

Call for Mobilizing Ideas -Components Labeling-

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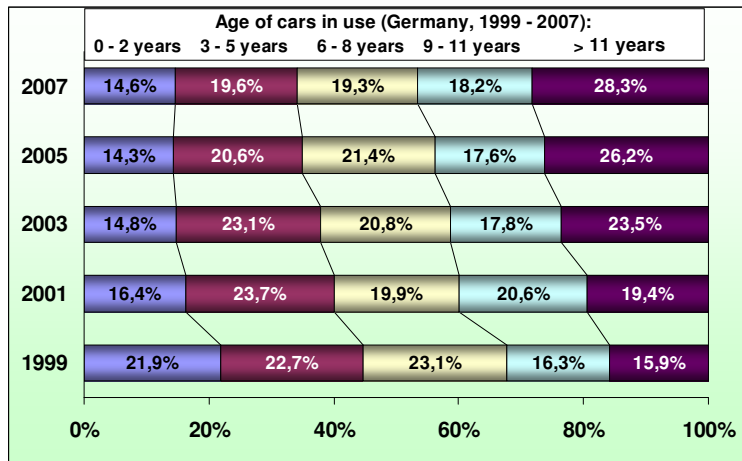
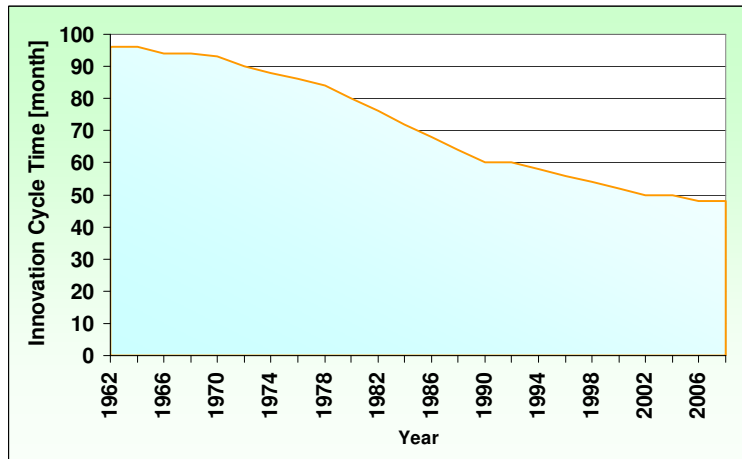
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Spare Parts World – Initial Situation



- Innovation cycle time decreases
- Product life time increases
- Variety of assemblies and components increases
- parts delivery obligation increases

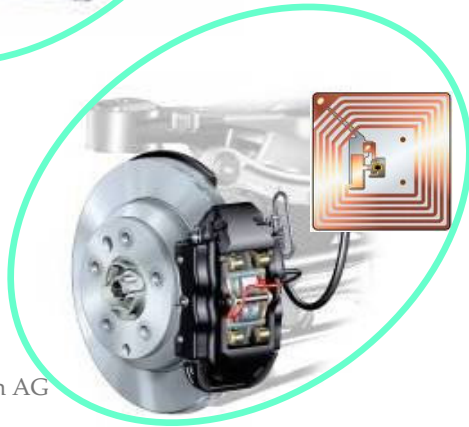
➔ Increase in economical risk for OEMs and Tier-1 suppliers

➔ Reworking and re-using of parts become crucial issues to ensure the long-term supply of spare parts

Actual Issues

- OEMs may use different Tier1-suppliers for the same components or for different variants of parts, construction units and assemblies
- From the start to end of production parts and assemblies may underlie multiple changes
- For a unique identification of used components a lot of different information and technical standards (individual number ranges, different identification techniques) need to be aligned
- The resistance of current identification means (e.g. bar codes) is insufficient for the mean life time of automobiles
- Current identification techniques are not able to receive and store information

Components Labeling - Potentials



Pictures: Volkswagen AG

- Use of RFID-technology to improve the identification of parts and components within automobile industry
- ➔ Economic re-use of parts and components
- ➔ Improvement of the ecology by the use of re-conditioned parts and components
- ➔ Counterfeit protection by electronic marking, identification and traceability
- ➔ Foster the leading position in environmental protection in Europe

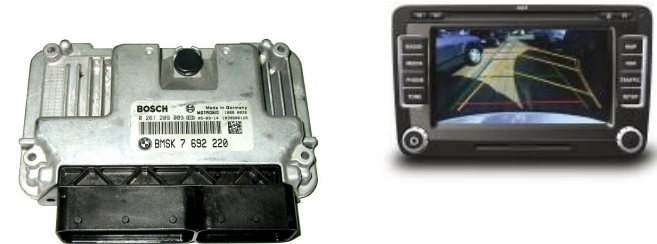
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Relevant Parts and Components

Mechanical components



Electric and electronic components



Body parts



Security relevant mechanical components



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Components Labeling – Operation Phases

Phase 2:
Maintenance



Phase 3:
Disassembly



Phase 4:
Reconditioning



Phase 1:
Production



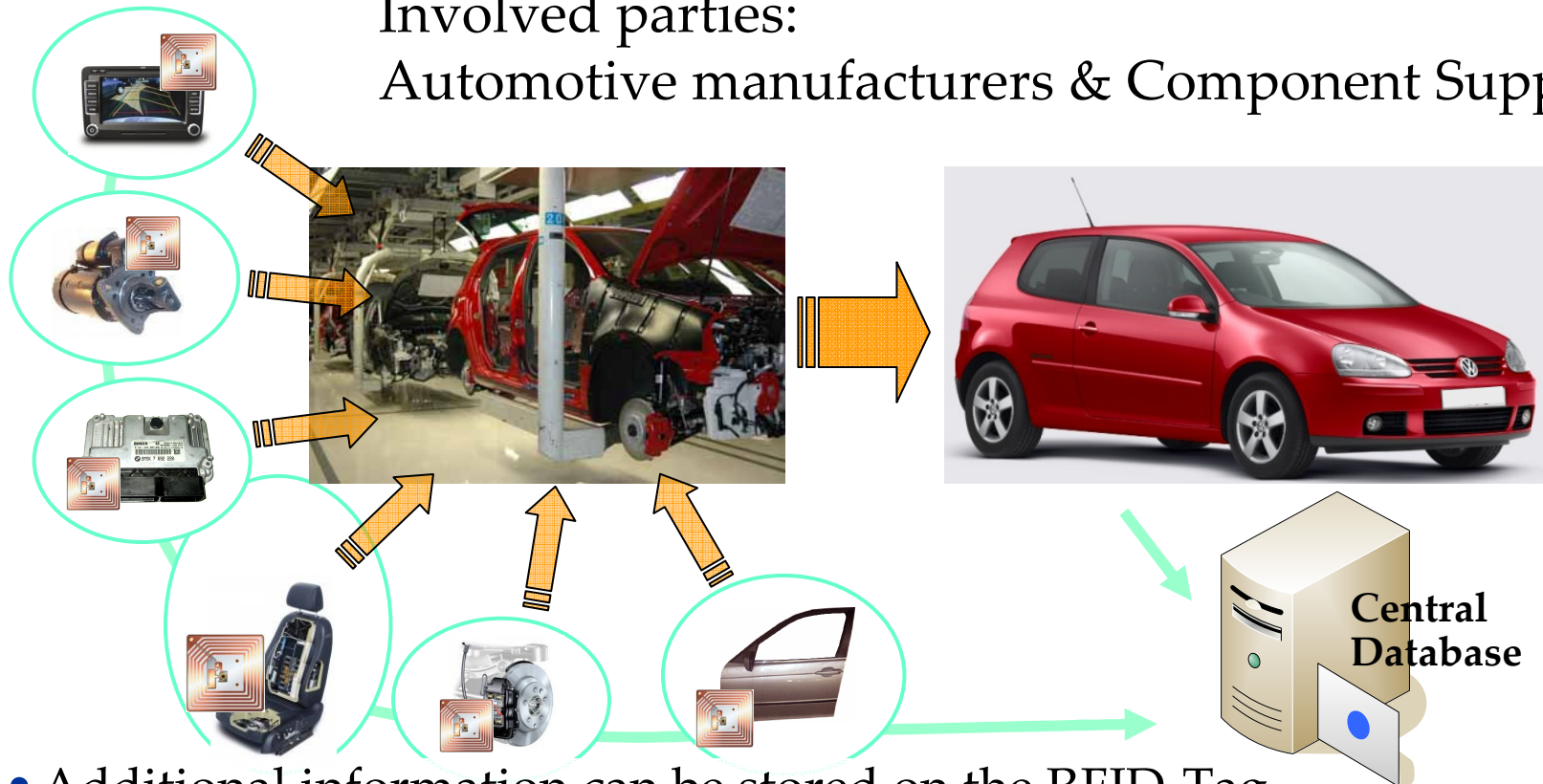
Phase 5:
Re-use



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Phase 1 - Production

Involved parties:
Automotive manufacturers & Component Suppliers



- Additional information can be stored on the RFID-Tag
- ➔ The components and parts always carry information

Phase 2 – First Life Cycle Maintenance and Technical Service

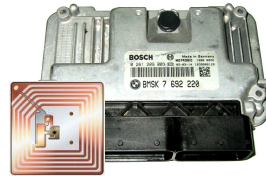
Involved parties:
Garages & Repair Services



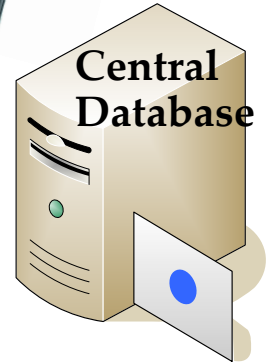
- Transparency of the actual conditions of components

Phase 3 - Disassembly

Involved parties: Disassembly companies, OEMs



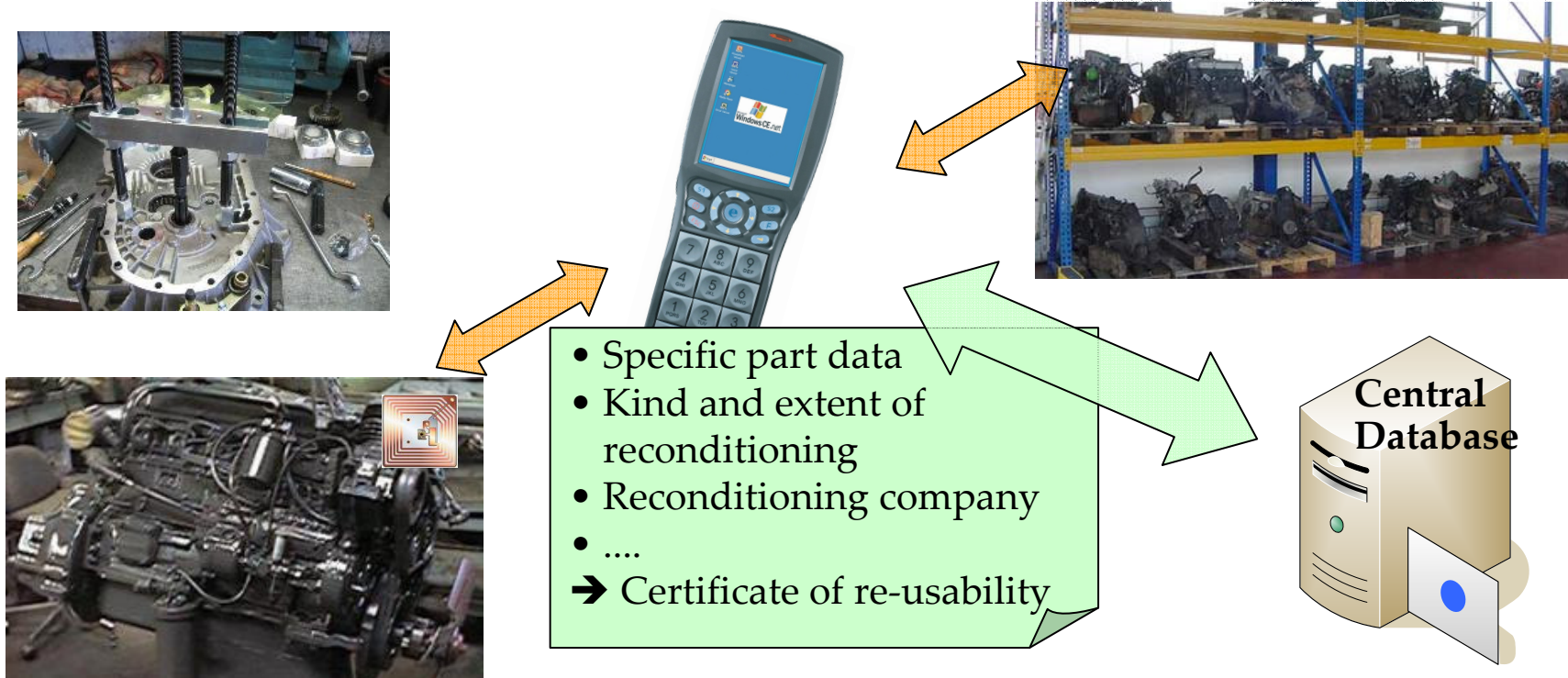
- Specific car data
- Specific part data (Producer, Model, specific type, mileage)
- Disassembly company
- Reason for Disassembly
- Date
- Classification into re-useable or not re-usable parts
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- Short-termed actual and specific part information (actual needs, specific disassembly and / or recovery instructions, ...)

Phase 4 - Reconditioning

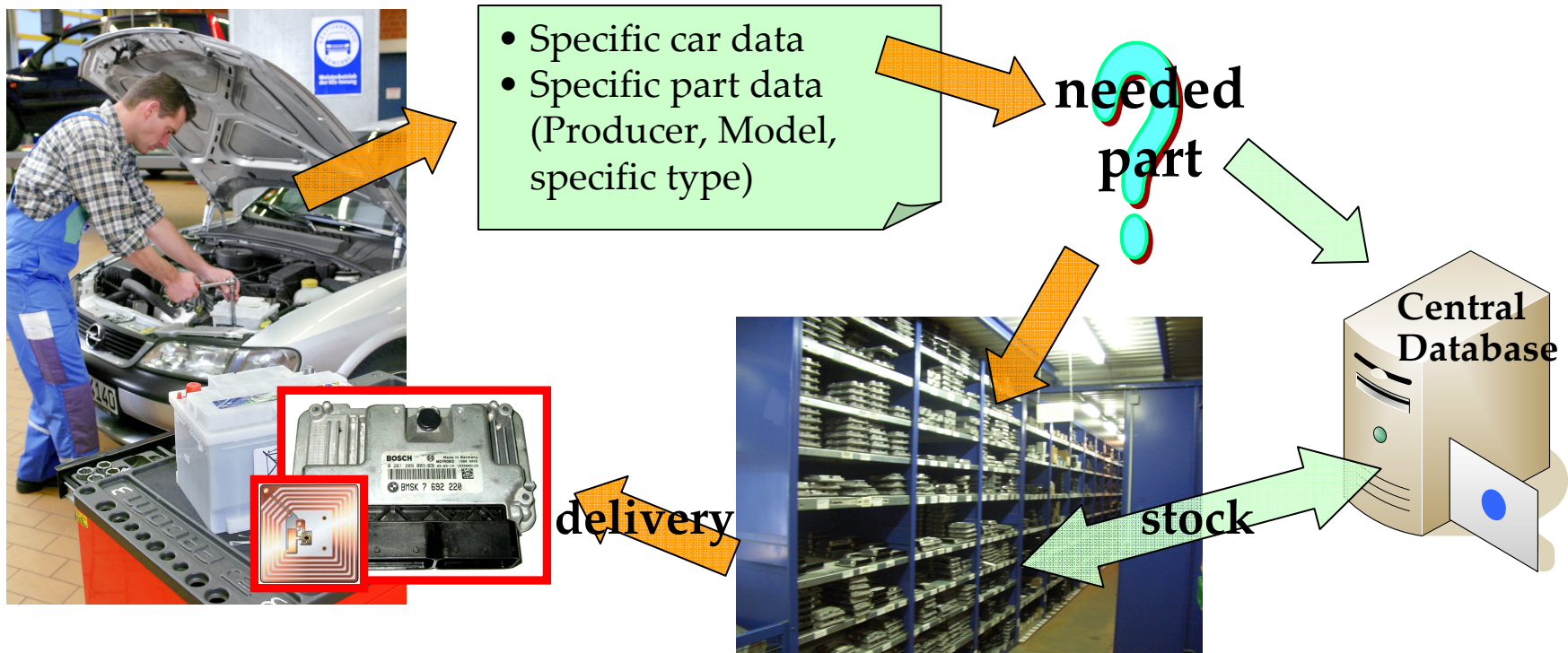
Involved parties: Tier1- X suppliers, specialized companies, OEMs



- Detailed part history available and useful for reconditioning process
- Information of needs and stock of parts in different conditions

Phase 5 – Re-use

Involved parties: Garages & Repair services



- Detailed part information for purposeful order of spare parts
- High availability of reconditioned parts with detailed part information

Challenges



Pictures: Volkswagen AG

- Development of standards for the identification of parts and components for the re-use in the automotive sector
- Development of universal database for different OEMs and suppliers
- Analysis and approval of suitable RFID-tags for usage in the components labelling
- Development of secure operating and information system
- Creation of business model
- Approval of business case

Components Labeling

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