

## Interdisciplinary project consortium

The CIRCULAR FOAM consortium is composed of 23 partners from 9 European countries. It represents all actors required to close the value circle of rigid polyurethane foams: process industries, manufacturing, waste management and logistics, technology providers, research and academia partners including, social scientists and economists working together with the public sector and citizens.



Euro - Centrum  
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## Project title

CIRCULAR FOAM – systemic expansion of territorial circular ecosystems for end-of-life foam

## Project duration

01.10.2021 – 30.09.2025

## Budget:

€ 19.192.150

EC contribution:

€ 15.756.499

## Internet & social media

Homepage: <https://circular-foam.eu>

LinkedIn: @Circular Foam

Twitter: @Circular\_Foam

## Design

PM-GrafikDesign

## Picture credits

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P. 2: © UNILIN Insulation

P. 3: © Electrolux Italia

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# CIRCULAR FOAM



## Systemic expansion of territorial circular ecosystems for end-of-life foam

## Recycling of end-of-life polyurethane

A prerequisite for recycling is a suitable collection, dismantling, (fine) sorting and recycling system. In CIRCULAR FOAM, these waste treatment steps and technologies are developed and adapted to the properties of polyurethane (PU) and its applications and to the requirements of the chemical recycling processes. The latter will contribute to making waste a valuable source of alternative raw materials for chemical industry, helping to become more independent of fossil-based resources.

## Systemic solution for a circular value chain

Recycling technologies alone cannot transform a value chain. Therefore, CIRCULAR FOAM will also address Design for Circularity for recycling and facilitate the interaction and collaboration between stakeholders necessary for future regional implementation of the technologies and potential investments.

Rheinisches Revier in NRW/Germany, Katowice in Silesia/Poland and Greater Amsterdam region/the Netherlands have been selected as pilot regions jointly developing a blueprint model of the circular value chain, which will address concepts for overcoming non-technological barriers and replicability to further regions.

If applied across Europe, the blueprint could result in the annual reductions of up to

- 1 million t of waste
- 2.9 million t of CO<sub>2</sub> emissions
- 150 million € costs for incineration

In the last year of the project, the whole eco-systemic solution, optimised and followed by a life cycle and techno-economic assessment, will be demonstrated. One refrigerator will be manufactured using chemically recycled PU rigid foam.

In 2019, about 2100 kt of rigid PU foam was produced in the EU, mostly used as insulation material in refrigerating appliances and as thermal insulation in the construction industry. Although appliances are collected in Europe in significant quantities, their PU parts are mainly incinerated or landfilled, due to the lack of suitable recycling processes. In the construction industry, despite increasing use and demand for PU foams, there are no collection practices for end-of-life PU streams at all. Therefore, solutions for collection, dismantling, (fine) sorting and recycling of the material are urgently needed.

