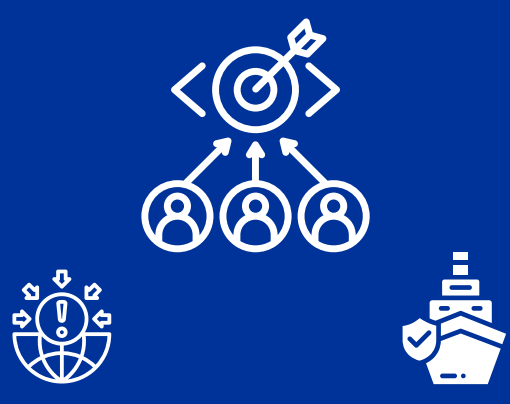
An advanced surveillance platform to improve the EUROpean Multi Authority bordeR Security efficiency and cooperation

REVOLUTIONIZING MARITIME SECURITY: EURMARS PROJECT'S CUTTING-EDGE COASTAL SURVEILLANCE SYSTEM

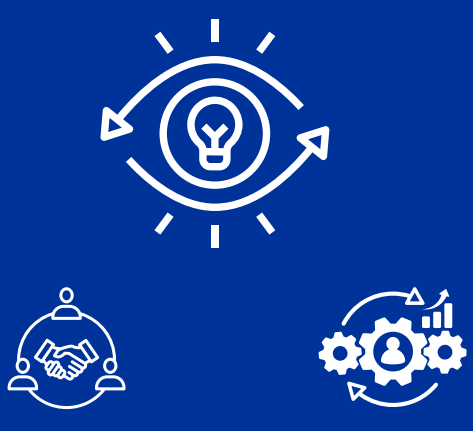
THE CHALLENGE

- The maritime domain faces an ever-evolving landscape of threats.
- Complex threats include:
  - Human trafficking,
  - Drug trafficking,
  - Arms trafficking.
- Necessitates a coordinated and technologically advanced approach among authorities.



THE VISION

- The EURMARS project emerges as a groundbreaking initiative.
- Aims to tackle complex threats at sea.
- Seeks to foster collaboration among:
  - National authorities,
  - Regional authorities,
  - EU-level authorities.
- Focuses on enhancing:
  - Situational awareness,
  - Operational efficiency.



PROJECT FOCUS

- Development of a secure multitasking surveillance platform.
- Integration of:
  - High-altitude technology,
  - Satellite imagery,
  - Uninhabited Vehicles (UxVs),
  - Ground-based sensors.
- Goal: Comprehensive border surveillance.

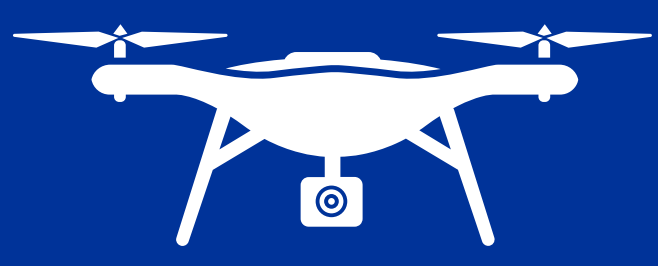
SKYLD LTD'S ROLE:

Coastal Ground & Low Altitude Sensing Systems

- Developed by SKYLD LTD, Cyprus
- Module is designed to:
  - Generate reliable geo-referenced detections and tracking.
  - Monitor ships, small vessels, persons, and vehicles in real time.
  - Operate under challenging maritime conditions.
- UAV platform:
  - Uses airborne camera systems.
  - Is triggered by abnormal events from other sensors.
  - Verifies and confirms events during patrols.

UAV PLATFORM CAPABILITIES

- Airborne cameras respond to sensor-triggered abnormal events
- Confirm & verify threats during patrols



TECHNICAL SPECIFICATIONS

- Camera Sub-Systems:
  - Combining shortwave IR, UV, thermal, and RGB cameras with ROS2 software libraries for live/raw image processing.
- Vessel/Vehicle Classification Sub-System:
  - Employs PyTorch for offline training on representative datasets, ensuring real-time classification using GPU technology.
- Behaviour Analysis/Anomaly Detection Sub-System:
  - Developed in Python, leveraging MQTT message broker for seamless integration with other components.

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