



AN INTEGRATED COLLABORATIVE PLATFORM FOR MANAGING THE PRODUCT-SERVICE ENGINEERING LIFECYCLE

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LMS

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Project Summary

- The European manufacturing industry faces new challenges, which are currently not addressed by today's products and systems. Most of the products are still in essence 'simple' in nature, with no capability for adapting to the consumers' needs and no integrated methods exist for the holistic acquisition and processing of feedback information emanating from product-services.
ICP4Life proposes an Integrated, collaborative platform for the design, development and support of product service systems for SMEs, equipment manufacturers and energy suppliers in order to maximize the impact in the European industry.
The proposed platform comprises of three main components namely Designer, Customizer, Planner and also of Services for a wide range of applications.

ICP4Life Designer:

- Selection of the appropriate product-service configuration considering a number of defined constraints and customer needs
Handling and linking of product design information to services and processes through a semantic model

ICP4Life Customizer:

- Assistance to customers in product-service configuration and provision of new services through the same or additional components (Meta Products)
Generation of web-based applications for handling product-service data

ICP4Life Planner:

- Semi-automatic design and reconfiguration of production systems through simulation for the whole supply chain
Identification of the most efficient production solutions in terms of time, cost and environmental impact
Reduction of energy consumption for manufacturing purposes and provision of energy saving recommendations

ICP4Life Services:

Development and support of service types for a wide range of applications covering different lifecycle phases:

- 1. Machine Health Monitoring 2. Performance Optimization 3. Product Data Report 4. Laser Process Quality Contr 5. Machine Data Analysis 6. Mold Maintenance (including AR) 7. Energy Demand Management Service 8. Power Interruption Planner 9. Environmental Impact Calculator

Expected Impact of the platform

- To reduce up to 30% the lead times in product development and process planning for modular product-services.
To improve sustainability and decrease time-to-market by 20% for all products including configurations and associated services.
To reduce the set-up and ramp-up times by up to 40% through seamless exchange of process information and knowledge reuse from previous projects.
To reduce the environmental footprint of products by up to 30% through the control and monitoring of all their lifecycle phases from design up to disposal.
Improve maintenance in energy supply networks by reducing relevant process times by 40%.

ICP4Life

