



Acubed in brief

Acubed propels Airbus forward by tapping into Silicon Valley's vibrant tech ecosystem, providing it with the means and know-how to capitalize on rapid technological advancements.

Dedicated to boosting Airbus' competitive advantage, Acubed's current focus is on accelerating the adoption of AI and autonomy within Airbus' commercial operations, from commercial flight functions to manufacturing, services and digital airspace management.

Through an agile and collaborative approach, bolstered by strong AI expertise, Acubed injects substantial value into Airbus by de-risking future investments, building blueprints for new and strategically important topics, partnering with the local ecosystem, all while closely monitoring transformative tech trends.

Areas of focus

Acubed's areas of exploration and maturation are closely aligned to Airbus' strategic priorities and aim to help Airbus secure and maintain its competitive advantage across nascent and established aerospace markets. Beyond its current portfolio, Acubed explores new areas of potential interest to mitigate risks and create additional value and opportunity for Airbus.

AI for Autonomy

- The Wayfinder team is developing certifiable autonomous flight and machine learning solutions to help Airbus bring about a significant increase in safety and efficiency in the next generation of commercial aircraft.
- To do this, the team has developed processes, methods and an agile framework to rapidly prototype and evaluate AI-based flight function software development. This involves running a dedicated IT infrastructure capable of aggregating and processing petabyte-sized data volumes to rapidly develop and test such flight functions.
- The team operates a general aviation flight lab out of Palo Alto Airport to collect data across the US and rapidly prototype flight functions. In addition, it generates large-scale, high-fidelity synthetic renderings of urban environments, airports and runways under multiple environmental conditions to supplement its real-world datasets.
- Wayfinder's team of experts work hand-in-hand with Airbus' teams in Europe to develop robust computer vision-based autonomous systems to enable Airbus to deliver on its smart automation ambitions for its next generation commercial aircraft.

AI for Manufacturing & Digital Engineering

- The Advanced Digital Design and Manufacturing (ADAM) team seeks to accelerate the digital transformation of the aerospace industry through the application of AI across manufacturing and engineering.
- ADAM is developing solutions to increase safety and efficiency across Airbus manufacturing sites via computer vision technology to track operational progress, perform quality assurance, and detect foreign objects.



- The team is also investigating the use of modern data engineering and ML/AI approaches to transform and standardize internal data sets, enabling Airbus engineering data to be used in analytics and process improvement, and laying the groundwork for Airbus to transition to next generation infrastructure and tools.

AI for Services

- Acubed is supporting the newly created Connected Aircraft Program to help understand and uncover the potential market opportunity made possible through enhanced onboard connectivity.
- To do this, our team is developing an AI-powered recommendation and data analytics engine that can capture data and provide recommendations to airlines, passengers and third party service providers.
- The goal is to better apprehend how Airbus could potentially help optimize airlines' operations and boost their ancillary revenue by providing analytics to airlines and a personalized passenger experience.

Digital Airspace Management

- The Uncrewed Traffic Management (UTM) team, initially founded at Acubed, is part of the global Airbus UTM program located across Europe and Singapore.
- Their work aims to enable autonomous and digital air traffic operations that ensure a safe, fair and efficient future airspace. The team is doing this through research, simulations and industry collaborations.
- Through Acubed's end-to-end airspace simulation environment, the team is rapidly validating the concept of a digital ecosystem which will allow the safe and scalable integration of both uncrewed and crewed aircraft operations.
- They also deliver a suite of software solutions for an extensible UTM ecosystem, including concepts of operation, to help shape and drive regulation and standards.

Quantum Sensing

- By partnering with local start-ups, Acubed is accelerating Airbus' understanding of the potential of quantum sensing for aviation use cases and how they may be leveraged as an alternative to GPS navigation in instances of jamming or spoofing.

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press@airbus-sv.com