MAPPER

Model-based Adaptive Product and Process Engineering

Fiat Research Center Use-case pilot:
The Target Setting process

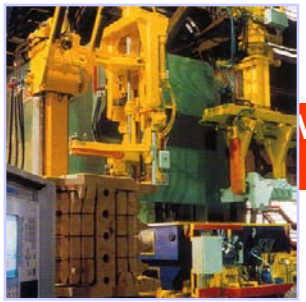
CENTRO RICERCHE FIAT

AUTOMOBILES

COMMERCIAL VEHICLES

AGRICULTURE & CONSTRUCTION

AUTOMOTIVE COMPONENTS



METALLURGICAL PRODUCTS

PRODUCTION SYSTEMS

COMPETITIVENESS FOR ALL SECTORS

AVIATION

COMMUNICATIONS

INSURANCE

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Presentation Structure

- Introduction of the use case subject: Target Setting
- Use Case Objectives
- Work Plan and Achievements
- Requirements List
- Example Model Template
- Future planning of use case focus

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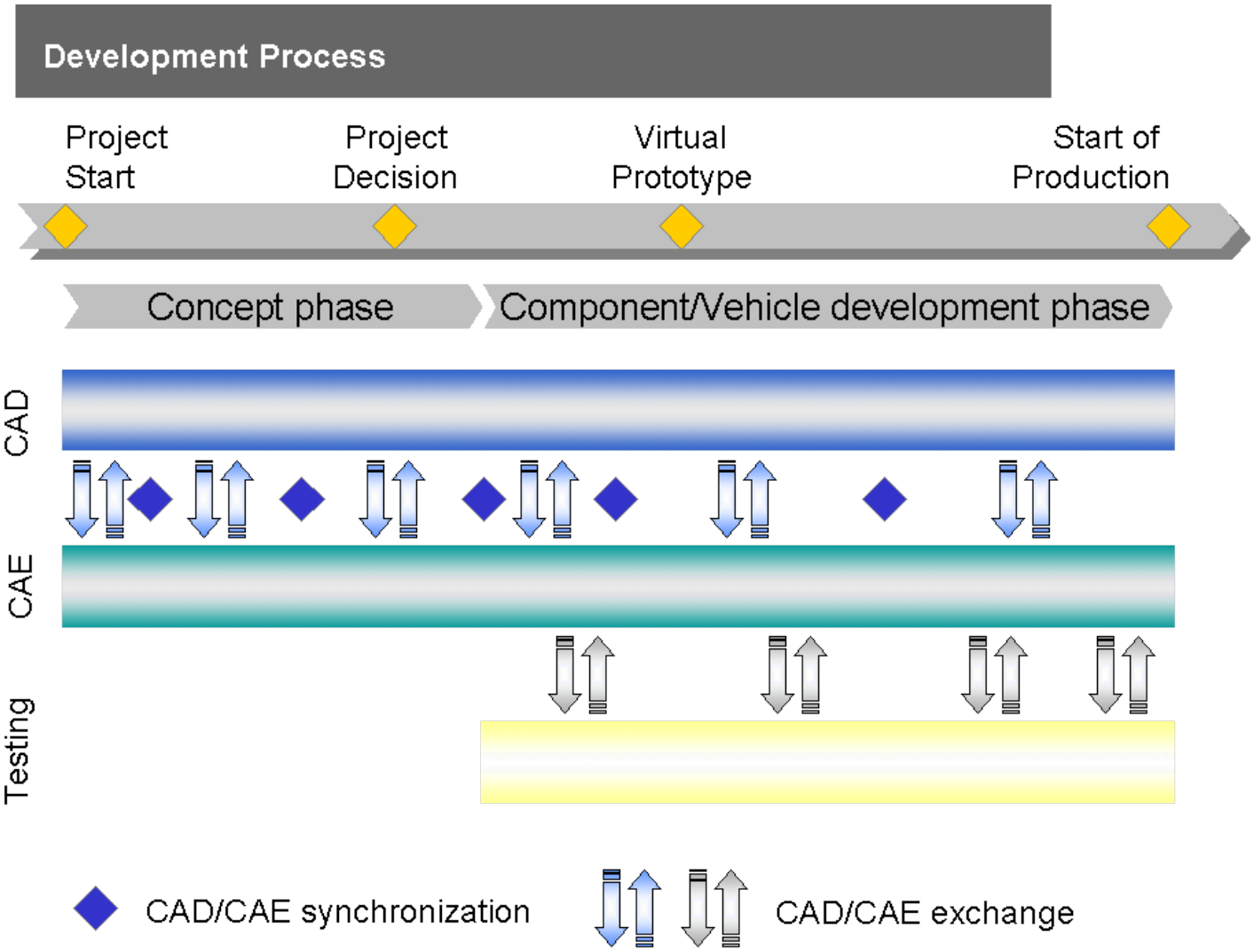
CPD Overview



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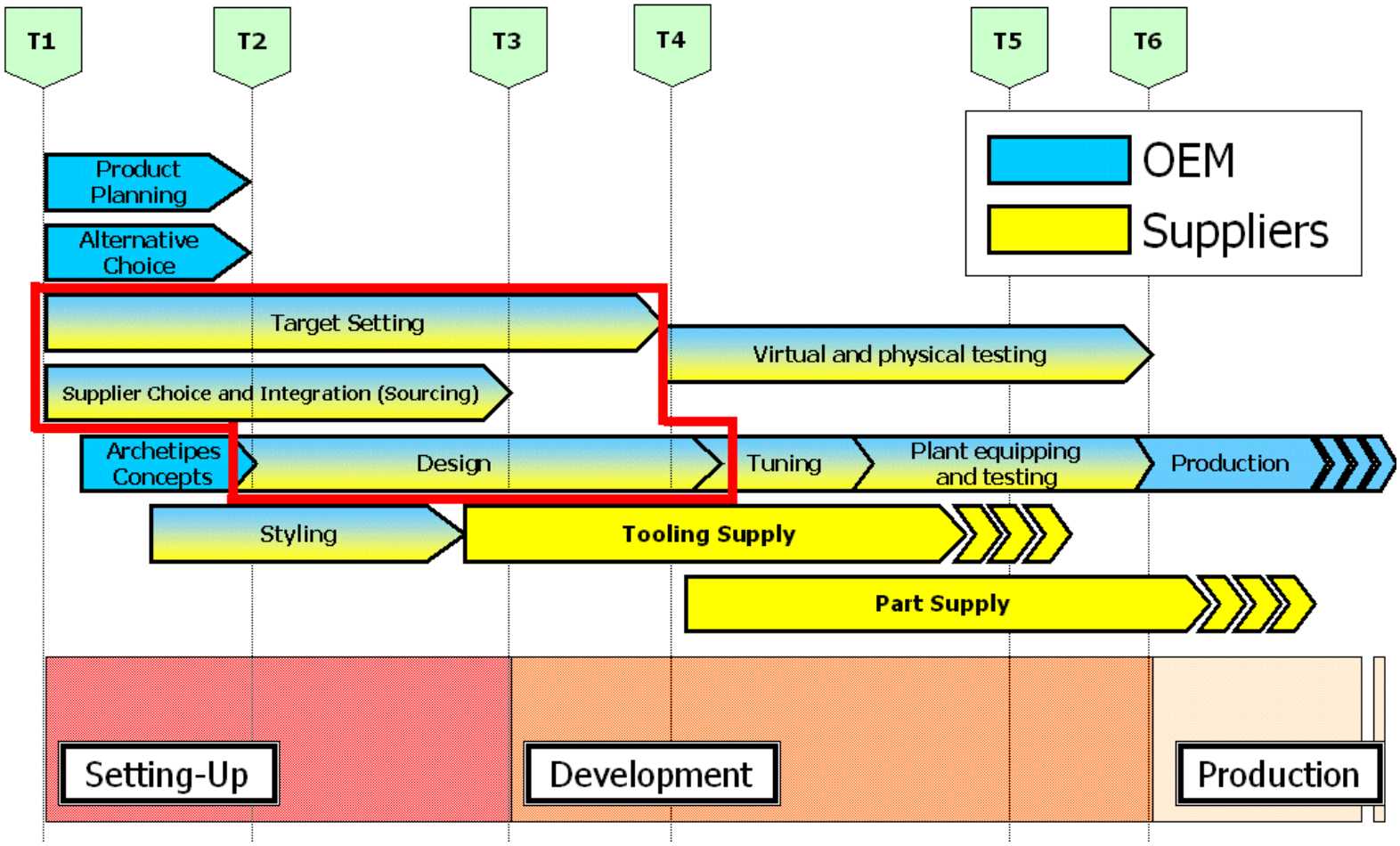
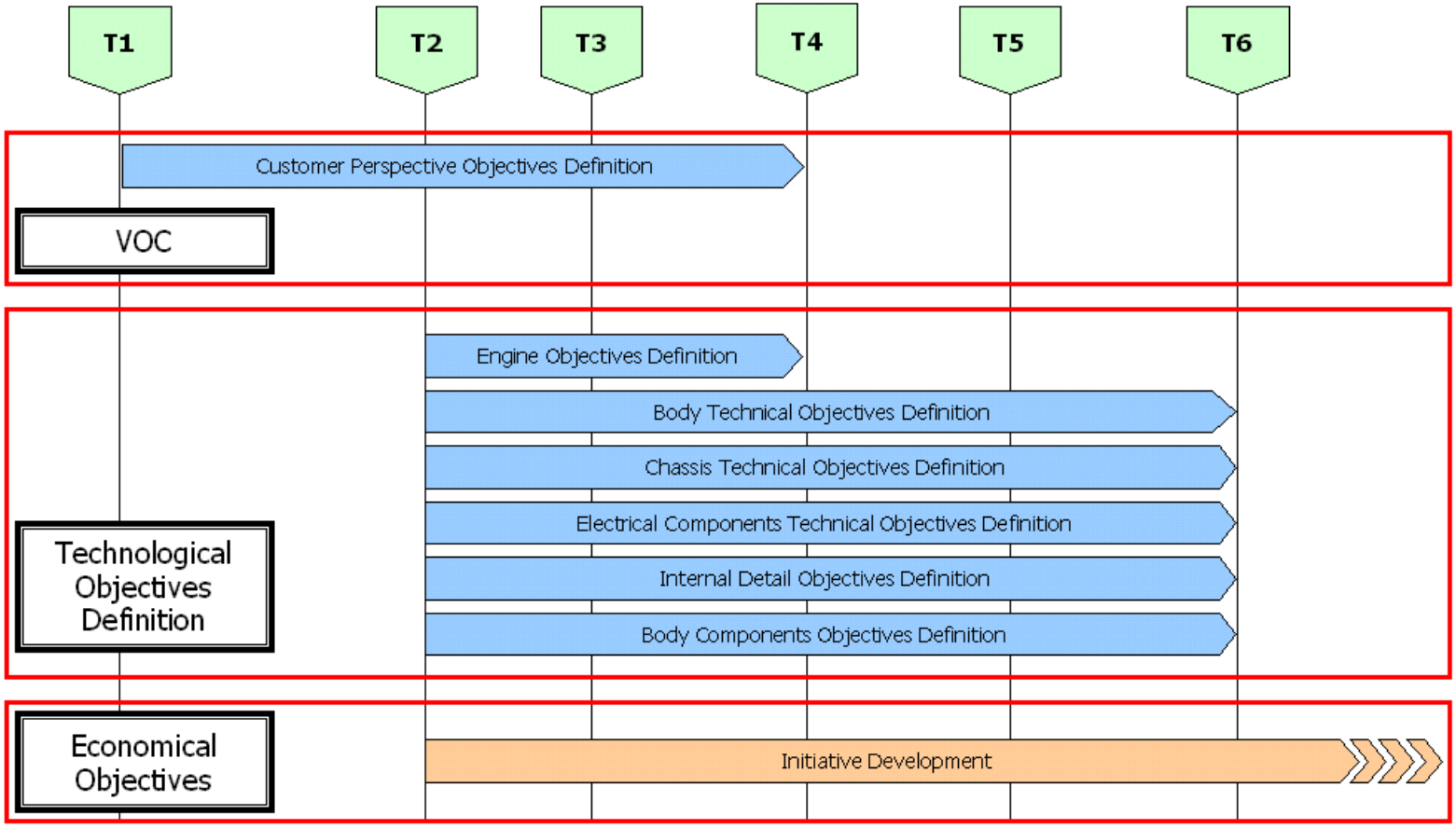
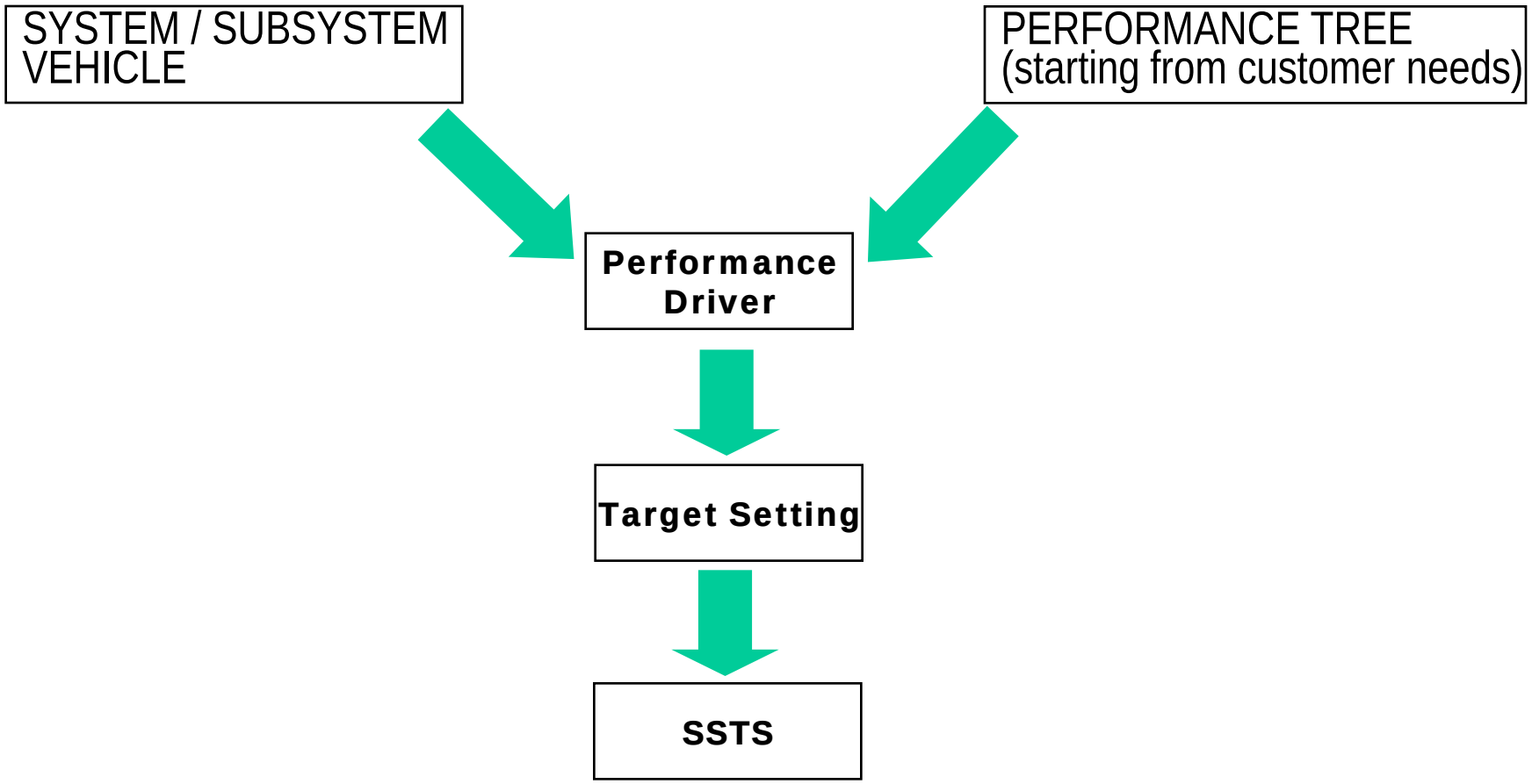
Product Development Process



CPD - Target Setting overview



CPD - Target setting approach



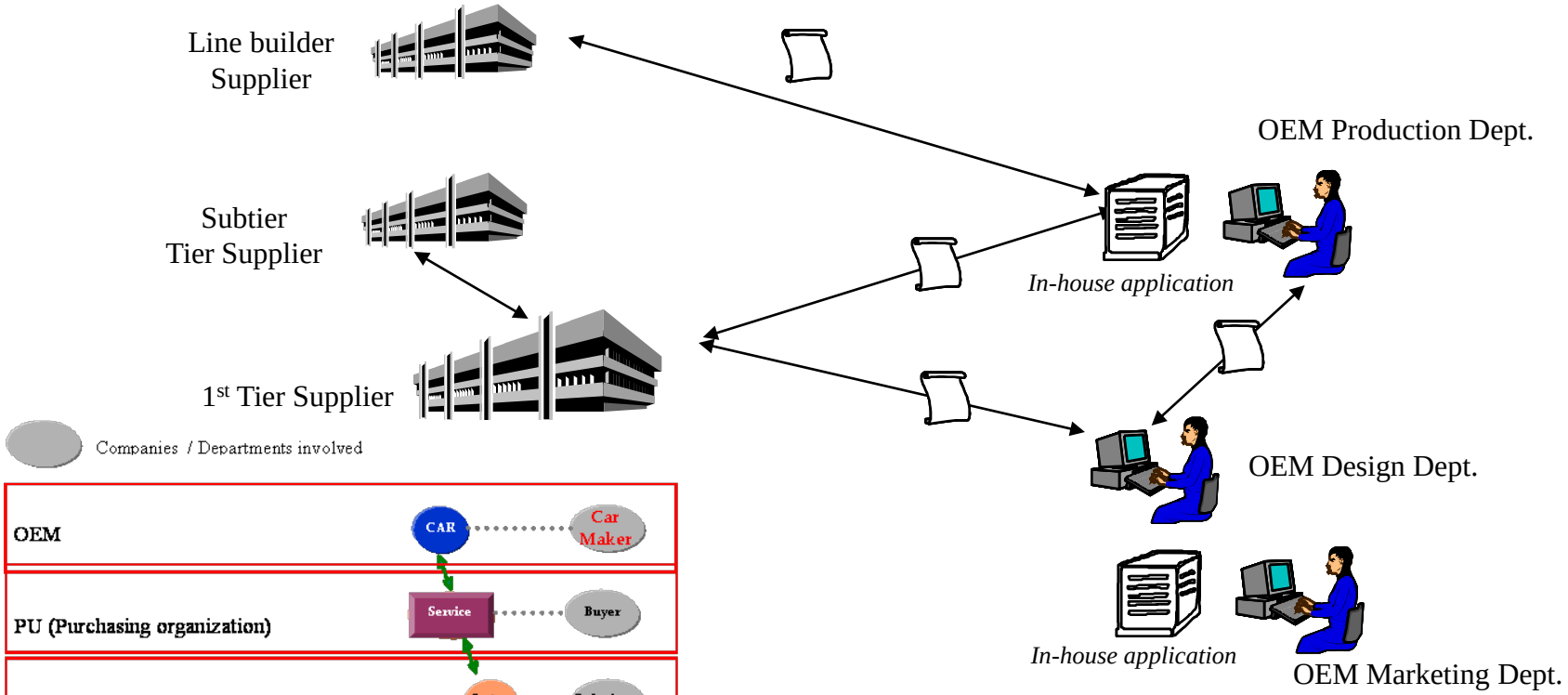
CPD Overview (Supplier Class)

Information

Class	Part supplied type	Examples
Engineering suppliers	Design (PDP earliest phases)	
Concept suppliers	Part that need development time longer than the vehicle PDP time, and/or have a strong influence on next PDP phases	Layout; Powertrain; Suspension
Class A Supplier	Parts with influence on styling Parts with an high innovation rate Innovative tools suppliers	Lights; Sits New Materials; Electronics, Front-End Tailored Blanks, Idro-forming
Class B Supplier	Parts with minor influence on other components to be developed	Sill board; Fuel Filler
Class C Supplier	Parts with no influence on other components. Supplied on Fiat design and specification	Flasks
Class D Supplier	Commodity supplier	Bolts and nuts

Suppliers

Current Situation



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Business Objectives

- Rapid economic scenario changes and short time in response to diverse markets spread throughout the supply chain;
- Suppliers involved in collaborations with different customers should necessarily understand and adapt their process to guarantee compatibility with different customers;
- Lack of process and data synchronization between OEM and Suppliers
  - The speed/amount of data flowing through the supply chain is slow/inadequate
  - Suppliers often use outdated information to guide design.

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General Objectives

- Exchange and share business object documents for establishing collaborative product design and manufacturing;
- Customized/Private product and process design and process automation;
- Company-crossing teams interactions on cooperative complex networked product development projects;
- Complex dependencies between data, formats and processes required to support interoperability

Requirements List

- Support the collection of VOC data through web-based interfaces (innovative, multi-media, interactive, live…)
- Make VOC data available in later phases of the PDP (e.g. TS) and compatible with other systems
- Transform static documents in live docs (through previous bullet): versioning, easy to update, accessibility, creating views, linkability to other objects (documents, drawings, barcodes…)
- Support information exchange between in-house IT systems (databases, PDM, PLM) and working documents (RFQ, SOR, SSTS)

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Requirements List

- Meeting support for Target Setting meetings
  - Standard requs: set-up, access rights…
  - Invoke and show results of external tools during meetings, such as simulation tools
  - For the preparation, organisation, performing and decision-making, reporting, history tracking of project TS meetings
  - Support the elicitation or quantification of new technical hypothesis by connecting the meeting room with external systems or people (e.g. shared virtual whiteboard)

- Sharing the knowledge, mapping the competencies and skills between different platforms

The AS-IS model

Walk through model template

”Target Setting in the context of Product Development”