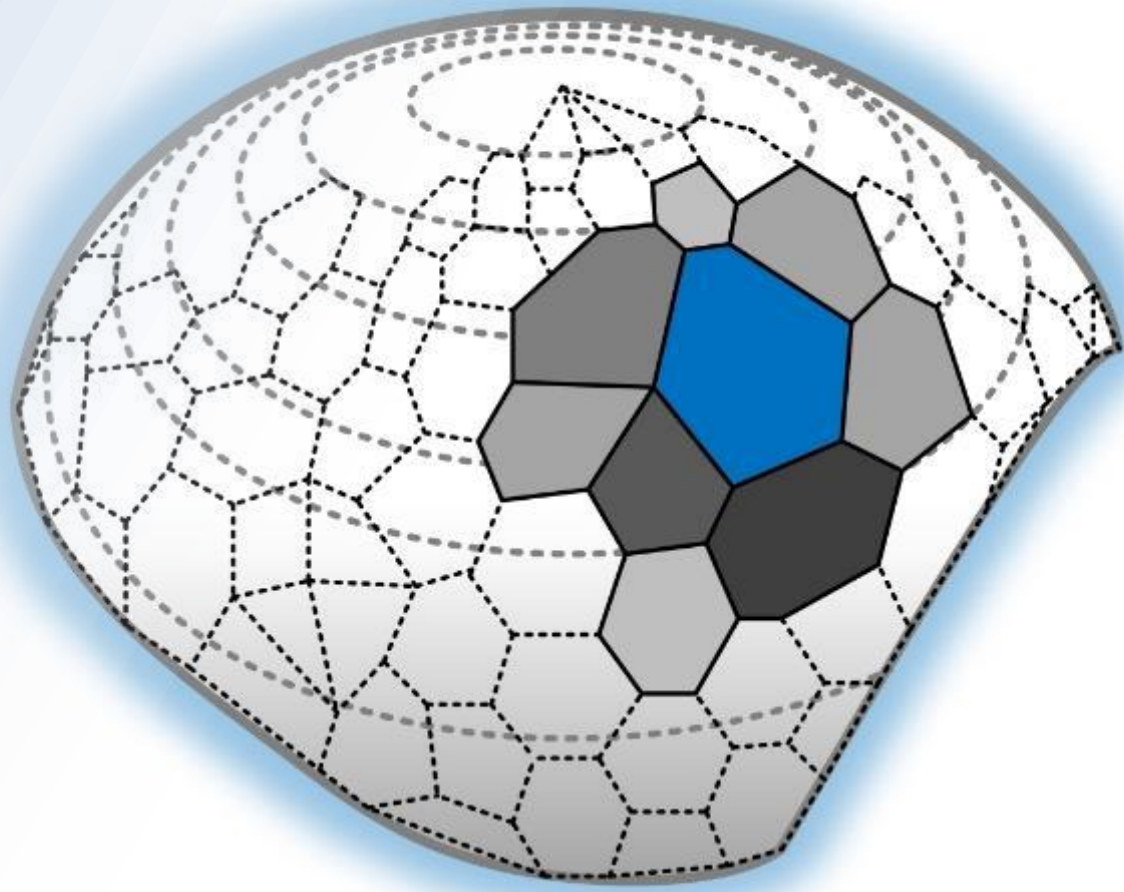


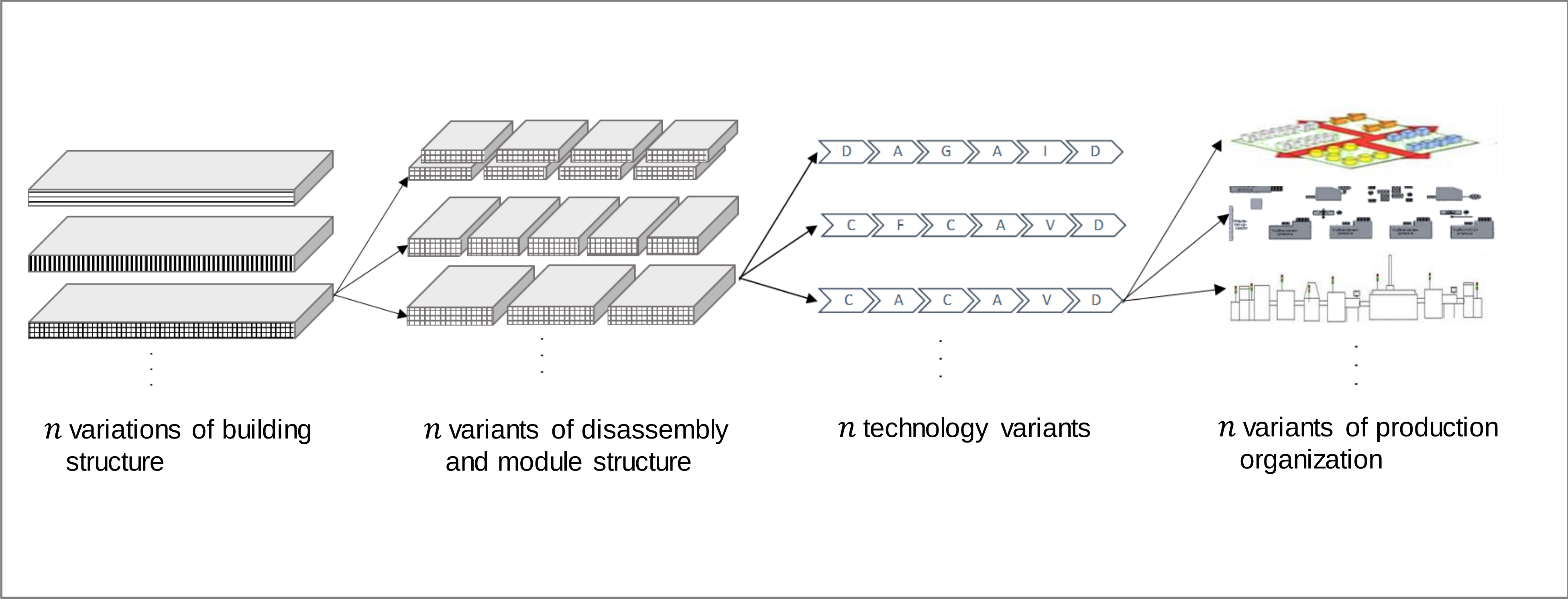
Assessment of segmentation strategies and individual modules from production engineering point of view

Prof. Dr.-Ing. Thorsten Schmidt
Technische Universität Dresden



SPP 2187

Motivation & Aims



- Managing complexity & diversity of variants

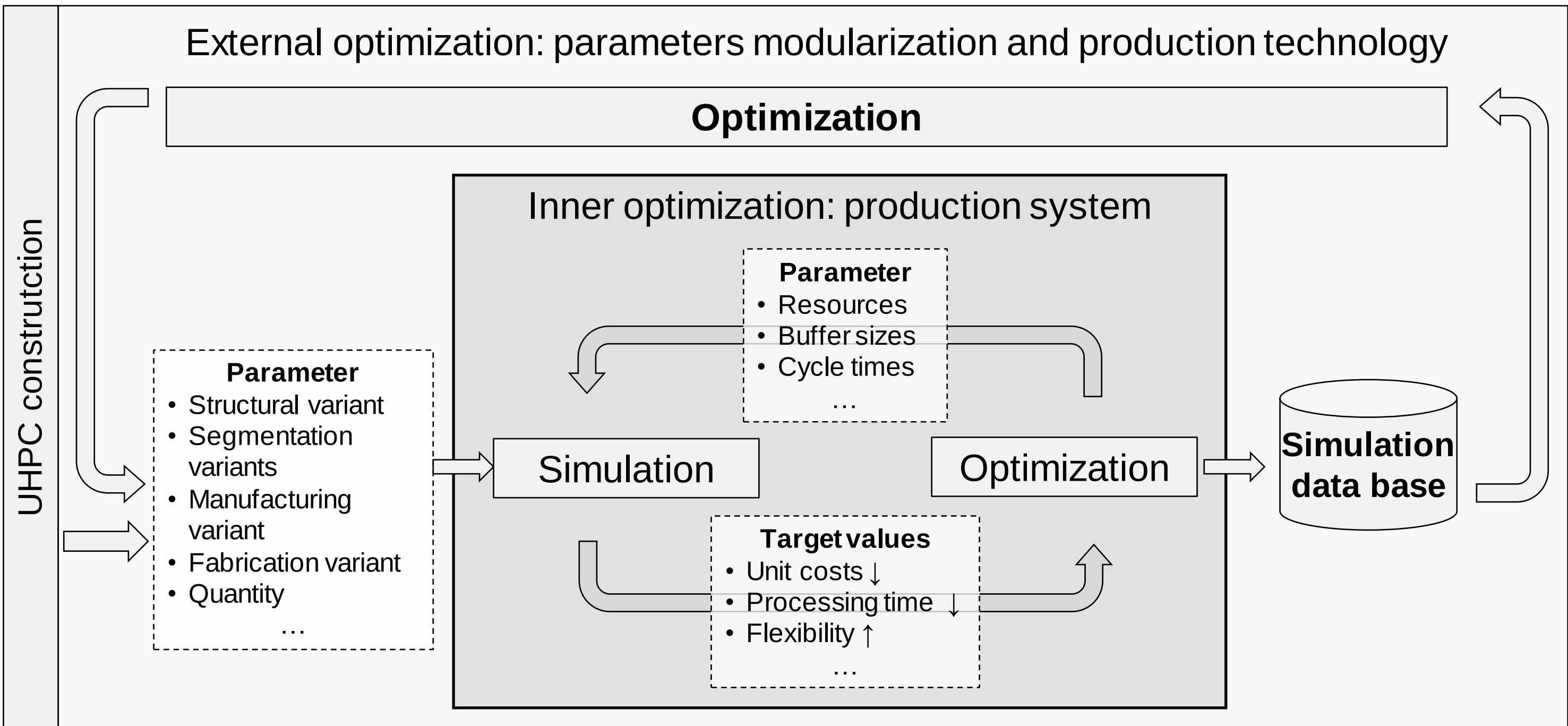
Saving Resources by

- Ability to select most efficient module and production system variants
- Deduction of design guidelines for structure and segmentation variants

Methods

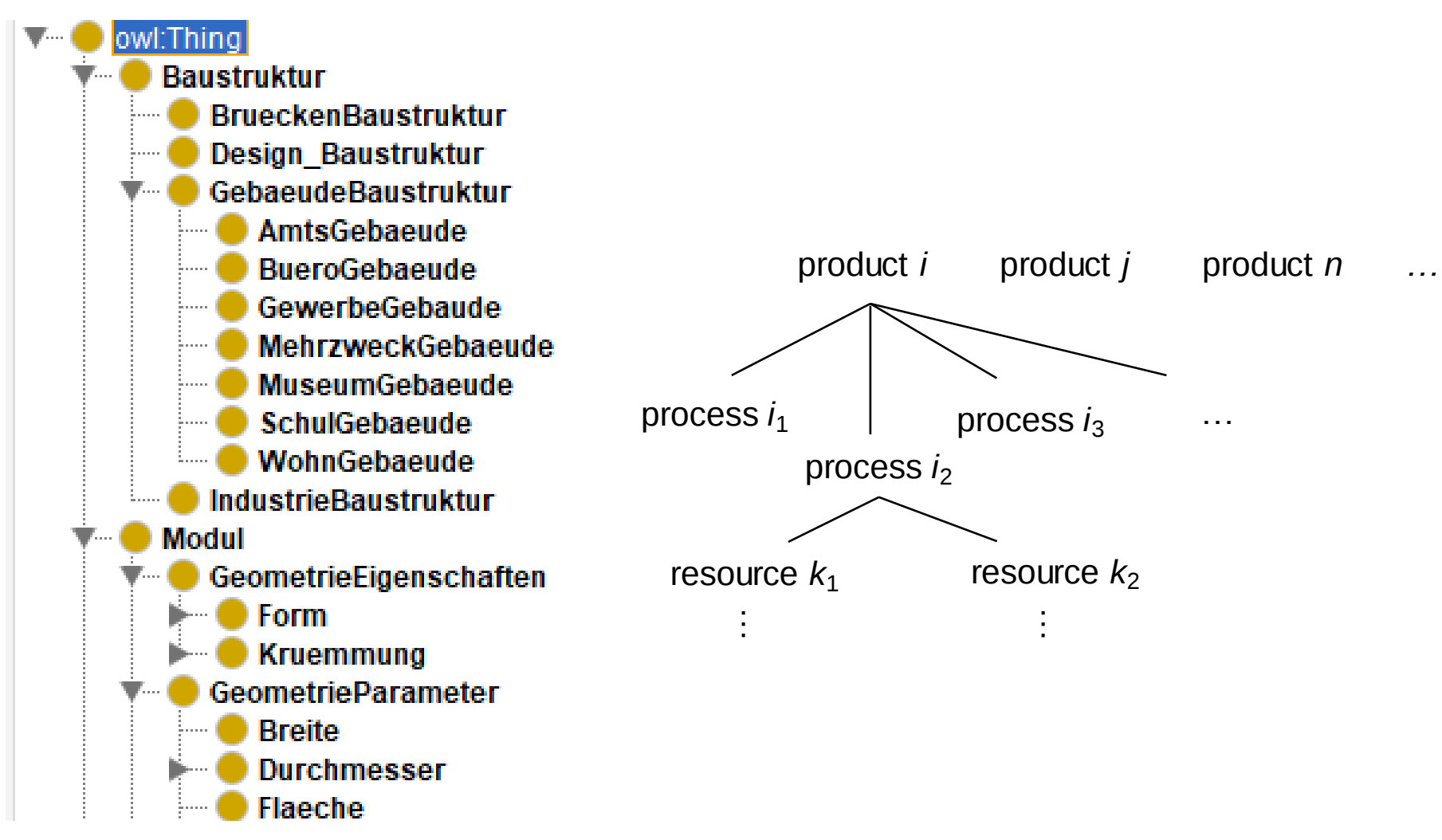
- Setting up Modular System for module variants, possible technologies as well as resources
- Evaluation of variants (modules, processes etc.) on the basis of cost modeling
- Using Machine Learning for deduction of suitable production technologies, manufacturing sequences or module variants

- Using genetic optimization strategies for Optimizing Production Systems

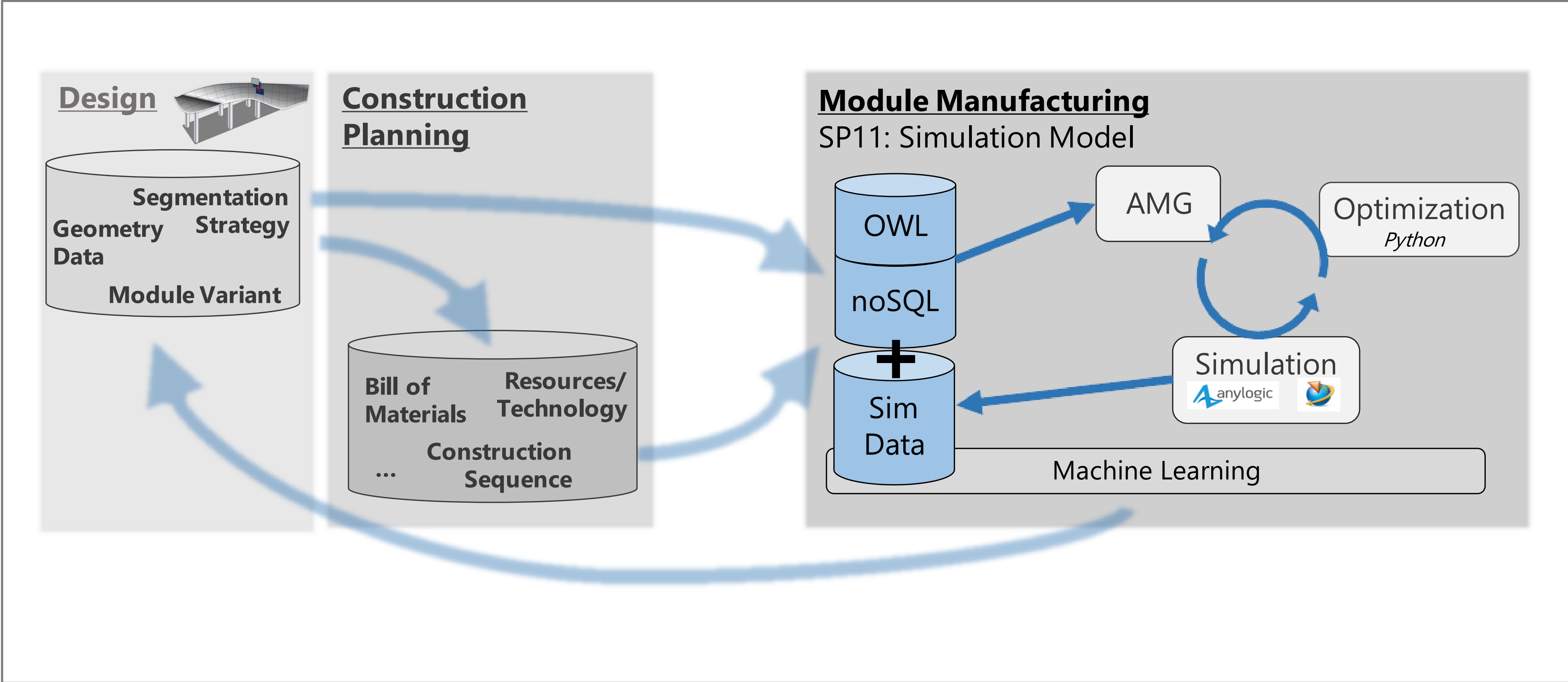


Results

- Data structuring and linking by using ontology as data base



- Parameter based Simulation of production processes (Plant Simulation/ AnyLogic)
 - Automated Model Generation & Optimization based on Python/ Java
 - Prediction of unit costs of alternative module and production system variants
- Method for holistic evaluation and pre-selection of segmentation strategies and production technologies for high-performance concrete modules from a production and economic point of view



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