### **PARTNERS**

### Original equipment manufacturers

# gorenjegroup

### **Knowledge providers**













### **Technology providers**











# ReCiPSS

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# RESOURCE-EFFICIENT CIRCULAR PRODUCT-SERVICE SYSTEMS

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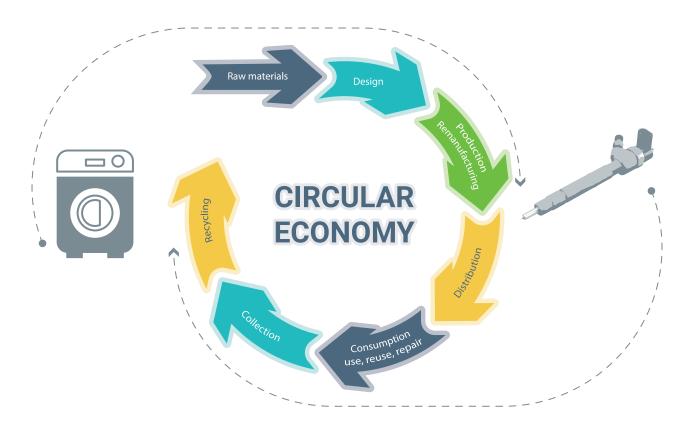
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776577-2

# **About the project**

The European Commission supports industry in large scale implementation of Circular Manufacturing Systems - a drive towards a stable circular economy.

Two industrial large-scale demonstrators of the Automotive and the White Goods industry are involved in the project. ReCiPSS is co-funded by the European Commission's Horizon 2020 research and innovation programme under grant agreement No 776577-2.

As part of the white goods demonstrator, Gorenje gospodinjski aparati d.d., one of the leading European household appliances producers, will implement an innovative circular pay-per-wash scheme for washing machines in 4 European countries.



In the automotive spare parts demonstrator OEM Bosch is confronted with a complex and intransparent reverse supply chain in the aftermarket. Within the project a streamlined reverse logistics flow over several tier-levels will be demonstrated by using only one third-party service provider to enable all stakeholders to close the loop.

To successfully implement the demonstrators, ReCiPSS will develop further circular tools/methodologies and will develop ICT platforms allowing data exchange for

both cases. The platforms and the data exchange will enable usage tracking and remote monitoring, in the case of washing machines and value chain collaboration, in the case of automotive parts.

The project brings together 13 partners from 8 countries and will be coordinated by the KTH Royal Institute of Technology, Sweden, with the support of a unique consortium of experts, which consist of 4 research and 9 industrial partners.

### **Business models innovations**

Multiple life cycle business models focused on remanufacturing to capture circular value.

Pay-per-use as a type of circular business model to investigate viability, consumer traction and environmental impact improvement.

Business model characterization of third-party remanufacturers for fit to circular value/supply chains.

Virtual modelling and simulation for circular business approaches in free/ open markets.

# **Design methodology & tool innovations**

Dedicated and generalized methods for simultaneous accounting for reuse, remanufacturing and recycling.

Strategies and methods for designing user-focused product-service systems stimulating behavioural change, including innovative use interfaces.

Design methods with concurrent focus on reuse, remanufacturing, and recycling in the context of circular systems.

# Value/supply chain innovations

Reverse logistics associated with new remanufacturing propositions and customer Segmentation.

Circular network design and optimization methods for multi-reverse flows and re-distribution.

Remanufacturing service design.

Reverse logistics design and supply chain optimisation based on circular business approaches in free/open markets.

# **Technology innovations**

IoT platform monitoring customer behaviour, asset usage and condition of assets (washingmachines).

Novel condition-based monitoring methods using machine-learning algorithms.

Part data management platform supporting standard data exchange protocols to connect trade network to the platform for cores required to service assets (cars).

