ENAIRE recognises an innovation project to improve safety, sustainability and capacity in scenarios of uncertainty

PRESS RELEASE

- Tecnalia Research & Innovation wins the fourth edition of the Technological Challenges Competition under the Open Innovation programme of the subsidiary CRIDA
- The winning solution is 'RO4ATFM: Robust Optimisation for Air Traffic Flow Management under Uncertainty in System Capacity'
- Jose Luis Meler, ENAIRE's Director of Air Navigation Services: "We are opening the door to external talent to seek new ideas, technologies and business models that help us improve"

Madrid, 14 November 2025

ENAIRE, the national air navigation service provider, has presented the awards for the fourth edition of the technological challenges competition managed through the Open Innovation programme run by CRIDA, its Research, Development and Innovation (R&D&I) subsidiary. The prize consists of an 18-month research agreement and a financial award of 60,000 euros.

In this fourth edition of the technological challenges competition, the winner was the group Tecnalia Research & Innovation with the solution 'RO4ATFM: Robust Optimisation for Air Traffic Flow Management under Uncertainty in System Capacity', which addresses the multi-objective optimisation challenge: achieving a dynamic balance in flights between safety, capacity and sustainability in ATM (air traffic management).

This proposal sets out the development of a multi-objective robust optimisation model, meaning one that enables effective management of air traffic flow under various uncertainty scenarios, while also minimising

multiple variables such as delays and operating costs, and ensuring the operational viability of the system.

As part of its commitment to open innovation, ENAIRE has launched several initiatives through its subsidiary CRIDA to progressively attract innovative talent and build an ecosystem around air traffic management: Business Ideas Competition, Technological Challenges Competition and Acceleration Competition (startup accelerator). These competitions seek to capture ideas and solutions at different stages of maturity.

At the awards ceremony for the fourth edition of the Technological Challenges Competition, ENAIRE's Director of Air Navigation Services, Jose Luis Meler, stated that presenting this award reflects how ENAIRE "decided to open the door to external talent to look beyond our organisation for new ideas, technologies and business models that help us improve the service".

PRESS RELEASE

Technological Challenges Competition

The aim of the Technological Challenges competition is to find medium- and long-term solutions to technological challenges in the field of air transport by using technologies from other areas.

The winning group, Tecnalia Research & Innovation, with the solution 'RO4ATFM: Robust Optimisation for Air Traffic Flow Management under Uncertainty in System Capacity', comprises a team led by Ignacio Olabarrieta Palacios, PhD in Computational Physics from the University of British Columbia (Canada), together with his colleagues Raquel Molinero Millán, an engineer with a Master's in Telecommunications from the University of Zaragoza; and Luis Viso Domínguez, Telecommunications Engineer from Universitat Ramon Llull in Barcelona and Master of Engineering Management from Auckland University of Technology.

Their participation demonstrates Tecnalia's commitment and expertise in pursuing cutting-edge solutions. Tecnalia is the largest applied research and technological development centre in Spain, a benchmark in Europe and a member of the Basque Research and Technology Alliance. In the field of sustainable mobility, Tecnalia brings together experts with more than 15 years' experience in Artificial Intelligence applied to mobility optimisation and

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intelligent transport systems, alongside specialists in developing innovative solutions for aerial mobility.

About CRIDA

CRIDA is a non-profit economic interest group established by ENAIRE, the Technical University of Madrid (UPM) and Ingeniería y Economía del Transporte, S.A. (INECO) to improve the efficiency of the air traffic management system in Spain through R&D projects.

In collaboration with ENAIRE, CRIDA identifies problems, proposes innovative solutions and facilitates their implementation, contributing to the advancement of air navigation on a global scale.

PRESS RELEASE

About ENAIRE

ENAIRE is the air navigation service provider in Spain.

As a company of the Ministry of Sustainable Transport and Mobility, it provides air traffic control services during the en route and approach phases of all flights to and from Spain and overflights. In addition, it manages communications, navigation and surveillance services from ENAIRE in the airspace and the entire AENA airport network in Spain and provides aerodrome air traffic control services in 21 airports, including the busiest.

ENAIRE is the fourth largest European air navigation service provider, and it is a member of international partnerships A6 Alliance, SESAR (Single European Sky ATM Research) Joint Undertaking, SESAR Deployment Manager, iTEC, CANSO (Civil Air Navigation Services Organisation) and collaborates closely with ICAO (International Civil Aviation Organization).

ENAIRE has received the highest score in Europe on the aviation safety key performance indicator for four years in a row. It has also been awarded the EFQM 600 Seal for its safe, efficient, innovative and sustainable management of air navigation services.