

June 2020

Acubed in brief

Founded in 2015, Acubed is the innovation center of Airbus located at the heart of Silicon Valley, a thriving hotspot for emerging technologies, innovation and entrepreneurship.

As a global leader in aerospace, Airbus aims to make things fly. Acubed's mission is to provide a lens into the future for the industry, transforming risk into opportunity to build the future of flight now.

Acubed strives to propel innovation to market faster, broaden the talent pool in emerging aerospace careers and simultaneously help drive a culture change across Airbus.

Acubed is a project-focused operation that employs the brightest minds to work at speed in order to help Airbus deliver impact at global scale. Its passion is to execute high-impact projects and foster technology partnerships that enable it to meet its ambitious objectives.

Current projects

Acubed runs several types of projects that aim to help Airbus secure a leading position in new and emerging aerospace markets, discover new aerospace products not yet envisaged, rapidly deploy uniquely skilled in-house teams applying digital technologies, and continue being recognized as a company that practices innovation in unique and exciting ways.

<u> WAYFINDER</u>

- Project Wayfinder is developing software using artificial intelligence to pilot the next generation of aircraft. The team is focused on building scalable, certifiable autonomy systems to power self-piloted aircraft applications throughout Airbus, from small urban air vehicles ("air taxis") to large commercial airplanes.
- The project is driving the maturation of machine learning and other core technologies for autonomous flight, and creating a reference architecture that includes software, hardware, and a data-driven development process to allow aircraft to perceive and react to their environment.
- Autonomous flight is transforming the transportation industry, and Wayfinder is at the

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heart of this revolution.



- Monark is working to scale up weather-related measurements using commercial aircraft, weather balloons, and autonomous flying platforms to directly and significantly impact and benefit both weather forecasting and commercial aviation.
- In particular, scaling up such measurements allows the team to provide advanced weather data analytics to enable critical and strategic decision making.
- By accelerating global weather sensing at scale, Monark is demonstrating Airbus' commitment to safer, sustainable aviation, as well as preserving life on earth for future generations to come.



- The Advanced Digital Design and Manufacturing (ADAM) project seeks to future-proof the aerospace industry through the application of digital innovation to design and manufacturing.
- Whether adapting manufacturing processes to gain in efficiences or to cope with disruptions, such as the COVID-19 pandemic, ADAM is helping to reduce lead times, production costs and to improve workflows dynamically, while helping to blend software and hardware expertise, an emerging skill set required for future aerospace careers.



- Ray20 is driving the maturation of computer vision and connectivity solutions within swarm networks for autonomous Earth Observation missions and Geospatial Information Systems to improve operations.
- Ray20's aim is to build scalable, certifiable and autonomous remote sensing systems over Europe and North America using Aircraft as a Sensing System (AaaSS). With such systems in place, Ray20 will be able to provide Airbus customers—in a wide range of industries, institutions and governments—with high quality, high cadence images and analytics of Earth to manage, support, analyze and improve their operations.
- Ray20 will create unrivalled standards for Earth Observation spatial and temporal cadence at the lowest cost on the market with a data-driven process that leverages aircraft to

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analyze the environment they cover. Geospatial Information Systems are transforming our understanding of the world, and the Ray20 team is at the heart of this revolution.

Airbus UTM

- Through research, simulations and industry collaboration, Airbus Unmanned Traffic Management (UTM) is building digital air traffic management solutions to enable the next age of aviation. It will design, develop, and build the critical infrastructure necessary to allow new aircraft, including air taxis and delivery drones, to safely enter and share the skies of our future.
- Leveraging Airbus' decades-long history of technological excellence in aviation and its
 established relationships with critical regulatory and industry organizations, Airbus UTM
 is advancing the industry with continued research and simulations to deploy a
 comprehensive air traffic management framework.
- The team is building a suite of products to provide an extensible baseline UTM ecosystem. This includes essential core services such as registration and airspace authorization, as well as a gateway to fleet management and safety certification services.

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