





Autonomous

Systems

Automation & Robotics

Perception & AI





On-Board

Systems



Additive Manufacturing

•3

Advanced **Processes** & Testing

Where we are



2 ATLAS α | Experimental Center

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Flight Test

- **3** ATLAS β | Tactical Center
- 4 Airbus Flight Simulator Center and Crew Training
- Joint Innovation Unit 'TOWARDS THE SMART FACTORY"
- 6 CATEC Galicia

Who we are

CATEC is an internationally recognized RTO (Research & Technology Organization) at the forefront of the aerospace industry.

Its extensive research and development focuses on the areas of advanced manufacturing and inspection technologies, additive manufacturing, automation & robotics, UAS technologies, aerial robotics, U-space and safe integration into airspace.

These activities are integrated into national and international cooperative ventures.



CATEC headquarters

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YOUR TECHNOLOGY PARTNER

Advanced Center for Aerospace Technologies CATEC

Air Traffic Laboratory for Advanced Systems **ATLAS**



Aviation



Space



UAS



Innovative solutions for the industry

The Advanced Center for Aerospace Technologies (CATEC) works on technological knowledge development and its transfer to the industry, focusing in different strategic lines of research

Materials & Advanced Processes

- Development of metal Additive Manufacturing solutions based in PBF-L and DED-L and post-processing.
- Prototyping of polymer-base Additive Manufacturing parts using FDM, SLA, SLS ...
- Development of ad-hoc non-destructive testing solutions based on ultrasonics, thermography, laser shearography, etc.
- Computed Tomography (CT) and digital radiography.
- Advanced structural and environmental testing.
- Structural Health Monitoring (SHM).
- Development of advanced robotic solutions for the aviation of the future.
- Automation of advanced manufacturing and inspection processes.
- Advanced multitask end-effectors development.
- Computer vision applied to manufacturing, monitoring and inspection processes.
- Development of deep learning powered workbenches.
- Data acquisition and processing for industrial digital twins.
- Cognitive applications of augmented reality.
- Industrial design and development of test benches.
- Artificial intelligence solutions for solving complex industrial to solve industry difficulties.



Avionics & Systems

- Advanced and highly autonomous GNC systems for UAS and AMM aircraft.
- Customize payloads for a large diversity of missions (environmental monitoring, surveillance, agriculture, inspection, etc.).
- On-board systems to increase safety in operations with UAS (DAA, FTS, etc.).
- Al-based techniques and algorithms applied to on-board UAS systems and U-space/UTM services.
- Specific applications and advanced Ground Control Stations (GCS).
- Systems and procedures for the safe integration of UAS into the airspace (including U-space / UTM).
- Design, integration, assembly and customization of UAS / drones.
- Design and organization of flight test campaigns (including support to obtain flight permits).



ATLASβ | Tactical Center

eVTOLs.

Leading-edge facilities and equipment for indoor and outdoor flight testing



Flight Test Centers

ATLAS*α* | Experimental Center

• Leading center exclusively devoted to the development of experimental flights with light and tactical UAS.

• About 1,000 km² of segregated airspace.

• Runway of 1.5 km suitable for the use of tactical UAS with greater wingspan and weight, and