



PolyUrethane Recycling Towards  
a Smart Circular Economy

## Deliverable

D5.5 Business case and exploitation plan

WP5 - System innovation, Sustainability Assessment & Business

### Project Information

Grant Agreement n°	814543
Dates	1st January 2019 – 31st December 2022

#### PROPRIETARY RIGHTS STATEMENT

This document contains information, which is proprietary to the PURESMT Consortium.  
Neither this document nor the information contained herein shall be used, duplicated  
or communicated by any means to any third party, in whole or in parts, except  
with prior written consent of the PURESMT consortium.

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 814543.

The PUReSmart project results presented reflect only the author's view. The Commission is not responsible for any use that may be made of the information it contains.

PUReSmart RESTRICTED - Under Consortium Agreement, Confidential until Oct 1st 2026.



## Publishable Summary

The target of this deliverable “D5.5 Business case and exploitation plan”, is to evaluate how the technical results of the PUREsmart project could be materialised into concrete products and what are the potential exploitation routes for the industrial partners.

Looking at the technical results overall of PUREsmart, the CAPU materials are still not mature enough to explore on an industrial level, and still need a development trajectory, before being able to explore.

The sorting and chemolysis technologies have very promising results. PUREsmart is proving that closing the loop is possible for flexible PUR, with high recycled content (>95%) on both TDI and Polyol side in the same applications, making PUR a real circular material. Exploitation plans for sorting and chemolysis are being made by the industrial partners Redwave, Covestro and Recticel Engineered Foams.

Redwave now offers the first NIR sensor-based sorting solution to reuse flexible polyurethane foam. For the first time in the industry's history, NIRS is being used to sort PU foams.

With the initiative, Evocycle® CQ Mattress, building on the PUREsmart project, Covestro is committed to transform end-of-life mattress foam directly back into PUR main building blocks, give them a new life and bring these material back into the value chain.

Foams containing the recycled materials (isocyanate and/or polyol), will be brought to the market by Recticel Engineered Foams within the existing sales and marketing channels.