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Executive Summary

Practical report on emerging terrorism-related threats against stations and trains

October 2019

Project Details

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Document details

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Consortium – List of partners

Partner No	Short name	Name	Country
1	UIC	UNION INTERNATIONALE DES CHEMINS DE FER	France
2	DB	DEUTSCHE BAHN AG	Germany
3	FS SPA	FERROVIE DELLO STATO ITALIANE SPA	Italy
4	PKP S.A.	POLSKIE KOLEJE PANSTWOWE SPOLKA AKCYJNA	Poland
5	SNCB	SOCIETE NATIONALE DES CHEMINS DE FER BELGES	Belgium
6	SNCF	SNCF	France



INTRODUCTION

1. PROJECT OBJECTIVES

Terrorist attacks carried out in recent years show an alarming increase of indiscriminate violent actions carried out against civilians gathering in public spaces. Even though railway transport represents a critical infrastructure for all European countries, stations and trains can be essentially regarded as soft targets due to their inherently open system nature. Several initiatives aiming at increasing their protection from terrorist attacks were undertaken in the past years at various levels. Nevertheless, the knowledge about the phenomenon itself and possible countermeasures is still quite fragmented and presents many gaps.

The SHERPA project aims at improving the overall protection level for stations and trains in Europe against terrorist attacks by implementing multiple synergistic actions towards the relevant stakeholders, such as: providing and sharing an up-to-date, high-value knowledge base on threats and countermeasures (both technical and procedural); defining a coherent approach for risk assessment, risk management, crisis and disaster recovery management; strengthening co-operation among stakeholders through high-level international trainings and other practical tools; outlining needs and requirements for industry and research to focus on improving the ways in which railways cope with both present and future threats.

Five among the most relevant key-players in the European railway sector (DB, FS, PKP, SNCB, SNCF) take part as partners in the SHERPA project proposal: their joint participation brings the highest levels of credibility, representativeness and authoritativeness. Furthermore, the consortium itself is led by UIC, whose aggregative nature, together with its solid expertise and experience in participating and leading European projects, will facilitate synergies among the co-applicants and between them and police, first responders and other relevant stakeholders represented in the Advisory Board such as CER, COLPOFER, RAILPOL, NS and SBB.



2. PURPOSE OF THE DOCUMENT

The Report on “Emerging threats” (hereinafter, also referred as “Report”) is intended to summarize the different activities carried out within SHERPA WP3 on “Analysis of emerging terrorism-related threats against stations and trains” in five main sections:

- Context and challenges
- Analysis of emerging threats
- Procedures and technologies for protecting stations and trains against emerging threats and gaps identified
- Legal framework and gaps identified
- Outline of expectations and needs for the railway sector to be primarily addressed by Industry, research and policy making bodies.

The information was gathered through three main activities:

- A literature review was carried out to identify the emerging terrorism-related threats which could affect stations and trains in the future years, assess their potential impact on the railway system and any vulnerabilities of the currently employed security technologies and procedures/policies.
- A questionnaire was prepared and sent to all the partners to gather information on insider threats and malicious use of UAVs. The results of the questionnaire are available in Annex 1.
- A workshop was organised to share the results of the literature review and the questionnaires, to get input from external experts on emerging threats and to brainstorm on needs at technical, organisational and legal level. A first proposal for needs and requirements on emerging terrorism-related threats for the railway sector was discussed lively among the workshop participants. In conclusion, the workshop brought highly valuable contributions from its participants.



TERMINOLOGY AND ACRONYMS

CBR(N)	Chemical, Biological, Radiological, (Nuclear)
CCTV	Closed Circuit Television
CBR(N)	Chemical, Biological, Radiological, (Nuclear)
Emerging threats	Constantly change of the security threat landscape with new ways to compromise all kinds of systems as older vulnerabilities are discovered and patched
GDPR	General Data Protection Regulation
Global Terrorism Index	Report published annually by the Institute for Economics and Peace, provides a complete summary of the main global trends and patterns in terrorism since 2000
IED	Improvised Explosive Device
Insider threat	Malicious threat to an organization that comes from people within the organization
Social media	Refers to websites and mobile applications that allow people to share content quickly and in real time
Soft target	A subject/object that is relatively unprotected or vulnerable, especially to military or terrorist attacks.
EU	European Union
WP	Work Package



Executive summary

This Practical Report on emerging terrorism-related threats against stations and trains is intended to summarize the different activities carried out within SHERPA WP3 on “Analysis of emerging terrorism-related threats against stations and trains.” It’s divided into five main sections:

- Context and challenges
- Analysis of emerging threats
- Procedures and technologies for protecting stations and trains against emerging threats and gaps identified
- Legal framework and gaps identified
- Outline of expectations and needs for the railway sector to be primarily addressed by industry, research and policy making bodies.

Summary of the context and challenges

The aim of this section is to describe the context and the main challenges for railways when dealing with emerging threats. Some of the main challenges are the following:

- The identification of emerging threats is the task of national authorities, national intelligent services and national security services. The role of the railway security organizations can only be to cooperate and support these players by granting security agencies access to information such as video footage and data.
- Countries and their security forces try to prevent the reoccurrence of acts committed in the past. The protection against new tactics of terrorists is more difficult, especially because new threats and emerging tactics are unprecedented, sudden and consequently catch civilians and security forces by surprise.
- If confronted with new threats, railway companies must demonstrate their ability to adapt whilst meeting a demand which is unrelated to the state and national authorities, namely continuing to operate as a business. As the sector is opened to competition, security will have to find its place alongside the need to operate competitively and allow freedom of movement for passengers.
- When railways are not the target of the attack or of any kind of disruption, they are often affected in a secondary and indirect way by attacks targeting other critical infrastructures.
- The legal framework for rail transport security is defined at national level and is not consistent at European level. Each state and rail company has their own organisation for security with different models of cooperation with the authorities.

Summary of “Identification and analysis of emerging threats”

In this section, different types of threat and modus operandi have been identified and analysed. One of the most significant emerging threats is the growing of radicalisation leading to violence. Beyond this threat, new possible modus operandi have been identified as listed below:

- use of drones against the rail system,
- cyberattacks that are evolving with the increasing of digitization of railway control systems
- CBR (Chemical, Biological, Radiological) attacks



- “unsophisticated methods” or “low cost methods” since they involve methods that require little investment and make use of everyday utensils or equipment, for example use of cars as a ram
- IED (Improvised Explosive Device): In EU countries where strict weapons controls are in place, IEDs are increasingly attractive alternative or addition to illegal small arms
- Terrorist use of internet and social media
- Hybrid methods which combine physical attack, cyberattack and attack on social networks with dissemination of false information to create a general confusion or chaos.

In an ever-changing world, with threats and methods constantly changing with technological advances and shifts in ideologies, terrorism is not a subject that is new in Europe. European countries have had their fair share of experiences with terrorism whether it has been from nationalist and separatist movements, political extremism such as far right and far left extremist, organized crime or religious extremism. Terrorism is always changing and adapting to changes of the world.

Summary of “Procedures and technologies for protecting stations and trains against emerging threats and gaps identified”

This section is describing the procedures and technologies available for preventing/protecting stations and trains against emerging threats and new modus operandi identified in the previous section.

The main conclusions are the following:

- The fight against terrorism is the responsibility of the state. However, the implementation of the measures decided by the state in the railway environment is subject to the responsibility of the railways and very often they can have an impact on the smooth functioning of the system and of the primary goal of the railways, which is to transport people and goods. Therefore, cooperation with authorities is very important in order to be sure that the decisions taken by authorities are efficient and adapted to the railways.
- Besides the everyday, common threats (luggage theft, metal theft ...), the company security strategy should include the terrorist emerging threat. The implementation of preventive and reactive measures with regard to a terrorist attack are very challenging and demanding.
- Emerging terrorist related threats are evolving quicker than the timescale for developing new solutions in an environment with a lot of constraints from the architectural, spatial, operational, legal, and economic points of view.
- Protecting individuals/passengers will always be the top priority. In order to protect stations and trains, the whole system should be protected. However, it’s impossible to protect the whole system and it’s essential to be proportionate, keeping always in mind the acceptability of the measures by the staff and the passengers.
- Emerging threats are important but past threats as well as daily and common crime also have a big impact on security and the feeling of security and needs to be addressed by the railways first.

Summary of “Legal framework and identified gaps”

The existing legal framework and the needs for the future have been identified for the following issues:

- Managing radicalized insider threat:



- Radicalization is an issue for a few countries in Europe while yet not appear in most European countries. In some countries, the legal framework has been adapted for the screening of railway sensitive positions, but the main issue is that there are limited resources for carrying out checks.
- Managing UAV's misuse:
 - Malign use of drones is an emerging threat, and yet the legislative framework is still limited. The European Union however is not overlooking this modus operandi and will most likely draft legislation in the next few years.
- Video surveillance and protection (CCTV):
 - European regulations governing CCTV are based on the General Data Protection Regulation (GDPR), however some countries put video protection in a legal framework that includes the detection of terrorist acts on domestic soil.
 - Most of the countries have a dedicated legislative framework regarding CCTV that describes the main conditions and limitations for installation of video surveillance systems in a public or private space.

Main gaps identified are the following:

- Screening legislation:

In general, there is a lack of legal instruments and authorisations to allow regular checks to be carried out in the rail environment.

The administrative procedures to ask the public authorities to carry out checks is time consuming and complicated, whereas it should be possible to respond more quickly and be more practical.

There are limited resources for carrying out checks. Insufficient staffing in public bodies responsible for vetting means that it is not possible to screen effectively for all sensitive positions.
- Regional differences and legal disparities in Europe:

Regional differences influence legal disparity. Railway companies may not share the same legal prerogatives, or security model, and may not all have similar roles and responsibilities. It is therefore difficult to measure and compare to see if the level of security is the same in all the countries crossed by an international train.
- On-board cameras in cross-border traffic:

The absence of rules or bilateral agreements on the use of on-board cameras on cross-border and international trains raises a whole new set of questions since video protection rules differ from one country to another.

Summary of “Expectations and needs from the railway sector”

This section gives an overview on the expectations of the railway sector in a context where the main responsibility when dealing with emerging terrorist threats belongs to the authorities.

European Legislation:

- Liberalisation of rail has a major impact on security: railway security personnel carrying out activities in a Member State which is not their home State should be subject to sufficient quality standards and at a level similar to those in force for the personnel of that Member State.



- Passenger right security (Article 26 of the REGULATION (EC) No 1371/2007) is not explicit enough. There is currently no mechanism to ensure continuity of the security chain in a cross-border train. The security-related powers of the railway staff present in a given train stop at the border of the state to which those staff are linked. This concerns the control of passengers but also any action that could be taken against criminal behaviour. The recognition of the power of train staff / security staff at European Level could be a solution among others to prevent any breach of security.

International trains and stations

- The measures decided by the authorities to fight against terrorism in general, and emerging threats in particular, must be the result of a thorough risk analysis and not be taken in the emergency immediately after an attack, nor with an electioneering. The measures should remain proportionate and respect the rule of law. They must also take into account the specificity and constraints of the rail sector and its competitive position towards other modes of transport.
- With regards to screening, should the screening include personnel from foreign railway companies entering the national market? Would a common European list of occupations for which screening would be necessary, be adapted to the radicalisation problem? And if so, what about people not on the list but for whom there are suspicions?
- Regarding cross-border video protection, would it make sense to work on this subject at European level, in order to facilitate exchanges between law and order forces on both sides of the border, and to offer customers an equivalent level of security?

External borders

- Need to have coherent measures and procedures at all Schengen Border points

Innovative solutions

- Need for innovative solutions for better protection of trains and stations without undermining their / the rail company's competitiveness
- A technology could be labelled as "appropriate" under three cumulative conditions:
 - it allows for at least some detection of explosives and/or firearms and/or large bladed arms that are carried or concealed by individuals inside railway stations or trains;
 - it does so without creating any bottleneck or new vulnerabilities;
 - its deployment does not require extensive station or train operations' redesign.
- More International exercises with the police should be organised

EU funding

- Specific funding mechanisms for railway companies (such as infrastructure managers and service facility operators) for strengthening security measures on infrastructure should be established at EU or at least at national level.
