



ENGINEERING
DRIVEN
PEOPLE

CT Engineers drives the technological revolution in urban air mobility with the Gavilanso project.

- The Gavilanso project focuses on the safe, sustainable, and efficient integration of unmanned aircraft and eVTOL in urban environments.
- CT Engineers is involved in the creation of virtual flight simulators for light aerial platforms and predictive digital twins of their batteries, allowing for mission testing and optimization before undertaking real flights.

Madrid, March 11, 2025, - The GAVILANSO project, part of the MISSIONS 2024 program, kicks off with the aim of developing advanced technological solutions in the field of urban air mobility (UAM). Over the next 12 months, this innovative project, with a total funding of 1.2 million euros, will work on developing key technologies for the integration of unmanned aircraft and electric vertical take-off and landing (eVTOL) vehicles in urban environments.

CT Engineers will work closely with its consortium partners, composed of IDNEO, which coordinates the project, ATYGES, and IDBOTIC. Additionally, the technological centers CATEC and CIRCE will participate as research and development entities.

The Gavilanso project addresses some of the most relevant technological challenges identified by the European Union Aviation Safety Agency (EASA), including improving operational efficiency, optimizing energy use, and ensuring the safety and sustainability of these new technologies.

In developing the Gavilanso project, three main goals have been established, fundamental to advancing UAM development:

- Design of a lightweight modular battery with a wireless management system (BMS) configurable in real-time by software.
- Improvement of the communication system and encrypted cybersecurity of the aircraft.
- Improvement in automatic fleet management, in swarm mode, using artificial intelligence to optimize operations and reduce risks.

Within this ambitious project, CT plays a crucial role, focusing its efforts on developing tools that optimize the safety, efficiency, and performance of the aircraft. Among its main activities in the project, the creation of a virtual mission center stands out, which will use hyper-realistic environments to test different scenarios and missions before carrying out real tests. In this way, risks will be minimized by detecting possible failures or unforeseen events in a controlled environment.



ENGINEERING
DRIVEN
PEOPLE

CT will also create a virtual replica of the high-voltage battery pack as a digital twin, in order to simulate its behavior in synthetic flight environments and test its performance in extreme conditions without putting real batteries at risk.

The company will carry out advanced virtual simulations for route planning and ground personnel training, and will participate in optimizing battery systems, both high and low voltage, using hardware in the loop (HIL) techniques. This approach will allow adjusting and optimizing battery performance before conducting physical tests, reducing risks and increasing operational safety and predictive maintenance.

The Gavilanso project not only promises to transform urban mobility but also to open new doors to technological innovation. With the participation of CT Engineers, a key step is being taken towards a future where drones and electric aircraft will be an integral part of our cities, changing the way we move and connect. This advance not only impacts engineering but will transform everyday life, improving the efficiency, sustainability, and accessibility of transportation.

About CT

CT is a leading engineering company throughout the complete product lifecycle. For more than 35 years, our mission has been to provide innovative services and technological solutions that help our clients be more effective and competitive. Today, CT's success is driven by 2.000+ engineers in seven countries providing end-to-end expert support to leading customers in the aeronautical, space, naval, automotive, railway, energy and industrial plant sectors. www.ctengineeringgroup.com

For more information:

Ignacio Abbad
Head of Marketing and Communications
The CT Engineering Group
Tel. +34 646 368 996
ignacio.abbad@ctengineeringgroup.com
www.ctengineeringgroup.com

Gabriela Martín
Internal and Corporate Communications
The CT Engineering Group
Tel. + 34 618073329
gabriela.martin@ctengineeringgroup.com
www.ctengineeringgroup.com