iProd general aim is to improve the efficiency and quality of the Product Development Process of innovative products by developing a flexible and service oriented software framework that, reasoning and operating on a well-structured knowledge, will be the backbone of the computer systems associated with current and new product development processes.

At a Glance

**Project:**
iProd: Integrated management of product heterogeneous data

Contract number: 257657

**Project coordinator:**
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LMS International

**Partners:**
LMS International
Fraunhofer IPK and IAO
Paragon S.A
Screen 99
SCAI Polska
Cenaero
Pininfarina S.p.A.
École Polytechnique Fédérale de Lausanne
Fundacion CIDAUT
Delft University of Technology
KE-Works
Alessi S.p.A.
Electrolux Italia S.p.A.
NOESIS Solutions N.V.

**Duration:** 36 months
( starting on February 2011)

**Total cost:** 4.664.858 EUR

**Programme:**
Information and Communication Technologies

**Project website:**
www.iprod-project.eu

The Product Development Process challenge for modern industry

Data and knowledge management technologies are of strategic importance for industrial innovation, provided they are integrated in the company processes, in the organisational structure, and can be flexibly adapted to company evolution. In particular the Product Development Process (PDP) of manufacturing companies, requires the efficient management of huge amounts of data from different sources and their integration in the sub-processes that compose the product chain.

The efficient use of information lifecycle, by the large adoption of virtual testing and by the inter-functional management of related data in the product management would become a strategic advantage for the innovation race. Present ICT solutions separately address parts of product development, but an integrated approach that includes data and services required for the whole Product Development Process does not yet exist.

The iProd ambitions

iProd aims to improve the efficiency and quality of the Product Development Process by developing a flexible, service oriented, customer driven software framework that will be the backbone of computer systems associated with current and new development processes. This framework will impact the product development process in order to reduce drastically product development costs and
time by defining an optimised testing process, support knowledge and competencies extraction, structuring and sharing also with suppliers, improve focus of new product development with a fast and structured management of competitor and market analysis data.

The iProd solution

To achieve these goals, iProd will rely on knowledge management (KM), reasoning engine (RE) and process integration and automation technologies. In particular, the following modules will be implemented:

- A distributed Knowledge Base (KB), where relevant product and process knowledge for product design can be captured and formalized. In particular, the KB will contain:
  - customer expectations,
  - subjective objectives,
  - knowledge about virtual and physical tests etc.
- A reasoning engine (RE) which will compose data and knowledge to achieve the following functions:
  - design new products according to customer needs,
  - optimize physical and virtual testing
  - support virtual testing and CAD design loops by means of a decision support tool
  - automate the various product design tasks with a Knowledge Based Engineering (KBE) application
- A software integration framework to link the KB and reasoning engine with the various analysis tools into one distributed and seamless design, analysis and optimisation process in order to
  - allow a number of concepts and customized variants to be quickly elaborated and evaluated
  - increase reliability of the evaluation and the success rate of the product development process

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