

Bridging the trade-off between traditional mass manufacturing and increased customers' demand for customization

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Traditionally, a company has to opt between being (1) a mass producer offering standardized goods (or services) with a high cost-efficiency or (2) to customize products for individual customers' needs what inevitably leads to higher production (i.e. product and process design, provision of components, manufacturing, distribution etc.) costs.

With the concept(s) of mass customization (MC), this trade-off is blurring. A mass customizer tries to produce individualized products with near mass production efficiency. Since the modern market requirements force producers to extend variety forming new market niches for more and more specific customers' needs, the mass customization as a competitive tool is gaining the managers' interest. However, being a mass customizer is not an easy task. To reach this, a number of techniques have been developed.

In the lecture, the concept and approaches to mass customization as a way to deliver personalized products without renouncing the mass production efficiency will be presented, from both the technical and organizational perspective. We introduce the two basic process strategies (mass production and small-batch manufacturing) and last decades' changes in market requirements. From these, we develop the need for mass customization and present the basic MC techniques (based on product/process design or a combination of both). In conclusion, several case studies are introduced to give an insight into the current situation of mass customization in Slovenian companies.

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