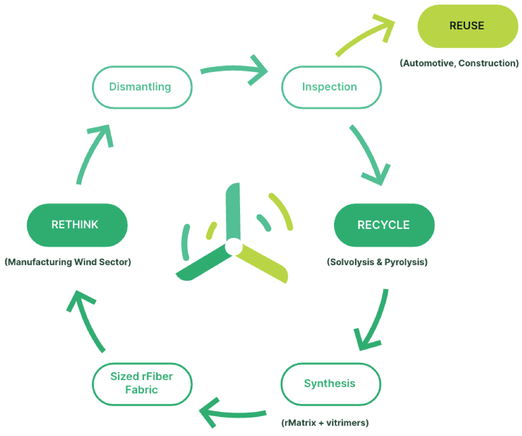
REWIND

EFFICIENT DECOMMISSIONING, REPURPOSING AND RECYCLING TO INCREASE THE CIRCULARITY OF END-OF-LIFE WIND ENERGY SYSTEMS.

CONCEPT

The REWIND project will develop suitable disassembly, quality inspection and characterisation of the composite waste, to decide if composite parts from EoL products should be reused or recycled depending on their value. REWIND will show potential high-value applications for composite end-of-life: repurposing for construction and automotive sector.

New innovative pyrolysis and solvolysis methods for recycling will be developed to reduce the processing temperature and time. The secondary raw materials obtained (sized recycled fiber fabrics and recycled vitrimer matrix from polymerized monomers) will be used to rethink and manufacture a small wind blade root section and composites patches for blades repairing.



FROM TRL3

TO TRL 5

- Dismantling using ultrasounds
- 3D Nestling
- HVF (High Voltage Fragmentation)
- LFD (Long fibre delamination)
- Pyrolysis with catalysts
- Catalyst assisted solvolysis in
- super/sub-critical conditions
- Sizing of recycled fibres
- Spinning continuous yarns with fibres
- Vacuum infusion

TO TRL 4

- Synthesis of recycled resins and vitrimer epoxy resins

PARTNERS

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