

ODESSA System Factsheet

AVERAGE RANGE 
100-150
meters

NUMBER OF OBSTACLES DETECTED



At least 10 obstacles at the time when range is at least 150 meters, with at least 120° Azimuth field of view, at least 20° Elevation and Maximum Speed of 250 Km/h

COVERAGE



360°

WEIGHT



3 Kg

POWER CONSUMPTION



60 W

VOLTS OF DIRECT CURRENT



28 V

AVERAGE PRICE



20.000 €

AVIATION STANDARDS GUIDELINES



AUTOMOTIVE ISO STANDARDS

26262

SWAP GUIDELINED COMPLIANCE

YES

Partners



Contacts

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Project Coordinator
Interconsulting S.r.l.



Horizon 2020
European Union funding
for Research & Innovation

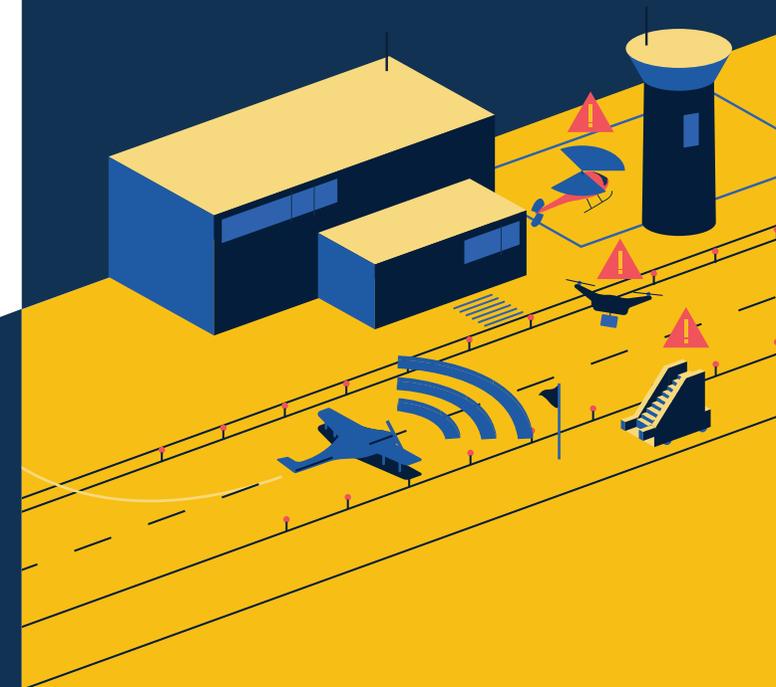


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Odessa

Obstacle **DE**tECTION Sensor for Surveillance on Aircraft



*Agile, affordable
and reliable obstacle
detection system*

A reliable and affordable collisions detection system

Mid-air, near mid-air, and on-ground collisions are main causes of accidents in general aviation.

By taking advantage of mature automotive technologies, where low cost and reliable millimeter radars combined with video cameras are used for the early detection of obstacles, **ODESSA dramatically enhances the collision avoiding capabilities of small aircrafts during landing, approach and on-ground procedures, independently from the airport sensors infrastructures.**

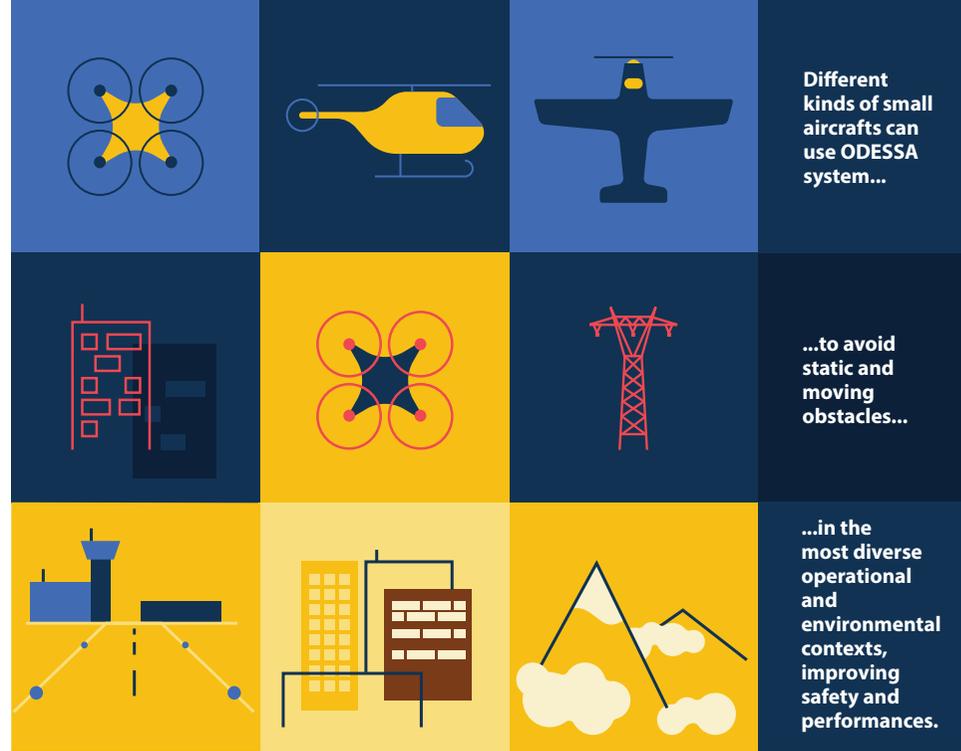
ODESSA project provides a **small, light, and low-cost sensors kit** that could be installed on fixed and rotary wing aircraft as well as drones.

The final ambition of ODESSA is **to improve the Terrain Awareness and Warning Systems (TAWS) or Traffic Collision Avoidance Systems (TCAS) capabilities**, already provided for civil aviation platforms, contributing to the development of the Modular Surveillance System (MSS) in the Clean Sky 2 Systems [ITD WP1.3].

Adapting innovative technology from the automotive domain

ODESSA looks for the best trade-off between automotive sensors and the very expensive collision avoidance systems used in general aviation, not accessible to small aircrafts owners.

The **project takes the best technologies from the automotive sector and adapts them in order to improve safety standards** not only for small aircrafts, but all aircraft classes thanks to the potential addition of functions cooperating with TAWS.



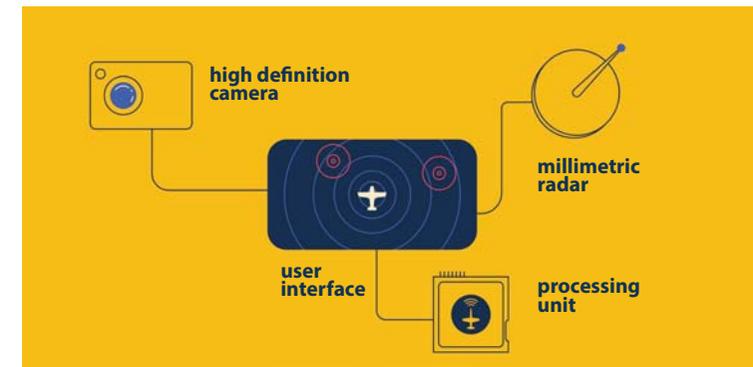
High level of performances

Scope of the project is the design and the development of the prototype of an avionic sensor, following the guidelines of the aviation standards, able to detect obstacles on the flight path close to terrain or during the "on ground" manoeuvres.

The expected result is an affordable sensor equipment, derived by mass-market series (automotive), appropriately modified in order to **comply with the aviation safety standards and satisfy the functional and environmental requirements of the aeronautics environment.**

The advancements in terms of reliability, sensor weight, size, power consumption and cost, **made automotive solutions to become attractive for aeronautical market.** Additionally, the associated industrial ISO standards 26262 are getting closer to aeronautical ones, especially in terms of safety analysis and hardware/software qualification.

ODESSA system



Milestones

