

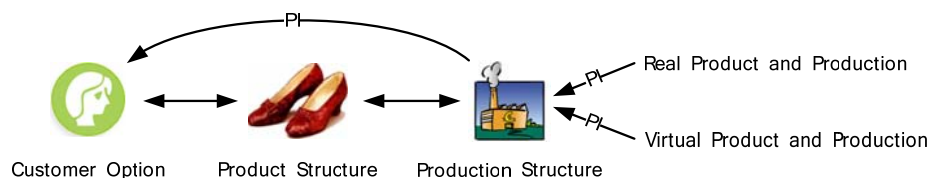
Performance Indicator Calculation Method (PICM) in Customer Driven Design and Production

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

Abstract

Synchronized product and production design in conjunction with mass customization is in the focus of this thesis. Performance indicator (PI)¹ values such as cost and throughput time shall be measured and aggregated to the customer variants. Based on an existing synchronisation of the three views: customer, product and production, an investigation about the possibilities of detection, capturing, distribution and allocation of the demanded PI-values shall be carried out.

This thesis will be connected to the EU 7th Framework Research Project DOROTHY, which 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.



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. Furthermore, the PIs will support the responsible management to make efficient and effective decisions on the offered product range as well as on the existing or planned product and production structures. This by considering the performance of the company positioned in a global and customer driven market.

Work packages

- Get familiar with the topic of the Dorothy project, the synchronisation method and the PI theory
- Consult relevant literature
- Investigate the possibilities of detection, capturing, distribution and allocation of the demanded PI-values
- Find a suitable method (there will be some propositions from us)
- Harmonize and update the existing Dorothy Shoe Collection Scenario with the project scenario
- Realise the PI calculation on the existing synchronisation of a Dorothy Shoe Collection Scenario
- Documentation
- Final and Mid-term presentation

¹ „Performance Indicators are a means of assisting responsible management to make efficient and effective decisions” [Jackson P. *The Management of Performance in the Public Sector*. Public Money and Management, Vol. 8, No. 4, 1988].

Information & Administration

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