



MAPPER

Model-based Adaptive Product and Process Engineering

Problem statement, vision and structure
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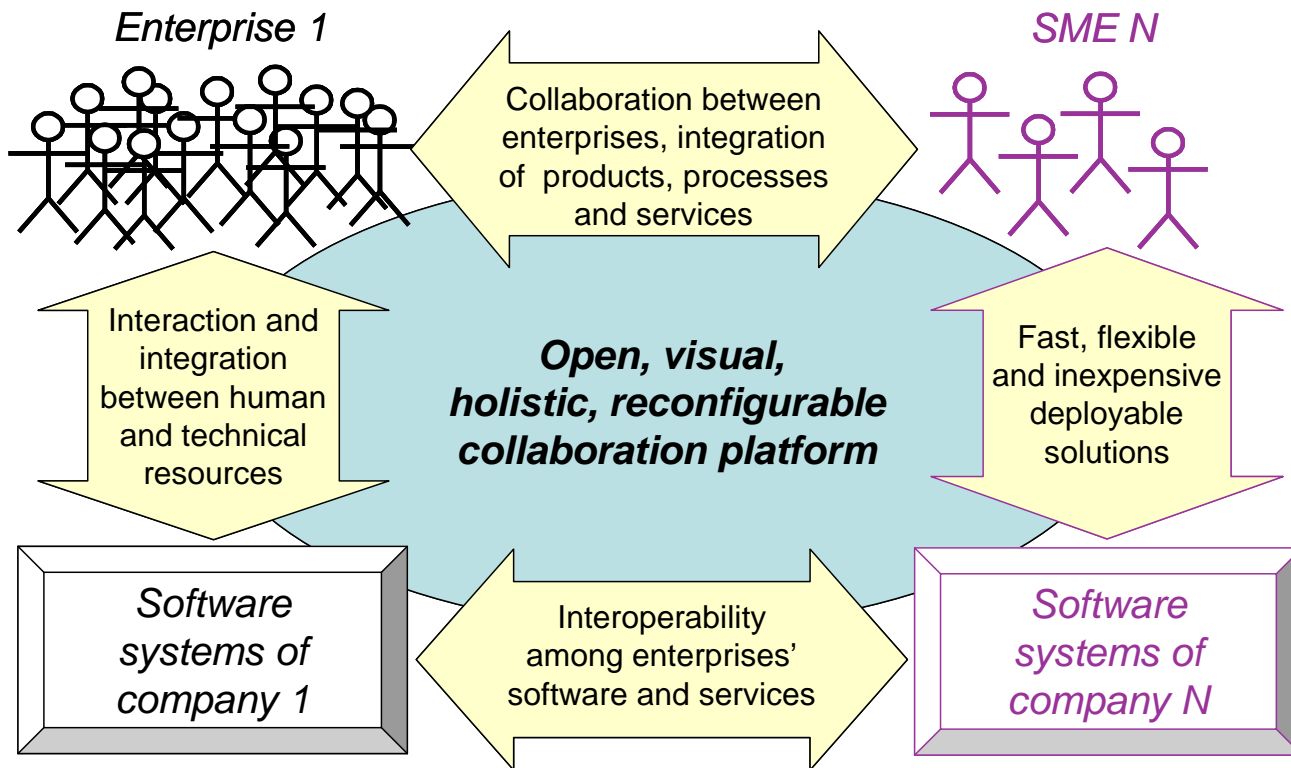
Turin, 03-04-2006

Problem statement

- The core ***problems and challenges*** in the area of faster and more flexible manufacturing concern
 - Achieving ***concurrency*** in all operations;
 - Quick and inexpensive formation of ***networked*** manufacturing organisations;
 - Bridge the gaps between ***heterogeneous knowledge, processes, systems, services, and ways of working***;
 - Processes and products need to be ***rapidly reconfigured*** to accommodate diverse and changing needs and opportunities;
 - New, cross-partner ***knowledge*** is continuously created and must be shared, executed on and managed.

The Vision of MAPPER

In 2010, agile manufacturing companies can inexpensively form collaborative networks and quickly adapt to market demands.



MAPPER Overall objective of MAPPER

MAPPER will enable fast and flexible manufacturing by providing methodology, infrastructure and reusable services for participative engineering in networked manufacturing enterprises, demonstrating practical benefits and scientific values in three industrial pilots.

- *Reducing cycle times and time to market* by ~10% through enabling adaptation to market demands;
- *Increased quality of products and lower costs* by decreased product and process late detected design errors by ~20%;
- *Increased innovations* by ensuring participation of all the groups of stakeholders from 10% to 100% (Measured by model changes triggered by others than the core design group);
- *Enable SME participation* in the manufacturing networks by reducing effective collaboration networking costs by ~50% and
- *Increased competitiveness of SMEs* by participation in manufacturing networks.

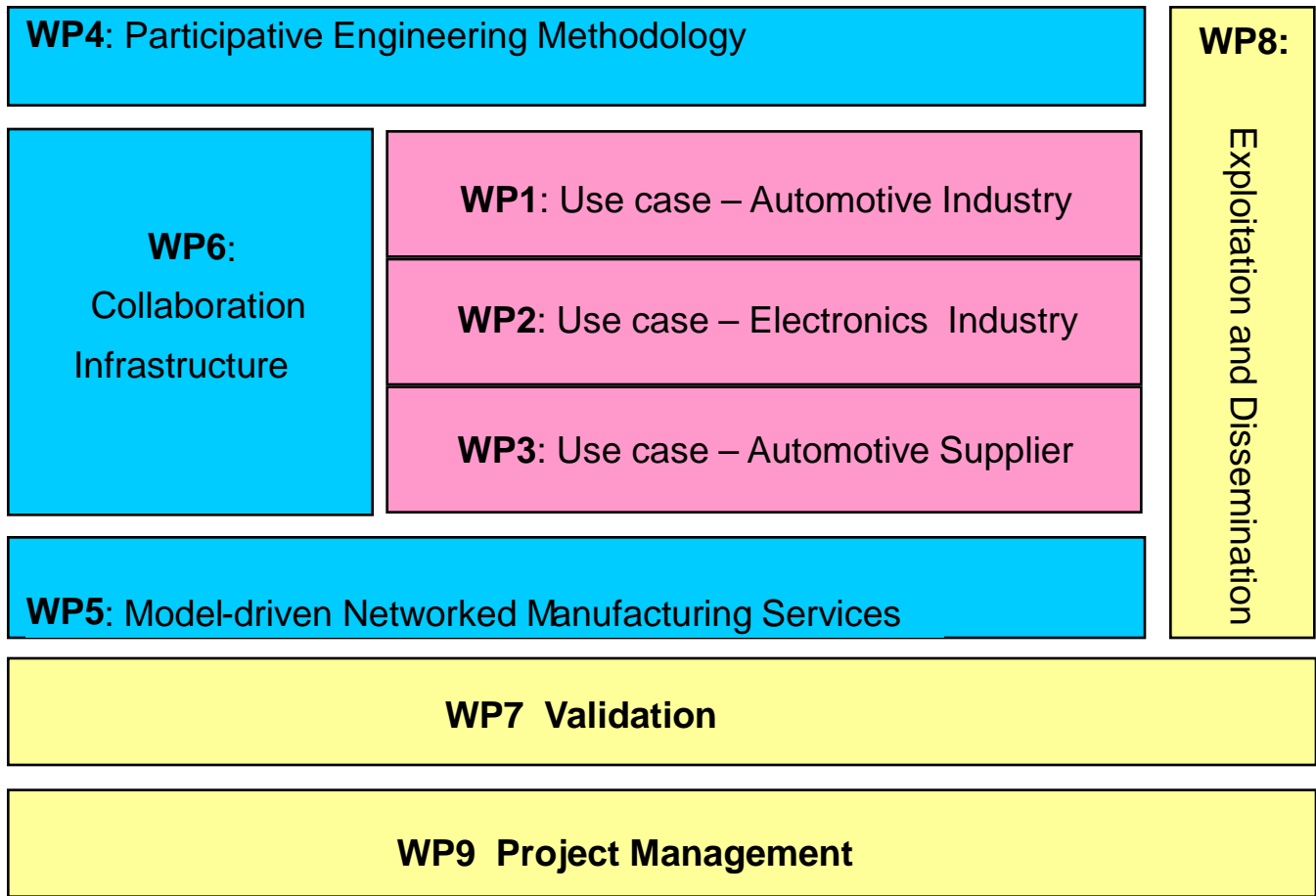


Scientific and technological results / objectives of MAPPER

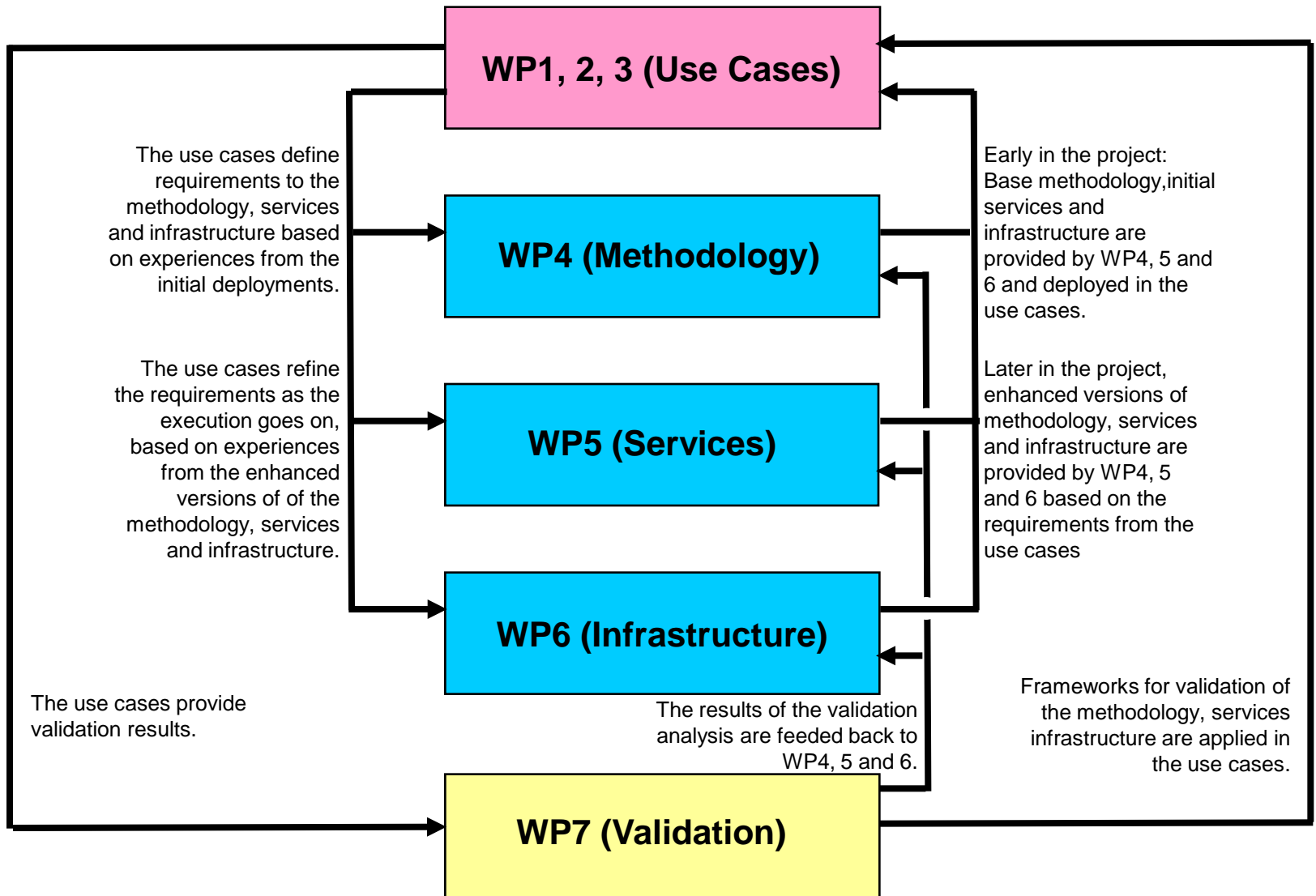
- O1: *Reconfigurable visual enterprise models* of products, processes and other enterprise aspects;
- O2: *Participative engineering methodologies*, enabling joint product and process design, interdisciplinary and inter-organisational collaboration throughout multiple product life-cycles;
- O3: *Customisable work environments* for different stakeholders, roles and tasks;
- O4: *Secure collaboration platform*, enabling enterprises to access each others engineering tools and product data in an open, yet secure manner;
- O5: *To develop and assess three industrial use-cases, and to validate the overall MAPPER approach;*
- O6: *To ensure early and continuous exploitation of results.*



Project structure



The flow within the project





End of presentation