruption and Extraordinary Opportunities (Frost & Sullivan, January 2020)

² Global Automotive Data Management and Cloud Platform Strategies, 2019 (Frost & Sullivan, February 2020)

innovation, and the largest customer and partner community available anywhere in the world. ML products such as Amazon SageMaker, Amazon Rekognition, and voice services such as Alexa, further allow automotive OEMs and suppliers to create tailored brand experiences for clients. Furthermore, AWS IoT Greengrass provides edge computing capabilities to ensure a secure and consistent end-user experience, even if there is a loss of Internet connectivity.

AWS chalks its success up to five main differentiators: scalability, elasticity, innovation, cost savings, and global reach. With such a tremendous number of partners, AWS can respond to requests quickly, regardless of a client's needs or the level of innovation required. Moreover, AWS customers only pay for the services they use. Since its inception, AWS has dropped its prices 80 times. The company's solution architects work diligently with customers to identify specific business needs and objectives, often saving customers up to two-thirds of the initial cost of services.

More importantly, AWS creates clear value by solely focusing on its clients. There is an intense emphasis on working backward from the clients' needs—co-locating, co-developing, and co-investing with them in an entirely different kind of engagement model than that of other cloud providers. AWS's sizeable portfolio is the direct result of its devotion to working with clients to identify potential business problems, and then working backward to establish a solution in the form of a useable service. In 2018 alone, AWS performed nearly 1,957 updates and improvements to its roster of services. Engagement with its customer base prompted around 90% of those service updates.

Another way AWS creates value for a customer is through ease of use. Setting up a server typically takes 10 to 12 weeks, particularly for larger companies. Aside from having to pay extra for time and people to manage it, there are also costly aspects to consider, such as surrounding infrastructure, computer storage, database, analytics, and more. AWS already has these critical items in place. It can generate a model of a project within fifteen minutes or less, all at a low cost - with virtually no waiting or pre-requisites.

Furthermore, AWS places a direct emphasis on the bigger picture of interoperability within its platform to connect to the broader ecosystem of Amazon's offerings, such as its supply chain or Alexa. By maintaining this level of interconnectivity, AWS can provide a rich overall experience for its customer base.

Outstanding Customer Experience and Support

AWS demonstrates a clear leadership position in the automotive CASE industry by supporting the entire automotive value chain including auto-tech startups, Tier 1 suppliers, mobility service providers, fleet providers, and OEMs. AWS's partner-centric strategy supports several purpose-built, connected car and autonomous third-party platforms. Rather than becoming just another supplier in what is quickly becoming an oversaturated space, for its large, strategic opportunities, AWS seeks to partner with these clients on a long-term journey across many different verticals. Likewise, independent software vendors that began with AWS tend to remain with it because of its perceived culture of innovation and customer obsession. The top ten global OEMs and Tier I suppliers currently use AWS for meaningful, connected, autonomous, or customer

engagement workloads. Also, working with AWS means attaining access to experts vaunting more than 23 years of experience in the automotive market.

Customers utilizing AWS's platform can partake in additional services, including Executive Briefing Centers, during which customers share face time with AWS to work backward from a business problem to identify potential solutions. There is also a two- to three-day summit called Digital Innovation, free of cost to customers, during which they can focus on a specific, desired business outcome. Sessions such as these invariably lead to proof-of-concept opportunities for customers that they can leverage for facilitating the roll-out of future products.

CASE offerings are only part of the overall story. AWS specializes in product innovation, connected mobility, digital customer engagement, manufacturing and supply chains. Thus, it seeks to provide support on nearly every conceivable issue with which a customer might need assistance. To facilitate these objectives, AWS assigns a dedicated account manager to assist each customer at any time. The company also has support agreements with some of its larger customers to provide support beyond the account manager. Additionally, solution architects are available to provide assessments and actively seek out opportunities to reduce operational costs and increase revenue. These support offerings identify AWS services that are relevant to customer CASE needs and enable them to leverage those services in an impactful way. In light of the COVID-19 pandemic, AWS maintains reliable support to customers by utilizing Amazon Connections and Amazon WorkDocs, as well as their communications service Amazon Chime.

Business Position, Growth Prospects, and Geographical Presence

In 2019, AWS joined forces with Volkswagen, a venture that sees AWS powering Volkswagen's Industrial Cloud. Ford Motor Company and Autonomic both began a multi-year agreement with AWS to expand the availability of cloud connectivity services and connected car application development services. Lyft went all-in with AWS, taking advantage of its breadth of functionality and highly reliable infrastructure to enhance rider experience and accelerate self-driving technologies in the cloud. In addition, Nissan Motor Company extended its fixed on-premise high-performance computing systems to the cloud with Rescale and AWS.³

AWS grew 35% in sales to \$9 billion in the third quarter of 2019, during which the company accounted for around 13% of Amazon's total revenue for that quarter.⁴ According to a recent Frost & Sullivan research analysis on global automotive data management and cloud platform strategies, connected and autonomous services will generate reviews worth \$84 billion for global automakers by 2025.⁵ AWS's list of clients continues to grow, featuring industry powerhouses like BMW Group, Kia, Honda, Mazda, Uber, Elektrobit, Cox Automotive, and Edmunds.

³ <https://aws.amazon.com/automotive/?nc=sn&loc=1>

⁴ <https://venturebeat.com/2019/10/24/amazon-earnings-q3-2019/>

⁵ *Global Automotive Data Management and Cloud Platform Strategies, 2019 (Frost & Sullivan, February 2020)*

Conclusion

Automotive cloud platforms are an increasingly crucial component in delivering today's connected, autonomous, shared, and electric (CASE) offerings. Frost & Sullivan points out that original equipment manufacturers, Tier I suppliers, and mobility solutions providers need a robust, flexible, and efficient platform to achieve their business goals with the CASE industry.

With more than 13 years of experience and the most comprehensive suite of cloud services available today, Amazon Web Services (AWS) ably validates its leadership position in cloud support by enabling automotive companies to realize innovative solutions for unique use cases involving CASE. AWS's philosophy begins with the customer's problem, and then works backward to establish business solutions in the form of useable services. AWS currently offers more than 175 such services, all of which are initially conceived by customer needs and feedback. The company also offers unparalleled support in the form of dedicated account managers, solution architects, and a massive ecosystem of partners ready to assist on a global scale.

With its innovative solutions, customer-centric design, and strong overall performance, AWS earns the 2020 Frost & Sullivan Global Company of the Year Award.

Significance of Company of the Year

To receive the Frost & Sullivan Company of the Year Award requires a market participant 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 underserved 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 revenue, 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 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 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 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 practices criteria
9 Communicate recognition	Inform Award recipient 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 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 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>.