# **NISTUTIGART**

Fachbereich Zuverlässigkeitstechnik

# Reliability assessment of vehicles



## **Problem definition**

The reliability of vehicles is a central criterion for customer satisfaction and a

#### Aim

Development of a methodology to ensure the reliability of complete vehicles based on event-driven testing in accordance with the requirements outlined in the specification.

key factor in the competitiveness of automotive manufacturers. Customers expect durable and robust vehicles that perform reliably under a variety of operating conditions. To meet these expectations, vehicles undergo extensive endurance testing to ensure their performance and durability throughout their entire lifespan. However, the traditional kilometer-based testing method is time-consuming and often fails to account for specific load scenarios adequately. Given the increasingly shorter development times, a more efficient and targeted testing methodology is therefore required.

# Procedure

1. Identification of relevant events

- 2. Definition and calculation of events
- 3. Defining target values
- 4. Error detection, assignment,

and weighting



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- 5. System differentiation
- 6. Integration of prior knowledge



prognosis





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