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# Development Methods in Battery Safety: Simulation and Testing

Graz University of Technology – Vehicle Safety Institute

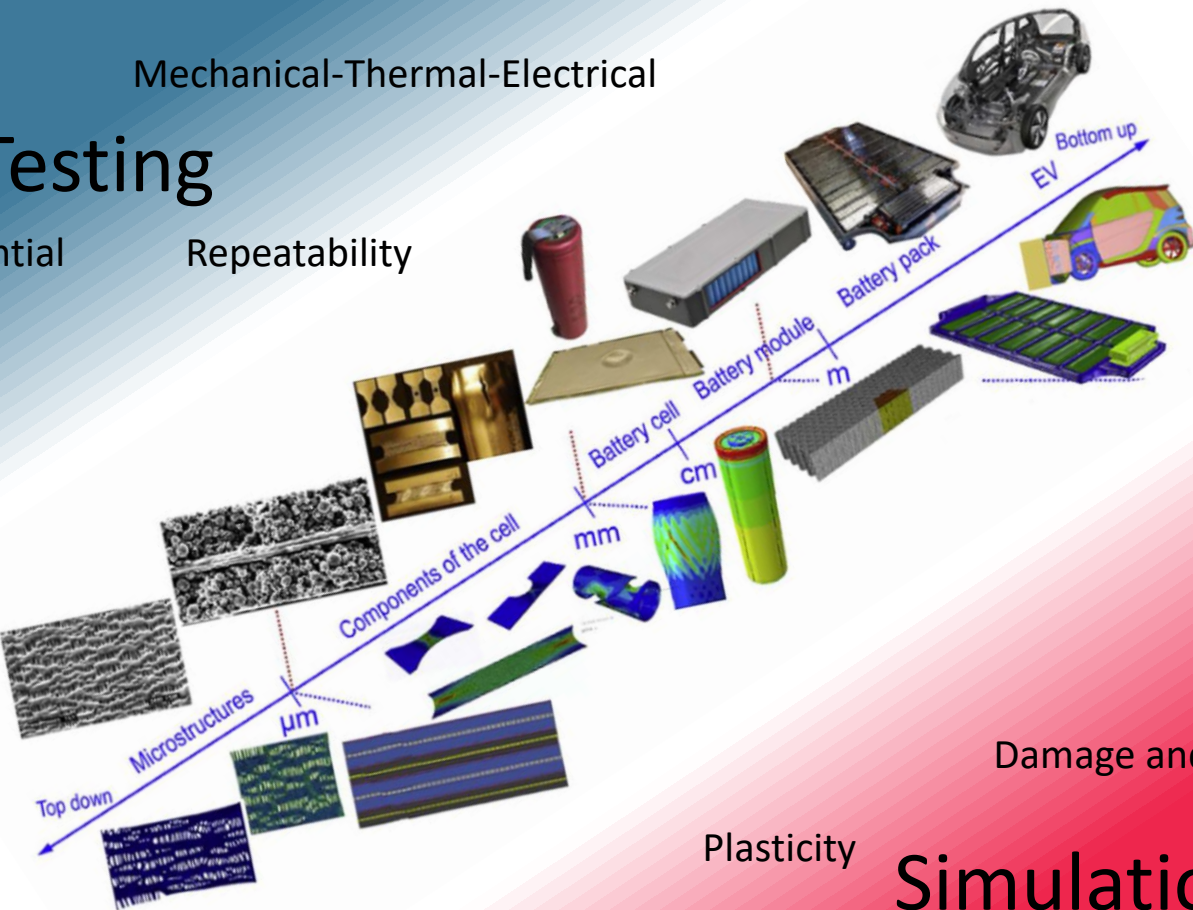
Dynamic

Mechanical-Thermal-Electrical

Hazard potential

Repeatability

# Testing



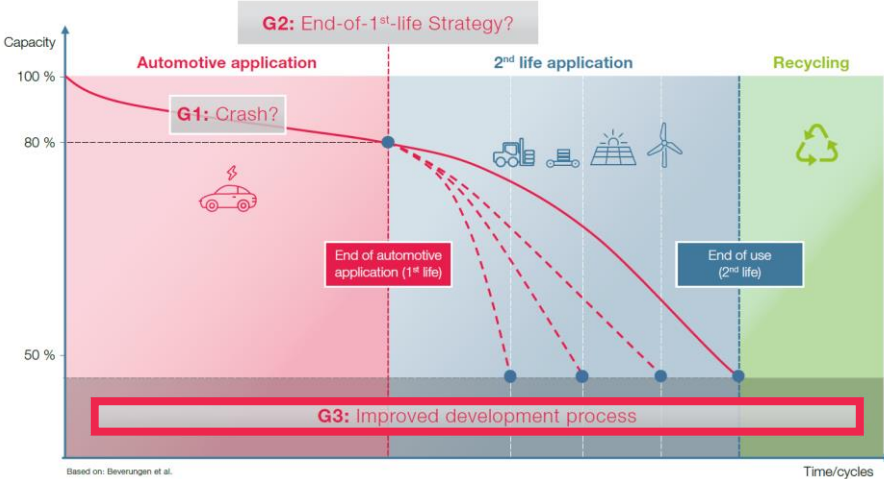
Damage and Failure

Plasticity

# Simulation

Finite Element Modelling

Dynamic



**Responsible Use  
of Resources**

**New Battery  
Technologies**

**Time to Market**

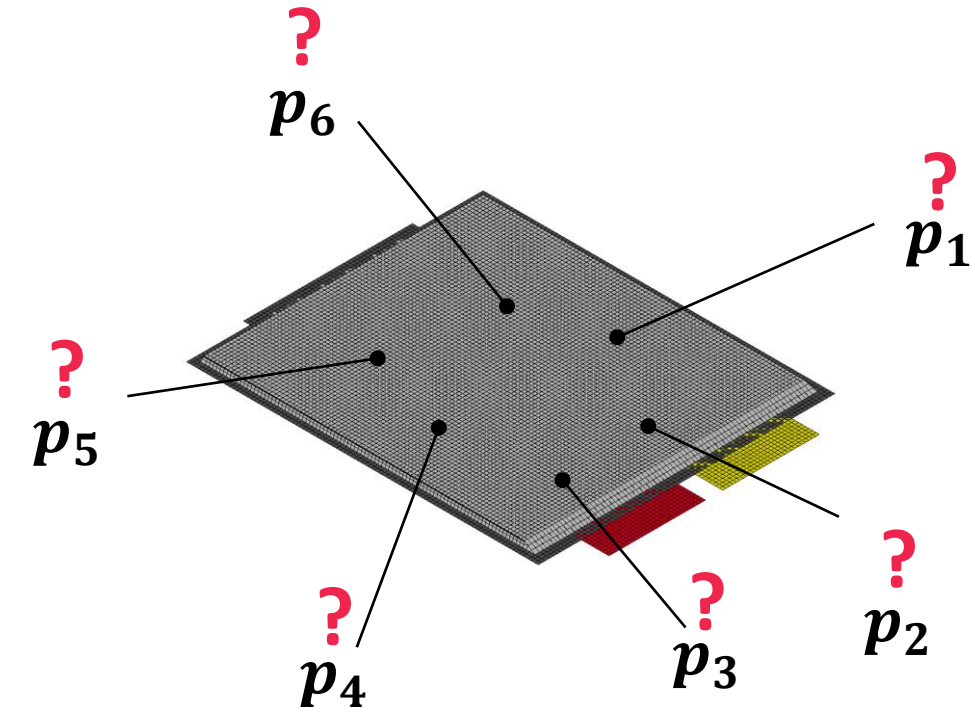


**SafeLIB**

**Big Data**

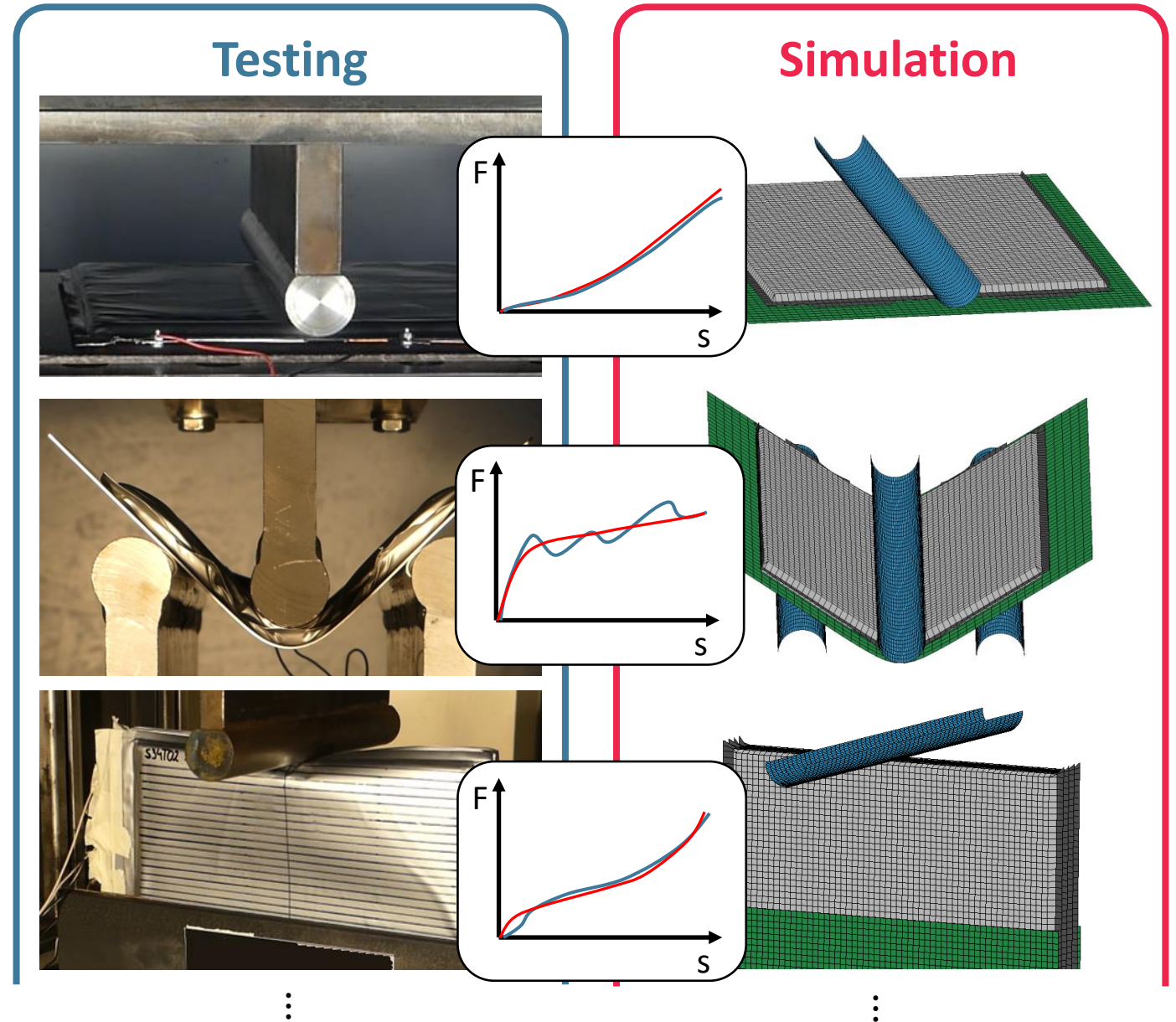
**Increasing  
Complexity of  
Models**

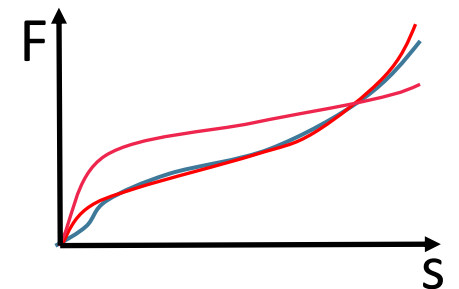
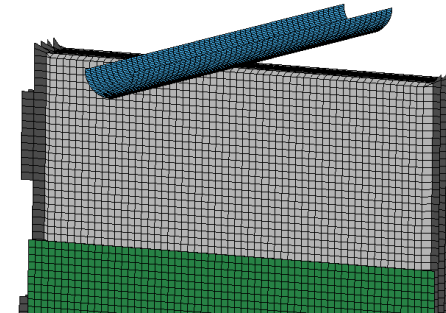
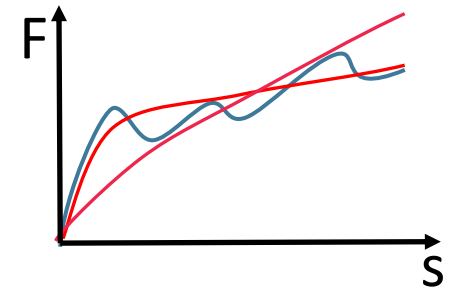
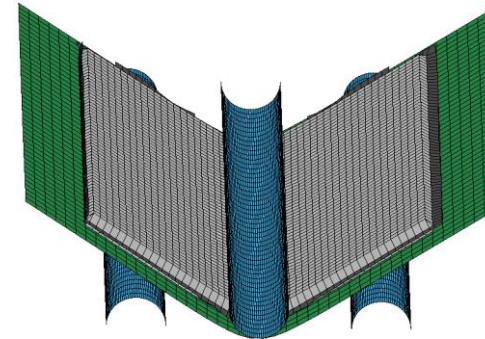
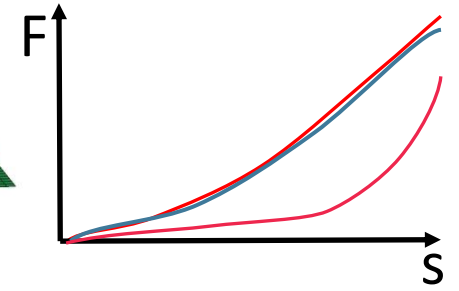
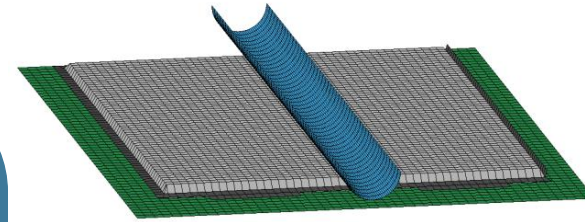
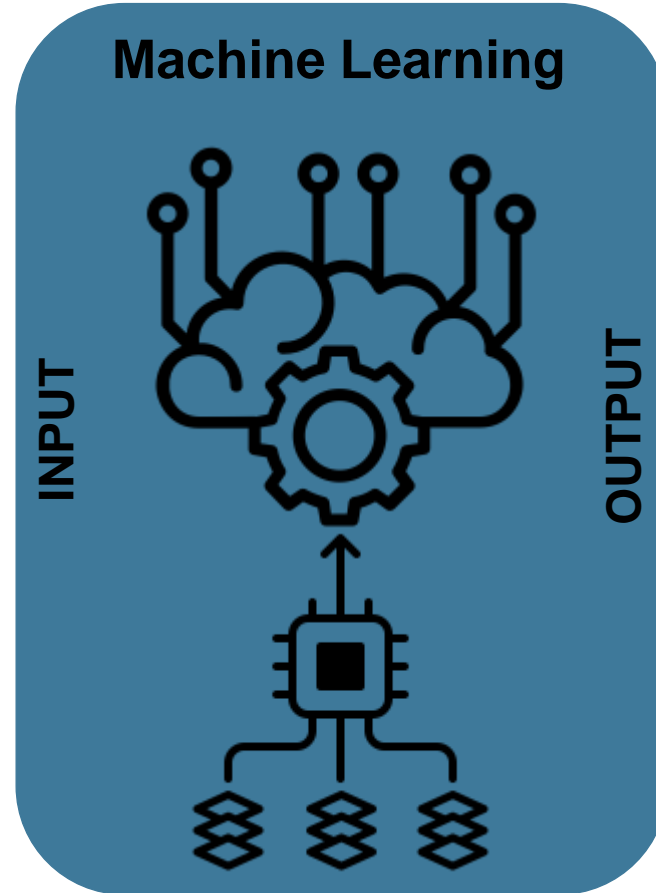
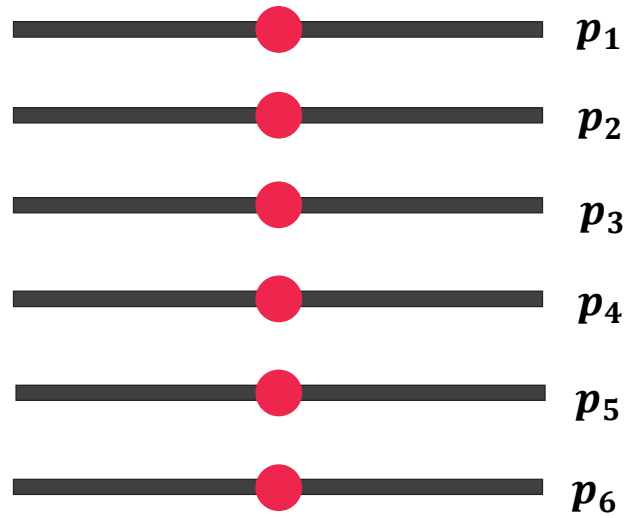
**Multi-Physical  
Modelling**



Examples for Parameters  $p_i$ :

- Young's Moduli
- Yield Stresses
- Element Thicknesses









Das COMET-Projekt SafeLIB wird im Rahmen von COMET – Competence Centers for Excellent Technologies durch BMK, BMDW, das Land Oberösterreich, das Land Steiermark sowie die SFG gefördert. Das Programm COMET wird durch die FFG abgewickelt.

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