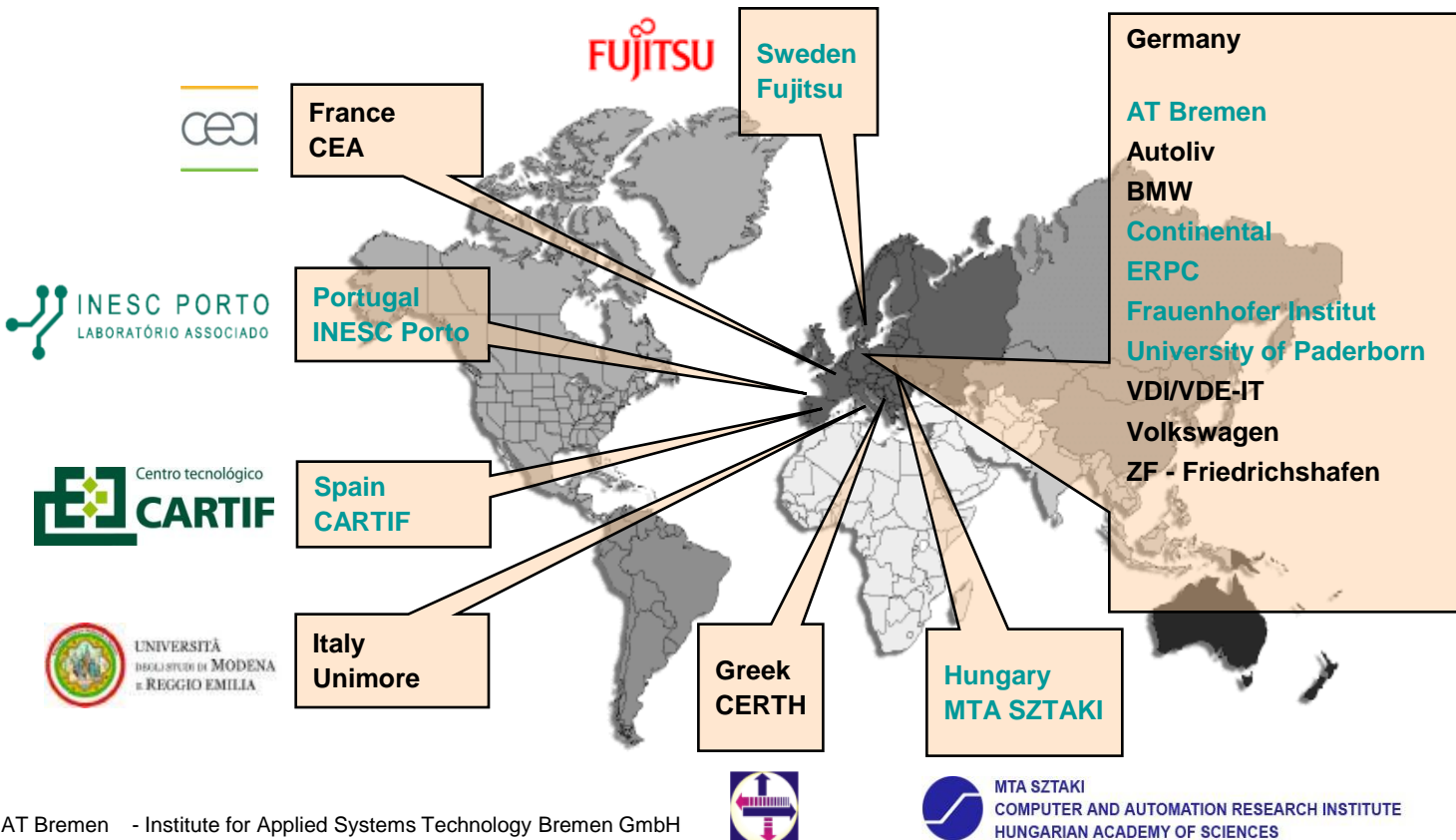


AC*DC

Automotive Chassis Development for 5-Days-Car



AC/DC – The Consortium



- AT Bremen - Institute for Applied Systems Technology Bremen GmbH
- CEA - Commissariat à l'Energie Atomique
- CERTH - Centre for Research and Technology Hellas
- ERPC - European Research Programme Consulting
- UNIMORE - University of Modena and Reggio Emilia



MTA SZTAKI
COMPUTER AND AUTOMATION RESEARCH INSTITUTE
HUNGARIAN ACADEMY OF SCIENCES

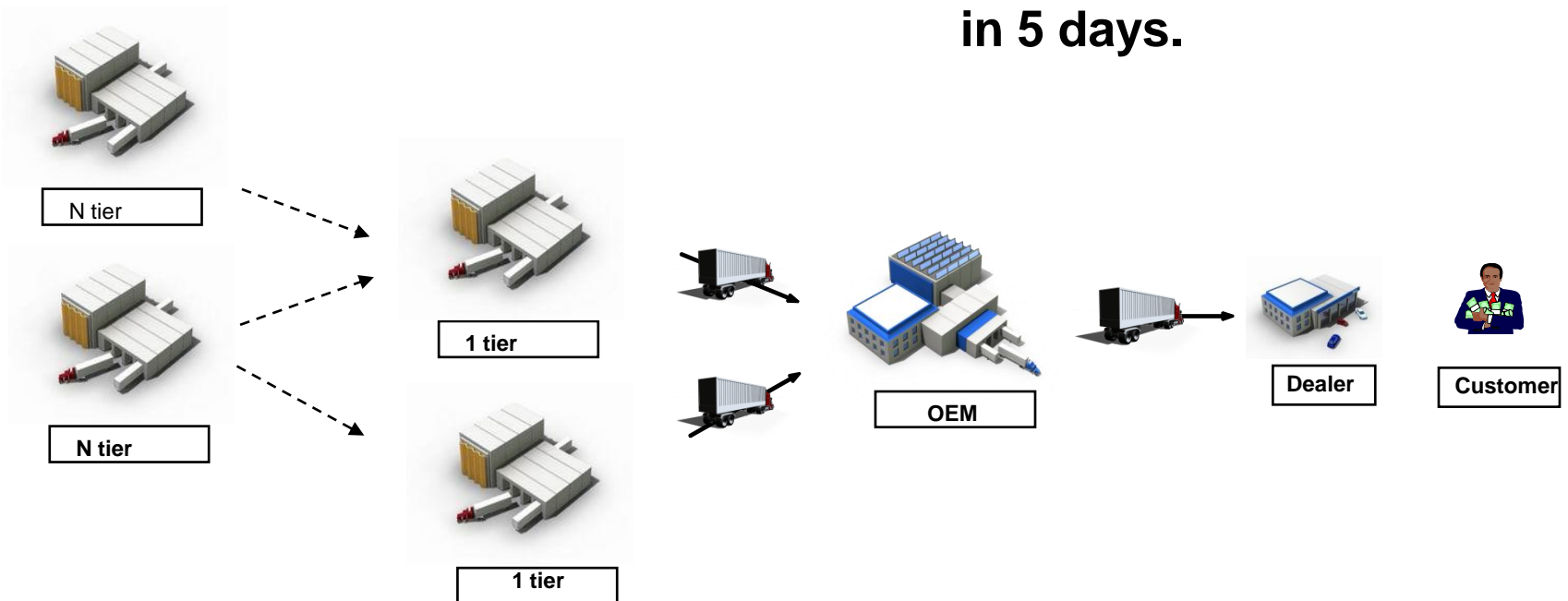


AC[⚡]DC – The motivation

- **Strengthen the European Car Industry**
 - Differentiation → Individuality, **Flexibility** and Image
 - Reduction of delivery times
- **New challenges for the automotive supplier industry**
 - Reduced predictability
 - Higher capacity and flexibility demands of the OEM
 - Ability, to operate a supply chain network - a decisive role!

AC*DC – The Vision behind

Development of a vehicle production & supply system to deliver a customized vehicle in 5 days.



AC⁺DC – The Approach

1. Dynamic Supply Network System for the automotive supplier industry

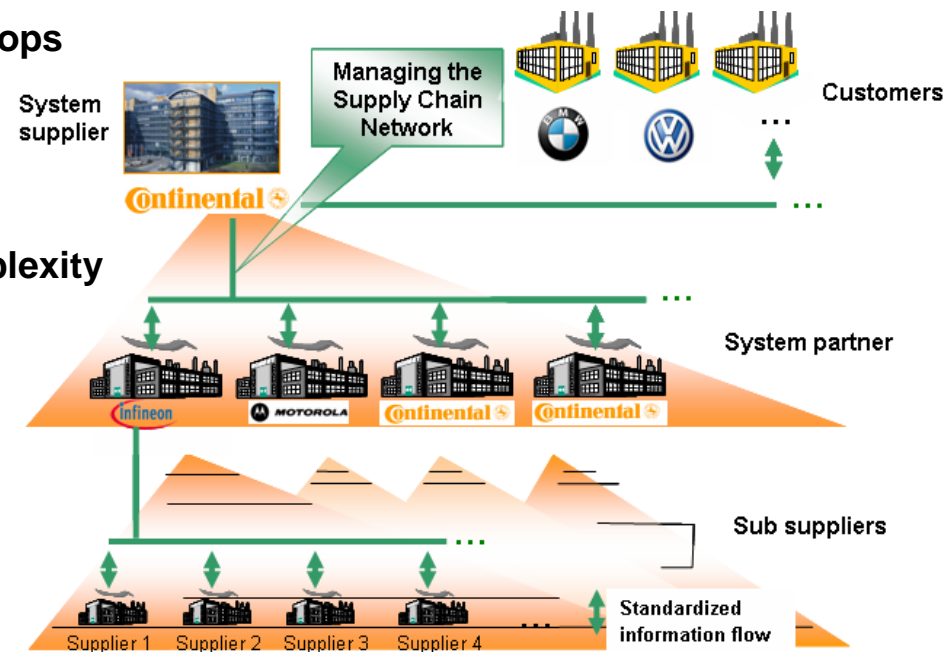
- 3 H's :
- Highly reactive
 - Highly reliable
 - Highly flexible

2. Customized-To-Order Principle

AC²DC – The Approach

1. Dynamic Supply Network System for the Automotive Supplier industry

- Decentralized supply chain planning & execution
- Efficient planning process based on feedback loops
- Higher responsibility at the 1st tier supplier
- Reduction of costs
- Reduction of supply chain network control complexity
 - Simplification & Standardization
- Close collaboration
- Supply chain optimum instead of local optimum

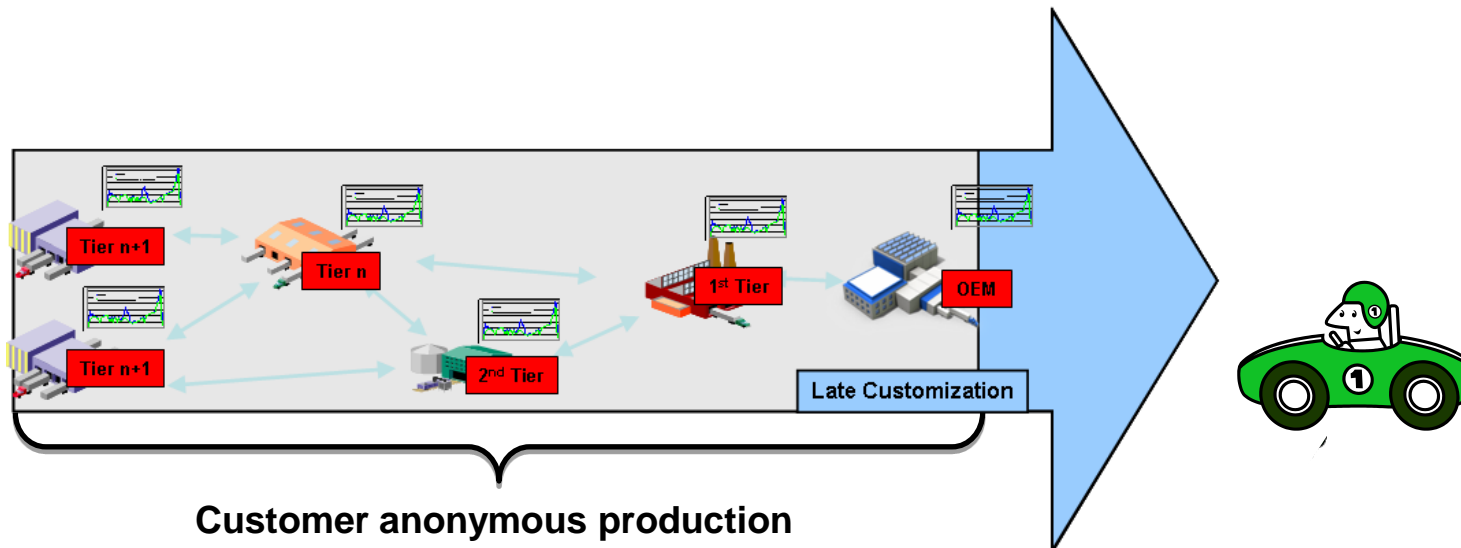


ACDC – The Approach

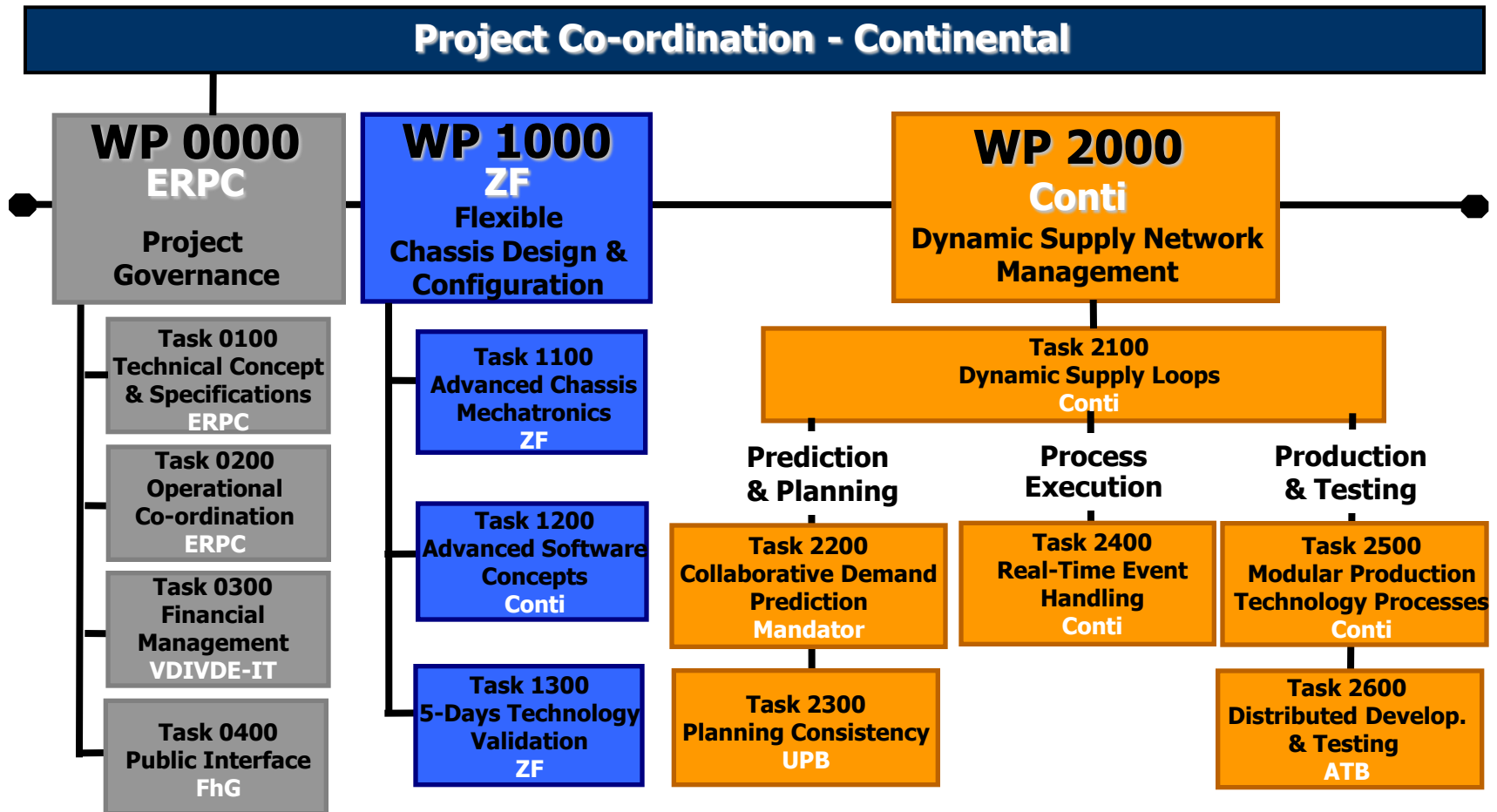
2. Customize-to-order Principle

- Consequent modularization
- Late customization via Software flashing

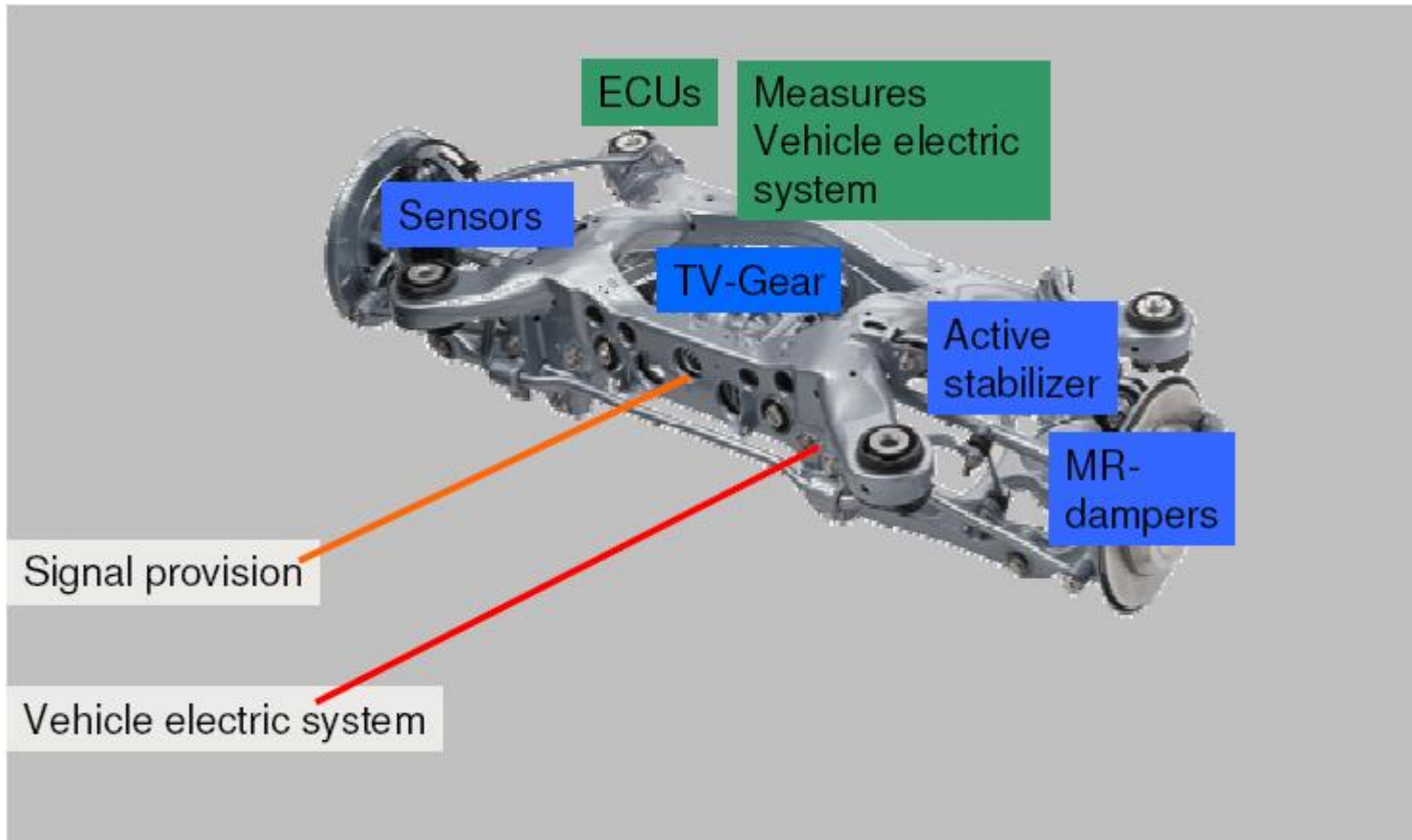
**Customized
mechatronic component**



AC⁺DC – The Project Structure

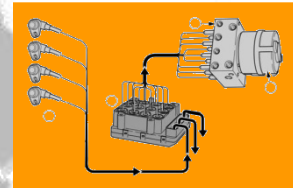
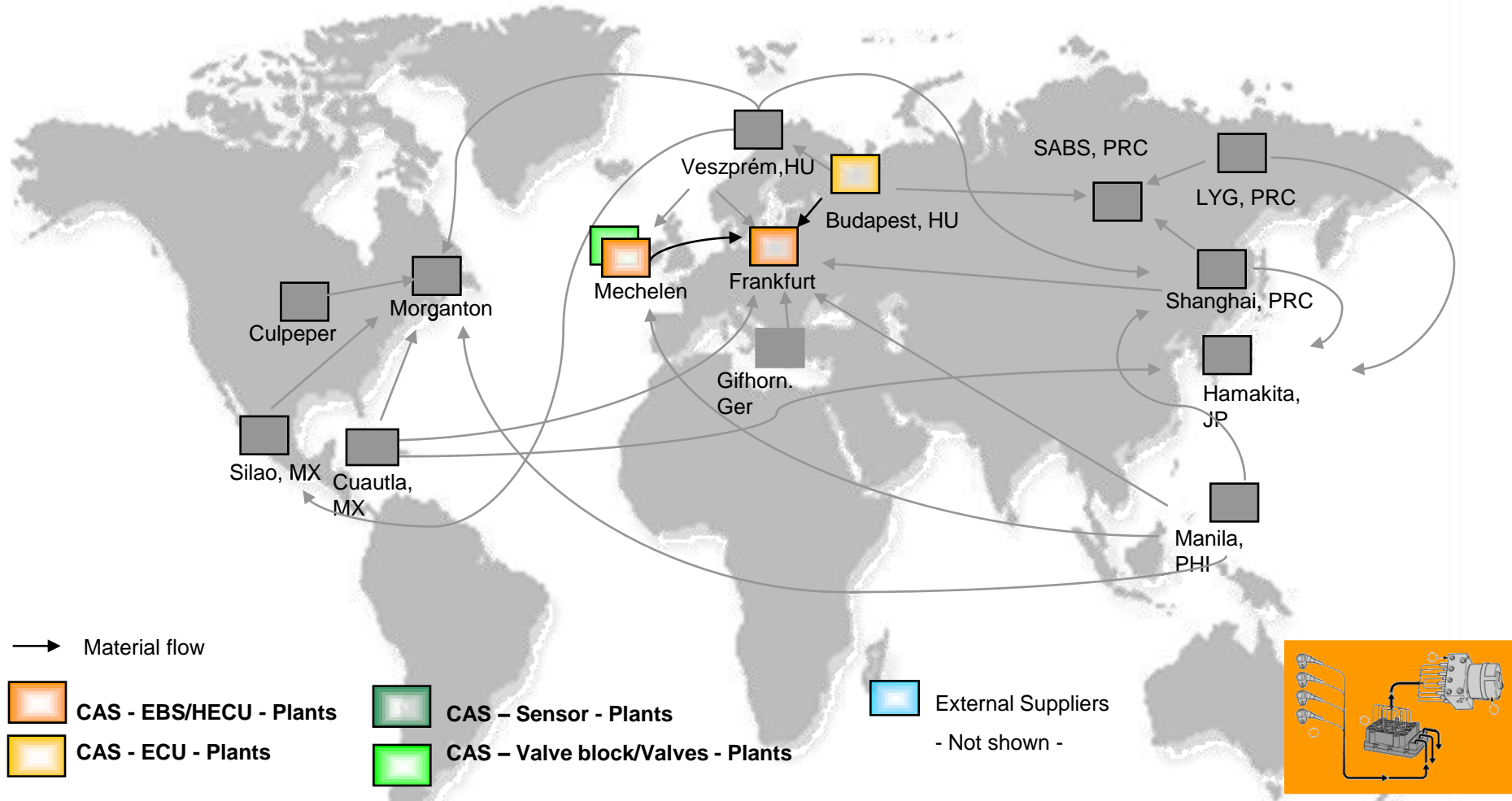


WP1000 – The USE CASE



Mechatronic rear axle module

WP2000 – The USE CASE



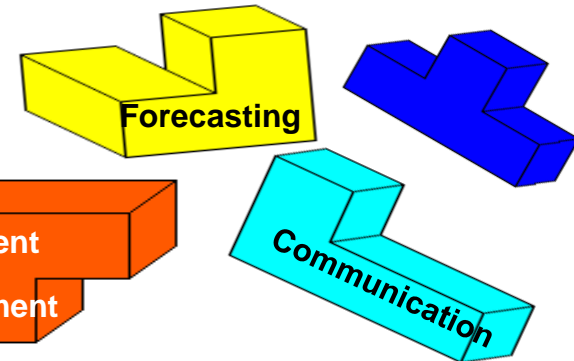
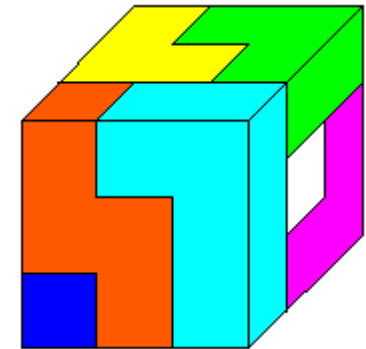
AC~~DC~~DC – Expected Final Results

1. Code of practice

- Documentation for implementation of AC~~DC~~DC methodologies in European Automotive Supply Networks
- Structure based on a **Tool-box principle**
 - Selection and implementation of those methods which are needed at an individual company

2. Integrated validation

- Proof-of-concept of Dynamic Supply Loops processes with validated rear axle module



... Questions?

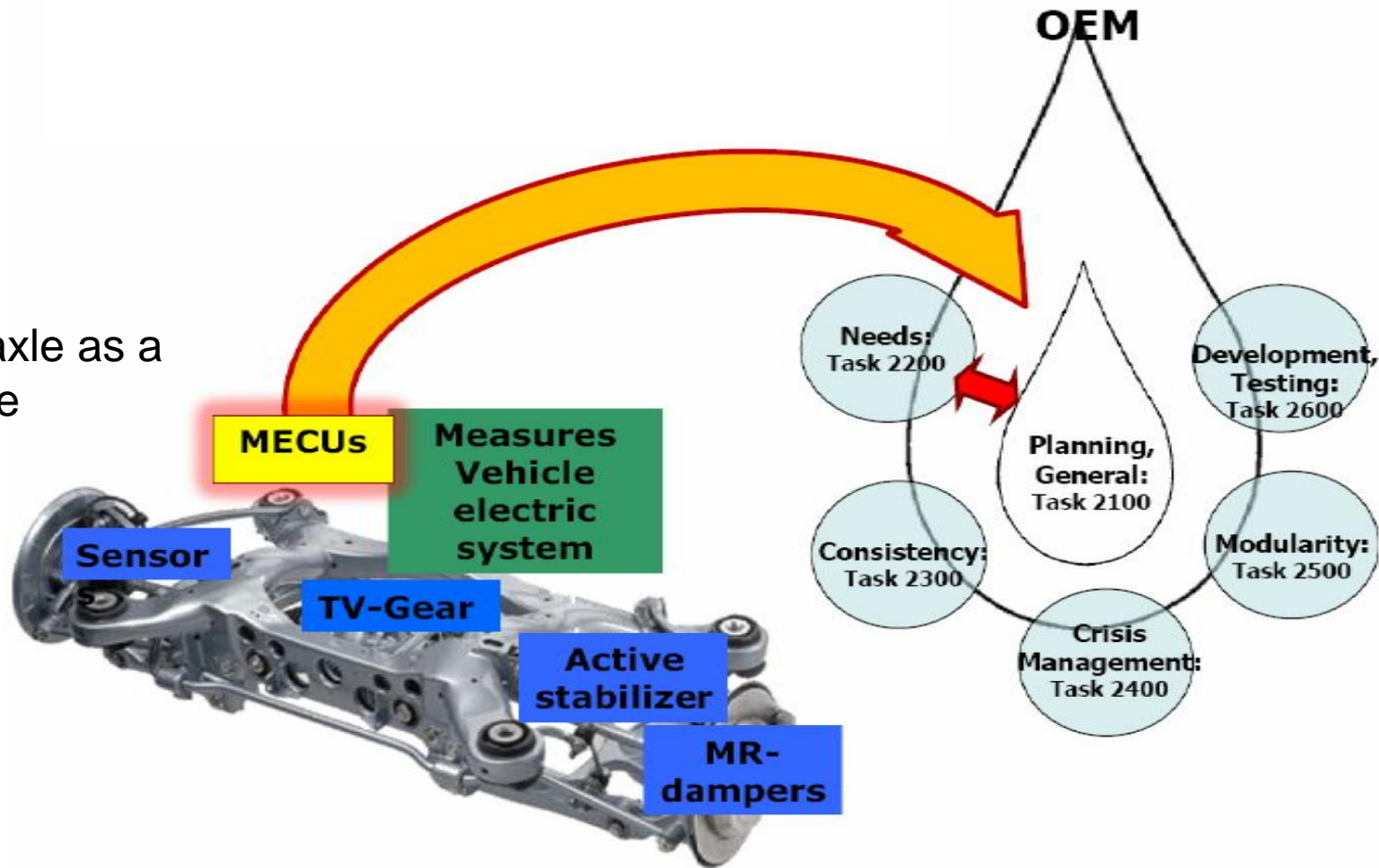


BACK UP

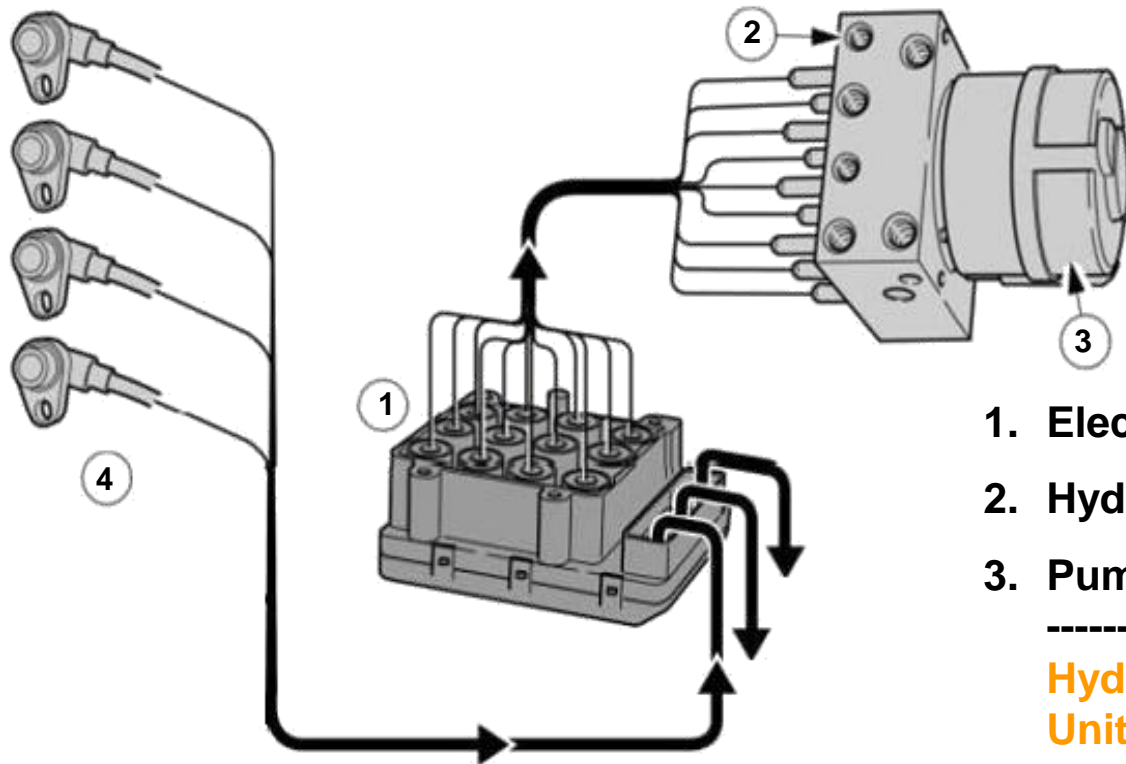
AC/DC - Implementation Initiative



Rear axle as a module



WP 2000 – The USE CASE



1. Electronic Control Unit (ECU)
2. Hydraulic valve unit & valves
3. Pump motor

Hydraulic Electronic Control Unit (HECU)

4. Active wheel speed sensors

