



Upcycling mineral and timber-based waste from construction & manufacturing process industries through eco-design, advanced logistics, quality control and digital solutions



Construction and demolition waste (C&DW) accounts for more than 30% of all waste generated in the EU, reaching approximately 450-500 million tonnes annually: in terms of volume, it is the largest waste stream in the EU across all industrial sectors.



Timber material generates a tremendous amount of waste annually from building element manufacturing, construction, demolition, and renovation, while only part of it is currently being recovered, with high variability per country.

CIRCULess aims on fostering circularity in the construction and manufacturing process industries, by minimizing Construction and Demolition waste as well as Manufacturing waste, with focus on mineral and timber-based material streams, by developing new processes for circularity of secondary materials from wastes/residues for all industrial processes, without compromising quality and performance as well as sustainable-by-design circular products.

CIRCULess project will experiment new circular products and processing techniques to improve quality and performances of secondary materials up to industry standards and improve environmental friendliness. These actions will be supported by a tailored digital platform for waste management, orienting decision making & operation, while recommendations for standards updates and relevant training material for both upskilling and training will be created.

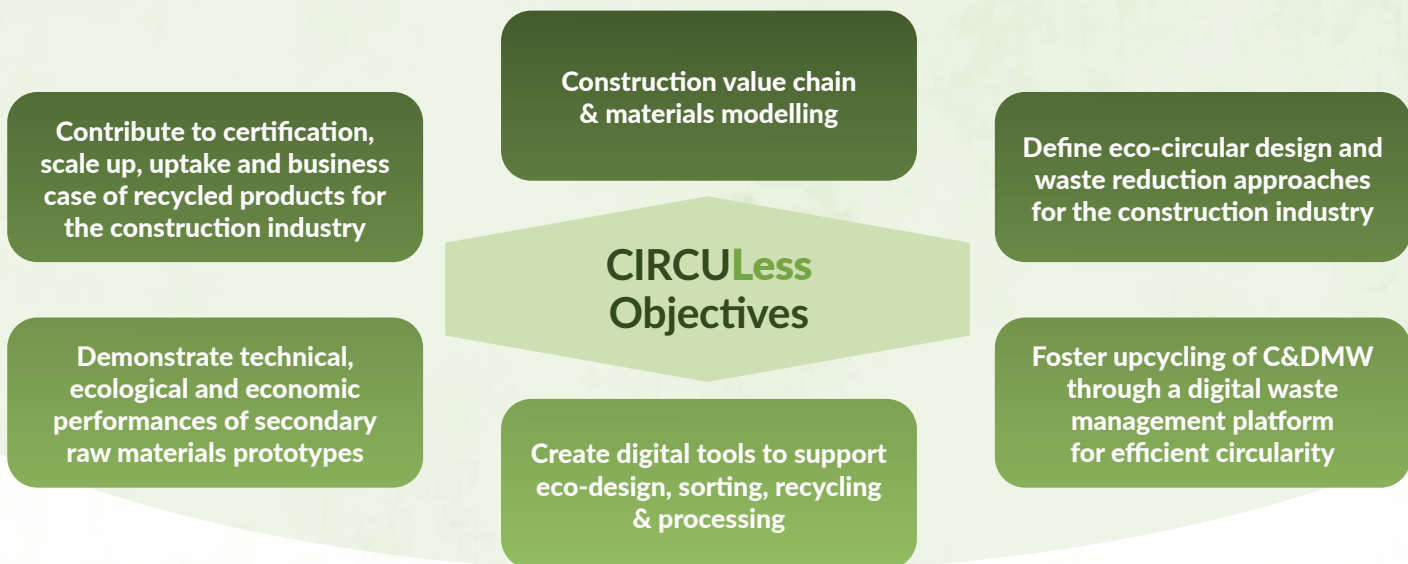
CIRCULess Targets

- Construction value chain models & market trends
- **CIRCULess** microservices platform
- Secondary raw material passport
- Characterization approaches for mineral and bio-based materials
- Processing techniques for mineral and bio-based materials
- Sorting, storage and logistic optimization solution
- Collaborative design approaches
- Alternative ways to reuse/ repurpose EoL waste
- Performance envelope
- Prototype of new secondary materials /products
- Customer perception for market acceptance
- Reskilling & training for circularity
- Guidelines for digitalization for circular-construction & eco-design
- Contribution to standardization



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20 PARTNERS



12 DIFFERENT EU MEMBER STATES

DENMARK


UK


NETHERLANDS


BELGIUM

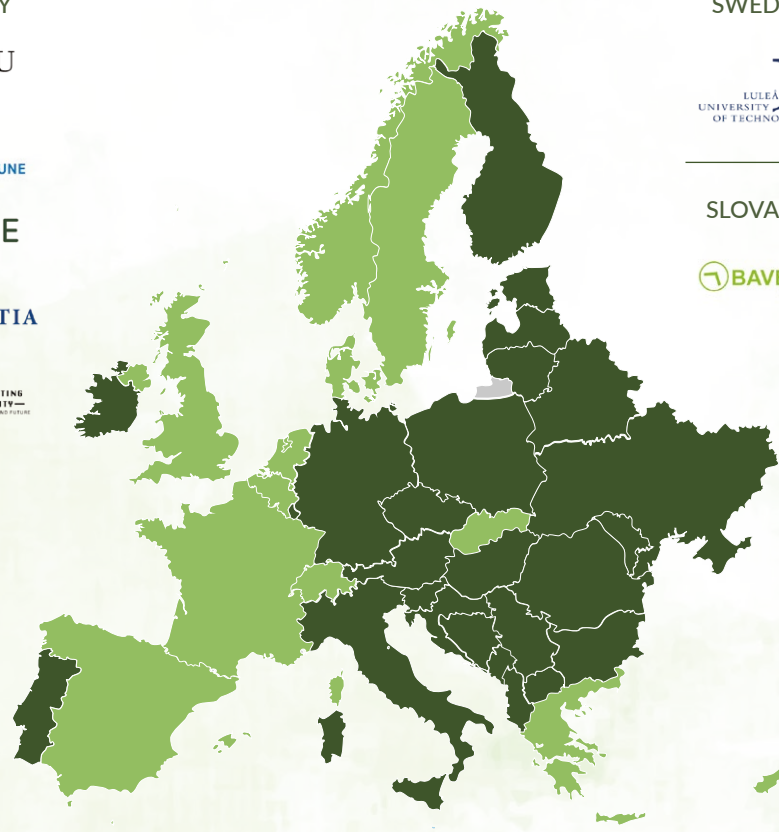

SWITZERLAND


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SWEDEN


SLOVAKIA


GREECE



CYPRUS


SPAIN





GA Number: 101138330

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