



Experience with a standards based product data collaboration hub

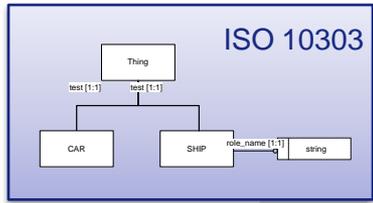
Nigel Shaw, Eurostep Limited



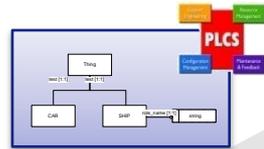
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Eurostep history on a page



1994



2000

•eurostep

2001



Share-A-space

2008

Microsoft
GOLD CERTIFIED
Partner

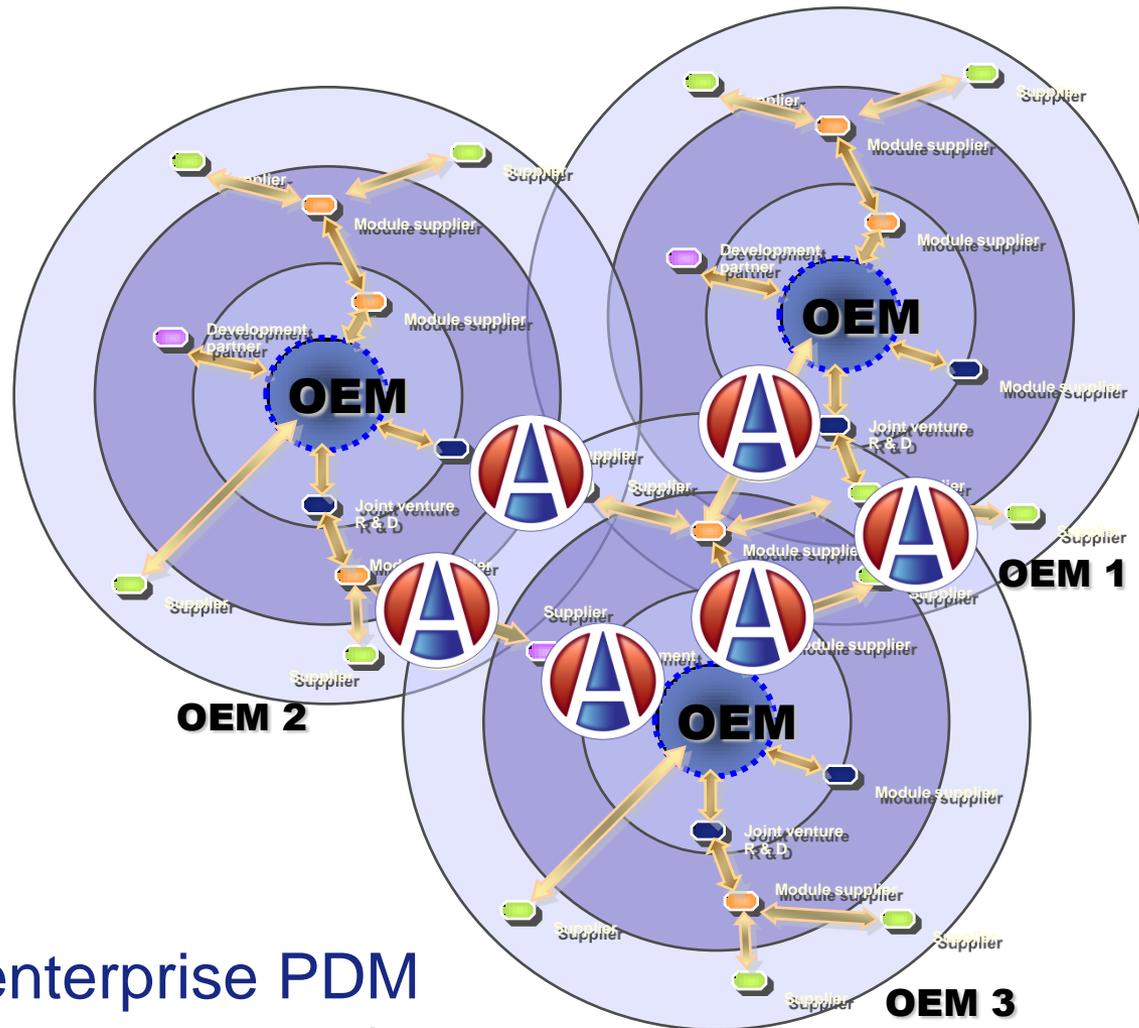
ISV/Software Solutions



digital

•eurostep

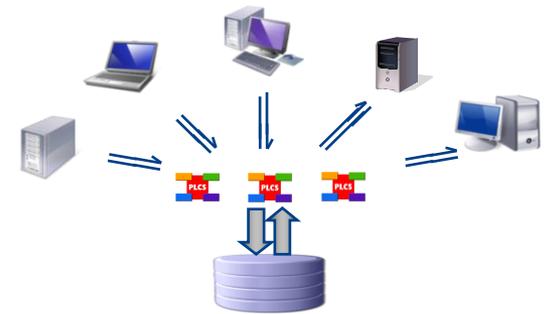
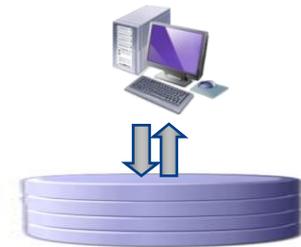
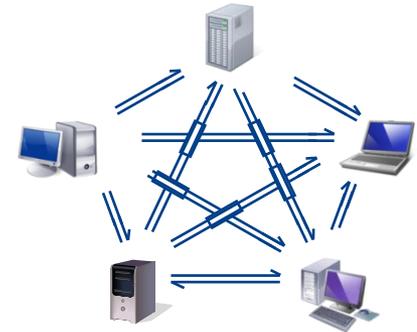
Original idea: OEM/Supplier networks



Extended enterprise PDM
Homogeneous systems/data

Principles of synchronization

- » Separate systems joined in point-to-point transfer
 - + Low initial cost for integration
 - + Best of breed system selection
 - Impossible configuration management, tracing, etc
 - No information control and assurance
- » Single system environment
 - + Configuration management, tracing, etc
 - High initial cost
 - No room for best of breed
 - Impossible to impose in collaboration, e.g. back to #1
- » Separate systems joined via information hub
 - + Configuration management, tracing, etc
 - + Low initial cost
 - + Information control and assurance also across the EE
 - + Best of breed system selection



BAE SYSTEMS

- Military Vehicle
- Turnover 2,5m€
- 1100 employees
- 95 % export
- Offset Value \geq Order Value
- **Results in local Manufacturing**

(Numbers from 2005)

Lead customer – Offset manufacturing
Into Switzerland – Portal role

Combat Vehicle



All Terrain Vehicle



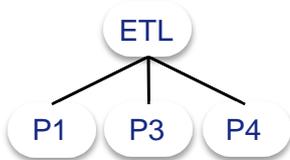
Future Products



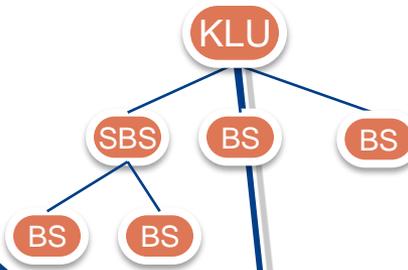
Volvo Deutz – engine supply



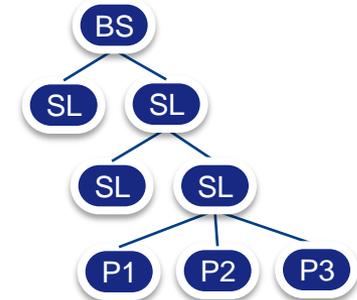
**Deutz Service
After-Sales**



**Deutz
Sales dept**



**Deutz
Design dept**

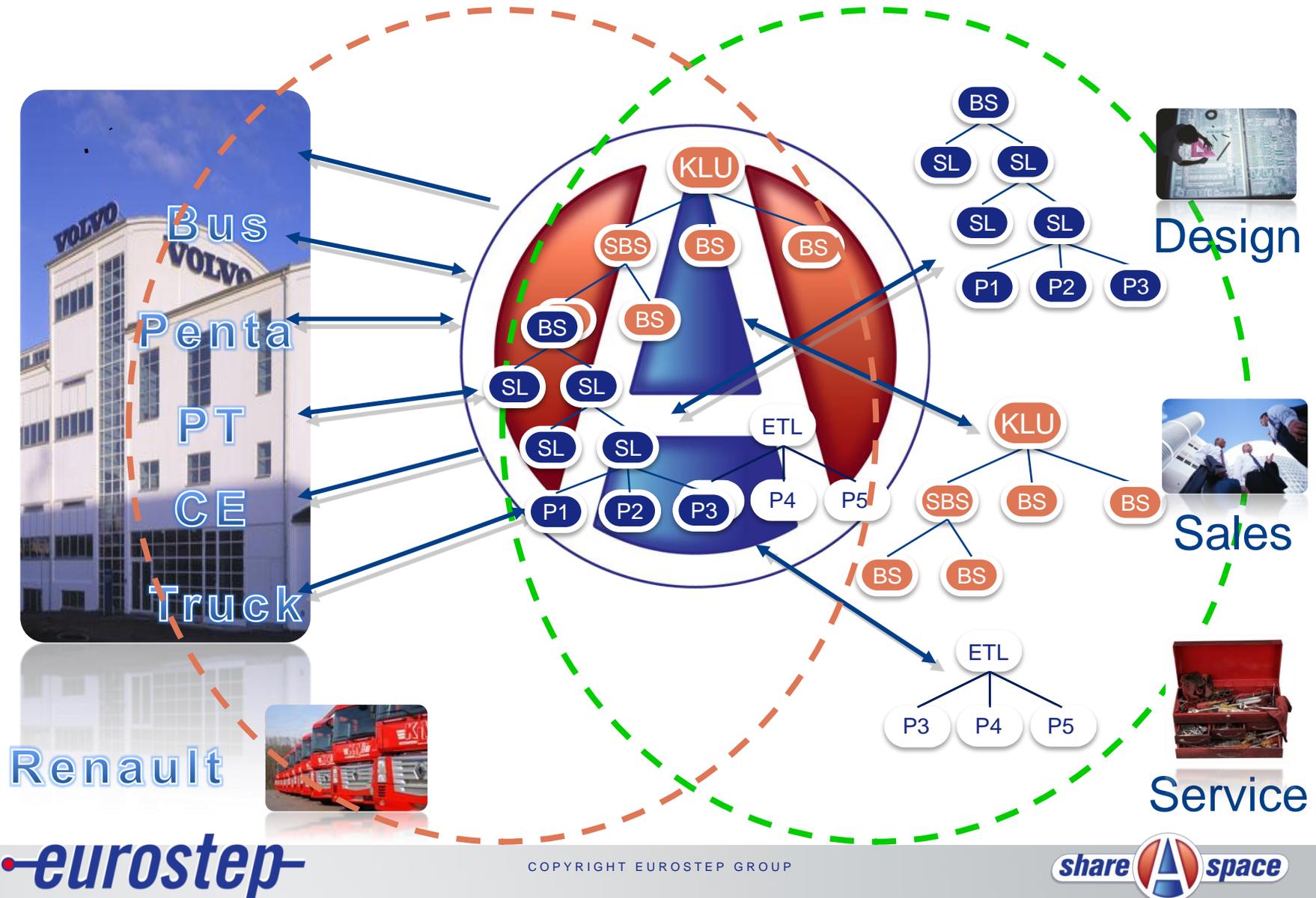


Challenge

- » Volvo often had outdated and non-consolidated product data, leading to inefficient information management
 - Difficult and time consuming to get the right data
 - High percentage of the spare parts where erroneously returned – internally called "Parts tourism"
 - High risk of design errors due to outdated third party information
 - Time consuming to produce a correct parts catalogue



Use of cross-function consolidation

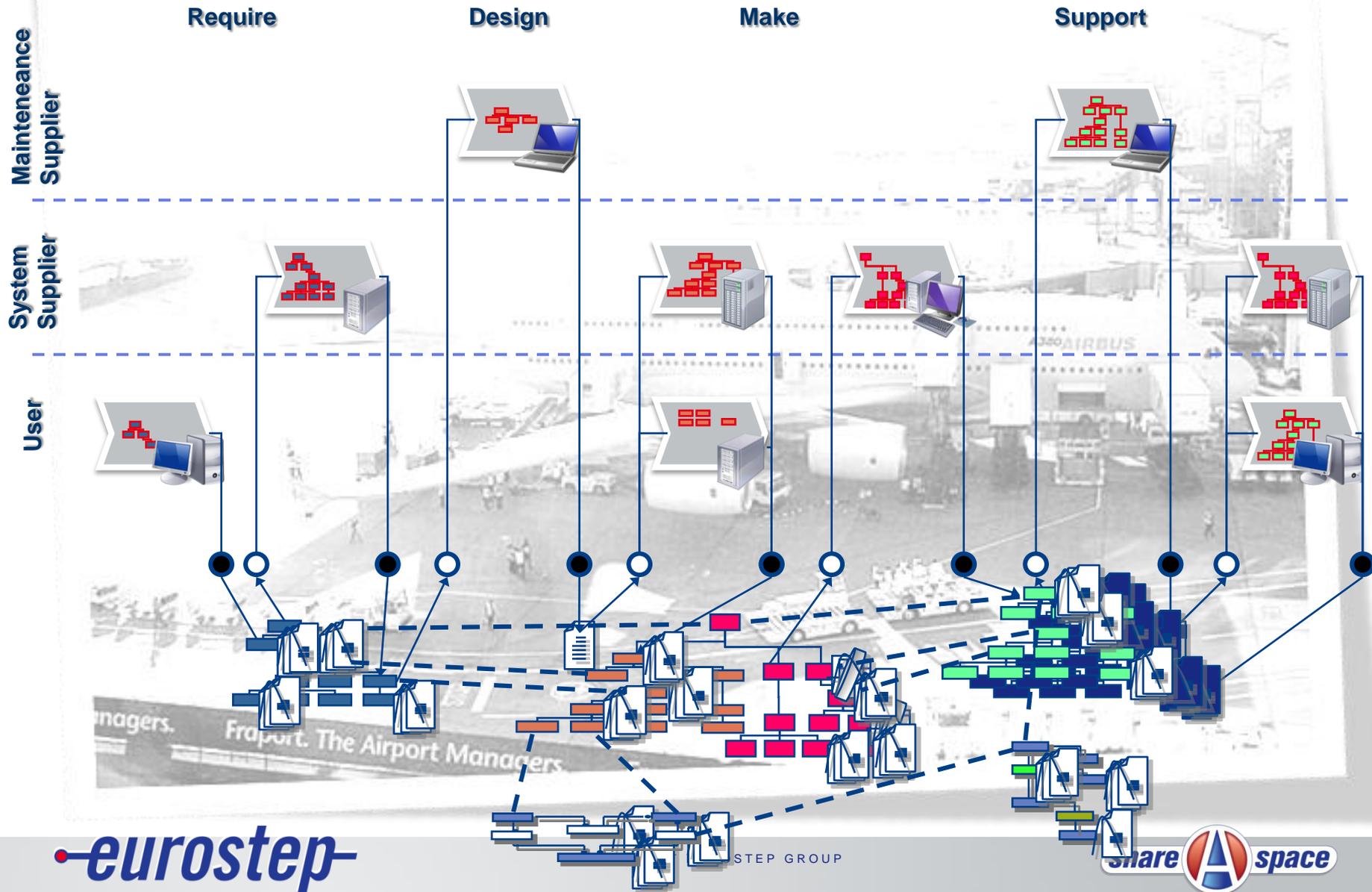


Renault
eurostep

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share  space

Information Assets in Heterogeneous Environment



Change in Heterogeneous Environment

Require

Design

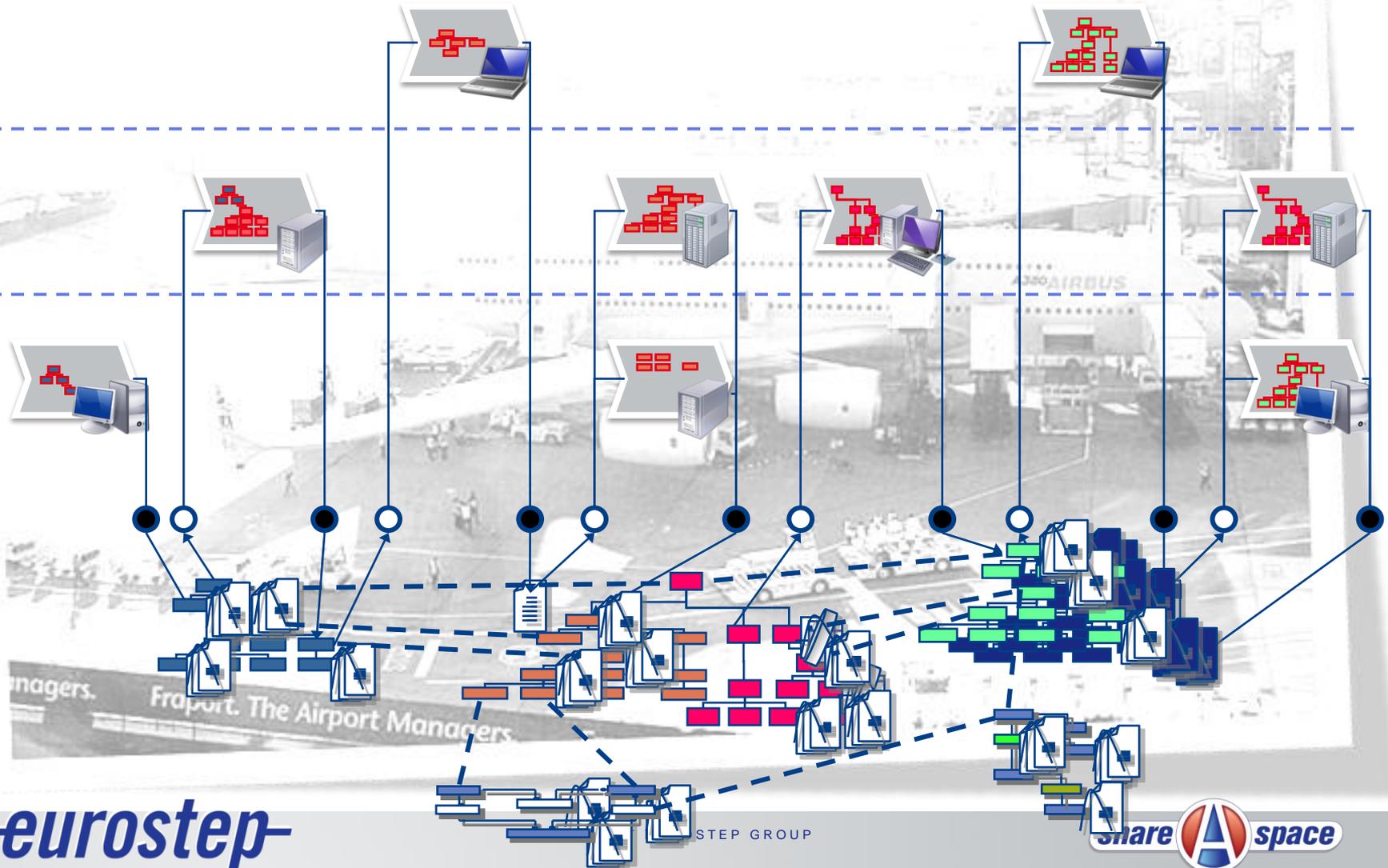
Make

Support

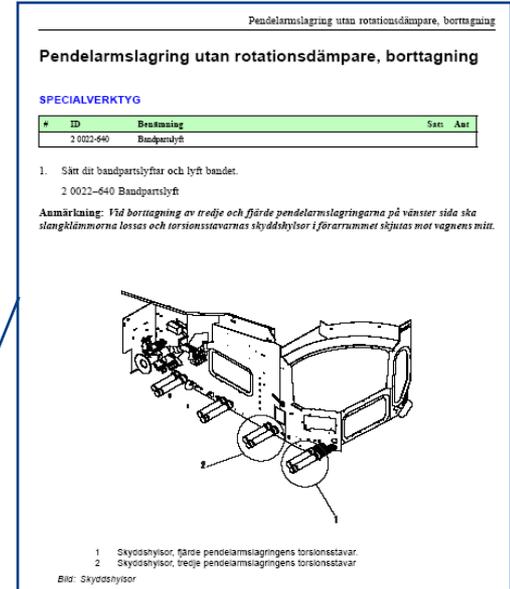
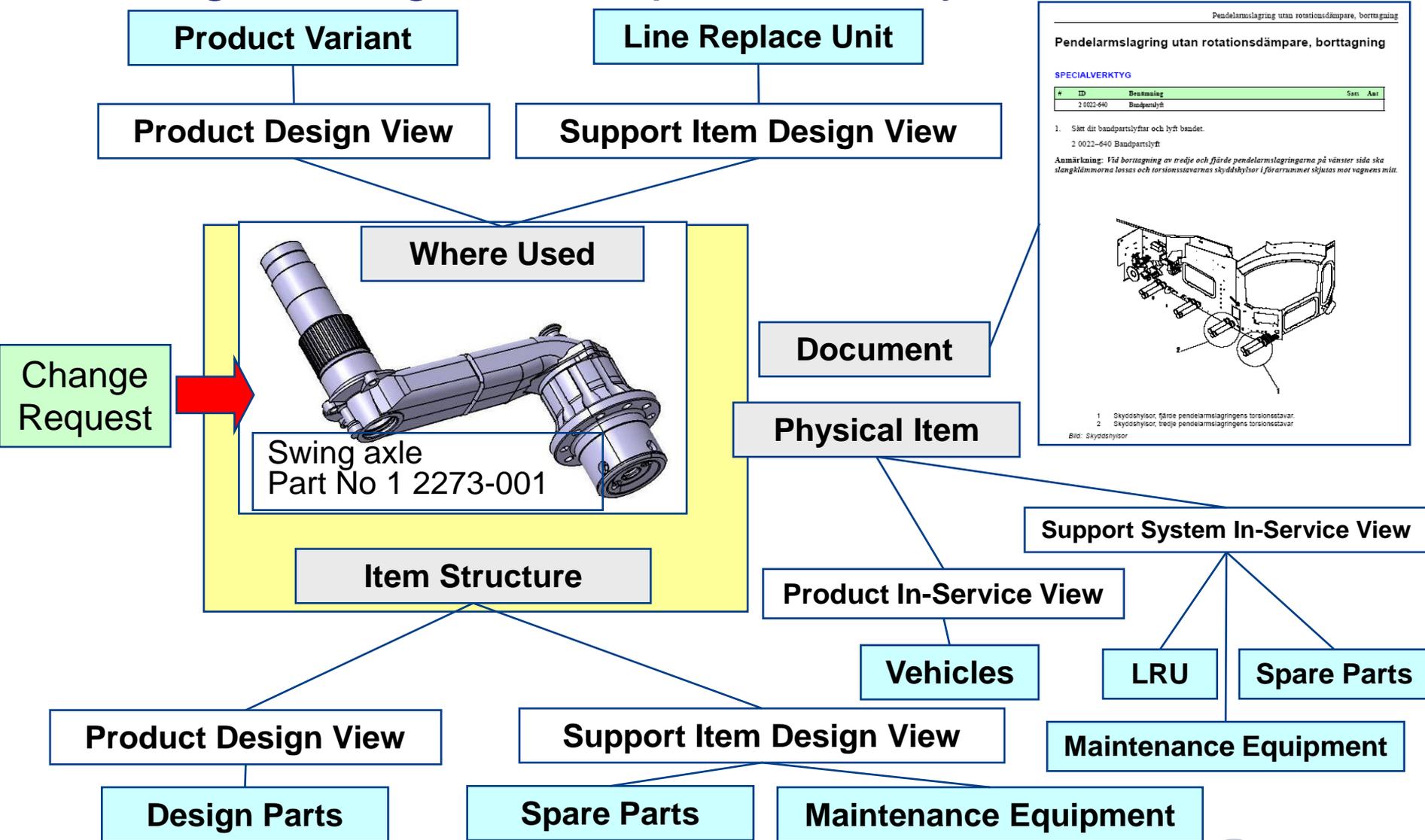
Maintenance
Supplier

System
Supplier

User



Design change consequence analysis



“Standards”

**IFC XMI
S1000D**

Light weight viz. in XML
PDM-System specific XML

ex Mil std **1388-2B**

PDM SCHEMA

AP214



PLS

AP233



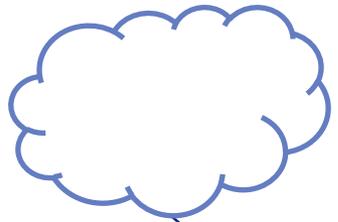
Excel/CSV

"LSAR"

BAAN

Life*S1000D

Matrix



1. LCN & tasks

4. Provisioning

2. Tasks & data modules

3. Product structure

4. LCN to provisioning

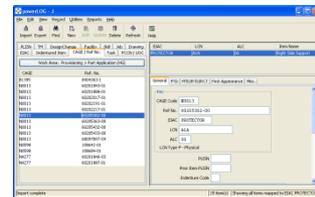
5. Provisioning data

1388-2B.dat

Information integration:
Example



Information hub



“Systems”

Maintenance Management

Requirements Management

Legacy systems

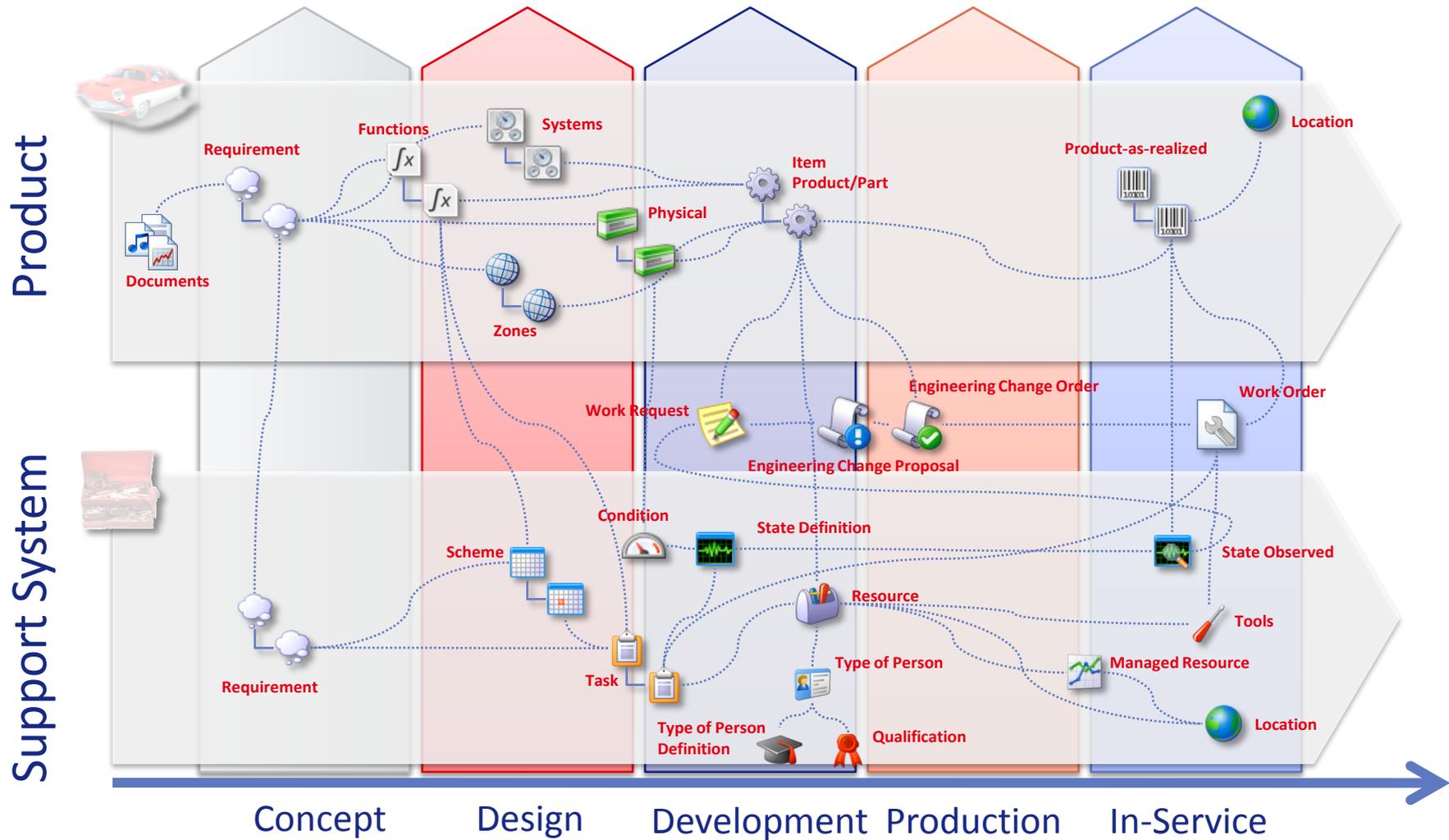
LSAR

CSDB

PDM

ERP

Rich Business Object Model in Share-A-space



Design Data from approved TDP

The screenshot displays the Windchill Share-A-space plugin interface. The main window is titled "Windchill Share-A-space plugin" and has a menu bar with "File". The "Identifier Context" is set to "US ARMY TARDEC". The interface is divided into two main sections: a list of parts on the left and a detailed view of the selected part on the right.

The left section shows a list of parts with columns: Id, Version, Place..., Name, and Descri... The selected part is 12460078, version G, with the name "INSTL ...".

The right section shows the "Part information" panel for the selected part. It includes fields for ID, Version, Name, and Description. The "Secondary context" section has three radio buttons: "No secondary context" (selected), "MecDev [Mechanical_design/Development_stage]", and "MaiSup [Maintenance/Support_stage]". The "Part properties" section is empty.

Id	Version	Place...	Name	Descri...
12460078	G		INSTL ...	
11608950-13	-	124600...	Clamp, ...	Clamp, ...
11608950-13	-	124600...	Clamp, ...	Clamp, ...
11608950-24	G	124600...	8.62-2 ...	
120382	-	124600...	LOCKW...	LOCKW...
120382	-	124600...	LOCKW...	LOCKW...
12338337	D	124600...	INSULA...	
12338337	D	124600...	INSULA...	
12338338	A	124600...	INSULA...	
12338339	A	124600...	GASKE...	
12338339	A	124600...	GASKE...	
12338339	A	124600...	GASKE...	
12338340	C	124600...	BRACK...	BRACK...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338342	A	124600...	SEAL A...	
12338342	A	124600...	SEAL A...	
12338343-1	E	124600...	CLAMP ...	
12338343-2	E	124600...	CLAMP ...	
12338343-2	E	124600...	CLAMP ...	
12338346	B	124600...	HANGE...	
12338350	A	124600...	TAILPI...	
12460081	E	124600...	HEAT S...	
12460082	B	124600...	SHIELD...	
12460083	B	124600...	BRACK...	
12460086	A	124600...	EXH.PI...	
12460087	B	124600...	SHIELD...	
12460090	B	124600...	MUFFL...	
12460091	C	124600...	EXH.@...	

Now compared to the OEM data

The screenshot displays the Windchill Share-A-space plugin interface. The main window is titled "Windchill Share-A-space plugin" and has a menu bar with "File". Below the menu bar, there are tabs for "MecDes", "MecDev", and "MaiSup". The "Identifier Context" dropdown is set to "US ARMY TARDEC".

The left pane shows a list of parts with the following columns: Id, Version, Place..., Name, and Descri... The list includes parts with IDs ranging from 12460078 to 12460091. The selected part is 12460078, which is a version G of the "INSTL ..." part.

The right pane shows the "Part information" section for the selected part. It includes fields for ID, Version, Name, and Description. Below this is the "Secondary context" section, which has three radio buttons: "No secondary context", "MecDev [Mechanical_design/Development_stage]" (which is selected), and "MaiSup [Maintenance/Support_stage]".

At the bottom of the right pane is the "Part properties" section, which is currently empty. The status bar at the bottom of the window shows "Part information" and "Where used".

Id	Version	Place...	Name	Descri...
12460078	G		INSTL ...	
11608950-13	-	124600...	Clamp, ...	Clamp, ...
11608950-13	-	124600...	Clamp, ...	Clamp, ...
11608950-24	G	124600...	8.62-2 ...	
120382	-	124600...	LOCKW...	LOCKW...
120382	-	124600...	LOCKW...	LOCKW...
12338337	D	124600...	INSULA...	
12338337	D	124600...	INSULA...	
12338338	A	124600...	INSULA...	
12338339	A	124600...	GASKE...	
12338339	A	124600...	GASKE...	
12338339	A	124600...	GASKE...	
12338340	C	124600...	BRACK...	BRACK...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338341	A	124600...	PLATE...	PLATE...
12338342	A	124600...	SEAL A...	
12338342	A	124600...	SEAL A...	
12338343-1	E	124600...	CLAMP ...	
12338343-2	E	124600...	CLAMP ...	
12338343-2	E	124600...	CLAMP ...	
12338346	B	124600...	HANGE...	
12338350	A	124600...	TAILPI...	
12460081	E	124600...	HEAT S...	
12460082	B	124600...	SHIELD...	
12460083	B	124600...	BRACK...	
12460086	A	124600...	EXH.PL...	
12460087	B	124600...	SHIELD...	
12460090	B	124600...	MUFFL...	
12460091	C	124600...	EXH.@...	



122003,, VEHICLE - MBT 122

Id	Name	Version	Start-Date
2300398-00000.000.0	Leopard 2 V.mbt122		1997-03-10 00:00:00

- New...
- Personal
- Tools
- Security
- Project Setup
- Information

Product-as-Realized Structure

Presentation Options

Identifier Context: Eurostep AB Effectivity Mode: Actual

Current Effectivity: 2009-05-01 14:21:35

- 122003 VEHICLE - MBT 122
 - AAA0101 | 14003 HULL HOUSING
 - AAA01021015A4 | 126 DRIVERS HATCH DRIVE
 - AAA0201 | 3448 MAIN ENG DIESEL AS
 - AAA0201060403 | 2196 ENG CONTR BOX W/MKE
 - AAA0201060403G1 | 5167 MKE ENGCONT UNT ASY
 - AAA0202 | 244003 TRANSMISSION ASSY
 - AAA03010101 | 2 EL CONT EQPT TRANS
 - AAA03010201 | 3806 VOLT REG AU1 ASSY
 - AAA03050301 | 688042 FUSE BOX
 - AAA07100201 | 5016 GEAR SELECTOR
 - AAA09010102 | 106 CONTROL BOX ASSY
 - AAA09020101 | 33768 PREHEAT UNIT
 - AAA120201 | 20 PRESENTATION UNIT

- Operations
- Edit
- View

Navigating Product-as-realized structure

Using SharePoint to access data held in Share-A-space

ECM Demo

Welcome ESSEVM114\jrn | My Site | My Links

eurostep ECM Demo

This Site: ECM Demo

Home Share-A-space Eurostep

Site Actions

ECM Demo > CCBAApproveTasks > A change for 04284733 is up for approval

View All Site Content

Recycle Bin

Approval of ECR

The result of this phase is that the ECR is approved or rejected and reasons for the decision are provided on the basis of the evaluation from the previous phase.



Work request:

Id	Name	Description
CR001	Failure on Lock washer	Lock washer fails when stressed

Person	Additional part	Responsibility	Analyze
mhm	25006702, TCD 2012 L06 2V	DMU Analysis	it looks good to me

Do you approve this change?

An aerial photograph of a winding road through a dense forest. The road is light-colored and curves through the dark green trees. The sky is a pale blue.

SOA

Web Services

Process Orchestration

Data Orchestration

Summary

- » Collaborations have their own master data
- » Controlled consolidation is vital to maintain consistency
- » The standards (AP214 & PLCS) provide a rich data model
 - no need to configure the content model
 - But it will expose data quality issues
- » Collaboration should not replace existing tools
- » Web services provide the ideal way to enable interaction
 - And business intelligent applications
- » PLM needs data orchestration to make SOA practical

”There is no doubt that Share-A-space holds the keys to a number of different and difficult extended enterprise information integration, consolidation and exchange issues.” – CIMdata 2007

What is collaboration?

Getting everyone to work in the same process?

- » Agreed by all?
- » Across tools and organizations?

Allowing partners to do what they do best?

- » Consistent data across diverse tools and organizations



Questions?



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