



## **RSC executes an EV powertrain market analysis to evaluate cost alignment and supply base capability for a leading global OEM**

Ricardo Strategic Consulting (RSC) executes a global market assessment for an OEM on their EV powertrain - analyze the impact of design parameters on cost, conduct design cost-to-value analysis, assess their supply chain, and recommend technical and strategic initiatives expanding current and future solutions.

### **CHALLENGE**

A leading global OEM is ready to launch its next generation EV with in-house powertrain design. The senior leadership team seeks to confirm whether its EV powertrain cost aligns with market price and customer value. The OEM requests RSC to perform a comprehensive global supply base analysis and recommend technical and strategic initiatives in the following sub-systems:

- Battery pack
- E-machine
- Inverter
- On-board charger
- DC/DC converter

## APPROACH

RSC quickly identifies a four-step methodology to assess cost competitiveness of OEM's EV powertrain components and key corporate initiatives with a qualified global supply base

- **Market assessment:** Identify capable global suppliers with relevant commercially available products, and normalize their market data to OEM's unique design parameters focuses on quality targets
- **Regression modeling:** Generate regression models for each component to outline market cost and parameterize the impact of each design specification on cost
- **Cost to value analysis:** Outline vehicle design parameters of most value to user, and accordingly determine powertrain design specifications applicable for adjustment to optimize cost
- **EV market trends:** Analyze adjacent EV industry trends to extract relevant competitive strategies and inform the client of key corporate initiatives necessary for EV market leadership

## RECOMMENDATIONS

Using our four-step methodology to assess cost competitiveness, RSC identifies manufacturing and technology trends defining a market baseline for cost optimization on current EV program. For future EV programs, RSC outlines actionable EV technology, design and cost strategies that support program cost targets to be executed by the OEM.

## RESULTS

- Normalized view of market cost aligned to OEM's unique design parameters
- Clear understanding of cost competitiveness of each component and specific design cost drivers
- Access to cost competitive global supply base and EV technologies to consider in client's current powertrain EV system along with detailed supplier profiles quantifying quality matrix, financial health, key prime customers, manufacturing capabilities, capacity, and other program specifics required by the client
- Actionable cost reduction initiatives for current program and align with OEM corporate electrification strategy

- **Alignment with EV technology**
- **Actionable cost optimization initiatives**
- **Market competitive cost**
- **Clear electrification corporate strategy**

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**Find out more about supply chain management.**

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