

# Requirements Management for the Factory of the Future – Analysis, Strategy and Tool Support

Keywords: factory as product, factory design process, requirements, performance planning

## Abstract

In the context of designing the factory of the future, it is important to efficiently capture and manage the requirements as early as possible in the design process. Besides the strategy of a company one source for deriving functional requirements is the product to be produced itself. In later stages the fulfillment of the requirements can then be assessed with the help of specific performance indicators. In this work the interplay between product, requirements and their link to the performance indicators will be analyzed.

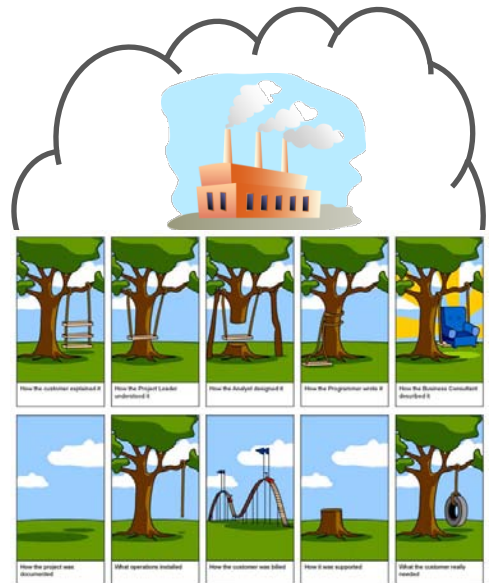
## Background Information

Today, manufacturing enterprises have to meet the increasing global consumer demands for greener, more customized and higher quality products. This causes the development of the corresponding production processes and facilities to be more complex and challenging.

One of first steps in designing a new factory is to collect and efficiently manage the requirements for the new planned facility.

In order to identify related requirements the company's strategy and the product to be produced have to be analyzed. In a next step the requirements that have been found have to be formalized. This should be done in a way, so that suitable indicators for the assessing the fulfillment of the requirements may be assigned.

Therefore, this student work focuses on a profound examination in the context of requirements management and aims at clear interfaces to the future product and at the assignment of performance indicators.



## Workpackages

- Get familiar with the topic of requirements management, factory design and related software tools
- Consult relevant literature and make an in-depth review with focus on requirements management
- Analyze the interplay between products, related functional requirements and expected performance
- Investigate existing modelling approaches for functional requirements and suggest extensions
- Documentation, mid-term and final presentation

## Informationen & Administration

Daniel Politze, CLA G19.2 - [politze@iwf.mavt.ethz.ch](mailto:politze@iwf.mavt.ethz.ch)

Noelle Jufer, CLA G19.2 - [jufer@iwf.mavt.ethz.ch](mailto:jufer@iwf.mavt.ethz.ch)

Jens Bathelt, CLA G19.2 - [bathelt@iwf.mavt.ethz.ch](mailto:bathelt@iwf.mavt.ethz.ch)