

FROST & SULLIVAN

SIBROS

2022
ENABLING
TECHNOLOGY
LEADER

NORTH AMERICAN
OVER-THE-AIR AUTOMOTIVE
MANAGEMENT SOFTWARE 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. Sibros excels in many of the criteria in the OTA automotive management software sector.

AWARD CRITERIA	
<i>Technology Leverage</i>	<i>Customer Impact</i>
Commitment to Innovation	Price/Performance Value
Commitment to Creativity	Customer Purchase Experience
Stage Gate Efficiency	Customer Ownership Experience
Commercialization Success	Customer Service Experience
Application Diversity	Brand Equity

A Broad Portfolio Based on Customer Needs

Founded in 2018 and headquartered in San Jose, California, Sibros is a provider of over-the-air (OTA) software update and data management solutions for the automotive industry. The company designs paradigm-shifting technology that enables original equipment manufacturers (OEMs) with software updates, precision data logging, and remote commands and diagnostics for all in-vehicle electronic control units (ECU) via its Deep Connected Platform™ (DCP). Sibros’ DCP and business model enables innovation and disrupts the traditional engineering consulting model by leveraging best-in-class technology to accelerate and support networking, vehicle-wide data logging, and system-wide software updates. This innovative technology combination enhances Sibros’ connectivity use cases to include

features such as location-based services, driver behavior analysis, usage-based insurance, in-vehicle marketplaces, and fleet management.

Sibros DCP was developed over the last four years by world-class subject matter experts and is one of the industry’s first vehicle-wide ASIL-D certified OTA solutions. DCP was designed from the ground up to provide OEMs with a holistic and purpose-built solution that solves all problems associated with V2C technology. Sibros’ DCP brings complete vehicle OTA software updates, live data collection, and analytics commands together on a single

“By integrating its OTA Deep Logger, OTA Deep Updater, and OT Deep Command Manager on S32G2, Sibros enables its customers to prototype, test, and deploy advanced connectivity functionality rapidly, shortening time to market and advancing OTA software and data management technology.”

**- Samantha Fisher,
Best Practices Research Analyst**

vertically-integrated platform. The company is continuously building on its technology in adherence to key safety and security requirements such as ISO 26262 functional safety standards, UNECE WP.29 cybersecurity regulations, and GDPR for data privacy policies among others required of automakers to operate in most countries. The solution securely manages all software and data in vehicles, between vehicles, in networks, and in the cloud with Sibros Armor, an IEEE-compliant Uptane security framework designed to provide a compromise-resistant defense against various cyber-related attacks and eliminate any single point of failure. This protection extends from research and development to vehicle end-of-life to enable the connected vehicle ecosystems of 2022 and beyond.

With its foundational platform in place, Sibros has assembled a comprehensive embedded software and cloud applications portfolio that bridges industry gaps and provides automakers everything needed to accelerate connected vehicle success with no additional hardware or intensive integration required. This portfolio includes products such as OTA Deep Logger, OTA Deep Updater, and OTA Command Manager.

- **OTA Deep Logger** is a comprehensive data logging solution that extracts millisecond-level data directly from every vehicle ECU and transmits it to the cloud in real-time to support various use cases such as data visualization and plotting, machine learning, and fleet management dashboards, including critical features such as proprietary data logging hardware and tools, dynamic log configuration and datasets, and customizable logging parameters and filters.
- **OTA Deep Updater** is an end-to-end solution that manages update packages and deployments, analyzes fleet data, and performs full vehicle firmware and software updates. It also includes notable tasks, such as fully customizable vehicle precondition checks, secure communication channels, and package download control and configuration.
- **OTA Command Manager** empowers owners and OEMs with remote, on-demand configurable command and diagnostic services for every stage of the vehicle lifecycle, including research and development, manufacturing, pre-sale, post-sale, and decommission. The module also includes command scheduling, live command status, and diagnostic file management.

Customers leverage DCP across various stages of the vehicle lifecycle, achieving broader organizational objectives for multiple use cases ranging from pre-production to post-sale. By integrating OTA Deep Logger, OTA Deep Updater, and OTA Command Manager, Sibros enables its customers to rapidly prototype, test, and deploy advanced connectivity functionalities, shortening time to market, advancing OTA software and data management technology, and supporting hundreds of connected vehicle use cases. These modules are deployable on cores with Linux, Free Real-time Operating System, or Automotive Open System Architecture Operating System.

Frost & Sullivan's research identifies Sibros as a leading partner, leveraging cutting-edge methodologies to advance the OTA automotive management software market.

Building Trust through a Customer-centric Approach

Sibros' approach goes beyond its extensive expertise and best-in-class capabilities, with customer value as a strategic imperative. Through the years, the company has earned a sterling reputation for supporting its clients' ambitions for a more connected future. Sibros' platform scales to fit customer-

specific needs. It offers the flexibility, agility, and customization required to support fluid, timely decision-making and delivers the necessary tools and infrastructure needed to succeed. Sibros' transformative, software-first approach empowers OEMs to address hundreds of connected vehicle use cases, including service/fleet management, predictive maintenance, personalization, and data monetization. Sibros utilizes crowdsourcing features to lay the technological foundation for its customers and enable all key connected capabilities from day one, allowing OEMs to focus on creating key differentiators for their products.

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Sibros builds its technology around a growing ecosystem of partners, including major cloud platforms and key chipset and hardware providers, to evolve alongside market needs and trends. For example, the company announced multiple technology collaborations with major silicon and chipset providers including Renesas, STMicroelectronics, and NXP. As vehicle network architectures continue to grow in complexity and interdependence across a large set of disparate ECUs, these partnerships empower OEMs with a single system that manages 100% of their essential software and data in a safe, secure, and reliable manner.

Sibros has also announced partnerships with automotive component suppliers including Pricol and ACTIA. Pricol is one of India's leading automotive technology companies providing Driver Information Systems, Sensors, and Telematics to automotive OEMs in over 45 countries. Sibros' connected all-in-one platform complements Pricol's suite of Driver Information Systems and Telematics to offer end-to-end OTA software and data management solutions to joint automotive customers in the ASEAN (Association of Southeast Asian Nations) region. ACTIA is a Swedish electronics manufacturer and global connectivity technology company where Sibros has integrated its OTA firmware modules (Updater, Logger) on the company's CU6 TCU hardware, a telematics control unit featuring ready-to-implement telematics services. These integrations deliver innovative out-of-the-box solutions that meet customer requirements with minimal integration to reduce time-to-market while continuing to meet global safety, security, and data privacy standards. Sibros' seamless and frictionless approach and its close relationships position it as a partner of choice.

Positioned for Growth

Since its inception, Sibros' commitment to excellence and customer-centric framework has led to its coveted preferred partner status. Over the years, it has added a range of new customers to its established base which includes legacy car, truck, bus, two-wheeler, and tractor manufacturers, as well as electric, solar, and commercial vehicle startups across different regions. In 2022, Sibros announced that Bajaj Auto, the world's most valuable two-wheeler company, has deployed DCP on its flagship Chetak electric scooter. Bajaj is a significant performer, with over three million units produced per year, earning it a strong reputation with other manufacturers in Asia. This partnership represents strategic excellence on Sibros' part as it provides key visibility in the Asia and Asia-Pacific regions. Additionally, in January 2022, Sibros announced its \$70 million Series B funding round, which it will use to accelerate its

technology and meet the strong global demand for large deployments of its deep connected vehicle software and data management platform. When combined with its continued recognition via industry awards, Sibros stands apart from the competition as a strong performer.

Frost & Sullivan believes the company is well-positioned to drive the OTA automotive management software industry into its next growth phase, capturing market share and sustaining its leadership in the coming years.

Conclusion

Technology integration is a critical success factor for the over-the-air (OTA) automotive software and data management industry. Yet, with many options available, market stakeholders need to leverage the most appropriate and best technology-based solutions to optimize their market impact. With its Deep Connected Platform™, Sibros delivers OTA software and firmware updates, high-quality, event-driven data collection, and user-facing diagnostic command transmissions. Sibros stands out from competitors based on its commitment to innovation, creativity, and its ability to launch new solutions with far-reaching impact and application. The company leverages best-in-class technology, such as the NXP S32G2, to accelerate key applications, such as networking and vehicle-wide data logging. This technology combination expands Sibros' connected use cases to include location-based services, driver behavior analysis, and fleet management. The company has combined its technology focus with customer-centric values to earn a solid reputation in the OTA software update and data management market. With its strong overall performance, Sibros earns Frost & Sullivan's 2022 North American Enabling Technology Leadership Award in the over-the-air automotive management software market.

What You Need to Know about the Enabling Technology Leadership Recognition

Frost & Sullivan's Enabling Technology Leadership Award recognizes the company that applies its technology in new ways to improve existing products and services and elevate the customer experience.

Best Practices Award Analysis

For the Enabling Technology Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Technology Leverage

Commitment to Innovation: Continuous emerging technology adoption and creation enables new product development and enhances product performance

Commitment to Creativity: Company leverages technology advancements to push the limits of form and function in the pursuit of white space innovation

Stage Gate Efficiency: Technology adoption enhances the stage gate process for launching new products and solutions

Commercialization Success: Company displays a proven track record of taking new technologies to market with a high success rate

Application Diversity: Company develops and/or integrates technology that serves multiple applications and multiple environments

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™.

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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)

