



EU Ecolabel

REFORM will contribute to the EU Ecolabel criteria for composite components.

The EU Ecolabel is a voluntary scheme, which aims to reduce the negative impact of consumption and production on environment, health, climate and natural resources.

It promotes products with a low environmental impact and is based on full life-cycle analysis, from production through to disposal, for different products.

reform.eu.com

The consortium



Advanced Manufacturing Research Centre



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REFORM

Green
Composites
Production

A European Union Funded
Collaboration

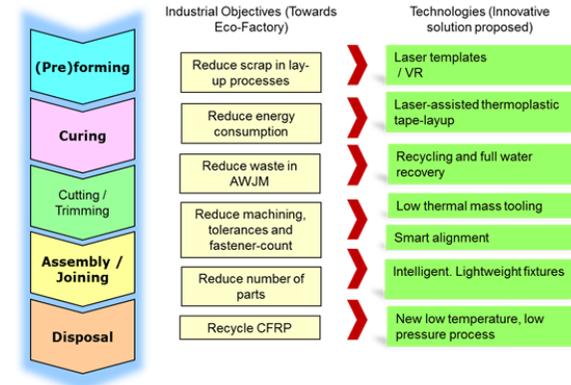


Our Objectives

REFORM is working on new ways to improve environmental performance across the life cycle of a composite component. The project covers four key areas:

- 1. Improving the efficiency of composites lay-up.** Laser-assisted tape-laying and augmented-reality systems can reduce scrap and waste by ensuring accuracy every time.
- 2. Reducing the need for bespoke tooling.** The REFORM partners will develop modular fixturing which can be reconfigured for a range of large parts while maintaining thermal stability and a vacuum-tight surface.
- 3. Cutting and trimming composite parts using abrasive waterjet machining and adaptive milling.** The REFORM consortium will develop innovative solutions which are more efficient than traditional machining techniques and optimised for composite materials.

- 4. Developing new disposal and recycling techniques.** REFORM researchers will examine ways of dismantling composite parts and reclaiming the fibres, and develop *Ecolabel* criteria for composites to provide a hallmark of minimal environmental impact.



Welcome to the REFORM Project

- Reducing the environmental impact of composites

REFORM (Resource-Efficient Factory Of Recyclable Manufacturing composite components) is a 4-year project funded by the European 7th Framework Factory of the Future Program to develop the next generation of production technologies.

The project focuses on developing resource-efficient and clean technologies for the manufacture of composite components. Fibre-reinforced composites (FRP) are becoming very popular as they allow component weight to be reduced without compromising on strength. In many applications, such weight reduction leads to energy savings during the service life of the product. However, when calculating the

environmental footprint of a component, the entire life cycle must be viewed, including material extraction, manufacturing, end-of-life disposal and recyclability.

REFORM focusses on the manufacturing cycle of FRP components. Methods for forming, machining (cutting and trimming), assembly and recycling are being considered. The project allows fully green, economically viable composites production techniques to be integrated into the eco-factory of the future.