



**ESSG<sup>®</sup> -**

## **User and Entity Behavior Analytics for Naval Forces Security**

User and Entity Behavior Analytics techniques applied to vessels patterns allow the analysis of illicit or dangerous behaviors through a self-learning methodology, improving anticipation and decision-making capabilities.



## Providing protection and illicit detection

ESSG® Maritime Security Solution Behavior Analysis, through the integration of AIS data and radar sensor flows extracts vessel patterns data and manages information correlation in order to detect and analyze behavioral patterns. The solution implements continuous learning model of vessel analysis through behavior modeling. Topological algorithm and Machine Learning and Deep Learning algorithm are combined to identify phenomena such as abnormal patterns and incongruous patterns.

## ESSG® Maritime Security Solution Behavior Analysis Capabilities

ESSG® Maritime Security Solution Behavior Analysis acts as an innovative awareness and decision support system integrating:

- monitoring maritime boundaries and vessel activities in a given area;
- information analysis and correlation;
- reporting to support decision making.

### Features

#### Information storage

utilizing temporary, persistent and historical archive to achieve a complete evolutionary view of vessel behaviors.

#### Information presentation

utilizing web accessible pages and GIS maps resulting information is presented with highlighted impact areas, vessel behaviors clusters and alerts detected by the heuristic engine.

#### Evolutionary Behavior Analytics

Utilizing all the collected information to identify vessel(s):

- with an abnormal behavior;
- changing suddenly and significantly its behavior cluster;
- with behavior not coherent respect to the declared type;
- with a divergent behavior compared to other vessels in a selected area;
- moving away from a point or area.