Collaborative Product Development

CMI User Day on the 7 June 2001

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Changes in Product Requirements

- Reduced product life cycle (time to market)
- Explosion of product variants
- Increasing individuality of products and global markets
- High innovation pressure and quality requirements
- Increasing complexity of products (e.g. megatronic)
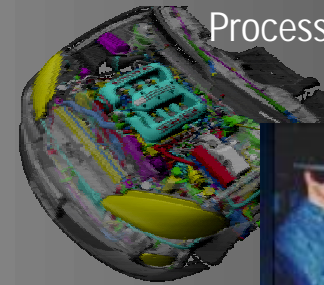
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Changes in the Engineering

Yesterday:
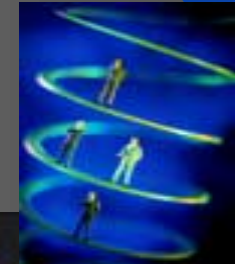drawing board and ink
expensive pre-produc-
tion tools

Today:
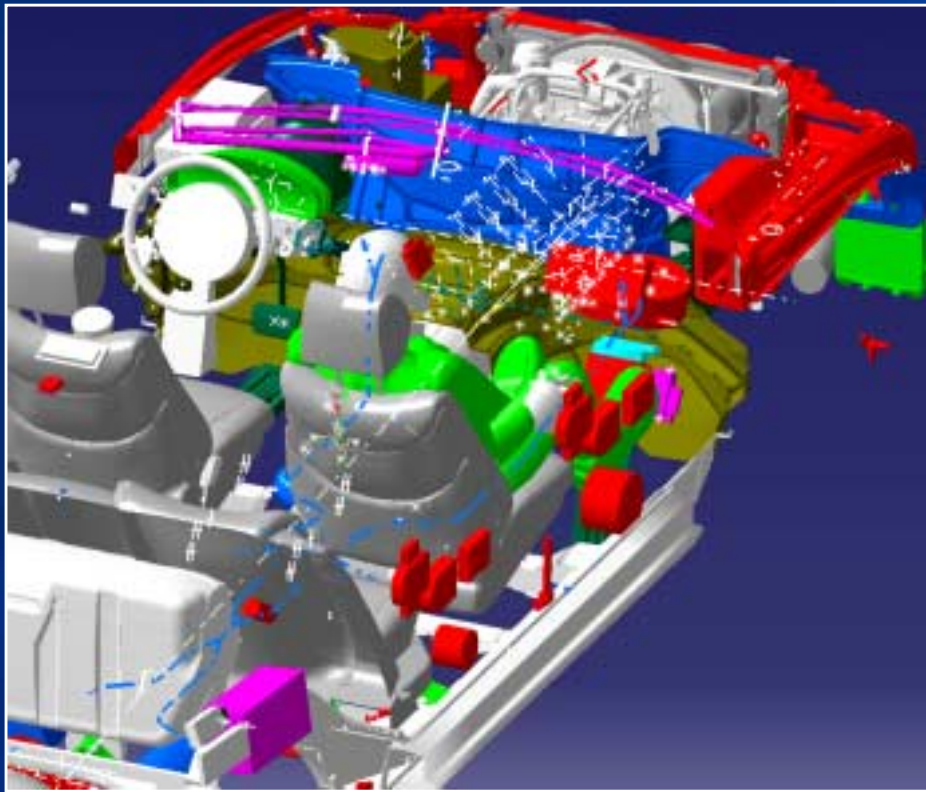3D-CAD
Rapid Prototyping
Rapid Tooling
Digital Mock-Up

Tomorrow:
Virtual Product-
Development and
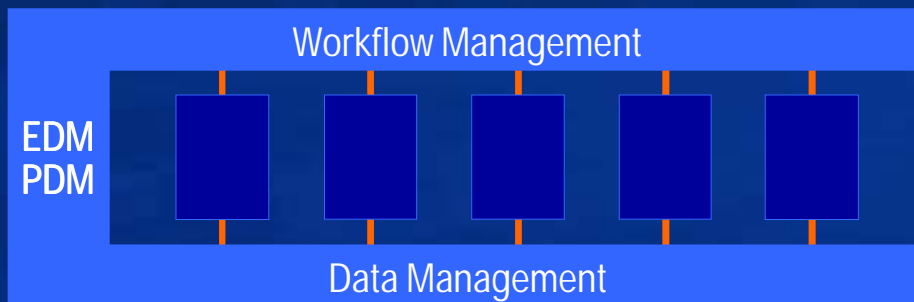Process Simulation /
Process Animation

☐ (Re-)Focussing on the main competencies in engineering: Innovation

☐ Engineering has an increasing value in the value chain

☐ Collaboration of many disciplines, global acting teams

☐ Need for a synchronized product and service engineering

☐ Need for the modeling of a digital master for engineering and production planning because of complexity and time

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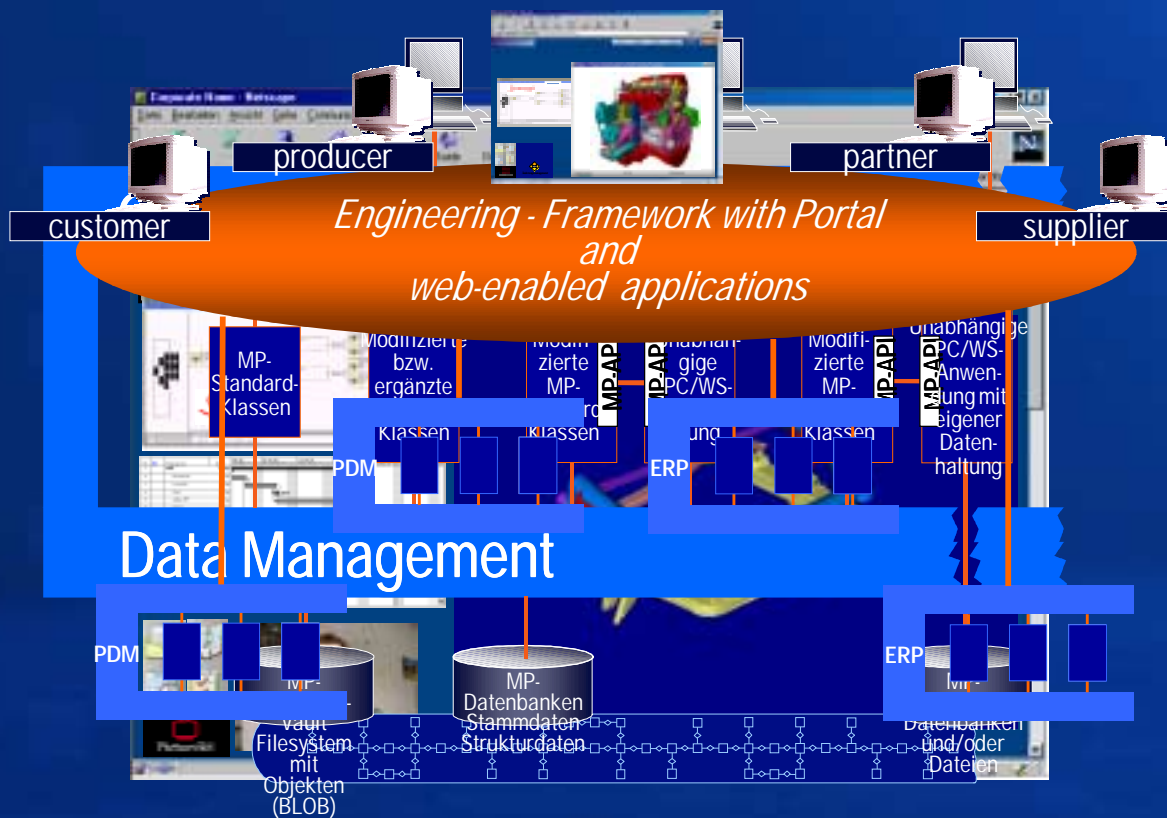
Building Block:
Digital Master

- Actual data about CAD model versions
- Integration of geometry and bill of material data
- Integration of a standard parts system
- Re-usage of parts
- Minimize number of physical mock ups / prototypes
- Virtual design space check (collision, assembling, service space)

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Building Block:
Process Management

Workflow Management

EDM PDM

Data Management

- Usage of EDM/PDM workflows to control flow of tasks and integration of system functionality
- Control of the CAD data management (who is changing what)
- Support change management within the product life cycle
- Control of the system partners
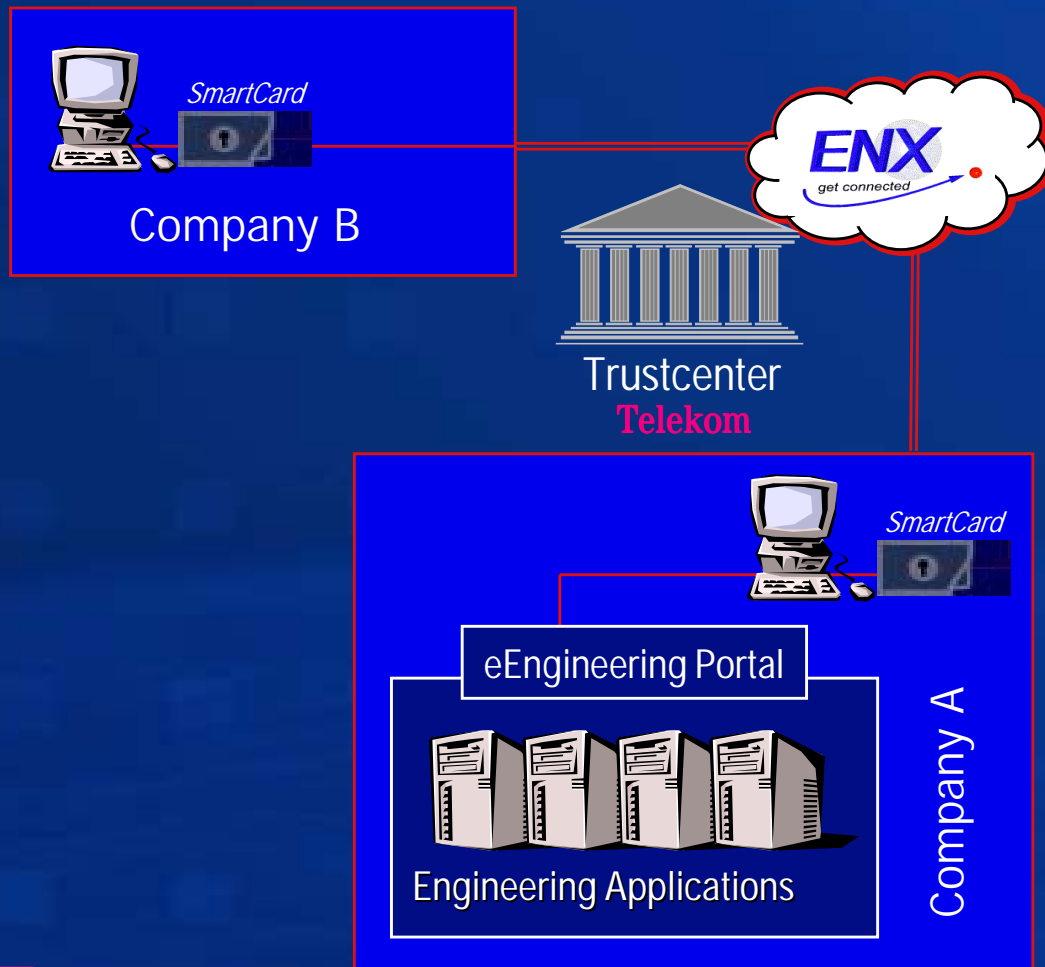- Control of the product release process

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Building Block:
eEngineering-Portal

- Unified access to engineering data via a personalized portal
- Secure access to engineering data for suppliers
- Communication platform for engineering projects
- Platform for engineering process synchronization
- Platform for the engineering data exchange

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Bulding Block:
Infrastructure and Security Services

SmartCard

Company B

ENX
get connected

Trustcenter
Telekom

SmartCard

eEngineering Portal

Engineering Applications

Company A

- ■ eEngineering portal with centralized security
- ■ providing of services
- ■ authorization of users/groups for access to individual applications
- ■ recording of the accesses
- ■ general advantages of portal based solutions, like personi- fication , single sign on
- ■ integration of existing business solutions

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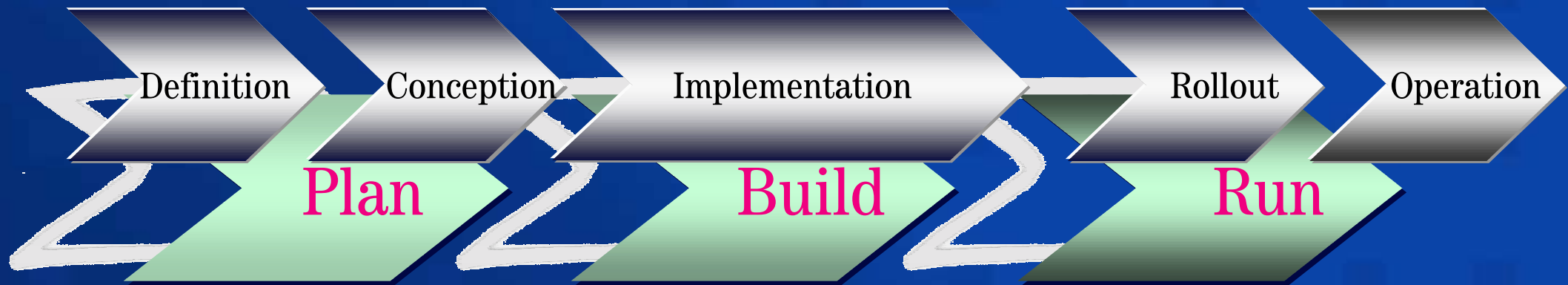## Mission: Enabling Collaborative Product Development

Competences
- Bill of Material / Config. Management
- CAD/DMU - Integration
- Test Data Management
- Change Management
- Life Cycle Engineering
- Supplier Integration
- Operating and Services

Locations / Staff
240 Employees in Stuttgart and München

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Phases of a PDM project

Definition	Conception	Implementation	Rollout	Operation

Plan **Build** **Run**

Plan	Build	Run
project goals	planning of releases	concept for rollout
project organization	user-specification	coaching
area of application and process	implementation-specification	concept for operation
existing IT-environment	Implementation (config. / programming)	data migration
steps of extension	realization of interfaces for migration and operation	beginning of operation
Interfaces	integration-test and acceptance	user help desk
system architecture		service management (systems control)
planning of phases		release management

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