



Press release  
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## **The European Commission selects IMOTHEP project led by ONERA to study hybrid electric propulsion**

**In Brussels on 20 January 2020, ONERA with its aviation research and industry partners officially launches the IMOTHEP project, an ambitious research initiative on hybrid electric propulsion funded by the European Commission under Horizon 2020.**

Under the leadership of ONERA, the French aerospace research lab, a consortium of thirty-three key aviation industry and research stakeholders is engaging in an ambitious research project on hybrid electric propulsion for commercial aviation, a technology that opens a new design space for aircraft and may provide a revolutionary step in improving their efficiency.

IMOTHEP (“Investigation and Maturation of Technologies for Hybrid Electric Propulsion”) receives a 10.4 M€ grant from the European Commission under the Horizon 2020 framework program.

IMOTHEP will perform an in-depth investigation of electric technologies for hybrid electric aircraft in close connexion with advanced aircraft configurations design and innovative propulsion architectures taking advantages of synergies between propulsion and airframe.

Analysing potential technologies and technical issues at the relevant scale is fundamental for hybrid electric propulsion and addressing the challenge of climate change requires exploring the technology for commercial aircraft that represents the bulk of current airlines' fleets and aviation's emissions. This is the central focus of IMOTHEP.

The ultimate goal of the project is to achieve a key step in assessing the potential of hybrid electric propulsion for reducing the emissions of commercial aviation and eventually to build the technology roadmap for its development.

The IMOTHEP consortium gathers the European major airframers, Airbus and Leonardo, leading engines manufacturers, Safran, GE Avio, MTU, ITP, and GKN, European aeronautic research organisation from EREA, ONERA, AIT, CIRA, DLR, ILOT, INCAS and NLR, universities, Université de Lorraine, ISAE/Sup'Aéro, Strathclyde University, TU Braunschweig, Politecnico di Bari, Chalmers University and the University of Nottingham, the think tank Bauhaus Luftfahrt, Eurocontrol, L'Up. In addition, IMOTHEP develops

cooperation with Russia, with the involvement of five leading research organisation, CIAM, GosNIIAS, MAI, NRC, TSaGI, as well as with the NRC in Canada.

*“For ONERA, reducing greenhouse gas emissions is key for aviation to pursue its development in the service of society and people mobility” underlines Bruno Sainjon, CEO of ONERA. “This calls for ambitious research and disruptive solutions allowing to go well beyond the continuous improvement of current aircraft technologies”.*



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## About ONERA, the French aerospace research center

ONERA, a central player in aeronautical and space research, employs 1950 people. Under the auspices of the French Armed Forces Ministry, it has a budget of €236 million, more than half of which comes from commercial contracts. Expert for the State, ONERA prepares the defences of tomorrow, addresses the aeronautical and spatial challenges of the future, and contributes to the competitiveness of the aerospace industry. It masters every discipline and technology in the field. All the major civil and military aerospace programmes in France and Europe carry a part of ONERA's DNA: Ariane, Airbus, Falcon, Rafale, missiles, helicopters, engines, radars. Acknowledged worldwide and often award-winners, its scientists help to train many PhD students.



<http://www.onera.fr>

## Contacts Presse ONERA

**Guillaume Belan**

Responsable des Relations Médias

[Guillaume.belan@onera.fr](mailto:Guillaume.belan@onera.fr)

Tél: +33 1 80 38 68 54 / +33 6 77 43 18 66

**Anais Gripon**

Assistante des Relations Médias

[anais.gripon@onera.fr](mailto:anais.gripon@onera.fr)

Tél: +33 1 80 38 68 69