



FOLDOUT

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Rajavartiolaitos
Gränsbevakningsväsendet
The Finnish Border Guard





FOLDOUT



THROUGH FOLIAGE DETECTION, IN THE INNER AND OUTERMOST REGIONS OF THE EU

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Project Factsheet

Project start: 1.9.2018

Project duration 42 months

Funding Frame: EU H2020 SEC-16-BES-2017 – RIA

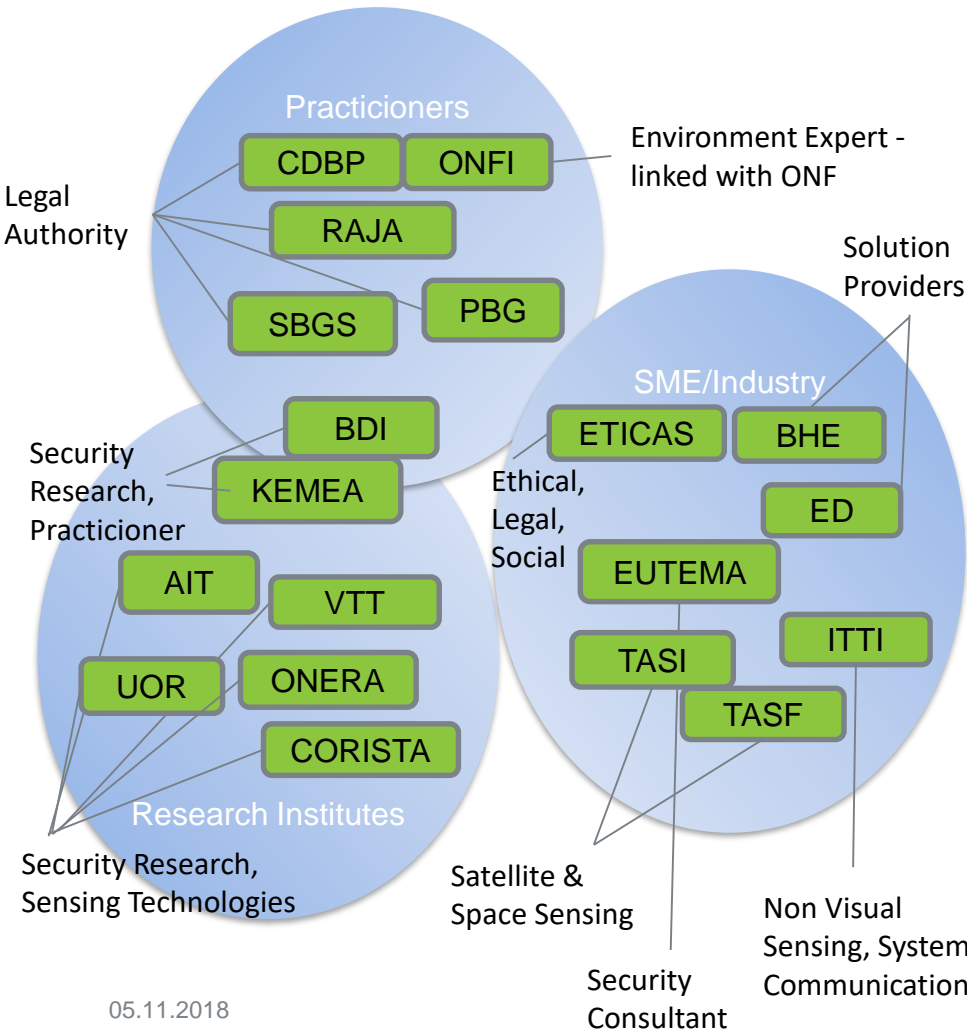
GRANT EUR 8,199,387.75,
Grant Agreement Nr.: 787021

Coordinator: AIT Austrian Institute of Technology GmbH



Consortium

Green: Practitioners
Blue: Academia & RTOs
Transparent: Industry/SME

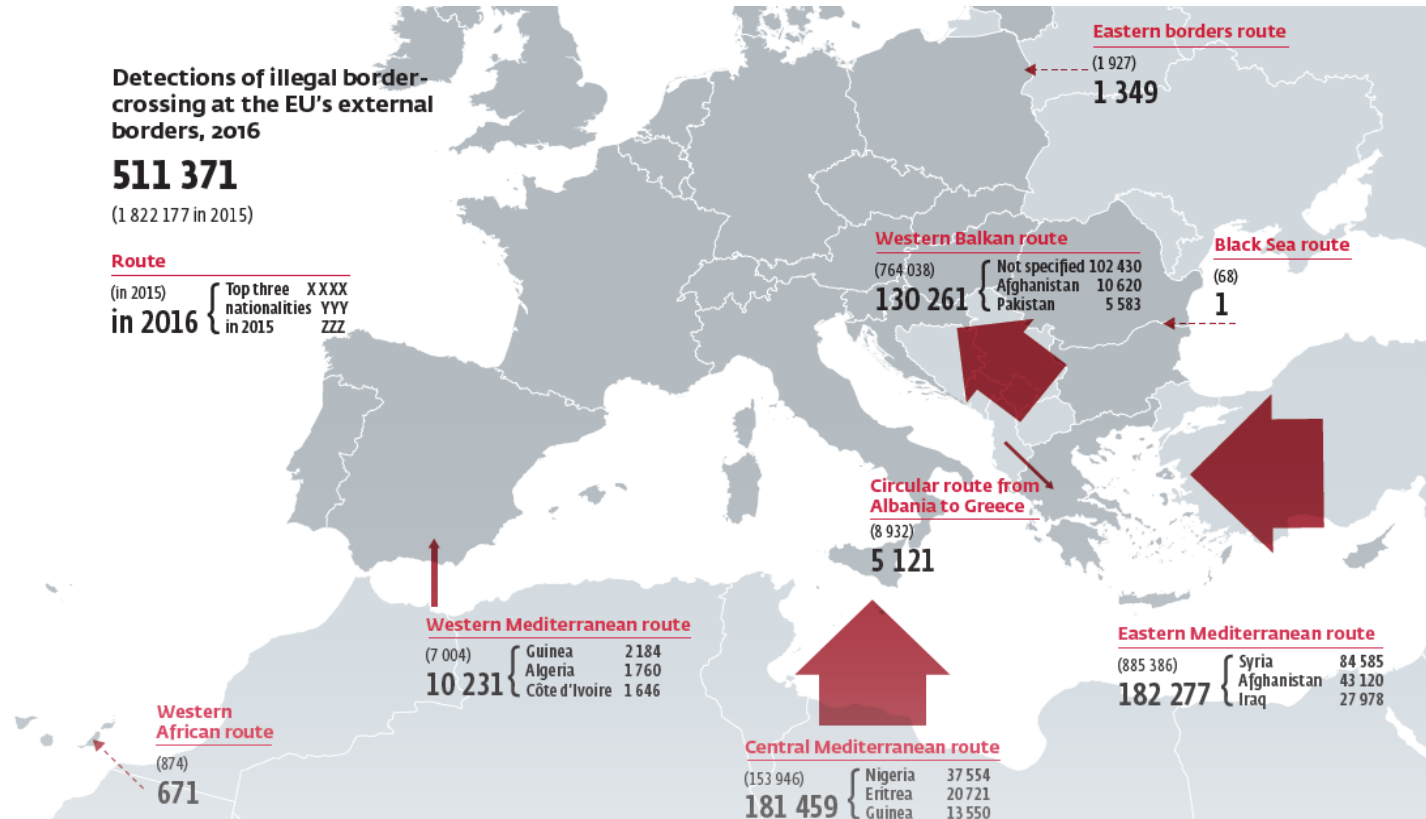


FOLDOUT partners	Short name	Country
AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH	AIT	AT
EUTEMA GMBH	EUTEMA	AT
EUROPEAN DYNAMICS BELGIUM BE	ED	BE
GLAVNA DIREKTSIA GRANICHNA POLITSIJA	CDBP	BG
INSTITUT PO OTBRANA	BDI	BG
KENTRO MELETON ASFALIAS	KEMEA	EL
ETICAS RESEARCH AND CONSULTING SL	ETICAS	ES
RAJAVARTIOLAITOS	RAJA	FI
TEKNOLOGIAN TUTKIMUSKESKUS VTT OY	VTT	FI
OFFICE NATIONAL D'ETUDES ET DE RECHERCHES AEROSPATIALES	ONERA	FR
ONF INTERNATIONAL	ONFI	FR
THALES ALENIA SPACE FRANCE	TASF	FR
BHE BONN HUNGARY ELEKTRONIKAI Kft	BHE	HU
CO.RI.S.T.A. CONSORZIO DI RICERCA SU SISTEMI DI TELESENSORI AVANZATI	CORISTA	IT
THALES ALENIA SPACE ITALIA SPA	TASI	IT
ITTI SP ZOO	ITTI	PL
KOMENDA GLOWNA STRAZY GRANICZNEJ	PBG	PL
THE UNIVERSITY OF READING	UOR	UK
VALSTYBES SIENOS APSAUGOS TARNYBA PRIE LIETUVOS RESPUBLIKOS VIDAUŠ REIKALU MINISTERIJOS	SBGS	LT

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Frontex Annual Risk Analysis 2017



- crossings are not detected with current environment because of
 - routes in forests
 - lack of effective equipment for foliage penetration

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Source: <http://www.dw.com/en/smuggling-migrants-through-bulgaria>



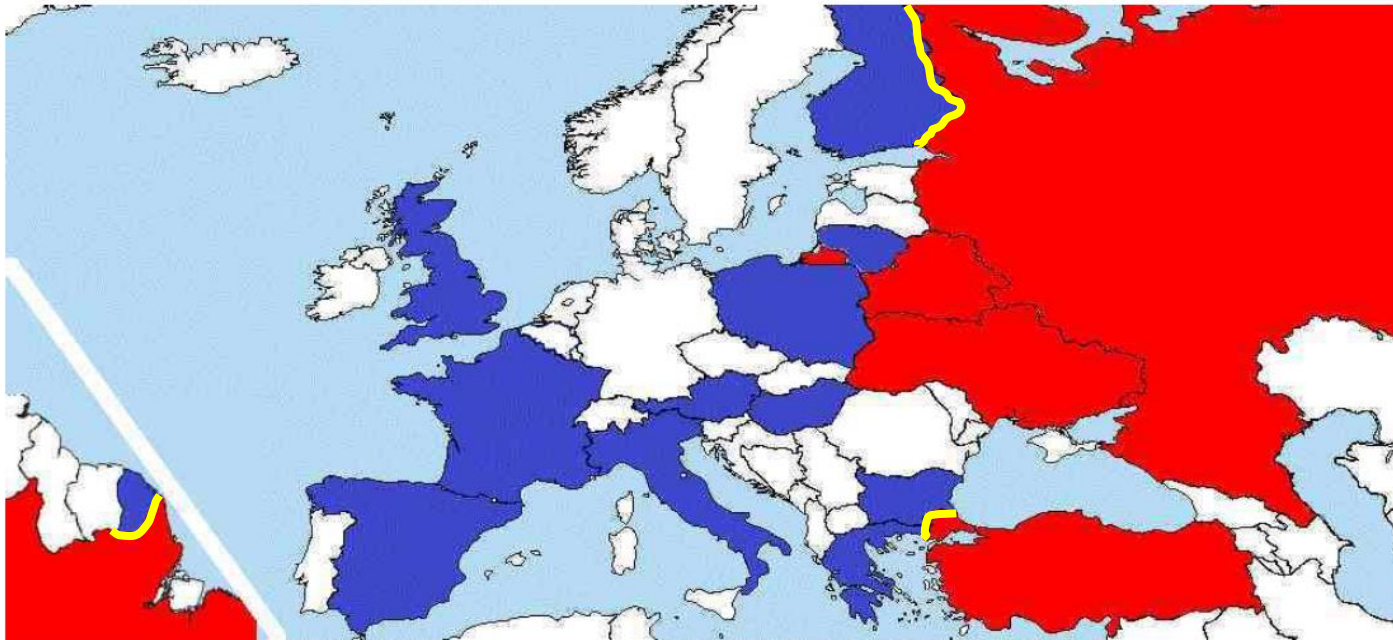
Motivation

- Improved methods for **border surveillance** are to ensure an effective and efficient EU border management
- **Support Border guards** to be able to
 - follow people moving into forests or other harsh and unstructured environments.
 - **deploy rapid intervention** troops and/or Border Police Teams at the scene as a key to an effective border security
- **No Off-the-Shelf solution enabling** a consistent and unified solution
- Border Surveillance needs
 - **Robustness/Reliability:** resistance in all climates; combination of the best sensors and technologies; intelligent fusion and self learning systems
 - **Effectiveness:** situational awareness results with the help of simple/interactive management in effective operations

Approach

- Integrate data (vehicle traffic), from **outside the border area** for pre-alarming
 - Integration of state-of-the-art solutions
 - Enhance existing detection systems (sensor, algorithms) for foliage penetration
 - **Combines various sensors** and detection technologies and **intelligently fuse** them into an effective and robust intelligent detection platform.
 - Simple decision making interface with suggested reaction scenarios to allow **a complete situation threat assessment**
 - **A two year pilot in Bulgaria** and demonstrators in Greece, Finland and French Guiana FOLDOUT will provide fundamental enhancements
 - To achieve improvements to the current situation of border surveillance FOLDOUT investigates in the following scenarios:
 - Scenario 1: Detection of **irregular border crossings** in forested terrain
 - Scenario 2: Persons & vehicles in a **search & rescue** scenario in forest;
 - Scenario 3: **Detection of illegal transport and entry of goods** (human trafficking, goldmines) in temperate broadleaf forest and mixed terrain
 - **Ground truth data production:** reference for the developments and tests
- **Main goal: to develop, test and demonstrate a solution to locate people and vehicles operating under foliage over large areas.**

PARTNER's Countries



French Guiana – Brazil

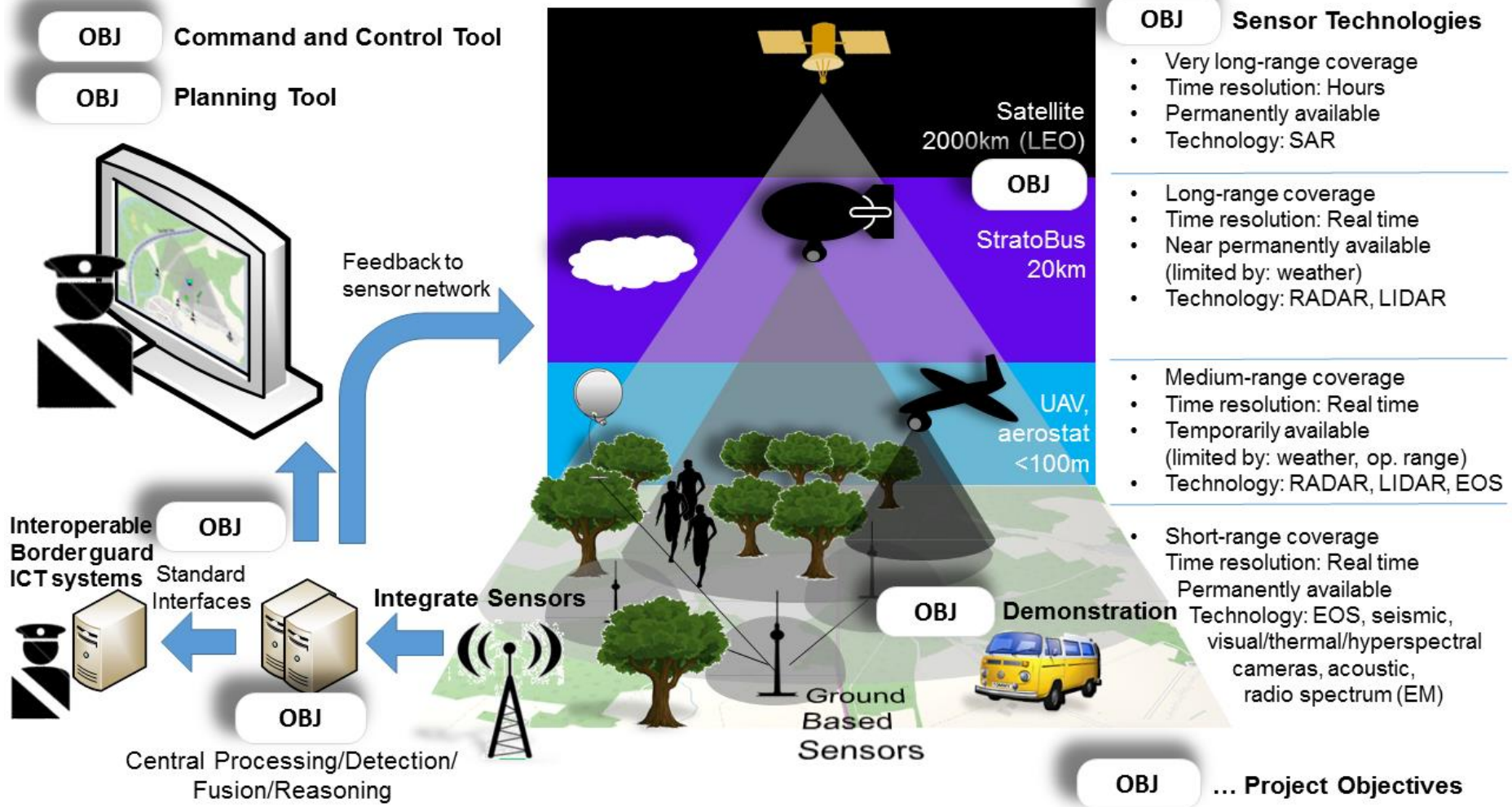
Europe

- Red countries are EU neighbour countries
- Blue countries are the project partners
- FOLDOUT practitioners in all relevant countries
- Demo borders are marked yellow

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Overview



Thank You!

Contact information

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