EuReComp

EUROPEAN RECYCLING & CIRCULARITY IN LARGE COMPOSITE COMPONENTS

Final Newsletter
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Constantinos Charitidis

EuReComp project Coordinator

Professor in the School of Chemical Engineering of the National Technical University of Athens (NTUA), Director of the RNanoLab

Dear Reader,

Welcome to the final **Issue #7** of the EuReComp Newsletter!

In this edition, we are pleased to present the key achievements of the EuReComp project. Over the past four years, EuReComp has delivered impactful results advancing circular solutions for large composite components. As the project reaches its completion phase, validated demonstrators and capacity-building initiatives clearly showcase the technical feasibility, environmental benefits and market potential of innovative recycling, repurposing and reuse strategies.

This newsletter highlights major achievements including:

- **The small-scale Photovoltaic (PV) Floating System**
- **Automotive demonstrator cases (Seat, Steering Wheel and Shaft)**
- **The ROCCA demonstrator**
- **The Life-Long Learning Programme for End-of-Life (EoL) Composite Management**

Together, these actions demonstrate how EuReComp successfully bridges research, industry and education to accelerate the transition toward circular composite value chains.

Thank you for being part of this journey.

Enjoy reading, and stay connected with EuReComp through our website and social media channels!

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Demonstrator Achievements:
From Energy & Automotive Applications
to Circular Skills Development

Small-Scale Photovoltaic (PV) Floating System

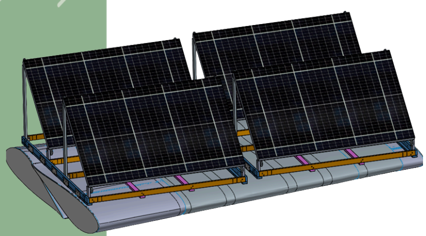
Second Life for Wind Turbine Blades

EuReComp successfully demonstrated the repurposing of end-of-life (EoL) wind turbine blade (WTB) segments into **structural floats for a photovoltaic (PV) floating system**.

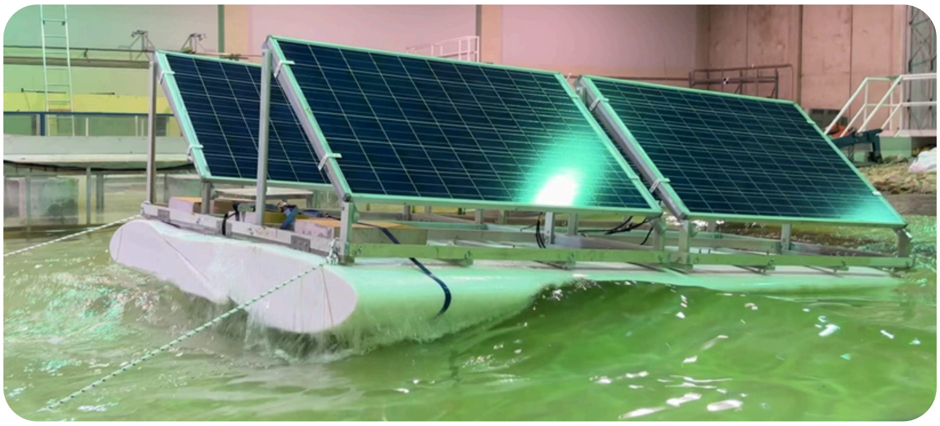
Using components from an **Enercon E66 blade**, including spar caps and shear webs, the project developed and validated a functional floating support structure. The demonstrator reached **TRL 6**, following **laboratory testing under controlled environmental and wave conditions**.

Structural performance was supported by **numerical simulations** and verified through floatability and wave basin testing. A **Life Cycle Assessment** (LCA) further evaluated its environmental performance, identifying transport and processing operations as key impact factors.

This demonstrator proves that **large composite structures can gain a second life** in renewable energy applications, offering a scalable and circular solution for EoL wind turbine materials.



Design of the large-scale PV-floating system demonstrator



Large scale PV-floating system in action (wave testing)

Demonstrator Achievements:
From Energy & Automotive Applications
to Circular Skills Development

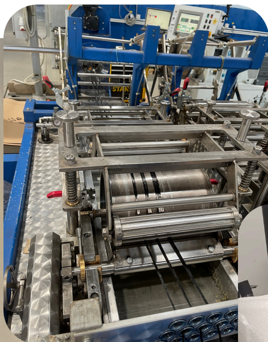
Circular Automotive Components: From Concept to Reality

EuReComp demonstrates that recycled composite materials can be successfully integrated into high-performance automotive parts. Through advanced manufacturing approaches, three functional components were developed, proving technical feasibility, structural reliability and industrial relevance.

Steering Wheel: A demonstrator showcasing the use of recycled composites in interior automotive components, meeting quality and performance requirements.
Automotive Shaft: A structural component demonstrating that recycled fibres can be applied in load-bearing applications requiring strength and precision.
Formula Seat: A high-performance seat illustrating the use of circular composites in complex, safety-relevant automotive structures.

Together, these components confirm that recycled composites can move beyond laboratory validation and into real automotive applications.

Steering wheel demo



Automotive shaft demo

A demo formula seat

Demonstrator Achievements:
From Energy & Automotive Applications
to Circular Skills Development

Steering Wheel demonstrator

3D Printing with Recycled Carbon Fibre

EuReComp successfully developed **a fully functional steering wheel using 100% recycled carbon fibre-reinforced polyamide** (PA6/66-rCF15%), presented at JEC 2026.

Through smart build orientation (45° printing angle) and geometry optimization, the team eliminated common polyamide warping issues and ensured **structural integrity**, even with a **fully solid design**.

Advanced thermal control during printing maintained material stability and prevented defects. The final component achieved **excellent surface quality** with **no warping** or adhesion failures.

This demonstrator proves that high-performance automotive parts can be produced using recycled composite materials.

Demonstrator Achievements:
From Energy & Automotive Applications
to Circular Skills Development

Automotive Shaft demonstrator

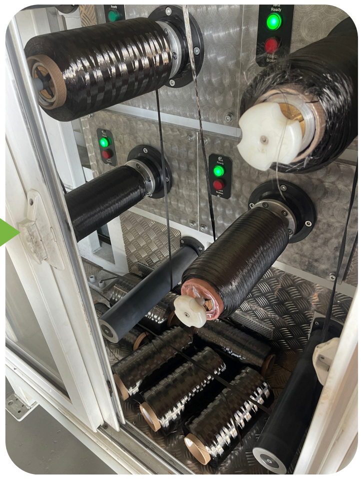
Load-Bearing Performance with Reclaimed Carbon Fibres

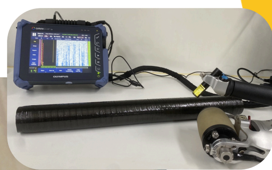
EuReComp successfully manufactured a composite automotive driveshaft using reclaimed **continuous carbon fibres**, demonstrating their suitability for structural, load-bearing applications.

Based on a real commercial shaft design (ID 50 mm, OD 54 mm, L 500 mm), the component was produced through filament winding using **recovered fibres processed via solvolysis**. Following trial runs and process optimization, the final demonstrator was successfully manufactured and cured.

Non-destructive ultrasonic testing confirmed the **absence of cracks**, voids or delaminations, validating its **structural integrity** and **mechanical reliability**.

This demonstrator proves that reclaimed carbon fibres can be reintroduced into high-performance transmission components, supporting circularity without compromising strength or precision.





Demonstrator Achievements:
From Energy & Automotive Applications
to Circular Skills Development

Formula Racing Seat demonstrator

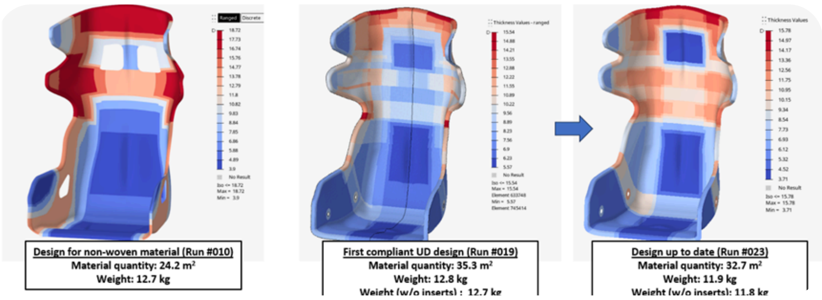
High-Performance Design with 100% Recycled Carbon Fibre

The Formula racing seat demonstrator showcases the full circular potential of recycled continuous carbon fibres.

Recovered through an **advanced solvolysis process** and treated to restore their surface properties, the **recycled fibres** achieved **performance levels close to pristine materials**. These fibres were transformed into unidirectional prepregs and used to manufacture the main body of the seat.

Critical high-load areas were reinforced with thermoplastic compounds incorporating recycled chopped carbon fibres, ensuring structural strength and safety. The seat design was validated through **detailed simulations** and **structural analysis** to confirm mechanical performance.

Manufactured entirely from recycled composite materials, the racing seat proves that high-performance automotive components can be produced within a fully circular composite value chain without compromising strength or reliability.



Demonstrator Achievements:
From Energy & Automotive Applications
to Circular Skills Development

The ROCCA demonstrator

A Mobile Cabin Built with Recycled and Reused Composites

The ROCCA 5-walls cabin is a fully functional, mobile multi-use unit manufactured using recycled and reused composite materials. Designed for flexibility, it can operate on land or water (when mounted on a pontoon), offering a scalable circular solution for large composite waste streams.

The cabin integrates **materials recovered from EoL wind turbine blades** and other composite sources. Reused elements include composite sandwich panels, shear web sections, wind blade tips and modified pressure tanks from aviation. Additional structural components were manufactured using **recycled glass fibre** (GF) and **recovered carbon fibre** (rCF) through vacuum infusion processes.

With **a total reuse of approximately 676 kg of EoL composite parts**, the demonstrator validates both technical feasibility and architectural functionality. The structure was designed for **easy assembly**, **dismantling** and **relocation**, proving that circular composite materials can be applied in real, high-value building applications.

ROCCA demonstrates how large composite components can gain a second life; transforming waste into durable, mobile infrastructure solutions.

> Demonstrator Achievements:
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Life-Long Learning Programme

Training for Circular Composite Management

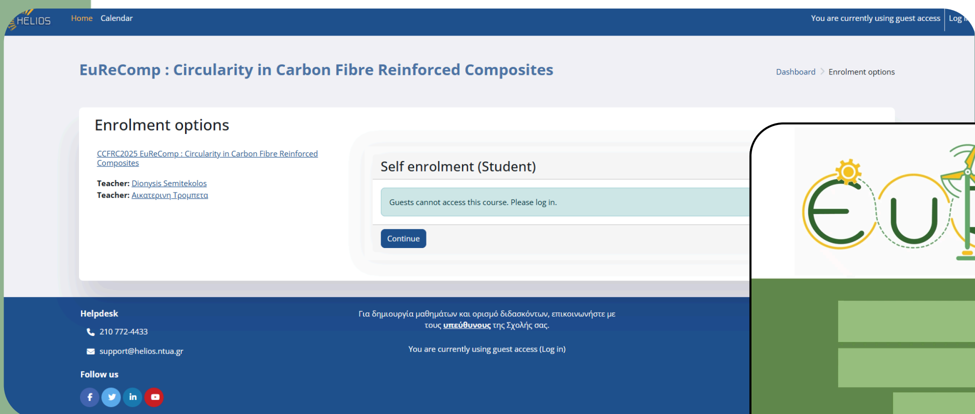
EuReComp developed **a Life-Long Learning (LLL) programme** to strengthen skills in EoL composite management. The course was created through structured collaboration among partners, transforming project knowledge into clear, modular educational content covering:

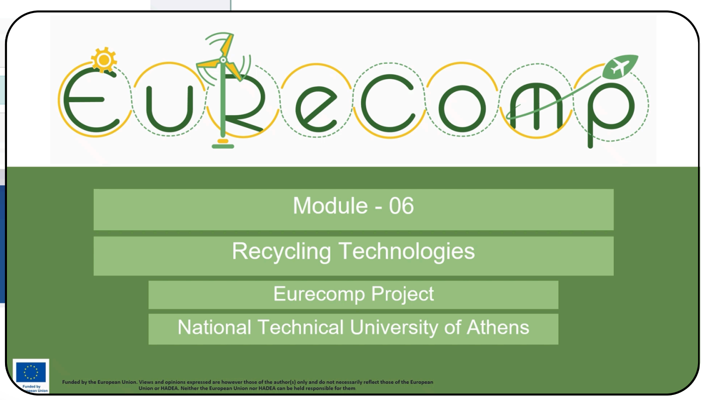
- **Inspection**
- **Dismantling & Sorting**
- **Repair & Reuse**
- **Recycling Technologies**
- **Composite Manufacturing**
- **Safety & Environmental Performance**

Each module includes structured presentations with full audio narration, forming complete video-based lessons. The material was internally reviewed to ensure technical accuracy and clarity.

The course is hosted on the **Helios** platform of the National Technical University of Athens and will remain accessible beyond the project's duration, ensuring long-term knowledge transfer to students, professionals and industry stakeholders.

EuReComp thus extends its impact from demonstrators to education, supporting the transition toward circular composite solutions.





"The 4th and Final Open Workshop of EuReComp!"

Final EuReComp Open Workshop!

The Final EuReComp Open Workshop will take place on **Friday, 20 March 2026**, hosted by **Dallara** in Varano de' Melegari, Parma, Italy.

This closing event will bring together project partners, industry stakeholders, and research experts to showcase the main outcomes of EuReComp and explore the future of circularity in composite materials.

Stay tuned for more information and the preliminary agenda on our website: www.eurecomp.eu

🔗 Follow EuReComp on LinkedIn and [X](X) to be the first to know when registrations open!

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Our Team

101058089
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48 months

NTUA • Prof. C. Charitidis
info@eurecomp.eu
https://www.eurecomp.eu