Topic: Business models and its underlying analyses for 2nd-life traction batteries from a car-operator's perspective

Start: Immediately (duration approx. 4-5 months)

Location: flexible

Supervisor: Florian Ratz

Problem definition / goal:

The market share of battery electric vehicles (BEVs) is growing rapidly worldwide. Powerful Li-ion traction batteries are crucial for the performance and range of BEVs, but also a significant cost factor – as they account for about one-third of the total value of a BEV. Therefore, it is important not to simply dispose of or recycle these batteries after their use in the vehicle (1st-life), but to put them to further use (2nd-life) if possible. The focus of the international project SafeLIB is on increasing the safety and reliability of Li-Ion batteries used in mobile and stationary applications but also analyzing the key business aspects. The goal of the following tasks is to investigate the utilization process.

Tasks:

- Definition und description of the taken car-operator's perspective within the battery life cycle
- Identification of necessities for a successful business with 2nd-life traction batteries (for AGVs and ESSs)
- Analysis of market situation/business requirements for the usage of these batteries applying pre-evaluated BM patterns
- Investigation of the products' value proposition from a car-operator's perspective

Requirements: Courses "Grundlagen der Unternehmensführung und Organisation" desired but not mandatory

Field of study: preferably Mechanical Engineering and Business Economics or Software Engineering and Management

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Have I aroused your curiosity? Then please send me your detailed application (CV & Transcript of records). I am looking forward to your submission!