

PRecycling - Plastics Recycling from and for home appliances, toys and textile



ANALYSIS AND CHARACTERIZATION OF WASTE MATERIALS

HIGH QUALITY RECYCLATES PRODUCTION

TOOLS FOR TRACING MATERIALS

To develop an **easy-to-use methodology** for:

- **sampling and analysis procedures of recyclates**

- **recyclate** definition

To promote the circularity and safety of plastic materials:

- **polymer recycling** based on the degradation degree
- production and verification of **recyclate's quality**
- **smart traceability solutions**
- digital information management

'waste to product' transformation is scalable, replicable, traceable, commercially viable, **safe to use** and with predicted lifetime.

New added value products from **recycled materials** for **home appliances, toys for children and textiles**

A **high quality, unique materials** made from **recyclates** can find a new use, both within the **same and new supply chains**.



The challenge: changing the **'waste problem=cost'** for the EoL disposer to a **'re-born product=value'**, which is **fully recycled and safe**, preserving the embedded value as it moves through the whole process, will be faced by the proposed methodology.



LCA/LCC/sLCA

Circular and sustainable products

Digital Twins

Social engagement

Project Acronym: PRecycling

Project number: 101058670

Call identifier: HORIZON-CL4-2021-RESILIENCE-01

Topic: HORIZON-CL4-2021-RESILIENCE-01-10 Paving the way to an increased share of recycled plastics in added value products (RIA)

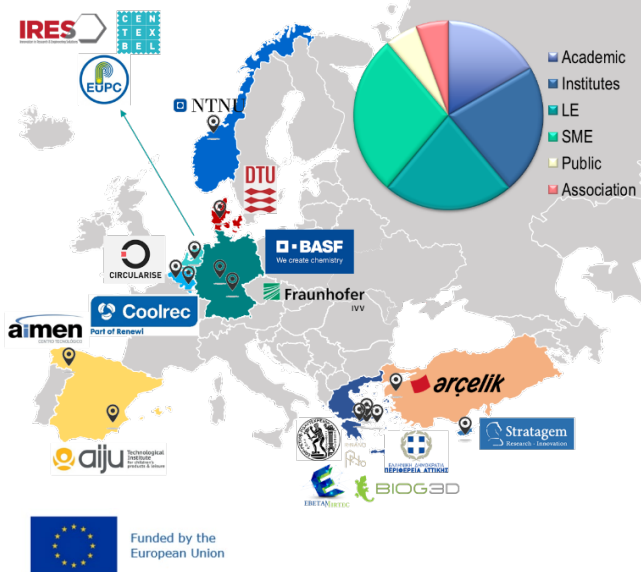
Number of partners: 17

Duration: 48M (1.04.2022 – 31.03.2026)

Funding: ~7M €

Coordinator: NTUA, R-NanoLab, Prof. C.A. Charitidis

Website: <https://www.precycling-project.eu/>

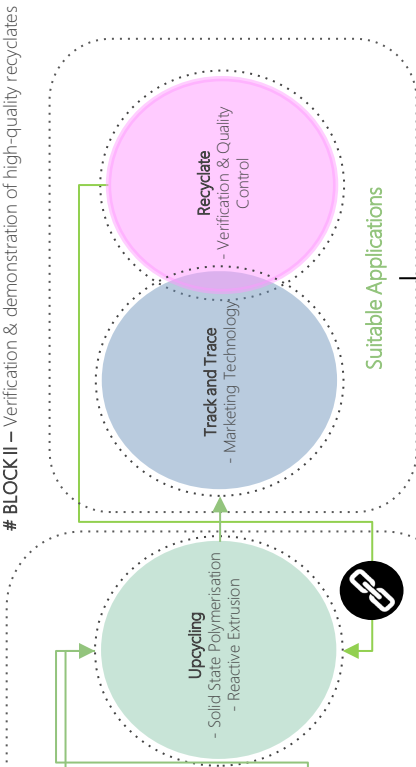
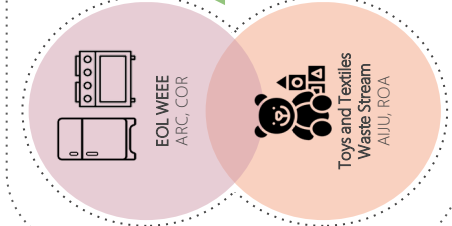


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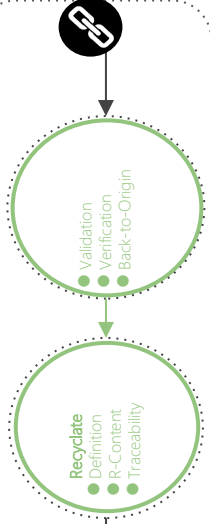


BLOCK I – Novel techniques for definition & production of recyclates



BLOCK II – Verification & demonstration of high-quality recyclates

BLOCK IV – Sustainable & circular design of products for recycling market



BLOCK III – Prototyping & validation

