



Horizon 2020 Secure Societies European Info Day and
Brokerage Event

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Avansig

Maria Merlan

mmerlan@avansig.com

- **AVANSIG**

SME specialized in software engineering. It offers development of advanced solutions in the field of Information and Communication Technology (ICT).

Research team and main activities:

- *Geographic Information Systems (GIS)*
- *Real-time locating system (RTLS)*
- *Autonomous Navigation System (ANS) autonomous navigation systems for both outdoor and indoor locations*

ROS (Robot Operating System), integrate GIS, LIDAR and computer vision, indoors positioning techniques, 3D mapping and SLAM (Simultaneous Localization And Mapping)



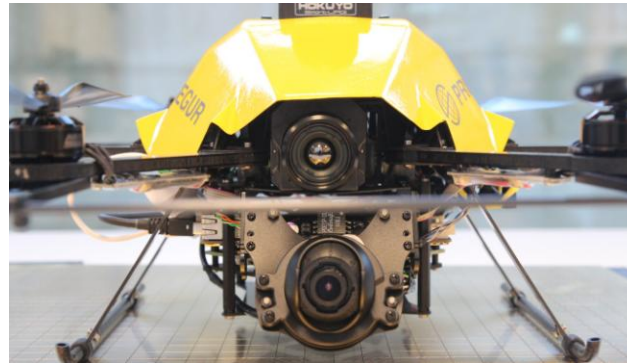
- **Previous Project experiences**

AVANSIG-PROSEGUR



DroneService (2015): *Indoor Security System with Autonomous Drones Based on map-matching LIDAR.*

SINDA (2016): *Indoor Security System with Autonomous Drones Based on Artificial 3D Vision.*

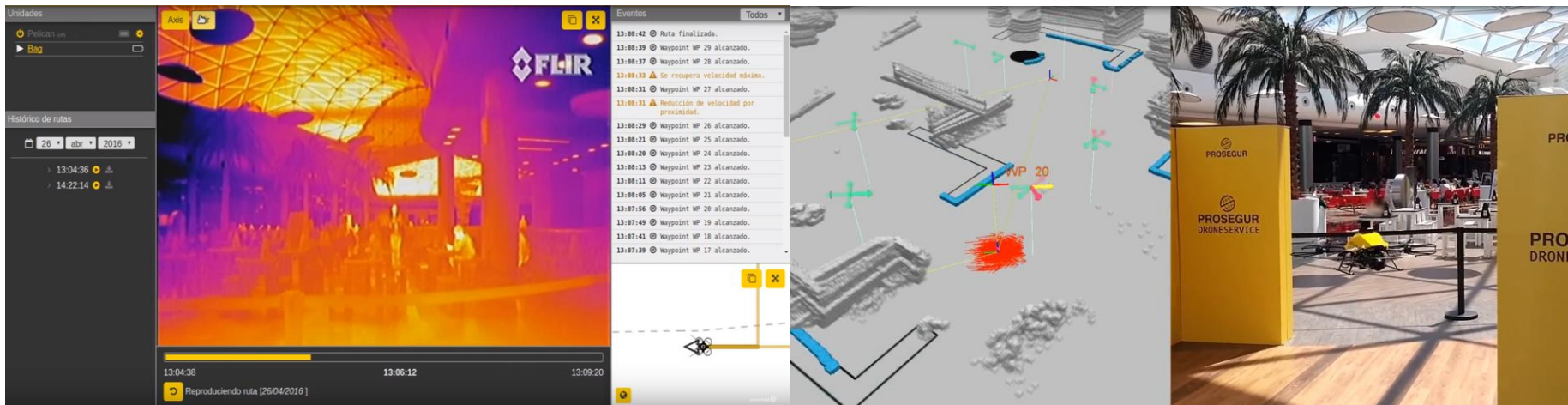


➤ **2017 (Prototype TRL7) Intelligent smart drone: ISASDRONE**



- **Previous Project experiences**

AVANSIG-PROSEGUR



Navigation in GPS-denied environments (high precision)

Automated remote charging

Obstacle detection and avoidance (autonomy)

Integration and Control Platform

Real time communication

Black box for activity log



ISASDrone Surveillance using autonomous smart drones

- *Objectives: Machines capable of perceive and react to the environment ,performing **dangerous, remote and systematic tasks fully automatically**, reducing costs and risks, improving quality of the service.*
 - *SEC-16-BES-2017 Through-foliage detection, including in the outermost regions of the EU.*
 - *SEC-12-FCT-2016-2017 Technologies for prevention, investigation, and mitigation in the context of fight against crime and terrorism.*
 - *CIP-01-2016-2017 Prevention, detection, response and mitigation of the combination of physical and cyber threats to the critical infrastructure of Europe.*



ISASDrone Surveillance using autonomous smart drones

- *Expected results*

Surveillance and security in GPS-denied environments	<ul style="list-style-type: none"> • Passive and active surveillance in small and large areas (shopping malls, industrial warehouses, production centers, etc.) • Support in physical surveillance in forest areas
Warehousing and distribution	<ul style="list-style-type: none"> • Stock control • Tool to monitor purchases IN and OUT • Lineal monitoring in supermarkets
Risk jobs conditions	<ul style="list-style-type: none"> • Inspection in industrial environments (nuclear and thermal power station, refinery, electrical and chemical plants, etc) • Inspection of fuel tanks
Harsh environments	<ul style="list-style-type: none"> • Monitoring mining sites • Inspections of wind turbines • Inspections of ships and offshore platforms



Required Partners

- *Project proposed: Surveillance using autonomous smart drones*

No	Partner Name	Type	Country	Role in the Project
01	PROSEGUR	IND	Spain	Security service supplier
02	AVANSIG	SME	Spain	Technology supplier
03	Required	LEA		Final user
04	Required	LEA		Final user
05	Required	LEA		Final user
06	Required	IND		Service supplier



Maria Merlan
Avansig
Department: R&D&I
+34 653805701
mmerlan@avansig.com
<http://www.avansig.com/>

