



# PRESERVE

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

### WE IMPROVE PACKAGING RECYCLING...

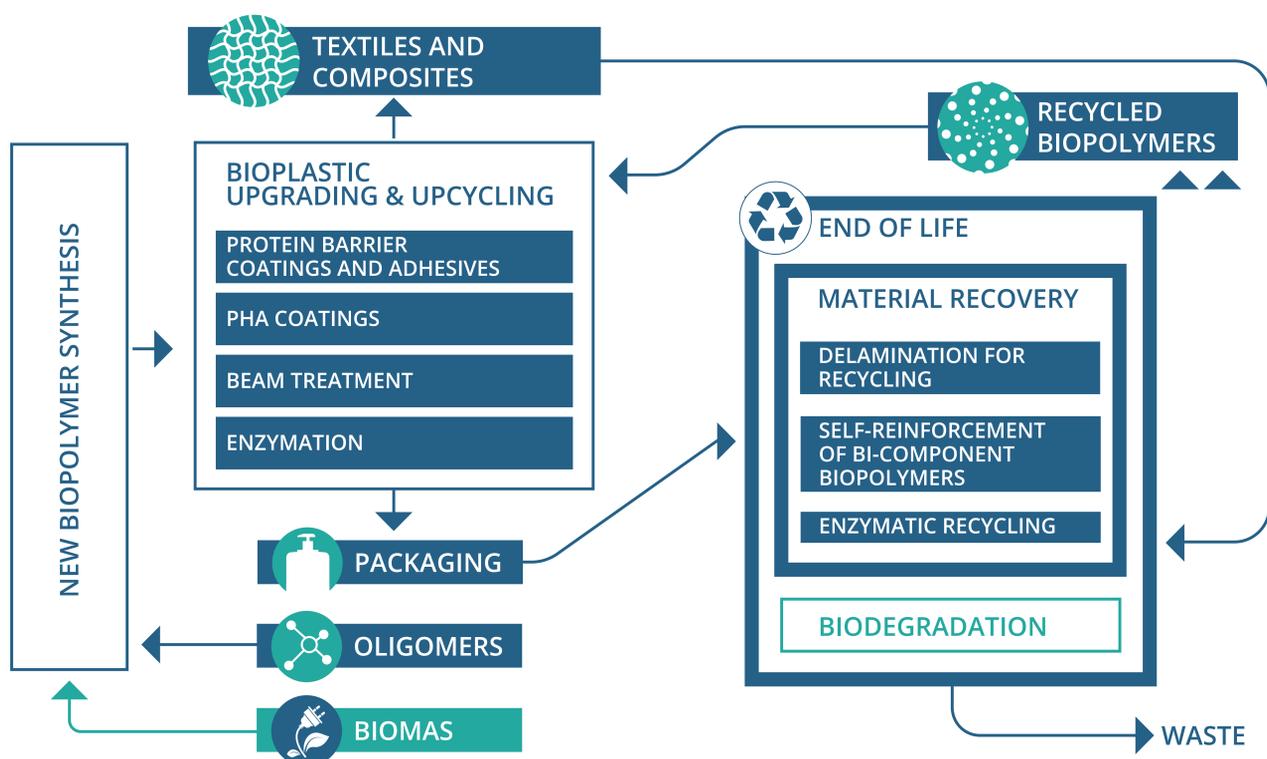
Of the 50 million tonnes of plastics consumed each year in Europe, only 32% of the resulting waste is currently recycled. Given that packaging consumes more than 40% of all plastic produced each year, improving its circularity from origin to subsequent life cycles is more than urgent. PRESERVE is developing 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.
- 3 By upcycling those secondary raw materials into non-food containers.



### OUR OBJECTIVES

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

- e Better packaging design allowing delamination with bio-based barrier coatings and adhesives, eBeam treatment to improve mechanical and barrier properties and novel methodologies to reduce the release of microplastics based on the application of functional finishing treatments.
- e 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.
- e Development of upcycled demonstrators deriving from recycled food packaging, with at least 85% of recovered materials for non-food-contact applications.

### PARTNERS INFORMATION



26 Partners  
9 Countries  
7 Research and Technology Organisations  
10 Small and Medium Enterprises  
9 Large Enterprises



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