



# Making Knowledge Applicable

*modelwise* is the first company to develop a mathematically complete solution for accelerated and improved safety assessment. Manufacturing companies profit from a significantly shorter time-to-market through seamless integration into the engineer's workflow and tool chain. Because overlooked design flaws cause callbacks and, in worst case, can endanger humans and the environment, it is critical to give engineers instant feedback on the safety of system designs.

The *modelwise* software has the following features:

- **Automated Safety Analyses:** automating the routine parts of safety analyses (e.g. FMEA) and enabling the execution in minutes instead of days.
- **Early Safety Analyses:** checking system designs in early project phases with high savings potentials.
- **Integrated Safety Analyses:** keeping costs for introduction low by seamless integration in existing Safety Engineering processes. Thus, the software will be integrated with requirements management tools – e.g. SOX2, DOORS, exida, Helix.
- **Reusable and automatic generation of models:** using existing models of technical systems (e.g. in Matlab, OrCAD, Altium), which are prepared by Automatic Model Transformation (AMT) for safety analyses.

## MODEL-BASED FMEA

The FMEA analyzes whether a fault mode can cause safety-critical effects. Model-based fault propagation allows a **complete** analysis of the system behavior and of the impact of fault modes. *modelwise* avoids additional modeling through automatically transforming existing models from standard tools, for example Matlab Simulink.

These models of technical systems are enriched with their fault behaviours, which are re-usable and collected in model-libraries. Such model-libraries are part of *modelwise*'s product portfolio.

## TEAM

*modelwise* is funded by EXIST Technology Transfer (Bundesministerium für Wirtschaft und Energie). The project is based on research results of the [Model-based Systems & Qualitative Reasoning](#) research group at the TU Munich.

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## AWARDS

- EXIST Technology Transfer funding
- Gründerwettbewerb – Digitale Innovation
- Münchener Business Plan Wettbewerb – Phase 1 finalist