PROJECT

FlyATM4E

Flying Air Traffic Management for the benefit of environment and climate

Funding: European (Horizon 2020)

Duration: Jun 2020 - Nov 2022

Status: Ongoing

Total project cost: €999,765

EU contribution: €999,765

Call for proposal: H2020-SESAR-2019-2

CORDIS RCN : 229744

Objectives:

The main objective of the FlyATM4E project is to expand approved climate-assessment methods and optimization of aircraft trajectories in order to identify promising mitigation options suitable to solve the task of reducing overall climate impact of aircraft operations. The project will assess the feasibility of a concept for environmental assessment of ATM operations working towards environmental optimisation of air traffic operations.

FlyATM4E will develop a concept to identify climate-optimised aircraft trajectories which enable a robust and eco-efficient reduction in aviation's climate impact. Climate optimization will take into account CO2 and non-CO2 effects, such as contrails and contrail-cirrus, water vapour, NOx and particulate emissions. FlyATM4E will identify those weather situations and aircraft trajectories, which lead to a robust climate impact reduction despite uncertainties in atmospheric science that can be characterised by ensemble probabilistic forecasts. This will improve the assessment of aviation's climate impact. It will further identify those situations where there is a large potential to reduce the climate impact with only little or even no cost changes ("Cherry-Picking") and those situations where both, climate impact and costs can be reduced ("Win-Win").

As a synthesis, FlyATM4E will formulate recommendations how to implement these strategies in meteorological (MET) products and enable not only the understanding of ATM possibilities to reduce aviation's climate impact, but moreover how to implement such eco-efficient routing. To this end, the FlyATM4E consortium builds on its expertise covering the whole spectrum from atmospheric science and climate research to aviation operations research and aircraft trajectory optimisation.

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: SESAR-ER4-05-2019 Environment and Meteorology for ATM

Lead Organisation:

Deutsches Zentrum Fr Luft Und Raumfahrt E.v

Address:
Linder Hoehe
51147 KOELN
Germany

Organisation Website:
http://www.dlr.de

EU Contribution: €368,628

Partner Organisations:

Technische Universitat Hamburg

Address:
Am Schwarzenberg Campus 1
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Organisation Website:
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EU Contribution: €259,375

Universidad Carlos Iii De Madrid

Address:
Calle Madrid
28903 Getafe (Madrid)
Spain

Organisation Website:
http://www.uc3m.es

EU Contribution: €112,388

Technische Universiteit Delft

Address:
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2628 CN DELFT
Netherlands

Organisation Website:
http://www.tudelft.nl

EU Contribution: €259,375

Technologies:

Aircraft operations and safety
Optimization of air traffic operations for reduced environmental impacts

Development phase: Research/Invention

STRIA Roadmaps: Network and traffic management systems, Other specified

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Environmental/Emissions aspects

Geo-spatial type: Other