



*Voltaiq Recognized for*

**2021**

**Product Leadership**

North American Battery Analytics

Software-as-a-Service Industry

*Excellence in Best Practices*

## 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. Voltaiq excels in many of the criteria in the battery analytics software-as-a-service 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

### Background

The global shift towards clean energy and steadily declining battery prices drive the growing adoption of batteries across various applications, primarily electric vehicles (EVs), grid-scale energy storage, and consumer electronics. Frost & Sullivan’s research estimates the global lithium-ion batteries market to reach \$132.5 billion by 2025, growing at a compound annual growth rate of 17.9% between 2018 and 2025.<sup>1</sup> The unprecedented surge in demand for batteries in increasingly complex use-cases and advanced applications is leading to a stronger emphasis on optimizing battery performance, reliability, and safety across all battery-enabled industries. An in-depth understanding of batteries, their chemistries, associated supply chains, and proper integration is paramount to enhancing battery performance and reducing risks of incurred losses. This need for a deep understanding of batteries and battery systems drives the demand for battery analytics solutions across the increasingly battery-dependent economy.

<sup>1</sup> Global Li-ion Batteries Market, Forecast to 2025 (Frost & Sullivan, November 2019).

## ***Innovative Enterprise Battery Intelligence™ Software Platform: Harnessing Data to Drive Battery Excellence and Positive Outcomes Across Business Units***

Founded in 2012, California-based Voltaiq offers the industry's first and only Enterprise Battery Intelligence™ (EBI) platform, its unique, powerful, and easy-to-use analytics solution offering. The company's EBI platform enables companies developing, manufacturing or operating batteries and battery-powered systems to harness battery data to navigate the complexities of producing and operating battery-powered products; foresee otherwise unforeseen battery issues, manage risk around warranties and leases of battery-powered assets, launch new products faster, and avoid costly recalls. Voltaiq provides its EBI software-as-a-service (SaaS) offering to serve the growing demand for battery analytics solutions from participants across the battery-intensive EV, battery manufacturing, energy storage, consumer electronics, and medical devices market segments.

*"Voltaiq's EBI platform stands out as the market's only fully-automated, purpose-built battery analytics solution capable of translating vast quantities of battery data into actionable insights."*

***- Vijay Wilfred, Senior Research Analyst***

Voltaiq's EBI platform stands out as the market's only fully-automated, purpose-built battery analytics solution capable of systematically gathering, analyzing, and translating vast quantities of battery data into actionable insights. The company's intelligent software solution arms its customers with a holistic understanding of their battery systems, allowing them to access real-time battery function

and predict future performance and behavior accurately. Voltaiq's groundbreaking EBI platform empowers customers to design, develop, manufacture, and operate cutting-edge battery-powered products faster and with greater efficiency. The platform collects and stores customer data automatically into a centralized location while harmonizing data from disparate sources into a common format. From this raw data, Voltaiq generates over 80 different statistics and extracts all necessary key performance indicators of the state of health and charge for customer battery systems. The company also enables powerful data discovery and management capabilities allowing customers free-form exploration of data sets to find relevant data quickly. Moreover, Voltaiq offers advanced analytics packages specifically designed for key product lifecycle stages of specific customer industries. These software solutions facilitate the analysis and visualization of the processed data with interactive, broad-based comparisons and detailed deep dives. Furthermore, Voltaiq has expanded its capabilities and released management-level dashboards to equip customers with the necessary tools to track their overall productivity and utilization across all product lifecycle stages.

Voltaiq is exceptionally cognizant of the importance of maintaining the security, integrity, and privacy of its customers' data. The company delivers a production-proven solution with the necessary governance to guarantee data quality and safety in accordance with stringent corporate standards and security policies such as General Data Protection Regulation, International Traffic in Arms Regulations, single sign-On, and two-factor authentication. Voltaiq's delivery of absolute security and complete control over data management, authorization, and authentication provides customers the confidence and flexibility to derive the maximum value out of their battery data. Moreover, securing data sharing over its platform enables Voltaiq to support global collaborations within its customer organizations. This ability

to ensure a thoroughly secure environment for battery data across entire product lifecycles significantly contributes to the company's success as a SaaS provider in the dynamic and growing set of battery-enabled industries.

Frost & Sullivan commends Voltaiq for its powerful EBI software platform designed as an end-to-end software solution to empower customers across various battery-enabled industries, thereby accelerating the electrification innovation of the global economy.

### ***The Voltaiq Advantage: Empowering the 'Electrify Everything' Revolution***

Voltaiq's EBI SaaS solution is unique in the battery analytics space as the industry's only purpose-built, scalable battery analytics software solution. Voltaiq's platform provides customers with a comprehensive view of battery data across their entire product lifecycles, from research & development and production to in-field use and second-life & recycling. The company's software generates significant advantages at each lifecycle stage, such as faster supplier qualification, rapid product launch, reduced production ramp time, increased production yield, predictive maintenance, and optimized warranties and residual values. Furthermore, Voltaiq's software solutions improve its customers' returns on investment (ROIs) by decreasing product costs, ensuring accurate product and warranty pricing, supporting resale values, and increasing margins.

The demands for higher energy density, greater reliability, and broader form-factor variations in the

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**- Sama Suwal, Best Practices Research Analyst**

rapidly evolving battery industry introduce the need for more effective and efficient battery development processes. However, participants in battery-powered industries often lack the necessary expertise and resources to properly process and analyze massive amounts of data generated by their internal labs, suppliers, and partners. This scarcity impedes the processing of the continually generated battery data and hinders the decision-making processes, ultimately resulting in longer time-to-market and higher costs. Voltaiq's productized advanced analytics solutions offer purpose-built tools that significantly

and seamlessly scale its customers' battery design capabilities, enabling them to consistently deliver products with industry-leading performance and reliability within the desired time-frame and budget. The company's EBI platform helps customers analyze and translate large quantities of increasingly complex battery data into actionable insights, significantly improving the efficiency and speed of its customers' product development processes. The company achieves this acceleration by automating 90% of battery analysis tasks and providing 1000X faster access to insights. For instance, Voltaiq drastically reduced the analysis time for one of its big three Detroit automotive customers from four hours down to nine seconds with its software solution.

Voltaiq differentiates as the only enterprise software platform which successfully connects information silos and enables organization-wide integration by bringing cross-functional teams and battery data together. This ability empowers customers to leverage battery data fully to accelerate innovation and

minimize risks within their organizations. Moreover, Voltaiq's battery analytics platform enables customers to protect their product roadmaps and prevent revenue losses by surfacing potential battery issues early in the development processes. The company supports customers in transitioning from traditional phase-gate approaches and reactive analysis to more agile and proactive workflows allowing for optimized, efficient, and accelerated product development.

Voltaiq enables participants from various customer industries to leverage its platform's advanced battery analytics capabilities to address their market-specific challenges and achieve desired battery-related outcomes. For instance, despite ample growth opportunities in the rapidly evolving automotive market, EV manufacturers face several challenges, such as the stringent regulations imposed in regional markets. For example, the vehicles' cost and driving range must fall within the allowable limits to be eligible for subsidies. As a result, EV manufacturers have been experimenting with different battery chemistries such as lithium nickel manganese cobalt oxide and lithium iron phosphate to develop batteries that deliver the optimal mix of driving range and cost-effectiveness. Voltaiq's EBI platform can be instrumental in enabling these companies to utilize battery data to identify the most suitable battery chemistries from a diverse portfolio efficiently. This capability would allow EV manufacturers to meet specific regional market requirements, such as delivering affordable vehicles for the cost-driven Asia-Pacific market while supplying high-performance EVs for the capabilities-driven North American and European markets. By helping EV manufacturers achieve their battery-related goals, Voltaiq is also driving innovation in the automotive industry.

Frost & Sullivan recognizes Voltaiq's EBI platform for empowering customers to achieve their desired battery-related goals by optimizing their operations and ensuring their supply chain quality and stability while significantly improving time-to-market, augmenting ROI, and reducing risks.

### ***Strong Customer Base Supporting Healthy Growth***

Voltaiq has established itself as the clear leader in the advanced battery analytics space, securing a growing customer base consisting of global Fortune 500 companies, major universities, and leading battery companies. Industry giants such as Amazon, Google, Microsoft, Mercedes-Benz Research and Development North America, University of Michigan, and Trojan Battery Company trust Voltaiq's software for all of their battery analytics needs. More importantly, the company successfully retained its entire customer base despite the adverse economic environment during the COVID-19 pandemic. Voltaiq's ability to avoid customer churn during such trying times is a testament to the excellent customer value generated by its industry-leading battery analytics SaaS solution. Moreover, the company's solid customer base enabled the company to double its sales year-on-year.

Voltaiq is ideally positioned to leverage the growing demand for battery expertise and battery analytics solutions generated by the acceleration of larger-scale electrification in the transportation and energy storage sectors. Voltaiq is strengthening its product evolution and go-to-market strategies to maximize its growth in this burgeoning market. In addition to its highly competent core team, Voltaiq maintains a strategic advisory board consisting of former executives from companies such as General Motors, Apple, Tata Motors, Uber, Mercedes Benz, and Toyota to help drive electrification innovation within the organization. Voltaiq aims to utilize the board's expert guidance to drive the global sustainable energy revolution in addition to its own growth.

Frost & Sullivan believes Voltaiq's strong product leadership and growing customer base positions the company for robust growth in the coming years.

## Conclusion

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Market participants in the rapidly evolving battery and battery-powered industries lack the necessary expertise and resources to process and analyze massive amounts of battery data efficiently to optimize battery performance, reliability, and safety.

Founded in 2012, California-based Voltaiq offers its Enterprise Battery Intelligence™ (EBI) platform, a unique, powerful, and easy-to-use analytics offering to serve the growing demand for battery analytics solutions across battery-enabled industries. The company's groundbreaking EBI platform is the industry's first and only fully-automated, purpose-built, and end-to-end battery analytics solution capable of systematically and safely gathering, analyzing, and translating vast quantities of battery data into actionable insights. These actionable insights generated by the company's real-time software solutions significantly optimize its customers' entire product lifecycles while substantially reducing the time-to-market, overall costs, and associated financial risks. A growing customer base consisting of global leaders across the electric vehicles, energy storage, battery manufacturing, and consumer electronics space trust Voltaiq to drive innovation and bolster battery excellence. Voltaiq's product leadership, pioneering innovation, and growing customer base position the company for solid growth prospects in the foreseeable future.

With its strong overall performance, Voltaiq earns Frost & Sullivan's 2021 North America Product Leadership Award in the battery analytics software-as-a-service market.

## 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

