

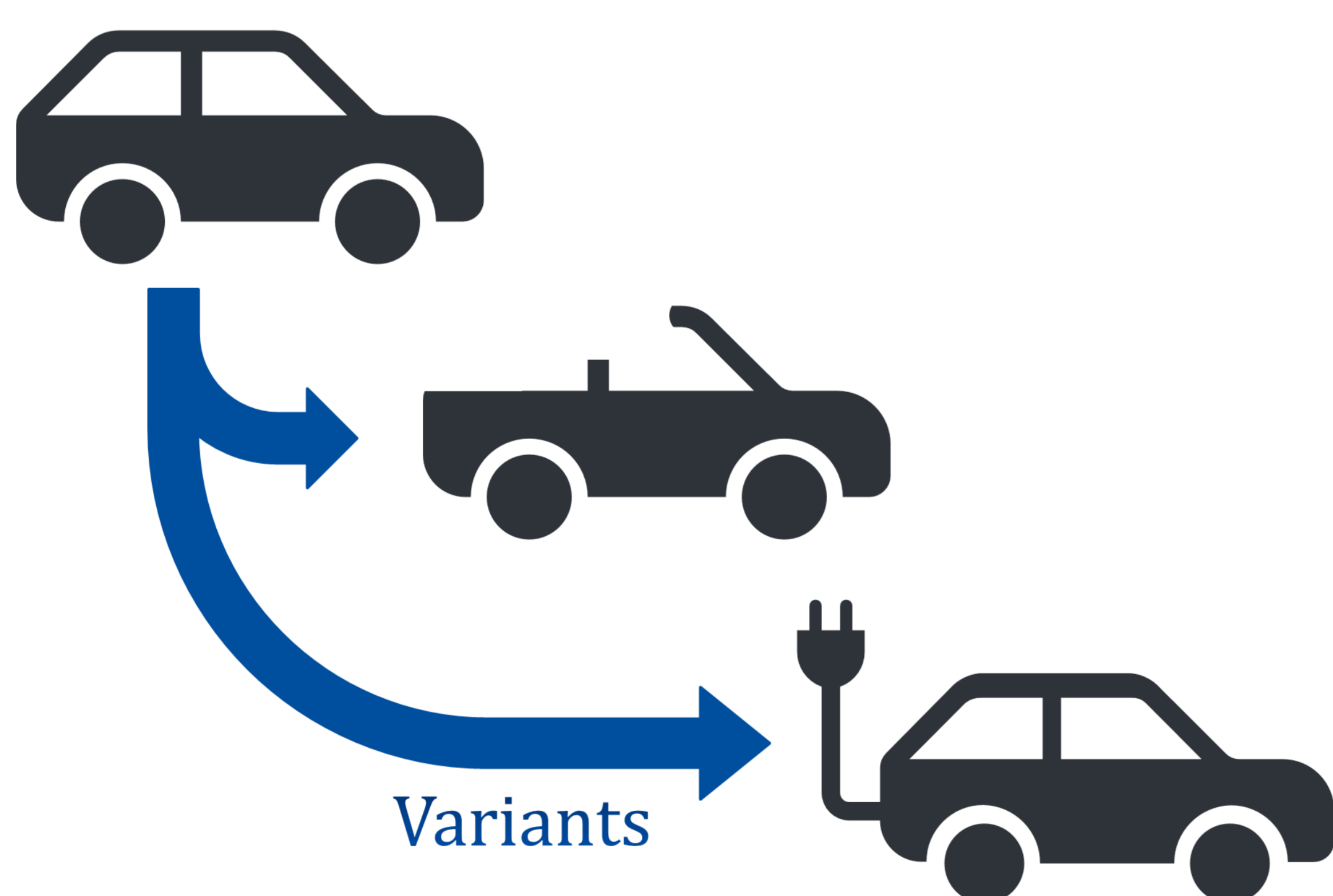
● **Variant Development**

Due to the increasing demand for product individualization, the development of product variants is constantly on the rise. Products are rarely developed from scratch, but are based on reference systems that emerge from the reference through adoption, design and principle variations.

The model of product generation development by Albers can be applied here.

● **Challenges of reliability assurance**

On the one hand, product variants share characteristics, but they also exhibit differences in product design or product use. These differences have different effects on the failure behavior. Since a physical description of the failure mechanisms is usually not possible, reliability assurance is carried out by means of empirical testing. During development, only cost-intensive prototypes can be tested and existing data from previous variants cannot be easily transferred to derived variants.



● **The aim of the research project...**

... is the development of a methodology for effort-reduced reliability assurance in variant development by analyzing similarities. The basis here is formed by approaches for the use of prior knowledge in test planning, to reduce the test effort considerably. For this purpose, it must be possible to quantify the usable prior knowledge by means of a transformation factor, which must be determined on the basis of objective criteria.

