

MegaM@Rt²

MegaModelling at Runtime



Objectives

MegaM@Rt will create a framework incorporating methods and tools for continuous development and validation. It will leverage the advantages in scalable model-based methods to provide benefits in significantly improved productivity, quality and predictability of large and complex industrial systems.

- Significantly increased productivity and quality of system development and shorten time-to-market for complex systems
- Reinforced European scientific and technological leadership in the design of complex systems
- Improved competitiveness of European companies by reducing design and maintenance costs as well as the time-to-market

Relevance and Impact

Model-Based Engineering principles and techniques have already shown promising capabilities. However, they have generally failed in terms of:

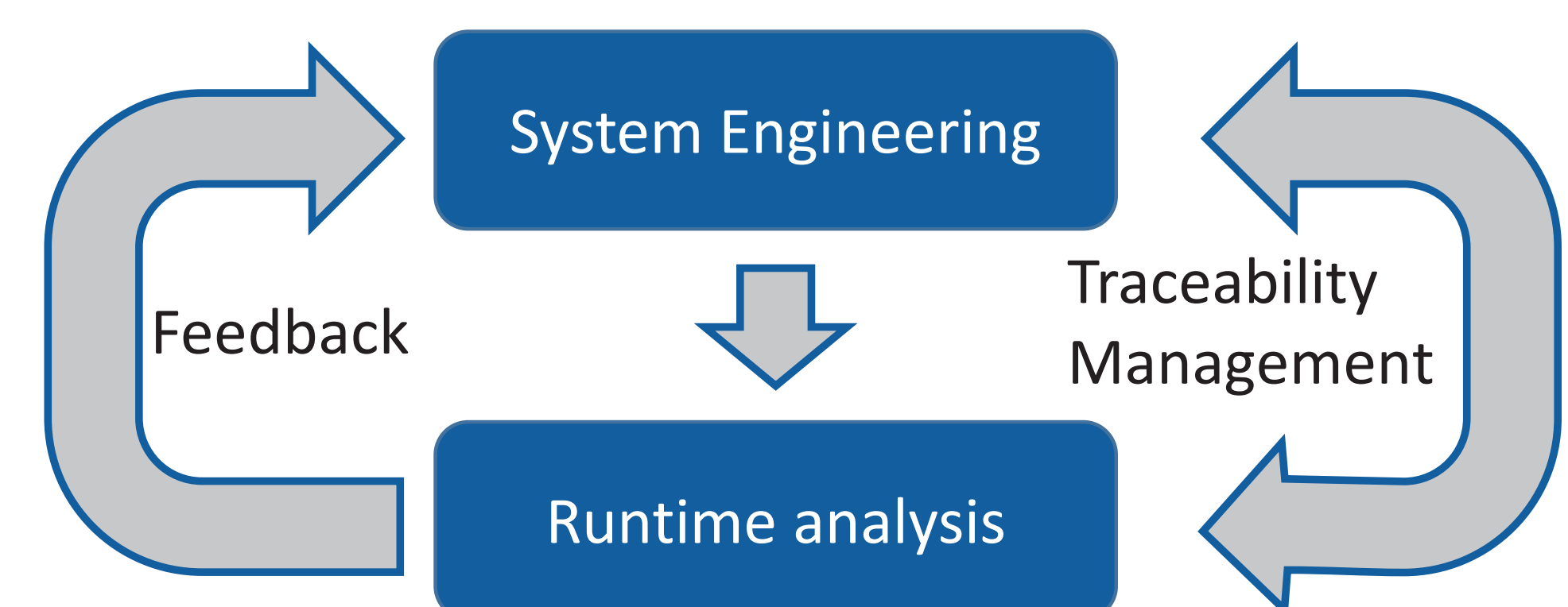
- Scalability to support real world scenarios implied by the full deployment and use of complex electronic components & systems
- Efficient traceability, integration and communication between two fundamental system levels: design time and runtime, especially for verification and validation of non-functional properties

MegaM@Rt brings together prominent tool vendors and research organisations with state-of-the-art methods and tools that will be validated in 9 highly relevant European industry case studies. The end users from the maritime, railway, telecom and other industrial domains will drive the project by providing real-world requirements and case studies as well as by validating and endorsing the MegaM@Rt results.

Technical Innovation

The main technical innovation topics of MegaM@Rt are:

- Scale up the use of model-based techniques by offering proper methods and related tooling interacting between both design time and runtime,
- Enhance and combine existing model-based techniques
- Provide efficient traceability support between design time and runtime models
- Collect and analyse runtime information to provide feedback to design phase
- Validate the designed and developed approach in concrete industrial cases involving complex systems
- Design and deploy a scalable megamodelling approach to manage all the involved artifacts (e.g. the many different models, corresponding workflows & configurations) and to better tackle their large diversity in terms of nature, number, size & complexity.



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MegaM@Rt²

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€M 19.5

Participating organisations
27

Number of countries
6

