

# The WoodTreat project: toward recovery of clean secondary materials from “highly polluted” post-consumer wood



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## Context and objectives

Wood acts as a CO<sub>2</sub> sink. Thus, increasing its use of wood in building is a sustainable way to mitigate global warming. However to avoid to increase the pressure on forest, maximize the CO<sub>2</sub> fixation and extending its service life, timber need to be treated with preservative. These compounds are reducing the recyclability of wood at the end of its life in a circular economy since the biocides could persist in sequential recycling loops. Wood waste comprises of several wood products with different levels of contamination, and the management of this complex feedstock requires a range of methods and the collaboration of many stakeholders. The most polluted grade (highly polluted post-consumer wood, HPPCW), often referred to as Grade C or AIII/AIV depending on the country, consists of preservative-treated wood and is currently not recycled. Wood preservation compounds pose a significant threat to not only to the environment but also to human health, and therefore it is a high priority to develop new methods to distinguish chemically contaminated wood waste along with efficient cleaning and remediation technologies.

The WoodTreat project, addresses the pressing challenge of valorizing highly polluted post-consumer wood waste (HPPCW) and creosote-treated wood (CTW). These waste streams, often contaminated with hazardous preservatives are currently incinerated or landfilled. This poses significant environmental and health risks

WoodTreat aims at developing techniques to recover clean secondary materials from post-consumer highly polluted wood, reducing waste, cutting CO<sub>2</sub> emissions, promoting bio-based products, and driving stakeholder engagement for sustainable policy

## Consortium & project

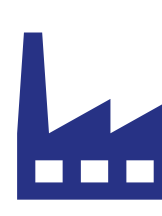
18 partners led by SLU



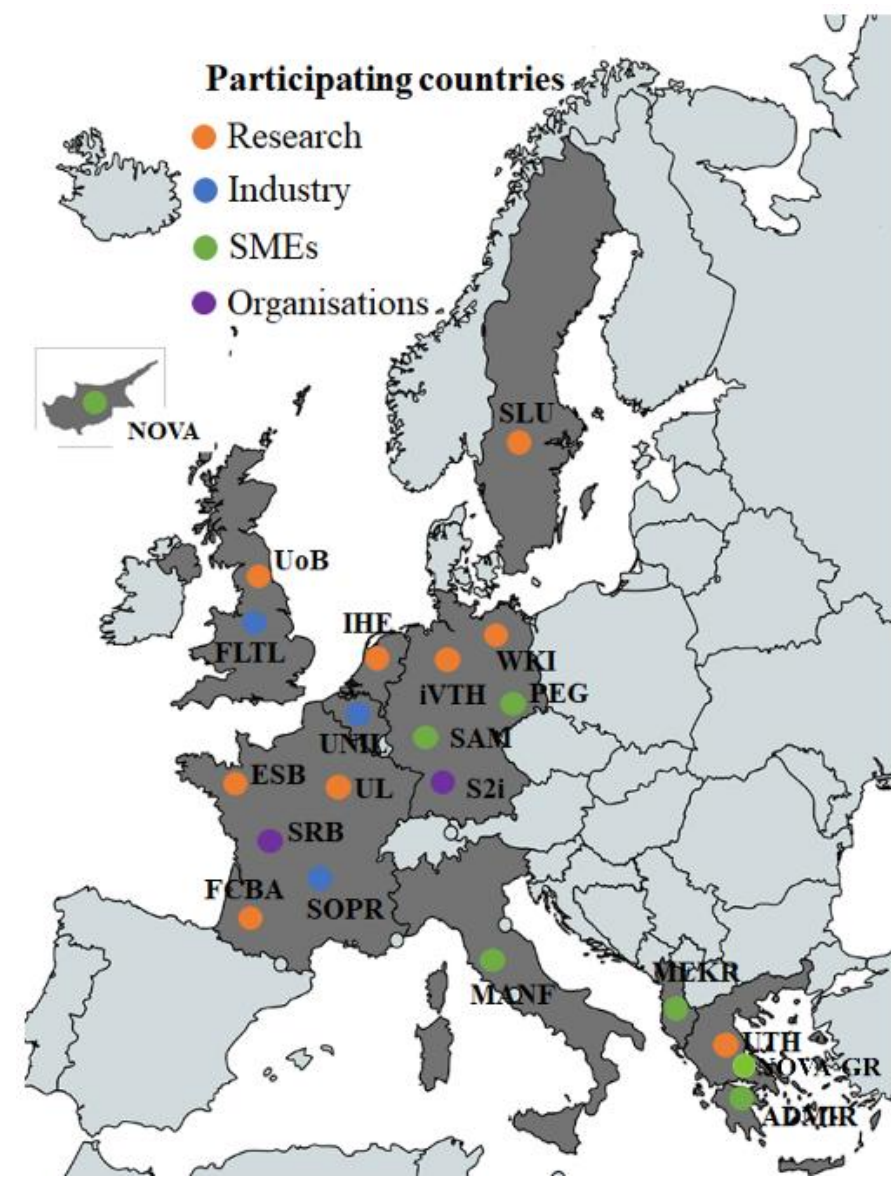
9 RTOs



6 SMEs



3 Large Companies



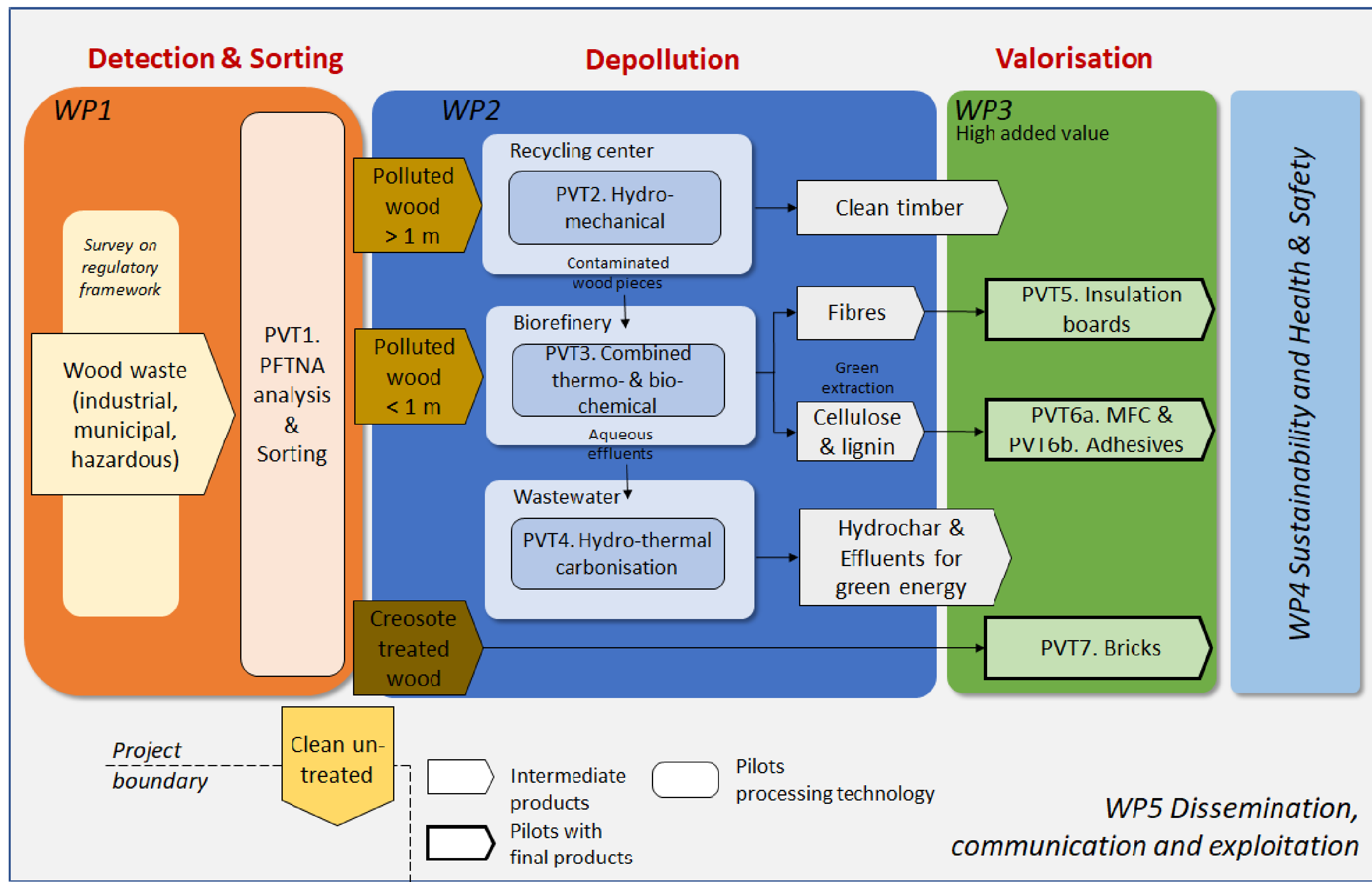
**CBE JU contribution:** € 3.5 million

**Duration:** September 2025 – September 2029

**Feedstock:** Use of wood waste as a feedstock

**Main products:** Circular industrial products:  
(insulation boards, MFC, adhesives, clay bricks)

## Project overview & PVTs

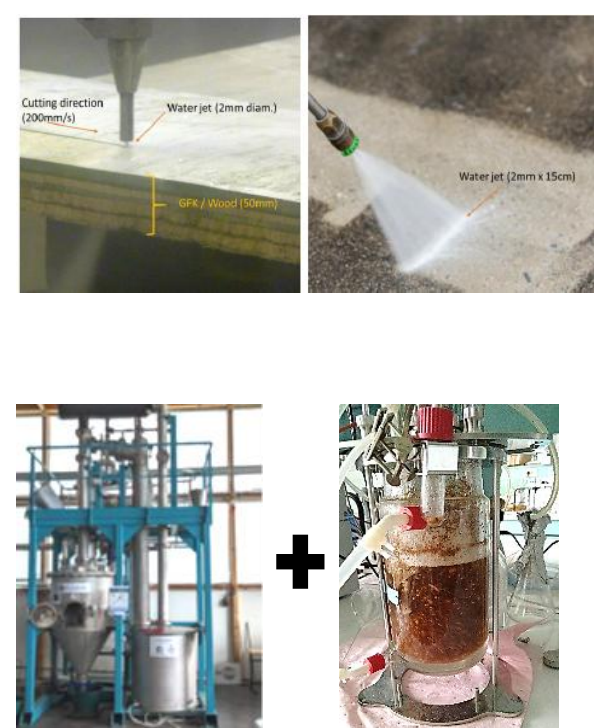


**WP1's** objective is to study factors that could impact the viability of extracting clean materials from highly polluted post-consumer wood (HPPCW), including the development of best detection methods and management options of wood waste that bridge the conflicting goals of waste wood processing and decrease unsustainable practices.



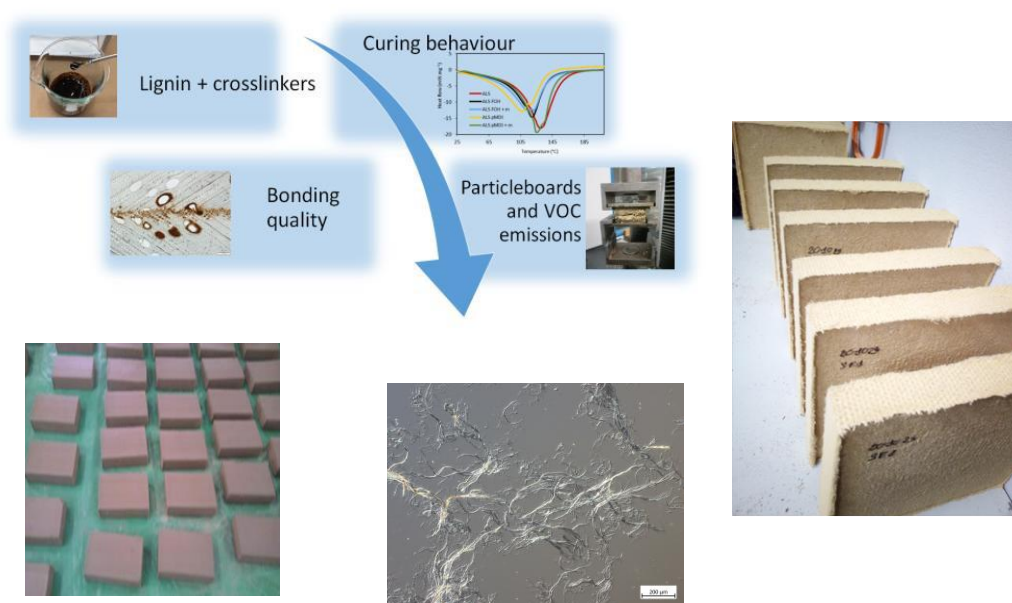
**WP2's** objective is to create clean and non-toxic raw material value chains from polluted wood waste streams (HPPCW) that have currently no recycling options using 3 technologies :

- Hydro-mechanical cleaning
- Combined thermo-chemical and bio-chemical cleaning
- Hydro-thermal carbonization



**WP3's** overall objective is to evaluate the depolluted & CT wood potential against 4 specific applications:

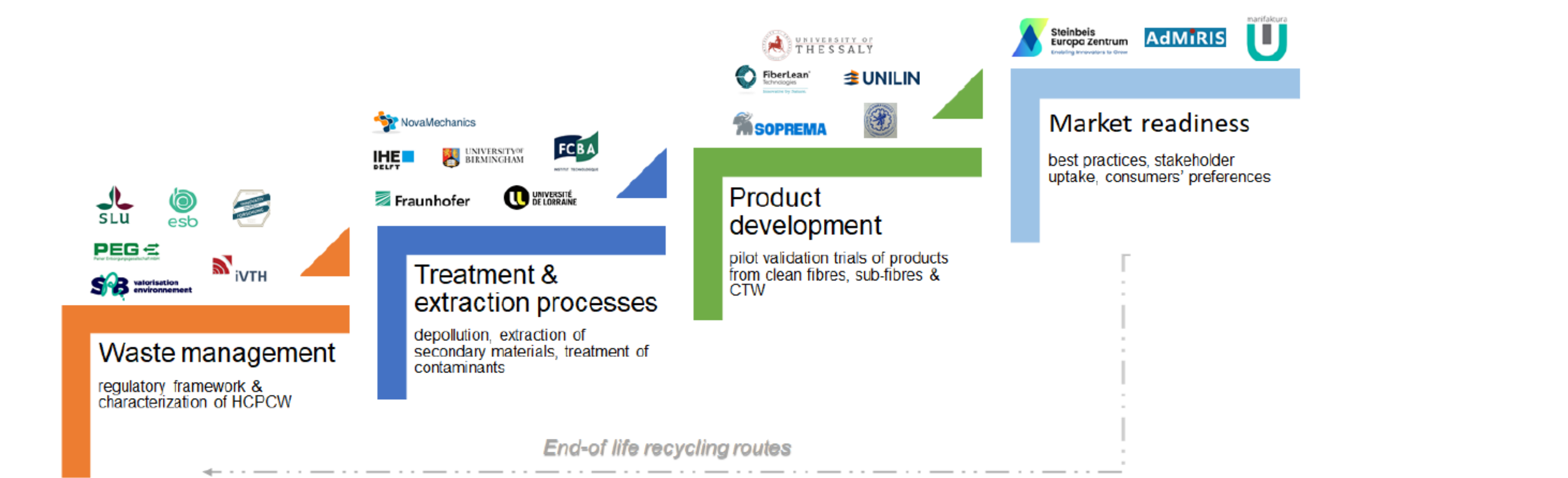
- Insulation boards
- MFCs
- Adhesives
- Bricks



**WP4** Health & Safety and Sustainability assesses health and safety aspects of materials and chemicals, the economic, environmental and social impact of the developed technologies, and forms a SSbD framework

**WP5** Communication, Dissemination & Exploitation communicates the results of the project and creates business models/ plans

## The WoodTreat concept



WoodTreat proposes a transformative, multi-sectoral approach to recover clean secondary materials from these waste streams and convert them into high-value bio-based products.

## Acknowledgement and funding

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