



Press release
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Optimized Flight Trajectories to limit the Climate Change.

On 19 and 20 February 2020, the new project 'Greener Air Traffic Operations' (GreAT) held its launch event at the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) Institute of Flight Guidance in Braunschweig, Germany. This European-Chinese research and innovation project aims to reduce the impact of air transport on climate change.

The project focuses on new strategies aimed at greener flight routings. These will be achieved through innovative air traffic guidance concepts and optimised operations on airports, in the terminal control area and during cruising flight. The concepts will consider various factors such as atmospheric conditions and real-time airspace constraints. An intense air-ground data exchange is one of the pillars of this approach. In contrast to previous optimisation strategies, GreAT will not focus solely on efficiency and capacity. Instead its focal point is the reduction of the environmental impact of air transport, a crucial part of future air traffic management.

The GreAT project will be conducted in collaboration with seven European and six Chinese partners. Researchers will investigate optimisation strategies for short-haul flights on the European side and long-haul flights on the Chinese side. The partners will develop and evaluate more flexible airspace structures as well as more predictable guidance principles, supported by next-generation assistance systems. This will allow for a better compromise between the shortest routes and conflict-free traffic pre-planning. In addition to initial conceptual work, comprehensive validation activities are planned, which will make use of the simulation capabilities and expertise that are available in the project consortium. The knowledge gained during this work will be exchanged and published to further support research and development after the project has been completed.

The official project kick-off was attended by all the European members of the consortium. During the two-day meeting, the international partners planned and communicated the project activities and discussed the steps needed to achieve the milestones on time.

In addition to DLR, which is acting as project coordinator, the consortium consists of HungaroControl – Hungarian



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Air Navigation Services (Hungary), Universidad Politécnica de Madrid (UPM, Spain), L-UP (France), Royal Dutch Airlines (Koninklijke Luchtvaart Maatschappij; KLM, Netherlands), the Italian Aerospace Research Centre (Centro Italiano Ricerche Aerospaziali; CIRA, Italy), and Pildo Labs (Spain) on the European side. On the Chinese side, the Chinese Aeronautical Radio Electronics Research Institute (CARERI), the Civil Aviation Administration of China (CAAC), the Civil Aviation University of China (CAUC), the China Electronics Technology Avionics Company (CETCA), the Nanjing Research Institute of Electronic Engineering (NRIEE) and the Nanjing University of Aeronautics and Astronautics (NUAA) are participating in the project.

An advisory board will support the project. It consists of the air navigation service providers Deutsche Flugsicherung GmbH (Germany), Austro Control (Austria) and LFV (Sweden), together with the suppliers Harris-Orthogon GmbH and ATRiCS Advanced Traffic Solutions GmbH (both Germany), the International Federation of Air Traffic Controllers' Associations (IFATCA) and Lufthansa (Germany)

The GreAT project has a total duration of 42 months, and received a grant of 2.7 M€ from the European Commission through the H2020 Framework Programme. It officially started on January, 1st 2020.

GreAT is one of four projects investigating different strategies to counteract the impact of air transport on climate change. The three sister projects ClimOP (GA No 875503), ACACIA (GA No 875036) and ALTERNATE (GA No 875538) started at the same time. All four projects aim for intensive research exchanges and collaboration throughout their entire duration.

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