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"Intelligence and information analysis based security policy for rail".

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General Plan

I. A NEW CONTEXT IS EMERGING .

*Major factors of explanation of changes
THE "BIG DATA"*

II. NEEDS TO MEET AT EU LEVEL

Trend= Transport Security policies are getting more professional; with layers (local-regional-National-trans borders- EU). With needs of Data, Intelligence on trans borders incidents, Strategic Data base and Platforms

Emergence of a more complex Context

Significative changes in the paradigm of Policies in Land Transport security.

Main relevant factors (1)

- Origins of Terrorists threats, which evolve constantly: from 9/11 Al-Qaeda, today's Islamic Army*
- Mafias and organised crime groups with international spreads*

Main relevant factors (2)

□ More IT driven actions (cyber-attacks; data jamming etc.).

□ Organised crime is prominent getting more involved in Transport criminality:

- Metal theft*
- Road & rail cargo theft*
- Part of the graffiti by mobile international groups*

Main relevant factors (3)

□ i.e. organisational skills, weapons and more threats, rapidity in execution - organised in planning, use of larger resources, clear disposal routes.

□ *Infiltration in economy, use of "classical" and of criminal methods in influencing and getting informations (insiders).*

Transport security policies more professional= more "specialised

- Based on access to Knowledge and Data Informations;*
- Organisation based: specialised functions; with dedicated human trained resources; able to transform knowledge in security (from different sources - from academic to empiric /experience based infos.) into Intelligence informations.*
- Risk Assessment, Technology and human based (choice of a relevant mix)*

Transport security policies

□ Activities getting more and more international (in rail with trans borders trains for passengers and freight) = international and EU cooperation is needed. National policies, and bilateral cooperations appear insufficient to tackle the whole aspects of the criminal activity in this international dimension.

□ With more and more support of quantitative models in decision making, and technologies to integrate data.

Being reactive and pro-active

Reactive

- Cable theft/cuts investigations
- CCTV, evidence & forensic gathering
- Network alarm response – RabiT
- Support national UK law enforcement / British Transport Police led operations & days of action
- Door to door enquires and leafleting
- Producing Police statements and crime impact information to support arrest/convictions
- Magistrate and Crown court expert witness representing Openreach/BT

Proactive

- Deployment tactical security devices
- Overt patrols in hotspot areas
- Proactive and reactive Scrap Metal Dealer visits
- Security compliance checks of people operating in the network
- Security compliance checks of cable stores and buildings

Taking into account the Consumer's perspective

From the consumer's perspective, there is an increased need of targeted measures, so that they are able to perceive concretely what preventive or repressive actions are taken to protect them from criminal activities. Examples: petty vandalism; aggressions; metal thefts; etc...

And targeted communication (linked with awareness efforts) .

Holistic Models

All Actors in Security are integrated in the process.

Adapted version: When adapted, the actors of the chain are associated: example scrap dealers associations.

There are cases where it is not appropriate.

New legislations, Organisations and Practises.

□ Legislations with characteristics of the criminality they aim to fight

***La loi FR 2011-900 du 29 juillet 2011.** Celle-ci a effectivement supprimé toute possibilité de paiement en espèces, ce qui a fait de la France le premier État européen à adopter une législation aussi restrictive. Elle a également imposé aux professionnels du recyclage la tiers-déclaration*

***UK- The Scrap Metal Dealers Act 2013** required all dealers to be licensed, and gave the police and councils more power to inspect their premises. The act also required sellers to produce identification and proof of address.*

New legislations, Organisations and Practises

Organisational:

UK: creation of a Metal theft Task Force- A new national metal theft taskforce is to be set up following a £5million boost from the Treasury.

"As part of our commitment to tackle crime, the Home Office recognises metal theft as a serious problem, and is working with other departments and law enforcement on co-ordinated action to tackle it. The new multi-agency taskforce, led by the British Transport Police, will target both metal thieves and scrap metal dealers who trade in stolen goods and fuel the demand.

The taskforce will develop intelligence, coordinate activity and target and disrupt criminal networks - both the thieves and also the criminal market, including rogue elements of the scrap metal industry."

Practises, New legislations, Organisations and Practices

"Depuis 2012, la gendarmerie et la SNCF ont ajouté une nouvelle arme à leur arsenal de lutte : les cellules d'analyse et de protection des métaux. L'objectif : prévenir et réprimer l'action des trafiquants.

Face à la recrudescence des vols de métaux sur son réseau, la SNCF s'est dotée, début 2012, de onze cellules d'analyse et de protection des métaux (CAPM). Réparties au niveau des sept zones de défense et de sécurité (ZDS), elles sont animées par vingt-quatre agents et dépendent de la surveillance générale (Suge) de la SNCF. Moyens techniques performants et développement d'une importante coopération avec les forces de l'ordre ont permis aux CAPM de progresser dans la prévention des délits ciblant les infrastructures de la SNCF". Au niveau national, la direction de la sûreté de la SNCF est constamment en contact avec l'office central de lutte contre la délinquance itinérante, point de contact et d'information privilégié du ministère de l'Intérieur pour les questions concernant les vols de métaux. Site Ministère de l'Intérieur

FP 7 Research Outcomes

162	CIVIL PROTECTION, LAW ENFORC.	INDECT	Intelligent information system supporting observation, searching and detection for security of citizens in urban environment	Intelligence against Terrorism, Security of citizens, automatic threat detection, urban observation system
22	TRANSPORT	ARENA	Architecture for the Recognition of thREats to mobile assets using Networks of multiple Affordable sensors	Flexible surveillance system, recognition of threats on mobile critical assets (trucks, trains, vessels, oil rigs)
234	CBRN	REWARD	REal-time Wide-Area RaDiation Surveillance System	Mobile system for real-time, wide-area radiation surveillance
280	LAW ENFORCEMENT	SMART	Scalable Measures for Automated Recognition Technologies	Ethics Justice, smart surveillance systems, data protection, integrity
54	BORDER CONTROL, HEALTH	CONCORDE	Decision Support System improving preparedness & interoperability of medical services during emergency which affects health of population at local, regional or cross-border level	Surveillance, EU external borders, Decision Support System, preparedness & interoperability of medical services during an emergency

FP 7 Research Outcomes

247	CRIME	SAVELEC	Safe control of non-cooperative vehicles through electromagnetic means	Control, Crime Forensic
281	CRIME	SMARTPREVENT	Smart Video-Surveillance System to Detect and Prevent Local Crimes in Urban Areas	Video-surveillance systems, urban scenarios
10	CRIME	ADABTS	Automatic Detection of Abnormal Behaviour and Threats in crowded Spaces	Detection, threat behaviours counter-terrorism
12	LAW ENFORCEMENT	ADVISE	Advanced Video Surveillance archives search Engine for security applications	Security, surveillance-footage, archive systems
24	DUAL, BORDER CONTROL	ARGUS 3D	AiR Guidance and Surveillance 3D	3D mapping, surveillance flying objects, Primary Radar Surveillance , alert level

New developments

"Development of a Community of Users in Disaster Risk and Crisis Management and the results of the mapping of policies and (FP7 secure societies) research, which is aimed to pave the way for improving future links among Horizon2020, capacity-building, training, industrial developments and policy implementation".

NEEDS at EU level

We are at a stage where in Member States having laws and enforcement, results are met.

But there are loopholes, and policy failures to enforce trans borders incidents: theft in one Member State, resell in another. Mobile crime is challenging us, as they spot our failures to enforce in a broader scope than nationally.

How could we tackle those Policy and organisational failures ?

NEEDS at EU level

FOLLOW EXCELLENCE

- Targeted legislations and New Organisational Patterns have proven successful at national levels*
- Working group on a set of legislative measures to go for a same EU Playing Field*

Big DATA

Big Data is the process of collecting, organizing and analysing large sets of data ("big data") to discover patterns and other useful information.

For most organizations, big data analysis is a challenge. Consider the sheer volume of data and the many different formats of the data (both structured and unstructured data) collected across the entire organization and the many different ways different types of data can be combined, contrasted and analysed to find patterns and other useful information.

The first challenge is in breaking down data silos to access all data an organization stores in different places and often in different systems. A second big data challenge is in creating platforms that can pull in unstructured data as easily as structured data. This massive volume of data is typically so large that it's difficult to process using traditional database and software methods.

Fresh DATA

***Fresh data** is about combining big data with real-time capabilities.*

Algorithms which allow the analysis of different sources of data: qualitative, images (VCCT), quantitative –

Suitable technologies include A/B testing, crowdsourcing, data fusion and integration, genetic algorithms, machine learning, natural language processing, signal processing, simulation, time series analysis and visualisation.

DARPA's Topological Data Analysis program seeks the fundamental structure of massive data sets . Additional technologies being applied to big data include massively parallel-processing (MPP) databases, search-based applications, data mining, distributed file systems, distributed databases, cloud based infrastructure (applications, storage and computing resources) and the Internet.

Dedicated Research and Methods

- Develop a common methodology to describe, collect variables relevant to incidents.
- Workshops (Metal theft, International graffiti, cargo theft – road and rail)
- Harmonisation in definitions; following best practices :

"l'OCLDI a mis au point un fichier de renseignements commun aux services de police et unités de gendarmerie à compléter à chaque vol de métaux ou tentative et à lui transmettre, via les voies hiérarchiques propres à chaque administration. À compter du 1er janvier 2012, la transmission des données a donc été harmonisée et on pouvait estimer qu'elle tendrait sinon à l'exhaustivité du moins à un volume très proche de la réalité des faits commis donnant lieu à une plainte."

Dedicated Research and Methods

- Develop techniques and processes which identify gaps in knowledge and intelligence, which are effective within individual Member States and transnationally across borders.*
- Have a data base for information on EU trans borders incidents, help supporting analysis, including predictive capacities . Encourage the exchange of information and best practices*

Innovations in Organisational Patterns

- New ways to address the issues : How to collect information relevant to investigations/enforcement, to organise the data , to share alert and the incidents management*
- How to organise relations with enforcement agencies, crime agencies to report thefts incident and ensure the whole process.*
- To Create Platforms composed of different specialists, multi-disciplinary from different complementary bodies complementary in competences; organising intelligence and an alert system, with cooperative methods to enforce efficiently. Concept of "Fusion Intelligence unit".*

CONCLUSIONS

1 *DATA*

2 *Organisation*

3 *Architecture for the data Base*

4 *Organisation of the Platforms*