



PRESS RELEASE

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New CBE – JU project starts: CUBIC develops novel biobased materials to improve the circularity of complex plastic multi material composites.

We are happy to announce the start of CUBIC, a research & innovation project funded by Circular Bio-based Europe Joint Undertaking (CBE-JU) under Horizon Europe, the European Union's Framework Programme for Research and Innovation, under Grant Agreement No. 101111996. With a duration of 42 months and a budget of almost 4.7 million Euros, the project held its kick-off meeting last week at Aitiip facilities in Zaragoza, Spain.

The CUBIC project aims to improve the sustainability and circularity of complex products made of high-tech advanced multi-material composite thermoset and thermoplastic structures, by developing novel circular biobased alternative materials. These new materials, 100% recyclable by design, will be manufactured as B2B intermediate semi-finished products that can be used either individually or assembled in the final end-user product. The project also aims at the easy adoption of the developed new materials by the market, enabling the decentralisation of the European manufacturing industry and boosting a twin green and digital transformation.

To make that happen, CUBIC will initially investigate the development of novel biobased materials, mainly from lignin and vegetable oils, in order to design the new B2B intermediate or semi-finished products. Furthermore, the project will apply a specific sustainable circular-by-design end-products approach, that substitutes current complex non-circular alternatives. This will be achieved by exploring self-reinforcement and dynamic chemistry technologies to allow the combination of different B2B intermediates in the same manufacturing process, where prototypes will be validated and tested. The latter will be implemented on two end-products or specific applications: a type IV H₂ gas storage Vessel and an automotive seat, which will satisfy the technical and environmental requirements. The project will also demonstrate the de-manufacturing, recycling and valorisation of the components.

CUBIC will deploy assessments regarding life cycle, cost and social methodologies as well as digital tools in order to improve the biobased materials and the manufacturing process for a better product design quality and process efficiency prediction. During the whole duration, CUBIC will establish and implement an updated and adapted plan for its exploitation, dissemination, communication and training activities. The overall activities that will be developed during the project execution will be consequently supported by coherent and smooth coordination as well as data management for interoperability following FAIR principles and ethics.

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The project consortium, led by Aitiip, consists of 13 partners with complementary competencies, including 6 industrial partners (Specific Polymers, Comfil, Carbotainer Proyectos, Moses Productos & Q-PLAN as small and medium enterprises and Novamont as a large company), 6 Research & Technology organisations (Aitiip, Centexbel, Cidotec, Idener, DITF, Circe) and 1 Academic organisation (Limerick University). The undertaking involves 8 European countries (ES, FR, IE, BE, DK, DE, IT, GR).

Project Details

Grant Agreement No: 101111996

Start Date: 01/09/2023

Project Duration: 42 months

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