PROTECTRAIL

SP2
Functional and Technical
Railway Security Specifications

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Protectrail objectives

a) The main objectives of Protectrail are then

a1) to specify and demonstrate

modular and integrated Security Systems suitable to Market (Railways Companies, Train Operators and other Stakeholders)

a2) tailored on the Stakeholder Requirements, based on the actual technological state of the art, but

a3) taking into account its trend too within a realistic horizon of time,

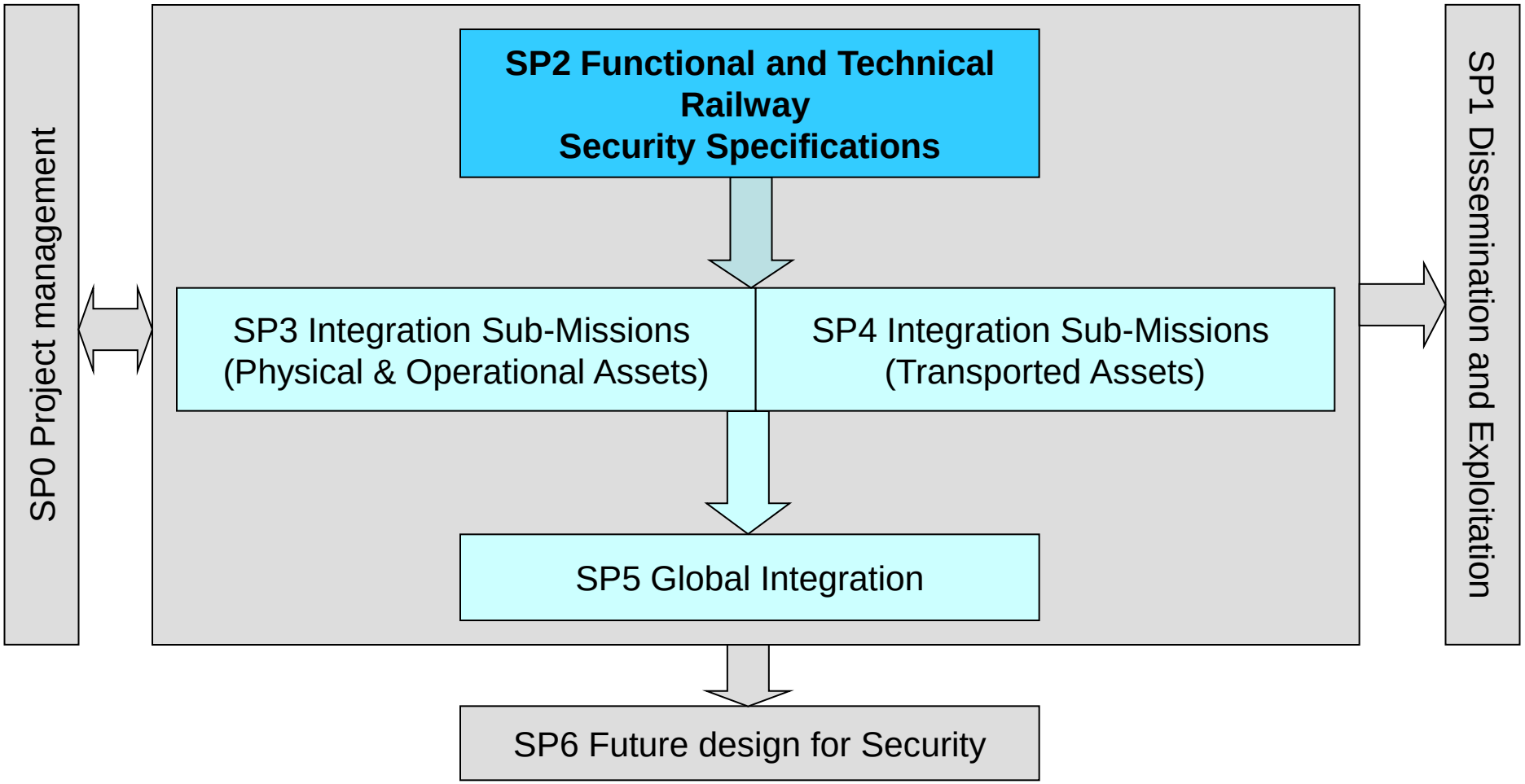
a4) tuned by ethic/legal aspects and regional disparities

for **preventing, fighting and increasing resilience** to terrorist and criminal actions.

But also

b) to start defining, where possible, Standards for Security Systems in order to allow interoperability at the European level.

SP2 in Protectrail



SP2 objectives

The SP2 objectives are:

- **to generate a set of functional and technical specifications** to comply with needs and priorities of **railway stakeholders** and/or having impact on railway security policies and on the **human rights** to privacy;

- **to refine requirements and specification during project's life** to take into account possible variations due to changed environmental conditions/technological evolution;

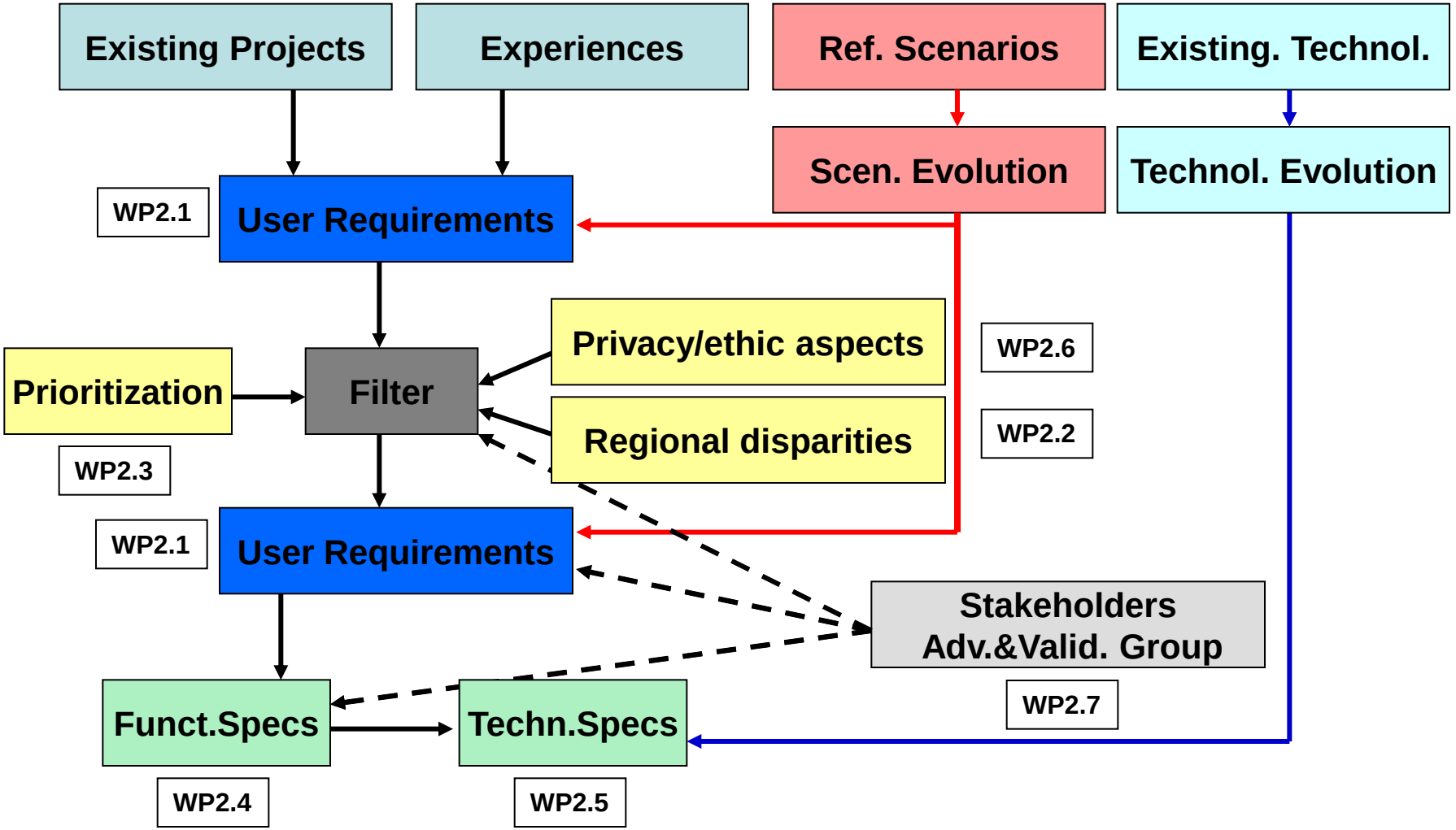
- **to provide stakeholders' advices on and feedback** to SP3, SP4 and SP5.

SP2 Partners

Short Name	Task	WP
ASTS	SP2 Leader	-
T3S	SP2 co-leader	-
DUCTIS	Collation, Synthesis and Assessment of Existing Information	WP2.1
UIC	Assessment of Regional Disparities	WP2.2
PLK	Priority Review and Scenarios Definition by Stakeholders	WP2.3
SSI	Security Functional Specifications	WP2.4
TNO	Security Technical Specifications	WP2.5
FUNDP	Privacy and Collective Security	WP2.6
ASTS	Stakeholders Advisory and Validation Group	WP2.7

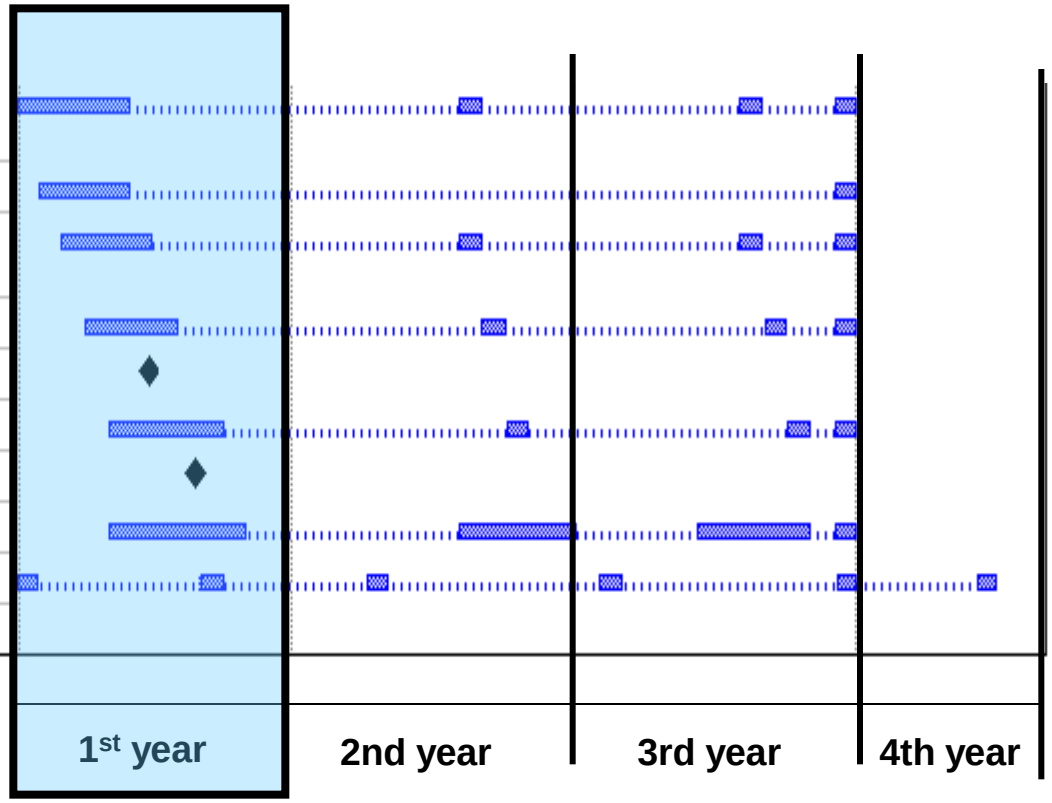
Are also present in SP2: ALS, BT, DAPP, ED, ESL, ITCF, LITRAIL, MOR, SARAD, SNCF, ZSSK, UNIFE.

SP2: WPs and dependencies



SP2 scheduling

14		WP21 Collation, Synthesis and Assessment of Existing Information
15		WP22 Assessment of Regional Disparities
16		WP23 Priority Review and Scenario Definition by Stakeholders
17		WP24 Security Functional Specifications
18		MIL1 Delivery of Security Functional Specifications
19		WP25 Security Technical Specifications
20		MIL2 Delivery of Security Technical Specifications
21		WP26 Privacy and Collective Security
22		WP27 Stakeholders Advisory and Validation Group
23		



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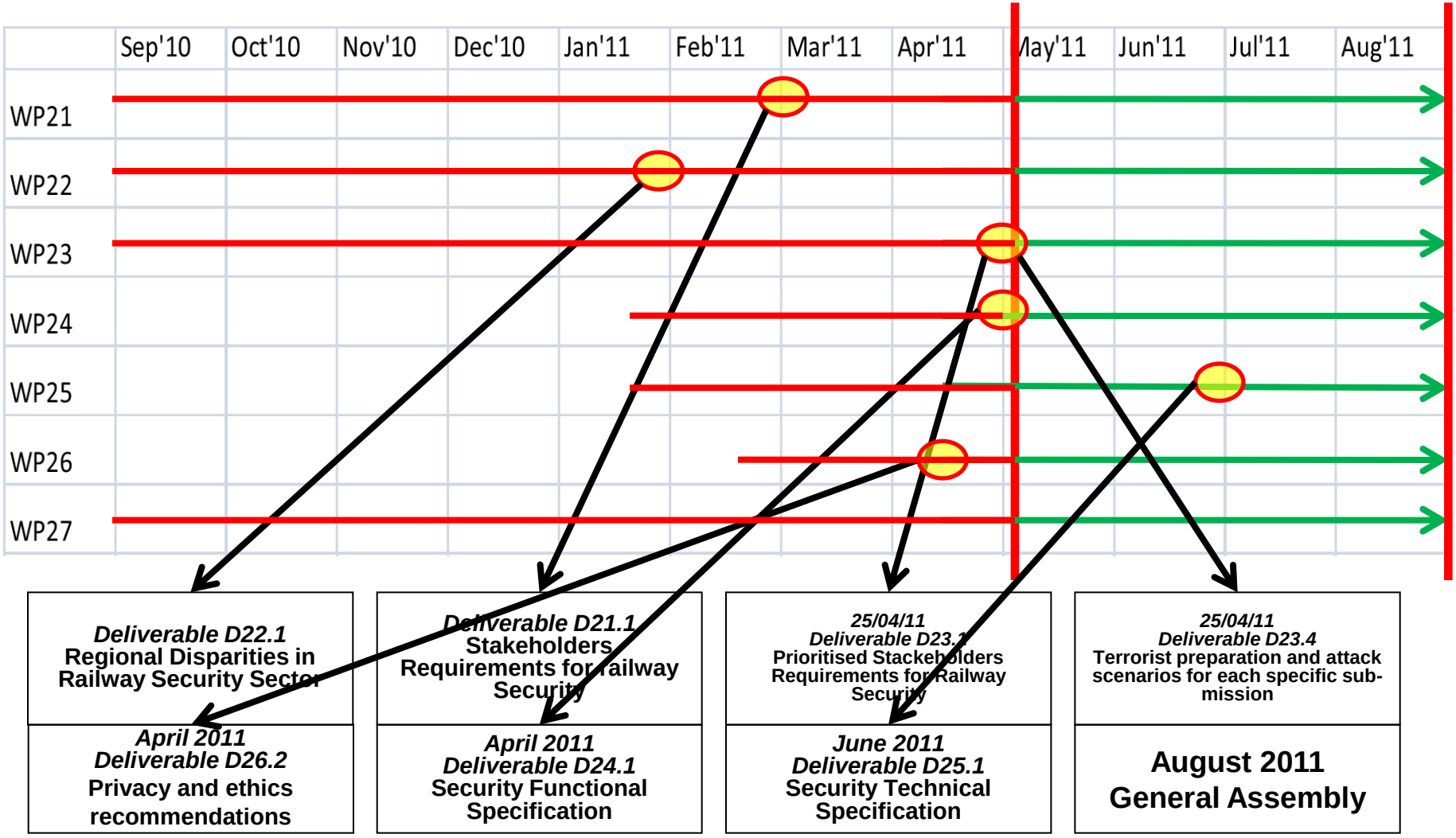
SP2 short-term objectives



Involved Stakeholders

- PLK - PKP Polskie Linie Kolejowe SA
- LITRAIL - Joint Stock Company Lithuanian Railways
- SNCF - Société Nationale des Chemins de Fer
- RFI - Rete Ferroviaria Italiana
- TCDD - Türkiye Cumhuriyeti Devlet Demiryolları
- ZSSK - Železničná spoločnosť Slovensko, a.s.
- CP - Comboios de Portugal
- SNCB - Société Nationale des Chemins de fer Belges
- NRIC - National Railways Infrastructure Company - Bulgarian

Prioritized Assets

Asset	Priority
Stations and buildings	**1**
Tunnels	**2**
Viaducts / Bridges	**2**
Rolling stocks	**2**
Open Air Track	**3**
Yards and depots	**4**
Plants, signaling and ITT systems	**5**
Power supply systems	**5**

Prioritized Attacks

Attacks	Priority
Terrorist attacks	**1**
· CBRNe	
· Fire	
· Hijacking of trains/cars	
· Sabotage of tracks/equipments	
· Etc...	
Thieves attacks	**2**
· Theft of copper	
· Theft of equipment/technology	
· Theft of passenger's properties	
· Etc..	
Vandalism attacks	**3**
· Graffiti	
· Equipment damaging	
· Interiors of trains damaging	
· Stone throwing	
· Etc…	

Prioritized Requirements

Requirements	Priority
To identify people (abnormal behaviour, tracking capability, face identification capability etc...)	1
To control accesses (detection of unauthorized people, ID badge for the personnel, etc…)	2
To identify unattended luggage (detection capability)	3
To have an integrated security system	4
To protect plants (plants, power and signalling)	5
To have human guards and employees with a high security awareness and vigilance	6
To check luggage and neutralize dangerous contents	7
To protect dangerous goods	8
To integrate safety and security technologies	9
To protect information systems (cyber-crime)	9
To have efficient communications channels to passengers/involve passengers in vigilance	9
To detect CBRNe	10
To detect and extinguish fire	11
To install armored or reinforced doors, gates, fencings	11
To ensure a connectivity link to Regional Polices and Ministry for Internal Affairs, Intelligence Agencies	12
To protect from hijacking of trains or service vehicles and hostage taking	13
To protect from other threats	14

Important emerging aspects

- **Open access to stations is a strict requirement but also a weakness;**
- **Controlling access to critical sites is a strong requirement;**
- **Passenger tracking, abnormal behaviour detection and automatic surveillance systems are worthwhile, also for citizens security perception;**
- **Surveillance systems are to be regarded also because they are non-intrusive and privacy respectful;**
- **Underground tracks and stations must be considered.**

- **For many interviewed Stakeholders there are also strong pressing issues out of terroristic acts (robberies, vandalisms).**

- **Due to the economical crisis the Security is having strong cuts in funds in many countries.**

Prioritization limits (at this stage)

1. Only few Stakeholders outside the Consortium have been involved up to now;

2. They are Railways Stakeholders (Infrastructure Managers and Train Operators) only, then needs and opinions of the Police, Internal Minister representatives, other pertinent Authorities are still to be deepened. As a consequence Prevention is predominant;

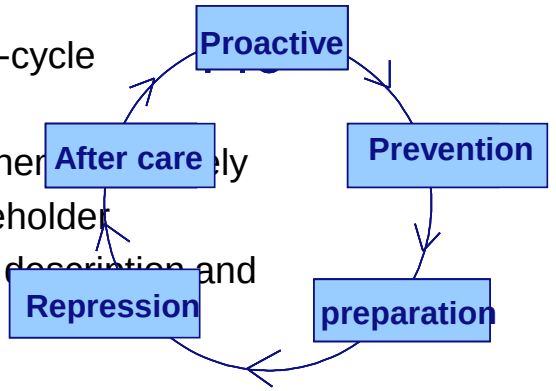
3. Also inside the Railways, the points of view reflect different structures/Companies (Train Operators vs. Infrastructure Managers);

4. Three tables are not linked each other (i.e. the assets and requirements priorities are not connected to the threat priorities);

5. The threat priorities depend on many factors that differ from country to country:
   - Previous experiences with terrorist actions
   - Presence of high speed lines or not
   - Presence of Pan-European Corridors or not
   - Presence of Security Department within Railways Organizations
   - Economical incidence of other criminal acts (robberies, vandalisms)
   - Others.

SP2 Next Steps for URs and Scenarios

- **User Requirements and Prioritization (version 2 of the deliveries D21.1 and D23.1)**
  - Involve all kinds of Stakeholder, entering in touch with the external to the Consortium, also using the **Stakeholders Advisory and Validation Group (SA&VG)**
  - Widen the pool of Railways
  - Focalise the enquiry also to the other phases of the Security life-cycle
  - Group in an homogeneous way the Stakeholders answers
  - Distinguish the answers referred to different threats and group ther ly
  - Qualify the context of the Country for the answers of each Stakeholder
  - Select a short list of priorities which will drive scenarios, system description and demonstrators.



- **Scenarios (version 2 of D23.4)**
  - Select a short list of scenarios which will drive system description and demonstrators. Also in this case the SA&VG will play a fundamental role.