

ReCiPSS

D8.4: Ecosystem report

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1 Introduction

This document reports the work carried out in Task 8.3 which focuses on developing the supporting ecosystem to actively promote the project innovations and technologies within the White Goods and Automotive industries and to the market in general. To create an ecosystem around the project technologies, a dissemination plan was created. The plan included dissemination activities focusing on academia, Industry, policymakers and general public. This document reports dissemination activities that are carried out specifically for the industrial audience using different industrial channels. As the project deals with two different industrial sectors (i.e. White Goods and Automotive) the relevant industrial channels in both sectors were identified. This document provides a brief introduction to those industrial channels along with a list of dissemination activities carried out by different project partners, the purpose of dissemination activities, targeted industrial sectors and the audience. The dissemination activities include presentations about the ReCiPSS project, seminars and webinars with professionals from the industry, workshops with different stakeholders in the value chain of both demonstrators (i.e. White Goods and Automotive), exhibitions and virtual booths, and thesis projects with industry with focus on ReCiPSS developments.

The document also discusses the impact of dissemination activities on ecosystem development. One of the main impacts is that these dissemination activities have led to the development of new contacts with different stakeholders in the Automotive and White Goods sectors who are interested in the transition to a circular economy. In addition, the stakeholder engagement within the design process with actors from across the value chains in both the automotive and white goods sectors has led to the development of new solutions relevant to both sectors.

Lastly, the document provides a post-project exploitation plan for the ecosystem and discusses how different innovations and technologies can be exploited by different stakeholders in the Automotive and White Goods sectors.

2 Industrial channels used for dissemination activities

As part of Task 8.3, different industrial channels are identified to disseminate the project innovations and technologies within the White Goods and Automotive sectors. Below we provide a brief description of some of the most important channels used to develop the ecosystem around the project.

2.1 Automechanika fair

Automechanika is the world's biggest trade fair for the automobile aftermarket. Auto-mechanika, being the leading trade fair brand, is the international meeting place for the manufacturing industry, repair shops and automotive trade. It represents the entire automotive aftermarket value chain. It is held every two years at the Messe Frankfurt, Germany.

<https://automechanika.messefrankfurt.com/frankfurt/en/facts-figures.html>

2.2 ReMaTec fair

Rematec is the world's leading remanufacturing trade event. It is a trade fair for automotive parts, accessories and services. The fair takes place every two years in Amsterdam, The Netherlands. It is a meeting place for the spare parts industry and one of the leading fairs of its kind in Europe and around the world. This fair is a communication and information platform in the industry and offers the exhibiting companies the opportunity to present themselves to a professional audience.

<https://www.rematec.com/amsterdam/>

2.3 Circular Futures Festival

The Circular Futures Festival is aimed at all those who deal professionally with the circular transformation of economy and society. The festival is initiated by Circular Futures and ProjectTogether. Participants include from the public sector, small and medium-sized businesses, academia and civil society. The festival aims at offering all participants a space to connect, learn, and engage with other relevant stakeholders committed to closing the loops and circular innovation.

<https://circularfutures.de/>

2.4 Transport and Logistics Innovation Week (SITL) fair

The Transport and Logistics Innovation Week (SITL) is the leading event for the Transport and Logistics markets. SITL covers all innovative products and services dedicated to the Freight, the Logistics Industry and the Supply Chain. The different areas of expertise are promoted throughout the year through different media and represented each year during the SITL.

<https://www.sitl.eu/fr-fr.html>

2.5 SIL BARCELONA fair

SIL Barcelona, Spain is the Leading Exhibition for Logistics, Transport, Intralogistics and Supply Chain in Southern Europe. The International Logistics and Material Handling Exhibition SIL is held at Fira de Barcelona. The SIL takes place annually where all logistics sectors are represented.

<https://www.silbcn.com/en/index.html>

2.6 Alihankinta trade fair

Alihankinta is a trade fair for industrial subcontracting in Tampere, Finland. The fair provides a platform for exhibitors from all over the world and brings the primary contact and service provider of the supplier industry.

<https://www.alihankinta.fi/en/>

2.7 RIC-RIT World Remanufacturing Conference

The RIC-RIT World Remanufacturing Conference aims at connecting remanufacturing to the innovations, challenges, and opportunities to shape remanufacturing. It brings together the most forward-thinking innovators in remanufacturing and the people who are most passionate about remanufacturing to meet and pave the way for the future.

<https://worldremanconference.com/2021/>

2.8 World Circular Economy Forum

World Circular Economy Forum (WCEF) is a global initiative of Finland and the Finnish Innovation Fund Sitra. It presents the world's leading circular economy solutions with business leaders, policymakers and experts participating from around the world.

<https://www.wcef2022.com/about/>

2.9 Dutch Design Week

Dutch Design Week (also known as DDW) is the largest annual design event in Northern Europe. Hosted in Eindhoven, Netherlands, the event is about Dutch design that includes exhibitions, studio visits, workshops, and seminars.

<https://ddw.nl/>

2.10 ERSCP Society

ERSCP stands for the European Roundtable for Sustainable Consumption and Production, a society that organises and promotes activities in the field of Sustainable Consumption and Production. The ERSCP Society focuses on fostering dialogue and co-operation among all interested stakeholders, nationally and internationally. The ERSCP Society seeks to motivate and encourage all stakeholders to work on new ideas of Sustainable Consumption and Production in order to promote transition to sustainable societies.

<https://erscp.eu/about>

2.11 Manufacturing Performance Days (MPD)

Manufacturing Performance Days is an executive and visionary summit for manufacturing industries, researchers and technology and service providers worldwide. This event brings together internationally recognised experts and academia to discuss and represent industry best practices and operational excellence, novel business concepts as well as scientific and technological breakthroughs in the field of manufacturing.

<https://www.aspire2050.eu/news/event/manufacturing-performance-days-2019>

2.12 EU Green Week

EU Green Week is the key event in the EU environment policy calendar. This annual opportunity to debate and discuss European environmental policy attracts policymakers, leading environmentalists, stakeholders and other interested parties from across Europe and the globe.

environment.ec.europa.eu/eu-green-week

2.13 The EU Industry Days

The EU Industry Days is Europe's flagship annual event, highlighting industrial frontrunners, ongoing industrial policy discussions and improving the knowledge base of European industry. It is the main platform to discuss industry challenges and co-develop opportunities and policy responses in an inclusive dialogue with a wide range of stakeholders. It informs industrial policies at European, national, regional and local levels and ensures coherence for European industry to deliver jobs, growth and innovation in Europe.

<https://eu-industry-days.ec.europa.eu/>

2.14 Advanced Engineering fair

Advanced Engineering originates from Birmingham, United Kingdom. The concept has now been established throughout Europe and has become an important event in the engineering and manufacturing industries.

<https://www.advancedengineeringuk.com/>

2.15 Cleantech Innovation Summit

The Cleantech Innovation Summit brings together business and science to exchange ideas and broaden horizons on the topic of Co2-neutral value creation. The event is repeatedly offered to Bavarian companies in Germany at regular intervals on various topics.

<https://www.bayern-innovativ.de/en/event/cleantech-innovation-summit>

2.16 Hisense Europe Tech conference

The Hisense Europe Tech conference was held in Velenje (Slovenia when). The event gathered the Group's research and development teams from all over Europe to present their breakthrough innovations, joined by R&D partners from research institutions.

<https://whitegoodsnow.com/2022/06/17/hisense-tech-conference/>

2.17 ZEOS Professional Conference

The Professional Conference “Changing People’s Waste Management Habits” was held in Ljubljana (Slovenia) in 2019. The participants shed light on the importance of correct waste (primarily e-waste) management and presented the challenges of modern times and examples of good practices for informing individuals about waste management in the local as well as the international environment.

[Professional Conference “Changing People’s Waste Management Habits](#)

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3 Industry specific dissemination activities

Table below provides a list of dissemination activities carried out by ReCiPSS project partners using different industrial channels.

Project partner	Dissemination activities for industrial audience	Purpose of the activities	Targeted industrial sectors	Audience
CECO	Presentation of project at Automechanika fair 2018	Present idea and target of the automotive demonstrator;	Automotive (dealers/wholesalers)	With around 4.600 exhibitors, Automechanika is the world's largest trade fair for the automotive industry with a focus on the aftermarket.
CECO	Presentation of project at ReMaTec fair 2019	Tradeshaw in Amsterdam with focus to Automotive Remanufacturing industry.	Automotive	Global players from 74 countries active in the aftermarket linked to remanufacturing parts and/or components
CECO	Workshop with Core brokers at ReMaTec fair 2019	Involvement of core-brokers as relevant stakeholders for remanufacturing in automotive aftermarket	Automotive	Core brokers
CECO	Report/white paper in Industrie 4.0 Management magazine	To support decision-makers in recognizing the advantages of circular economy and to tackle challenges for a successful introduction at an early stage	Automotive, others	Readers of journal " Industrie 4.0 Management "
CECO	Presentation at the International Academy for Production Engineering (CIRP) winter-meetings in Paris, 2020	Present business-model and C-ECO's "Coremanagement-as-a-service"-approach to scientific community	Scientific	International universities with researchers focussed on production-systems and organizations

CECO	Presentation of ReCiPSS project at ReMaTec Live and Connected, 2021	Demonstrate new business-model opportunities basing on transferable core-options to industry; motivate feedback and further users	Automotive	Corebrokers, Remanufacturers at digital version of Rematec Trade fair during pandemic
CECO	Presentation of ReCiPSS project on the circular futures Festival in Berlin and Munich, 2021	Communicate options-concept to very diverse community of circular approaches,	Various (machinery, process-industry, electronics,...)	Companies, scientific, private persons interested in CE
STR	Presentation of project at Messe SITL Paris 2019 fair	Explain the process and benefits of the circular economy and the market economy	Logistics, automotive with Road transport, Trade /distribution	The SITL show attracted a total of 30,750 visitors
STR	Presentation of project at SITL Messe Munich 2019 fair	Explain the process and benefits of the circular economy and the market economy	Transport logistics	The SITL show attracted a total of 63 000 visitors
STR	Presentation of project at SIL Messe Barcelona-Transport-Logistics (Leading trade fair for logistics, transport, intralogistics and material handling in Southern Europe)	Explain the process and benefits of the circular economy and the market economy	Transport logistics	The SIL Barcelona attracted a total of 11.000 visitors
Bosch	Presentation of ReCiPSS project and detailed selection results of the Common Rail Injector 2-18 at Bosch	Evaluated data/results to be used as valuable base for the reman platform development of the Common Rail Injector 2-18	Automotive	25 Bosch internal reman specialists/engineers
TUD	Workshop with german automotive wholesaler Ernst Lorch KG, located in Albstadt/Germany. Lorch is operating a network of outlets in Germany, Austria and Switzerland to supply car parts and everything else automotive workshops need for their business.	Co-creating together with stakeholders to understand their perspective and jointly develop ideas for C-ECOs platform	Automotive value chain	Automotive value chain
TUD	Workshop " simplify reverse logistics for automotive cores " at ReMaTec 2019 in Amsterdam.	Co-creating together with stakeholders to understand their per-	Automotive value chain	Automotive value chain

		spective and jointly develop ideas for C-ECOs platform		
TUD	Presentation at European Roundtable on Sustainable Consumption and Production (ERSCP) Society in Oct 2019	Raising awareness of the ReCiPss tools and methods for an audience of industry and policy makers	Wide range of industries	Wide range of industries
TUD	Presentation at Dutch Design Week in Oct 2019	Raising awareness of the ReCiPss tools and methods for an audience of professional industrial designers	Wide range of industries	Wide range of industries
TUD	Successful graduation project of Francesco De Fazio on design tool development, impacting the design requirements of product design at Philips and contributing to scientific literature, Nov 2019	Raising awareness of the ReCiPss tools and methods for an audience of professional industrial designers	Wide range of industries and professional designers	Wide range of industries and professional designers
TUD	Workshop for Industrial Design Engineering Master Class (IDEMC) - Design for the circular economy, Jan 2020	Raising awareness of the ReCiPss tools and methods for an audience of professional industrial designers	Wide range of industries and professional designers	Wide range of industries and professional designers
TUD	The Product Journey Map tool has been included in the Delft Design Guide, Feb 2020	Raising awareness of the ReCiPss tools and methods for an audience of professional industrial designers	Wide range of industries and professional designers and students.	Wide range of industries and professional designers and students.
TUD	News article ReMaTec DESIGN FOR REMANUFACTURING: A DESIGN MANAGEMENT PERSPECTIVE, Feb 2020	Raise awareness on upcoming co-creation workshop	Automotive value chain	Rematec visitors
TUD	Workshop with Bosch Automotive Aftermarket Solutions, Oct 2020	Co-creating together with stakeholders to understand their perspective and jointly develop ideas for C-ECOs platform	Automotive value chain	Automotive value chain
TUD	Workshop with Knorr-Bremse, July 2021	Co-creating together with stakeholders to understand their per-	Automotive value chain	Automotive value chain

		spective and jointly develop ideas for C-ECOs platform		
TUD	Workshop with ATAG Benelux, a leading supplier of kitchen appliances and consumer electronics, 2022	Understand their perspective to jointly define problem statement for setup co-creation sessions	Whitegoods sector	ATAG
TUD & C-ECO	interviews (Car repair workshops, Automotive), 2022	understand their perspective and link to findings of other co-creation sessions	Automotive value chain	Automotive value chain
TUD	Workshop with Bosch BMC/UXE (Design department of Bosch), 2022	Getting to know each other and exploring ways to collaborate on circular design	Automotive, power tools, domestic appliances (BMC/UXE works across all Bosch divisions)	Bosch Design, Power Tools, E-bikes, domestic appliances
TUD	Master thesis project with Bosch Automotive Aftermarket on 3D printing for remanufacturing, 2022	Understanding the possibilities of using 3D printing for spare parts in the AA division of Bosch.	Bosch AA division	All stakeholders involved in the remanufacturing value chain
FHG	Presentation at World Remanufacturing Conference 2018	Presentation of goal and scope of the project	Remanufacturing	n/a
FHG	Presentation at ReMaTec fair, 2019	Presentation of goal and scope of the project	Remanufacturing	n/a
FHG	Continuing education course: Economía Circular e Industria 4.0	Advanced training offering for manufacturing companies in Colombia	Various	~ 20
FHG	Presentation at Bayern – Fit for Partnership "Georgia"	Presentation of goal and scope of the project, promoting remanufacturing activities to increase resilience in supply chain	Various	~ 15
FHG	webinar series: #keepthepace - game changer in automotive production	Presentation of the project results, remanufacturing as alternative to recycling on material level	Automotive industry	~ 70

FHG	Cleantech Innovation Summit »CO2-neutrale Wertschöpfung«	Presentation of the project results, re-manufacturing as alternative to recycling on material level	Various	~ 100
FHG	Bilateral project and result presentation	Reference for Reverse Supply Chain Management	Various	~ 30
CIR	Webinars on circular supply chain simulations	To share the developments and key findings on circular value and supply chains in ReCiPSS project.	These webinars are available online for internal stakeholders within ReCiPSS as well as wider audience in automotive and white goods industry.	Industrial audience in the manufacturing sector curious about implementation of the circular economy.
PDS	Demonstration of ReCiPSS project developments at Alihankinta 2019 fair	Provide the audience with insight and inspiration through live demos in regards our developments in this field	Industrial subcontractors and OEMs	n/a
PDS	Presentation at Manufacturing Performance Days 2019, held in Stuttgart at the time of PTC Forum Europe	Provide the audience with insight and inspiration in regards our developments in this field	Existing clients	n/a
PDS	On demand recording for EU Green Week 2021	Provide the audience with insight and inspiration through live demos in regards our developments in this field	Open to anyone	n/a
PDS	Demonstration at Advanced Engineering, Kiistamässa June 15 – 16, 2022	Provide the audience with insight and inspiration through live demos in regards to developments in the project	Exhibition visitors representing industrial companies	n/a
KTH	Presentation of ReCiPSS project at World Circular Economy Forum in Oct 2018	To provide an introduction to the project and its expected results	Various sectors	100+

KTH	Presenation of ReCiPSS project at World Circular Economy Forum in Oct 2019	To provide an introduction to the project and its expected results	Various sectors	200+
KTH	Seminar at Rotary club Djursholm, Stockholm	ReCiPSS presented among high private/public officials and industrialists	Various industry sectors and general public	30+
KTH	Ellen MacArthur Foundation CE 100 Acceleration Workshops	Acceleration workshop to promote Circular Manufacturing Systems (CMS)	Scientific, industry and general	200+
KTH and Signifikant	Seminar on "Circular Manufacturing Systems : From Idea to Implementation"	To discuss how manufacturing organizations are finding ways to fast-forward transformation beyond old linear ways of doing businesses	Scientific, industry and general	N/A
KTH	Presenation at Circular Materials Conference 2021	To discuss the role of ICT in Circular Economy enabled Product Life Cycle Management	Various sectors	100+
KTH	Virtual booth at EU Industry Days 2022	To present, showcase, and promote ReCiPSS project and its developments	Various sectors	N/A
KTH	ReCiPSS project presented at an event organized by German-Swedish Chamber of Commerce	To present and promote ReCiPSS project to different German organisations	Various Sectors	30+

4 Impact of dissemination activities on the ecosystem development

This section provides the impact of industry-specific dissemination activities on the ecosystem development in the Automotive and White goods sectors.

- Developed new contacts with automotive dealers as potential users of the Part Data Management System for demonstration-phase
- Promoted the idea of transferable return-options in the automotive remanufacturing industry, raised attention for new business opportunities with core brokers
- Co-creation workshops helped to get relevant insights into the view of the market, challenges and pain points of core brokers as stakeholders in the Automotive Remanufacturing Ecosystem along with an integrated view of solution development. They also help create a touchpoint for future business opportunities based on options-model in the digital platform to exploit project-results
- Propagated the idea of transferable return-options as a necessary instrument to enable a circular process with partners who are not in direct business relation with a wider audience in the field of production, Industry 4.0 and sustainability
- Leveraged the scientific community as multipliers in their networks with other industry partners to explore the potential to apply options-model in other business domains (non-automotive)
- Explored the application of “options-concept” in other domains/industries and raise feedback
- Disseminated the ReCiPSS tools (e.g. disassembly map, product journey map) within the wider Bosch organization
- Stakeholder engagement within the design process with actors from across the whole automotive value chain has led to new solutions relevant to the automotive sector as a whole.
- Stakeholder engagement within the design process has led to new solutions relevant to the whitegoods sector as a whole.
- Explored the possibility to use 3D metal printed parts to service cars long after they're no longer produced, thus extending their lifespans.
- Introduced the concept of remanufacturing to managers who were not been aware of it so far.
- Facilitated the initiation of remanufacturing of products in manufacturing companies
- Expanded the product spectrum of remanufactured products outside the automotive sector using the example of washing machines and transferring it to other applications (e.g. heat pumps)
- Helped in optimization of remanufacturing and related processes, e.g. core selection and return of products

5 Post-project exploitation plan for the ecosystem

This section provides plans for the dissemination and post-project exploitation of results using supporting ecosystem

- Newly developed ReCiPSS core selection approach including software by C-ECO can be used for other Bosch Reman products. Specially to support the core and reman data management to have a better data transparency and more precise data concerning core age, core availability, core conditions etc. to be considered for reman project and production planning.
- C-ECO could adapt their core selection to other automotive customers or even other industrial sectors.
- Transferable return-options in a digital platform have the potential to change “the rules of the game” for core-returns in automotive aftermarket as well as in other industries where producers want to re-gain control on used products at the end of the usage phase. In its digital representation and connected to the physical infrastructure of core-handling is in the heart of a commercial product “Coremanagement as a Service”. The fact that the theoretical concept has been incorporated into a digital platform which is in active use and part of a commercial product assures that the ecosystem is alive and will be maintained over the project duration and beyond.
- Working at the intersection between academic knowledge and industrial application, the project partners will use the knowledge generated in their consultancy business and be a multiplier for the knowledge created. This is true for research projects, free-of-charge-key-notes or the usage of the knowledge in academic discussions as it will be used in professional consulting projects being the state-of-the-art developments. A special focus will lie on the physical infrastructure needed to implement a large reverse supply chain as well as user friendly simulation approach for generating advice for users at an adequate level of detail with a limited amount of work.
- Different types of webinars and seminars related to ReCiPSS project will be available online even after the completion of the project, leading to increased interest in the project results.
- In the White Goods sector, the lessons learned during the ReCiPSS project will be used as a resource for further business development specially pay-per-use business model for ASKO professional.
- New industry contacts will be used to create new project proposals for different markets
- ReCiPSS tools (disassembly map, product journey map) will be used in new graduation projects with industry as there is great interest from industry in these tools.
- The Product Journey Map tool is made part of a book and will be taught to bachelor students at TUD (approx. 300 students every year). The book is translated into Chinese and is sold worldwide, which will help dissemination of the Product Journey Map method.

6 Conclusion

The report identifies several industrial channels to disseminate project innovations and technologies within the White Goods and Automotive industries. It also lists the dissemination activities carried out by project partners focusing specifically on the industry audience to develop an ecosystem around the project developments. The industry-specific dissemination activities by project partners have helped promote the project innovations and technologies to relevant stakeholders in both the Automotive and White Goods sectors. This ecosystem will help in the post-project exploitation of results and developments. Lastly, any additional industry-specific dissemination activities or workshops carried out during remaining period of the project will be reported as part of the deliverable “D8.3 Dissemination report”.

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