

**Project title: Product Lifecycle Management and Information Tracking using Smart Embedded Systems**

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**End date** : 15.05.2008  
**Duration** : 42 months  
**# of Partners** : 22

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**Partners (Industrial, SME, Institutes):**

**Germany:** BIBA, COGNIDATA, INDYON, INFINEON, InMediasP, SAP; **Switzerland:** Bombardier Transportation, EPFL; **UK:** Cambridge University; **France:** Caterpillar; **Ireland:** CIMRU; **Italy:** CR FIAT, FIDIA S.p.A., ITIA-CNR, Politecnico di Milano, WRAP; **Greece:** INTRACOM; **Norway:** SINTEF, **Finland:** Helsinki University of Technology, Trackway.

**Project objectives:**

The core innovation of PROMISE is the concept of smart products that are able to sense their condition and environment. PROMISE-Product Lifecycle Management (PLM) addresses gaps in information flow and creates better understanding and extends control of products over the lifecycle, giving manufacturers effective instruments to create more value to the end users and win market share

PROMISE focuses on the complete lifecycle of a product from the Beginning of Life (BOL) to the Middle of Life (MOL) to the End of Life (EOL) with more emphasis in tracking and managing of information at the last two phases of the product's life cycle. PROMISE's main objectives are

1. To develop new closed-loop life cycle information flow models all three product life-cycle stages,
2. To develop new PLM systems and IT infrastructure exploiting the capabilities of smart product embedded information devices,
3. To develop new standards allowing the technologies and associated tools developed by the PROMISE project to be accepted by the market, enabling market growth by creating a favourable environment for the development of new innovative applications in Product Lifecycle Management systems
4. To develop new business models for innovative technologies to be deployed by all players in the Product Life-Cycle.

**Project description:**

PROMISE will develop appropriate technology, including product lifecycle models, Product Embedded Information Devices (including firmware and software components) as well as tools for decision making based on data gathered throughout a product lifecycle. This is done to enable and exploit the seamless flow, tracing and updating of information about a product, from its delivery to the customer to its final destination (deregistration, decommissioning) and back to the designer and producer.

The key result will be a new IT infrastructure and ubiquitous Product Lifecycle Management software which maximises strengths of existing hardware and legacy systems. Achieving maximum advantage may require the development of industry- or product-specific Product Embedded Information Devices (PEIDs) which are based on a combination of existing technologies, such as bar-code, RFID transponders and short- as well as long-range wireless communication technologies. Applications are being tested in 10 PROMISE demonstrators in the automotive, railway, heavy load vehicle, electronics and white goods sectors. Activities also address integration and standardisation, business development, and training issues.

**Field of Application:**

PROMISE offers potential stakeholders an attractive business proposition: to create value by transforming information to knowledge at all phases of the product lifecycle and thus improving product and service quality, efficiency and sustainability. The product and service value may be created at various levels: technical (e.g. exploiting knowledge gained "in the field"); economic (e.g. new business opportunities, better customer relations); environmental (minimisation of pollution, resource use and energy consumption); and social (greater comfort, safety, security). Closing product lifecycle information loops has several benefits:

- Producers will be provided with complete data about the modes of use and conditions of retirement and disposal of their products.
- Service and maintenance as well as recycling experts will be assisted in their work by having: (a) a complete and always up-to-date report about the status of the product, and (b) real-time assistance and advice through the internet.
- Designers will be able to exploit expertise and know-how of the other players in the product's lifecycle and thus improve product designs towards lifecycle quality goals.
- Recyclers/re-users will be able to obtain accurate information about "value parts and materials".
- In the very end PROMISE gives better value to end users, lowers manufacturing costs and gives product a new life.