GLOBE

Global Border Environment

GLOBE

Phase 1 of the Demonstration Project for the Integrated Border Management System

TELVENT amper CiaoTech gmv PRIO ALTRAN robotiker tecnalia

SETCCE EUROSENSE INTA SKYSOFT PORTUGAL COGENT SYSTEMS cesVISION EDISOFT

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GLOBE

GLOBE Objective

- GLOBE is a Coordination and Support Action that comprises the 1st Phase of the Demonstration Project for the European-wide Integrated Border Management System
- GLOBE was the selected proposal to the topic SEC-2007-3.1-01 included in the 1st call of the Seventh Framework Programme.
- The main objective of GLOBE is to provide the best route to achieve a global border environment by identifying the synergies between current and future systems while analyzing the potential pitfalls that may hinder this coordination, thereby providing authorities with the best information possible for decision making.

GLOBE Consortium

Project Structure – Work Packages

Work Package Title	Leader
WP1 - Project Management	Telvent
WP2 - Political/Legal/Regulatory framework analysis	PRIO
WP3 - Current Initiatives analysis	GMV
WP4 – Border Checks analysis	Telvent
WP5 - Unregulated Borders analysis	**Amper**
WP6 – Info. Normalization & Systems Integration	Altran
WP7 - Key Border Management Indicators	Telvent
WP8 - Roadmap development	Tecnalia
WP9 - Dissemination of results	Econet
TOTAL	

GLOBE is planned to be completed on July 2009. The project is currently performing analysis tasks so no final conclusions are available at this stage.

Demonstration Project Phase 2

Our Vision...

Our Vision...


Situational Awareness
LRIT
AIS
VMS
Port Entries
Cargo
Jane´s
Lloyd´s
SafeSeaNet
Intelligence
amper

Our Vision...

Situational Awareness

REMOTE SENSOR PLATFORMS & NETWORKS

Radar
Infrared and optical cameras
High resolution satellite images
SAR
OTH radar
Sonar…

Sensor data gathering > stds
Remote sensor open architecture and secure communications links

LRIT

AIS

VMS

Port Entries
Cargo

Jane´s
Lloyd´s

SafeSeaNet

Intelligence

amper

Eurosur (Step 1)

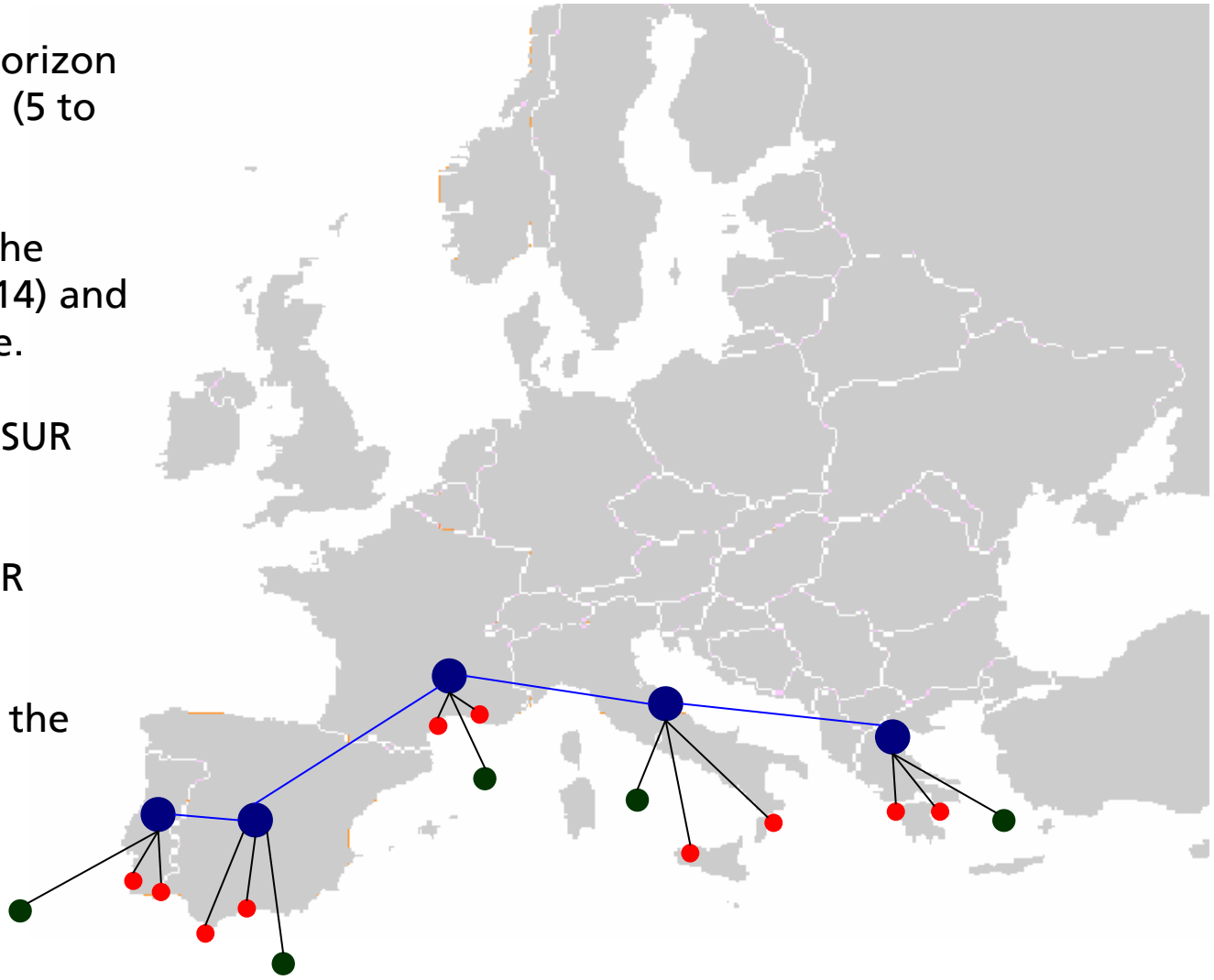
Demonstration Project Horizon should be mid/long term (5 to 10 years and beyond)

The implementation of the Demonstration (2010-1014) and EUROSUR overlap in time.

Close follow-up of EUROSUR progress is required.

Alingment with EUROSUR achievements is a must.

EUROSUR can be seen as the foundation of the Demonstration Project.



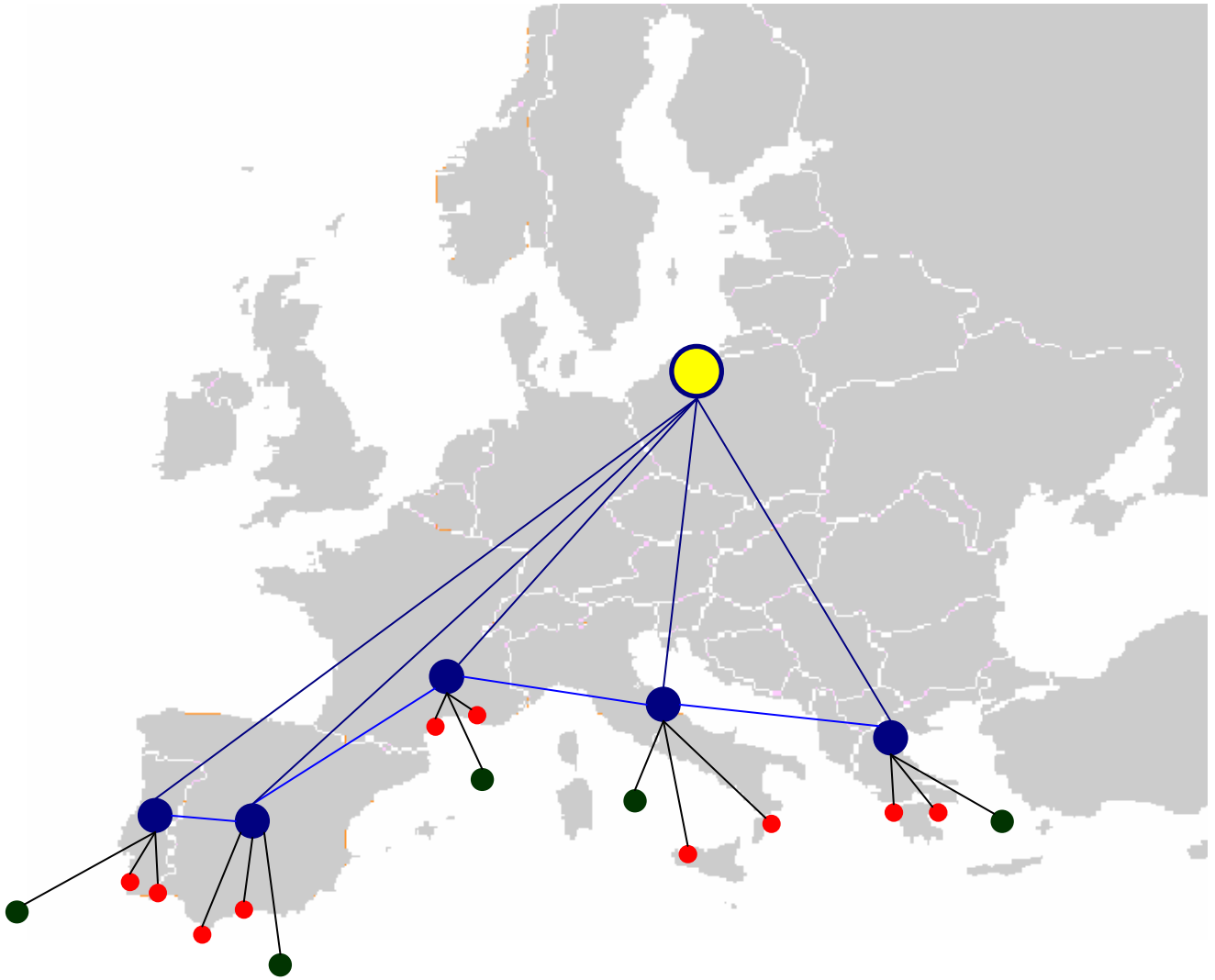
National Coordination Centre

Coastal Surveillance Station

Remote Surveillance Platform

Eurosur (Step 2)

- FRONTEX
- National Coordination Centre
- Coastal Surveillance station
- Remote Surveillance platform



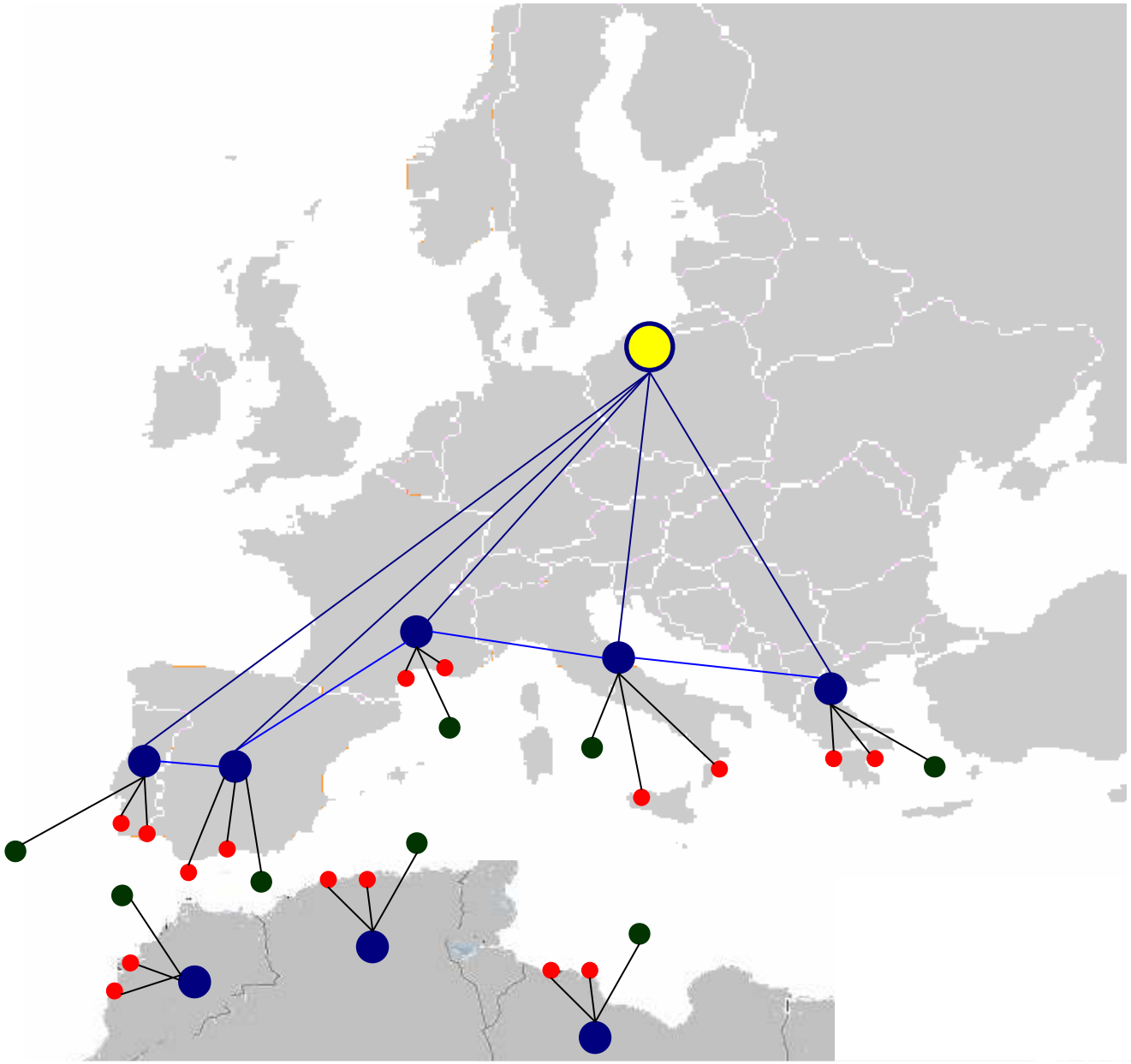
Eurosur (Step 3)

FRONTEX

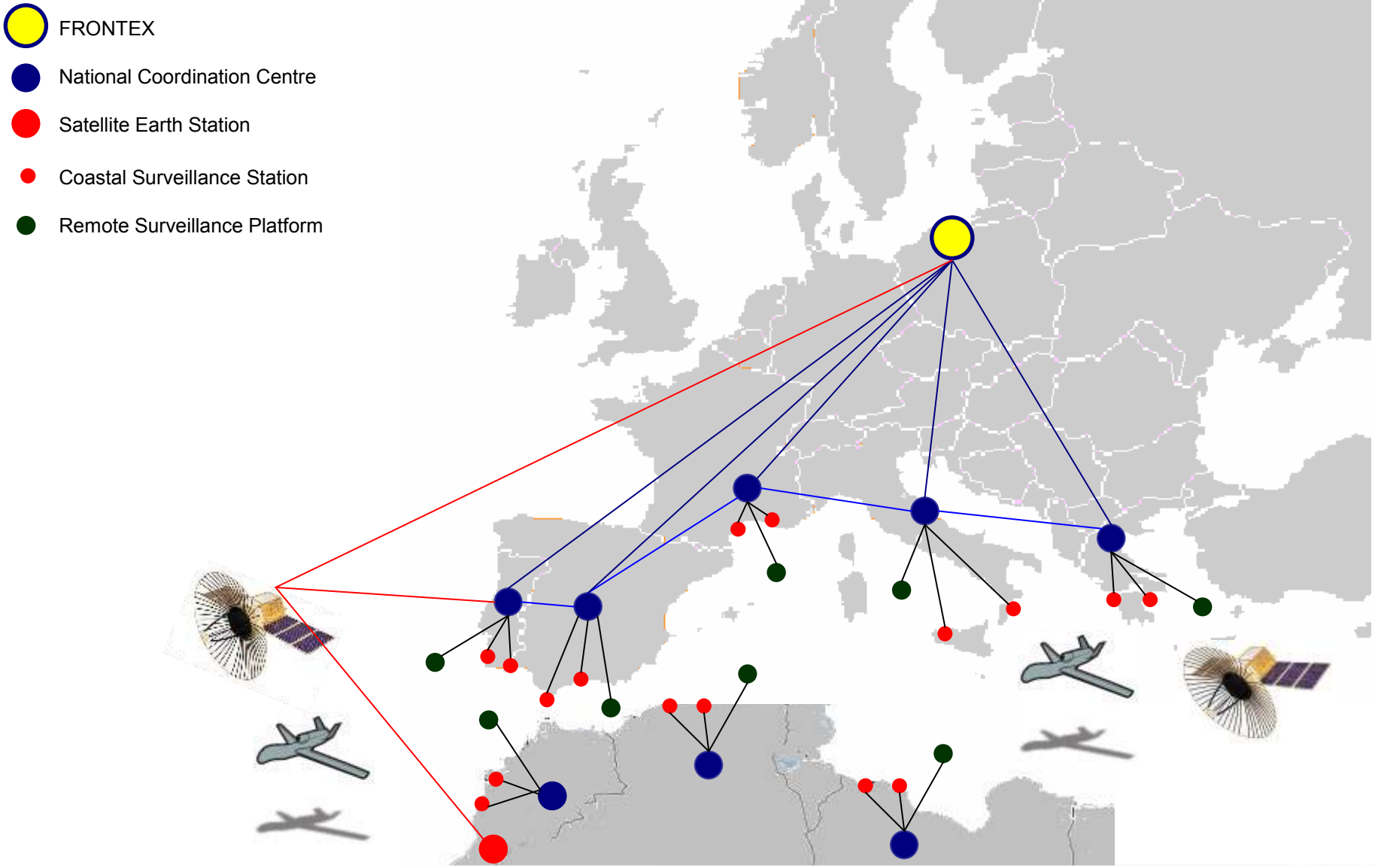
National Coordination Centre

Coastal Surveillance station

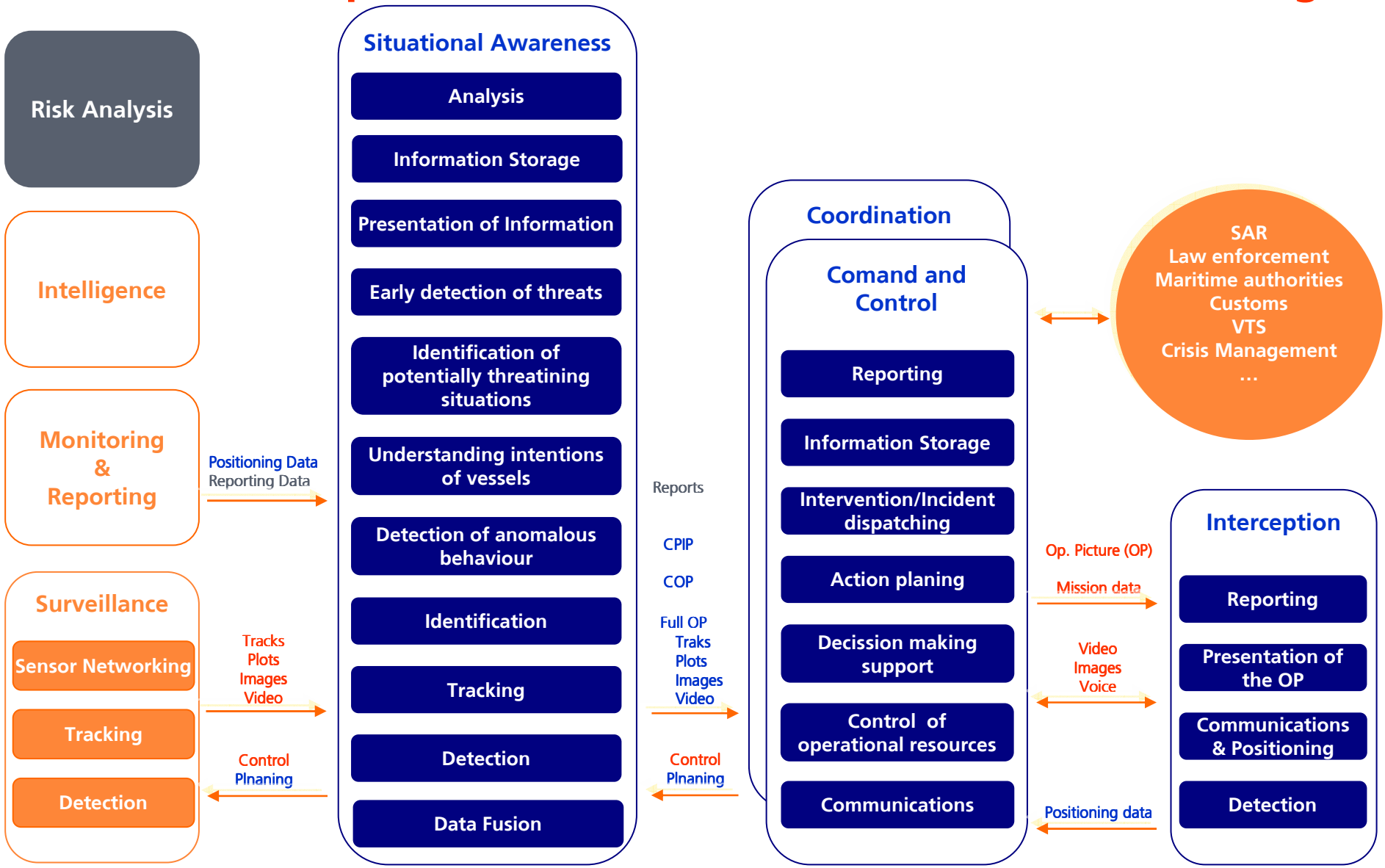
Remote Surveillance platform



Eurosur (Step 5)



Capabilities, Services and Information Exchange



Main Challenges

- Non technical issues, probabily, the biggest challenge: Political, Legal, Organizaional and Administrative Issues.

- Strong End User Involvement:
  - Member States and associated countries
  - Different Sectors
  - Civil – Military Cooperation

- Definition and Implementation of Common Procedures (aligned with EUROSUR):
  - Act at local level
  - Command at national level
  - Coordinate at European level
  - Cooperate with neighboring third countries

- Sharing of resources and information (sensors, platforms, communications, information systems and tools) among:
  - Different Sectors /Authorities.
  - Member States.
  - Neighboring Countries.

Main Challenges

- Integration and Interoperability between heterogeneous systems:
  - Monitoring, Reporting and Information Systems from different sectors (VTS, AIS, LRIT, …)
  - National Surveillance Systems (operational, under development or planned)
- Integration of achievements of European R&D projects for extended border surveillance:
  - Space Surveillance
  - UAS (as well as airborne surveillance and other manned and umanned remote mobile platforms)
  - Secure sensor networking and collection of big amounts of data
  - Data (information) fusion
  - Early Detection of threats: suspicious behaviour, understanding of intentions of the vessels early
  - Identification of potentially threatening situations
  - Secure communications and open architecture for remote surveillance platforms

Main Challenges

- Increase the reaction capability through secure communications, command and control technologies:
  - Based on present communications infrastructure, research projects and new ad-hoc developments for secure tactical communications (and positioning) for remote operations
  - Decision support tools
  - Tactical units with access to Situational awareness
- Detection of small boats
  - Extension of the capabilities for detection beyond coastal waters
  - Improvement of detection capabilities in coastal waters

Architecture

- Open Architecture Framework
  - Surveillance
  - Detection (threats)
  - Identification
  - Intelligence
  - Information (and knowledge) Processing
  - Communications
  - Command and Control

- Layered services and information. Proposal of standards.

- Interoperable at least at COP and CPIP level (short term) with the NSS of Member States and third countries (alignment with EUROSUR)

- Medium / long term horizon: considering the technology forecast for further upgrading of EUROSUR.

Architecture

- Allow the extension of interoperability features to lower levels.
- Selective Data Distribution among different parties.
- Distributed - Network Enabled, for efficient surveillance and operation.
- “Distributed Intelligence”: including identification capabilities in remote surveillance nodes. Improves system reliability, reduces bandwith requirements and cuts down costs.
- Cost Efficient

Demonstration Scenario

- Demonstration should cover Border Surveillance of the European coastline, territorial waters, EEZ, high seas and also EEZ and territorial waters from a neighbouring country (under the framework of a cooperation agreement).

Recommendation: At least three south European Member States should be involved in the Demonstration.

- The Demonstration should include at least one neighbouring country that has signed a cooperation agreement with Europe.

- Missions based on the cooperation of the main surveillance (and monitoring and reporting) systems: coastal surveillance + maritime monitoring and reporting + satellite + remote platforms UAS / airborne surveillance extending the surveillance from the coast to the departure point.

Demonstration Scenario

- Integration with legacy systems such as existent national border surveillance systems as well as maritime monitoring and reporting systems.

- The participation of FRONTEX is a key factor the development of the project and for the Demonstration itself.

- Authorities and End Users of the participating countries responsible for maritime systems (including SAR, FMC) should also participate in the demonstration when required (i.e. shared resources, processes, cooperation).

- Participation of Agencies like EMSA, EUSC, … is also of great importance.

Recommendation: Cooperation with military systems to pave the way for the future European Maritime Surveillance Network.