

Startical Successfully Launched Its Second demonstrator satellite, IOD-2, Advancing Space-Based Air Traffic Management

- IOD-2, Startical's second demonstrator satellite and part of the EU-funded ECHOES project, will continue validating real-time VHF voice and data communications between aircraft pilots and air traffic controllers from space.
- The launch builds on the success of IOD-1, which achieved the world's first satellite-based VHF communications with active air traffic, using standard aeronautical protocols.
- Startical's technology is set to improve flight safety, efficiency, and punctuality, while enabling more direct routes that reduce fuel consumption, operational costs, and CO₂ emissions.

Madrid, June 24th, 2025 – Startical, the company created by ENAIRE and Indra, has successfully launched its second satellite, IOD-2, from Vandenberg Space Force Base in California. The mission reinforces Spain's leadership in the race to transform global air traffic management (ATM) using space-based technology.

The launch of IOD-2 follows the successful deployment of IOD-1 in March 2025, which already made history by enabling the first-ever VHF voice communications between aircraft pilots and air traffic controllers via satellite, fully compliant with international aviation standards. These milestones accelerate the development of Startical's future constellation of over 200 low Earth orbit satellites, designed to provide real-time VHF voice and data communications and aircraft surveillance, particularly in regions currently without coverage, such as oceans and remote areas.

With IOD-2, Startical intensifies its testing phase to demonstrate robust, real-time aeronautical communications and surveillance services from space. Additionally, it reflects Spain's commitment and capabilities to innovate in the aerospace sector. The mission is led by Startical while the engineering behind the mission systems and the satellite payload have been developed by Indra, with the support of ENAIRE. "The success of IOD-1 proved that space-based VHF works. With IOD-2, we advance Spain's leadership in aerospace technology and reaffirm our mission to be the first company that will provide VHF voice and data global coverage for ATM" said Juan Enrique González Laguna, General Manager of Startical.

Today, aircraft flying over oceans or remote regions must maintain wide separation due to the lack of real-time communication. Startical's satellites will change that, enabling continuous monitoring and direct voice contact with pilots anywhere on Earth, allowing faster responses to storms, emergencies, or rerouting needs. It also paves the way for more direct and fuel-efficient routes, contributing to a greener aviation industry.

Like its predecessor, IOD-2 is part of ECHOES, a project co-founded by the European Union under the Connecting Europe Facility (CEF), managed by the European Climate, Infrastructure, and Environment Executive Agency (CINEA) and supported by the SESAR Joint Undertaking. The project aims to demonstrate how satellite technology can enhance ATM services and reduce environmental impact. Both satellites will continue undergoing test over the South Atlantic, covering airspace managed by the Canary Islands, Azores, Dakar, Cape Verde, and Brazil. Beyond technological demonstration, these real-world tests will help define future international standards for satellite-based air traffic communications.

Watch the launch [here](#).

About Startical

Startical is a public-private company created by Indra and ENAIRE, approved by the Council of Ministers, which will position Spain as a leader in global satellite services for air navigation. The initiative aims to deploy over 200 small satellites in low Earth orbit to improve air traffic management, extending coverage in oceanic and

remote areas. Startical will pioneer by integrating ADS-B surveillance with VHF radio communication between controllers and pilots, following aeronautical standards. In 2025, it carried out the first two launches to validate the technology in orbit. With these advancements, the initiative will enhance the safety, efficiency, and sustainability of global air traffic, facilitating the creation of new routes, and contributing to the reduction of operational costs and CO₂ emissions.

About ECHOES

The overall objective of ECHOES is to demonstrate the technical feasibility of a space-based solution for VHF communications (voice and datalink) for the aviation sector, which in combination with space-based ADS-B, would greatly contribute to ATM in terms of safety, capacity, cost-efficiency and environmental impact, focused mainly in oceanic areas. To provide the required services and test this technology, ECHOES was set to develop, manufacture and launch two satellites in a Low Earth Orbit, IOD-1 and IOD-2. These satellites will serve as the platform to test the technologies and services aimed at improving the Air Navigation Services. The project is led by Startical with participation of ENAIRE, Indra, Nav Portugal, Deutsches Zentrum für Luft- und Raumfahrt (DLR) and Mitiga Solutions. For additional information on the ECHOES project, please visit www.sesarju.eu/projects/ECHOES.

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