

Development of Models, Methods and Instruments to Describe, Analyse and Estimate Uncertainties in technical Systems.



TECHNISCHE
UNIVERSITÄT
DARMSTADT

SFB 805 – Control of Uncertainty of Load Carrying Systems in Mechanical Engineering funded by DFG

Goal and Objectives

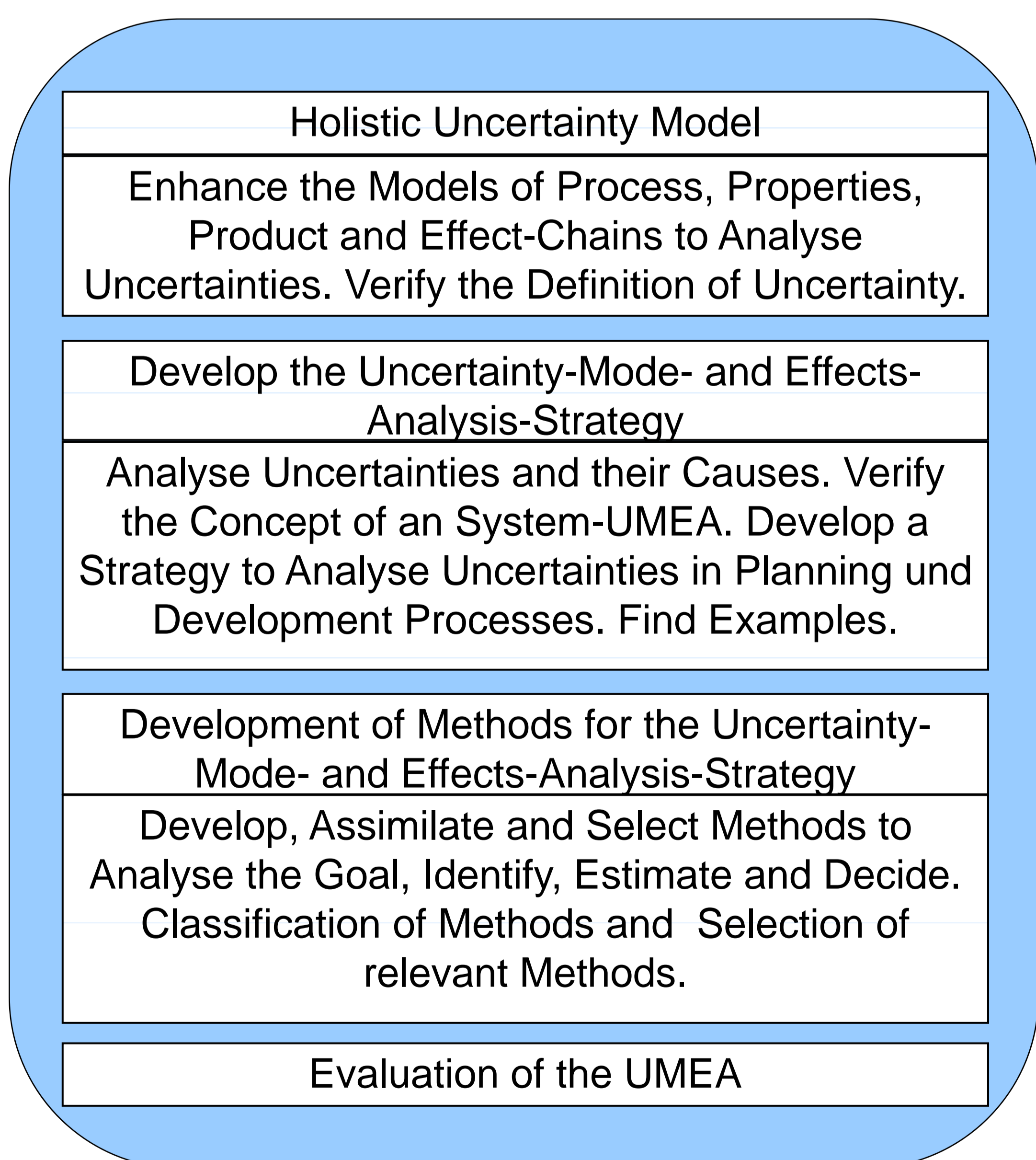
Development of an Uncertainty Mode and Effects Analysis - Methodik (UMEA)

- Methodology to analyse uncertainties
- Analyse of risk, reliability, value,
- Definitions of different uncertainties: aleatoric, epistemic, forecast
- Description of uncertainties in real and virtual product- and process development.
- Development of models and methods to analyse uncertainties.
- Capture and estimate uncertainties.

Research Questions

- What is the definition of uncertainty in technical systems?
- What models and methods are necessary to collect uncertainties in a simple way?
- How can uncertainties be estimated

Research Approach



Contact



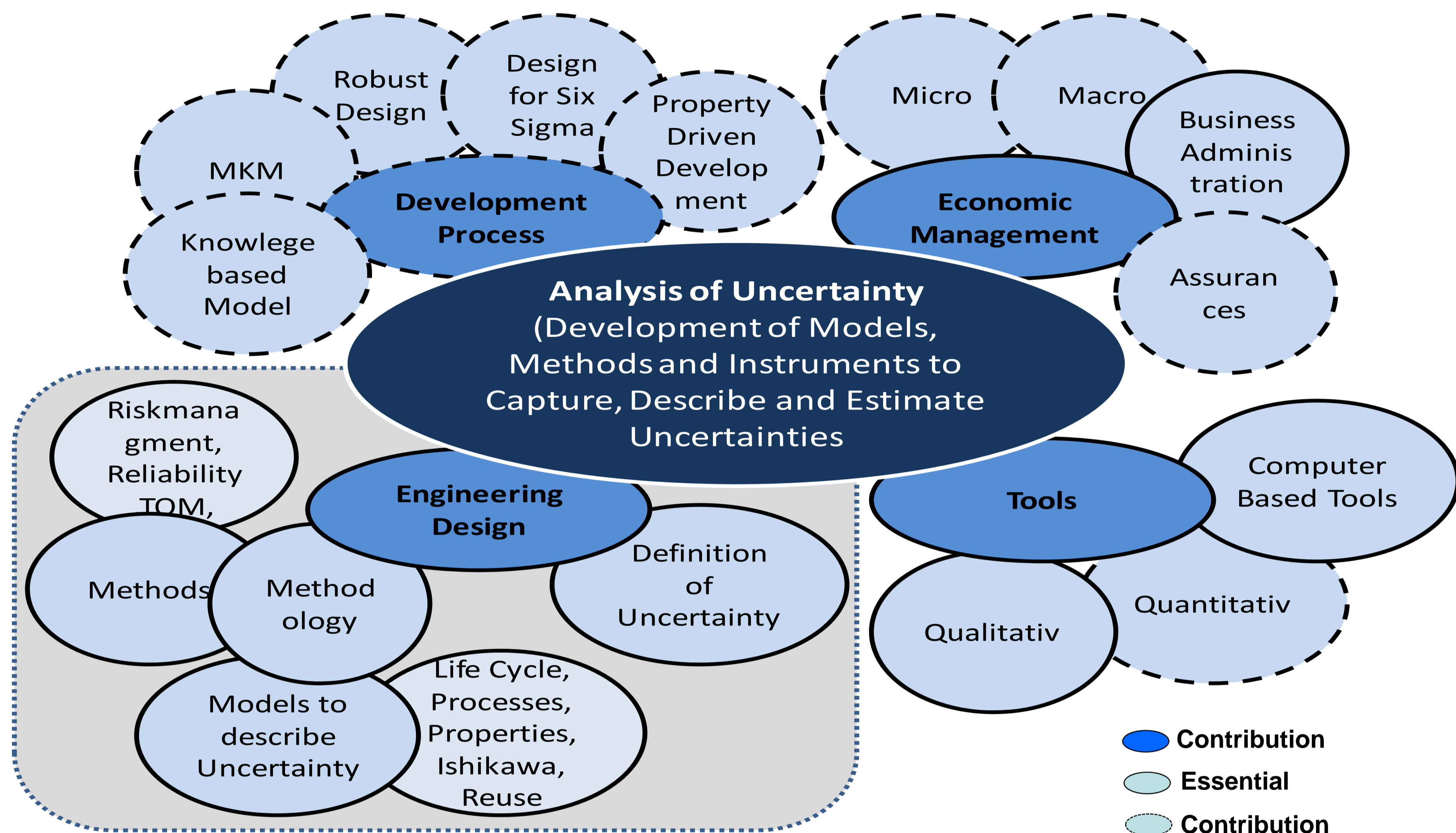
Dipl.-Wirtsch.-Ing. Roland Engelhardt

Institute of product development and machine elements darmstadt (pmd)

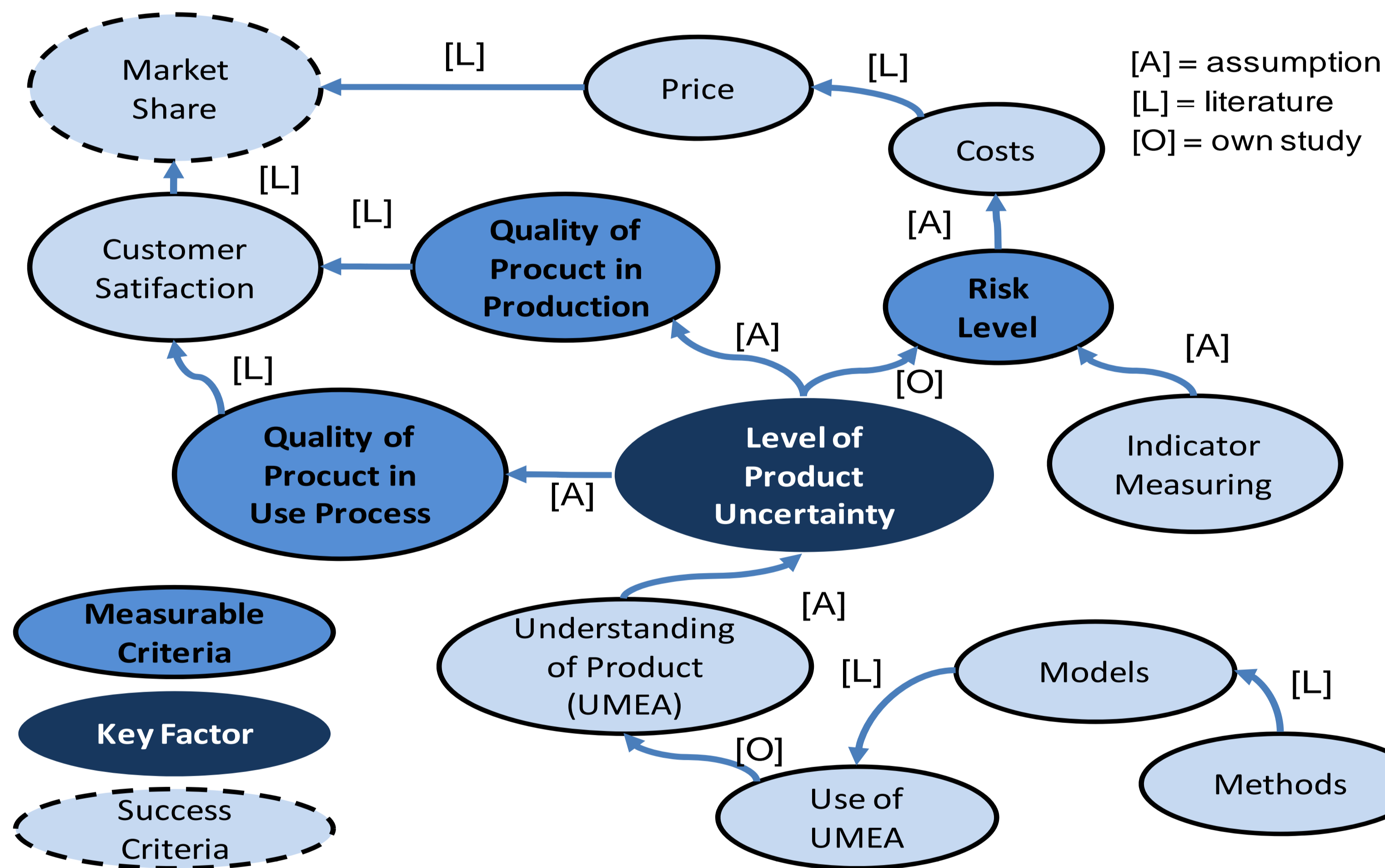
Technische Universität Darmstadt
Germany

E-Mail: engelhardt@pmd.tu-darmstadt.de

Areas of Relevance and Contribution



Initial Reference Model



Example of Work

