

VALUE NETWORKS OF ACTORS IN THE FREIGHT SECTOR: THE CASE OF ELECTRIFICATION OF FREIGHT TRANSPORT

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Background and Purpose

Electrification is foreseen to become the main pathway for decarbonizing road freight transport. Still in its early stages - in particular regarding long-haul heavy road transport - many challenges lie ahead, both in terms of technological solutions and business viability. Challenges and opportunities for business are complex in themselves, and also differ depending on actors and roles in the value network. For example, different actors need to design their specific business models based on their own value network, but the business models need to function together to contribute to a sustainable business ecosystem. This presentation will focus on two actor groups: the automotive industry and their customers - often hauliers. We aim to explore similarities and discrepancies between the actor groups' value network perceptions in relation to the electrification of road freight.

Literature

A systematic literature review revealed that the alignment of business models in the supply chain is rather poorly addressed. The findings from the literature review have been complemented with literature on value configuration, to form an initial frame of reference.

Methodology

The study behind this presentation is explorative, due to the early stage and limited degree of implementation of electrified solutions for road freight. The findings are based on semi-structured interviews with respondents from companies in the automotive industry (mainly truck manufacturers) and forwarders. The interviews were structured around themes related to value networks, for example customer market, supplier market, competitors and value creation. The interviews were documented, and the results were structured according to the themes and analysed in relation to the literature.

Findings

The study is ongoing, and some preliminary results can be presented.

In light of the ongoing electrification, manufactures of vehicles for road transport need to reassess their product market offering. From offering a truck and associated service deals, electrification brings new opportunities to extend the offering to include various services relating to operations. In turn, this alters the value balance between these companies and their customers.

The hauliers in the study see electrification as a business opportunity for improving their own value proposition in terms of sustainability. However, there are challenges related to charging - access as well as capacity - which may at the same time restrict the offering in terms of flexibility. Vis-à-vis their suppliers in the automotive industry, the hauliers reveal

some interest in extended services from the vehicle manufacturer, however this interest differ to some extent from what the manufacturers suggest as future extensions of their offerings.

The differences and similarities of the views of the vehicle manufacturers and the hauliers are discussed based on a framework for value configuration, through which some explanations are offered.

Conclusions

Although in its early stages, this research can conclude that different perceptions of value and of the value network will become a major challenge to overcome by the studied companies. Electrification of freight transport is challenging when building sustainable value networks, given the different value configurations of vehicle manufactrers and hauliers. The services offered and requested mirror this inconsistency between the company types. The research further stresses the need to continue to develop a framework for analyzing business opportunities and challenges in the interface between the automotive industry and the freight service industry.