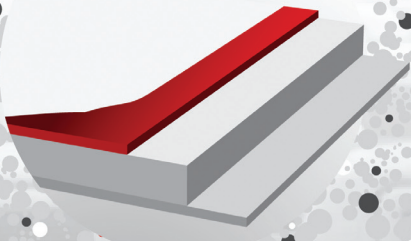
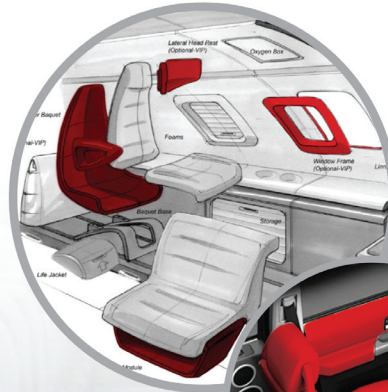


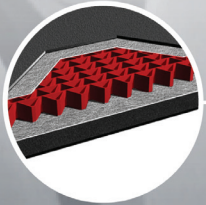
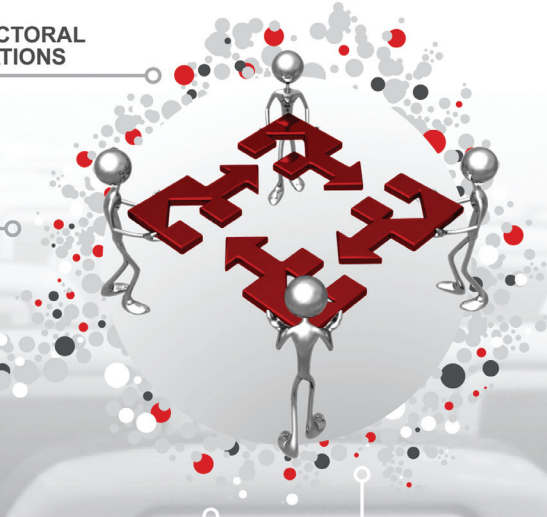
COMPOSITE
MULTICAPA



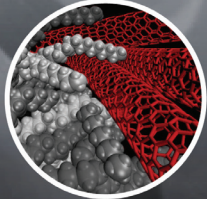
MM MULTI
MATHERIA



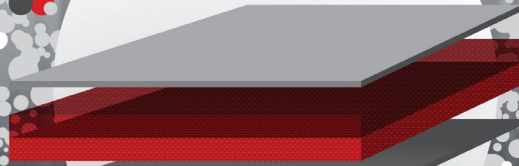
CROSS-SECTORAL
APPLICATIONS



NEW
TECHNIQUES



HYBRID
COMPOSITE
MATERIALS



MULTI.MATHERIA CONSORTIUM PARTNERS

Companies: Rucker-Lypsa (Coordinator), Antolin, Applus-Lgai, Aries Complex, Compass, Galactic Suite Design, Elisava, Easy Vip Solutions, Idom, Prae Trade, Quantech and INGENIA (promoter).

Research centers: CIMNE, CTAE, LEITAT, UPC



Unión Europea

FEDER



The industrial research project Multi.Matheria is focused on the development of new hybrid composite materials based on multi-layer core technology (FRP sandwich core, photo-luminescent textiles, smart fabrics, translucent materials, etc.) with adaptive properties suitable for a wide range of transports interior “ambiance” (automotive, aerospace, railways, etc.).

The use of new materials results in a radical change in the design of interior architecture and aesthetic concepts which requires redefining the product development whilst introducing important technological innovations in production processes.

The Multi.Matheria multidisciplinary research team will cooperate to develop a wide range of adaptive hybrid materials with specific properties by adding functional layers including:

- A “base layer” (e.g. a thermoformable composite material) able to fulfill main mechanics requirements such as stiffness, strength, vibro-acoustic, thermal and environmental sustainability.
- A “finishing layer” (e.g. a smart fabric) to ensure compliance with the requirements of aesthetic quality of the product.
- A “functional layer” to provide enhanced performance and/or product functionality (e.g. sound-absorbing foam to optimize the vibro-acoustic response of the component).

One of the main scopes of Multi.Matheria is the production of advanced technological demonstrators that will be used for conducting experimental tests addressed to validate technologies and numerical simulations of production processes.

