



# Port of Valencia. Support to e-navigation

## SCOPE

The campaign performed in Valencia will be devoted to capture operational benefits brought by PASSport in support to e-Navigation providing a concrete contribution to initiatives started by the International Maritime Organization (IMO) more than 10 years ago and well in the implementation phase. The PASSport system shall complement existing e-Navigation systems by providing real time data and visualization of ship movements, monitoring of dangerous and difficult to access areas and providing such data to VTS/ships. In particular, the following functionalities will be implemented: 1) Contribute to continuous real-time monitoring for ship arrival/departure to/from port. 2) Detection of vessels with AIS disabled. 3) Provide real-time information/data to support "Pilots" VTS. 4) Ships monitoring in anchorage areas

## PLANNING

- Campaign execution: 2023 Q3 (Sept 2023)

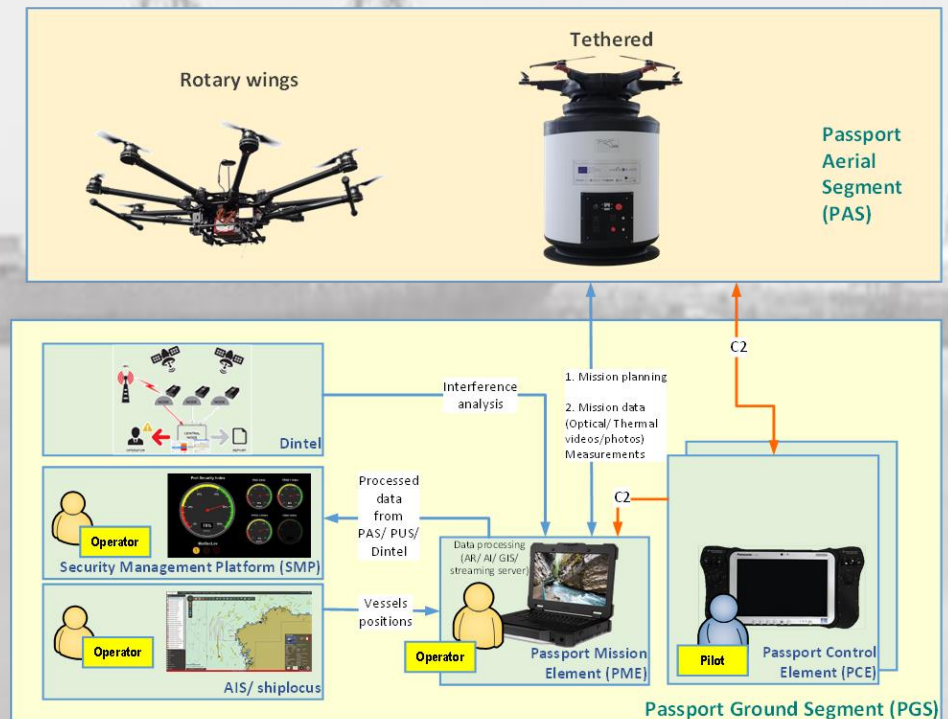
## PORT OF VALENCIA

The Port of Valencia has been selected as it is the fifth busiest seaport in Europe. As of 2019, it moves an annual cargo traffic of around 81 million tonnes and 5.4 TEU, ranking first in Spain and second in the Mediterranean basin in container shipping (after the Port of Piraeus), and second in Spain in annual cargo traffic, after the Port of Algeciras. The three ports controlled by the Port Authority of Valencia are in Valencia, Sagunto and Gandía. They are located on the shores of the Mediterranean Sea, along an 80 km stretch of Spain's eastern coastline. The Port of Valencia is the centre of economic activity in an area of influence encompassing a radius of 350 km, which generates 51 percent of Spain's GDP and includes half the entire working population of the giant country. The port has a quay length of 12 km and a total storage area of 300 acres (1.2 km<sup>2</sup>).

## PASSPORT ARCHITECTURE CONFIGURATION

PASSport configuration for this campaign is composed by:

- One (1) rotary wing tethered drone equipped by optical camera for distant video monitoring
- One (1) rotary wing drone optical camera for distant video monitoring
- One (1) control segment (PCE) composed managing the fleet of drones
- One (1) mission center (PME) where both real time (video for situational awareness) and data for post-processing are collected, processed together with Copernicus, validated and published. PME also manages all mission phases, i. e. planning, acquisition, processing, validation, reporting.
- One (1) Security Management Platform (SMP) used to trigger threats and activate relevant intervention procedures
- One (1) GNSS interference detection to check quality of GNSS signal
- Interface to already existing AIS systems, namely shiplocus, already managed by PASSPort consortium





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## THE PILOT: Valencia areas

The validation campaign in Valencia is planned to be carried out in September 2023. Five potential locations within the Port of Valencia have been identified to deploy the validation campaign. Each one of these will require a specific authorisation from the port authority prior to it starting.

### Location 1: East dike

Esplanade on the ports East dike.

- Disposes of sufficient ground space (>10m diameter) for pilot deployment
- With power source for electronic equipment

### Location 2: Boluda tug boat's dock

- Centralized area with sufficient ground space (>10m diameter).
- Without power source for electronic equipment.

### Location 3: Port Authority parking

- Area located at in the close proximity of the Port Authority.
- Approximately 290m from the water, with sufficient ground space (>10m diameter) for drone flight testing without obstacles.

### Location 4: Port's northern enlargement 1

- Area located at the port's northern expansion.
- Currently not in use, with irregular ground surface.
- Sufficient ground space (>10m diameter)

### Location 5: Valenciaport's northern enlargement 2

- Area located at the port's northern expansion.
- Currently not in use, with irregular ground surface.
- Sufficient ground space (>10m diameter)

