



ADACORSA



Airborne data collection on resilient system architectures



Project 5 key activity areas:

1. **Drone avionics:** ADACORSA will provide an innovative drone platform, enabling rapid development of new drones tailored to the respective applications;
2. **Infrastructure:** ADACORSA will leverage existing infrastructure (ground stations and other drones), borrowing concepts from the automotive world, to provide advanced services to support safe, efficient and secure access to airspace for large numbers of drones;
3. **Legal Framework:** ADACORSA aims at contributing to the emerging regulatory frameworks for drones that are bigger and more capable than the typical short-range camera drones and must be allowed to fly beyond visual line of sight (BVLOS) to enable a multitude of possible business cases;
4. **Security:** Airflight security is so fundamental a requirement that it is recognized as a separate area. ADACORSA develops technologies that allow drones to be unambiguously identified and support secure communication between the drone, other drones and ground stations. This is also a prerequisite to privacy;
5. **Societal Acceptance:** the core activities of ADACORSA will foster societal acceptance by guaranteeing safety, security and privacy in the context of a low pollution, low noise and low-cost device.

Project vision:

The main vision of ADACORSA is to Provide technologies to render drones as a safe and efficient component of the mobility mix, with differentiated, safe and reliable capabilities in extended beyond visual line of sight (BVLOS) operations.

Project mission:

- Develop technologies for operations beyond visual line-of-sight
- Regulatory framework: EASA Specific Operations Risk Assessment (SORA)
- Develop technologies that contribute to increased trust in civilian drone operations
- Higher reliability of data and communications increase trust
- Increased trackability of drones and transparency of operations
- Bring relevant automotive technology to the drone industry
- Cost-effective and tested on ground
- Leverage European primacy in automotive technologies and strengthen industry's capability in cross-domain technologies

Project Main Objectives:



ADACORSA will deliver:

- a) On the component level, functionally redundant and fail-operational radar and LIDAR sensors as well as 3D cameras. In order to reduce risk, time and costs, the project aims to adapt technologies from the automotive sector to the drone market for these components.
- b) On the system level, hardware and software for reliable sensor fusion and data analytics as well as technologies for secure and reliable drone communication using multipath TCP and registration and identification by developing platforms based on eUICs/eSM.
- c) On an architecture level, fail-operational drone control and investigation a pre-operational Flight Information Management System (FIMS) the integration with CoTS components for Unmanned Air Vehicle Traffic Management System (UTM). Within the project, 35 physical as well as virtual demonstrators of BVLOS, long-range drone flight shall pave the way toward certifiable systems for future integration of drone operations.

Project facts:

Project Coordinator – INFINEON TECHNOLOGIES GERMANY AG
 Website: <https://adacorsa.eu/>
 Project Start: 01-05-2020
 Duration: 36M
 Total Investment: –€84.6M
 Requested EU contribution: –€M 12
 Participating organizations: 50
 Number of Countries: 12

Project partners:

