



The future of air transport is green: MAHEPA paves the way for hybrid-electric aircraft

The project aims to reduce the impact of air transport on climate change, pollution and noise

Milan, 19 June 2017 - MAHEPA (Modular Approach to Hybrid-Electric Propulsion Architecture) is a European research project seeking to overcome the limitations of electrically-powered aeroplanes by introducing new serial hybrid-electric motorisation systems. A new motor type will be developed for two four-seater hybrid-electric aeroplanes. The first aircraft will be fitted with a propulsion system using an internal combustion engine, while the second will have a hybrid fuel cell system, demonstrating the **potential of this technology for flying long distances with zero emissions**. The first flight is scheduled for 2020.

These systems will constitute enabling technology for the hybrid aircraft of the future and ensure **air transport which is both inexpensive and sustainable**.

The project will be officially presented at the Paris Air Show, held from 19 to 25 June 2017.

“Hybrid-electric propulsion for aviation is a key factor to the development of the light aircraft of the near future, and will soon impact on regional transport as well. At the Politecnico di Milano, we are committed to staying at the cutting edge of technology in order to contribute to a better life and more sustainable development. We are therefore proud to be contributing to the H2020 MAHEPA project in which the academic world, research centres and industry are working in partnership to achieve a decisive step forward in hybrid-electric aeronautical propulsion. This project will see the complete development and testing of two general aviation hybrid-electric aircraft. The experience will provide the data we need in order to refine our analysis and design methodologies, increase our capacity to conceive eco-compatible aeroplanes of increasing size, and assess the impact of their implementation on the European air transport system”, says **Lorenzo Trainelli**, Professor of Aircraft Design at the Department of Aerospace Science and Technology and head of the Politecnico di Milano’s MAHEPA research unit.

The MAHEPA project will not only develop and finalise technologies but also study the implications of these on regulations, airport infrastructure requirements, air traffic management procedures, operational safety, costs and emission models, thus consolidating an original shared vision for regulators, the aviation industry, operators and investors.

The MAHEPA project has received funding under the European Union's Horizon 2020 Research and Innovation programme. The project is coordinated by the aircraft manufacturer **Pipistrel**, in partnership with **Compact Dynamics GmbH** (Germany), **Deutsches Zentrum für Luft- und Raumfahrt e.V.** (Germany), **Universitaet Ulm** (Germany), **H2FLY GmbH** (Germany), **Technische Universiteit Delft** (Netherlands), **Politecnico di Milano** (Italy) and **Univerza v Mariboru** (Slovenia).