

The project aims to address all aspects and stages of thermoplastic and CF reinforced thermoplastic 3D printing material development from recycled resources, starting with the selection of suitable waste streams, strategies for material repair, compatibilization and upgrade towards AM processing, compatibility between different thermoplastic matrices and the reinforcing fibres and nanoparticles, comparative assessment of various AM thermoplastic processing technologies and closed-loop material optimisation in terms of processability and performance..

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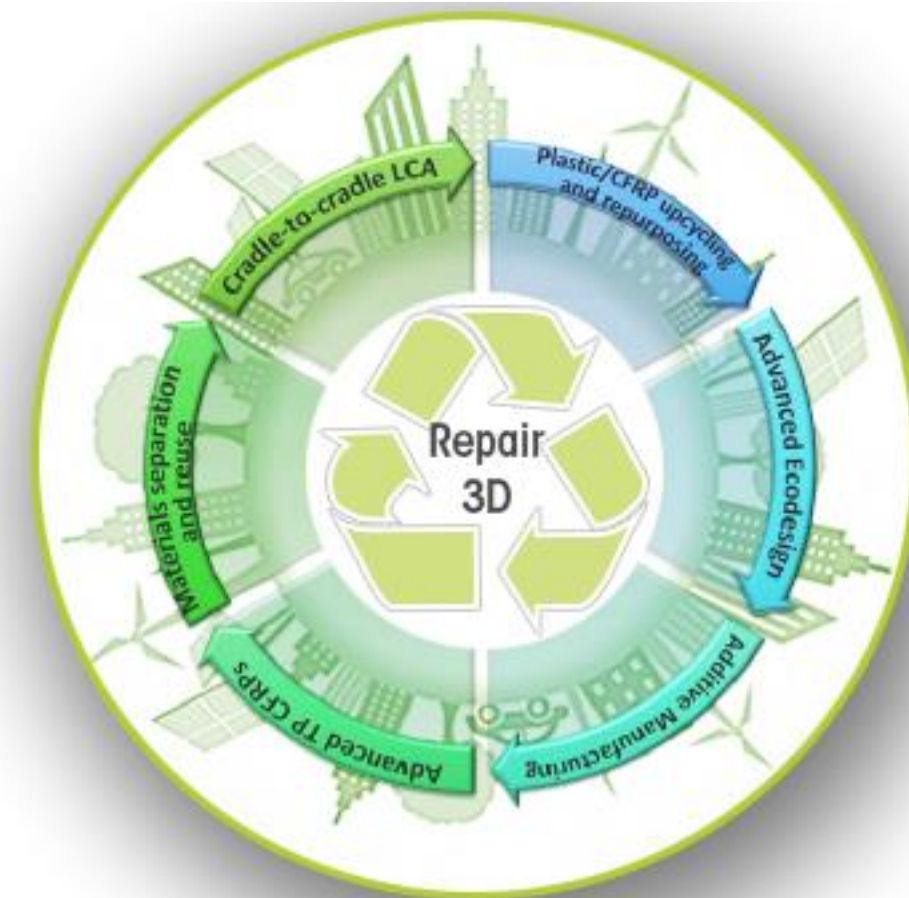
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Recycling and Repurposing of Plastic Waste for Advanced 3D Printing Applications

www.Repair3D.eu



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The Project

The project aims at the development of innovative reclamation and repurposing routes for end-of-life plastic and carbon fibre reinforced polymer (CFRP) components. This will be achieved by employing advanced nanotechnology solutions, Additive Manufacturing (AM) and recycled resources, for the production of high added value 3D printed products with advanced functionalities. In this way, the combination of AM, polymer processing and recycling technologies could constitute a new paradigm of a distributed recycling process, easily implemented at local scale in collaboration with the industrial sector and collection facilities, in order to create competitive, highly customisable products at lower production costs, in a flexible digital environment that fully unravels the potential of eco-design and allows for integration of smart intrinsic self-sensing, self-repairing and recycling options.