



TREASURE

D7.4: Report on dissemination activities

31/05/2024 (M36)

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Technical References

Project Acronym	TREASURE
Project Title	leading the TRansition of the European Automotive SUpply chain towards a circulaR future
Project Coordinator	POLITECNICO DI MILANO (POLIMI)
Project Duration	36 months as of 1 June 2021

Deliverable No.	7.4
Dissemination level ¹	PU
Work Package	WP7
Task	T7.1&7.2 – Dissemination of results & Communication activities.
Lead beneficiary	UNIZAR
Contributing beneficiary(ies)	All partners
Due date of deliverable	31/05/2024
Actual submission date	31/05/2024

Document history		
V	Date	Beneficiary partner(s)
V1.0	17/05/2024	UNIZAR
V1.1	27/05/2024	NEXTMOVE
V1.2	28/05/2024	UNI
VF	31/05/2024	UNIZAR

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EXECUTIVE SUMMARY

Deliverable D7.4 “*Report on dissemination activities*” is a public document of the TREASURE project, delivered in the context of WP7 (Tasks 7.1 and 7.2).

The present deliverable is an update of the previous dissemination plans submitted (D7.1 and D7.2), intended as a concise report on the actions of dissemination and communication performed from the entire project, from Month 1 to Month 36.

The dissemination and communication plan encompass several activities, including conference attendance, presentations on the TREASURE project at conferences, and organizing/participating in events with high impact. These events include a workshop during Raw Material Week, the World Touring Car Cup, the ELV Spanish national conference, and SEAT Go to Zero Week.

Additionally, a website (refer to deliverable 7.1) was established to disseminate project objectives, results, and materials. It includes relevant news, events, and resources, regularly updated for visitor engagement. Over three years (time the TREASURE project lasts), it has been obtained more than 13,000 visits. LinkedIn also served as another dissemination channel, sharing short news, videos, and engaging content with the 619 followers acquired during this period.

The outcomes and results derived from the project have been published in various international journals and conferences. Over the project duration, 12 scientific publications were published and several other publications were presented at conferences, while others are still waiting to be published or presented in coming conferences.

Other activities have been also carried out, such as training courses, clusters with other EU initiatives and a video summarizing the different perspectives of the electronics in the automotive industry, as well as the all the activities conducted in the different work packages of the TREASURE project.

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1. Introduction

This report presents the dissemination activities and results obtained during the duration of the project, ending by the end of May, 2024.

Tasks within WP7 commenced in month 1 and will continue beyond the project's completion with the aim:

To widely spread TREASURE objectives and results among the main target audiences identified, to increase awareness, visibility, exploitation potentials and chances of TREASURE partners to actively interact with relevant stakeholders.

The specific objectives of communication and dissemination activities are:

- Elaborating a successful dissemination plan.
- Developing the project communication infrastructure.
- Linking with all relevant industrial and societal entities throughout Europe to facilitate market uptake of the results and the drafting of roadmaps.
- Linking with the EIP Raw Materials and EIT Manufacturing to support the external funding of the spin-out activities by individual beneficiaries in the consortium and setting up a TREASURE startup.

The overall goal of this report is to show the activities developed, present future actions, and lessons learned.

2. Dissemination and communication activities M1-M36

Table 1 shows an overview of the KPIs related to the dissemination and communication activities with the corresponding achieved figures during this period.

Table 1. Summary of the results of the different KPIs until M18

Channel	Objective	Related KPI
Website	Interest generated towards the value chain and other stakeholders (including the public at large)	13,510 / 4,500 of visits <i># of hits per page:</i> Home – 5.431 Project- 1.079 Partners – 1.118 Objectives - 674 News - 853 News, events and Media - 332 Newsletter - 263 Resources - 603 Contact- 235 Events - 257 <i># of references of the website on other sites</i> Organic Search – 2.207 Direct – 1.868 Referral - 335 Organic Social - 127 Unassigned - 58 Email - 9
Social media	Interacting with the general public through Twitter, Facebook, LinkedIn, YouTube profiles	<i>Linkedin</i> 622 / 1000 followers 62 / 60 posts 954 / 1000 views of promoted post
Journal articles, magazines and newsletter	Publication intensity	18 / 15 scientific journal published and under review 6 / 6 newsletter 1 SEAT internal newsletter article Publication of a special issue related to TREASURE in the journal “Sustainability”
International/national conferences, seminars and workshops	Enlarge the interest in other sectors/areas, transferring knowledge, lessons learned and results	49 / 36 events
Industrial events in the reference sector, focusing on both professional and general public	Enlarge the interest within specific sectors, transferring knowledge, lessons learned and results	14 / 12 events
Clustering with other national and EU initiatives	Connect with different networks, experts to share experiences, knowledge and best practices	12 / 3 other national and EU initiatives contacted – ECOMONDO, Club of Roma, EU plastic strategy
EDGE platform: a dedicated TREASURE online space	Reflection on circularity around vehicles, coding people’s experiences, supplying data on the cultural humus surrounding modern mobility	308 Topics 321 / 300 participants 11,300 / 4,000 forum posts 15 / 10 of offline onboarding events 886 of nodes in the SSNA

In the next sections, the information about dissemination and communication activities is detailed.

2.1. Website

The website has been developed to provide a general overview of the project and to disseminate to wide audiences (scientific, industrial and the general public) the different activities that are performed within the project to foster circular economy practices in the automotive industry. Furthermore, it is used as a repository of the different materials (such as deliverables) generated within the project. The website can be accessed with the next link: <https://www.treasureproject.eu/>

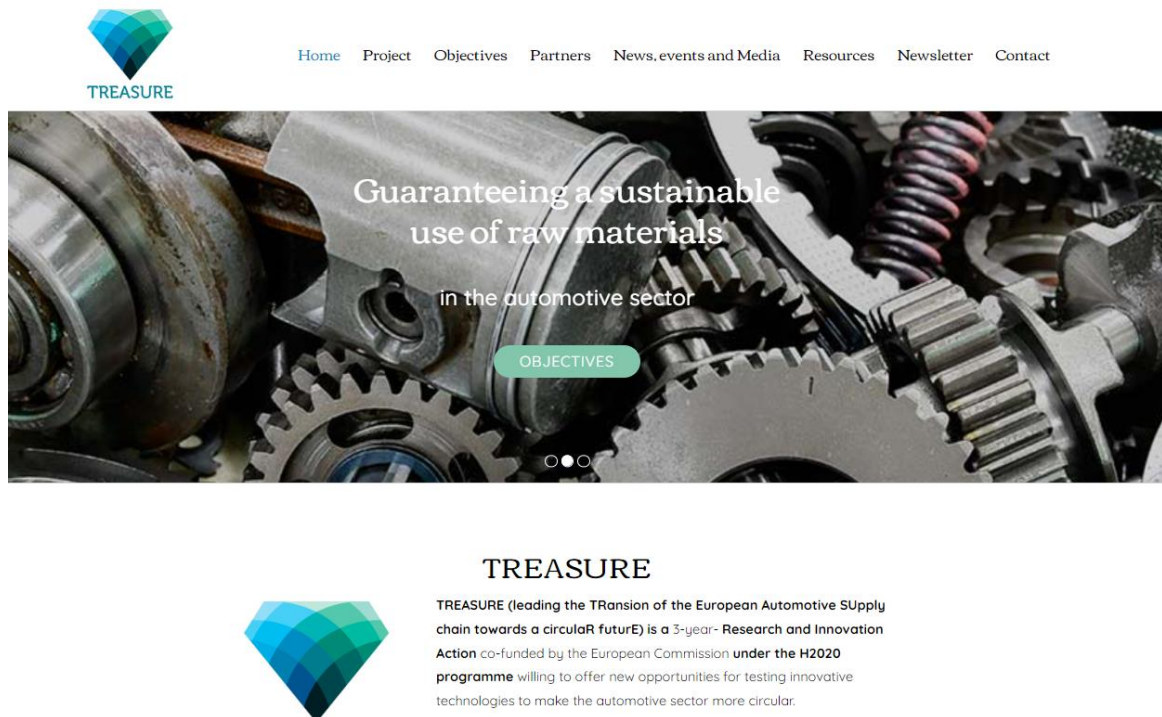


Figure 1. Screenshot of the main page of the Treasure website.

The webpage has been regularly updated to provide the latest news and information regarding the project. On the webpage, you can find the first three sections: Project, Objectives, and Partners. These sections were created at the beginning of the project to provide an overview and relevant information about the project, including its objectives and the partners involved. The remaining sections are explained below.

The News, Events, and Media section was created to upload information about the project and its dissemination efforts. Accordingly, the following entries have been added:

- News: 60 entries
- Events: 10 entries
- Media: 6 entries

The News section features updates related to any findings or interesting outcomes obtained by partners from the TREASURE project. Additionally, it includes information about conferences attended to disseminate the project, as well as general assemblies and various meetings held throughout the project. Some of this information is collected in Figure 2.



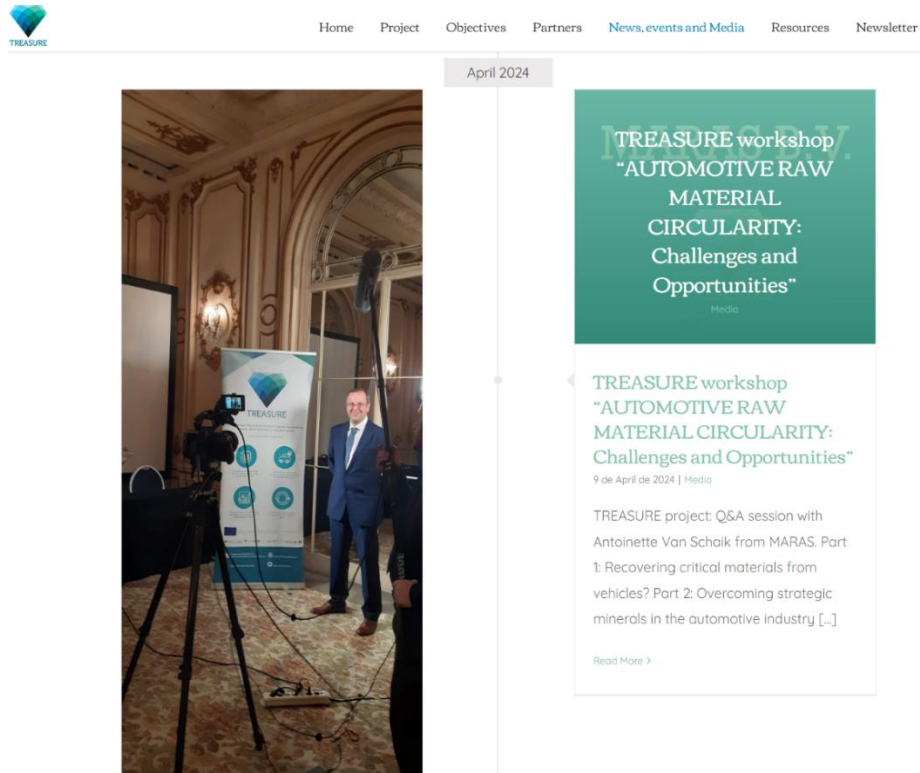
Figure 2. Screenshots for the section NEWS of the website

Events section was added to include workshops, events, meetings and similar activities organized by a partner of the consortium. Find in Figure 3 some of the information uploaded to the website.



Figure 3. Screenshot for the section EVENTS of the website.

The Media section has been incorporated to feature multimedia content generated during the project, including interviews with partners, press conferences, and launches of TREASURE projects in various sources. Below, in Figure 4, you can find some of this information.



Part 1: Recovering critical materials from vehicles?



Part 2: Overcoming strategic minerals in the automotive industry



Figure 4. Screenshots for the section MEDIA of the website.

The Resources section has been utilized to compile all the public information obtained from the TREASURE project. Here, you can find public deliverables developed throughout the project's duration, as well as scientific articles derived from the work conducted. All this information can be downloaded by clicking on the document title.

Additionally, you can find information about the workshop organized by UNIZAR in Brussels. By clicking the link, you will be redirected to YouTube, where you can find both parts of the workshop video. You can find this information in Figure 5.

Papers:

- **Criticality and recyclability assessment of car parts—A thermodynamic simulation-based approach.** Iglesias-Émbil, Marta ; Abadías, Alejandro ; Valero, Alicia ; Calvo, Guiomar ; Reuter, Markus Andreas ; Ortego, Abel Ocultar – [Sustainability (Switzerland) 15, 1 (2023), 91 [22 pp]- ISSN: 2071-1050]. <https://doi.org/10.3390/su15010091>
- **Exergy Assessment of Plastic Car Parts.** Ortego, Abel ; Russo, Sofia ; Iglesias-Émbil, Marta ; Valero, Alicia ; Magdalena, Ricardo – [Vehicles 5, 3 (2023), 1211-1226- ISSN: 2624-8921]. <https://doi.org/10.3390/vehicles5030067>
- **Recovery of Metals from Printed Circuit Boards by Gold-REC 1 Hydrometallurgical Process.** Ippolito, N.M.; Passadoro, M.; Ferella, F.; Pellei, G.; Vegliò, F. Sustainability 2023, 15, 7348. <https://doi.org/10.3390/su15097348>
- **Disassembly of in-plastic embedded printed electronics.** Stephan Harkema, Peter A. Rensing, Sanne M.D.C. Domensino, Joris M. Vermeijlen, Diana E. Godoi Bizarro, Antoinette van Schaik. <https://doi.org/10.1016/j.jclepro.2024.141837>

TREASURE workshop “AUTOMOTIVE RAW MATERIAL CIRCULARITY: Challenges and Opportunities”

Here you can find the videos of TREASURE workshop “AUTOMOTIVE RAW MATERIAL CIRCULARITY: Challenges and Opportunities”

- **Part 1:** <https://www.youtube.com/watch?v=xKdirz4Fv0>
- **Part 2:** <https://youtu.be/Nqxm3B0XoRg>

List of public deliverables:

WP1 – Reference framework definition

- D1.1 – TREASURE Reference framework
- D1.2 – TREASURE tool platform requirements and specifications (1st version)
- D1.3 – Industrial use cases and scenarios design (1st version)
- D1.4 – Industrial use cases and scenarios design (2nd version)

WP2 – Circularity & sustainability assessment methods integration & application

- D2.1 – TREASURE methodology definition
- D2.2 – TREASURE_Sustainability and Circularity Advisory methodology definition
- D2.3 – Participatory social impact assessment report

WP3 – Automotive value chain digitalization

- D3.1 – Criticality Analysis of Selected Vehicles
- D3.2 – Disassemblability Analysis
- D3.3 – Recyclability Analysis
- D3.4 – Report on KPIs to be embedded in the TREASURE circularity web platform

WP4 – TREASURE platform design, development & integration

- D4.1 – TREASURE technical architecture (1st version)
- D4.2 – TREASURE technical architecture (final version)
- D4.5 – Report on ethnography of CE in the automotive industry (1st version)
- D4.11 – Validation, verification, best practices and lessons learned (1st version)- with annexes

WP5 – Pilot plants reconfiguration/optimization

- D5.2 – Pilot-scale reconfiguration, testing and optimization of a semi-automated PCB disassembly process
- D5.4 – Pilot-scale reconfiguration, testing and optimization of a materials recovery process
- D5.5 – Materials recycling/recovery assessment report

WP7 – Dissemination, communication & clustering

- D7.1 – Dissemination Plan (1st version)
- D7.2 – Dissemination plan (2nd version)
- D7.3 – Communication material

WP8 – Exploitation, standardization and business model

- D8.1 – Exploitation plan (1st version)
- D8.4 – Standardization Toolkit
- D8.6 – Report on business model identification

Figure 5. Screenshot for the section RESOURCES of the website.



2.2. Social media

The project has been especially active in the professional network (LinkedIn), where 50 posts have been published since the creation of the TREASURE profile. The posts on this social media platform are related to important news and events relevant to the project, as well as interesting information about the automotive industry. Additionally, it has been also used for disseminating published articles and sharing any other relevant information that may be of interest to the partners and followers. Below in Figure 6, it is illustrated some examples of what has been posting.

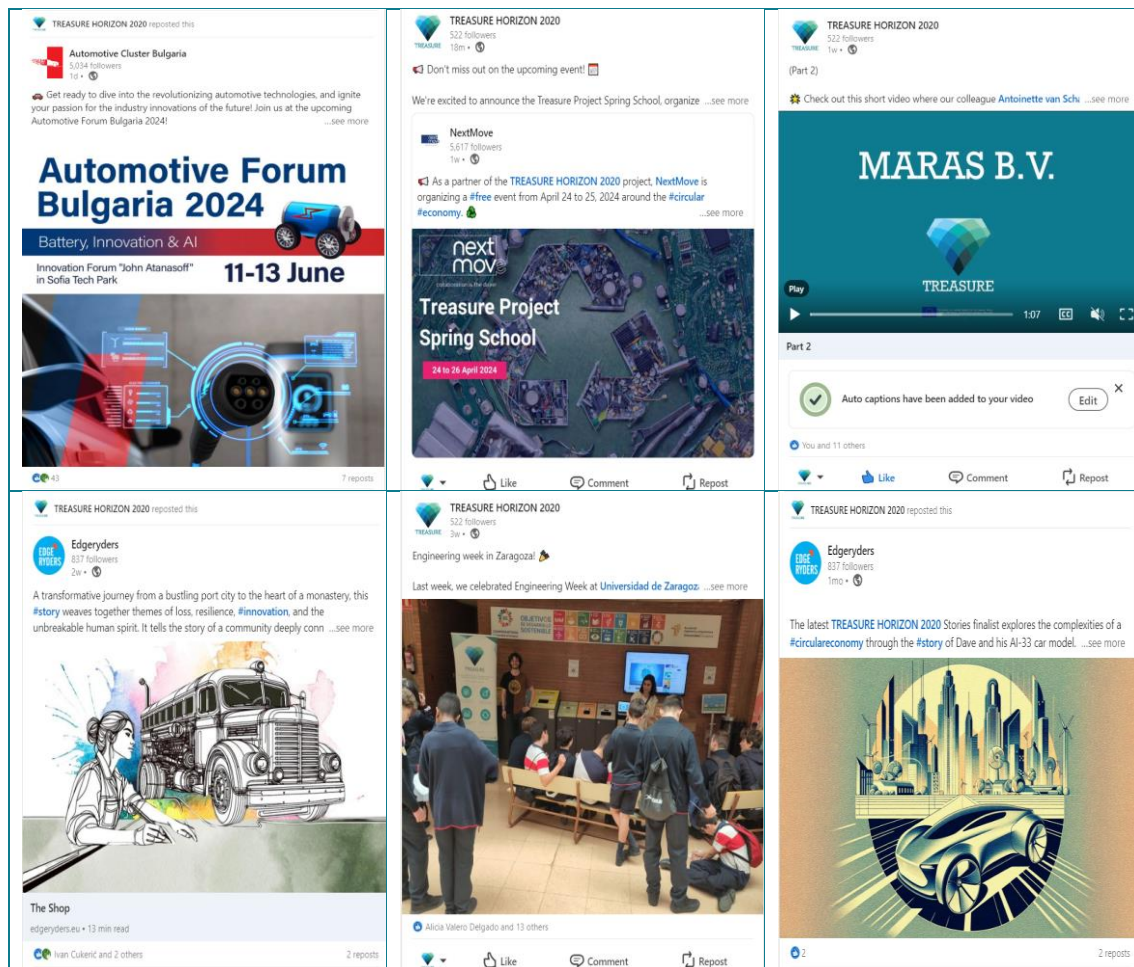


Figure 6: Post example published in LinkedIn

2.3. Newsletters and journal articles

Newsletters have been sent every six months to subscribers (6 in total), in which all the information regarding the project progress, participation in events and upcoming events to bookmark have been summarized.

In Figure 7 is possible to see an example of how the newsletter has been sent to the subscribers.








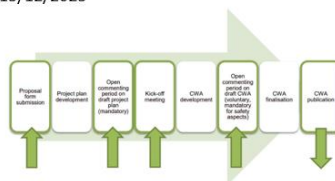
Events	
<p>TREASURE was presented at the International Automotive Recycling Congress IARC 2023 21st-23rd June 2023</p>  <p>Link: https://www.treasureproject.eu/news/treasure-was-presented-in-iarc-2023/</p>	<p>Treasure was presented in the 36th ECOS International Conference named 26/06/2023</p>  <p>Link: https://www.treasureproject.eu/news/treasure-was-presented-in-the-36th-ecos-international-conference-named/</p>
<p>TREASURE was presented in the 2nd International Conference on Raw Materials and Circular Economy 30/06/2023</p>  <p>Link: https://www.treasureproject.eu/news/treasure-was-presented-in-the-rawmat-2023-conference-2/</p>	<p>TREASURE was presented in the hybrid-conference entitled "Vehicle Inspection and Society: Beyond Technology" 28/09/2023</p>  <p>Link: https://www.treasureproject.eu/news/treasure-was-presented-in-the-hybrid-conference-entitled-vehicle-inspection-and-society-beyond-technology/</p>
<p>The <u>Scuola universitaria professionale della Svizzera italiana (SUPSI)</u>'s SPS Lab has developed a sustainability and circularity Assessment and Advisory methodology October 2023</p>  <p>Link: https://www.treasureproject.eu/news/treasure-follows-a-roadmap-to-sustainable-printed-electronics-tno-at-holst-centre/</p>	<p>Treasure was presented in a workshop as part of the European project RESOURCES 7/11/2023</p>  <p>Link: https://www.treasureproject.eu/news/treasure-was-presented-in-a-workshop-as-part-of-the-european-project-resources/</p>
<p>Revolutionizing Automotive Sustainability: Highlights from the TREASURE Project Event 17/11/2023</p>  <p>Link: https://www.treasureproject.eu/events/revolutionizing-automotive-sustainability-highlights-from-the-treasure-project-event/</p>	<p>CEN Workshop on methodology to improve the recyclability rate of Critical Raw Materials from cars 13/12/2023</p>  <p>Link: https://www.treasureproject.eu/events/treasure-was-presented-in-a-cen-workshop-on-methodology-to-improve-the-recyclability-rate-of-critical-raw-materials-from-cars/#</p>

Figure 7: Part of the fifth newsletter sent on M30

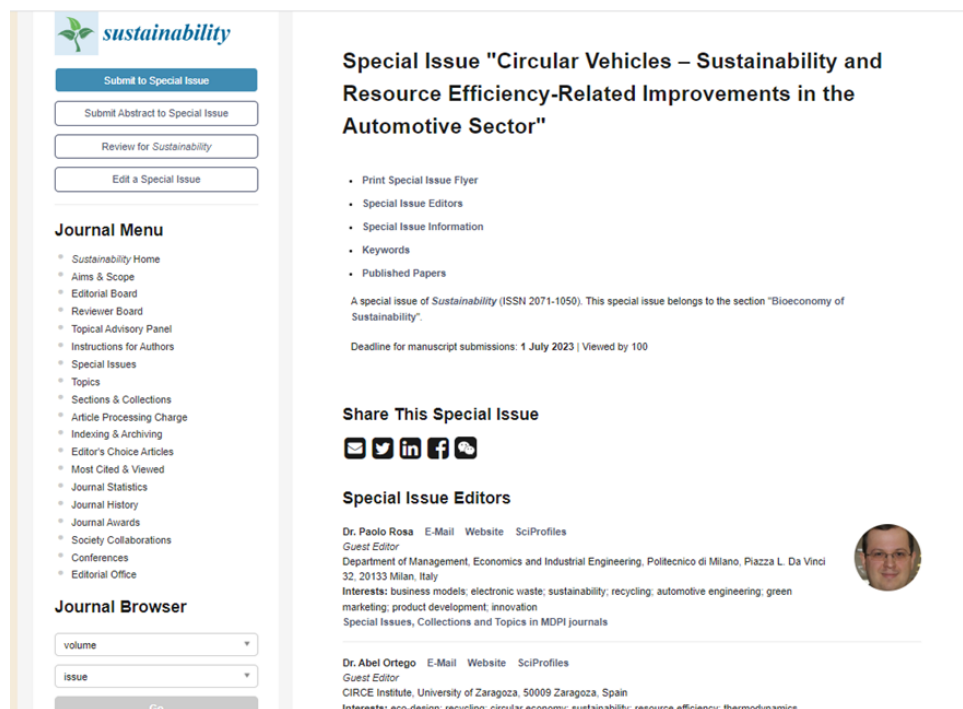
Regarding scientific papers, six articles have been sent to scientific journals and all of them has been already published in open access. Additionally, other articles are expected to be sent to scientific journals and conferences, while others are under review. In Table 1 it is possible to find the details of the articles.

Table 1: Scientific publications

Title	Authors	Journal
Criticality and recyclability assessment of car parts - a thermodynamic simulation-based approach	SEAT – UNIZAR - MARAS	Sustainability
Exergy Assessment of Plastic Car Parts	SEAT - UNIZAR	Vehicles
Recovery of Metals from Printed Circuit Boards by Gold-REC 1 Hydrometallurgical Process	UNIVAQ	Sustainability
Chemical Characterization of an ARDUINO® Board and Its Surface Mount Devices for the Evaluation of Their Intrinsic Economic Value	UNIVAQ	Processes
Disassembly of in-plastic embedded printed electronics	TNO – MARAS	Journal of Cleaner Production
Life Cycle Assessment of an IMSE automotive console	TNO	To be submitted
Digitalisation of the automotive circular economy recycling chain - simulation based recycling assessment and optimisation	MARAS	Journal recycling (submitted)
Twin Transition of WEEE recycling processes	POLIMI	Accepted in PLM24 conference
Recyclability of electronic car parts perspective from disassemblability, thermodynamics and metallurgy	UNIZAR - MARAS	To be submitted
Identification of critical metals and potential bottlenecks in passenger cars through a thermodynamic approach	UNIZAR	ECOS Conference 2022. Proceedings
Exergy cost associated with polymers recycling in vehicles: from qualitative to quantitative indicators	UNIZAR	ECOS conference 2023. Proceedings
Exergy strategies for the circular economy: dismantling, disassembly, eco-design, and recycling in electric vehicles	UNIZAR	ECOS conference 2024. Proceedings
Disassemblability Assessment of Car Parts: Lessons Learned from an Ecodesign Perspective	UNIZAR – SEAT	Sustainability

Title	Authors	Journal
Enhancing the Sustainability of the Electronics in the Automotive Sector in the Context of Circular Economy Through a Decision-Making Framework	SUPSI – MARAS – POLIMI	EGG 2024 conference
Advancing Sustainability and Circularity in the Automotive Industry: A Data-Driven Platform Approach	SUPSI – TXT – POLIMI	EGG 2024 conference
Evolution in the content of strategic metals in a passenger car and its implication for the circular economy	SEAT – UNIZAR	Journal of Cleaner Production
Conceptualizations of sustainable behavior, circular economy, and car electronics in the automotive sector: An Ethnographic Perspective	EDGERYDERS	Journal of Industrial Ecology (to be submitted)
An integrated Lifecycle Sustainability Assessment framework for product lifecycle-oriented decision making.	SUPSI	Circular economy and Sustainable Development: a necessary nexus for a sustainable future. - Springer book

Moreover, a dedicated special issue in the Journal Sustainable (MDPI) has been promoted. The title is: "Circular Vehicles – Sustainability and Resource Efficiency-Related Improvements in the Automotive Sector" led by POLIMI and UNIZAR. three members of TREASURE (Paolo Rossa, Alicia Valero and Abel Ortego) act as guest editors in an special issue of the journal Sustainability (mdpi) focused on resources efficiency where scientific contributions derived from the project will be published.



The screenshot shows the MDPI Sustainability journal website for a special issue. On the left is a 'Journal Menu' with links like 'Sustainability Home', 'Aims & Scope', 'Editorial Board', 'Reviewer Board', 'Topical Advisory Panel', 'Instructions for Authors', 'Special Issues', 'Topics', 'Sections & Collections', 'Article Processing Charge', 'Indexing & Archiving', 'Editor's Choice Articles', 'Most Cited & Viewed', 'Journal Statistics', 'Journal History', 'Journal Awards', 'Society Collaborations', 'Conferences', and 'Editorial Office'. Below the menu is a 'Journal Browser' with dropdowns for 'volume' and 'issue', and a 'Go' button. The main content area features the special issue title, a list of actions (Print Special Issue Flyer, Special Issue Editors, Special Issue Information, Keywords, Published Papers), a note about the special issue's ISSN and section, a deadline for manuscript submissions (1 July 2023), and a 'Share This Special Issue' section with social media icons. Below that, it lists 'Special Issue Editors' with profiles for Dr. Paolo Rosa (Guest Editor, Politecnico di Milano) and Dr. Abel Ortego (Guest Editor, CIRCE Institute, University of Zaragoza).

Figure 8. Screenshot of the special issue dedicated to resource efficiency in the automotive sector

2.4. International/national conferences, seminars and workshops

In this field the following activities have been carried out:

Table 2: TREASURE participation in conferences, seminars and workshops

PARTNER & Responsible	Name of the event	WEBLINK	DATE	LOCATION
UNIZAR – Alicia Valero	Summer course – Motorland	http://cursosextraordinarios.unizar.es/noticias/comienza-la-edicion-de-septiembre-de-los-cursos-cex-en-motorland	sep-21	Teruel (Spain)
POLIMI – Paolo Rosa	Summer School Francesco Turco	https://www.summerschool-aidi.it/	sep-21	Virtual
POLIMI – Paolo Rosa	Cluster meeting of projects contributing to the EU Plastics Strategy	https://rea.ec.europa.eu/index_en	sep-21	Virtual
UNIZAR – Guiomar Calvo, Ricardo Magdalena, Yolanda Lara	European Reserchers’ Night	https://ucc.unizar.es/noche-investigadores/2021	sep-21	Zaragoza (Spain)
UNIZAR – Alicia Valero and Abel Ortego	Aragón Radio	https://www.cartv.es/aragonradio/radio?play=podcast/122852	may-22	Zaragoza (Spain)
UNIZAR - Abel Ortego	International world touring car cup	https://www.fiawtcr.com/event/wtcr-race-of-spain-2022/	jun-22	Teruel (Spain)
Edgeryders – Stephen Harkema and Corné Rentrop	Holst Centre Innovation day	https://holstcentre.com/innovation-day/	jun-22	Teruel (Spain)

PARTNER & Responsible	Name of the event	WEBLINK	DATE	LOCATION
UNIZAR - Alicia Valero, Ricardo Magdalena	ECOS 2022	https://ecos2022.dtu.dk/	jul-22	Copenhagen (Denmark)
POLIMI - Paolo Rosa	IFIP 19 th Conference on Product Lifecycle Management 2022	www.plm-conference.org/en/	jul-22	Grenoble (France)
UNIZAR - Abel Ortego	Symposium on Sustainable Minerals 2022	https://mei.eventsair.com/sustainable-minerals-22/	jul-22	Online
UNIZAR - Abel Ortego	Summer school	https://www.youtube.com/watch?v=uj6HUDK63s4	aug 2022	Pamplona (Spain)
UNIZAR - Abel Ortego	iCRS 2022	https://www.icrsconf.com/icrs_2022.html	aug 2022	Online
UNIZAR	European Researchers night	https://lanochedelosinvestigadores.es/ciencia.es/	sep-22	Zaragoza (Spain)
UNIZAR - Ricardo Magdalena	Minerals to metals forum		oct-22	Cape Town (South Africa)
UNIZAR - Abel Ortego	Technopark Motorland Aragón	https://www.youtube.com/watch?v=Kbd1BfD6PqM	nov-22	Teruel (Spain)
UNIZAR - Abel Ortego	Spanish Automotive project F3 and TREASURE		Feb - 23	Madrid (Spain)
UNIZAR - Ricardo Magdalena	CONAMA 2023 Conference	https://www.fundacionconama.org/conama-local-2023/	Mar – 23	Zaragoza (Spain)

PARTNER & Responsible	Name of the event	WEBLINK	DATE	LOCATION
UNIVAQ	AIDIC (ICHEAP16)	https://www.aidic.it/icheap16/	May – 23	Napoli (Italy)
UNIZAR – Alicia Valero	Conference Matèries primeres crítiques: El petroli del segle XXI	https://www.youtube.com/watch?v=f dKhJ05r4NE	June – 23	Online
TNO	IMSEDays2023	https://www.linkedin.com/posts/stephan-harkema-86b7252_imsedays2023-activity-707686886659774464-2l6D?utm_source=share&utm_medium=member_desktop	June – 23	Oulu (Finland)
POLIMI	International Automotive Recycling Congress	https://events.icm.ch/event/e2e5c27c-ff22-4918-b685-0b07aa604ddf/websitePage:80b50054-5359-4e0a-8382-2b5598a6f0a7	June – 23	Geneva (Switzerland)
EDGERY DERS	International Automotive Recycling Congress	https://events.icm.ch/event/e2e5c27c-ff22-4918-b685-0b07aa604ddf/websitePage:80b50054-5359-4e0a-8382-2b5598a6f0a7	June – 23	Geneva (Switzerland)
UNIZAR	ECOS Conference	https://ecos2023.com/	June - 23	Las Palmas de Gran Canaria (Spain)
MARAS	World Mining Congress Brisbane 2023		June – 23	Brisbane (Australia)
UNIZAR - MARAS	11TH INTERNATIONAL CONFERENCE ON INDUSTRIAL ECOLOGY:	https://isie2023netherlands.nl/main-program	July – 23	Leiden (The Netherlands)
EDGERY DERS	11TH INTERNATIONAL CONFERENCE ON INDUSTRIAL ECOLOGY:	https://isie2023netherlands.nl/main-program	July – 23	Leiden (The Netherlands)
UNIVAQ	Raw Materials 23	https://www.rawmat2023.ntua.gr/	Aug – 23	Athens (Greece)
MARAS	Conference of Metallurgist (COM)		Aug – 23	Toronto (Canada)

PARTNER & Responsible	Name of the event	WEBLINK	DATE	LOCATION
UNIZAR	Conference on Materials Criticality:	https://www.iustel.com//diario_del_derecho/noticia.asp?ref_iustel=1236200&popup=	Sep – 23	Santiago de Compostela (Spain)
UNIZAR	Vehicle Inspection and Society: Beyond Technology	https://lnkd.in/dDTE7j79 https://www.treasureproject.eu/wp-content/uploads/2023/09/Program-CITA-event-with-Spain-EU-26-September-2023.pdf	Sep – 23	Brussels (Belgium)
UNIZAR	Researcher's Night	https://lanochedelosinvestigadores.es/	Sep – 23	Zaragoza (Spain)
EDGERS	TechBlick: the Future of Electronics Reshaped	https://www.techblick.com/electronic_sreshapedeurope23	Oct – 23	Berlin (Germany)
TNO	TechBlick: the Future of Electronics Reshaped	https://www.techblick.com/electronic_sreshapedeurope23	Oct – 23	Berlin (Germany)
UNIZAR	How to manage a circular economy project? Tricks from the planning to avoid failing in the execution pitch and networking activities		Oct – 23	Online
UNIZAR	Conference on The challenge of materials for the ecological transition	https://www.etsi.us.es/sites/default/files/documentos/2023-10/di%CC%81ptico_sostenibilidad_2023_vdef.pdf	Oct – 23	Online
UNIZAR	Conference on The challenge of materials for the ecological transition.		Oct – 23	Oviedo (Spain)
MARAS	Digital Twinning & Exergy of Circular Economy Systems - Examples from industry		Nov – 23	Helsinki (Finland)
UNIZAR	Networking in between Research Institutes and Presentation of the TREASURE Project		Nov – 23	Naijing (China)

PARTNER & Responsible	Name of the event	WEBLINK	DATE	LOCATION
UNIZAR	Workshop: Automotive Raw Material Circularity: Challenges and Opportunities	https://research-and-innovation.ec.europa.eu/events/upcoming-events/automotive-raw-material-circularity-challenges-and-opportunities-2023-11-17_en	Nov – 23	Brussels (Belgium)
UNIZAR	Spanish Circular Economy Report Presentation		Dec – 23	Zaragoza (Spain)
UNI	CEN/WS “TREASURE”	https://www.cencenelec.eu/news-and-events/news/2023/workshop/2023-10-25-treasure/	Dec – 23	Milan (Italy)
UNIZAR	UNITA matching event		Dec – 23	Torino (Italy)
SEAT & UNIZAR	Class in circular economy Master		Dec – 23	Online
UNIZAR	The Engineering and Architecture Week	https://urez.org/semana-de-la-ingeniera-y-arquitectura-2024/	Mar – 24	Zaragoza (Spain)
TNO	A step closer to sustainability with In-Mold Electronics		Apr – 24	Wurzburg (Germany)
UNI	Class in a Master Degree. Training course	https://www.linkedin.com/feed/update/urn:li:activity:7188905894225580033/	Apr. – 24	Milano (Italy)
TNO	ICP / INEMI during GCC2024	https://www.ipc.org/event/theres-no-end-circle-workshop-how-address-circularity-challenges-electronics-manufacturing	Jun – 24	Berlin (Germany)
TNO	Innovation Day 2024	Innovation Day 2024 - Holstcentre - Corporate website	Jun – 24	Eindhoven (The Netherlands)
UNIZAR	37th International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems	https://ecos2024.com/	Jul – 24 (taking place after the end of the project)	Rhodes (Greece)

2.5. Industrial events in the reference sector, focusing on both professional and the general public

Table 3: TREASURE participation in industrial events

PARTNER & Responsible	Name of the event	WEBLINK	DATE	LOCATION
TNO at Holst Centre – Stephan Harkema	Automotive Interior Expo 2021	https://www.automotive-interiors-expo.com/en/	nov-21	Stuttgart (Germany)
TNO at Holst Centre – Corné Rentrop &/ Stephan Harkema	LOPEC	https://www.lopec.com/en/	mar-22	München (Germany)
TNO at Holst Centre – Stephan Harkema	Folien + Fahrzeug / Plastic Films in Mobility 2022	https://www.skz.de/bildung/tagung/folien-und-fahrzeug-plastic-films-in-mobility	may-22	Würzburg, (Germany)
Edgeryders-Stephen Harkema	Plastic film in mobility	https://www.skz.de/bildung/tagung/plastic-films-in-mobility	may-22	Eindhoven (Netherlands)
UNIZAR - Abel Ortego	ELV spanish conference	https://www.ifema.es/srr/notas-prensa/eventos-sigrauto-srr	jun-22	Madrid (Spain)
SEAT – Alicia Valero	Circular economy in the new mobility ecosystem” organized by SEAT	https://www.youtube.com/watch?v=yDOrIhrMQvY	sep-22	Barcelona (Spain)
UNIZAR – Alicia Valero	Raw Materials Week	https://www.eurawmateriasweek.eu/2022	nov-22	Brussels (Belgium)

PARTNER & Responsible	Name of the event	WEBLINK	DATE	LOCATION
SEAT - Marta Iglesias	Raw Materials Week	https://www.eurawmateriasweek.eu/2022	nov-22	Brussels (Belgium)
POLIMI – Paolo Rosa	World Manufacturing Forum 2022	https://worldmanufacturing.org/activities/world-manufacturing-forum-2022/	nov-22	Milan (Italy)
UNI	Automotive Electronics Recycling	https://www.treasureproject.eu/wp-content/uploads/2023/05/1685091261291.pdf	May – 23	Online
TNO	Annual Innovation Day for Holst Centre industrial network	Holst Centre Innovation Day short version (youtube.com)	June – 23	Eindhoven (The Netherlands)
MOVEO	TREASURE Spring school	https://nextmove.fr/en/events/treasure-project-spring-school	April - 24	Paris (France)
UNIZAR	FEUZ		April - 24	Zaragoza (Spain)
WALTERPACK	Stellantis meeting/matching		May – 24	Torino (Italy)

2.6. Clustering with other national and EU initiatives

Regarding clustering with other initiatives, TREASURE was present in the following three activities:

Table 4: Cluster activities

Title	Partners	Date
CM (Mobility Circular Campus)	NextMove	2020
Cluster meeting of projects contributing to the EU plastics strategy.	POLIMI	Sep 2021
Fairphone project	Maras	2022
Cluster meeting on plastic attendance – Ecomondo	POLIMI - WALTER	Nov 2022
Cluster meeting with Club of Rome	UNIZAR	Nov 2022
MESAP	NextMove	2022
Circthread project	UNI	May - 23

Title	Partners	Date
Business Upper	NextMove / Polimi	August 2023
Synapse	NextMove	Aug - 23
JN2E	NextMove	Nov – 2023
Pôle MecaTech	NextMove	2024
ITRI Institute	NextMove	2024

2.7. EDGE platform: a dedicated TREASURE online space

Edgeryders platform was born in 2013 out of a Council of Europe research project, being an international community consisting of 7.000 members in 80 countries. Its mission is to support diverse groups of people with the relationships, information, knowledge, tools and opportunities to accelerate the transition to a greener, more equitable and humane society for all. A dedicated space for TREASURE project has been set up, in order to develop engagement with the general public. This page was a landing page for the EDGE platform for the TREASURE project: <https://treasure.edgeryders.eu>. On this page, visitors are informed about all the news, events, open calls and discussions on the EDGE platform.

Since its creation, 308 topics have been created with 324 participants. The space topics can be consulted in: <https://edgeryders.eu/c/treasure/394>

Furthermore, part of EDGE platform is also GraphRyder with its visualisations which is imbedded in the TREASURE platform made by TXT Group.

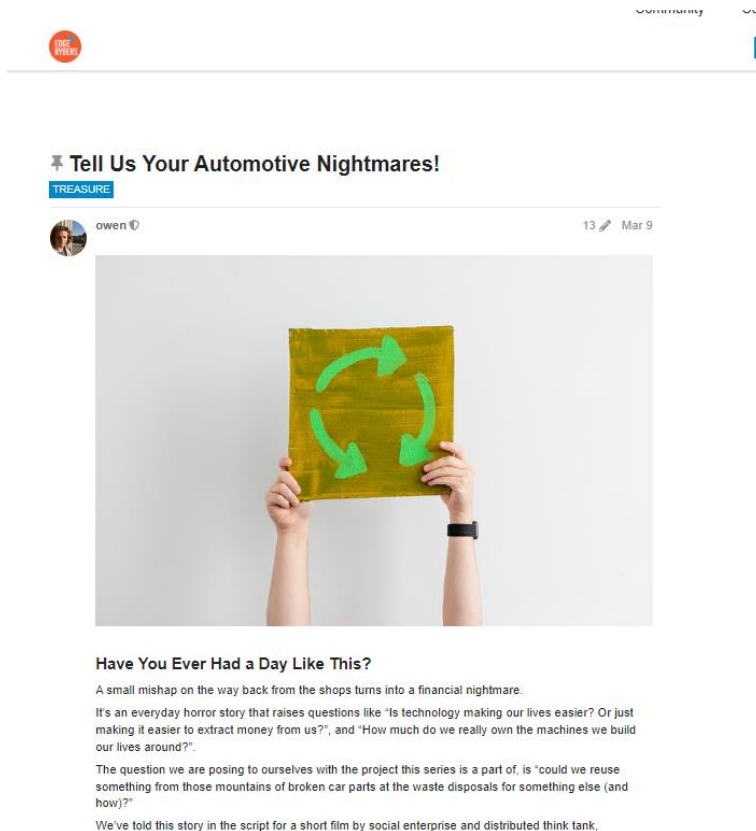


Figure 9: Example of one topic published in TREASURE online space available in EDGE platform

2.8. UNI

As the Italian national standardization body, UNI (Ente Italiano di Normazione) is primarily known for its role in developing and managing standards. However, UNI has also been actively engaged in dissemination activities with the objective of raising awareness about the TREASURE project and its connection to standardization.

2.8.1. Role of UNI in Standardization and Dissemination

UNI's involvement in dissemination goes beyond its traditional scope of standardization. The organization has taken a proactive approach to ensure that the key findings and innovations of the TREASURE project are widely communicated to relevant stakeholders, including industry professionals, academic researchers, policymakers, and the general public. This strategic dissemination is aimed at creating a robust link between the project's outcomes and the ongoing efforts in standardization.

Workshops and Seminars: UNI has organized several workshops and seminars designed to present the TREASURE project's findings. These events serve as a platform for knowledge exchange, where participants can discuss the implications of the project's results on current and future standards. Examples include:

- On September 29, 2022, UNI participated in a seminar with the Cluster Lucano Automotive, a key reference point for the automotive sector that brings together the main companies in the Stellantis supply chain in the Melfi plant. This workshop focused on the role of technical standards in the automotive industry and highlighted the advancements and findings of the TREASURE project.



Figure 10: Cluster Lucano Automotive Seminar

- On April 24, 2024, UNI held a workshop at Università Bocconi. The session addressed students in the Master's program in Economics and Management of Government and International Organizations, discussing the critical role of standardization in regulating markets and promoting research, particularly through UNI's involvement in the TREASURE HORIZON 2020 project. This session emphasized the intersection of standardization, market dynamics, and innovation.

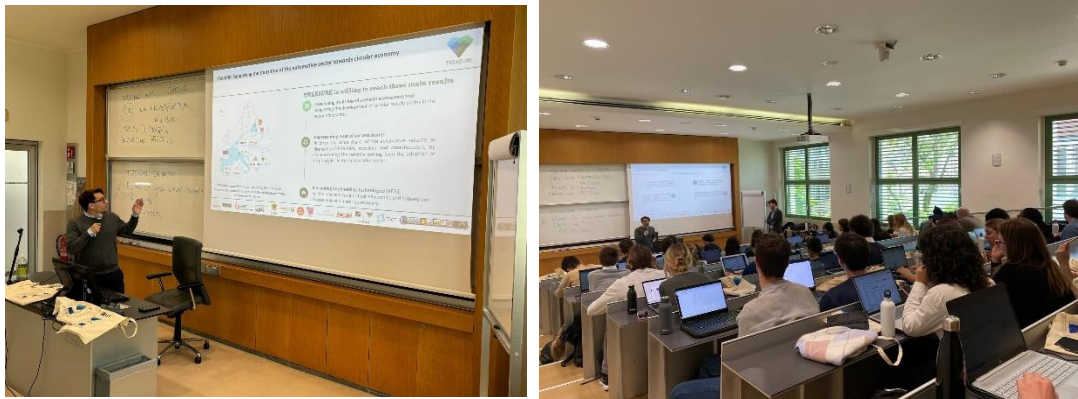


Figure 11: UNI Workshop at Università Bocconi

Collaborations with Academic and Industrial Partners: UNI has established partnerships with universities, research institutions, and industry leaders to facilitate the dissemination of TREASURE project results. Collaborative efforts include joint research initiatives, co-hosted events, and shared resources for broader outreach. A notable example is the collaboration between UNI and CUNA (Commissione Tecnica di Unificazione dell'Autoveicolo), a non-profit association federated with UNI. CUNA contributes to solving technical unification issues in the field of mobile machinery, their components, and related products. This collaboration is part of the activities outlined in Task 8.4, which aims to promote engagement with relevant Technical Committees.

Online Presence: Leveraging digital platforms, UNI has created a dedicated web page on his website and different social media actions to disseminate information about the TREASURE project.

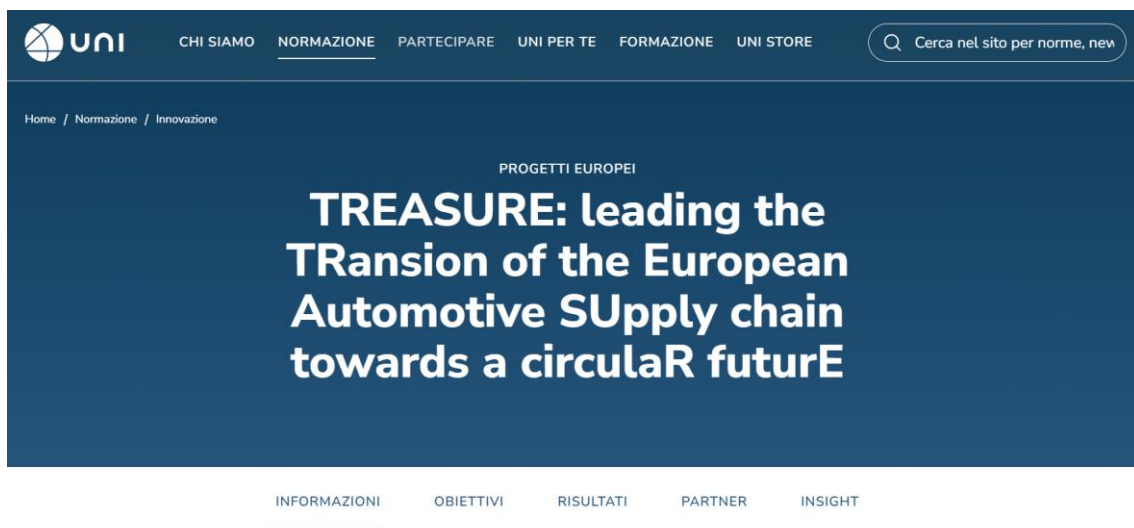


Figure 12: TREASURE web page on UNI website

Conferences and Expos: Participation in national and international conferences and expos has been a key part of UNI's dissemination strategy. Presenting at these events allows UNI to reach a diverse audience and highlight the relevance of the TREASURE project in the context of global standardization efforts. Examples include:

- **Ecomondo 2022:** On November 10, 2022, from 10:00 to 13:30, during the seminar "La cessazione della qualifica di rifiuto, passaggio chiave nell'Economia Circolare," Viviana Buscemi, TPM UNI, discussed the role of technical standards in codifying end-of-waste criteria and highlighted the EU TREASURE project.
- **Ecomondo 2023:** On November 9, 2023, UNI participated in the conference "Approvvigionamento sostenibile e sicuro di materie prime critiche – Iniziative europee e nazionali" as part of Ecomondo 2023 in Rimini, where the TREASURE project was also presented.

2.8.2. Objective and impact

The primary objective of UNI's dissemination activities is to enhance the visibility and impact of the TREASURE project. By linking the project's outcomes with standardization processes, UNI aims to facilitate the adoption of innovative solutions and best practices across various industries. This approach not only promotes the practical application of the TREASURE project's findings but also contributes to the continuous improvement of standards in related fields. Through targeted dissemination efforts, UNI ensures that the innovations of the TREASURE project are effectively communicated, fostering a culture of continuous improvement and collaboration in the realm of standardization. By engaging a wide array of stakeholders, including industry professionals, academic researchers, and policymakers, UNI supports the integration of cutting-edge research into practical standards that benefit society as a whole. In conclusion, UNI's comprehensive dissemination strategy underscores its commitment to bridging the gap between research and standardization.

3. Other activities

As part of the TREASURE project, specifically within deliverable 7.5 titled "Dissemination Videos", a video has been developed for dissemination purposes. This video aims to provide a general overview of the challenges associated with electronics in the automotive industry. Additionally, it seeks to explain the various approaches through which this sector can be assessed, ranging from the extraction of mineral resources to exploring new technologies and opportunities within the industry.

While the TREASURE project serves as the primary focus of the video, the intention was to create a document that can be extended beyond the project's conclusion. This approach aims to raise awareness not only within society but also among car manufacturers and companies, with the goal of fostering a more sustainable automotive sector. This includes enhancing the circularity of car parts and their components.

The development of the video required collaboration from various partners, who contributed several media elements for inclusion. This included pictures and short clips of the pilot plants, communication materials from SEAT, and images from the circular web application.

The video has been uploaded to the different dissemination channels available for TREASURE project:

YOUTUBE: <https://www.youtube.com/watch?v=X9ArqA54uZk>

Linkedin: <https://www.linkedin.com/feed/update/urn:li:activity:7196812885912653825>

Webpage: <https://www.treasureproject.eu/resources/>





Figure 10. Screenshot of the video

4. Conclusions

Dissemination is considered to have a key role in the success of any project, serving as a channel to share knowledge, insights, and achievements to different type of audience. Throughout the duration of the project, it has been undertaken a multifaceted dissemination strategy, utilizing several channels and media to increase the spread of the knowledge.

The first thing created was the website. It was developed to collect not only the general information of the project with the goals, but also to include all the relevant results and achievements obtained during the activities carried out. With over 13,500 visitors, it has been demonstrated that the website has been a very important resource. The consistent updating of the website with over 60 news entries in the new section ensured that visitors were kept informed about the latest developments and milestones achieved.

Furthermore, the profile created on LinkedIn demonstrated the importance of this Social Media for expanding the knowledge and to reach and fostering meaningful connections within the professional community. With 619 followers, it has been possible to disseminate the project updates, share insights, and engage in discussions on pertinent topics. The publication of 61 posts on LinkedIn facilitated the interaction between connections and enhancing visibility.

Additionally, partners from the project participated in 46 events, including conferences, workshops, and seminars. These events provided valuable opportunities to showcase the project, share the findings, and network with stakeholders.

Another component of the dissemination strategy was the publication of scientific findings in international journals and conferences. The publication of twelve scientific papers underscores the results of the research carried out, expecting the publication of more scientific papers with the TREASURE's outcomes in the coming months.

A newsletter has been released to subscribers every six months from the beginning, providing regular updates on project activities, events, and milestones. Moreover, a highlight of the dissemination activities was the creation of a comprehensive dissemination video summarizing the key aspects of the project. This video served as a dynamic and accessible resource, providing

an overview of the objectives, methodologies, and outcomes in a visually engaging format. These materials have served as a valuable communication tools, being able to reach a broader audience and communicate the impact of the work effectively throughout the project lifecycle.

