Newsletter November 2021

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1. STATUS UPDATE

A Multi-criteria Decision Analysis (MCDA) has been used to evaluate, compare and rank the EoL methods defined for the biocomposites selected for the project. Those EoL methods showing the best results in the ranking have been selected for further development and testing at laboratory and pre-industrial scale. Currently, the target biocomposites are being manufactured at AIMPLAS facilities using the bio-based resins and reinforcements chosen. Some of the materials and composites manufactured for the project can be seen in Figure 1.

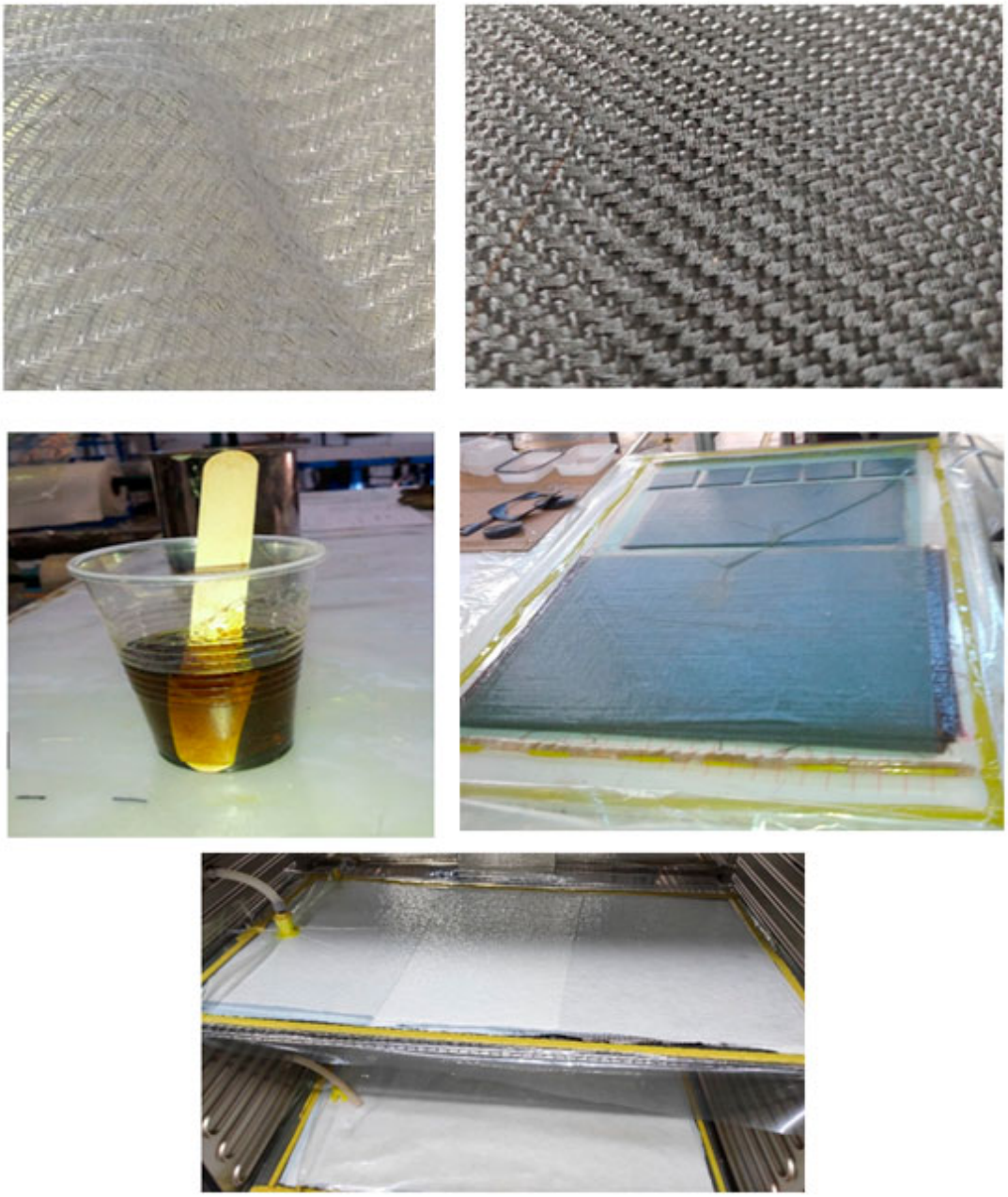

Figure 1. Some materials and composites selected for the project: natural fibre fabric (upper left); prepreg reinforced with inorganic fibre fabric (upper right); bio-based resin (centre left); biocomposite from natural fabrics processed by infusion (centre right); OoA vacuum bagging (lower)

2. CONSORTIUM

AIMPLAS

València Parc Tecnològic Calle Gustave Eiffel, 4 46980 Paterna Valencia, ESPAÑA

https://www.aimplas.es

TNO

Anna Van Buerenplein, 1 Den Haag 2595 DA, the Netherlands

https://www.tno.nl/en/

3. REPORTING

Deliverables available:
- D2.1. State of the art of EoL methods for (bio)composites
- D2.2. Preliminary definition of EoL concepts for biocomposites
- D4.1. "MDCA report: methodology, assessment and results"

If you want to download the public deliverables, please register as stakeholder in the following link. Once registered you will receive the reports.

4. BECOME A STAKEHOLDER

The ELIOT team is looking for stakeholders interested in the results of the project. Are you a company from the composites value chain? We are looking for waste managers, recyclers, end users in different sectors, as well as policymakers, sectoral associations and other relevant bodies. The ELIOT solutions might generate additional market opportunities for your business. As a stakeholder, you will be invited to workshops to promote the project findings. The workshop will offer the chance to come into discussion with researchers and relevant industry stakeholders.

You can become a stakeholder in the following link.

5. NEXT STEPS

The biocomposites manufactured by AIMPLAS will be adapted to the needs of each specific EoL method to be tested. The adaptation entails the treating of biocomposites by grinding or adjusting the size or shape of biocomposites to each EoL technology. As a result, a report on the materials, methods and results from the experimental analysis conducted at laboratory scale for each selected EoL method will be prepared. Special attention will be also given to the scalability of each EoL method tested. Accordingly, the report will present the main results of the study of up-scaling factors, including results from a simplified techno-economic analysis and streamlined Life Cycle Assesment.

Among the EoL methods validated at laboratory scale, those showing the best results in terms of potential scalability will be demonstrated at a larger scale. The demonstration will involve the testing of each EoL method at pre-industrial scale using the pilot plants of TNO and AIMPLAS. A full techno-economic analysis and LCA will be conducted to demonstrate the representativeness and reliability of the results obtained at a production level closer to industrial scale. The environmental impacts of the new EoL methods will be compared to the impacts of current treatment routes for composite waste (incineration and landfill) in order to calculate the environmental savings that can be achieved with the project. The red box of Figure 1 shows the activities in which the research organizations will be working in the second part of the project: the experimental work at laboratory level and demonstrations at preindustrial scale using real biocomposite parts. In addition, the evaluation and decision-making processes in the project will be driven and supported by techno-economic analysis and LCA.

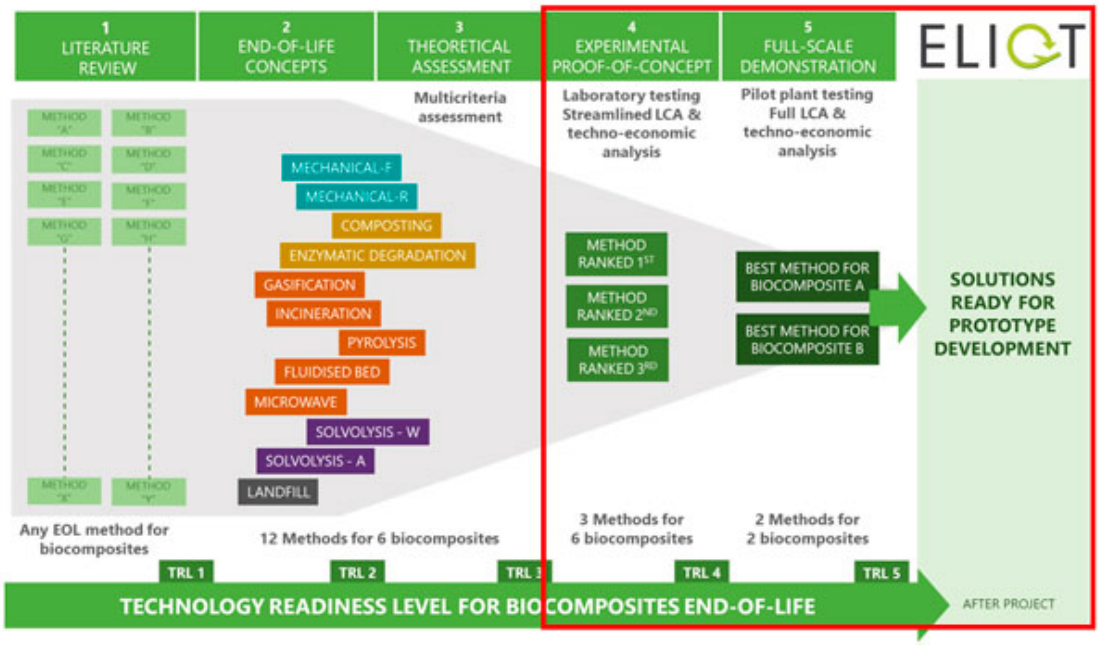

Figure 2. Work to be performed in the second part of the project.

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