Future Design for Security

Sub Project 6
Objective

• Description of the long term evolution of the future railway security system
  – As a result of various influence factors and their mutual interactions
  – Inclusion of Political, Economical, Social-cultural aspects, besides the Technological aspects
  – Uncertainty is important and leads to more than one possible future

• No changes to DOW
Output

• A software based foresight system to imagine alternative long term developments in railway security up to a range of 20 years

• Overview on how different national security concepts and practices can be merged together to provide an implementation roadmap towards a unified solution for railway security in Europe
SP6 within PROTECTRAIL

- SP 2 Railway Security Specification
- WP 6.1 Vision of Railway in next 10-20 years
- WP 6.2 Design of Railway Security Systems in the framework of complex system dynamics
- WP 6.3 Future Design for Prevention
- WP 6.4 Future Design for Mitigation
- WP 6.5 Future Design for Crisis Management
- SP 5 Global Integration
WP 6.1 Vision of Railway in next 10-20 years

UIC    ALS    ASTS    MOR    Sarad

Deliverable (Report)
Vision of the main rail sector stakeholders in Europe for the next 10-20 years

Keywords:
- political environment
- economical environment
- social environment
- traveling cost
- technologies
- future demands
- operational requirements
- public and private security
- consequences of open markets
- relationships between authorities and business
- traffic volume (passengers, freight, short and long distances)
- European dimension.
WP 6.2 Modeling Railway Security System

Deliverables
1. Description of the evolution model, influence factors, their mutual interactions and resulting scenarios.
2. Software to generate the system model

Keywords:
- relevant influence factors their estimated future development
- mutual interactions between influence factors
- modeling possible system evolution using several methods (for example: Bayes networks, Neural Nets, Fuzzy Logic)

The WP 6.1 delivers input to WP 6.2
WP 6.3 Future Design for Prevention

**SARAD**  ASTS  Ductis  ED  ISL  MOR  T3S

**Deliverable (Report)**

Description of possible new techniques and organisational processes reducing vulnerabilities and increasing threat detection capability. Recommendations of new design criteria for preventive protection of railway infrastructure.

**Keywords:**
- Mainstreams of future technologies and processes
- Design concepts improving prevention
- Future Threats and Countermeasures
Deliverable (Report)
Report on how design, materials, technologies or tools could be selected and deployed in the system to reduce consequences of attacks or accidents.

Keywords:
- Mainstreams of future technologies and processes
- Design concepts improving mitigation
WP 6.5 Future Design for Crisis Management

Ductis  ALS  ED  Sarad  SSI  T3S

**Deliverable (Report)**

Effective and efficient measure to increase capability of crisis management.

**Keywords:**
- Future communication interfaces
- Increasing reaction capabilities
- regional disparities
- Scenario based estimation of measures after railway attacks.
## ProtectRail: Time Schedule

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<th>WP</th>
<th>Work Package</th>
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Workshop (2 days)  Workshop (1 day)  
Milestone 6  
Steering Board  
Techn. Coordination
## Partners

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