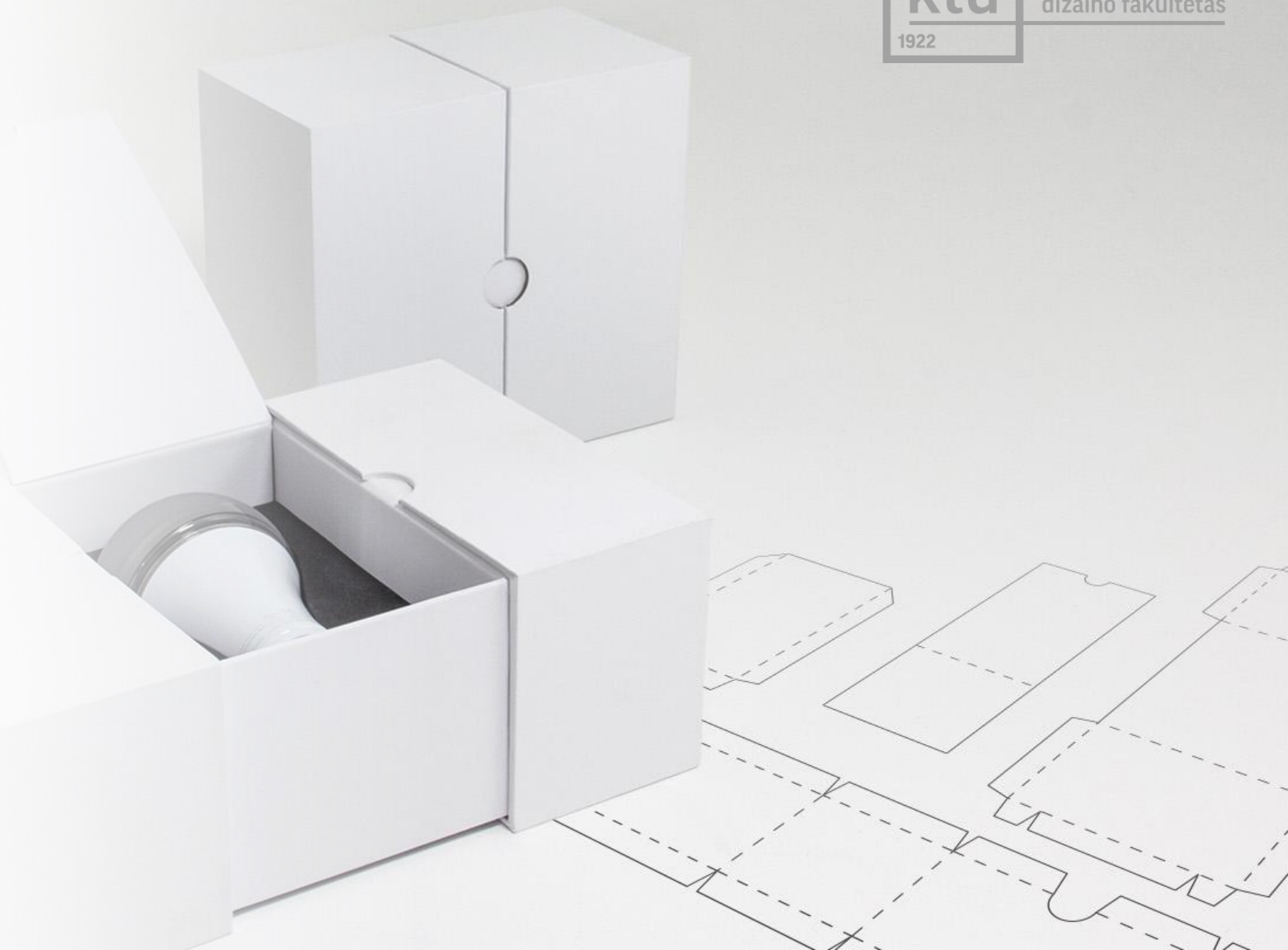
KTU Center for research on advanced packaging materials and technologies



Horizon Europe Cluster 6
Brokerage Event

October 12, 2026 / Brussels

KTU CENTER FOR RESEARCH ON ADVANCED PACKAGING MATERIALS AND TECHNOLOGIES

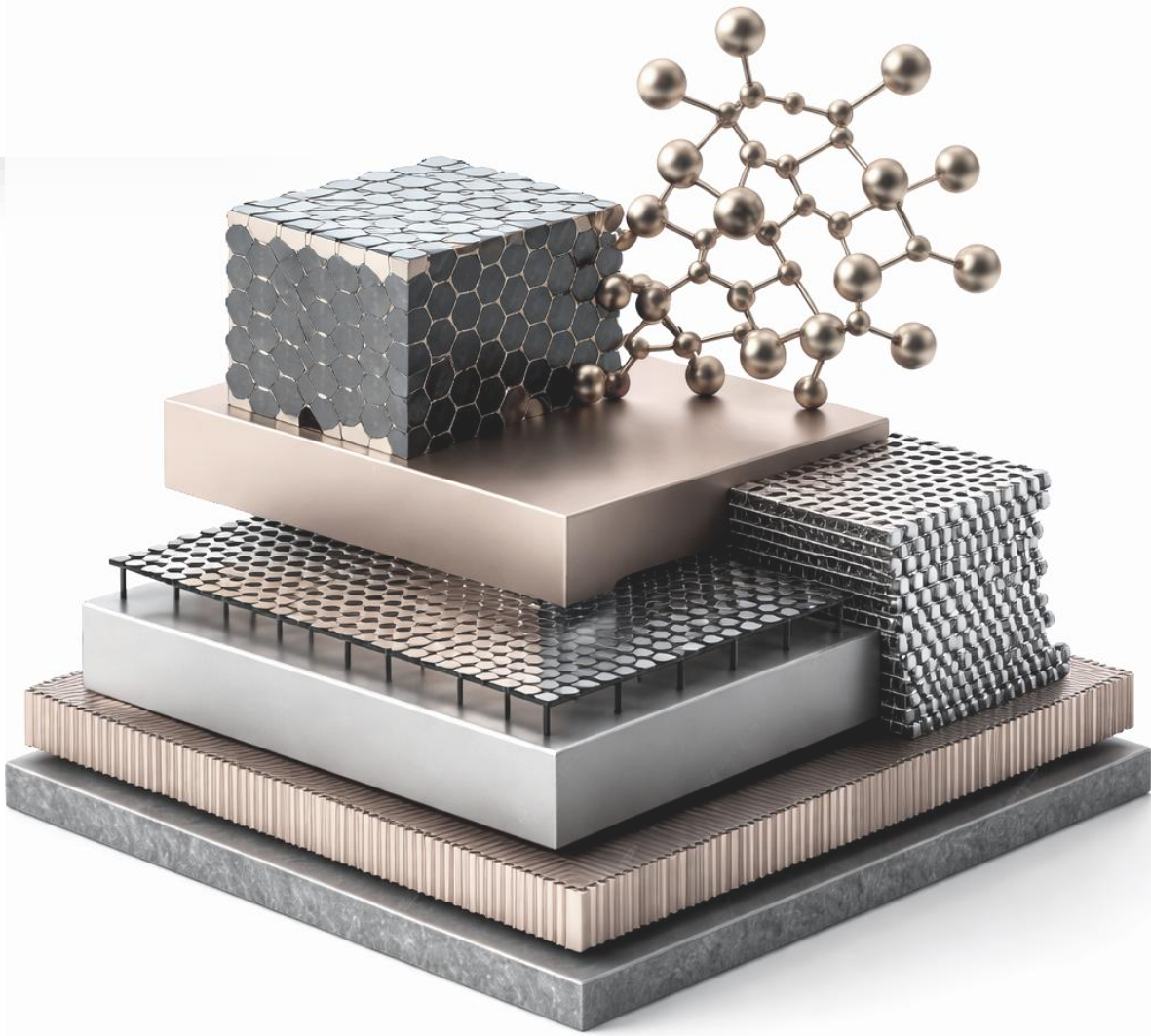
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KTU Center for Research on Advanced Packaging Materials and Technologies is a specialized R&D center covering the full packaging innovation cycle – from material development to market readiness.

We develop and optimize advanced, bio-based and circular packaging materials, including polymer and fiber-based composites, renewable and secondary raw materials, functional additives and coatings.

Our capabilities cover material formulation, extrusion, injection moulding, electrospinning and additive manufacturing, as well as advanced FT-IR, SEM, DSC, TGA, UV-VIS and TOC characterization, mechanical and functional testing, environmental ageing, and aerobic and anaerobic biodegradation assessment.

We support industry in new material development, prototype validation, recyclability and biodegradability assessment, packaging compliance and preparation for market introduction.



A. RAW MATERIAL STAGE
ADVANCED MATERIAL DEVELOPMENT & CHARACTERIZATION

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1 **DEVELOPMENT,** formulation and optimization of polymers, biopolymers, fiber-based materials and bio-composites for packaging applications.

2 **INTEGRATION** of virgin, recycled and bio-based raw materials, natural fibers, agricultural and industrial side-streams, functional fillers, additives and coatings.

3 **CHARACTERIZATION** including chemical composition, morphology, thermal behaviour, mechanical performance and structure–property relationships to support the development of high-performance, circular and bio-based packaging materials.

B. PRODUCTION & USAGE STAGE

PROTOTYPE DEVELOPMENT, VALIDATION, PERFORMANCE TESTING

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1 **DEVELOPMENT** and validation of packaging prototypes and components using extrusion, injection moulding, additive manufacturing and other processing technologies.

2 **TESTING** covers primary, secondary and tertiary packaging, packaging components, films, sheets, rigid and fiber-based structures and coated or multilayer materials.

3 **EVALUATION** includes mechanical, structural, thermal, surface, barrier and functional properties, supporting material optimization, process adaptation and validation of packaging performance under relevant application conditions.

C. END-OF-LIFE STAGE

RECYCLABILITY, BIODEGRADABILITY, MICROPLASTICS ASSESSMENT

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1 EVALUATION of packaging and packaging materials across different end-of-life pathways and environmental conditions.

2 ASSESSMENT includes mechanical recyclability and repulpability, as well as aerobic and anaerobic biodegradation under controlled composting, soil, aqueous and anaerobic digestion conditions

3 ANALYTICAL methods are applied to investigate material disintegration, degradation behaviour, organic carbon conversion and microplastic formation and release, identification and characterization of polymer particles.

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LET’S TURN NEW MATERIAL CONCEPTS INTO CIRCULAR PACKAGING SOLUTIONS

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LET’S COLLABORATE

We are looking for:

RESEARCH & INNOVATION PARTNERS for Horizon Europe and other European R&I projects in sustainable packaging, advanced materials, circular economy and bio-based solutions.

INDUSTRIAL PARTNERS for new material development, prototype production and validation, scale-up and demonstration in relevant industrial environments.

PACKAGING & MATERIAL PRODUCERS interested in developing and testing polymers, bio-composites, fiber-based materials, coatings and innovative packaging solutions.