



SAP Finance Best Practice Workshop

Profitability Management in Global Value Chains

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safety.

Agenda

- **An overview of TRW**
- **Value chains, project objectives and constraints**
- **TRW Occupant Safety Systems Europe IS landscape**
- **Solution to manage profitability in global value chains**
- **Project Status – Lessons Learned – Future Challenges**

Agenda

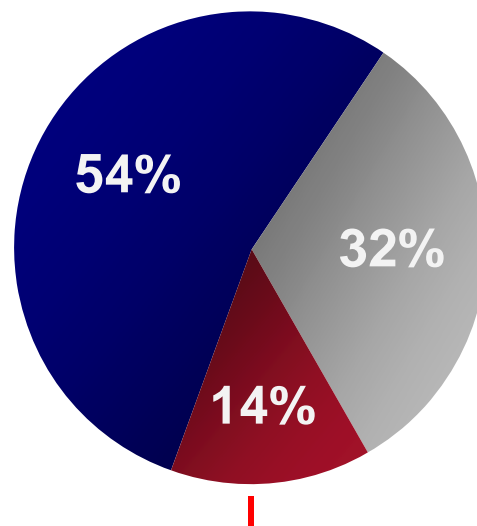
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TRW Automotive - Profile

- **Headquartered in Livonia, Michigan**
- **66,000+ employees worldwide**
- **More than 200 facilities in 27 countries**
- **Serves all major OEM vehicle manufacturers worldwide and their suppliers**
- **Leading developer and supplier of active and passive safety systems**
- **Key products:**
 - Braking Systems
 - Steering & Suspension Systems
 - Commercial Steering Systems
 - Inflatable Restraint Systems
 - Steering Wheel Systems
 - Seat Belt Systems
 - Safety Electronics
 - Integrated Safety Systems
 - RF Products
 - Tire Pressure Monitoring
 - Security Electronics
 - Engine Components
 - Engineered Fasteners & Components
 - Body Control Systems
 - Aftermarket Operations

Sales & Operating Segments

**2007 Full
Year Sales of
\$14.7 Billion**



Chassis Systems “Active Safety”

- \$8.0 billion of sales
- Primary products include:
 - Foundation brakes
 - ABS
 - Electronic stability control
 - Steering systems

Automotive Components

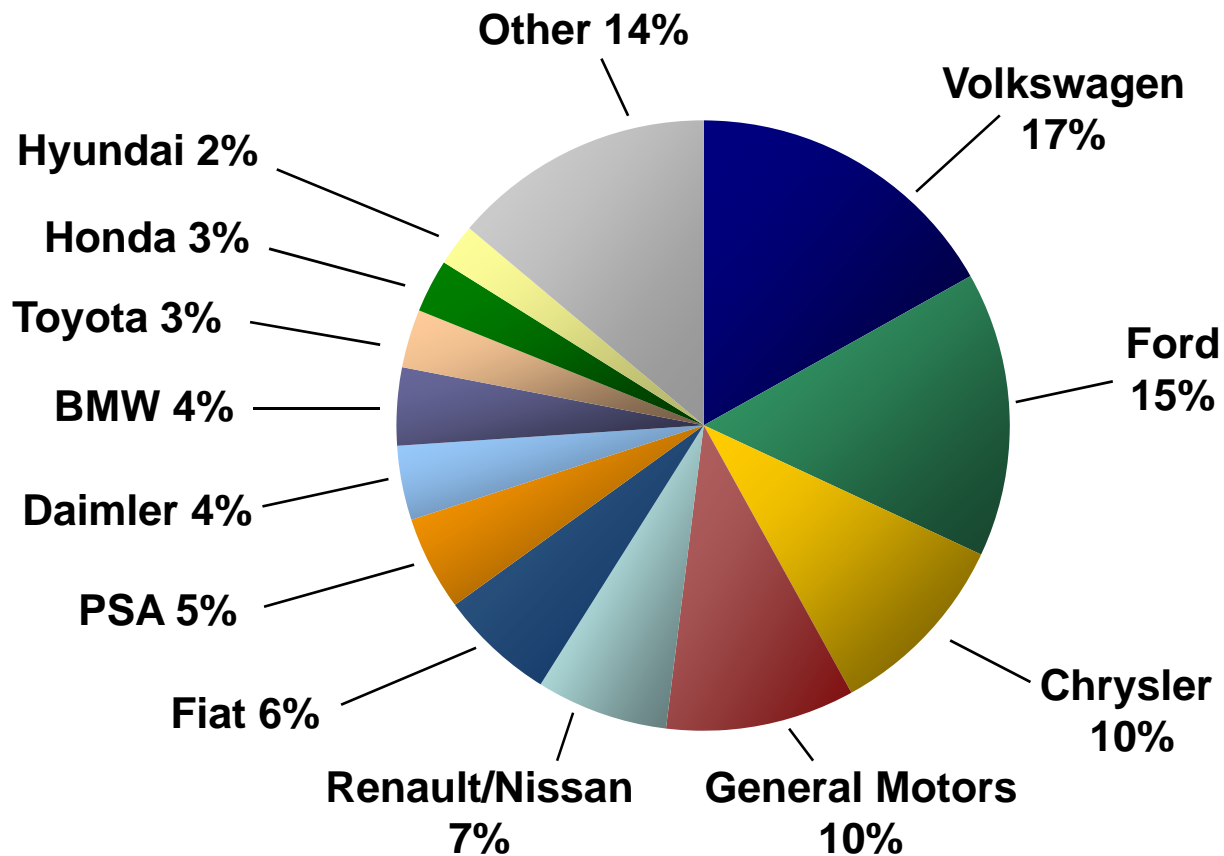
- \$2.0 billion of sales
- Primary products include:
 - Body controls
 - Engine valves
 - Fasteners

Occupant Safety Systems “Passive Safety”

- \$4.7 billion of sales
- Primary products include:
 - Airbags
 - Seat belts
 - Safety electronics
 - Steering wheels

TRW Automotive Worldwide Sales

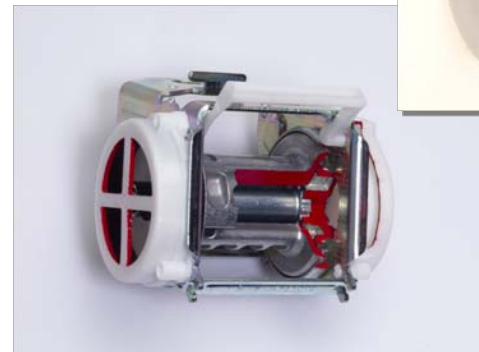
2007 Sales by Customer - \$14.7 Billion



TRW Automotive - Occupant Safety Systems

Seat Belt Systems

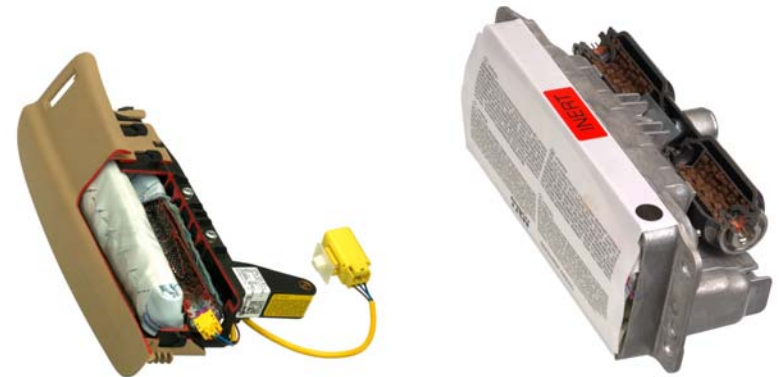
- Retractor & buckle assemblies
- Pyrotechnic retractor, buckle and anchor pretensioners
- Adaptive energy management devices – declining, progressive or switchable
- Height adjusters and webbing guide loops
- Seat Integrated Restraints
- Active Control Retractor (ACR)
- Buckle switches



TRW Automotive - Occupant Safety Systems

Inflatable Restraint Systems

- **The complete air bag system:**
 - Frontal Systems: driver, passenger, knee, and seat ramp
 - Side Impact and Curtain Systems
 - Rollover Systems
- **Gas generant, inflator, bag and module assembly**
- **Simulation, math modeling, crash testing and analysis**



TRW Automotive - Occupant Safety Systems

Steering Wheel Systems

- A full range of steering wheels, from base wheels to top-of-the-line, that incorporate leather, wood, heated and decorative bezels
- Magnesium aluminum or steel armature
- Polyurethane or injection-molded rim
- Simulation of armature performance
- “Floating” and Mylar Horn mechanisms
- Snap-In airbag module attachment
- Vibration suppression

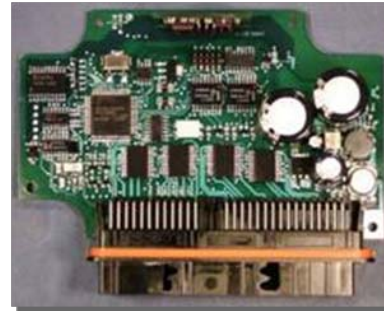


TRW Automotive - Occupant Safety Systems

Safety Electronics

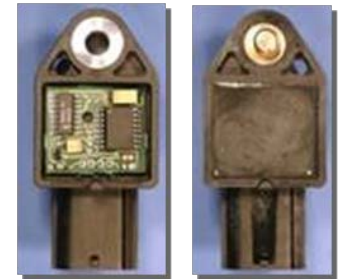
- **Crash Sensing Electronics**

- Airbag Control Module
- Frontal Crush Zone Sensor
- Side Impact Sensor
- Rollover Sensor



- **Occupant Sensing Systems**

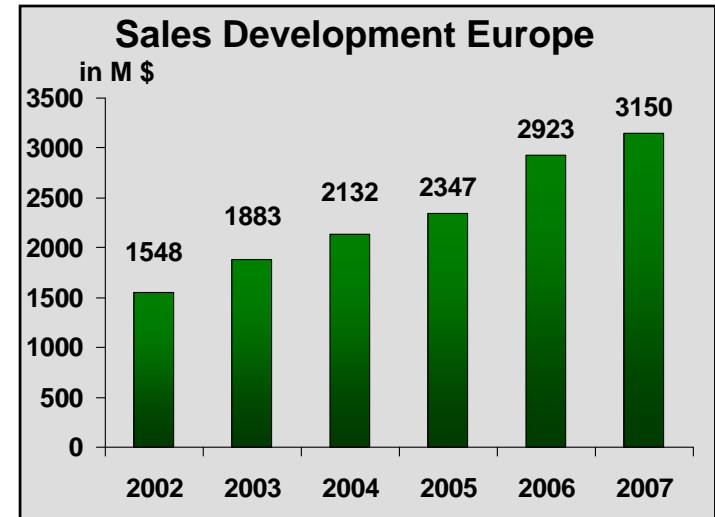
- Occupant Classification Module
- Integration of Strain Gages or Hall Effect Sensors



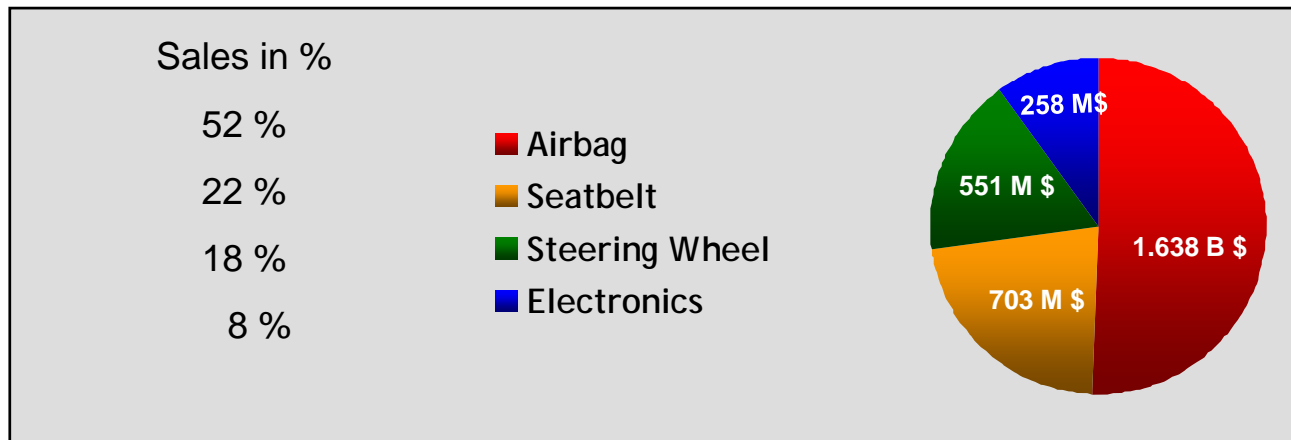
TRW Occupant Safety Systems Europe

- Sales 2007: US \$ 3.150 billion
- 18 plants in 9 European countries
- Employees: 16,000

- Plant Atlantis in South Africa
- 1 Joint Venture in Turkey
- 1 Joint Venture in Tunisia

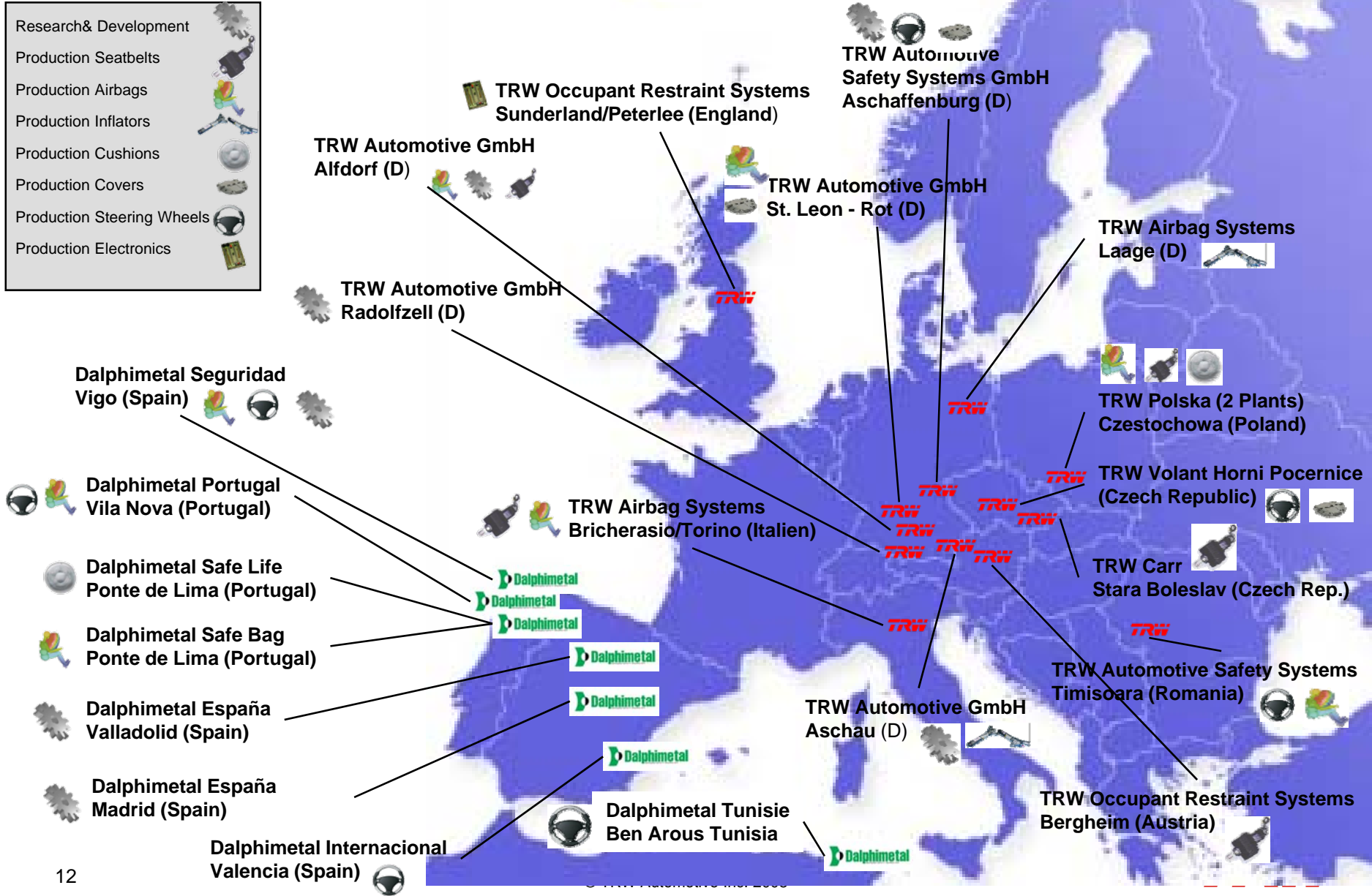


Sales 2007 by Product Line



TRW Occupant Safety Systems Europe

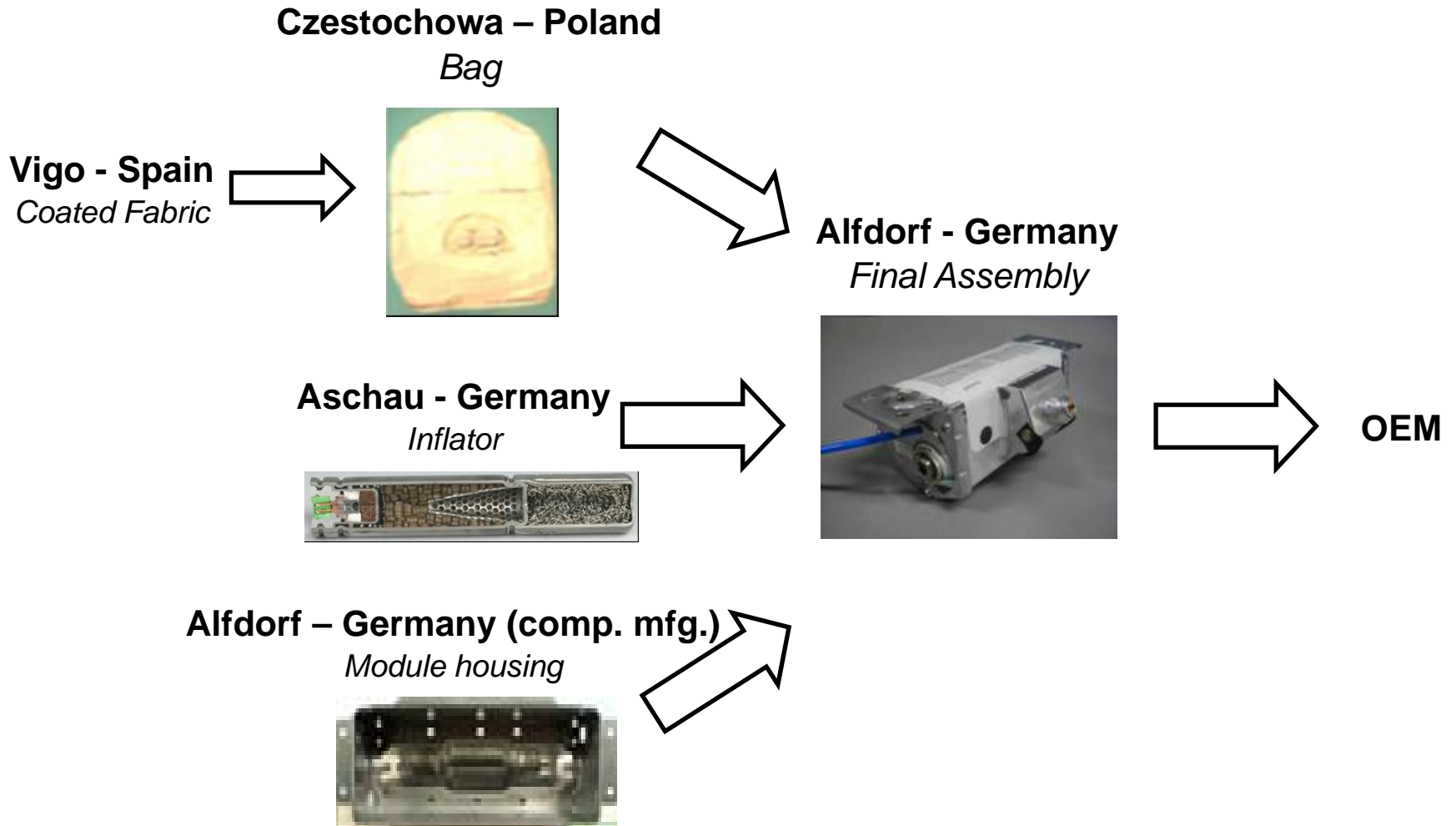
- Research & Development 
- Production Seatbelts 
- Production Airbags 
- Production Inflators 
- Production Cushions 
- Production Covers 
- Production Steering Wheels 
- Production Electronics 



Agenda

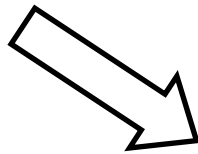
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Value Chain for Airbag modules

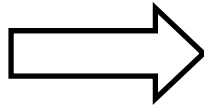
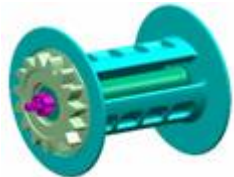


Value Chain Seatbelt Products

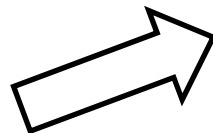
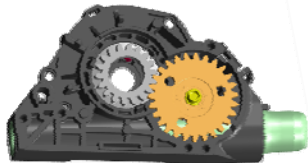
Alfdorf – Germany (comp. mfg.)
Stamping – Plastic Moulding



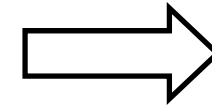
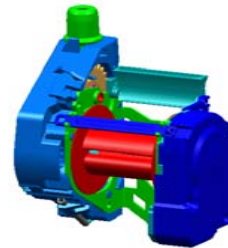
Stara Boleslav – Czech. Rep.
Subassembly



Bergheim – Austria
Subassembly



Czestochowa – Poland
Final Assembly



OEM



OSSE Global Profitability - Objectives

Implementation of an OSSE-wide tool for calculation of product group costs and global profitability under consideration of

- ◆ Elimination of intercompany profits
- ◆ Mapping of different part numbers for the same product in different OSSE plants
- ◆ Allowance for different consolidation basis/levels (e.g. Dalphimetal vs. remaining OSSE plants)
- ◆ Possibility for considering sales & transportation costs of the delivering plant as part of the manufacturing costs in the receiving plant from a group costing perspective
- ◆ Ability to separate “non-serial” business from Profitability Analysis

OSSE Global Profitability - Constraints

Software tool

- ◆ with SAP like user interface in order to reduce training as well as familiarization effort and time
- ◆ using SAP development and customizing techniques to minimize ongoing support effort
- ◆ also allowing an extraction of non-SAP data
- ◆ extracting SAP R/3 data to a separate database for more flexibility (disintegration)
- ◆ with BW interface to support a more flexible reporting
- ◆ with planning and simulation functionality

Different Cost view for Airbag Production Sample

		Transfer Price	Cost Component Split local view						Cost Component Split global view								
			Material	Production fix	Production variable	Packaging	IC - Freight	Customs	Total	Material	Production fix	Production variable	Packaging	IC - Freight	Customs	Intercompany Profit	Total
Alfdorf	Airbag Module	80,00	50,00	4,00	16,00	2,00	1,00		73,00	24,50	7,00	25,00	4,00	2,00	0,50	10,00	73,00
	Production Bag	41,00	41,00	4,00	16,00	2,00	1,00		23,00	15,50	3,00	9,00	2,00	1,00	0,50	10,00	41,00
	Inflator		8,00						8,00	8,00							8,00
	Housing		1,00						1,00	1,00							1,00
Czestochowa	Bag	41,00	24,00	2,00	7,00	1,00	1,00		35,00	15,50	3,00	9,00	2,00	1,00	0,50	4,00	35,00
	Production Coated Fabric	20,00	20,00	2,00	7,00	1,00	1,00		11,00	11,50	1,00	2,00	1,00		0,50	4,00	20,00
	Fixing Plate		3,00						3,00	3,00							3,00
	Thread		1,00						1,00	1,00							1,00
Vigo	Coated Fabric	20,00	11,50	1,00	2,00	1,00	0,50		16,00	11,50	1,00	2,00	1,00		0,50		16,00
	Production Fabric		10,00	1,00	2,00	1,00	0,50		4,50	10,00	1,00	2,00	1,00		0,50		10,00
	Fluid A		1,00						1,00	1,00							1,00
	Fluid B		0,50						0,50	0,50							0,50

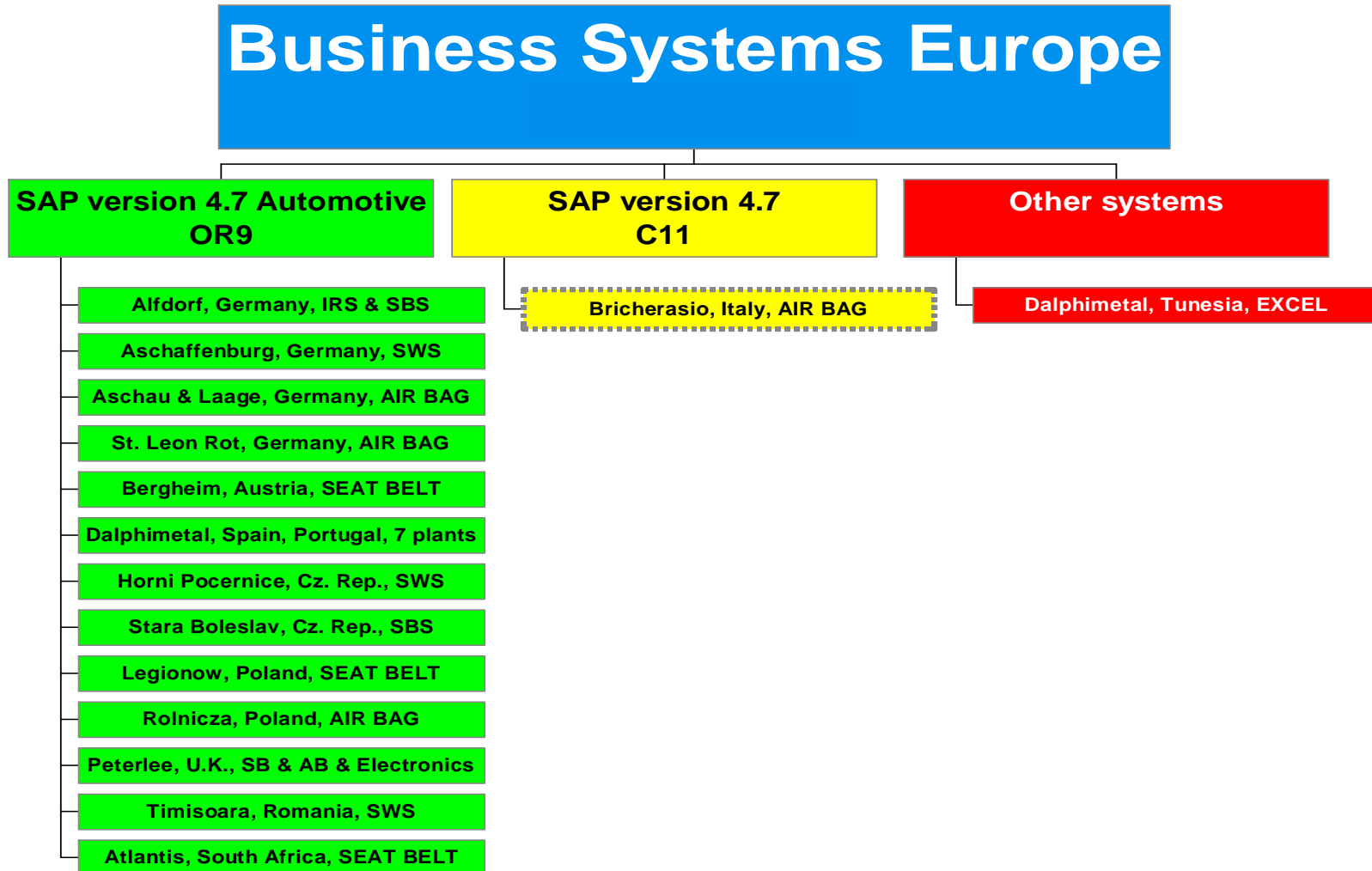
Different Cost view for Airbag Production Sample

		Transfer Price	Cost Component Split local view						Cost Component Split global view								
			Material	Production fix	Production variable	Packaging	Customs	Total	IC - Freight	Material	Production fix	Production variable	Packaging	Customs	IC - Freight	Intercompany Profit	Total
Alfdorf	Airbag Module	80,00	50,00	4,00	16,00	2,00		72,00		24,50	7,00	25,00	4,00	0,50	2,00	9,00	72,00
	Production Bag	41,00	41,00		4,00	16,00	2,00	22,00		15,50	3,00	9,00	2,00	0,50	2,00	9,00	22,00
	Inflator Housing		8,00					8,00		8,00							
			1,00					1,00		1,00							
Czestochowa	Bag	41,00	24,00	2,00	7,00	1,00		34,00	1,00	15,50	3,00	9,00	2,00	0,50	1,00	3,00	34,00
	Production Coated Fabric	20,00	20,00		2,00	7,00	1,00	10,00		11,50	1,00	2,00	1,00	0,50	1,00	3,00	20,00
	Fixing Plate		3,00					3,00		3,00							3,00
	Thread		1,00					1,00		1,00							1,00
Vigo	Coated Fabric	20,00	11,50	1,00	2,00	1,00	0,50	16,00	1,00	11,50	1,00	2,00	1,00	0,50			16,00
	Production Fabric		10,00		1,00	2,00	1,00	0,50	4,50		1,00	2,00	1,00	0,50			4,50
	Fluid A		1,00					1,00		1,00							1,00
	Fluid B		0,50					0,50		0,50							0,50

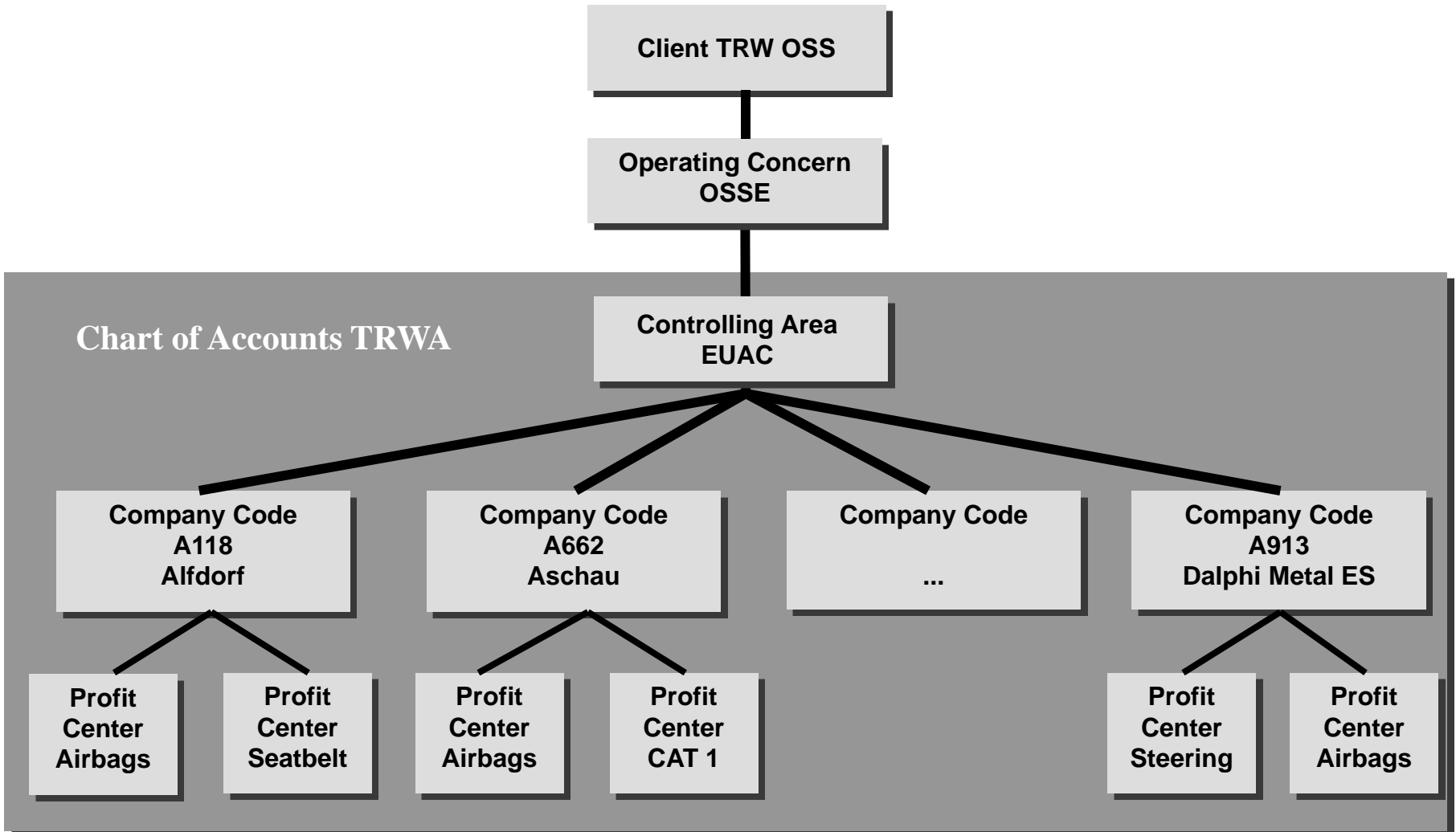
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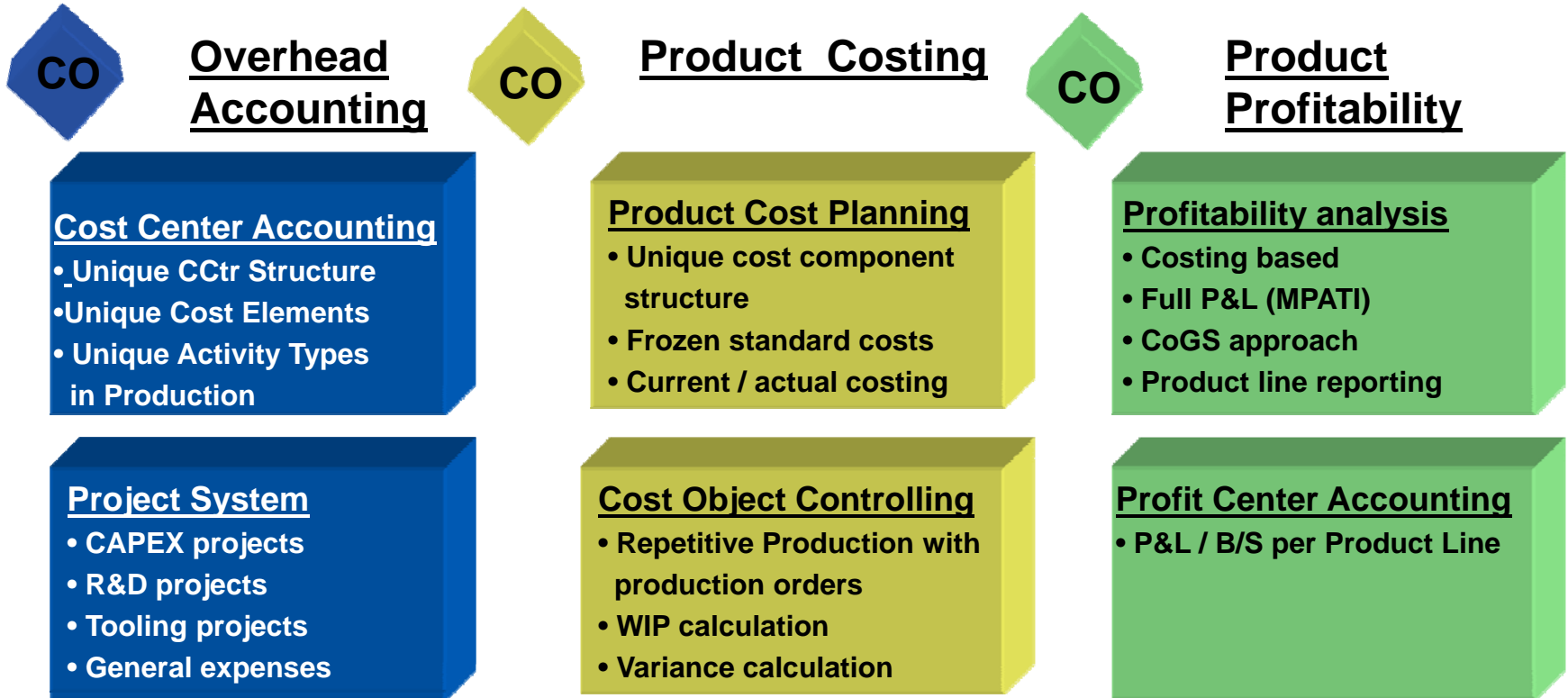
Landscape Business Systems OSS Europe



OSSE SAP Organizational Structure FI / CO



OSSE Controlling Modules



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Why did we choose the „GCP-Engine“

because...

- ◆ The CO organizational structure of TRW OSSE supports the SAP standard group costing functionality as available with Rel 4.7
- ◆ Common TRW OSS cost component layout supports the SAP standard group costing functionality as well
- ◆ Also the standardized CO-PA structure would allow us to use the SAP standard group costing functionality

but...

- ◆ Main issue was broken links along the I/C supply chain (different part numbers for the same parts in some OSS plants – no harmonization of material masters possible)
- ◆ Another issue is the different handling of the sample-/prototype-business throughout OSSE which makes the exclusion of the related transactions challenging
- ◆ GCP allows for the calculation and allocation of actual material costs per period, whereas the current OSSE SAP system is based on standard price valuation.

Transfer to F. Wurm (IMC)

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Project Status – Next Steps

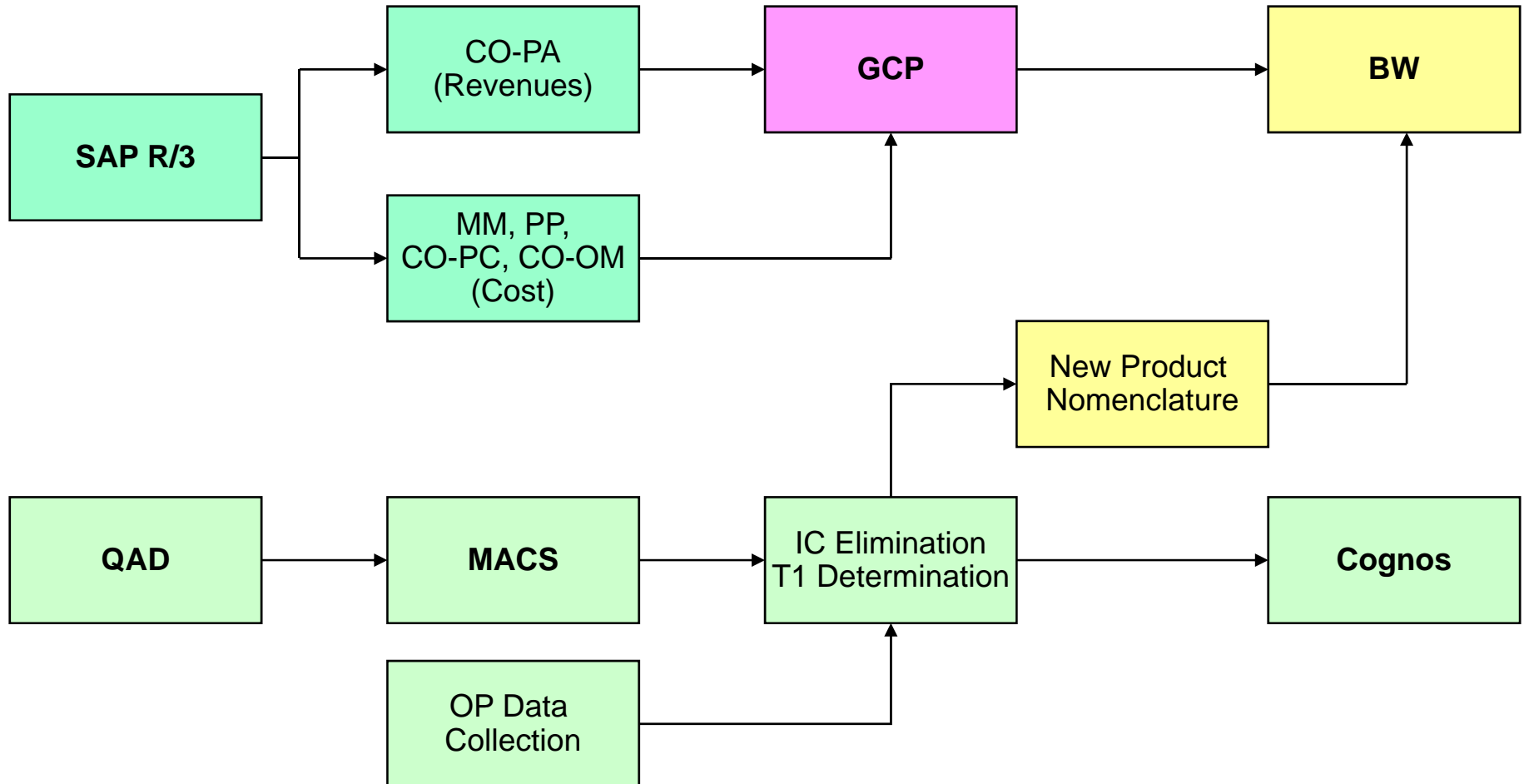
- ◆ Realisation of a prototype in Februar 2007
- ◆ Project „kick-off“ in April 2007
- ◆ „Go-live“ scheduled for July 1, 2008

- ◆ Analysing January – June 2008
- ◆ Ongoing monthly calculation runs
- ◆ Setup of global profitability reporting in SAP-BW
- ◆ Allocation of regional and divisional overhead cost

Lessons Learned

- ◆ **Highly standardized SAP environment expected ... not available**
- ◆ **Different setup for the same process in various company codes**
- ◆ **Existing „old“ processes were not adjusted to standard SAP processes**
- ◆ **Additional efforts required to harmonize master data and processes**
- ◆ **Internal project support should not be underestimated**

OSSE Profitability Data Flow - Today



The „GIFCO“ Project - Objectives

- ◆ **Implementation of TRW globally harmonized Accounting and Controlling instance for Shared Service operations and global reporting – based on FI new GL.**
- ◆ **TRW standard:**
 - Run R/3 for local Finance and Controlling
 - Run either SAP or QAD for local Logistics and Production control
- ◆ **Implement reference client (global CoA, vendor- and customer number, payment terms etc.)**
- ◆ **Global harmonization of FI master data and processes, e.g. Chart of accounts, accounts payable, accounts receivable, invoice verification, payment**

GIFCO Project Objectives cont.

Global harmonization of CO modules, master data and processes, e.g.

- ◆ Cost center structure
- ◆ Cost elements
- ◆ Activity types
- ◆ Cost component structure
- ◆ Value fields / characteristics
- ◆ Profit centers

Global product profitability reporting based on

- ◆ CO-PA
- ◆ GCP

TRW Profitability Data Flow - Tomorrow

