

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

# 2024 PRODUCT LEADER

*IN THE EUROPEAN FLEET  
CHARGING AND ENERGY  
MANAGEMENT  
INDUSTRY*



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

BEST  
2024 PRACTICES  
AWARD

## 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. EO Charging excels in many of the criteria in the fleet charging and energy management space.

AWARD CRITERIA	
<i>Product Portfolio Attributes</i>	<i>Business Impact</i>
Match to Needs	Financial Performance
Reliability and Quality	Customer Acquisition
Product/Service Value	Operational Efficiency
Positioning	Growth Potential
Design	Human Capital

### ***EV Fleet Electrification Challenges and Energy Management Solutions: An Overview***

The electric vehicle (EV) revolution is reshaping the transportation landscape rapidly. In 2023, Europe recorded a remarkable 20% growth in new EV registrations, reaching 3.2 million units.<sup>1</sup> Frost & Sullivan appreciates how this unprecedented surge emphasizes the immense potential and opportunities within the EV sector.

Central to the successful deployment of EVs is the concept of fleet electrification. EV fleets, comprising multiple EVs operated by a single entity, offer significant advantages such as reduced operational costs and enhanced brand image. However, managing an EV fleet presents unique challenges that demand innovative solutions.

One of the most pressing concerns is the potential strain on the electrical grid. With the rising number of EVs plugged in, the demand for electricity soars, raising the risk of grid overload, especially during peak consumption periods. This convolution can lead to power outages and disruptions, impacting the overall reliability of the power system.

Efficient charging and energy management are paramount to overcoming electrification challenges. Such systems encompass strategies from optimizing charging schedules to integrating with renewable energy systems, ensuring that fleets remain charged and ready without overburdening the grid. Real-time monitoring and energy consumption analysis are also pivotal to charging management systems, which can

<sup>1</sup> <https://www.iea.org/reports/global-ev-outlook-2024/trends-in-electric-cars>

identify opportunities to improve efficiency and reduce operating costs.

While electrification's environmental and economic benefits are undeniable, fleet managers face significant hurdles in optimizing energy consumption and infrastructure. The initial hurdle lies in the substantial upfront costs of installing a suitable charging infrastructure. Additionally, grid constraints and uneven distribution of charging stations pose significant obstacles. Efficiently managing charging schedules to avoid peak demand periods and optimize energy costs is another critical challenge.<sup>2</sup> Furthermore, collecting, analyzing, and leveraging vast amounts of data related to vehicle performance and charging patterns is essential - but requires sophisticated data management systems.<sup>3</sup>

Frost & Sullivan points out that properly addressing these multifaceted issues necessitates innovative solutions prioritizing energy efficiency, cost-effectiveness, and grid reliability. EO Charging (EO) stands out as a leader in EV fleet charging and energy management by offering a comprehensive suite of solutions. The company's focus on combining smart charging hardware and intelligent charging and energy management software enables efficient and reliable charging infrastructure, all while providing fleet managers with granular control over their EV infrastructure and valuable insights through data analytics.

### ***Delivering Unmatched Reliability and Efficiency for Fleet Electrification***

Founded in 2015 and headquartered in Stowmarket, United Kingdom (UK), EO is a significant innovator in the fleet charging and energy management solutions market. As the global demand for EVs intensifies, the company accelerates the transition to carbon-free transportation by making EV charging simple, reliable, and accessible for fleets worldwide. EO provides a comprehensive suite of solutions, from depot design and electrical installation to grid upgrades and ongoing operations management, ensuring commercial-grade charge assurance with industry-leading uptime. Its technology and service stack offer a full range of capabilities (including charger, energy management, and maintenance). The company empowers fleets to navigate charging management complexities by integrating cutting-edge hardware and software with unparalleled customer support.

Frost & Sullivan analysts recognize how EO clearly distinguishes itself by meticulously aligning its product offerings with fleet customers' specific needs and tailoring every solution to meet large commercial fleets' unique operational demands. The company adopts a customer-centric approach to electrification projects, beginning with a thorough understanding of the client's operational profile and energy demands before deploying the charging infrastructure. EO's systematic and data-driven consultation process includes conducting comprehensive site surveys and leveraging data on vehicle types, power supply, and operational schedules to craft highly personalized and optimized charging solutions. Frost & Sullivan appreciates the way that this tailored approach minimizes unnecessary expenditures and confirms that customers can seamlessly transition from traditional diesel and petrol fleets to EVs without disrupting their operations. Moreover, EO's collaboration with top-tier EV charging infrastructure manufacturers helps customers receive cutting-edge tools and equipment tailored to their operational requirements.

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<sup>2</sup> <https://www.tandfonline.com/doi/full/10.1080/13675567.2021.1978409>

<sup>3</sup> <https://www.mdpi.com/2076-3417/13/10/6016>

Reliability and quality are at the heart of EO's product and service offerings, consistently exceeding customer expectations. The company's rigorous development and delivery process follows the Royal Institute of British Architects' plan of work, ensuring every project meets stringent quality benchmarks,

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**- Aaron Manoharan  
Industry Analyst**

from initial site surveys to the final grid connections and aligning with each client's precise specifications.

EO reinforces its reliability even further with its best-in-class EO Cloud platform, pivotal for managing and optimizing fleet charging operations. Built to integrate seamlessly with commercial-grade infrastructure, EO Cloud offers a software-defined charge platform that customers can depend on for real-time monitoring and control of their charging networks. The platform's extensive data collection capabilities, including historical energy consumption, charger status, and network uptime, provide customers with the insights needed to maintain optimal performance and minimize downtime

(less than 1%).

Likewise, the EO Hub, a robust energy management tool connected via the EO Cloud, nicely represents the company's dedication to quality. With its ability to calculate and distribute available power on-site, EO Hub ensures fleet operators maintain complete control over their power usage, enhancing operational efficiency. Its compatibility with over 50 Open Charge Point Protocol (OCPP) charging station models guarantees that customers can rely on EO's solutions - regardless of their existing infrastructure and without additional hardware. The company's relentless emphasis on reliability and quality enables the company to provide long-term value and dependable performance.

Frost & Sullivan commends EO for understanding and meeting fleet operators' unique needs, seamlessly transitioning to electric fleets through tailored, future-proof solutions. The company delivers high-quality, reliable products and services while consistently exceeding customer expectations.

### ***Redefining Uptime with Self-healing Technology and 24/7 Remote Support***

EO offers unparalleled value through its innovative products and strategic partnerships. The EO Hub, a standout product in EO's portfolio, characterizes this value by integrating on-site meters and building management systems seamlessly to optimize power distribution across fleet vehicles. This capability allows efficient charging of fleets and enables cost savings through off-peak energy tariff utilization, effectively reducing the total cost of ownership (TCO) for customers.

Furthermore, EO's collaboration with industry leaders like ABB E-mobility (ABB) allows it to deliver top-tier charging solutions, such as high-capacity chargers installation for the UK's largest electric bus orders at Warrington's new depot.<sup>4</sup> The company clearly differentiates its offerings further by incorporating advanced features like self-healing technology and a 24/7/365 remote technical operations center in its

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<sup>4</sup> <https://www.eocharging.com/stories/eo-to-install-charging-infrastructure-for-more-than-100-new-electric-buses-in-warrington>

baseline enterprise software package.

Additionally, EO Cloud's broad suite of features enable it to meet fleet electrification's complex needs:<sup>5</sup>

- **Advanced Access Management:** Administrators users can assign user profiles and control access to information, tailoring permissions based on individual needs, adding new users, and deactivating existing ones.
- **Real-time Monitoring:** EO Cloud enables the live monitoring of charging sessions, vehicles, and energy usage, and offers comprehensive diagnostics to detect any faults before they impact fleet operations.
- **Seamless Integration:** The platform's architecture supports easy integration with various telematics providers and other proprietary application programming interfaces, making it adaptable to different systems.
- **Scalability:** Designed to fit the size and budget of any fleet electrification program, EO Cloud is built to scale alongside businesses as they grow and evolve with new charging innovations.
- **Proven Reliability:** Tested and integrated as part of Europe's largest fleet electrification program, EO Cloud manages over 5,700 charging stations across 120 sites in nine countries.

EO emphasizes the complexity of fault diagnosis due to the various components involved in the ecosystem, such as connectivity, existing electrical infrastructure, vehicle firmware, and charger firmware (including third-party systems like ABB's). To that end, EO developed a service layer that allows for rapid fault resolution through an elimination process. Its software includes a machine learning module known as self-healing, which typically resolves over 50% of faults without human intervention. The company's technical operations team resolves an additional 67% to 80% of faults remotely, typically leaving only around 20% of issues that require on-site technician support.<sup>6</sup> Frost & Sullivan notes that speed and reliability are EO's unique selling points when serving high-performing, business-critical fleets, such as those in delivery and logistics, where uptime is essential.

Frost & Sullivan recognizes EO for delivering exceptional value through its innovative solutions, strategic partnerships, and advanced technology integration, allowing customers to receive the best return on investment in the fleet charging market. Its ability to provide comprehensive, cost-effective fleet charging management while minimizing downtime sets it apart from competitors.

### ***Powering Uninterrupted Charging with High-profile Partnerships and Innovative Solutions***

EO demonstrates exceptional competence in customer acquisition by leveraging EO Cloud and EO Hub, receiving widespread acclaim in Europe and globally. The company's strategic partnerships with industry giants like Amazon and DHL are quite pivotal in expanding its customer base and establishing its reputation in the market. For instance, EO's collaboration with Amazon involves designing, manufacturing, and installing a network of over 800 electric charging stations across the UK for Amazon's new fleet of electric delivery vehicles, with hundreds more installations planned.<sup>7</sup> This partnership showcases the company's ability to meet the high demands of one of the world's largest e-commerce

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<sup>5</sup> <https://www.eocharging.com/eo-cloud>

<sup>6</sup> Frost & Sullivan Discussion with EO Charging

<sup>7</sup> <https://www.aboutamazon.co.uk/news/sustainability/an-electrifying-collaboration-that-owes-its-origins-to-a-pig-shed>

companies in supporting large-scale fleet electrification.

Similarly, installing EO Hub at Go-Ahead Croydon, one of London's largest bus operators, enables EO to nearly double its electric bus fleet by optimizing energy distribution and managing site power capacity effectively.<sup>8</sup> The company's work with Bpost in Belgium demonstrates its customer acquisition strategy further, where EO Hub plays a crucial role in aligning on-site energy sources with the energy needs of Bpost's EV fleet, ultimately helping the company reduce its TCO and manage long-term energy expenditures.<sup>9</sup> These high-profile partnerships and EO's ability to deliver tailored, high-quality solutions significantly enhance its customer-facing processes, leading to efficient and consistent new customer acquisition while strengthening customer retention. The company's strategic partnerships with top-tier companies like ABB, Kempower, and Siemens enhance its customer-facing processes further and allow it to offer high-quality hardware and advanced diagnostic capabilities, crucial for maintaining high uptime and reliable service.

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*"EO's operational excellence is quite evident in the design and functionality of its products. The company equips these platforms with capabilities that support the OCPP, enabling smart charging functionalities even during connectivity issues."*

**- Rabin Dhakal**  
**Best Practices Research Analyst**

even during connectivity issues. For instance, the EO hub ensures continuous charge assurance by taking over local site management in case of lost connection to the EO Cloud. This dynamic load management and adherence to smart charging schedules are critical for maintaining uninterrupted charging services in EV fleets. EO bolsters its operational efficiency with the ability to integrate and operate proprietary software platforms from partners like ABB, allowing the company to deliver higher uptime and more reliable service. This integration boosts EO's charge assurance, allowing fleet customers to experience minimal disruptions and maximum

operational productivity. Its focus on guaranteeing charge assurance enables the company to unlock additional opportunities in energy management, asset monetization, and energy optimization.

Frost & Sullivan acknowledges EO's exceptional ability to acquire and retain high-profile customers by delivering tailored, high-quality solutions that meet the specific needs of large-scale fleet operators. Its operational efficiency, marked by innovative in-house technologies and strategic partnerships, permits its customers to receive reliable, uninterrupted service, enabling solid leadership in the fleet charging and energy management market.

### ***Fueling Growth through Quality, Innovation, and Global Expansion***

EO demonstrates significant growth potential, driven by its relentless focus on product quality and customer-centric innovations. The company's hardware products, including the EO Genius 2 and EO Mini Pro 3, have earned the prestigious British Standards Institution Kitemark certification, a globally

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<sup>8</sup> <https://www.eocharging.com/stories/eo-charging-launches-energy-management-solution>

<sup>9</sup> Ibid.

recognized symbol of quality, safety, and reliability.<sup>10</sup> This achievement underlines EO's dedication to maintaining the highest industry standards and reinforces customer trust, a critical factor in driving brand loyalty and long-term growth.

EO's strategic approach to flexibility and innovation amplifies its growth potential. The company collaborates with partners and integrators to explore monetization strategies through demand-side response and other flexibility services. EO is integrating its hub with on-site storage and generation systems (such as batteries and solar panels) by conducting trials with major clients like Amazon to optimize charging schedules and reduce energy costs. This focus on leveraging consistent charging patterns, especially for large fleets like bus operators, enables the company to help its customers manage energy peaks and achieve significant cost savings.

EO's global presence, with over 100,000 charging stations deployed across 35 countries, reflects its strong growth trajectory. The company advocates an open ecosystem, ensuring its alternating current and direct current charge points integrate seamlessly with EO Cloud software or other back-office providers via OCPP. EO positions itself to capitalize on the growing demand for EV infrastructure and support the global transition to EVs by providing tailored solutions that offer complete control and flexibility.

Frost & Sullivan analysts observe EO's robust growth potential, driven by its customer-centric innovation and strategic global expansion. Its ability to deliver flexible, scalable solutions that adapt to evolving market needs ensures its continued leadership in the rapidly growing EV infrastructure sector.

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<sup>10</sup> <https://www.eocharging.com/stories/british-born-eo-charging-accredited-bsi-kitemarktm-safety-and-quality-certification>

## Conclusion

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Frost & Sullivan applauds the way that EO Charging (EO) establishes itself as a unique leader in the electric vehicle (EV) fleet charging and energy management space by addressing the unique challenges of fleet electrification with innovative and comprehensive solutions. The company aligns its product offerings with the specific needs of large commercial fleets, enabling superior customer experience and a seamless transition to EVs without operational disruptions. EO's smart charging hardware, advanced EO Cloud platform, and robust EO Hub allow fleet managers unparalleled control and intelligent management of their fleet, enhancing reliability and operational efficiency. Strategic partnerships with industry leaders like Amazon and DHL significantly bolster the company's market presence, showcasing its ability to deliver scalable, high-quality solutions. EO reinforces its growth by focusing on product excellence, continuous innovation, and a customer-centric approach. The company positions itself to lead the EV fleet charging industry into the future by exploring monetization strategies, integrating flexibility services, and offering customers cutting-edge technology with significant cost savings and operational benefits.

With its strong overall performance, EO Charging earns the 2024 Frost & Sullivan Product Leadership Award.



## What You Need to Know about the Product Leadership Recognition

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Frost & Sullivan's Product Leadership Award recognizes the company that offers a product or solution with attributes that deliver the best quality, reliability, and performance in the industry.

### Best Practices Award Analysis

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

#### *Product Portfolio Attributes*

**Match to Needs:** Customer needs directly influence and inspire the product portfolio's design and positioning

**Reliability and Quality:** Products consistently meet or exceed customer expectations for performance and length of service

**Product/Service Value:** Products or services offer the best value for the price compared to similar market offerings

**Positioning:** Products serve a unique, unmet need that competitors cannot easily replicate

**Design:** Products feature innovative designs, enhancing both visual appeal and ease of use

#### *Business Impact*

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

**Customer Acquisition:** Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

**Operational Efficiency:** Company staff performs assigned tasks productively, quickly, and to a high-quality standard

**Growth Potential:** Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

**Human Capital:** Commitment to quality and to customers characterize the company culture, which in turn enhances employee morale and retention

## 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)**

