FROST & SULLIVAN

AT&T
RECEIVES THE 2023
COMPANY OF THE
YEAR AWARD

Identified as best in class in the North American vehicle connectivity solutions industry

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. AT&T excels in many of the criteria in the vehicle connectivity solutions space.

AWARD CRITERIA

Visionary Innovation & Performance	Customer Impact
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

Leading Vehicle Connectivity: AT&T

Headquartered in Dallas, Texas and founded in 1885, AT&T is setting the new standard for vehicle connectivity capabilities. Automotive original equipment manufacturers (OEM) have incredibly unique needs, with various data capabilities or connectivity requirements and differing time-to-market goals. Seamless and low-latency connectivity will play a vital role in helping OEMs reach their unique goals. AT&T focuses on empowering unmatched value through flexibility, bringing innovation into the automotive connectivity space by customizing solutions directly to OEMs' specific needs. As a result, AT&T has become the preferred partner and market leader within the vehicle connectivity solutions space and is creating the gold standard for vehicle connectivity.

AT&T Connected Solutions

A key to being successful in the Internet of Things (IoT) space is having a wide area of uninterrupted network connection. In line with this necessity, AT&T has over 33% growth in low power, wide area network connections, supported on AT&T's 5G network, the most reliable 5G network nationwide. This network backbone translates to value for the automotive industry, as AT&T's network covers most roadways in the United States, a key to providing connectivity in various locations. While the automotive industry is a leading industry adopting 5G capabilities in the IoT space, since vehicles have a long life, there will be vehicles with only 3G or 4G connectivity capabilities on the road for years to come. AT&T focuses on IoT connectivity to support both 4G and 5G-connected vehicles, keeping 4G vehicles connected while

helping to set the standard for future innovation and 5G connectivity.

The automotive industry requires flexibility and customization based on the specific vehicle application, location, and telemetry specifications. Furthermore, OEMs look for manners to better ingest, use, and monetize data. As such, AT&T's extensive IoT connectivity, expert support team, and broad partnerships with stakeholders across device manufacturing and IoT products empower it to be a true partner with vehicle OEMs and provide customization tailored to their specific needs. Its high quality, wide range network facilitates OEMs' various needs, including increased and efficient data monetization, powering entertainment features, allowing new features released over the air, enhancing vehicle services via connectivity, and providing cloud computing capabilities.

> *"AT&T focuses on empowering unmatched value through flexibility, bringing innovation into the automotive connectivity space by customizing solutions directly to OEMs' specific needs. As a result, AT&T has become the preferred partner and market leader within the vehicle connectivity solutions space and is creating the gold standard for vehicle connectivity."*
>
> *- Kamalesh Mohanarangam*
> *Research Manager*

Additionally, many automotive OEMs are innovating based on AT&T's connectivity, making it increasingly important to remove friction points across the process to ensure that data is increasingly consumable and more easily used and monetized. AT&T develops partnerships with leading stakeholders such as device manufacturers, chipset manufacturers, and content suppliers. As such, the company can both source devices on a customer's behalf or work directly with partners to develop a solution specific to a customer's needs, heightening overall value and showcasing its customization abilities. Finally, AT&T's commitment to quality led it to have highly secure IoT connectivity platforms integrated into its core network, ensuring data security at any level. As a result, AT&T's solutions are flexible, intelligent, and secure, empowering innovation across the industry by meeting customers' needs while safeguarding data security. This also allows AT&T to scale its business and repurpose solutions across its IoT base, lessening time to market while still empowering unmatched flexibility and customization.

Multi-Pronged Approach Enhancing Differentiation: Flexibility, Security, and Support

AT&T set out with the goal to be the best partner within the automotive connectivity space and has since become a market leader in the industry. The company attributes its vast success to its multi-pronged approach, encompassing its large investment in technology capabilities, vast and stable network, and customer support teams with expertise in the automotive industry. This approach differentiates AT&T from the competition, providing an all-encompassing quality and support for its IoT connectivity solutions. AT&T's quality is built on its network, which provides unmatched coverage and stability for its connectivity solutions. Moreso, the company invests in various networks and other go-to-market solutions, including expanding its network coverage, security capabilities, and anomaly detection. It has also built out its 5G SA core, allowing it to win new customer contracts and renew existing partnerships as automotive OEMs look to transition from 4G to 5G capabilities. Furthermore, AT&T helps to support the transition from 4G to 5G connection, analyzing 4G connected vehicles on a case-by-case basis to determine the easiest and most cost-efficient manners to switch out telematics control units or other hardware to 5G capabilities. As this is often a highly labor-intensive (and thereby cost-intensive) process, AT&T provides OEMs with

recommendations regarding whether they should invest in switching hardware, as well as the best manners to do so.

Many vehicle OEMs have expertise in vehicle manufacturing but do not have expertise in IoT, telemetry data, or connecting devices. AT&T works with these customers, creating recommendations or sourcing necessary hardware, ensuring that the associated telematics and diagnostics data is retrieved, and even building portals to allow clients to view and manage data and firmware. As such, AT&T customizes solutions tailored to customers' specific needs, offering as much or little professional services tailored to a customer's specific scenario. AT&T has a range of platforms, including connectivity management and platforms targeting different verticals. It also offers Wi-Fi hotspot solutions that can be integrated directly into a vehicle, as well as entertainment and infotainment capabilities. Moreso, its span of IoT solutions and capabilities are built around a core foundation of security that can evolve to meet the needs of both the device, the asset being integrated into, and different regulatory requirements that its customers need to support. While AT&T provides customization and flexibility based on each partner's specific needs, it looks at how to leverage innovation and solutions specific to one manufacturer to its other partners, empowering an industry-wide increase in connectivity and innovation. As a result, AT&T also provides a roadmap to customers with its existing services, giving customers additional areas to expand services as well as tailoring their own unique connectivity solutions. Finally, AT&T's dedicated team has expertise in the automotive industry, enabling support teams to be ingrained with automotive OEMs to understand their needs with direct knowledge of vehicle manufacturing processes to create the most effective solutions.

> *"AT&T set out with the goal to be the best partner within the automotive connectivity space and has since become a market leader in the industry. The company attributes its vast success to its multi-pronged approach, encompassing its large investment in technology capabilities, vast and stable network, and customer support teams with expertise in the automotive industry."*
>
> *- Kamalesh Mohanarangam*
> *Research Manager*

Expert Support Enabling Value

Pricing models of connectivity solutions have shifted toward on-demand and usage models in reaction to the increased connectivity consumption patterns, including traditional telematics capabilities, infotainment, and entertainment solutions. As such, there are two primary income levels for connectivity: wholesale virtual desktop interface with traditional telematics, safety, security diagnostics (bundled into the purchase price of the vehicle), and the added connected car solutions such as Wi-Fi, entertainment, infotainment, and audio streaming offered on a subscription basis. AT&T works closely with OEMs to analyze the subscription models for the added connected car solutions to identify manners to increase subscription take rates after the initial free trial period. Additionally, AT&T is helping OEMs determine the efficacy of bridging the added connected car capabilities into the initial purchase price of the vehicle, providing drivers access to added features without requiring a monthly subscription.

Furthermore, AT&T helps OEMs to bolster subscription rates by seamlessly integrating the sign-up process into the OEMs' applications. the company has made massive investments to streamline the enrollment and management process, enhancing the overall user experience to bolster subscription sign-ups. The

company created a mobile-first Wi-Fi enrollment application that streamlines the process for end users to sign-up and sign the terms and conditions and provides communication of the free trial expiration to empower easy sign-up for retail subscriptions. Furthermore, AT&T builds its enrollment application with an advanced application programming interface and software development kits that enable direct integration into an OEM's specific branded application, giving the user a single seamless interface in which to interact, thereby bolstering take rates around subscription services. Finally, AT&T does branding hand-in-hand with manufacturers to ensure a seamless experience under the OEM's specific branding and application configuration. As such, many OEMs recognize the importance of these solutions and are looking to continue their partnership with AT&T as they transition vehicles to 5G connectivity, as solutions for end-user support are already created under their brand.

Investing in the Future with Expansive Innovation

AT&T invests in exploration and innovation across various aspects of connected vehicles, ensuring high value to clients and high end user satisfaction. The company plans to support the entire transportation ecosystem, including vehicle connectivity enhancements, electric vehicle (EV) charging stations, and manufacturing facilities.

Vehicle Connectivity

AT&T plans to expand its vehicle connectivity capabilities into vehicle-to-vehicle and vehicle-to-connectivity infrastructure. This will pave the way for vehicle-to-everything communication, making vehicles able to connect with any other devices to empower increased user experience and heighten data analytics capabilities.

Electric Vehicles

With the industry-wide shift toward EVs and autonomous driving, EV and autonomous connectivity offers a large growth area in which software takes a leading role in redefining how vehicles interact with drivers, manufacturers, and the surrounding environment. While the EV itself offers an opportunity for connectivity growth in-line with mechanical vehicles, EV charging stations provide a unique growth opportunity, as drivers will spend longer periods charging vehicles when compared to filling up a vehicle's gas tank. AT&T is focusing on innovation to improve the charging experience, not only providing drivers with information regarding available charge stations but providing connectivity at the charging site to empower increased value, such as enabling connectivity for entertainment devices, Wi-Fi capabilities, or EV firmware updates while charging.

Next-Gen Transportation Solutions

AT&T focuses on Next-Gen Transportation solutions that evolve with great automation intelligence programming to help support the creation of fully autonomous vehicles. Manufacturers need different connectivity network capabilities at various stages of autonomy. As such, AT&T's Next-gen Transportation solutions can connect AT&T's partners to its multi-network capabilities, such as 5G, fiber, low-earth orbit satellite constellations, or Edge network, based on the manufacturer's needs and vehicle's autonomous capabilities. The company also invests innovation in artificial intelligence (AI) enabled vehicle solutions such as predictive and proactive safety controls. This innovation focuses on increasing safety on existing

vehicles but supports autonomous vehicle development as well, as predictive safety capabilities are imperative for the evolution of autonomous vehicles. The company also focuses on AI solutions for vehicle management for predictive network performance and anomaly detection to provide next-level security.

Unmatched Brand Loyalty

As the clear leader in the business, AT&T has over 112 million IoT-connected devices, with over 62 million attributed to connected vehicles. Furthermore, 70% of Fortune 500 companies and thousands of small and medium businesses are served by AT&T IoT connectivity solutions. The company has a 65% five-year compound annual growth rate on professional services, highlighting its tremendous growth potential. AT&T has put more than 140 billion primarily in its wireless and wireline networks in the United States and has invested heavily not only in fiber but in the spectrum and 5G capabilities, showcasing its commitment to remaining at the forefront of connectivity and powering the future of IoT capabilities. The company has customers in over 200 countries and territories globally with various IoT Sims. Moreover, AT&T provides support tailored to customers' requirements; some OEMs want to support their vehicles easily on one SIM and one carrier partner wherever the vehicle travels. AT&T supports this, re-engineering and re-credential SIMs as needed depending on the country or territory that they are moving.

As a result of its leading position, AT&T partners with over 60 brands in the automotive industry, including major vehicle OEMs such as Acura, Audi, BMW, Buick, Cadillac, Chevrolet, Ford, GMC, Dodge, Jeep, Kia, Mazda, Porsche, Toyota, Tesla, Nissan, Skoda, Western Star, Volvo, and Rolls Royce. As a result, about 80% of embedded connected cars in the United States are connected using AT&T's advanced network. This number is only increasing as vehicle OEMs are increasingly integrating connectivity capabilities into their vehicles. As a result, AT&T's automotive connectivity sector has experienced growth over the last 33 quarters and expects to see continued growth in line with automotive manufacturing. Its large growth and extensive customer loyalty are highlighted in AT&T's commitment to quality, thus simultaneously heightening its OEM customer's brand reputation. Many times, AT&T provides connectivity solutions, such as crash notification or emergency response, under the vehicle OEM's brand. As such, AT&T recognizes that its solutions represent the OEM's brand in the minds of the customer and thereby needs to provide the highest level of connectivity availability to bolster its partner's brand recognition for high-quality connection. The company's continued growth and ongoing partnerships with over 60 automotive brands showcase its success in supporting its partner's brand, thereby solidifying its leading position.

Conclusion

The increasing adoption of connectivity features, such as telematics, safety, security diagnostics infotainment, entertainment, and Wi-Fi, heightened by the transition to 5G networks, have led vehicle original equipment manufacturers (OEMs) to seek connectivity partnerships that can not only provide high-quality networks, but tailored and specific customization capabilities meeting their specific needs. AT&T rises to this challenge, maintaining the largest 5G network in the United States to provide a backbone for its connectivity solutions customized directly to OEMs' needs. The company's massive network maximizes roadway coverage, while AT&T's vast portfolio of vehicle-connected solutions provides unmatched connectivity. Furthermore, the company's support team's expertise in the automotive industry empowers best-in-class service, helping OEMs tailor solutions, and enhancing

connectivity capabilities, thereby increasing the transition to 5G networks while providing network support for 4G connected vehicles remaining on the road. The company's flexibility and customization are enhanced by its commitment to innovation, helping to support the industry-wide transition to electric vehicles and assisting in the creation of more connected and autonomous vehicles. As a result, AT&T is a market leader in the vehicle connectivity solutions space, partnering with 80% of vehicle OEMs and becoming the premier partner industry-wide.

With its strong overall performance, AT&T earns Frost & Sullivan's 2023 North American Company of the Year Award in the vehicle connectivity solutions industry.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends: Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first-to-market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at http://www.frost.com.

The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™.

Learn more.

Key Impacts:

- **Growth Pipeline:** *Continuous Flow of Growth Opportunities*
- **Growth Strategies:** *Proven Best Practices*
- **Innovation Culture:** *Optimized Customer Experience*
- **ROI & Margin:** *Implementation Excellence*
- **Transformational Growth:** *Industry Leadership*

The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- **Mega Trend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**