

PROJECT

## HAIRMATE

### Hybrid AIRcraft seating MAnufacturing & TEsting

**Funding:** European (Horizon 2020)

**Duration:** Oct 2018 - Sep 2022

**Status:** Ongoing

**Total project cost:** €1,045,197

**EU contribution:** €864,435



**Call for proposal:** H2020-CS2-CFP07-2017-02

[CORDIS RCN : 218489](#)

#### Objectives:

HAIRMATE project aims to design and manufacture moulds for manufacturing and testing the next generation aircraft seating obtained in the HAIRD project. Within the HAIRD project a new seating with reduction of Deep Vein Thrombosis (DVT) risk, multi-functionality and simple surfaces for composite manufacturing was designed. The moulds to manufacture the structural parts and the cushion will be manufactured.

#### Methodology:

These moulds will be designed in detail taking into account the composite manufacturing techniques of Sheet Moulding Compound (SMC), Wet Compression Moulding (WCM) and Prepreg Compression Moulding (PCM) co-moulded with SMC. If it is needed, the HAIRD seating design will be slightly redesigned to fulfil all the requirements of the moulds. A Life Cycle Assessment (LCA) data collection of materials and processes will be carried out. These data will be used to do an assessment of seating life-cycle to guarantee the new design and manufacturing improvements in terms of sustainability. Moreover, different tests will be performed to define the mechanical and fire safety properties of the materials developed by the Topic Manager (TM) for the manufacturing of the seating. Finally, a full-scale seating will be tested to analyse the structural reliability and to approximate the HAIRD seating design to the industry and thus to the market. Once again, some design and structural calculus loops will be carried out to improve the seating.

#### 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)

**Other programmes:** JTI-CS2-2017-CfP07-AIR-01-36 Hybrid Aircraft Seating Manufacturing & Testing

#### Lead Organisation:

**Acondicionamiento Tarrasense Associacion**

**Address:**

Carrer De La Innovacio 2  
8225 Terrassa  
Spain

**EU Contribution:** €310,440

#### Partner Organisations:

**Universitat De Girona****Address:**

PLACA SANT DOMENEC 3  
17004 GIRONA  
Spain

**Organisation Website:**

<http://www.udg.es>

**EU Contribution:** €132,216

**Alpex Technologies Gmbh****Address:**

Gewerbepark  
6068 Mils  
Austria

**EU Contribution:** €421,779

**Technologies:**

Aircraft design and manufacturing  
Lightweight cabin seats

**Development phase:** Validation

**STRIA Roadmaps:** Vehicle design and manufacturing

**Transport mode:** Air transport

**Transport sectors:** Passenger transport

**Transport policies:** Societal/Economic issues

**Geo-spatial type:** Other