BORA

BOrder-crossing Risk Assessment

Abstract

Europe is developing its common security approach on the principles laid down by the European Agenda for Security, prioritising the fight against terrorism, organised crime and cybercrime. During the last months / years, beyond "traditional" criminal activities like smuggling and other types of commercial fraud across EU borders, Europe has faced an unexpected increase in migration pressure and a continuous flows of drugs and firearms, which have underlined the weaknesses of the EU borders approach and the need for increased cooperation among Member States (MS) in terms of sharing of information and resources.
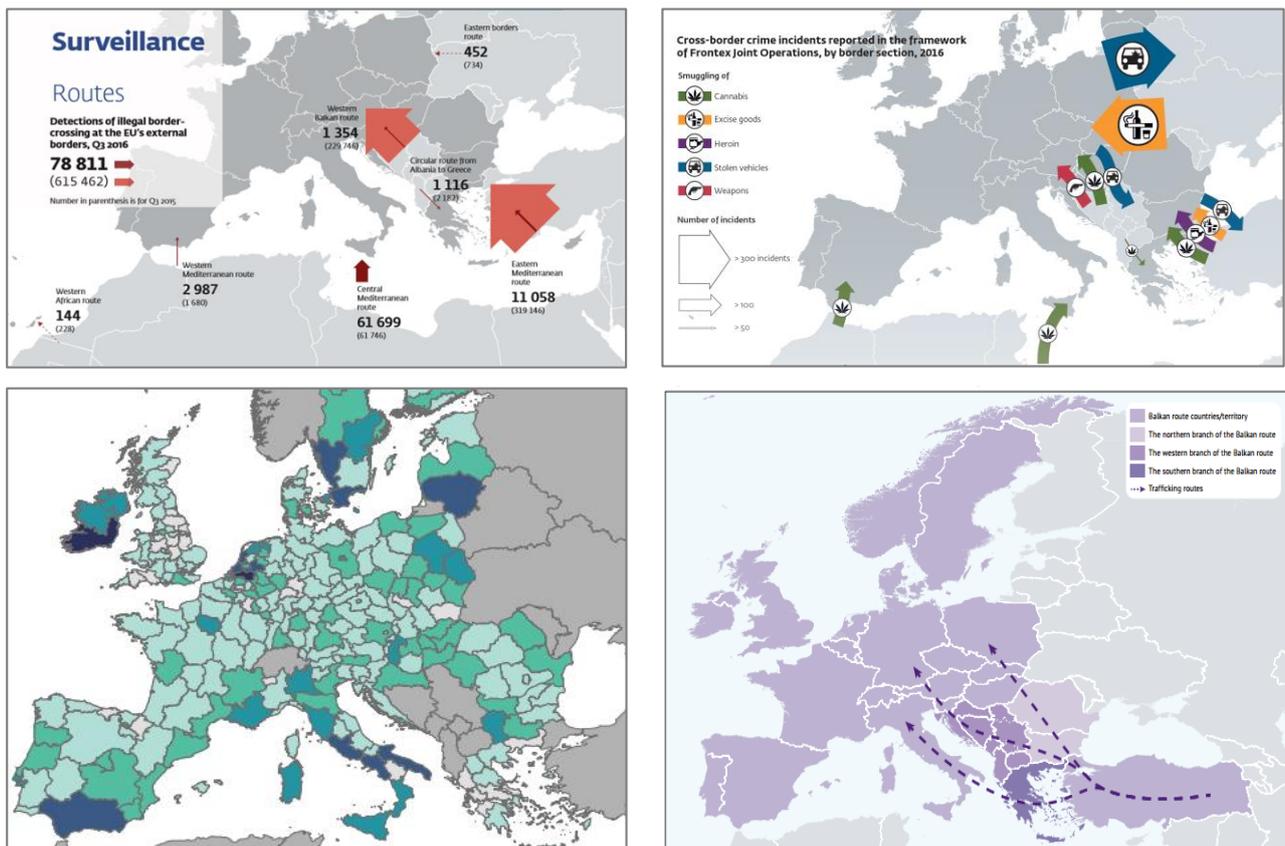
Figure 1 Frontex Survey on 2016 Cross Border Crime and Migration[1]; seizures of illicit firearms in Europe (Transcrime 2017); flows illicit opiates to Europe (UNODC 2015)

Cooperation amongst MS in sharing information and intelligence is primarily a political issue but must be supported by adequate and standardized protocols, procedures, architectures and technologies in order to guarantee appropriate and legal data management. This is also key for more effective and efficient border and customs controls. Due to high volume flows to be controlled with a limited amount of resources, the controls efficiency and effectiveness depend on the capability of limiting controls to fewer goods and people pre-selected through a preliminary (and non-disruptive) risk-based screening of the flows. To achieve this result, this project aims at developing **an innovative ICT - platform to support law enforcement and border/customs agencies in detecting, preventing and acting against the trafficking of**

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[1] http://frontex.europa.eu/assets/Publications/Risk_Analysis/Annual_Risk_Analysis_2017.pdf

people and goods early thus identifying the high risk from the low risk people and goods.. In particular, the focus will be on human smuggling, drug trafficking, and trafficking in firearms.

The BORA project (**BOrder-crossing Risk Assessment**) targets the development and operative validation of a platform for enhanced border and custom controls through improved assessment of people and goods at for Border crossing points (airports, ports, stations, land checkpoints), leveraging on increased cooperation of European border guard authorities and custom authorities. Relying on the BORA platform, border guard and custom authorities will be able to take better preventive actions and countermeasures on the basis of multi dimensional risk based assessment of goods and people in order to ensure the security of border crossing in a cost effective way.

BORA Project

WHAT: OBJECTIVES	WHERE:	WHO	WHY: POLICIES (& TOOLS)
BORDER CROSSING MONITORING • People (third countries and EU citizens) • Goods	**BORDER CROSSING POINTS:** - Airports - Ports - Stations - Land checkpoints	- EU Agencies - MS law enforcement agencies - Responders - Military forces - NGOs - Suppliers	- SCHENGEN CODE - PNR - MIGRATION POL. - ASYLUM - SMART BODERS PACK. - EUROSUR - Revised customs code - ISS - EU Security Agenda - EU Counter-terrorism policy VIS - SIS II - EURODAC

The BORA platform will collect screening information from border and customs authorities and will combine with various parameters from pre-screening and pre-declarations with other information held by other authorities (e.g. the police knows a case of trafficking but the custom control no) and analytics of history and other events (e.g. the same person always comes in Greece after or before 10 people from Afghanistan at the border of Greece) returning risk-indicators and new intelligence for law enforcement actions. Building on lessons learned and on fieldwork experiences of the partners, this will improve the sustainability of the current risk-based screening checks.

In particular, the focus will be on human smuggling, drug trafficking, and trafficking in firearms acknowledged as top EU's priorities for the fight against organised and serious international crime between 2018 and 2021.[2]

BORA Platform

The BORA platform behaves as an advisor that collects data, elaborates risk-related information, displays the situation and suggests the best preventive and corrective actions to the law enforcement and border/customs agencies. Current solutions to border/custom checks mainly use decision support systems that generate alerts and warnings, whose importance and relevance rely also on manual interpretation on the base of the specific contextual situation. BORA goes a step beyond, closing the risk control loop at a two phase procedure, suggesting (and even operating) the best actions to be actuated on the field aimed at managing the risk (i.e. to refuse entrance of those which are illegal, or identify criminal). operations.

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[2] EC (2017) ST_8654_2017_INIT_EN

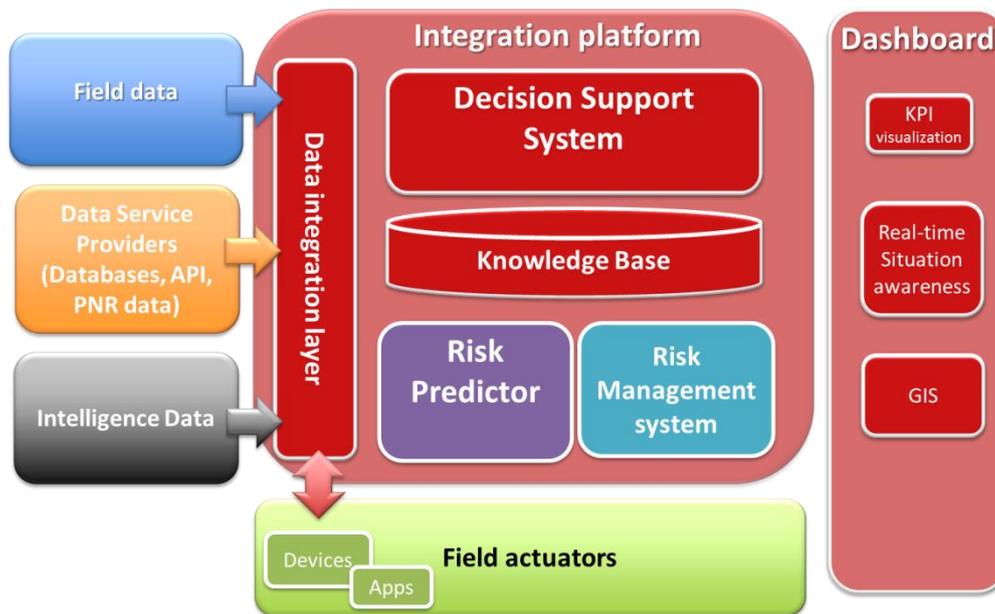The following Picture depicts the BORA platform.

Figure 2 Bora Platform architecture

The core component of the BORA Platform is the Integration platform that provides:

- Integration of Field data (originated by the sensors deployed at the crossing point and managed by Police Forces, Security services etc.) and heterogeneous data coming from multiple sources including existing information systems, intelligence data etc.;
- Storage and normalization of historical data providing the Knowledge base supporting current analysis and future investigations;
- Risk management system that provides management of improved and new risks assessment methodologies that leverage the enhanced available data of traditional and new private and public data sources enabling novel perspectives in the control procedures. Risk assessment is enhanced by applying dedicated analysis techniques (e.g. machine learning) to derive previously invisible and unrecognizable threats and situations or criminal behavior;
- Decision Support System (DSS) able to support LEAS in taking the right measures following an optimized set of actions (workflow) also considering other optimization criteria (social, economic etc.) through a correlator engine. The DSS not only highlights facts occurred in the past, but also propose likely events in the future and related actions to be undertaken, enabling decisions.

The Dashboard is intended as high level Human Machine Interface (HMI) to monitor overall Key Performance Indicators (KPIs) and global situation awareness with support of geospatial information visualization.. It also presents the actual risk score for a specific good or person allowing to analyse the way this risk is estimated and accept the score or not ending in apass or no pass decision.

The Data Sources envisaged are:

- Field data: data originated by the sensors deployed at the crossing point and managed by Police Forces, Security services etc.;
- Data Service providers: data (coming from databases, APIs, PNR data, public data, …) referred to the single event to be monitored and to the global observed context;
- Intelligence, coming both from internal Police Forces & Security Services sources and social sources and the processing of historical data.

The Field actuators are intended as devices and apps for security practitioners (supported by secure communication means) to improve their operational efficiency.

Sought End User Support

The BORA Project is a <u>user driven project</u> aiming at improving efficiency and effectiveness of border checks through basis of multi dimensions key performance indicators in order to ensure the security of border crossing in a cost effective way. To this aim direct involvement of End users (Border Control authorities / Customs) is mandatory in order to provide:

1) requirements and detailed operative scenario description in order to drive BORA platform design
2) operational validation of the BORA platform through direct involvement (assets/facilities, personnel)
3) assessment of the operational improvement achieved through the BORA platforms and suggestion for further improvement
4) support to future exploitation of the BORA concept and solution

Project details

- **Call ref.** *SEC-15-BES-2017 Risk-based screening at border crossing*
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- **Core Team Partners**: European Dynamics, Fraunhofer Institute – IAIS, CRAT
- **Estimated Budget:** 8Meuros
- **Duration:** 36months

Challenges / Threats addressed
- Terrorism
- Organised Crime
- Massive migration

Operational Environments ("domains")
- Border Crossing Points (airports, ports, stations, land checkpoints).

Technology/Assets involved:
- Enhanced Risk indexes differentiated per domain;
- Decision Support System;
- New operational methods fast identification and enrolment;
- Screening, registration and resettlement ICT based systems;
- Secure communications (both fixed and mobile);
- Surveillance systems (e.g. cameras, radar, scanners) integrated with command and control solutions to provide border security situation awareness;
- Improved data management techniques;
- Diversified Data sources integration and big data analytics;
- SW Defined Data Center to store large amount of data and provide end-users decision support services through Cloud paradigm.

These assets also have **built-in cybersecurity capabilities** of the used information and communication systems, in order to guarantee:
- the integrity of surveillance data;
- the confidentiality of personal data recorder incl. biometrics;

- the governance of data use (logs to trace the access to data, etc.);
- data placement inside EU countries.

Call Text

SEC-15-BES-2017 Risk-based screening at border crossing.

Specific Challenge: Specific Challenge: The concept of 'borders' has changed in recent times. The purpose and function of borders have been, and remain, to delineate and demarcate one sovereignty from another. However, borders must also allow for the smooth movement of people and goods. Maintaining the current level of checks is becoming increasingly expensive given the ever growing volumes of people and goods on the move, and increasingly more disruptive of flows. It would remain sustainable if thorough checks could be limited to fewer individual goods and people pre-selected further to a preliminary (and non-disruptive) risk-based screening of the flows.

Scope: Proposals should take account of the four-tier access control model developed in the EU: measures undertaken in, or jointly with third countries or service providers (e.g. those managing Advance Passenger Information or Passenger Name Record systems); cooperation with neighbouring countries; border control and counter-smuggling measures; control measures within the area of free movement in order to prevent irregular immigration and cross-border crime inside the Schengen area.

Innovative, international alert systems can be developed further to more co-operative law enforcement and investigative efforts. Building upon lessons learned and field experience is essential.

The combination of a variety of arrays of sensors, new operational methods, and improved data management techniques can support appropriate law enforcement responses and enable better, transnational, interagency access to reliable and secure situational intelligence and information, on a real-time and cost-effective basis.

Collaboration with IATA, the air transport industry and other partners and international stakeholders in other fields of transport safety (e.g. maritime, rail) may lead to the development of new solutions.
Particular attention should be paid to personal data protection and to other ethical concerns that may arise from the development of risk-based screening at borders.

The outcome of the proposal is expected to lead to development up to Technology Readiness Level (TRL) 7; please see part G of the General Annexes.

Indicative budget: The Commission considers that proposals requesting a contribution from the EU of € 8million would allow for this topic to be addressed appropriately. Nonetheless this does not preclude submission and selection of proposals requesting other amounts.

Expected Impact: Short/Medium term:
- Enhanced situational awareness for border control practitioners, enabling the timely and proper identification of potentially dangerous people and goods, and preventing smuggling and human trafficking;
- Improved risk-management coordination and cooperation between border control (passport/persons), customs (baggage/goods) and security in transport (pre-boarding security checks on persons and baggage).

Long term
- Improved solutions for remote detection of abnormal behaviours;

- Improved and people-respectful border automated screening systems through close cooperation with actions resulting from SEC-18-BES–2017: Acceptance of "no gate crossing point solutions".

More effective use of intelligence to reduce risks at borders;

Type of Action: Innovation Action