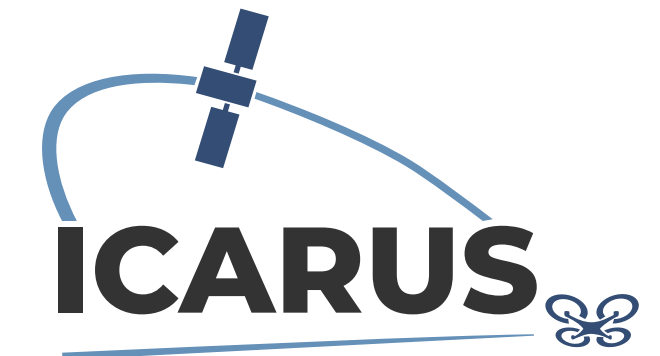


Integrated Common Altitude Reference System for U-space



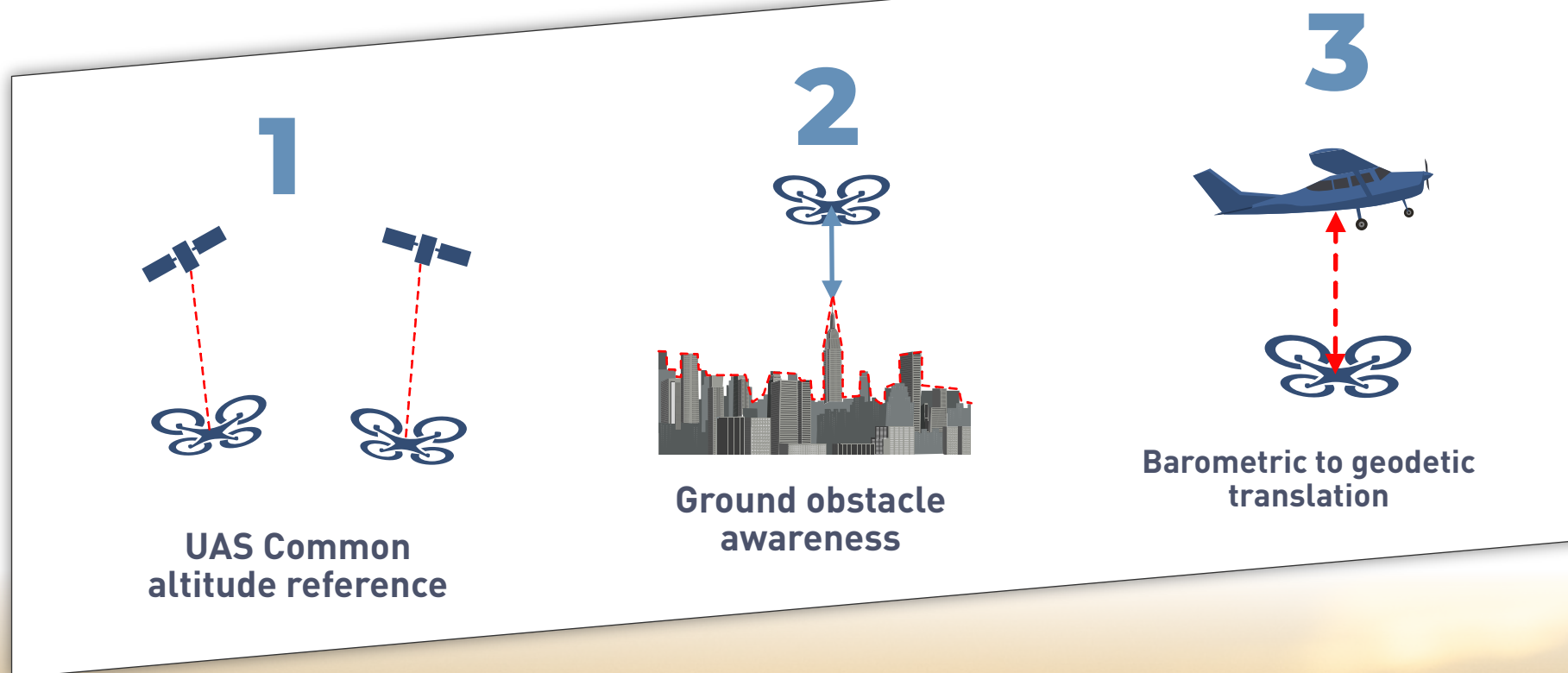
Problem statement

Currently there is **no common altitude reference** in manned vs unmanned aviation, or between different drone manufacturers.

Traditional methods to determine altitude, and ensure vertical separation, are **based on pressure altitude**.

Drones and manned aircraft already **use satellite measurements** (GNSS) for navigation purposes.

Technical objectives



ICARUS benefits

The U-space service that ICARUS will develop and validate can be **used by drone and manned aviation** to obtain their current altitude, using a Common Altitude Reference, as well as distance from the ground or known obstacles.



This innovative service will increase the **safety of operations**, boosting long distance (BVLOS) operations, increasing the **capacity of congested low level airspace** and further the **integration of drones** with traditional manned aviation.

What is ICARUS

ICARUS is an innovative **U-space service** providing its users accurate **height estimation** and **altitude translation** (geodetic to/from barometric) for UAS and General Aviation during both strategic and tactical phases of the flight. Pilots may use the ICARUS service to obtain the terrain profile and known ground obstacles, while keeping a common reference altitude datum as well as augmenting the "level of confidence" on the vertical position.

Project Consortium



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10th SESAR Innovation Days

