

## ■ Motivation and Objectives

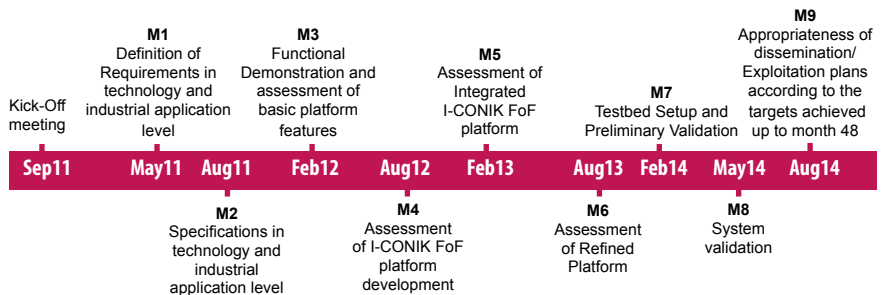
Current digital manufacturing Information and Communication Technology (ICT) platforms have a long way to go for effectively addressing engineering knowledge management issues:

- Today's ERP systems are often detached from the engineering knowledge they are associated with, while PLM systems provide no link to actual performance indicators;
- Current User Interfaces (UI) are often too complex and require much effort to follow and use effectively;
- Knowledge is often dispersed over many stakeholders and many IT systems;
- There is still a significant absence of robust tools for automatic knowledge capturing and reuse.

The i-CONIK FoF project will attempt to address the following objectives:

- Improving the efficiency of knowledge management and collaboration throughout the product lifecycle, supporting the capture, the systematic organization in the form of manufacturing templates of knowledge;
- Revolutionizing the UI context in the engineering office and the shop floor, with emphasis on faster, easier, error-free UI for data entry / checking in the shop floor along with serious games options.

## ■ Project Plan, Milestones and Deliverables



## ■ Technical Approach

Design and development of an integrated platform comprising of the following components:

- Process Knowledge Component,
- Integrated Collaborative Platform,
- Extended Engineering Component,
- Advanced User Interfaces and Training Component.

Realisation and validation of the developed platform through two separate use cases, namely:

- Automotive Assembly process use case,
- Extended Engineering Collaboration use case.

## ■ Achievements

- SP1:** Elicitation of all requirements and definitions of the specifications for the elements of the i-CONIK FoF platform.
- SP2:** Realization of the knowledge ontology for the acquisition, distribution and reuse of the knowledge regarding the manufacturing process design.
- SP3:** Design and development of the agent-based collaboration platform.
- SP4:** Implementation of the extended engineering component.
- SP5:** Design and development of a series of Advanced User Interfaces and the development of a training framework, using advanced learning methodologies, user interfaces and Augmented Reality (AR).
- SP6:** Definition and setup of the industrial use cases and validation of the i-CONIK FoF platform.

Budget 9.67 M€  
 Duration 48 months  
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Funding 6.15 M€  
 Start September 2011  
 Contract n° 284602  
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