



# MOSCOW AVIATION INSTITUTE PARTICIPATES IN EU INITIATIVE FUTPRINT50 TO CREATE A HYBRID-ELECTRIC AIRCRAFT

News / Manufacturer



The EU funded initiative FUTPRINT50 kicked-off in January 2020 and runs until December 2022 with the aim to accelerate technologies required for the entry-into-service of a commercial hybrid-electric aircraft in a class of up to 50 seats by 2035/40. This reported by Moscow Aviation Institute press-service.

FUTPRINT50 is a Future Propulsion and Integration: towards a hybrid-electric 50-seat regional aircraft and will be implemented thanks to a highly competent international consortium that brings together a mix of expertise: one OEM (Embraer SA), a TIER 1 organization (Airholding SA), two SMEs (ADSE, EASN) and 11 Universities and research organisations (University of Stuttgart, Cranfield University, TU Delft, etc.), abridging the EU with Russia, USA and Brazil. The Russian side is represented by Moscow Aviation Institute (National Research University), Central Aerohydrodynamic Institute (TsAGI), Central Institute of Aviation Motors (CIAM), State Scientific Research Institute of Aviation Systems (GosNIIAS) and the National Research Center "Zhukovsky Institute".

At global level aviation is challenging the mitigation of the sector's impact on the environment. The aviation community has realized that a change is required and therefore adopted the ambition to have a climate neutral aviation system by 2050 (FlightPath2050).

FUTPRINT50 researchers address the need to accelerate the use of disruptive technologies in

aircraft design that sustain the Carbon Neutral Growth commitment towards FlightPath2050. Promising tools, technologies, a common roadmap for technology and regulatory aspects for this class of hybrid-electric aircraft will be explored and an analysis of the key enabling technologies for future hybrid-electric demonstrators will be performed during the three-year course of the project.

FUTPRINT50 will focus on energy storage, energy harvesting and thermal management. Besides advancing the state of the art of these technologies, it will research and share open-source aircraft design tools, hybrid-electric aircraft designs and reference data sets. To attain the ambitious vision of the entry into service of a hybrid–electric 50-seater aircraft, FUTPRINT50 will develop a roadmap for a hybrid-electric region liner with distributed propulsion and a synergetic configuration design that will surpass the efficiency and environmental performance of the current generation of regional aircraft. This will be an important element in a new sustainable air transport system, opening new flexible routes to link smaller cities, and enabling air mobility for the European citizens at zero emissions on thin routes.

Communication links between the project and the European Academia will be pursued through the FUTPRINT50 Academy. Future engineers along with the supervision of University Professors and the mentoring of FUTPRINT50 partners will perform Bachelor/Master Theses on key themes identified within the project. Interaction with FUTPRINT50 will be ensured through the organization of web-conferences/seminars and physical workshops.

Funded by the European Commission under the H2020 Framework Programme with a total budget of 4,7 M€ for the European partners, FUTPRINT50 is coordinated by the University of Stuttgart.

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