



PROTECTRAIL (242270) - The Railway-Industry Partnership for Integrated Security of Rail Transport SP2, WP2.1

WP title

WP2.1: Collation, Synthesis and Assessment of Existing Information

Main Outcome

A document „Stakeholders‘ Requirements for Railway security“ with the contents to **collect, synthesise and assess** existing information concerning the security of railway assets and infrastructures and to **transform it into a set of User Requirements.**

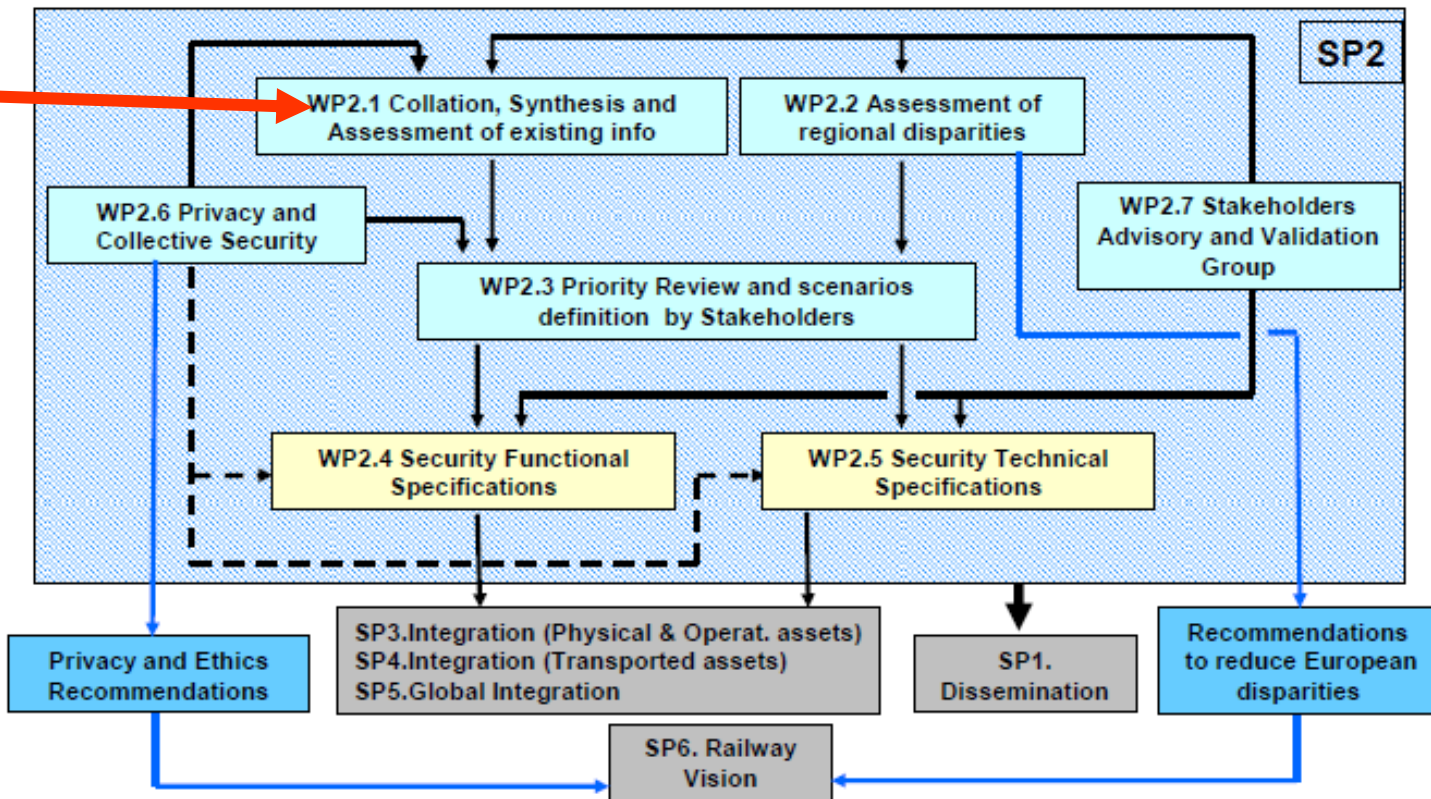
Contributors

- Ductis as WP responsible
- PKP, Litrail, ZSSK, TCDD, SNCF, UIC as Railway supporters
- ED, Sarad, Elbit as technical supporters
- ASTS as technical and management support



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Position of
WP21 within
SP2





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Observe our clear distinction between requirement types:

Outcome of D21 is a set
of
User Requirements

A requirement which follows directly from the security needs of a railway infrastructure (including the security needs of its customers and other stakeholders). Nothing is said here about the technical realisation.

Not
**Functional
Requirements**

A breakdown of a user requirement to one or more functional units. Each functional requirement has to refer to one or more user requirements where it is derived from.

Not
**Security Technical
Requirements**

A technical description which satisfies a part of or a whole functional requirement or several of them, e.g. a scanning unit which shows the contents of luggage or a DFMD. Each technical requirement has to refer to the functional requirements it is derived from.



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What do we mean
by „User“ in the
term User
Requirements?

Potential Users are the different kinds of
stakeholders in the Railway environment:

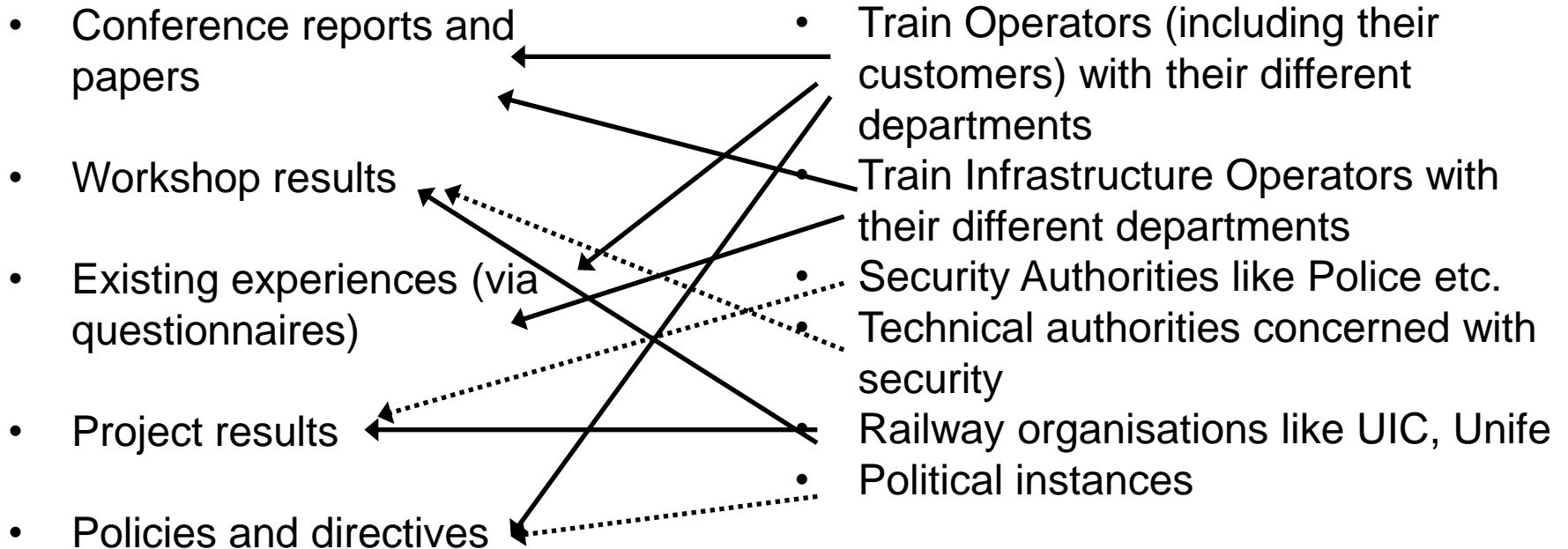
- Train Operators (including their customers) with their different departments
- Railway Infrastructure Operators with their different departments
- Security Authorities like Police etc.
- Technical authorities concerned with security
- Railway organisations like UIC, Unife
- Political instances like ministry of transport, ministry of the Interior

Note: We are restricted to requirements concerning security!



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Our sources of information for User Requirements





**The main result of this collection and assessment is a
Structured Set of User Requirements**

- Structured along the submissions of PROTECTRAIL
- Structured along the differentiation Terrorist attacks <-> Criminal attacks
- Structured along further Criteria



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Characteristics of the set of User Requirements

- It is a strictly hierarchical tree with the requirements as leaves
- Each requirement
 - has a unique numerical identification
 - has a verbal title
 - has a short verbal description
- Similar requirements can be collected to a class



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An excerpt of the Set of User Requirements

3 To protect plant, signalling and ITT systems

- 3.1 To protect from terrorist attacks
 - 3.1.1 To protect plants (power plants, marshaling yards too)
 - 3.1.1.1 To control access
 - 3.1.1.2 To detect unauthorized people inside plants areas
 - 3.1.1.3 To have ID badge for the personnel
 - 3.1.1.4 To install armoured or reinforced doors, gates, fencings
 - 3.1.1.5 To have employees with a high security awareness and vigilance
 - 3.1.1.6 To have dedicated areas for dangerous goods
 - 3.1.1.7 To have real time information about dangerous goods carried by train (kinds and position)
 - 3.1.2 To protect Signalling and ITT systems
 - 3.1.2.1 To control access
 - 3.1.2.2 To detect unauthorized people
 - 3.1.2.3 To have ID badge for the personnel
 - 3.1.2.4 To install armoured or reinforced doors, gates, fencings
 - 3.1.2.5 To have employees with a high security awareness and vigilance
 - 3.1.2.6 To ensure all signalling and ITT systems against any unauthorized cyber intrusion
- 3.2 To protect from other threats (hackers, vandalism, robberies, etc.)
 - 3.2.1 To protect plants (power plants too)
 - 3.2.1.1 To control access
 - 3.2.1.2 To detect unauthorized people
 - 3.2.1.3 To have ID badge for the personnel
 - 3.2.1.4 To install armoured or reinforced doors, gates, fencings
 - 3.2.1.5 To have employees with a high security awareness and vigilance
 - 3.2.1.6 To have dedicated areas for dangerous goods
 - 3.2.1.7 To have real time information about dangerous goods carried by train (kinds and position)
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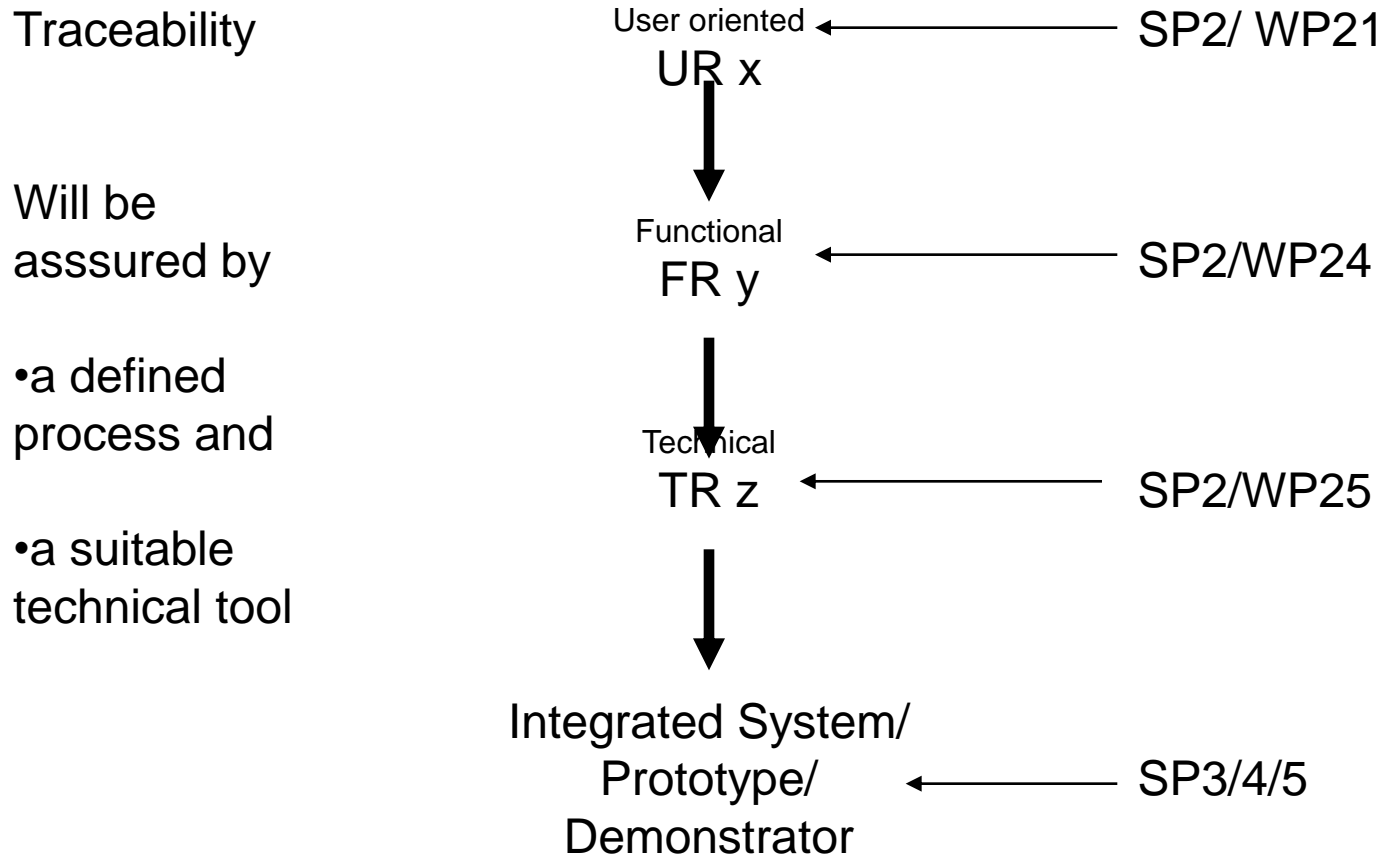
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How User Requirements look like

- | | | |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| UR1.1.1.1 | <i>To identify people with abnormal behaviour</i>
Abnormal behaviour means, a person is constantly walking around and looking for different points “of no interest” like waste baskets, edges etc. | 1.1.1.1 - 1.1.3.1.1 -
1.1.3.2.1 - 1.2.1 –
4.1.3.1.1 –
4.1.3.2.1 – 4.2.1 |
| UR1.1.2.10 | <i>To control accesses</i>
This means for each security relevant room: (i) Access only for authorized people, (ii) Record and store who accessed and left when, (iii) Check correctness of authorizations. | 3.1.1.1 – 1.1.2.3 -
1.2.8 - 1.1.2.10 -
3.1.2.1 - 3.2.1.1 -
3.2.2.1 - 4.1.3.1.4 |

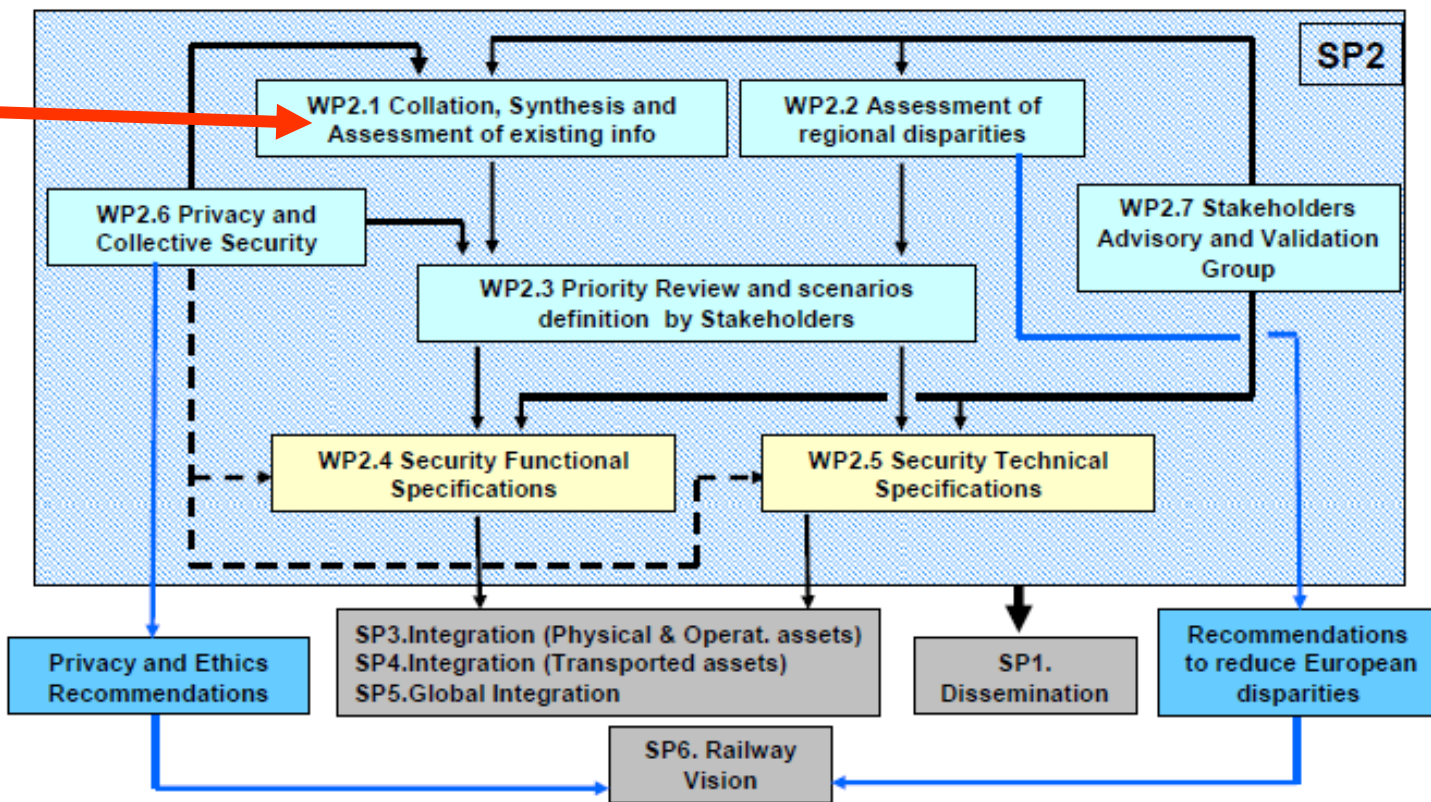
On the whole there are about 150 different User Requirements.

Traceability of the User Requirements



Evolution of the User Requirements System

Position of
WP21 within
SP2





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Evolution of the User Requirements System

The evolution will be implemented by

- Taking up new developments and trends
 - From the different stakeholder groups
 - From inside the project
- Two additional versions of the User Requirements document which will follow in 2011 and 2012



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Thank you for your attention!

Questions?