

ELEKTROBIT RECEIVES THE 2023 ENABLING TECHNOLOGY LEADERSHIP AWARD

*Identified as best in class in the global automotive
operating systems 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. Elektrobit excels in many of the criteria in the automotive operating systems space.

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

Market Overview

Consumer expectations for added features that improve safety, comfort, and accessibility continue to increase in connected cars. Even with the number of features that evolved over time, electrical/electronic (EE) architecture experience drawbacks with more complexity, weight, and added cost.¹ The primary drawback of electronically controlled features is they require separate electronic control units (ECU) and supporting communication interfaces. To manage the concerns surrounding the rapid increase in new capabilities while maintaining customer requirements, automakers are rethinking the legacy approach and architecture design.² For example, the introduction of battery-electric and software-defined vehicles requires original equipment manufacturers (OEM) to work from the bottom/up when reshaping vehicle EE architecture. Software and connectivity inevitably redefine the mobility space from growth drivers that include modernized mobility functions such as electrification, advanced driver assistance systems, user experience, comfort, security, and, most importantly, safety. Over time, connected vehicles will incorporate updated EE architectures with new features, requiring automakers to design robust automotive operating systems (OS).

Enabling the Transition to Software-defined Mobility

Founded in 1988, Elektrobit is a global company that provides connected and embedded software products to the automotive industry. The company is a leader and forerunner in the automotive software

¹ Global Vehicle Electrical/Electronic (EE) Architecture Strategic Insights and Growth Opportunities (Frost & Sullivan, December 2022).

² Ibid.

space with over 35 years of experience and offices across 11 countries. Its innovative software powers over five billion devices in more than 600 million vehicles globally.

Elektrobit places a high entry barrier for emerging competitors. The company's mission establishes itself as a go-to-market partner. Backed by world-class experts, Elektrobit developed its products and services

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- Steven Lopez
Best Practices Research Analyst

over the last three decades. The company refined its philosophy to embody an open-source and customer-centric approach to designing automotive OS for automakers. These systems allow the company to continuously build its solutions and solidify a foundation for the future of the automotive industry. Its solutions offer flexibility for various applications that enhance car infrastructure software, connectivity, security, autonomous driving, and user experience.

Elektrobit offers full-service automotive software purpose-built to bridge industry gaps. Its products and services allow the creation of automotive OS in software-defined vehicles. Because of the market's rapid entry of connected vehicles, automakers are left to develop automotive OS designed upon new EE architectures alone. Elektrobit understands the overwhelming task of developing automotive OS; however, with its years of automotive expertise, cutting-edge software, and integration services, the company is making it possible for automakers to accelerate the development of new platforms. Frost & Sullivan finds that Elektrobit enables the transition to software-defined mobility by providing the tools necessary to build function-specific automotive OS through a collaborative process with OEMs.

Building Trust through a Customer-centric Approach

Elektrobit helps customers globally with its support, delivery, and licensing portals. Customers have access to technical support where they can manage and access requests 24/7, download products, and achieve training course licenses. Furthermore, the company offers clients online access to essential resources, including blogs and webinars, allowing clients to stay informed and strengthen customer relationships.

Elektrobit meets with customers to assess their specific needs and develop tailored solutions with roadmaps for seamless execution. Further implementation of its open-source approach establishes ongoing trust with customers for long-lasting relationships extending throughout the service lifecycle. Elektrobit remains actively involved with industry standards and certifications, including AUTOSAR, CAN, GENIVI, LIN, MOST, NDS, and OSEK.³ Furthermore, quality best practices are an essential part of the company's foundation, which it achieves through its Quality Management System. Elektrobit regularly ensures compliance with quality management, information security, cyber management, and functional safety.⁴

Positioned for Growth

Since Elektrobit's inception, the company has expanded to 24 offices globally with about 3,500 employees.

³ <https://www.elektrobit.com/about/> (Accessed August 2023).

⁴ Ibid.

As co-creators of future mobility, the company continues to garner a strong customer base through partnerships, project collaborations, and long-lasting relationships in the automotive industry. Over the past three years, the company increased its performance value and commercialization success. One noteworthy partnership is with Jaguar Land Rover (JLR). In 2021, Elektrobit provided its engineering

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expertise to JLR, creating a strong team for feature enhancements. In 2023, the company announced JLR’s success since using Elektrobit’s software platform. By incorporating Elektrobit’s services into its vehicles, JLR is building its next-generation electrical architecture, which will be readily available in its 2024 models.⁵ Moreover, the company played a crucial role in Sony Honda Mobility (SHM)’s new electronic vehicle prototype, AFFELA brand vehicles. It created the software architecture for AFEELA, integrating its services for the cockpit system as well as enabling SHM to leverage the entire Sony

ecosystem and enhance the user experience.⁶

Elektrobit’s sterling reputation and customer-centric framework led to its coveted preferred partner status. Over the years, it has worked with a range of leading automotive OEM partners, such as Ford, General Motors/Cadillac Escalade, SHM, Continental, and Volkswagen. Elektrobit is a subsidiary of Continental and receives positive feedback from their partnership.

“Elektrobit and Continental have worked together on many high-performance computer projects. We’re now pleased to extend our field-tested products and expertise to all OEMs and Tier 1s in a single, highly integrated solution. This is the most highly integrated controller and software framework commercially available for HPC-based architectures and will allow our customers to accelerate their software-defined vehicle efforts.”

- Martin Schleicher, Head of Software Strategy, Continental⁷

Elektrobit continues growing its partnerships with joint ventures and mobility alliances. In 2022, the company joined the Eclipse Foundation’s Software Defined Vehicle Working Group, allowing Elektrobit to push its open-source approach and drive innovation for next-generation mobility solutions. For example, in 2023, the company launched EB corbos Linux, an industry-first cloud-ready software package built with Ubuntu open-source OS. The software is customizable, meets security and industry regulations, and provides OEMs and Tier 1 suppliers for developing electronic ECUs in software-defined vehicles.⁸ In August 2023, Elektrobit announced its collaboration with NXP S32G3 vehicle network processors. The combination of Elektrobit’s AUTOSAR compliant software and NXP processors accelerates time to market as well as reduces time and development costs for carmakers and suppliers. The company highlights that NXP S32G3 is suitable for next-generation architectures and that its software, including EB corbos Linux,

⁵ <https://www.elektrobit.com/newsroom/jaguar-land-rover-selects-elektrobit-as-provider-for-next-gen-vehicle-software-architecture/> (Accessed August 2023).

⁶ <https://www.elektrobit.com/newsroom/elektrobit-reveals-sony-honda-ev-prototype/> (Accessed September 2023).

⁷ <https://www.elektrobit.com/success-stories/automotive-software-stack-enables-continental-caedge-framework/> (Accessed August 2023).

⁸ <https://www.elektrobit.com/products/ecu/eb-corbos/linux/> (Accessed August 2023).

helps to make this software-hardware combination excel among competitors.⁹ Frost & Sullivan believes the company is well-positioned to drive the automotive OS space 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 automotive 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 connected software, Elektrobit enables automakers globally. The company stands out from competitors based on its commitment to innovation, creativity, and ability to launch new solutions with far-reaching impact and application. Elektrobit provides flexible and pioneering solutions for car infrastructure software, connectivity, security, autonomous driving, and enhancements for the user experience. The company helps create innovative software architectures and allows original equipment manufacturers to enable existing software-defined vehicle automotive operating systems (OS). Powering over five billion devices in more than 600 million vehicles globally, the company is a global vendor in the automotive industry. It pairs its technology focus with customer-centric values, thus earning a solid reputation in the automotive market. With its strong overall performance, Elektrobit earns Frost & Sullivan's 2023 Global Enabling Technology Leadership Award in the automotive operating systems industry.

⁹ <https://www.elektrobit.com/newsroom/elektrobit-and-nxp-semiconductors-collaborate-on-s32g3-processors-software-enablement-for-sdv/> (Accessed September 2023).

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

