FROST & SULLIVAN

Clever

2022
PRODUCT
LEADER

European
Electric Vehicle Charging
Infrastructure Industry

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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. Clever excels in many of the criteria in the electric vehicle charging infrastructure space.

AWARD CRITERIA

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

Company Profile

Founded in 2009 and headquartered in Denmark, Clever (formerly ChoosEV) is a leading electric mobility and charge point operator. The company has been quite active in the electronic mobility (e-mobility) market since 2009, focusing solely on cars. Clever provides extremely user-friendly EV charging products that cater to private households, companies, municipalities, housing associations, real estate investment companies and organizations, making it a one-stop-shop for all types of EV charging, whether private or public. In addition to EV charging stations, the company offers financing services, operation, advice, and environmental optimization. The company is based out of Copenhagen, Denmark and operates in Sweden and Norway through a joint venture with E.ON Drive.

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- Prajyot Sathe,
Research Manager

In 2020, Frost & Sullivan recognized Clever for its competitive differentiation, strategy effectiveness, and customer experience and remains impressed with the company's continuing innovation and sustained leadership.

Demonstrating Consistent Product Leadership Due to Strong Capabilities

Clever has spent the past 13 years building and refining its e-mobility product solution portfolio. The company offers easy-to-use solutions that work with both electric and plug-in hybrid vehicles. With more than 4,000 public charging points and daily charge point additions, the company operates the largest and fastest charging network in Denmark. From its inception, Frost & Sullivan analysts have observed how Clever has consistently showcased innovative and research-driven strategies designed to accelerate EV adoption in the country. Unlike many private charging stations, the organization encourages its owners to share their points at their discretion. With this charging model, customers can charge at over 80,000 private or semi-public charging stations in Clever's network - setting it apart from other competitors with fewer or no private or semi-private charging points.

Due to the vast investment in battery technology, EVs are getting less expensive to buy and more efficient to run. As a result, under the European Union Connecting Europe Facility program (2017), Clever and another company received financing aid to establish ultra-fast charging stations. These two companies are Denmark's largest electric mobility companies. There are also 180 charging stations installed in Norway, Sweden, Denmark, Germany, the UK, Italy, and France with a budget of £10 million, which offer 150 kilowatts (kW) charging with an option to upgrade to 350 kW.

Keeping users' needs in mind, Clever aims to give them more than just an EV charging box or access to a public network of charging stations. The industry is driven by time, primarily because the vehicle range increases while drivers expect quicker charging times. There are many public and private parking lots, fuel stations, and service areas on motorways for charging EVs in Europe; however, Frost & Sullivan notes that the number of charging options is still insufficient. Thus, Clever intends to invest in and install more than 20,000 public chargers across Denmark by 2025.

Clever's infrastructure consists of close to 100,000 public charging stations, semi-public charging points and private charging boxes with an intelligent charging solution. The company plays a critical role in balancing the grid by developing smart grid solutions, which also include many public charging options.

Clever currently provides over 60 ultrafast charging points (300 kW) throughout Denmark, allowing drivers to drive an EV while making fast charging available across the country. Due to its extensive network of fast-charging stations, users can enjoy the open road knowing there are always charging stations nearby. The company is furthermore, planning on putting more than 300 ultrafast charging points (+150 kW) on the market by end 2022 which will be exceeded with more than 1,000 ultrafast chargers by 2025 in Denmark alone.

Data security is also a priority for Clever. The company protects customer data, enhancing customer satisfaction and loyalty through its Personal Data Protection Policy. As a result, Clever consistently delivers exceptional customer experiences. Frost & Sullivan believes that with its product and technology leadership capability, the company can enhance its performance and future-proof its business posture.

Customer-focused Growth Strategy

With its product-led customer-focused strategy, Clever consistently brings to market best-in-class products. Developing charging infrastructure for tomorrow's sustainable mobility is one of the company's

priorities. Clever charging stations along highways, cities, shopping centers, workplaces, and homes make charging more accessible and convenient. With its intelligent technology, Clever makes charging more meaningful. Clevers intelligent charging system contributes to balancing the Danish electricity grid and improves the carbon footprint of EVs, by intelligently scheduling their customers' daily charging.

Clever partnered with Hitachi Power Systems and Hybrid Greentech to launch a Battery energy storage system (BESS) at the fast-charge EV station in Koge, Copenhagen's main transport hub and commuter area. The BESS is the first of its kind, to be integrated directly with EV AC chargers for grid services.

The BESS has a capacity of 1,2MVh (the equivalent of 10-20 EV batteries) and will be virtually integrated with Clever's home charging network. Basically, the BESS and the AC chargers complement each other to help stabilize the grid.

If there is a surplus of energy in the grid, the BESS is charged, and a selected portion of Clever home chargers are set to start charging and if there is a lack of power in the grid, the BESS will discharge, and the EV chargers will enter a short pause state. (Home charging typically offers ample hours for planning the optimum time and speed of each customers car). Thus, significantly helping to balance the grid without using fossil fuels, purely by utilizing the flexibility of the BESS and EV chargers.

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>
> *- Norazah Bachok,*
> *Best Practices Research Analyst*

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While evolving from a technology standpoint, Clever never loses sight of its customer's perspective. Its brand is popular across Europe for its exceptional EV charging services which cater to customer-specific needs. Given today's landscape, Frost & Sullivan believes the company is in a prime position to increase its market share in the highly competitive EV charging infrastructure industry.

Growth Performance

Clever is at the forefront of the fiercely competitive EV charging infrastructure market. With a deep-rooted history of purpose-fit innovation, the company shapes the industry's trends, impacting its role in the market.

Clever initiates regular enhancements to its technologies to ensure optimal performance. It has a wide range of strong partners, especially on the information technology side. Therefore, Clever partnered up with Delegate — the Microsoft Partner of the Year in Denmark for 2021. Delegate and Clever have created a new charging point management system (CPMS) using Microsoft Azure as underlaying platform. The new CPMS is built to scale to manage millions of charging points and to give full insights to the charging network. The development model has changed to continuous delivery, where updates and new features

are deployed multiple times per day. Data and insights are fundamental and can easily be delivered to relevant recipients, e.g., reimbursements and charging transactions to the customers, and utilization of charging points to companies.

Over the past few years, the company has recorded tremendous revenue growth. Furthermore, for the past four years, the company's revenue has grown 26 times. Today, it has nearly seven times more customers than it did a year ago. Every month, Clever installs over 3,000 chargers at homes and businesses. As the company grows, the manpower also increases, with close to 200 employees now, up from 30 in 2018.

The company hopes to reinforce a more sustainable lifestyle through its Clever app. As part of its customer purchase experience enhancement, it allows direct payment and charging through its mobile applications. Furthermore, the app gives users convenient access to usage of kWh split on home or on public network, real-time data about the availability and location of all public charging stations on the Clever network; thus, helping to address varied end-user concerns more effectively.

Conclusion

To be a product leader, a company needs to properly understand the market's needs and deliver a solid solution designed and embedded with high-quality and reliable performance. Frost & Sullivan finds that Clever embodies this concept and exemplifies it with best practice implementation. The company delivers high-quality, stress-free, and fast service to its customers due to its advanced technology system and long-standing industry capability. As well as providing private and public charging solutions, the company deploys the best-in-class customer experience when it comes to network maintenance, system upgrades, and safety. Additionally, Clever also focuses on promoting efficient, convenient, and safe electric vehicle (EV) charging to keep up with the current sustainable mobility trend.

With its strong overall performance, Clever earns the 2022 Frost & Sullivan's Product Leadership Award in the European electric vehicle charging infrastructure industry.

What You Need to Know about the Product Leadership Recognition

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

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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)**