

# Compatibility and Configuration Matrix System (CCMS) in Customer Driven Design and Production

**Key Words:** Customer Driven Design and Production, Variant management, Digital Factory, Factory as Product, Enterprise Integration

## Abstract

The Compatibility and Configuration Matrix (CCM) is a proven analysis tool and knowledge base in the development of variant intensive products. Within this work, this concept shall be expanded in order to integrate the production facilities as well which are needed to manufacture the variant intensive products.

## Environment

For some years now, globalised markets have been demanding that the various sectors can produce customer driven, individualized products in ever shorter cycles. This impacts the development of products in the sense of an increasing amount on variants as well as in decreasing development cycles. The ever more complex product development also highly affects the development of the corresponding production processes and facilities. One approach on that topic offers the paradigm "Factory as Product" by integrating the product into the factory and by taking advantage of the acquisitions of the digital product development.

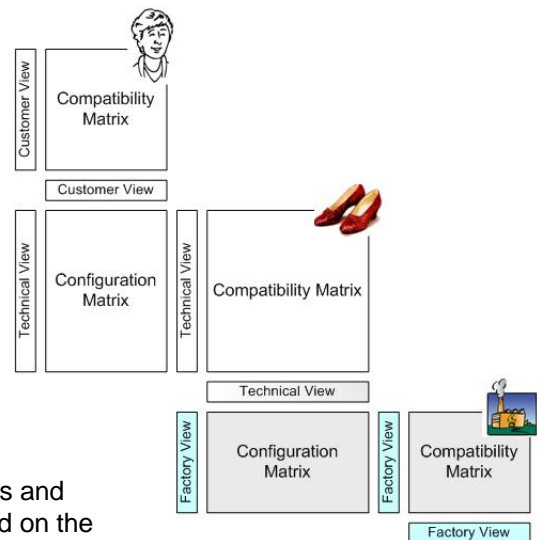
CCM maps two different views, usually customer requirements and product components and visualizes their dependencies. Based on the paradigm "Factory as Product" CCM shall be expanded to a Compatibility and Configuration Matrix System (CCMS) covering the product and production knowledge while connecting the product and production life cycle.

Within the EU 7<sup>th</sup> Framework Research Project DOROTHY this paradigm is addressed. DOROTHY aims to "design customer driven shoes everywhere, manufacture them intelligently anywhere" as a crucial challenge for shoe industry to gain competitiveness on the global markets.

The developed and applied CCMS shall be justified exploiting a real case example together with the DOROTHY industry partner Hugo Boss.

## Work packages

- Get familiar with the topic of CCM.
- Consideration of the paradigm "Factory as Product": Integration of the product and the factory design by creating a common knowledge base:
  - o Develop a CCMS concept including the customer, product and factory view.
  - o Apply the developed CCMS on the collected and generated information of the DOROTHY project.
- Planning of a validation workshop for the applied CCMS with the DOROTHY industry partner Hugo Boss.
- Validation of the applied CCMS concept together with Hugo Boss.
- Written final report including an abstract required.
- Final and Mid-term presentation required.



## Informationen & Administration

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