

Would you like us to try to find interested companies with your projects ideas, please send us a short project abstract (by the 7th October) which we will display on this webpage under the match-making section.

The match-making concept is only designed to help you to find partners, a coordinator, technology,...

This webpage can be found at: <http://www.aeroportal.eu/ap3callfp7workshop.html>

Project Ideas	
Proposers of the idea:	National Aerospace University " Kharkiv Aviation Institute" named by N.Ye.Zhukovskiy
Type of Organisation: (SMEs, University, Research Center,...)	University
Call identifier:	FP7-AAT-2010-RTD-1
Topics called:	AAT.2010.1.1-2. Aerostructures; AAT.2010.3.3-1. Aerostructures; AAT.2010.4.1-2. Aerostructures;
Funding Instruments:	CP-FP (Small or Medium scale focused research) <input checked="" type="checkbox"/> CSA-CS (Coordinating) <input type="checkbox"/> CSA-SA (Supporting) <input type="checkbox"/>
Project Title:	Composite Fuselage Section Wafer-design Approach for Safety Increasing in Worst-case Situations and Minimizing of Joints.
Project objectives:	To achieve the following impact: - total fuselage weight saving (=> fuel consumption decreasing=>greening); - sufficient fuselage safety increasing in case of internal (de-compression, gunshots, explosions etc.) and external (crash landing) worst-case situations; - sufficient manufacturing cost economy due to minimizing of joints in fuselage section.
Project abstract: Be concise! Avoid abbreviations (Max. 3000 characters incl. spaces. Any exceeding words will be discarded.)	Wafer design used for metal aircraft panels proved its sufficient benefits (high loads, weight savings, minimum of joints). As a rule, metal wafer panels were made with single-billet milling (disadvantages: high cost and low material rate of use). Since airframe became more and more composite made, benefits of composite technology can be used for fuselage section manufacturing as a single wafer-like design. Winding technology allows producing fuselage section up to 3 meters in diameter (GA, business jets, mid-range liners etc.) In this case wafer ribs to be formed from unidirectional carbon fibers together with the skin. Ribs would create net-like load-bearing structure and to be oriented in the directions of the most specific parameters of the fibers. Such approach can partly de-load fuselage skin and would give a) total fuselage weight saving (=> fuel consumption decreasing=>greening); b) sufficient fuselage safety increasing in case of internal (de-compression, gunshots, explosions etc.) and external (crash landing) worst-case situations; c) sufficient manufacturing cost economy due to minimizing of joints in fuselage section
Project structure (WPs, duration,...) *	To achieve project overall objective the following work packages assumed: 1. Fuselage wafer-like section design methodology development considering loading in worst-case situations. 3D models of blast load distribution would be developed. 2. Comparative FEM-simulation and weight analysis of conventional and wafer design considering worst-case loads. 3. Full-scale fuselage wafer-section manufacturing (including manufacturing processes development). 4. Wafer section testing: static, fatigue. 5. Worst-case situation testing: crash, gunshot, explosion etc.
Estimated budget *	
Project Coordinator	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
What are you looking for (a coordinator, partners, technology, other,...)? Please specify.	We are looking for: 1. Project coordinator 2. Partners interested: Universities, research labs, aircraft/parts manufacturers (incl. SMEs)
The person identified above confirms that the data provided in this form are correct and that permission is given to publish this data in the MatchMaking table located in the Workshop page.	Yes <input checked="" type="checkbox"/>

* Not Mandatory