HUBS4BUILD: New EU Project Builds a Network of Circularity Hubs for a Bio-based Built Environment

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Turning local biomass and waste into high-performance building materials: that is the mission of HUBS4BUILD, a new Horizon Europe project that kicked off in September 2026. Wood K plus is part of the 40-partner consortium and leads the development of the project's bio-based materials.

The built environment accounts for roughly 40% of the EU's energy consumption and 36% of its greenhouse gas emissions. The linear construction sector is still marked by siloed operations, with little communication between stakeholders from material suppliers to end-of-life managers. Circular alternatives struggle to compete: EU-wide standards are inconsistent, financial incentives are insufficient, virgin materials remain cheap, economically viable technologies for diverse waste streams are lacking, and deconstruction is labour-intensive.

HUBS4BUILD will establish a network of permanent, replicable regional Circularity Hubs that connect the circular bio-economy with circular construction value chains. Each hub orchestrates its regional network of farmers, waste collectors, processors, architects and policymakers. The project aims to deliver a data-driven, bankable and replicable blueprint for regional transformation, with the following targets:

- 13 hubs in 13 countries.
- 9 bio-based construction products validated.
- ~700 tonnes of local waste valorised and 200 local professionals trained.
- A Bankable Twinning Methodology and a Replicators Network, in collaboration with the Circular Regions and Cities Initiative.

Wood K plus, represented by its research area Wood Materials Technologies in Tulln, leads Work Package 3 "Bio-based materials and resource circularisation", the technical core of the project.

Over the upcoming 4 years, Wood K plus provides guidance for the characterisation and pre-processing of the secondary biogenic feedstocks collected across the hubs, such as construction and demolition wood, bread residues, plant fibres, sheep wool, straw and seagrass. It guides the development of structural wood-based panels, including MDF made from recycled wood fibres with formaldehyde-free bio-based adhesives, or supports prototyping of fibrous insulation materials. Wood K plus also coordinates the performance testing of all new materials, including e.g. mechanical and fire testing and supports certification readiness for CE marking and standardisation. Beyond that, Wood K plus provides technical support to the different hubs, such as the Alpine Bread2Build Hub in Pongau (Austria), the Dutch fibre hub or the Hungarian straw hub.



involved countries in HUBS4BUILD
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Kick-off meeting of HUBS4BUILD at coordinators CluBE and University of Thessaly in Kozani, Greece
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