Standardization in the Context of PLM and ERP Processes

Opportunities and Experiences

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Focus:
Optimization & integration of product development and business processes

Founded in 1988
- Based in Munich (D) and Chicago (USA)
- > 30 employees, member of the TESIS group ( >160 employees)
- ~ 200 customers worldwide

Siemens PLM Software Partner since 1992
- Software development
- Consulting and implementation
- Reseller for Teamcenter and NX

SAP Software Solution Partner since 1997

Complete PLM turnkey solution package
Consulting, Integration, Software, Implementation
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TESIS PLMware – Solution Portfolio

Turnkey PLM solutions

Teamcenter / CAD Implementation

Migration Services

SOFTWARE

Teamcenter / CAD Implementation

Software

PLM process wizards

Teamcenter Gateway for SAP

Integrated PLM Landscapes

Customer specific modifications

Offerings with products and solutions from TESIS PLMware and SIEMENS PLM Software

Approach

• Efficient – Solutions based on standard software to support end-to-end business processes
• Flexible – Implementation tailored to the specific customer requirements
• Customer focused – Specially developed solutions for the manufacturing industry
• Innovative – Continuous improvements in software & processes
• Comprehensive – Expert support from a single source
• Future proof – >20 years of experience, use of proven Siemens PLM Software standard products, satisfied customers

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Standardization in the Context of PLM and ERP Processes

Agenda

- Standard and purchase parts in the PLM / ERP
- Tools involved
- Sample process
  - Typical use cases
  - Customer examples
  - Potentials and benefits
- Project approach
- Summary
Historic context

- PDM environments usually driven by mechanic development; evolution in parallel with the (3D) MCAD world
- Specific tools for standard and purchase parts
- Only limited cross-domain information exchange
- PLM processes rarely supported by IT tools → no seamless processes across systems
Motivation

Situation today

- (Customer) PLM / PDM environments have evolved
  - Increased benefits
  - Seamless processes can be realized with the help of IT tools
- Increasingly complex requirements for product development
  - Product variants / individual customer requirements
  - Cost pressure
  - Developing time / multifunctional development teams
  - Service
  - Globalization
Situation today

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Optimizing the standard and purchase part process as a way to ensure competitive advantage
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Essential Requirements

- **Part Numbers**

- **Simple Enterprise Integration and release Process**

- **CAD Information**
  - Size, material, weight

- **Supplier Information**
  - Specification, effectivity dates, usability status, terms of delivery

- **PLM Information**
  - Project data, export regulations, status

- **ERP Information**
  - In-stock, price, manufacturing information, alternatives

- **Prefered items**

- **Integration**
  - Providing of required functions based on identical data

- **Search / Comparison**
  - Attribute search, geometric search
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Tools Involved

- Innovation processes
- Parts management
- Product lifecycle
- Release processes & change management
- Visualization
- Electronic catalogues
- Manufacturer information
- Searches
- Parts classification
- CAD integration

- Logistics
- Manufacturing planning
- Finance & accounting
- Quality management
- HR
- Order management

- SAP ERP
  - SAP AG

- PARTsolutions
  - CADENAS
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Tools Involved

- **Teamcenter**
  Siemens

- **Teamcenter Gateway for SAP (T4S)**
  TESIS PLMware

- **SAP ERP**
  SAP AG

- **PARTsolutions**
  CADENAS

- **UPS / IPS**
  TESIS PLMware, CADENAS
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Sample Processes – Parts Usage

- **PARTsolutions CAD Client**
  - Search
  - Show results
  - Select part(s)
  - Use part

- **Teamcenter T4S**
  - Part(s) available?
  - YES
  - Show meta data
  - Show data from Vault

- **SAP ERP**

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Sample Processes – Concept Parts

PARTsolutions CAD Client
- Generate geometry
- Mapping of meta data
- Use part

Teamcenter T4S
- Item number
- Store data
- Release process
  - OK
  - NO
    - Compare attributes
    - User info

SAP ERP
- Create MM
- MM maintenance
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Sample Processes – Locking (ERP)

PARTsolutions
CAD Client

Teamcenter
T4S

Lock workflow

Lock status change

SAP ERP

Change MM status
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Sample Processes – Locking (PLM)

PARTsolutions
CAD Client

Teamcenter
T4S

SAP ERP

Lock workflow → Lock status change → MM status change
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Customer Examples – Concept Parts (A)

PARTsolutions CAD Client
- Search
- Generate geometry
- Mapping of metadata
- Use part

Teamcenter T4S
- Reserve number in SAP ERP
- Store data
- Release

SAP ERP
- Material number reserved
- MM, BoM, DIR
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Potentials and Benefits

- Electronic catalogues can be used as a virtual encyclopedia in the entire PLM process, containing all parts-specific as well as essential company specific information (currently > 90 million parts)

- Up-to-date supplier information at all times

- Support of the standardization process
  - Easy searches (re-use of parts, use of purchase parts)
  - Standardized naming
  - Relevant information is available across all systems

- Optimum support of the concept parts process

- Synchronization of PLM, ERP and catalogue information ensures that the „right“ parts are used

- Consistent quality of Master Data

- Lay the basics for a seamless BOM process (use the correct item number right from the beginning)

- Standardized release processes for all parts and document to ensure high product quality

- Reliable distribution of process results into the different company departments
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Project Approach

- Identifying relevant processes

- Modeling of the functional data model
  - Business objects (articles, documents, relations)

- Integration into the existing Teamcenter, SAP ERP, PARTsolutions landscape
  - Technical data model
  - Release and change processes
In many cases, existing tools & technologies can be used and adapted / configurated to realize new potentials for efficient business process support.

The integration of the different tools can also be seen as a chance. — Now it’s the time to select the right tools for the respective use cases.

Process automation enables each user to provide and find all relevant information at the right time, whenever he needs it. Process integration allows for optimized business processes.

Integration projects are best designed by interdisciplinary project teams, including at least one representative of every department. A clear vision for efficient company processes is a must.

Only processes that are filled with life can deliver the results they are supposed to deliver. Don’t forget employee training.

Partnership CADENAS — TESIS PLMware — Siemens offers new perspectives for better process integration and for optimum use of the strengths of the individual solutions.
Standardization in the Context of PLM and ERP Processes
The Key to Success

People

Processes

Tools
Thank you.

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