

GREEN-LOOP Consortium



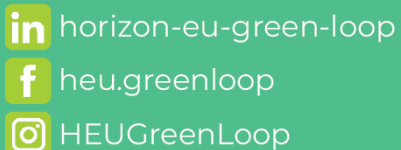
GREEN-LOOP

Sustainable manufacture systems
towards novel bio-based materials



www.greenloop-project.eu

Follow us on



Member of BIO-MATTERS Cluster



Discover how **bio-based products,**
smart manufacturing and energy efficiency
can transform industries



This project has received funding from the European Union's Horizon Europe, grant number 101057765. This includes funds from the UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee, grant number 10038028. Views and opinions expressed are however those of author(s) only and do not necessarily reflect those of the European Union or HADEA. Neither the European Union nor the granting authority can be held responsible for them.



What is GREEN-LOOP

GREEN-LOOP is a project aiming at developing and demonstrating a comprehensive set of innovative, cost-effective, sustainable, green, bio-based products able to substitute traditional materials.

The **implementation of three value chains** is leading to the creation of **three novel bio-based products**, with better mechanical, physical and chemical properties compared with conventional materials.



Multifunctional rubber panels for Building & Construction



Bottle closures for Food & Beverage



Wood composite bearings for Appliances & Tooling

Green Loop is optimising the entire lifecycle of each product, from sourcing raw materials to end-of-life treatment. All manufacturing processes are updated to handle new and improved bio-based materials using Artificial Intelligence.

GREEN-LOOP's bio-based products are aligned with the goals outlined in the **MADE IN EUROPE Roadmap 2021-2027**. As part of this, GREEN-LOOP serves as a model for transitioning to greener manufacturing technologies, integrating both existing and innovative methods to produce bio-based materials.

BENEFITS

GREEN-LOOP aims at enhancing and supporting the bioeconomy at the European level through robust product design adapted to **new sustainable and circular schemes**, reducing the cost of manufacture and accelerating the market introduction of novel bio-based products.

GREEN-LOOP's vision comes to life through **innovative techniques**. These include updating traditional production systems to work with **eco-friendly materials**, electrifying production with tools like **microwaves** and **ultrasound**, implementing advanced monitoring and control systems, and prioritizing the creation of sustainable end products.

GREEN-LOOP covers the whole value chain: biomass sourcing, conversion and pre-treatment, disruptive and **enhanced bio-based production at industrialization system up to TRL6**, end-user testing. The project supports circular activities such as recycling, refurbishing and reusing.

