Case Study: Opportunity assessment of battery and charging systems in global xEV platforms

Datamatics Business Solutions

Client Detail:

- Headquartered in Delaware, USA, the client is a leading science and technology-based company, which manufactures batteries and related products for industries including agriculture, automotive, building & construction, chemicals, electronics, energy, food & beverage, etc.
- The client has presence in 90 countries with Europe and North America being its key markets, followed by Latin America, Middle East, Africa and Asia-Pacific

Business Situation:

- The client wanted to undertake a detailed assessment of the battery and charging systems being used/to be used in the current and upcoming xEV platforms globally, covering their technological aspects, performance, materials used, unmet needs, et al.
- It also wanted to develop a detailed understanding of the leading global battery and charging system suppliers and their product portfolio, recently announced investments, partnerships, etc.

Assignment:

- The client approached Datamatics to conduct a detailed study on various battery and charging systems used in xEV platforms (current and future models) globally

Datamatics Solution:

- With an aim to achieve the desired objectives, Datamatics conducted a comprehensive research using a combination of secondary and primary research to execute this study
- Accordingly, Datamatics segregated the study into five broad stages:

Stage 1: Global xEV Platforms Assessment - We provided a high-level view of global xEV platforms covering the current and upcoming platforms, trends, regulatory framework / incentives driving the market, market development, et al.

Stage 2: Assessment of Battery Systems - This involved a detailed assessment of the battery systems / packs used in each of the existing xEV platforms globally & also covering other components of the battery systems such as separators, mechanical barriers, etc.

Stage 3: Assessment of Charging Systems - We provided a detailed assessment of the charging systems used in each of the existing xEV platforms globally, including physical connectors, analysis of insulation materials used, etc.

Stage 4: Technology Analysis – This included in-depth analysis of the current and future technologies in the battery and charging system used in xEV platforms

Stage 5: Industry Landscape - We also provided the analysis on the battery and charging systems market, as well as profiles of key battery and charging system suppliers

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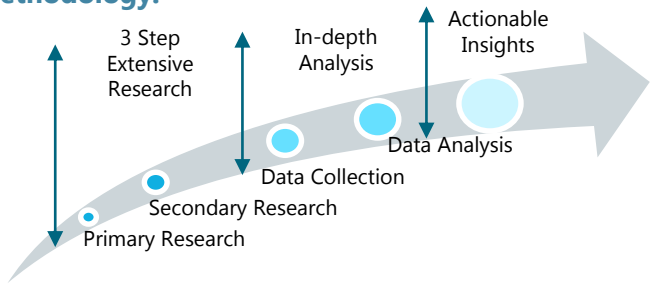
Methodology:



Approach:

- Datamatics conducted in-depth secondary research to identify key battery and charging system suppliers, assess the market size and future growth, key announced investments and partnerships, etc.
- Datamatics also conducted patent analysis to provide an in-depth analysis of the current and future technologies in the battery and charging system used in xEV platforms
- Semi structured interviews were conducted to validate outcome of secondary research and also to gather missing information and also recorded opinions & comments for further analysis
- Further, Datamatics also presented all insights and information in a template mutually agreed with the client

Project Plan:

- Datamatics identified the universe of players operating across the value chain and devised a sample size to adequately capture

Value Chain Stakeholder	No. of Interviews
Automotive OEMs	10
Suppliers (Battery & Charging Systems)	13
Cell and Pack Producers	12
Insulation Material Manufacturers	13
Consultants & Industry Experts	4
Total	**55**

Analysis:

- The global xEV battery market is estimated to grow at a CAGR of 20% between 2016 and 2020, due to the introduction of low cost batteries with high capacity which will act as a catalyst to drive the demand for electric vehicles
- More than 90% of the OEMs prefer lithium-ion batteries in their xEV models i.e. hybrid and electric vehicles
- Future developments in battery technologies include lithium-air breathing battery, bio plant charger, gold nanowire battery, et al.

Study Outcome:

- The study provided key insights on battery and charging systems being used/to be used in the current and upcoming xEV platforms globally, covering their technological aspects, performance, materials used, unmet needs, et al
- The study provided high-level recommendations regarding future opportunities in the battery and charging systems used in xEV platforms