

25<sup>th</sup> November 2025 | Online



**BioPackMan**

BIODEGRADABLE PACKAGING MATERIALS ADVANCING  
CIRCULARITY, SUSTAINABILITY & ECO-INNOVATION

## BIODEGRADABLE PACKAGING MATERIALS ADVANCING CIRCULARITY, SUSTAINABILITY & ECO-INNOVATION

European Bioplastics Touchbase  
with BioPackMan

*T. Kosanovic Milickovic, E. Gkartzou,  
M. Karamitrou, C. Charitidis*

# Coordination Team



**Prof. Costas A.  
Charitidis**

NTUA. R-NANO Lab Director  
Project Coordinator  
[charitidis@chemeng.ntua.gr](mailto:charitidis@chemeng.ntua.gr)  
+ 30 210 772 4046



**Dr. Tatjana Kosanovic  
Milickovic**

Senior Researcher  
Coordination Team Member  
[tkosanovic@chemeng.ntua.gr](mailto:tkosanovic@chemeng.ntua.gr)  
+ 30 210 772 3260



**Eleni Gkartzou**

Researcher  
Coordination Team Member  
[egartzou@chemeng.ntua.gr](mailto:egartzou@chemeng.ntua.gr)  
+ 30 210 772 3104



**Dr. Melpo Karamitrou**

Senior Researcher  
Coordination Team Member  
[mkaramitru@chemeng.ntua.gr](mailto:mkaramitru@chemeng.ntua.gr)  
+ 30 210 772 3260



# Outline



- **Project ID**
- **Scope**
- **Consortium**
- **Specific Objectives**
- **Ambition**
- **Activities via innovation pillars**
- **Collaboration activities**



# Project ID



**Call:** HORIZON-CL4-2024-RESILIENCE-01-TWO-STAGE

**Topic:** HORIZON-CL4-2024-RESILIENCE-01-35 Biodegradable polymers for sustainable packaging materials (IA)

**Type of Action:** HORIZON-IA

**Acronym:** BioPackMan

**Full title:** Biodegradable Packaging Materials Advancing Circularity, Sustainability & Eco-innovation

**Number:** 101178576

**Duration:** 48 months

**Start Date:** 01 Jun 2025

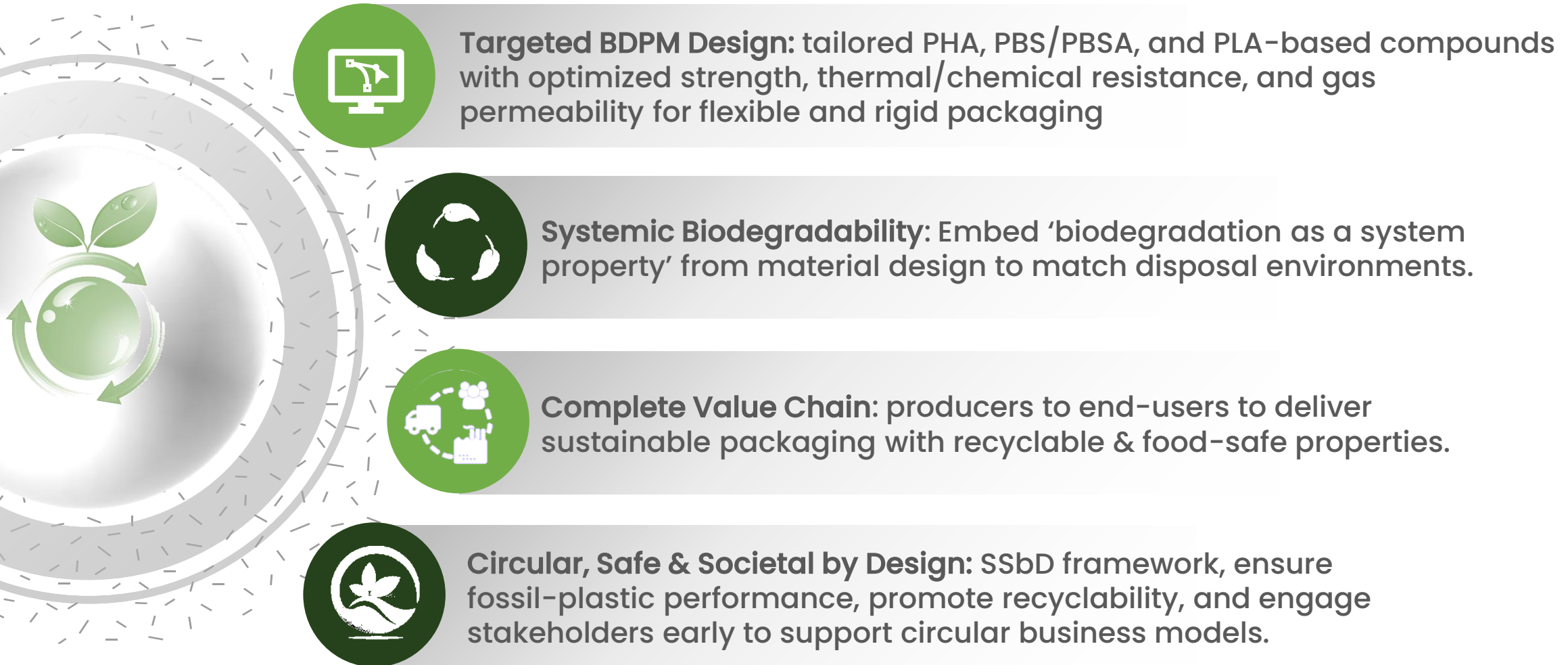
**End Date:** 31 May 2029

**Estimated Project Cost:** €9,577,330.00

**Requested EU Contribution:** €7,999,292.51

**Project Coordinator:** prof. C.A Charitidis, NTUA-R-NanoLab

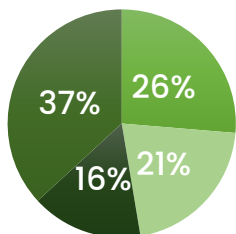
# SCOPE



# CONSORTIUM



BioPackMan



- University (5)
- Research centre (4)
- SME (3)
- LE (7)



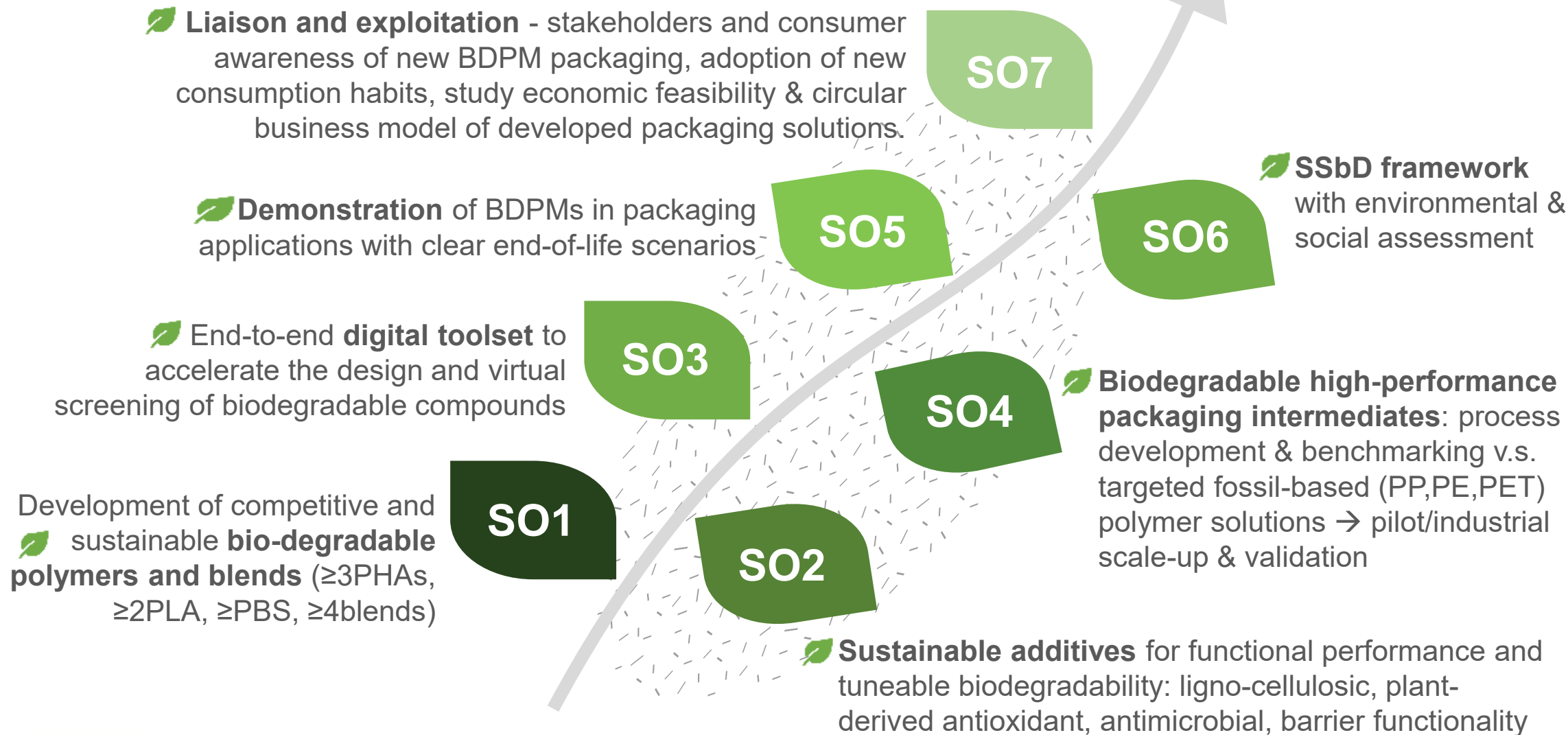
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- 2 – AIMPLAS
- 3 – BEWARRANT
- 4 – BIOPLASTECH
- 5 – BIO-MI
- 6 – LOGOPLASTE
- 7 – ITENE
- 8 – NOVAMONT
- 9 – ITA
- 10 – BOLTON
- 11 – JOTIS
- 12 – FUTERRO
- 13 – AIMEN
- 14 – NTNU
- 15 – TALLIN
- 16 – EXUS
- 17 – AHSA
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# OBJECTIVES



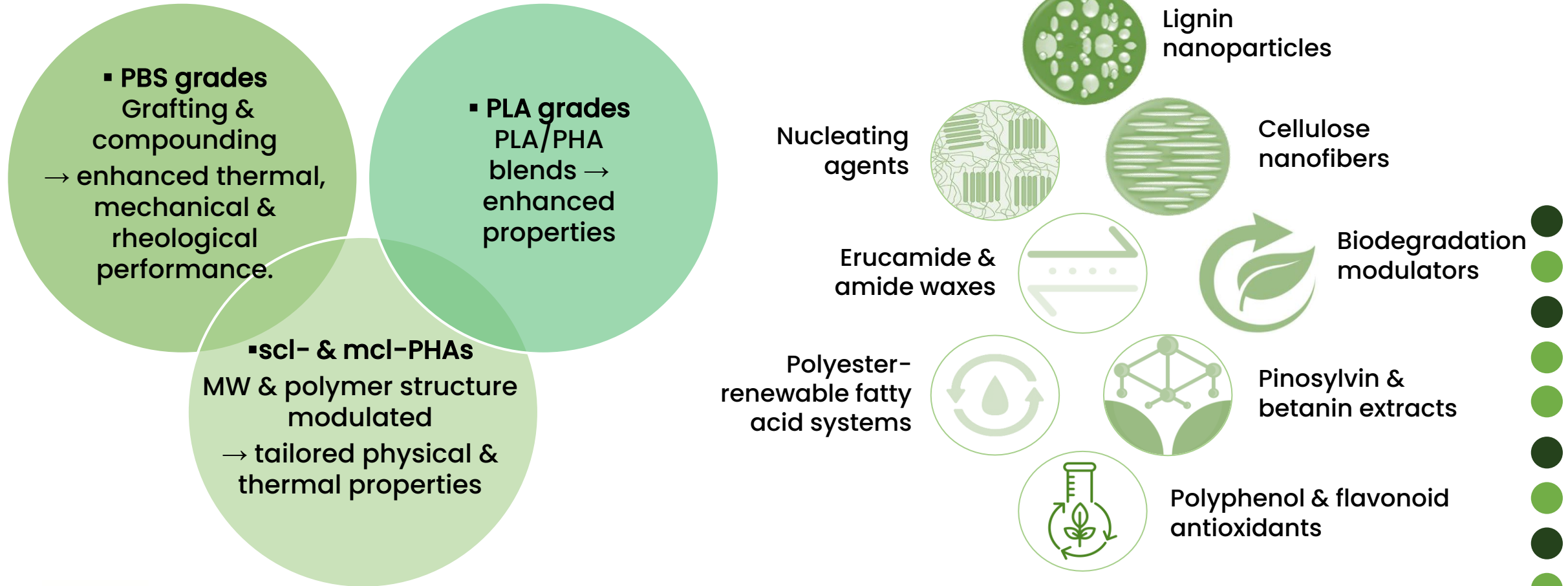


# AMBITION

**Ambition 1. Production of novel biodegradable polymers → SO1**

**Ambition 2. Sustainable additives for reinforcement & functional properties → SO2**

➤ Delivering a full portfolio of innovative biodegradable compounds

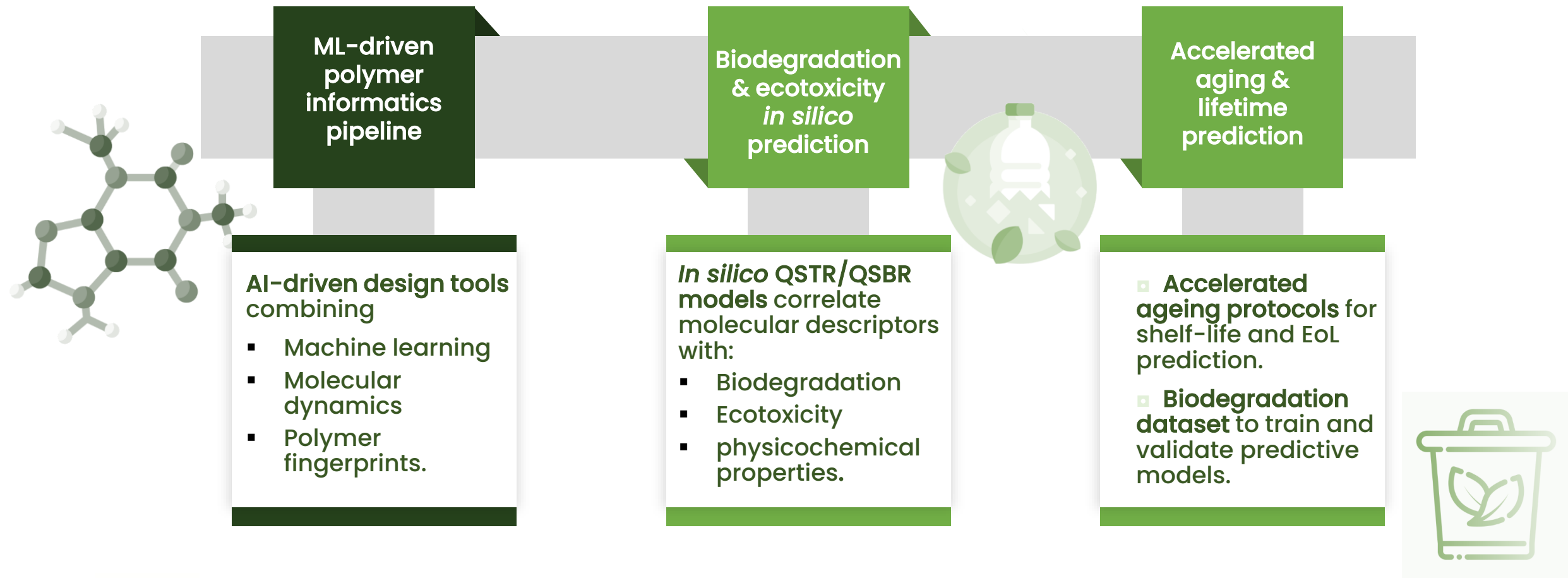




# AMBITION

## Ambition 3. Digital toolset for accelerated discovery & design of optimal BDPMs → SO3

➤ **BioPackMan platform** for virtual screening for accelerated discovery & design of biodegradable compounds



# AMBITION

Ambition 4. Biodegradable & sustainable packaging solutions → SO3, SO4, SO5

## #1. Laminates and/or coextruded films

- Flexible packaging prototypes
- Plastic pouches for confiserie products & laundry detergents \ dish-washing products.
- BDPMs validated for film casting, extrusion, lamination.



Novel tailor-made  
biodegradable, recyclable  
packaging structures

## #2. Rigid packaging – bottles

- Rigid packaging prototypes
- Bottles for syrups and powders, shower gel & cleaning products
- BDPMs validated for EBM, IM & SBM processes.



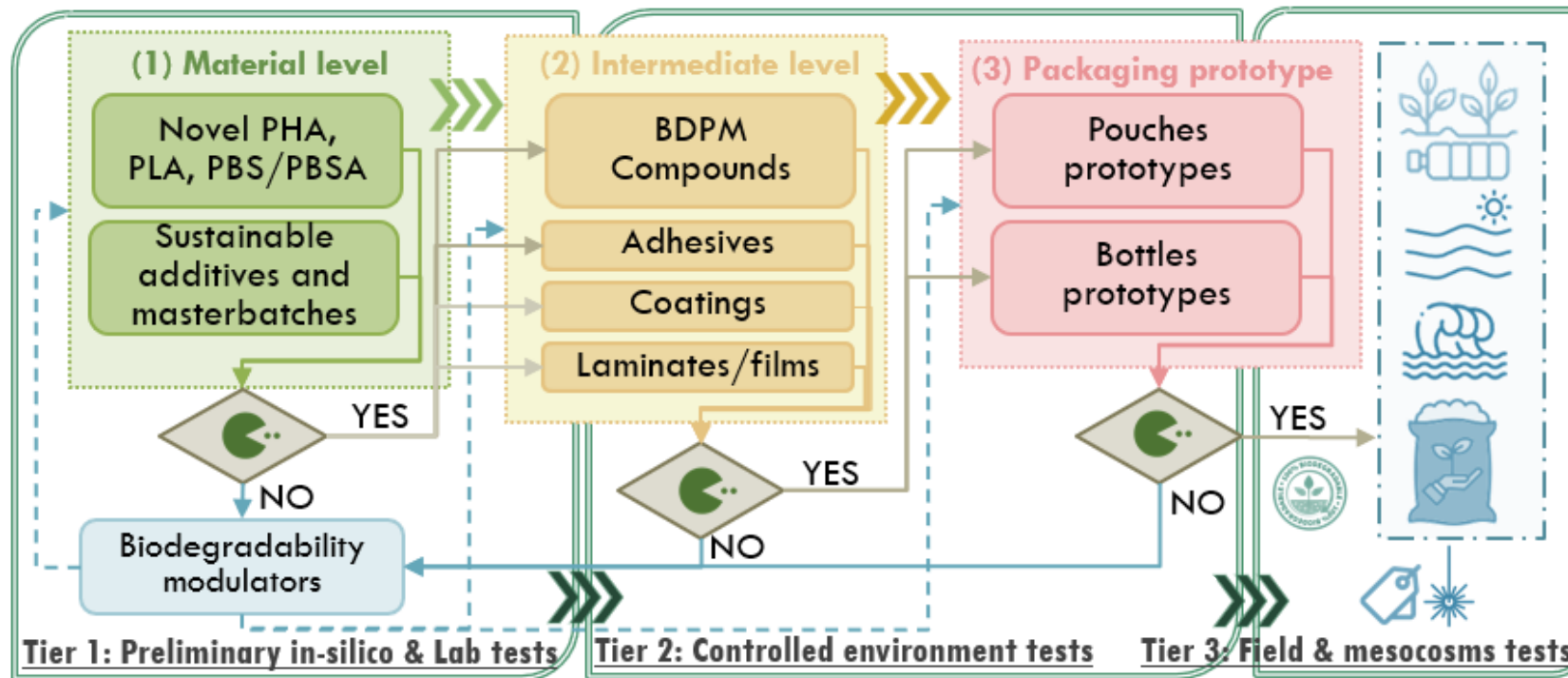
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# AMBITION

## Ambition 5. Environmental-specific biodegradability → SO5, SO6

- Adopt a systemic approach to biodegradation & circularity, aligned with diverse environmental & EoL scenarios, following SSbD principles.

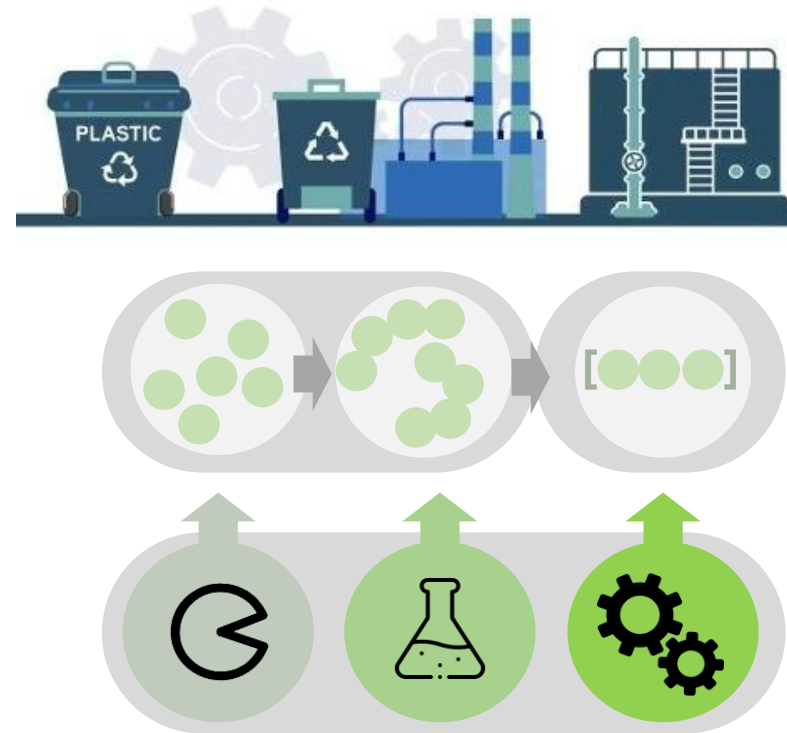


# AMBITION

Ambition 6. Sound and case-specific EoL assessment – demonstration of recyclability → SO6

Ambition 7. Establishment of the safe-and-sustainable-by-design (SSbD) framework → SO6

- **Comparative cradle-to-cradle scenarios:**
  - exploring sorting, mechanical, chemical & enzymatic recycling
  - to increase the efficiency
  - to assess properties/performance vs. recycled content (targeting 30%).
- **≥1 mechanical & ≥1 chemical recycling strategies** developed with 60–80% process yield.
- Reclaimed monomers/ oligomers assessed as feedstock for PLA/PHA production.



# AMBITION



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Ambition 8. Social engagement to enhance acceptance of biodegradable packaging products → SO7

## Collaborative awareness campaigns

- Strategic communication campaigns to increase **consumer awareness**
- Highlight benefits of BDPM packaging for everyday use & circular EOL treatments, proper **disposal methods**.
- **Clear labeling** to build consumer trust
- **Eco-design** for circular packaging

## Skilling/education programs

- Align current and future **education and learning dimensions**
- Preserve EU workforce **industry-specific knowledge**
- Promote market readiness, strengthen EU market positioning, **industrial leadership & competitiveness**.

## Policy recommendations

- Decrease the use of fossil-based resources.
- Reduce the CO<sub>2</sub> emissions.
- Knowledge on **safety and environmental assessment** of new BDPMs.
- **Protect human health and environment** from harmful & toxic chemicals.
- Creation of new jobs.



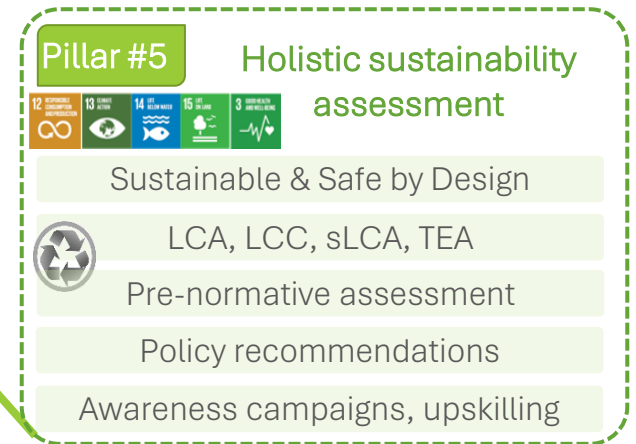
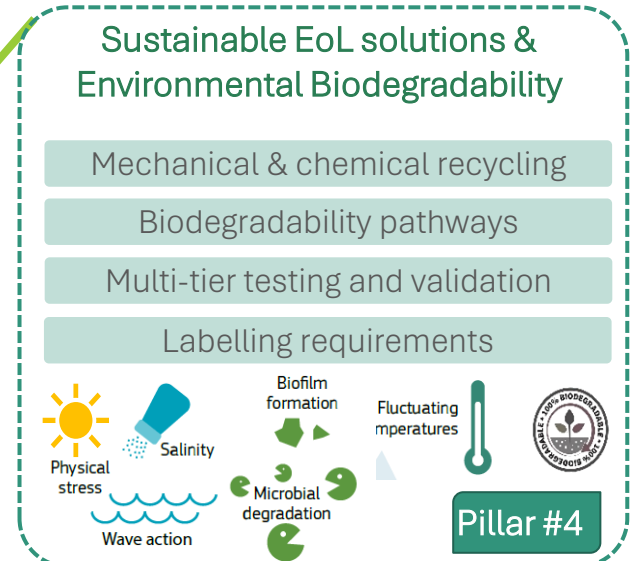
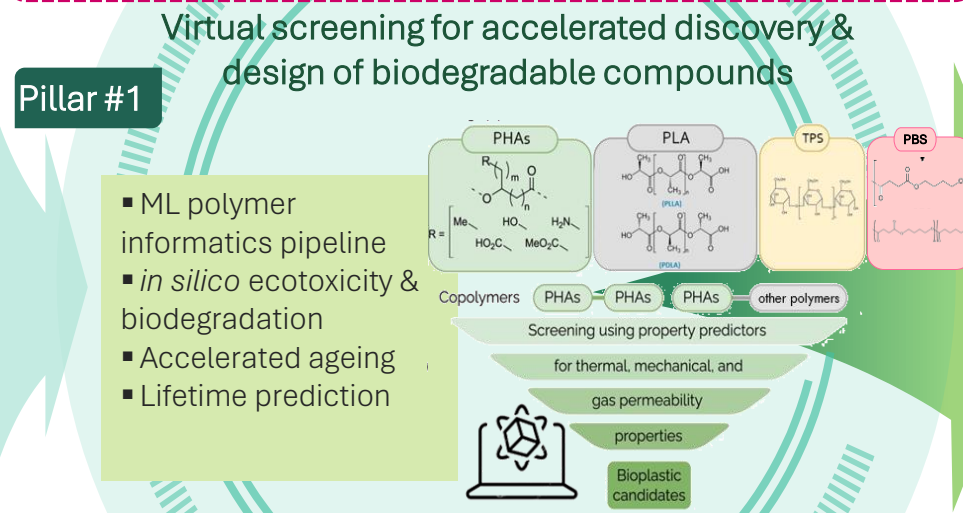
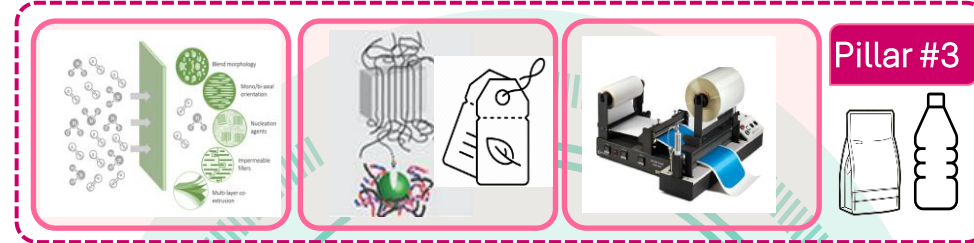
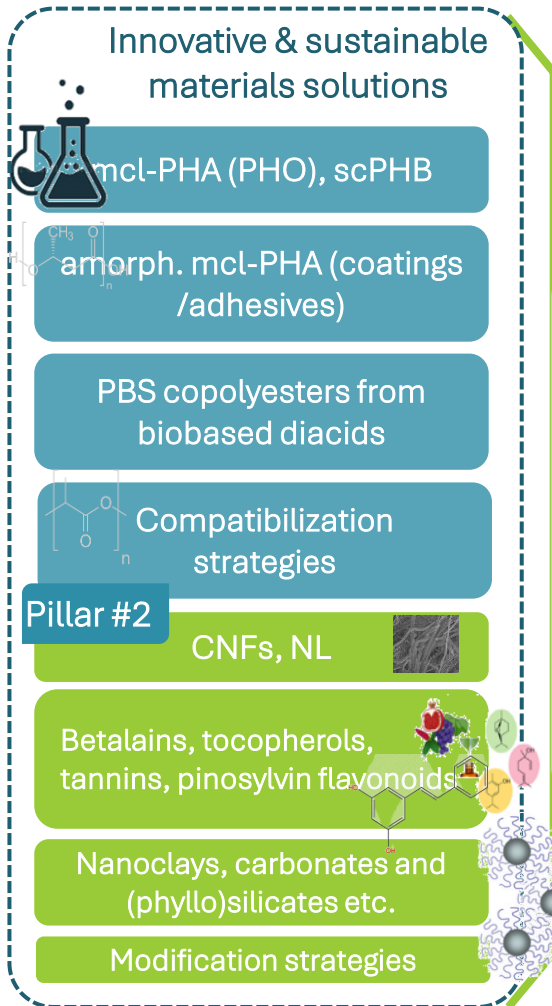
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# INNOVATION PILLARS



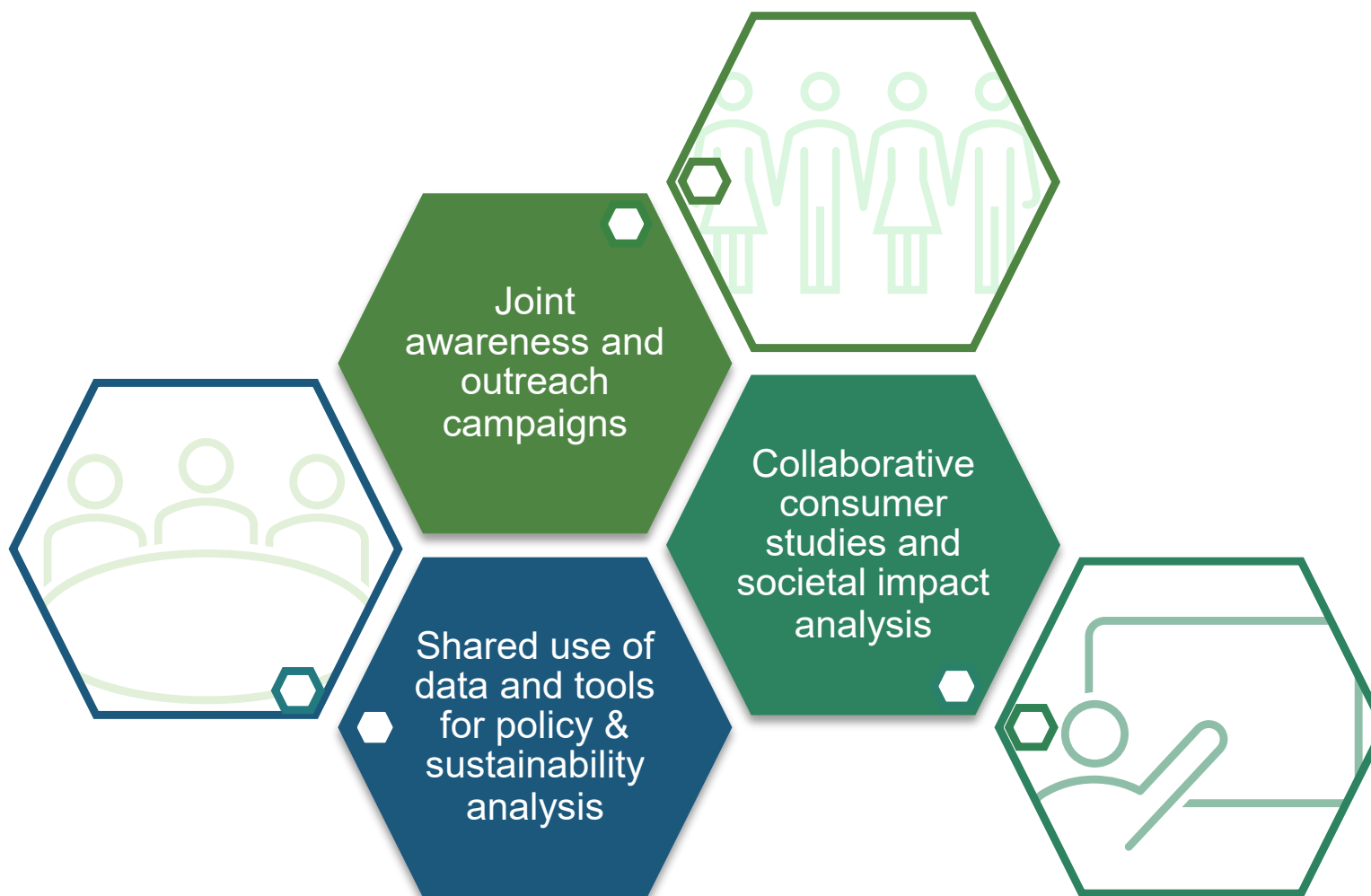
## BioPackMan Advisory Board 4 Biodegradable Packaging (AB4BP)

- AB4BP will feed novel perspectives into BioPackMan, through organization of working groups/strategic committees, communication & dissemination activities with AB4BP.
- Coordinators of sister projects (be-UP, GRECO, E-OILE & UPCYCLE), relevant ongoing projects (OITB, CBE, CL4, CL6) and representatives from associations (European Bioplastic) invited.
- Experts in biodegradable/biobased packaging value chains, polymer chemistry and process scale-up, sustainability standards & ecolabels, market and business models, digital tools, EU policy & regulation, and social/behavioural sciences
- Provide strategic advice and recommendations, participate in annual meetings and consultations, advise on EU legislation and compliance, support dissemination via networks, contribute to stakeholder engagement, and offer ad-hoc guidance on regulatory, technical, and market issues.





# COLLABORATION IDEAS WITH 'SISTER' PROJECTS & EUBP



europeanbioplastics



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[biopackman.eu](http://biopackman.eu)



## **EUBP members**

**Thanks for your attention!**