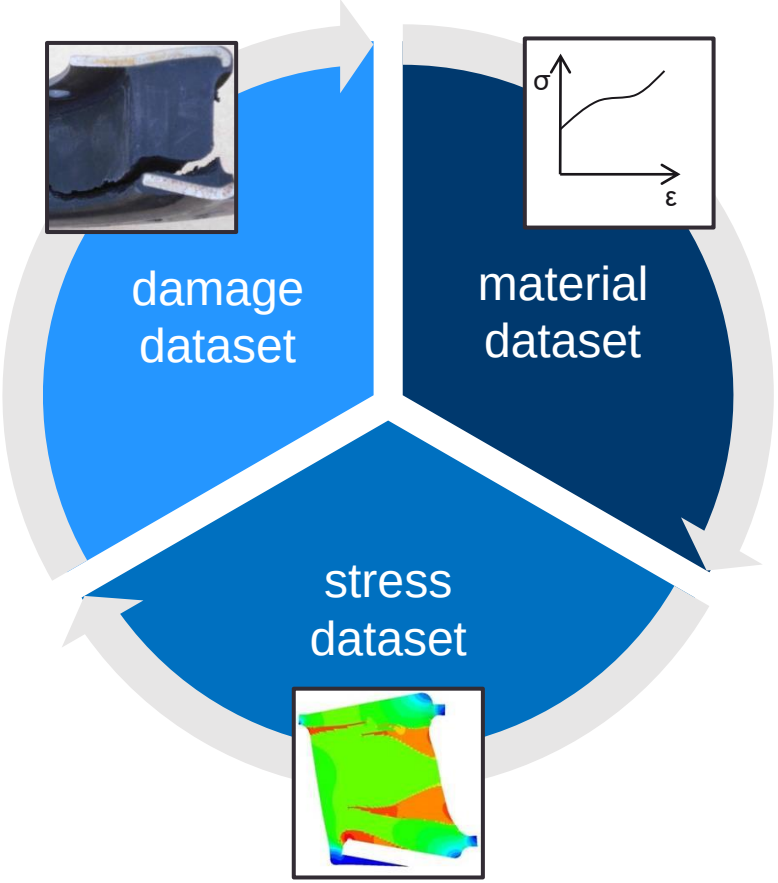
User-oriented service life prediction system for dynamically stressed elastomer components

Problem

- The service life of elastomers depends on many influencing factors
- Previous models for service life prediction are only valid for special load cases or can only be transferred to real applications to a limited extent
- In practice, service life tests are carried out in a large number of destructive tests, which are resource- and cost-intensive

Objective

- Development of a service life prediction system, which is calibrated on the basis of a few tests on material specimens
- Transfer of the service life prediction to a component geometry via FE simulations
- Implementation of the developed prognosis logic in an open-interface platform for software-independent application



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