

CelluWiz... Combining innovative technologies to produce all-cellulosic packaging materials.

The European project **CelluWiz** started in June 2019 with its kick-off held on 12-13th at CTP in Grenoble. **CelluWiz** overall objective is to develop two processes able to produce an all-cellulose packaging material that can offer a competitive alternative to existing multi-layers plastic materials or multi-materials used in the packaging sector while being renewable recyclable/recycled and biodegradable.

This project has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No 838056.

Packaging is necessary to transport and protect food and goods and communicate with the end-user. The food packaging industry, agile to follow consumer expectations and societal changes, is nowadays taking the challenge to improve its sustainability and reduce its environmental impact. **CelluWiz** project will greatly participate to take the challenge by developing, from laboratory to small pilot scale, two innovative processes able to produce all-cellulose, recyclable and compostable, multilayer materials for packaging.

A consortium of 5 partners, including 3 RTOs (Centre Technique du Papier, ITENE, CNRS-Cermav and CNRS-3SR) and 2 industrial groups (Stora Enso and Voith Paper), has been set up to reach the following objectives:

- Develop the MFC wet lamination process. This process combines, without glue, a board with a layer of Micro Fibrillated Cellulose, creating a stratified cellulosic material. The MFC layer confers stiffness, lightweighting, barrier to air, grease, contaminants and oxygen.
- Develop a specific version of the chromatogeny coating and grafting process for MFC layers. This ultrafast and efficient solvent free chemical grafting process will be fully revised to create a micron size layer of pure cellulose ester which will bring liquid resistance and water vapour barrier.
- Produce three proofs of concept (Clamshell, Cup and Tray) showing performances at least equivalent to market references.
- Demonstrate the environmental benefits of the innovative processes and materials and their easy integration into the value chain, by performing LCA and LCC and by submitting the project advances to an advisory group composed of stakeholders of the value chain.

At the end of the project, **small pilot machines** will be able to prove that the **CelluWiz** materials can offer a **competitive alternative to existing multi-layers plastic materials** or multi-materials while being **renewable, recyclable** in the paper for recycling (PFR) value chain and **biodegradable**.

See you in 2022 - Follow us on celluwiz.eu

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Consortium description | Kick-off Meeting June 2019

<p>CTP <i>Centre Technique de l'Industrie des pâtes, papiers, cartons et celluloses</i></p> 	<p>ITENE <i>Instituto Tecnológico del Embalaje, Transporte y Logística</i></p> 	<p>VOITH</p> 
<p>STORA ENSO</p> 	<p>CNRS <i>Centre National de Recherche Scientifique</i></p> 	<p>CNRS <i>Cermav et 3SR</i></p> 

Concept and Project Process

