

## Partners



Technical University  
of Denmark



D'APPOLONIA



swerea SICOMP



BIOMASS BASED  
CHEMICALS



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WOODY

Innovative Advanced  
Wood-Based  
Composite Materials  
and Components



[www.woodyproject.eu](http://www.woodyproject.eu)

# What is Woody?

# Objectives & Innovations

Currently, the world of polymeric composite materials is almost exclusively based on fossil-derived components. This fact should not be overlooked, since the non-renewable global oil resources are being exploited year after year also as a consequence of the ever growing demand for plastics engineering materials.

**Woody** is a large-scale integrating project funded by the European Commission's Seventh Framework Programme (FP7), the goal of which is to develop new composite panels and laminates from wood-derived renewable materials, providing performances competitive with respect to traditional composites.

This will also enable the inclusion of all component necessities: fibre, matrix and core. Enzymatic processing is developed in parallel to chemo-thermo-mechanical treatments for achieving maximum output and eco-sustainability.

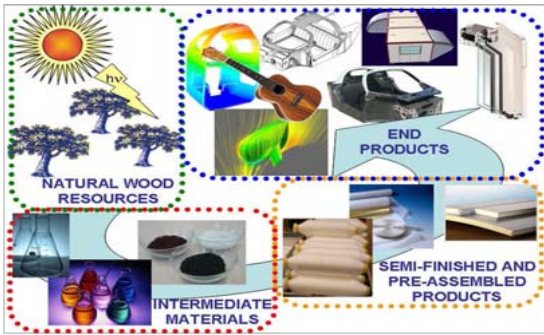


### Partners in the project

**Woody** comprises 18 partners across Europe, as well as Israel, with extensive expertise in biocomposites, and is coordinated by CETMA in Italy.

### Objectives

- Development and promotion of composite structures from renewable materials – wood-derived cellulose fibres and resins obtained from natural raw materials
- Development of an innovative process covering the entire value chain of composites: fibre, matrix and core derived from natural resources materials
- Application of innovative materials, treated and developed in an eco-sustainable manner and designed according to an innovative concept, in the sectors of transportation and construction and in the furniture, music instrument and toy industries

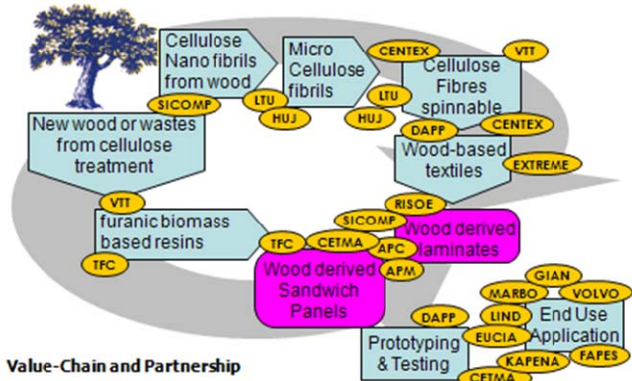


Woody value chain

### Main Innovations

- Development of an enzymatic and thermal-chemo-mechanical treatment for the extraction process of high-quality, sustainable cellulose fibrils
- Composite design tools enabling a newer and optimal exploitation of the properties of the materials, developed by utilising the potential of panels and hybrid structures
- Development of additives for various operation methods in the composites formulation process

### Schematisation of the partners' tasks



Value-Chain and Partnership

The breakthrough **innovation** in materials is supported by an innovative approach in the design of composite products, the so-called *Composite Thinking*, starting from the phase of conception, to the production and installation, enabling to rethink products and fully exploiting the potential of composites.

**Woody** aims to set the standard for the development of a new class of products, optimising the use of natural resources. Such approach is therefore expected to increase the tendency to recover wild forest areas. This will also promote the culture of wooden species dedicated to the extraction of compounds for the production of renewable composite materials.