

New Materials for the Future of Mobility | CompPair announces its participation in a €2.8 Million Eurostar initiative for the development of sustainable composites to propel the future of mobility

CompPair is delighted to announce its involvement in a €2.8 M Eurostar program secured by a consortium comprised of Spanish, Italian and Swiss companies to accelerate the transition to green mobility. The consortium has received the interest of several OEMs in the automotive, aeronautical, and rail industries.

The project built by the consortium is called NERTHUS and is dedicated to achieving two primary objectives: the development and industrialization of a new generation of environmentally friendly composites, and the subsequent demonstration of their feasibility through targeted case studies defined by participating original equipment manufacturers (OEMs). The development and formulation of new materials include enhancing the properties of natural fibres and developing bio-based resins, self-healing resins and fire-resistant resins. By reaching targeted markets, the Nerthus project aims to showcase the feasibility and inherent benefits of these advanced materials, providing concrete evidence of their transformative potential in the ever-evolving realm of mobility. The project's contents are strategically aligned with the European Commission's NextGen goals, aspiring to position Europe as the global benchmark in sustainable technologies.

The project was launched in response to the pressing needs of the transportation sector, recognizing the imperative for eco-designed materials and sustainable practices in the development of lightweight structures. The actors of the consortium consist of: (i) Composites ATE SL, a Spanish part manufacturer focused on medium to high production series; (ii) Bcomp Ltd., a Swiss materials provider of Natural Fibres; (iii) CompPair Technologies Ltd., a Swiss materials provider of self-healing composites; (iv) Advanced materials testing and consulting SL (AMTEC), a Spanish test center; and (v) Angeloni Group srl, an Italian provider of composite semi products. The mission is rooted in a comprehensive approach that seeks to address various facets of sustainability. This includes the incorporation of bio-based resins and natural fibers. The emphasis on developing fast-curing resin systems, particularly those bio-based and suitable for press-curing, aligns with the project's commitment to substantial energy savings, plastic auxiliary material reductions, and a significant reduction in lead times. Moreover, the endeavor to create bio-based self-healing materials with CompPair's HealTech™ technology, capable of restoring structural integrity through a simple application of heat, underscores the project's dedication to cost-effective and efficient repair methods. Through these concerted efforts, the Nerthus project envisions a future where vehicles benefit from more sustainable materials and processing technologies, contributing to a greener and locally sourced mobility landscape.

Ultimately, the Nerthus project aims to make a substantial impact by facilitating the development of lightweight structures with composites, thereby improving range, and reducing consumption. Central to this mission is the application of bio-based resins and natural fibers. This approach presents a proven and feasible alternative for constructing vehicle structures using natural or partially natural materials. Additionally, the project focuses on the creation of fast-curing bio-based resins, optimized for press-curing processes, offering remarkable energy savings, and significantly shorter lead times compared to traditional autoclave methods. Finally, the development of self-healing bio-based materials, capable of restoring structural integrity with a simple application of heat, not only offers a cost-effective and efficient repair solution but also contributes significantly to reducing CO₂ footprints through decreased maintenance costs and extended parts lifetime.

CompPair's participation in the Eurostars program marks a significant stride toward the realization of sustainable composites. By introducing innovative materials and addressing long-standing industry concerns, Nerthus emerges as a catalyst for change, promising a paradigm shift towards eco-designed, sustainable, and locally sourced materials for the vehicles of tomorrow.

The consortium would like to acknowledge the funding bodies. Eurostars is part of the European Partnership on Innovative SMEs. The partnership is co-funded by the European Union through Horizon Europe. From Switzerland, this international program is supported by InnoSuisse, the Swiss Innovation Agency.



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About CompPair Technologies Ltd.

CompPair is a world-class composite expert, providing the first healable and sustainable composite material, a ground-breaking innovation in the field of self-healing composites. Made with CompPair's technology, HealTech™, composite structures can heal damage on site in 1 minute. CompPair provides manufacturers with cutting-edge materials compatible with standard production processes. HealTech™'s value proposition is a 99% repair time reduction and significantly lower CO₂ emissions. CompPair tackles composite limitations and leads a paradigm change for the industry.

About the partners

AMTEC, Advanced Materials Testing and Consulting S.L. (Spain) is a spin-off of Universitat de Girona and the AMADE research group is a reference in Europe in complex composite structures simulations as well as in material characterization, holding all required approvals for aerospace testing among others.

Angeloni Group S.R.L (Italy): For more than 40 years Angeloni has been focused on innovation, continuously developing and offering new materials and solutions into the advanced composite market. With capabilities covering resin formulation, fabric weaving and prepregging of reinforcements, the company is in a position to become the supplier of greener semi-finished (prepregs) composite materials

Bcomp Ltd. (Switzerland): its objective is to become the global reference in lightweight, high-performance sustainable materials, offering people the freedom of sports and mobility without compromising future generations' right to the same. Bcomp is the reference in Europe in development of flax fibres for green composites. Bcomp is already well integrated in the mobility market and has many projects with OEM, and thus full understanding of the requirements of the market.

Composites ATE S.L. (Spain): after 25 years in the industrial applications' composites sector, its new branch developing fast-cure composite applications is allowing to triple the revenues in the period 2019-2022. ATE is probably nowadays the company delivering the greatest amount of homologated carbon fibre and fast curing resins to the European automotive industry.

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