2023 Master internship at University of Gdansk

TITLE : Sustainable management in air transport

LAB & PEOPLE

- Name of the hosting lab: Faculty of Economics University of Gdańsk
- General activities of the lab: Department of Transportation Market
- Website: www.ekonom.ug.edu.pl
- Number of staff / PhD: 2 members of staff
- Supervisor name and contact: Dariusz Tloczynski; dariusz.tloczynski@ug.edu.pl

TOPIC OF THE INTERNSHIP

- Scientific context of the internship (max 20 lines)

Due to the potential environmental risks associated with the rapid growth, aviation market is widely indicated to be decarbonized. Moreover, aircraft emit gases and molecules directly into the upper troposphere and lower stratosphere. These gases and molecules change the concentration of greenhouse gases in the atmosphere (including CO_2, ozone and methane), cause the formation of condensation trails and may increase cirrus cloudiness. Chemical composition of exhaust gases from aircraft turbine engines, as a result of further photochemical reactions taking place in the atmosphere, causes the other negative phenomena like acid rain and photochemical smog. All of this aspects contribute to climate change.

As a result, aviation needs to adapt climate change mitigation solutions. Many actors are trying to influence the growth of sustainable aviation, including European Union, the International Air Transport Association (IATA) or the International Civil Aviation Organization (ICAO). All these entities provide recommendations for decarbonizing:

- European Union – ReFuelEU Aviation,
- IATA – Fly Net Zero,
- ICAO – CORSIA.

Solutions are focused on sustainable aviation fuels, new technologies, operational efficiency and carbon offset (e.g. Individual voluntary carbon offset programs).

Keywords : IATA, ICAO, European Commission, Air carriers, airport, airspace, sustainable, air transport market

Bibliography :

B. Daley, (2010), Air Transport and the Environment, Ashgate Publishing Company.
T.G.Flouris, A.K. Yilmaz, (2016), Risk Management and Corporate Sustainability in Aviation, Taylor & Francis.
M. Janic, (2017), The Sustainability of Air Transportation. A Quantitative Analysis and Assessment, Taylor & Francis.
C. Thomas, D. Raper, J. Maughan, (2012), Towards Sustainable Aviation, Taylor & Francis
European Commission, European Green Deal: new law agreed to cut aviation emissions by promoting sustainable aviation fuels, Brussels, 2023.

- **Tasks and duties entrusted to the student:** During this internship the student will evaluate the implementation of sustainable tools in air transport. It will identify and then analyse the implemented environmental policy instruments in selected air carriers and/or airports operating in Europe. The impact of sustainable tools on air operations and the financial situation of airlines will be determined, and implications for the region will be identified. In order to do so, the student will need to collect secondary data on the instruments of aviation institutions at global, European or national level and data on the implementation of these factors by selected aviation companies. The main outcome will be the creation of a database, the development of a model and the publication of a paper or presentation at a seminar/conference.

- **Skills to be acquired or developed:** Creation of a database; Data analysis.

PROFILE OF THE DESIRED STUDENT

- Minimum level of study required: Master's degree

- Field(s) of study: Transport, Business, Economy and Management, Tourism

- Scientific skills : Excel, Statistica

- Language skills required : English or Polish

THE INTERNSHIP ASSIGNMENT:

Desired duration of the internship (in months): 2 months

Desired Starting date of the mission: *(please indicate the level of flexibility) 1st October 2023*

Indicative weekly schedule: *35h / week*

Remuneration : *Not available*

Erasmus grant *: Application should be made by the student at the sending institution*

Internship agreement: *an internship agreement will be signed.*

To SEA-EU students:

If you're interested please send your CV and letter of motivation to the scientist in charge, dariusz.tloczynski@ug.edu.pl (Dariusz Tłoczyński) before the date 01/10 / 2023.