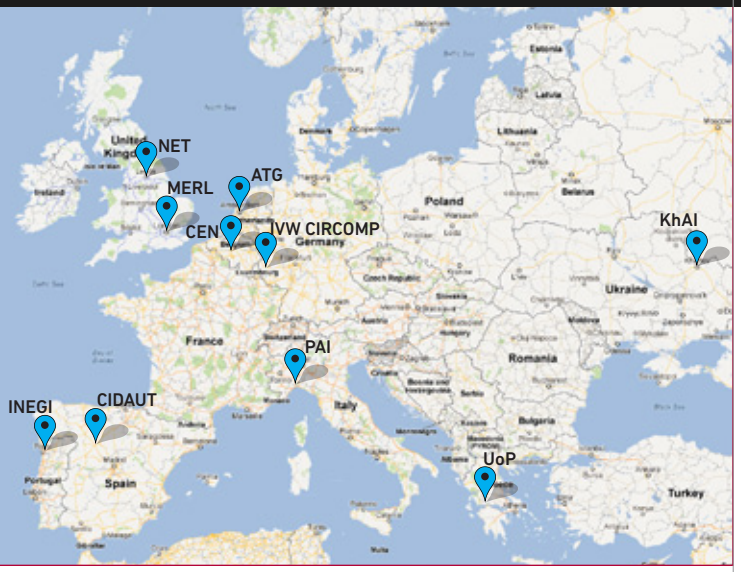

The Project

This is a collaborative project between 11 European companies located across 9 different countries. This consortium brings together several expertizes from material selection, structural design, safety, manufacturing to testing phase with the main objective to develop a composite fuselage for a medium sized aircraft.

Funding

The research leading to these results has received funding from the European Community's Seventh Framework Programme AAT.2010.1.1-2. AAT.2010.4.1-2. TPT under grant agreement number 265549.

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wasis
project

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Introduction

Aeronautics is a key asset for the future of Europe, but nowadays the industry has to face the challenge of "**More Affordable, Safer, Cleaner and Quieter**" whilst at the same time accounting for a demand that will triple over the next 20 years.

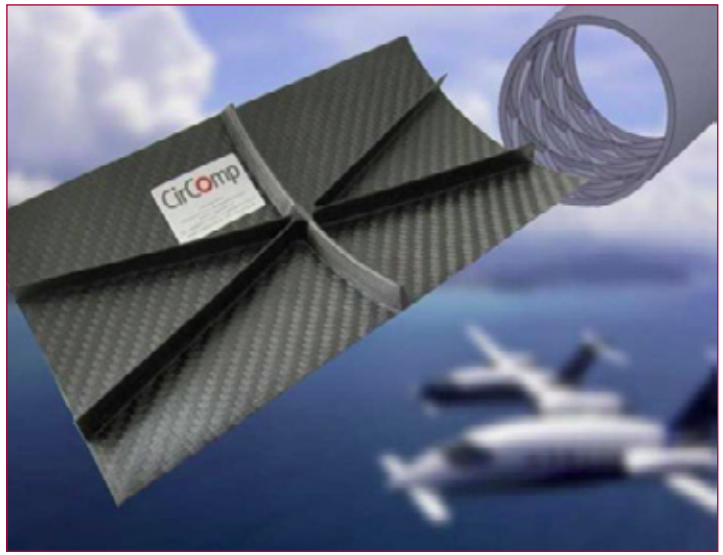
Currently the stringer scheme, used since the beginning of the last century still is the most used load-carrying scheme for aircraft. WASIS project aims to develop innovative fuselage sections based on a composite lattice approach that simultaneously meets the required environmental demands and increased safety together with design and manufacturing cost-efficiency improvements.

Stringer scheme

Objective

The main objective of this project is the development of a composite fuselage section that allows simultaneously:

- weight reduction due to integrative design and manufacture of wafer-like structure and innovative micro-fastener joining elements.
- improve fuselage section safety in worst case scenarios in comparison with corresponding conventional stringer scheme section due to the wafer structure high damage tolerance.



Lattice structure witn skin demo panel

Expected Results

It is expected that this concept will be proven as a viable option for future design standards. This integrated solution will result in:

Cleaner aircraft
More affordable aircraft
Safer aircraft

Innovative fuselage section

The WASIS team is very pleased by the success that it has achieved in the first 2 years of project.

During the first 2 years of the project several milestones on design and manufacturing were successfully achieved. Therefore promising solutions and functional prototypes are available and ready for the second half of the project. Updated and detailed information at:
www.wasis.eu

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SEVENTH FRAMEWORK PROGRAMME