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Press release

**TORINO AIRPORT AND POLITECNICO DI TORINO
PARTNERS IN THE H2020 TULIPS EUROPEAN CONSORTIUM
FOR A MORE SUSTAINABLE AVIATION INDUSTRY**

- *The research project developed together with Politecnico di Torino aims to create an airport smart grid and energy system, and to decarbonise the aviation sector*
- *The European Union is funding the efforts of the 29 partner consortium members with 25 million euros for the next four years*
- *For SAGAT, a new element in the Torino Green Airport project aimed at sustainability*
- *For the Politecnico di Torino, a new action for the development and technological transfer of its own research into civil aviation and sustainability issues*

Torino, November 29 2021 – Torino Airport and the Politecnico di Torino are partners in the European H2020 TULIPS consortium.

The consortium, led by the Royal Schiphol Group, the managing company of Amsterdam and Rotterdam airports, is made up of 29 partners - including airports, airlines, universities and research and training institutes and industrial partners - and has obtained a maximum of **€25 million in funding from the European Union**.

The project is fully in line with the objectives of the European Green Deal, and aims to develop innovations that **facilitate the transition to low-emission mobility**, improving the overall **sustainability of airports and introducing sustainable fuels and organic carbon sequestration in aviation**.

The TULIPS project, which will start in January 2022 and will last until December 2025, aims to accelerate the introduction of sustainable technologies in the aviation sector, contributing to zero emissions and waste at airports by 2030 and climate neutral aviation by 2050.

Thanks to the research collaboration with the Politecnico di Torino, Torino Airport takes a further step in the **Torino Green Airport project aimed at sustainability** and is further committed to achieving the **zero emissions targets set by joining the NetZero 2050 programme**.

Thanks to TULIPS, the Politecnico di Torino will be able to further develop its research and transfer the results to the aviation sector, where both the European Union and ICAO (International Civil Aviation Organization) have introduced extremely ambitious greenhouse gas reduction targets.



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Accelerating sustainability

Torino Airport will implement, with the technical and scientific coordination of the Politecnico di Torino, some of the solutions developed within the consortium, while all innovations aimed at increasing sustainability will be tested at the lead hub of the consortium in Amsterdam Schiphol (Lighthouse Airport of the project).

In cooperation with the Politecnico di Torino, **systems for the creation of airport energy smart hubs** and carbon offsetting will be tested at Torino Airport. In particular, a pilot project will be carried out in preparation for the start-up of an airport smart grid, to self-produce in an **efficient and sustainable manner the energy necessary for the operation of the infrastructure**. This project envisages the use of a combined and flexible system, powered by different energy sources such as methane, biogas, hydrogen, photovoltaics, as well as energy storage systems.

The Politecnico di Torino, in collaboration with the Airport, in addition to studying Green solutions such as the introduction of hydrogen into airports and carbon sequestration in aviation through the use of biochar (an extremely versatile carbonaceous material), will coordinate European partners in the development of a European proposal for the establishment of the EU Clearinghouse to support the certification of new sustainable fuels for aviation.

Other projects led by international partners will focus on new horizons in intermodality, and on **systems for recharging aircraft and airport vehicles with electricity or hydrogen**. Some of the systems to be developed will be tested at Torino Airport.

Andrea Andorno, CEO of Torino Airport, said: “We are proud to be part of this research project and to represent, together with the Politecnico, the only two Italian companies that are part of the European TULIPS consortium. Being able to contribute to making the aviation industry more sustainable is an important part of our Torino Green Airport development project, announced last July, which aims to anticipate the target of zero emissions by 2050. The challenge of climate change cannot be postponed and we are pleased to take it up, as it gives us the opportunity to innovate by implementing high-value solutions”.

David Chiaramonti, lecturer at the Energy Department and project coordinator for the Politecnico di Torino, added: “It is with particular satisfaction that we are about to embark on the activities of the H2020 TULIPS project, together with numerous prestigious European partners. The aeronautical and aerospace sectors are among the areas of excellence of our University, where we develop both technologies and processes and sustainability analyses, also contributing to the development and monitoring of sector policies in Europe and Italy and supporting industry in the ecological transition”.

Several initiatives will be implemented by other consortium partners within the TULIPS project. In addition to Torino Airport and Amsterdam Schiphol, the consortium’s other partner airports are Oslo in Norway and Larnaka in Cyprus, where other solutions will be tested.

Collaboration at four very different airports will allow the impact of the proposed solutions on European climate targets to be made clear.



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For example, the large-scale supply of Sustainable Aviation Fuel (SAF) will be introduced and optimised, and material re-use will be improved in a circular economy; airside demonstrations will be carried out to capture ultrafine particles from departing and landing flights; and the entire passenger and cargo journey will be examined, with proposals for innovative multi-modal solutions.

It is expected that the results of the project will contribute significantly to the decarbonisation of the aviation sector and the knowledge gained will subsequently be shared with the aviation industry and other European airports in order to apply TULIPS innovations and technologies on a large scale.

Partners

The TULIPS consortium is a partnership between Royal Schiphol Group (lead partner of the project), Oslo Airport, SINTEF AS, SINTEF Energi AS, Hermes Airports, Catalink Ltd, **Torino Airport**, **Politecnico di Torino**, Beta-I, Egis S.A., Excess Materials Exchange, Fraunhofer Gesellschaft, KLM Royal Dutch Airlines, KLM Equipment Services, Manchester Metropolitan University, Mobility Concept, Royal NLR Netherlands Aerospace Centre, Nouryon Industrial Chemicals, Pipistrel Vertical Solutions, Port of Amsterdam, SKYNRG, TNO, TU Delft, Instituto Superior Técnico, University of Antwerp, BAM Infraconsult, Ballard Power Systems Europe, DHL Global Forwarding Netherlands and Zepp.solutions.



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The contents of this publication are the sole responsibility of TULIPS and do not necessarily reflect the opinion of the European Union.

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