



# Bachelor/Master thesis

## *Mobility of the Future - Modular Development of Electric Drive Train of Commercial Vehicles*



Source: Tesla

### **Initial situation:**

Over the next few years, a total of four commercial vehicles with different electric powertrain concepts will be set up at the PEM of the RWTH Aachen University as part of a research project.

In addition to the conversion of the vehicles, a modular system for a flexible and modular powertrain will be developed. This conceptual drive train must support different energy concepts and be adaptable to almost any vehicle with a short development phase.

### **Your task:**

Your task is to identify and evaluate current, innovative approaches to modular design methodology and to break them down into their characteristics such as goal, application and information processing logic. A new modular methodic for a modular technical layout of the powertrain will then be derived. Finally, the effects that a powertrain developed with the outlined methodology could have on

supply chains, production processes and engine design should be discussed as an outlook on the further development of the methodology.

### **Your profile:**

- Studies in mechanical engineering, vehicle technology or similar
- Interest in production and/or automotive engineering
- Safe handling of MS Office
- Independent structured work
- Ability to communicate & work in a team
- High level of commitment and initiative

### **Our offer:**

- Comprehensive support
- Delimited tasks
- Close cooperation with an industrial company
- Collaboration in a young, dynamic project team

### **Are you interested?**

Please send a current transcript of grades, curriculum vitae and certificates together with a letter of motivation to the email address below.

### **Your contact at PEM:**

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