

F R O S T & S U L L I V A N

2024 COMPANY OF THE YEAR

*IN THE GLOBAL
SOFTWARE-DEFINED
VEHICLE INDUSTRY*

F R O S T & S U L L I V A N

BEST
2024 PRACTICES
AWARD

Valeo

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. Valeo excels in many of the criteria in the software-defined vehicle space.

AWARD CRITERIA	
<i>Visionary Innovation & Performance</i>	<i>Customer Impact</i>
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

Challenges, Innovations, and the Path Forward in the Software-defined Mobility Sector

The connectivity revolution propels a transformative journey into an era defined by the convergence of energy, big data, and computational intelligence. The revolution reinforces data interactivity, harnessing effective data utilization to reshape automotive technologies, infrastructures, and research and development (R&D) models.¹ Software-defined vehicles (SDV) are significant in this transformation, indicating a paradigm shift that decouples network functions from proprietary hardware appliances. This pivotal shift allows for the parallel development of vehicles in physical and digital spaces, with software emerging as the primary differentiator. Notably, the commercialization of software maximizes the lifecycle and value cycle of vehicles, driving the automotive industry into uncharted territories of innovation and consumer-centricity. Unlike traditional vehicles, which predominantly rely on hardware, SDVs leverage advanced software algorithms and connectivity to enhance performance, functionality, and user experience, enabling rapid development and deployment of new features and transforming the automotive industry’s timeline from years to months.

Frost & Sullivan points out that navigating the complexities of automotive software development presents formidable challenges. While smartphone software successfully addresses technical complexities through standardization and abstraction, the automotive software sector grapples with high heterogeneity and interoperability issues. Each subsystem within a vehicle presents a unique integration challenge, further

¹ https://www.researchgate.net/publication/359462389_Impact_Challenges_and_Prospect_of_Software-Defined_Vehicles

compounded by stringent safety standards. SDVs also generate vast amounts of data, posing significant challenges regarding data privacy. It is quite imperative to develop robust privacy frameworks to ensure the responsible collection, storage, and use of data, safeguarding user privacy rights in the automotive sector.

The automotive industry requires software-oriented companies that can also supply the hardware. Currently, the hardware serves as the distinguishing factor, while the software is often offered as a complementary service. Suppliers, too, must cater to future needs by providing upgradeable compute architectures, ensuring that new features can be seamlessly integrated as long as the hardware remains capable or supportive. They must demonstrate a commitment to building ecosystems or playing vital roles within existing ecosystems. Original equipment manufacturers (OEM) understand the importance of establishing robust environments and networks of partners to address the multifaceted challenges of automotive software development. By collaborating with diverse stakeholders, including software developers, suppliers, and research institutions, OEMs can leverage collective expertise and resources to overcome technical hurdles, ensure interoperability, and meet evolving customer demands.

The partnerships between OEMs and technology (tech) companies indicates a new era of innovation in the automotive industry.² It allows OEMs to tap into new revenue streams and business models enabled by software-driven services and solutions. From subscription-based features and over-the-air (OTA) updates to connected services and mobility platforms, software-enabled offerings present lucrative opportunities for OEMs to enhance customer engagement, generate recurring revenue, and differentiate their products in the market.

Amidst the automotive transformation, Valeo is a significant innovator, capitalizing on the increasing significance of software to redefine mobility and create unparalleled opportunities in the automotive industry. Frost & Sullivan applauds the way that the company proactively engages in ecosystem-building efforts to foster collaboration and innovation across the automotive industry.

Integrating Disparate Systems with Revolutionary Mobility Software Solutions

Founded 1923 in Saint Ouen, France, Valeo is at the forefront of the automotive industry's transformative journey toward SDVs. With its headquarters in Paris, France, Valeo leverages more than three decades of experience providing cutting-edge embedded software solutions to foster safer, cleaner, and more affordable mobility solutions globally. Currently, the company dedicates more than 40% of its 20,000-strong engineers to software and systems development.³ Structured around four meticulously crafted business groups, Valeo offers innovative solutions tailored to address the evolving demands of the automotive landscape - including driving assistance systems, powertrain systems, thermal systems, and visibility systems.

Valeo showcases its pioneering efforts in addressing customers' unmet needs within the automotive industry with the launch of Valeo anSWer, a revolutionary solution poised to redefine the future of mobility. Building upon decades of expertise and innovation, the company recognized the pressing need

² <https://cds.frost.com/p/297230703#!/ppt/c?id=PF1D-01-00-00-00&hq=software%20defined%20vehicl>

³ <https://www.valeo.com/en/valeo-answer/>

for a comprehensive, integrated software platform that seamlessly integrates diverse automotive functionalities. Valeo anSWer represents a paradigm shift in automotive software solutions, offering an open, scalable, and modular framework encompassing three significant pillars: end-user applications, middleware, and integration and engineering services.

With best-in-class end-user applications spanning advanced driver assistance system (ADAS), intelligent lighting, electric powertrain, and thermal management, Valeo anSWer demonstrates the company's commitment to delivering innovative solutions that redefine the automotive landscape. Likewise, engineering services, grounded in years of expertise and industry-leading capabilities, provide invaluable support to OEMs facing challenges in developing and integrating complex systems into their vehicles. By adopting an agnostic and unique "white-box" software approach, Valeo ensures seamless integration with the entire software ecosystem, fostering collaboration and innovation across the automotive and tech industries. The middleware, called the Valeo's operating system (VOS), provides a robust framework that enables communication between applications and the system on a chip. By abstracting the application from the underlying HW so developers can focus on the actual feature development and user experience while OEMs have the freedom of choice of SOC (System-On-Chip), the VOS ensures the system functions harmoniously, optimizing safety, cybersecurity, and OTA updates.

The automotive industry faces the pivotal challenge of integrating disparate systems, such as infotainment and ADAS, into a cohesive and seamless architecture. Valeo acknowledges this challenge and proactively develops software solutions, particularly its groundbreaking middleware, to create a virtual compute cluster within vehicles.

Frost & Sullivan notes that Valeo's expertise in mixed-criticality systems addresses another vital need in the industry: ensuring the continuous operation of safety-critical functions even in the event of non-critical application failures. Through meticulous software design and engineering, the company's middleware ensures strict separation between safety-critical and non-critical applications, safeguarding vehicle integrity and enhancing overall safety. This innovative approach empowers OEMs to build applications without limiting the number of electronic control units, thereby streamlining development processes and reducing time-to-market.

"Valeo showcases its pioneering efforts in addressing customers' unmet needs within the automotive industry with the launch of Valeo anSWer, a revolutionary solution poised to redefine the future of mobility. Building upon decades of expertise and innovation, the company recognized the pressing need for a comprehensive, integrated software platform that seamlessly integrates diverse automotive functionalities."

- Kamallesh Mohanaragam
Research Manager

Frost & Sullivan feels that Valeo's focus on scalability and adaptability underlines its commitment to proactively navigating future challenges. By embracing an agnostic and unique open-source software approach, the company ensures seamless integration with the entire software ecosystem, positioning itself as a trusted partner for OEMs and industry stakeholders.

Frost & Sullivan commends Valeo's approach to understanding industry challenges and devising best-in-class solutions, driving innovation, and shaping the future of mobility. By offering a holistic solution for SDVs, Valeo empowers OEMs to navigate the complexities of modern vehicle architecture and seize new opportunities in the

“Valeo’s strategic partnerships highlight its dedication to improving the customer ownership experience. Collaborations with industry leaders such as BMW and Renault Group demonstrate its innovative acumen and customer-centricity.”

- Rabin Dhakal
Best Practices Research

evolving automotive landscape.

Accelerating Success through Superior R&D and Market Leadership

With a global presence spanning 29 countries, Valeo bolsters a workforce of approximately 112,000 and a robust infrastructure comprising 66 R&D centers and 175 production sites. Valeo has achieved remarkable growth in recent years. Over the past three fiscal years (FYs), the company witnessed a steady uptick in sales, with revenues soaring from €18.01 billion in FY 2021 to €22.04 billion in FY 2023. This impressive growth trajectory underscores the strong demand for Valeo’s products and services, signaling the company’s

ability to capture market opportunities effectively.⁴

Moreover, Valeo’s focus on cost management and profitability is evident in its stable earnings before interest, taxes, depreciation, and amortization margin, which experienced a slight improvement from 11.3% in FY 2021 to 12.0% in FY 2023. Similarly, the company demonstrates enhanced operational efficiency and cost control measures, as reflected in the operating margin growth from 1.7% in FY 2021 to 3.8% in FY 2023. These improvements underscore Valeo’s commitment to driving sustainable growth while maintaining profitability.⁵

Valeo has invested in enhancing its software capabilities across all its businesses, launching a separate offering which is part of Valeo anSWer the transformation journey towards a Software-Driven company. The remarkable increase in order intake to €34.9 billion in 2023 and the significant improvement in the margins associated with these new orders prove the effectiveness of these strategic decisions.

Looking ahead, Valeo is set for continued success, with projected sales growth from €22 billion in FY 2023 to approximately €25.5 billion by FY 2025.⁶ Valeo’s strategic focus on software development and expansion into higher-margin segments, like digital services, bodes quite well for future profitability. The company’s extensive R&D capabilities and Level 4 autonomy aspirations position it as a leader in the SDV space.

Frost & Sullivan applauds Valeo’s exemplary financial performance, strategic foresight, and innovative approach, which enable the company to drive significant value for its stakeholders and maintain its leadership position in the dynamic automotive landscape.

Delivering Enhanced Value through Top-notch Integrations and Collaborations

Through its integrated hardware and software solutions, Valeo delivers an unparalleled value proposition, setting new standards of excellence and customer satisfaction. By offering comprehensive solutions tailored to OEMs’ requirements, the company facilitates smoother integration and testing processes, enhancing efficiency, and reducing costs. Moreover, Valeo’s engineering services cater to new OEMs

⁴ https://www.valeo.com/wp-content/uploads/2024/03/valeo-fy2023-results_and-2025-moveup-plan-progress-review-presentation.pdf

⁵ Ibid.

⁶ Ibid.

venturing into vehicle development, providing essential support in various design and integration aspects. From designing sensor sets to onboard networks, the company's holistic approach ensures customers receive superior value at every product lifecycle stage.

Furthermore, Valeo's strategic partnerships highlight its dedication to improving the customer ownership experience. Collaborations with industry leaders such as BMW and Renault Group demonstrate its innovative acumen and customer-centricity. For instance, the partnership with Renault Group aims to develop the electrical and electronic architecture of next-generation vehicles, ensuring they remain up to date throughout their lifecycle.⁷ This initiative reduces development times and costs and enhances customer safety. As part of this collaboration, Valeo provides key electrical and electronic components, including the high-performance computer, and contributes to software development. With a focus on high performance, compatibility, and safety, the goal of this partnership is to streamline development processes and reduce costs, ultimately delivering technologically advanced and competitive vehicles. Valeo's integration into Renault's tech ecosystem is a pivotal step towards co-constructing SDVs.

Likewise, Valeo and BMW are jointly developing an automated valet parking system up to Level 4. All functions will be based on technology and sensors in the car. Infrastructure based services will also be jointly developed to experience fully automated parking and charging in enabled public parking facilities and sites.⁸ This endeavor allows Valeo to simplify and enhance the driving experience and facilitate greater customer satisfaction, enabling it to further strengthen its SDV offerings.

Valeo's collaboration with Qualcomm Technologies, Inc. also reflects its innovative insight into emerging segments such as two-wheeler and three-wheeler vehicles. By leveraging Qualcomm's advanced computing units and Valeo's expertise in telematics and ADAS, the companies aim to deliver improved safety and an always-connected digital experience for riders. This partnership also enables Valeo to innovate in the emerging vehicle segments with a software-oriented approach, using SDV technologies to enhance connectivity, safety, and user experience in the Indian market's fast-growing two-wheeler and three-wheeler segments.⁹

Moreover, Valeo's extensive ecosystem of strategic partnerships with major players such as AWS, GitHub, Autosar, and Mobileye further enhances its value proposition. By leveraging synergies with industry leaders, the company ensures access to cutting-edge technologies and expertise, enabling innovative solutions that exceed customer expectations.

Frost & Sullivan lauds Valeo's unwavering focus on providing value-driven solutions through relentless innovation, strategic partnerships, and a customer-centric approach.

Innovating Trust and Partnership in Intelligent Mobility

Valeo underpins its brand equity with a rich heritage of commitment and passion spanning a century. From its humble beginnings in a workshop outside Paris in 1923 to its status as a global technology

⁷ <https://media.renaultgroup.com/renault-group-and-valeo-sign-a-partnership-in-software-defined-vehicle-development/>

⁸ <https://www.valeo.com/en/bmw-and-valeo-engage-in-a-strategic-cooperation-to-co-develop-next-generation-level-4-automated-parking-experience/>

⁹ https://www.valeo.com/wp-content/uploads/2023/11/PR_Valeo-and-Qualcomm-Deepen-Technology-Collaboration-to-Support-Small-Mobility.docx.pdf

powerhouse, the company nurtured a brand synonymous with leading-edge solutions for intelligent mobility and sustainability.

Valeo's strategic focus on SDVs features its ability to anticipate market trends and evolve with the changing dynamics of the automotive landscape. Its innovative solutions, designed to enhance intuitive driving and reduce carbon dioxide emissions, resonate with customers globally, earning their trust and loyalty. Central to the company's brand strategy is its emphasis on partnerships and collaborations within the emerging SDV space. Unlike superficial agreements, its partnerships are rooted in practical business opportunities and shared goals, fostering mutual trust and value creation for all stakeholders. By serving as an enabler for smaller companies and bridging the gap between startups and established OEMs, Valeo reduces risks and accelerates innovation in the industry.

Moreover, Valeo's international network and strategic industrial footprint enable it to stay close to customers and anticipate their evolving needs. Through a robust sales network and immersive ride-and-drive events, the company engages with customers directly, showcasing its latest innovations and gathering valuable feedback to jump-start future developments. By proactively conducting consumer surveys, Valeo ensures that its automotive solutions align with drivers' preferences, reinforcing its position as a trusted partner in shaping the future of mobility.

Frost & Sullivan admires Valeo's brand equity, which embodies a legacy of innovation, trust, and a customer-focused approach, driving the company forward. As Valeo celebrates a century of history and looks towards the future, its innovative excellence ensures that it remains at the forefront of the SDV revolution, earning the loyalty and appreciation of customers worldwide.

Conclusion

Establishing and nurturing ecosystems within the automotive industry requires overcoming various barriers, including organizational silos, differing priorities among stakeholders, and legacy business models. Collaborations between original equipment manufacturers, technology companies, suppliers, and other industry players are essential to drive innovation and address complex challenges associated with software-defined vehicles (SDV) effectively.

Valeo recognizes the importance of ecosystem development and collaboration in driving innovation and accelerating the adoption of SDVs. The company capitalizes on the convergence of energy, big data, and computational intelligence to redefine mobility and create unparalleled opportunities in the automotive landscape. With its roots tracing back to 1923, Valeo has evolved into a global technology powerhouse, leveraging over three decades of experience providing cutting-edge embedded software solutions for safer, cleaner, and more affordable mobility solutions worldwide.

The launch of Valeo anSWer represents the company's dedication to addressing customers' unmet needs, offering a revolutionary solution poised to reshape the future of mobility. Valeo's impressive growth trajectory over the past three fiscal years and its top-notch collaborations highlight the company's ability to capture market opportunities effectively and deliver unparalleled value propositions to customers. Its extensive ecosystem of strategic partnerships with industry leaders such as Renault, BMW, Qualcomm, AWS, GitHub, Autosar, and Mobileye enhances its value proposition, ensuring access to cutting-edge technologies and expertise. By staying close to customers and engaging directly through immersive events, Valeo continues to drive innovation and anticipate market demands, reaffirming its position as a trusted partner in shaping the future of mobility.

With its strong overall performance, Valeo earns the 2024 Frost & Sullivan Global Company of the Year Award.

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)**

