

MASS CUSTOMIZATION ACROSS THE VALUE CHAIN

Ralph Seelmann-Eggebert

Head of Mass Customization (MC)

Fraunhofer Institute for Factory Operation and Automation IFF

Sandtorstrasse 22

39106 Magdeburg

Germany

Tel.: +49 (0) 391 – 40 90 402

Fax: + 49 (0) 391 – 40 90 622

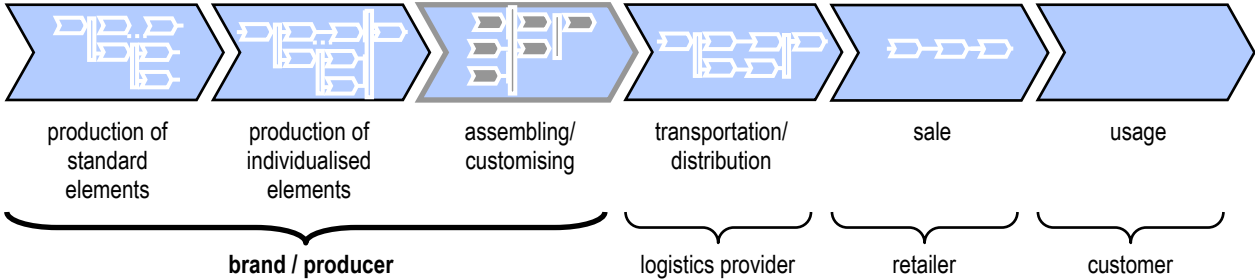
seelmann@iff.fraunhofer.de

www.iff.fraunhofer.de

Enabling Mass Customization across the Value Chain

Mass Customization as a marketing strategy has been known for several years. Researchers and industrialists focused mainly on the strategic side of Mass Customization. The biggest hurdles on the move into Mass Customization were suspected here. And yet not every possibility has been looked upon. With the first pioneers in Mass Customization new challenges arose in terms of process structure, information flow and logistics across the value chain. Mass Customization turned into a holistic process strategy including among others customer interactivity, configuration and IT tools, product development, ppc and crm. Widely however the logistics of materials and information within enterprises and across the supply chain has been neglected and is only now being examined and adapted towards the demand of a Mass Customization Value Chain.

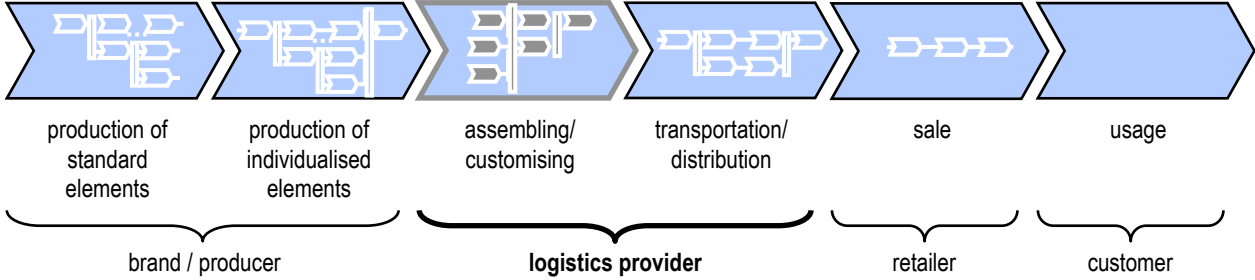
This paper aims logistical implications and points out different enabling mechanisms for Mass Customization focussing on the responsibility of customizing within the value chain. In picture 1 the connection between different process



Picture 1 Classic customization responsibility

elements, their activities and the responsible actor for that activity are shown. As most often encountered in practical use of Mass Customization the original producer and owner of the brand is responsible for customizing of the product. Brand and production could be separated, the latter being outsourced. In this case the responsibility is shifted backwards in the value chain to the contracted producer. From an outside view however the brand stays responsible for defaults of any sort.

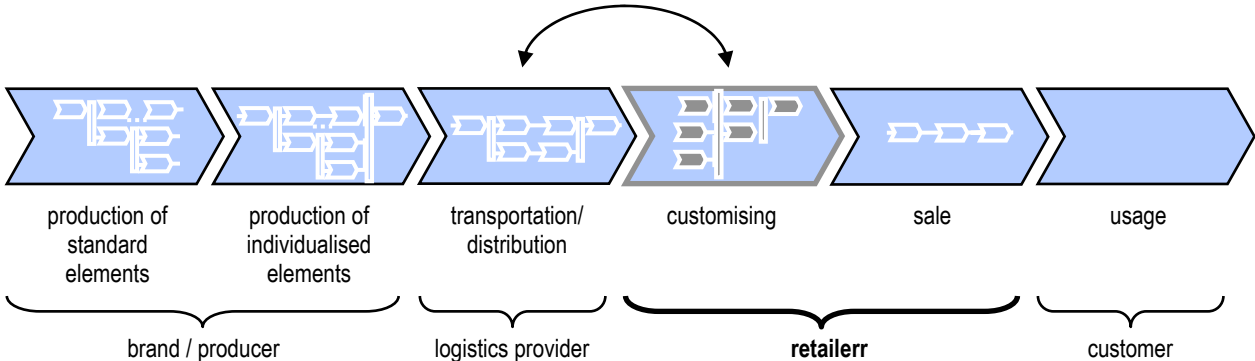
In accordance with the trend towards individual goods, strategies like postponed manufacturing have emerged. Here the point of customization is delayed as much as possible. This often causes product adaptations and an increase in flexibility concerning reaction times to changing customer demands. Lately an increasing amount of value adding processes is not only postponed but also outsourced as indicated in picture 2.



Picture 2 Logistics provider adds value to the product

Logistics providers adopt a more important role within the value chain. This includes a reconfiguration of their internal processes in terms of education of personnel, responsibility for quality and new price structures for their customers. They are however able to build up new fields of business and thus attract new customers. In this approach the lack of a retailer within the process chain reduces the reaction time to the customers' demands to a minimum. Consequently an integrated retailer extends the reaction time and thus the delivery time.

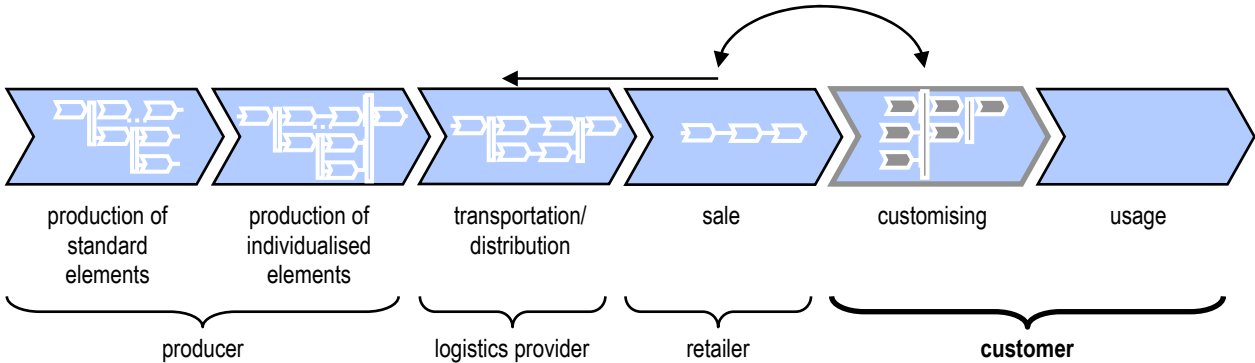
Depending on the product complexity and the provided technical essentials, the point of customization could be shifted further up the process chain towards the Point of Sale as shown in picture 3.



Picture 3 Customizing at PoS

This shift enhances the pressure on the often stretched crucial phase of selling the product to the customer. The educational requirements of the sales personnel are enlarged by the technical product know how and the machine usage. Another crucial point in Mass Customization, the often demanded short delivery time, will furthermore be eliminated with this approach. The active individualization in stores could in addition initiate a copy effect on other customers.

An individualisation by the customer, as shown in picture 4, represents the highest flexibility when looking at quick response time. In this approach the entire previous process



Picture 4 Customer customization

is not individualized to customers' needs and the product will have to provide features to be easily customized. These circumstances are known from Pines 'adaptive' Mass Customization approach and are based on a thorough product development.

Practical examples will be added to the four steps identified above during the presentation. Economical reflections and different cost options will be pointed out.