



Driving cost reduction through robust data in support of a greener freight industry



Tevva is a technology-led, scale-up automotive OEM specialising in the design and manufacture of battery electric and hydrogen fuel cell electric vehicles. With a focus on sustainability and carbon neutrality at the core of the company’s mission, Tevva launched Britain’s first 7.5 tonne battery **electric truck** in 2021 and is developing a dual-fuel approach (Electric and Hydrogen) to enable heavier loads over longer distances.

THE CHALLENGE

In a fast-developing market, Tevva wanted to gain a detailed understanding of the cost of each 7.5 tonne truck in order to look for ways to improve profitability and ultimately drive enterprise value. This would become more important over time, as the business increases production and larger models approach market readiness. Tevva also recognised that developing internal skillsets in areas such as cost and value engineering and supply chain management would be critical to the delivery of its long-term strategic plan.

THE SOLUTION

The Vendigital project team reviewed data and plans from across the business, looking for anomalies or areas where a lack of clear information could be causing saving or efficiency opportunities to be lost.

The Bill of Materials (BoM) for Tevva’s 7.5 tonne truck was analysed closely. Vendigital’s experience in the automotive industry was utilised to support benchmarking activity, which helped to identify key risks and opportunities.

A robust sourcing plan was developed, based on accurate and reliable data, aligned to the company’s desired timescales and outcomes and taking into account industry lead times and other market considerations. Importantly, engineering and procurement work streams were synchronised to meet the same timescales, taking into account processes for parts manufacturing and delivery. This planning would help to minimise the risk of disruption.

A series of internal workshops were carried out to identify areas where there might be scope to reduce cost. These workshops were attended by cross-functional teams and focused on analysing parts and materials that were high cost, high weight or complex. The aim was to further assess their suitability from a cost, value and reliability perspective, while exploring alternative solutions.

An implementation framework was then developed based on data analysis and workshop outputs, providing a reliable basis for managing cost down activities.

OVERVIEW

35%

Proportion of total cost saved on BoM

71%

Weight reduction of the stretch target was identified

40

Employees involved in cost saving focused workshops

Skills+

Cross functional workshops to increase collaboration



As a market leader in the development of battery electric trucks, speed to market is critical to our proposition. The project delivered by Vendigital will ensure that things continue to run smoothly as we ramp up production of our 7.5 tonne truck, while progressing plans to develop our product range further.

Hylton Routledge,
Head of Procurement, Tevva



Tevva is a dynamic OEM with ambitious plans to green the UK's freight industry and, ultimately, reach into overseas markets. We were delighted to be invited to help Tevva identify key areas of opportunity to reduce the cost and weight of its trucks in support of their enterprise value and sustainability goals. Robust data was critical to our solution, which involved bringing together engineering and procurement teams and creating a new operational framework to support the delivery of Tevva's business plan.

Dom Tribe, Partner, Vendigital

THE RESULTS

The review process identified the scope to improve operational efficiency and reduce costs:

- Significant BoM savings for the 7.5 tonne truck were identified, representing 35% of the total vehicle cost
- 71% weight reduction of the stretch target was identified, further improving the energy efficiency of its powertrain
- 200 cost saving ideas identified through the series of cost saving focused workshops with a 40-strong team of internal managers and engineers

Based on an in-depth understanding of cost and value engineering principles and the importance of accurate and reliable data, the framework put in place to support procurement and other management teams would help to optimise processes on an ongoing basis. It would also facilitate greater collaboration between the procurement and engineering teams.

Type of ideas	Saving Range p.a	Weight Saving Range Per Idea (kg)	Description
Re-design 116	£5k – £3.3m	0.1 – 12	Re-design / DFM requiring CAD & Drawing updates
Industrialisation 57	£72k – £4m	0.05 – 3	Prototype manufacturing to series production solutions
Material change 22	£22k – £400k	0.03 – 2	Material changes
Finish change 12	£51k – £510k	0.1	Low hanging fruit - simple
Deletion 10	£5k – £2m	0.05 – 2	Deletion – potentially low hanging fruit
Commercial 8	£205k – £2.8m	1.6 – 3	Commercial activities – procurement focussed
Manufacturability 2	TBC	N/A	Assembly simplification
Performance improvement 1	N/A	N/A	Performance improvements
Warranty 1	TBC	N/A	Cost mitigation

Complexity of Change & Type of Idea

