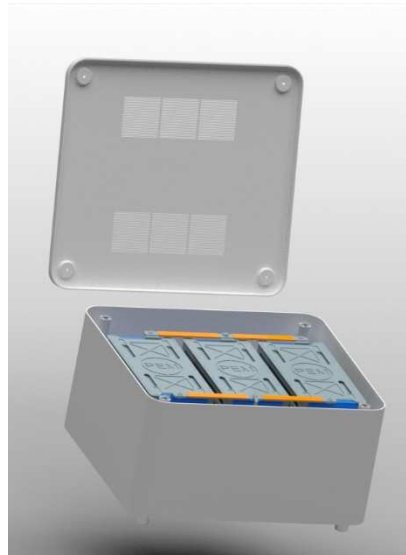


# Bachelor-/Master thesis

## *Second life of heavy-duty battery cells and modules*



### Initial situation:

In the LiVe project, a novel battery system with pouch cells has been developed for heavy-duty trucks (BEV, HEV, high voltage line connection).

The purpose of the research project is to reduce the total costs of operation of such delivery trucks, and the battery system entails innovative aspects such as tab cooling and the capability of being disassembled up to cells level, hence enabling repairs, remanufacturing and repurposing of used cells.

In this context, the repurposing of used modules and cells plays an important role in recovering value at the end of the truck battery life

### Objective of the thesis:

- (1) Evaluate the existing concept and freeze the design of an

home energy storage made from the truck battery modules

- (2) Procure the components, build and test a prototype in eLab
- (3) On the basis of expected load profiles, identify the criteria for the selection of cells and modules selection used in the trucks, with respect to battery parameters
- (4) Estimate the costs of building such home energy storage made of used cells and modules in a mass production environment

### Requirements:

- Understanding of the underlying technical problems and creativity
- Knowledge of Siemens NX, and willingness to learn
- Interest in electric mobility and circular economy

- Motivation and effort
- Capability to both work independently and in team

### What is offered:

- Comprehensive supervision
- Relevant problems to the industry
- Knowledge in battery production

### Have we sparked your interest?

Please send your transcript of records, CV and certificates to the e-mail address below.

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