

# DEMONSTRATORS

## BIO-BASED PACKAGING FOR FOOD AND DRINKS (PRIMARY UPCYCLED BIOPLASTICS)

- e Film and tray for dairy and meat packaging (cream cheese tray, film for vacuum pack)
- e Snack pack (Nut-chocolate bar, instant cocoa powder)
- e Pouch (liquid yoghurt)
- e Beverage brick (Juice)
- e Pulp moulded packaging (yoghurt and liquid yoghurt)

## SRM UPCYCLING INTO COSMETIC PACKAGING, TEXTILES AND COMPOSITES

- e Personal care flowpack (wet wipes)
- e Personal care injected jar
- e Small injected bottles
- e Packaging textile (reusable shopping bags)
- e Composites (Carrier boxes and cases)



**PRESERVE** will enable know-how transfer through its value chain of actors: 7 technology institutes & academia; 4 polymers and bio-based raw materials producers; 4 plastic packaging converters; 3 end-users packers; 5 up-recyclers and providers of technological solutions; health, safety and environment assessment; 2 innovation and dissemination specialists.



 <https://cordis.europa.eu/project/id/952983>

 <https://www.preserve-h2020.eu>

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 PRESERVE H2020  PRESERVE H2020

 @preserve\_h2020

#aBetterChance



HIGH PERFORMANCE SUSTAINABLE  
BIO-BASED PACKAGING WITH TAILORED END  
OF LIFE AND UPCYCLED SECONDARY USE

**Project Coordinator:** IRIS (Spain)

**Overall project budget:** € 7 999 576,25

**Start date:** 1 January 2021

**End date:** 31 December 2024

**Total months:** 48



PRESERVE has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952983.

# WE IMPROVE PACKAGING RECYCLING...

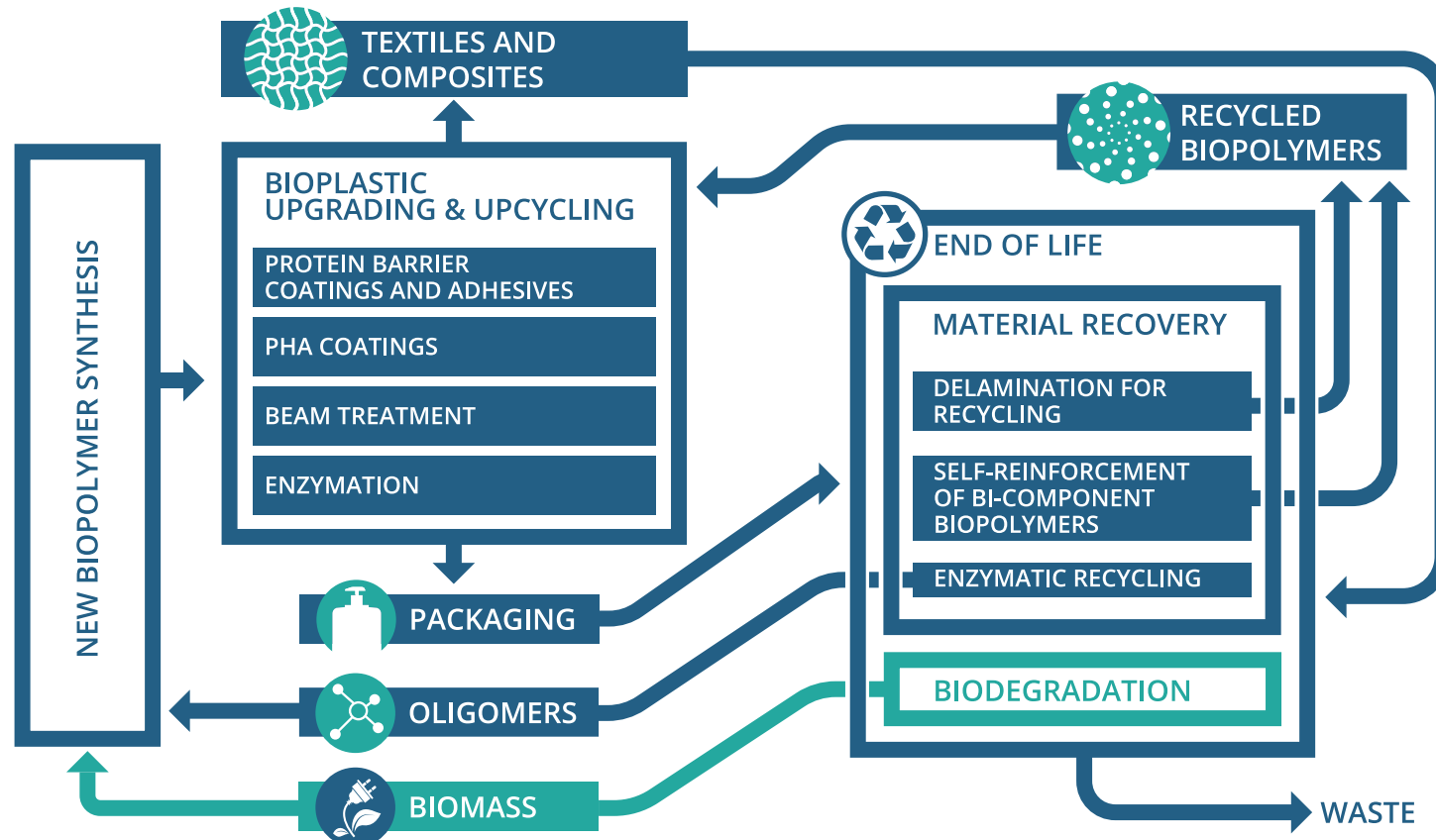
Of the 50 million tonnes of plastics consumed each year in Europe, only 32% of the resulting waste is currently recycled. Given that packaging consumes more than 40% of all plastic produced each year, improving its circularity from origin to subsequent life cycles is more than urgent. PRESERVE is developing solutions to improve the recyclability of food packaging. Introducing a life cycle approach with innovative materials can help us reaching unexplored new potential for plastic and cardboard packaging and its end of life.

# ...BECAUSE EVERYTHING DESERVES A BETTER CHANCE

In **PRESERVE**, we have the potential to change up to the 60% of packaging currently used by the market.

## How can we do this?

- 1 By enhancing bio-based packaging in terms of properties that currently limit the application of bioplastics as well as their recycling.
- 2 By recovering biopolymers and reintroducing them as secondary raw materials.  
By upcycling those secondary raw materials into non-food containers.
- 3



## OUR OBJECTIVES

Our upcycling strategies to boost packaging performance in the first and subsequent life cycles of the materials comprise several steps:

- Better packaging design allowing delamination with bio-based barrier coatings and adhesives, eBeam treatment and enzymation to prevent microplastics release.
- Establishment of a delamination pilot plant, with subsequent adjusting and upscaling of the new recycling process, with an initial sorting via advanced photonic and artificial intelligence approaches.
- Development of upcycled demonstrators deriving from recycled food packaging, with at least 85% of recovered materials for non-food-contact applications.