Motivation

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Motivation

Mass Production

**Mass Production (MP):** efficient production of a high number of identical products.

**Henry Ford:** You can have any car color as long as it’s black (remark about T model in 1909).

MP Business model of the past!

**New Challenge:** Buyer markets predominate!

**Mass Customization (MC):** customer-individual production of highly variant products under near mass production pricing conditions.
Mass Customization

Major goals:
- more intensively take into account customer requirements and preferences
- to achieve this goal under mass production level time and pricing conditions.

Supportive technologies were needed to efficiently implement the new paradigm (MC).
Configuration has evolved into a leading technology to support MC scenarios.
Knowledge-based Configuration

**Definition**: “a special case of design activity where the artifact being configured is assembled from instances of a fixed set of well defined component types which can be composed conforming to a set of constraints.” (Sabin and Weigel, 1998).

Component types and constraints constitute a configuration model (extremely high number of potential solutions, enumeration not practicable).

Configuration model and customer requirements constitute a configuration task (Mittal and Frayman, 1989).

Configuration task is given to a configuration system (configurator) – solution (configuration) is determined.
Example Configuration Model
Example Configuration
Overview of Configurator Applications

http://www.configurator-database.com
Persons in a Configurator Project
(Stakeholders)

**Knowledge Engineers**: responsible for the development of a configurator application. Have deep knowledge about configuration technologies and cooperate closely with domain experts.

**Domain Experts**: major providers of technical (product engineers), marketing, and sales knowledge (experts from marketing and sales).

**End Users**: apply the configurator in the context of real-world business processes

**Knowledge Acquisition**: process of transforming product domain knowledge into the formal representation of a configuration knowledge base (configuration model).
Thank You!
References


