An ITEA Smart engineering project

COMPAS

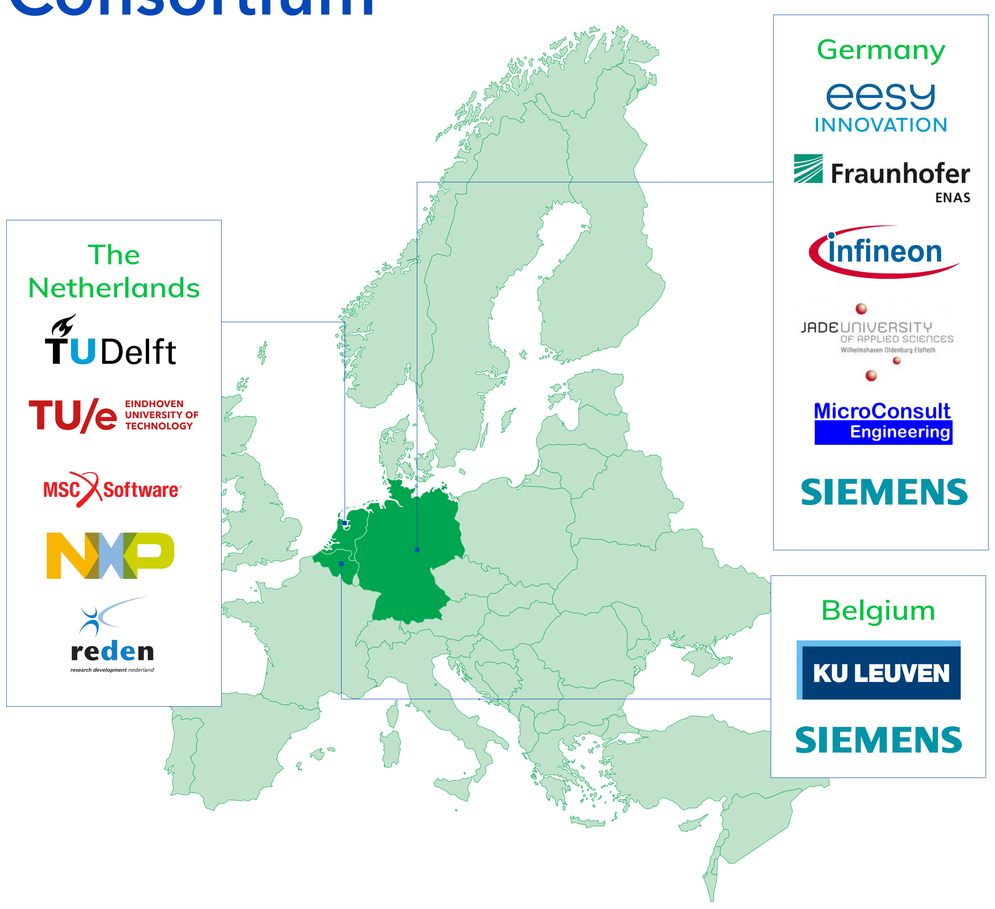
25 years ITEA 4 1998 – 2023

Compact modelling along the high-tech supply chain

Project summary

COMPAS (Compact modelling of high-tech systems for health management and optimisation along the supply chain) will develop compact models for system-level simulations and ultra-compact digital twins for prognostic health management. This will result in innovations in model order reduction (MOR) to generate compact models, and AI-based health management of high-tech systems.

Consortium



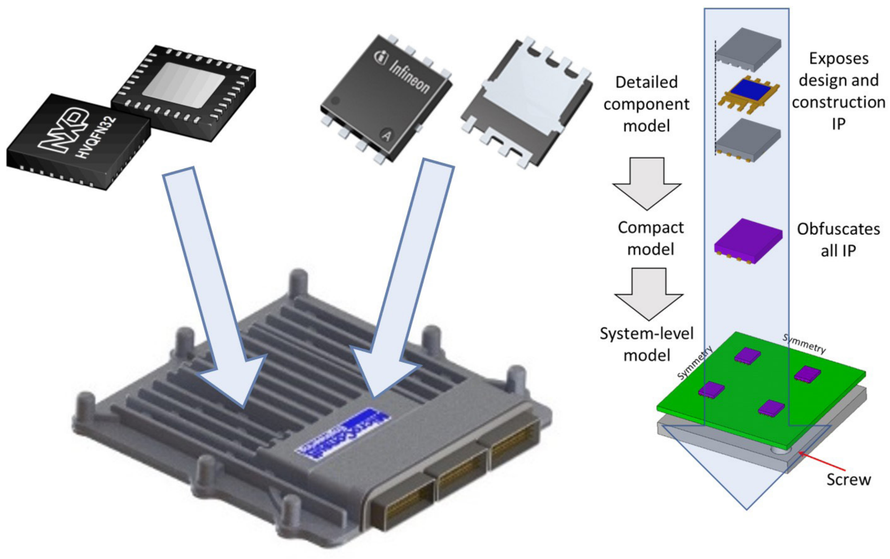
Project duration

January 2021 - December 2023

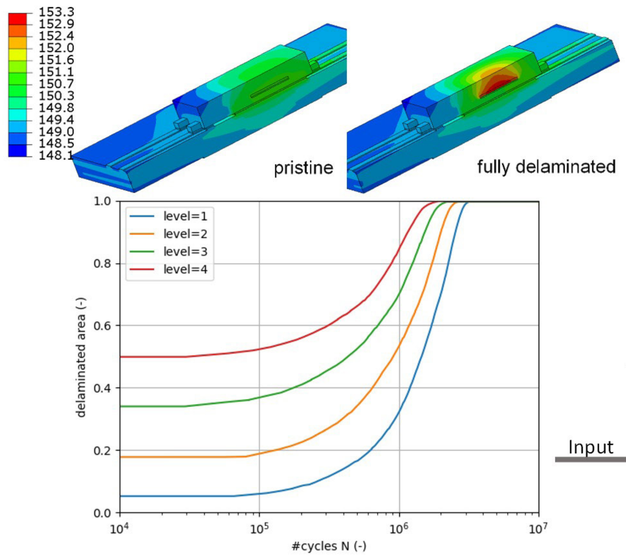
Key results / Unique advantages

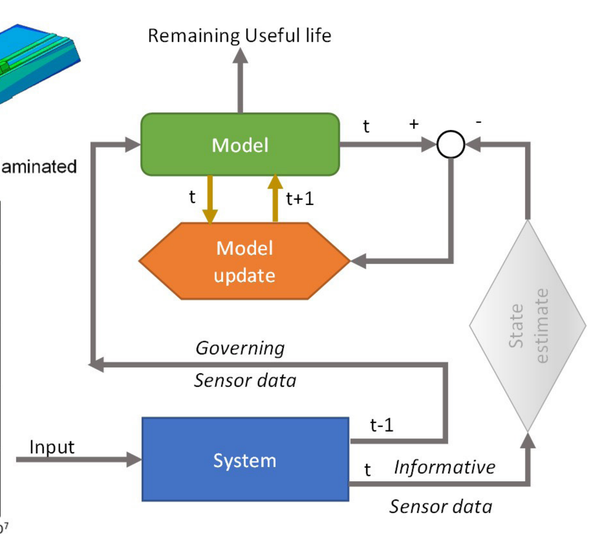
- **Non-linear MOR** techniques have been developed to couple transient multi-physics simulations.
- **MOR in commercial software tools** using piece-wise linear super-elements.
- **(FMI-based) exchange standard** will be proposed to microelectronic simulation community.
- **Digital Twin methodology** for prognostics based on real-time updated compact models.

Co-design along the supply chain by simulation



Prognostics by ultra-compact digital twin





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