

Brussels, 17 November 2023

Raw Materials Week

This workshop, organized by the H2020 TREASURE project, aims to address the primary challenges confronting the automotive industry concerning raw materials while also showcasing new circularity solutions as opportunities to overcome these challenges. It will feature the participation of key stakeholders from the automotive sector, including car and car part manufacturers, technology providers, certification entities and research institutions.

Event Information:

- *Date and Time:* Friday, 17th November 2023, from 9:30 AM to 1:00 PM.
- *Location:* Hotel Le Plaza Brussels, Bld. Adolpho Max 118-126, 1000, Brussels, Belgium.
For those who prefer to join us remotely, we will also provide an online access.
- *Registration:* To secure your spot please register using the following [LINK](#)
- *Contact:* m.rodriquez@unizar.es

Programme:

09:30-09:45	Fostering the circular economy in Europe <ul style="list-style-type: none">○ Daniel Cios, European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship & SMEs (DG GROW).
9:45-11:10	Cutting-edge circular technologies for the automotive industry <ul style="list-style-type: none">○ Paolo Rosa. Professor in the Manufacturing Group at Politecnico di Milano and project coordinator of TREASURE and CIRC-UIITS H2020 and Horizon Europe projects.○ Antoinette van Schaik. Founder and Director of MARAS.○ Manuele Capelli – Research Associate. Technology and Society Laboratory. Empa.○ Stephan Harkema – Program Manager Sustainable Electronics at TNO at Holst Centre.
11:10-11:30	Coffee break
11:30-13:00	Round table: Challenges and opportunities of the automotive industry. (Moderator: Alicia Valero, UNIZAR) <ul style="list-style-type: none">○ Marta Iglesias. Environmental Innovation R&D. SEAT.○ Steve Brown. Senior Director for Automotive OEM programs within MacDermid Alpha Electronics Solutions.○ Julien Van Damme. CEO of JVD Consulting.○ Laurent Vautier. Project Manager in Industrialization and Operational Excellence at Nextmove cluster.○ Elena Mocchio. Innovation and Development Department. UNI.

Speakers

Fostering the circular economy in Europe



Presenter: **Daniel Cios**. European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship & SMEs (DG GROW)

Daniel Cios got interested in raw materials markets and policy during his studies in European affairs in 2010. In his research, he took up the research question on how the EU could ensure supplies of rare earths. At that time, he did not expect that this academic interest would continue in his future professional career. First, by being a consultant on issues related to supplies of raw materials and performing economic and technological analysis of various innovative projects that gave him an understanding of the industry. Later on, in the public sector in the European Commission, which he joined in 2018. He is placed in the unit for Energy Intensive Industries and Raw Materials in the Directorate General for Internal Market, Industry, Entrepreneurship and SMEs. His main responsibilities are EU activities on raw materials, particularly for batteries and EU Horizon Europe framework program on R&I in the area of raw materials.

Cutting-edge circular technologies for the automotive industry



Title: *“How circular strategies and digital solutions can work together to improve the recovery of critical raw materials and the reuse of strategic components in the automotive industry: the TREASURE and CIRC-UIITS projects”*

Presenter: **Dr. Paolo Rosa**. Professor in the Manufacturing Group at Politecnico di Milano and project coordinator of TREASURE and CIRC-UIITS, H2020 and Horizon Europe projects.

Paolo Rosa is an assistant professor in the Manufacturing Group of Politecnico di Milano, Department of Management, Economics and Industrial Engineering, by focusing his research on Circular Business Models, Circular Value chains and End-of-Life strategies for the mass electronics and automotive sectors. He has been (and he is still) involved in industrial, regional and European research projects and he won and participated in several FP7, H2020 and Horizon projects. He is currently the coordinator of the H2020 TREASURE and Horizon CIRC-UIITS projects and he is involved as task leader in the Horizon FREE4LIB and Horizon ECOTRON projects. He has been (and he is still) involved as teaching assistant in several Master of Science courses of Politecnico di Milano. He is co-author of 42 papers published in international journals, 15 papers presented at international conferences, 5 book chapters, 4 editorials and he is co-guest editor (together with Alicia Valero and Abel Ortego) of a Special Issue in MDPI dedicated to the TREASURE topics. He was awarded for the best paper in August 2015 with the Elsevier Atlas Award.



Title: *“Digitalisation of the automotive circular economy recycling system: simulation-based assessment and optimisation”*

Presenter: **Antoinette van Schaik**. Founder and Director of MARAS

MARAS B.V. (www.maras-bv.nl) is a consultancy company (founded in 2005), which provides technology-based system solutions and knowledge in the field of recycling and resources, sustainability and circular economy.

MARAS combines knowledge intensive consultancy, extensive industrial expertise with sound and industrial relevant research and a strong scientific background. Van Schaik performs industry projects and consultancy for amongst others automotive and WEEE recycling industry (shredders, recyclers, metallurgical industries), automotive and electronics producing OEMs, governments, NGO’s and collective systems and waste and surface water industries. Her work includes modelling and process simulation, large industry trials, dismantling work, recycling and recovery rate calculations and resource efficiency assessment of products and recycling systems/flowsheets, Design for Recycling and the development of the Recycling Index. Van Schaik has worked in the automotive recycling industry (Auto Recycling Nederland) and as Post-doc researcher at Delft University of Technology. She holds a M.Sc. degree in Mining and Petroleum Engineering (1997) and Ph.D. degree (2004) on ‘Theory of Recycling Systems – Applied to Car Recycling’ from the Delft University of Technology (Netherlands). She has over 100 publications (including 2 books / 6 chapters in books & encyclopaedias) as well as numerous industry reports, is co-author of the book Metrics of Material and Metal Ecology (706p.). She is one of the main authors of the United Nations Environmental Protection (UNEP) Report “Metal Recycling: Opportunities Limits Infrastructure”. She was awarded with the ‘Knowledge Sharing Award 2006’ within the SuperLightCar project by Volkswagen AG (2006) and the ‘Best Paper Award’ at Delft University of Technology (2002).



Title: *“Electronics in ELVs. The case for separate recycling”*

Presenter: **Manuele Capelli** – Research Associate. Technology and Society Laboratory. Empa

Manuele Capelli has studied ‘Environmental Sciences’ and ‘Management, Technology & Economics’ at ETH Zurich before joining the Technology and Society Lab at Empa, Switzerland. He is mainly involved in projects on the treatment of consumer & car electronics and has expertise in the field of life cycle assessment. Additionally, he audits e-waste recycling companies as part of the take-back system for e-waste in Switzerland.



Title: *“Design-for-recycling principles applied to in-mold structural electronics”*

Presenter: **Stephan Harkema** – Program Manager Sustainable Electronics at TNO at Holst Centre

After receiving his PhD in polymer chemistry from the University of Groningen in 2005, Stephan joined TNO in The Netherlands. For roughly a decade, he studied materials for flexible organic light-emitting diodes at Holst Centre and later specialized in light management in OLEDs. In 2017, he transferred to the Hybrid Printed Electronics department and continued on the topics of light management and human machine interfacing in In-Mold Structural Electronics. Since early 2021, he started the Sustainable Electronics Program at Holst Centre and currently leads a team that leverages TNO's broad range of expertise to develop sustainable solutions for in-plastics embedded electronics.

Round table: Challenges and opportunities of the automotive industry



Title: *“Circular Economy Research lines at SEAT”*

Presenter: **Marta Iglesias**. Environmental innovation R&D, SEAT

Marta Iglesias Émbil has a degree in Chemical Engineering from the University of Oviedo and has two master's degrees in Business Environmental Engineering (Sarrià Chemical Institute) and in Industrial Ecology (Autonomous University of Barcelona). With almost 15 years of experience in the automotive sector, as well as in the environmental field, she is responsible for Environmental Innovation in the R&D area of SEAT. Among its functions, it is responsible for promoting Circular Economy projects applied to vehicles. Likewise, she is pursuing a doctorate in the use of metallic resources in the automotive sector, being part of the research teams of Sostenipra (Universitat Autònoma de Barcelona) and Instituto CIRCE (University of Zaragoza). Additionally, she works as an expert for the European Commission within the framework of the Horizon Europe program.



Title: *“Reduction of Natural Resources in PCB Fabrication & Assembly Processes”*

Presenter: **Steve Brown**. Senior Director for Automotive OEM programs within MacDermid Alpha Electronics Solutions

Steve Brown is a Senior Director for Automotive OEM programs within MacDermid Alpha Electronics Solutions, part of Element Solutions Inc (ESI). Steve is responsible for driving and aligning our electronic materials business units in the dynamic automotive sector. During his 29-year career in the electronics industry, Steve has held both technical and commercial positions and, in addition to MacDermid Alpha, has worked for Lord Corporation, CyberOptics and Celestica. Steve holds degrees in Electronics & Manufacturing Engineering from Loughborough University of Technology and is based out of Woking, UK.



Title: *“The new ELV Regulation : challenges for the treatment chain”*

Presenter: **Julien Van Damme**. CEO of JVD Consulting

After completing his Master of Science in Engineering (Electro Mechanics) in 1978, he pursued further education with a Master after Master in Business Engineering in 1982. Following his studies, he embarked on a professional journey working for Honda in Europe. During his time there, he contributed to various aspects of the business, including parts management, where he was involved in establishing a comprehensive supply chain management system that covered the entire process from orders to suppliers and the delivery of products to European dealers. Additionally, he worked on projects related to end-of-life vehicles (ELV) and environmental matters, and he played a role in addressing regulatory requirements such as REACH and SCIP. In recent years, he transitioned into freelance consultancy, where he provides support to Honda Motor Europe.



Presenter: **Laurent Vautier** Project Manager in Industrialization and Operational Excellence at. Nextmove cluster.

Following a degree in machine design, Laurent completed an apprenticeship in engineering at Valeo. During his 15-year tenure in the automotive industry, Laurent held various roles, including Production Manager, Quality Engineer, Application Engineer, and Project Manager. In 2016, he joined the largest stationery company in France as a Project Manager for new products and industrial equipment. Concurrently, as a teacher in high schools and universities, Laurent trained students in Project Management, Leadership, Change Management, and ISO regulations. In 2023, Laurent became part of the NextMove cluster team, aiming to bring industrial partners together to address innovation, enhance competitiveness, and tackle significant challenges such as the Circular Economy.



Title: *“TREASURE standardization activities: a support in the development of a future digital product passport for printed circuit boards (PCBs)”*

Presenter: **Elena Mocchio**. Innovation and Development Department. UNI.

Elena Mocchio is the head of the Innovation and Development Department at UNI, the Italian Standardization Body. Elena joined UNI in 2000, where she assumed different posts up to date. At first International assistant in the Technical Department, in 2004 she became a National and CEN/TC Technical Officer in different sectors, involved in developing processes and tools for the

technical department. In 2010 she joined the External Relations, New Business and Innovation Directorate, a new structure for carrying out strategic lines and finding out new potential markets and new stakeholders. In 2017 Mrs. Mocchio became head of the UNI Innovation Department in charge of the development of new projects, both at a national and international level, in new emerging and innovative fields, and promoting the tools of Prassi di Riferimento (UNI/PdR) and CEN Workshop Agreement to bridge the gap between research and market through standardisation Mrs. Mocchio holds a degree in Foreign Languages and modern literature of the Università Cattolica of Milan.



Moderator: **Alicia Valero**. Head of the Industrial Ecology Research group at Institute CIRCE and Professor at University of Zaragoza

Dr. Alicia Valero Delgado is senior researcher and head of the industrial ecology group at the Research Centre for Energy Resources and Consumption (CIRCE - Institute) and associate professor at the University of Zaragoza in the Mechanical Engineering Department. Her research has focused on identifying resource efficiency measures and applying thermodynamics in evaluating resource depletion, a subject from which she has received four international awards. She is the author or co-author of over 100 papers in international journals and book chapters relating to analyzing and optimizing energy and using raw materials. Together with her father, Antonio Valero, she developed Thanatia's theory.