Vision

ProSEco is a novel development platform, runtime infrastructure and a set of reusable base software services to support industries in collaborative ideation, design and development of new Product Extension Services (PES).

Along with these ICT tools ProSEco will provide an ecoinnovation methodology to take into account eco-relevant issues from the ideation phase.

Modern products include high number of sensors, ProSEco will allow to map these real data (sensors) to create specific services to optimize use and ecological impact of these products. Using ProSEco, industries will develop new eco-innovative product-services which will open new business opportunities.

Consortium

ProSEco

Collaborative Environment for Eco-Design of Product-Services and Production Processes Integrating Highly Personalised Innovative Functions

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Project Background

Manufacturing industry nowadays needs to move towards a new concept of the so-called Meta Product extending their products with different novel, personalised and context sensitive product and customer support services.

**Meta Products therefore integrate Product Extension Services in wide range of applications**, e.g. services to support drivers to optimise energy consumption (classical, hybrid and electrical cars), condition based maintenance of household appliances or machines etc.

Many (if not all) services to extend products can be effectively facilitated by ICT solutions (web-based software services) what will be a key approach applied within ProSEco.

An essential aspect of such Meta Products is that **they require easy adaptation to personal needs**, specific customer groups (e.g. adaptation to customers in different regions), processes/environment in which products are used, and **dynamically changing market requirements**, but, in the same time, they have to provide high value added to a wide range of users.

Building of Meta Products requires collaboration of various actors: Product Manufacturers, Suppliers, Service providers etc. **Industry needs new methods and tools to cost effectively build Meta Products**. The ProSEco project intends to provide such means.

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Project Realisation

The approach will be driven by four application scenarios in the areas of automotive, home appliances and automation equipment.

### Personalised support to drivers to optimise energy use (classical, hybrid and electrical cars) - VW

![Image](image1.jpg)

### Support remote condition based maintenance of household appliances - Electrolux

![Image](image2.jpg)

### Support remote condition based maintenance for shoe manufacturing machines - DESMA

![Image](image3.jpg)

### Lean – based design of eco – driven services around machines - ONA and Alberdi

![Image](image4.jpg)

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Targeted Results

1. **Collaborative Development Environment**
   - Integrated platform to support the creation of Product Extension Services over the whole development life-cycle (from idea creation to service deployment).
   - Key tools of the platform are: Collaborative Space, Market Simulation, Tool for selection of sensors for Product Extension Services, Eco-tool for impact assessment and others.

2. **Secure Runtime Infrastructure**
   - Secure and configurable runtime environment allowing the execution of developed Product Extension Services in the Cloud.
   - Key modules of the infrastructure are: Security, Privacy & Trust, orchestration & configuration of services, support for context sensitivity and others.

3. **Re-Usable Software Services**
   - Base software services, which can be configured and re-used in combination with application specific services using the development platform.
   - Key core services are: Monitoring services, security enforcement, context extraction and others.

4. **Methodology**
   - Practical guidelines for organisations on eco-innovation and how to prepare their business for introducing the Product Service System paradigm as well as guidelines on how to develop Product Extension Services.