

PRESS RELEASE

REDYSIGN, towards a recyclable, biobased alternative for fresh meat packaging

The CBE JU-funded REDYSIGN project aims to create a groundbreaking packaging product for fresh meat >98% derived from wood, through the development of 12 innovative resource-efficient processes, 2 food quality sensors and an enhanced paper-recycling process.

Bilbao, October 2023 — REDYSIGN is a new Circular Bio-based Europe Joint Undertaking [funded project](#) in the circular bio-based sector (GA nº101112521). Led by [Tecnalia Research and Innovation](#), it was launched officially on the 3-4 of October in Bilbao with the participation of all the consortium members and a CBE representative. Based on 12 innovative resource-efficient technologies, the project will develop new sustainable bio-based materials which will then assemble to substitute the complex, ubiquitous, non-circular plastic packaging product that is currently used for fresh meat distribution.

Throughout its four-year duration, REDYSIGN will work on creating a completely biobased, smart, and recyclable fresh meat packaging for which every intermediate product – the tray, the barrier coating, the absorbent pad and the transparent film – will be made almost exclusively of wood constituents. In addition, the packaging solution will incorporate two sensors to prevent food spoilage: one to detect early rotting, one to detect breaks in the cold chain during meat distribution and storing.

The project will also implement two innovations to enhance the recycling efficiency. The first one involves using specific identification markers to sort bio-contaminated products accurately at the waste treatment plant. The second relies on the application of advanced oxidation treatments to sanitize the materials and reduce the energy consumption in the subsequent fibre recovery operation, thus making the recycling process more energy efficient.

To carry out the project, a multidisciplinary consortium made up of 13 partners distributed across 7 European countries brings together some of the most advanced companies and research institutes of the European bio-based sector: [Tecnalia Research and Innovation](#), [PackBenefit SL](#), [Metgen OY](#), [Eroski SCoop](#), [Fábrica Nacional de Moneda y Timbre-Real Casa de la Moneda](#), [Valmet Technologies OY](#), [Fibinol OU](#), [McAirlaid's Vliesstoffe GmbH](#), [Holoss- Holistic and Ontological solutions For Sustainability, Lda](#), [Teknologian Tutkimuskeskus VTT Oy](#), [RISE PFI AS](#), [Zabala Innovation](#) and [Fenix TNT SRO](#).

The project is supported by the Circular Bio-based Europe Joint Undertaking and its members. Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CBE JU. Neither the European Union nor the CBE JU can be held responsible for them.

CHALLENGES AND CONTRIBUTION OF THE PROJECT

The world is facing an unprecedented pollution crisis: the mixture of synthetic chemicals, especially plastics, in hundreds of everyday products is putting human health and wildlife at risk. One of the biggest problems is the enormous amount of plastic-based packaging waste generated and its limited recycling rate, which globally only accounts for 40%.

The European Union is tackling this reality by implementing wide-range legislative actions. Boosted by these measures, the new technological knowledge and consumers' awareness of the effects of plastic waste, there has been an increase in the demand of wood-based packaging solutions. Driven by it, the REDYSIGN project will contribute to address existing gaps related to both the technical limitations of existing biobased products and the efficiency of the (bio)industrial production processes associated.

By replacing fossil-based with biobased packaging, REDYSIGN aims to have a triple impact: environmental impact, contributing to the EU's 2050 long-term strategy for a climate-neutral Europe; economic impact, paving the way for the marketability of highly demanded new sustainable packaging products in the fresh meat market and beyond, and social impact, expanding the market share for the fibre-based packaging and, therefore, creating new jobs in the forestry value chain and the biobased industries.

KEYWORDS

Bio-based Industries, Resource-Efficient Processes, Fiber-based fresh meat Packaging, Recyclable-by-design, Smart Packaging

SOCIAL MEDIA

LinkedIn: [@REDYSIGN](#)

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