MODULE I

Product-Development

MODULE III

Production Data Processing

MODULE II

Production

MODULE IV

Rapid Prototyping

MODULE V

CAM / CAx Systems

Digital factory for individualized mass products

Conception / Structure

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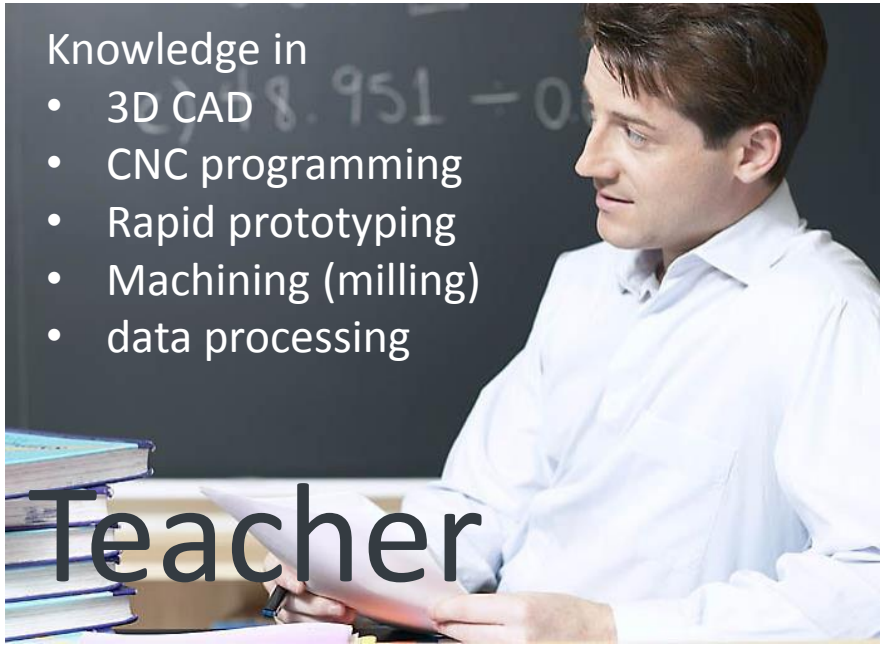

Digital factory for individualized mass products

conditions

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Description of the contents

The customer wishes and needs of an individualized mass product (Fidget Spinner) are analyzed and evaluated. The product idea defines possible product variants of the Fidget Spinner. The product variants should include variable dimensions, different colors or different shapes. The construction of the Fidget Spinner takes place according to production and assembly with a 3D-CAD system. The design is parameterized according to the product variants and the design data are documented.

The 3D datasets of the design are used in both digital prototyping and rapid prototyping. Digital prototyping is ideal for photorealistic visualization and simulation of assembly and production processes. Using the appropriate rapid prototyping method, it is possible to create design models, function prototypes or end products.

Another area where 3D design datasets are used is the flexible programming of CNC machines with a CAM system. After analyzing the data and the appropriate manufacturing structure and scheduling, the production data for the ERP / MES system is processed and adjusted.

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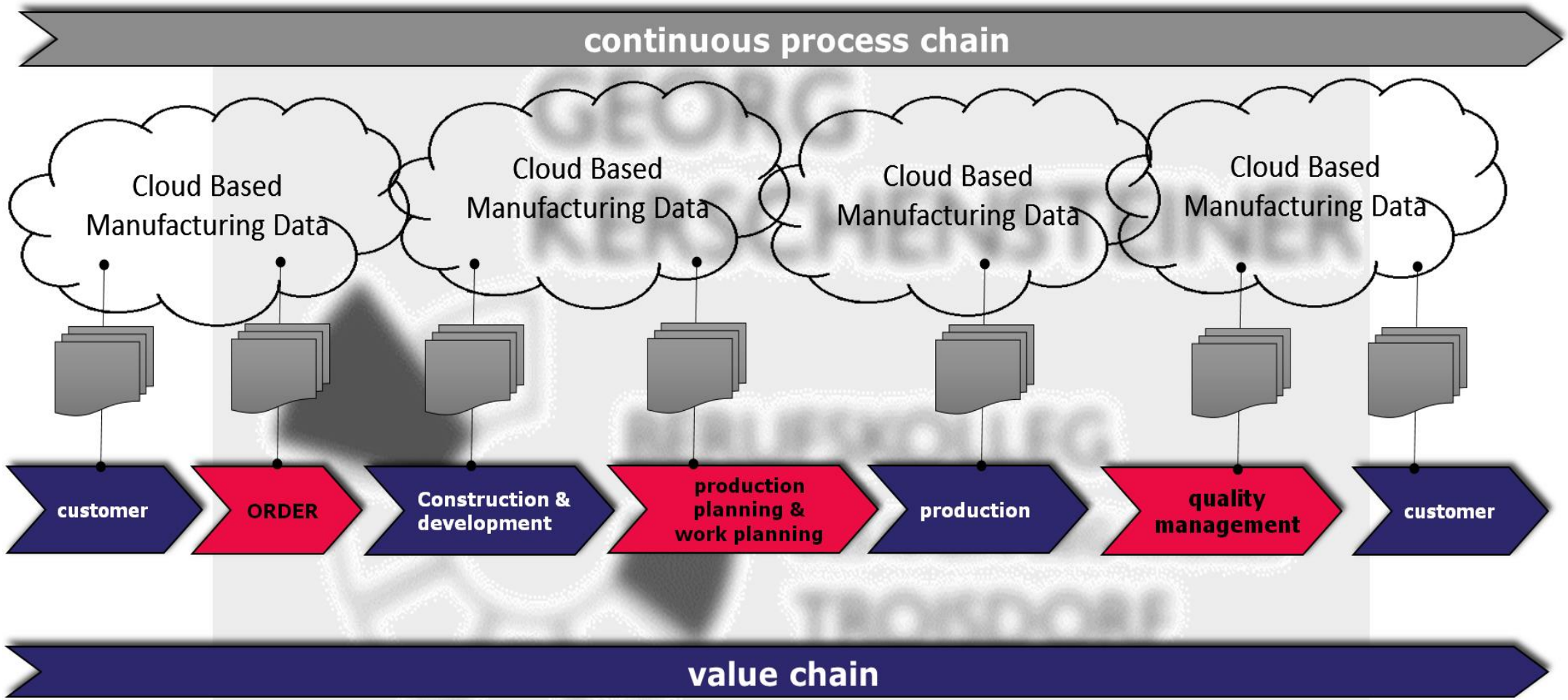

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Digital factory for individualized mass products conditions

Student

The target group for the Industry 4.0 course is everyone involved in the development and production of industrial goods. This concerns both the mechanical engineering sector and the broad areas of plastics technology.

Teacher

Knowledge in

- 3D CAD
- CNC programming
- Rapid prototyping
- Machining (milling)
- data processing

Requirement

- Software
- Hardware
- Workshops
- Classroom

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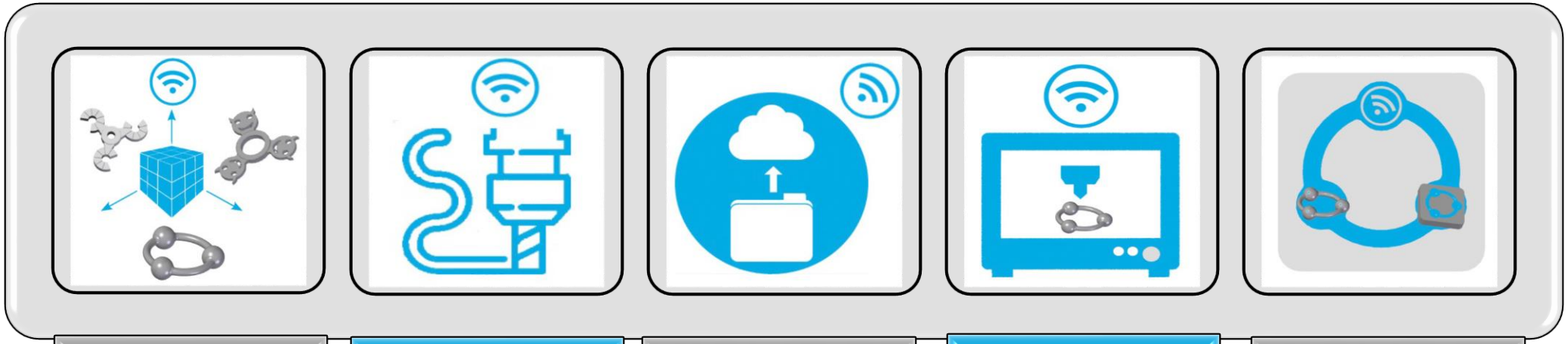

Produkt-entwicklung

- 3D konstruieren mit Solid Edge 9

Produktion

- CNC-Program. Heidenhain iT510

Produktionsdaten-verarbeitung

- Datenverarbeitung in vernetzten Systemen Teil I & II

Rapid Prototyping

- Betrachtung der verschiedenen additiven Verfahren
- Fertigen / ausdrucken indiv. Produkte (Kundenwünsche)

CAM & CAx Systeme

- Betrachtung verschiedener CAM & CA System
- Anwendung von NX-CAM

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