PROJECT

HAIRD

Hybrid AIRcraft seating requirement specification and Design

Funding: European (Horizon 2020)

Duration: Jan 2017 - Dec 2017

Status: Complete

Total project cost: €207,363

EU contribution: €207,363

Call for proposal: H2020-CS2-CFP03-2016-01

CORDIS RCN : 207650

Objectives:

HAIRD project aims to deliver a new design for a next generation aircraft seating which is comfortable, light-weight, fast to disassemble, easy to dismantle, cost efficient to produce, highly recyclable and reliable in structural integrity. Within the HAIRD project a new mono-materials cushion will be developed to improve the easy-recyclability and the cost production. Topological and geometrical optimization techniques will be applied by means of computational tools to ensure weight reduction without compromising the structural reliability. This approach will be used in both structure and cushions combined by selection of very light-materials in the market.

A new mechanical system will also be designed allowing fast assembly, dismantling and disassembly of the seat into the aircraft, shortening the maintenance cost and workforce. Finally, an assessment of seating Life-cycle will be done to guarantee the new design improvement in terms of sustainability. The direct impact is expected in terms of sustainability, economic viability, novel attractive, cost reduction in maintenance and material, fuel consumption and CO2 emissions.

Parent Programmes:

H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Acondicionamiento Tarrasense Associacion

Address:
Carrer De La Innovacio 2
8225 Terrassa
Spain

EU Contribution: €207,363

Technologies:

Safety systems
Vehicle seat design for improved safety

Development phase: Implementation

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Environmental/Emissions aspects

Geo-spatial type: Other