



INTERNSHIP 6 MONTHS YEAR 2020

Internship tutors:
Joel Jézégou / Laurent Bertrandias

Internship with ISAE SUPAERO and Toulouse Business School

Location: ISAE SUPAERO / TBS - Toulouse

Starting Date: February/March 2021

Market Analysis for Small Electric Aircraft Commercial Operations

In the scope of e-AIRchitecture research program on electric aviation, ISAE-SUPAERO and Toulouse Business School (TBS) collaboratively propose an internship to identify and to scientifically formalize, through a market analysis and the preparation of a choice-based conjoint analysis, relevant air mobility solutions relying on electric/hybrid electric aircraft reducing the environmental footprint of aviation.

Focusing on small aircraft (from 4/6 passengers to 19 passengers max), various air mobility solutions can be developed through Thin Haul Commuting or On-Demand Mobility (Point-to-Point, Door-to Door, networks) operations, possibly using routes with low emissions (CO2) objectives. Those commercial operations are promising solutions for decongestion of ground transportation, for improving point-to-point transportation in regional area (European FlightPath 2050 objectives), and for decrease of operating costs and CO2 emissions of transportation system. An analysis of societal mobility needs is a key driver to elaborate a substantiated market analysis, to derive appropriate operations and aircraft architectures.

Main tasks of the internship are:

- To establish a state-of-the-art review on Thin-Haul Commuting, On-Demand mobility, methodologies for routes selection, mobility evaluation and environmental protection evaluation,
- To compile sources of information to characterize European societal mobility needs, like market databases (population densities, aerodromes, ground infrastructures, existing routes, GDP, other transportation solutions...),
- To establish economical models for electric/hybrid electric aircraft & operation,
- To develop a market analysis for air transportation operations through electrically powered small aircraft, that will include at least relevant routes, flight profiles, economical benefits, comparison with other transportation solutions for given European zone(s) that will be defined during the internship. It will be supported by the preparation of a choice-based conjoint analysis.

Expect outputs are:

- A substantiated market analysis,
- A prepared choice-based conjoint analysis ready to be launched,
- An analysis of the results of the market study that help delineate the characteristics of the potential market for small electric aircraft.

REQUIRED SKILLS

Skills:

- Basics of aircraft design – Strong interest in small aircraft operations and people & goods transportation - Market evaluation – Aircraft environmental protection evaluation
- Curiosity, autonomy and ability to think “outside the box”

APPLICATION FOR INTERNSHIP

To apply : CV and motivation letter to be send by email to Joël JEZEGOU (joel.jezegou@isae.fr) and Laurent BERTRANDIAS (l.bertrandias@tbs-education.fr)

For further information: please contact the above-mentioned contacts.