



*PROTECTRAIL (242270) - The Railway-Industry Partnership  
for Integrated Security of Rail Transport*

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# LE ROLE DES COMPAGNIES FERROVAIRES DANS LE PROJET ET LA DEMO FINALE

Bratislava 2012



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## Les compagnies ferroviaires – membres du Consorcium

PKP PLK SA

Litrail

SNCF

ZSSK

TCDD

RFI



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# Les compagnies ferroviaires – qui sont accepte a cooperer

B-Holding

DB AG

CP

NRIC

Isr

ADIF



# Assets to be protected

<u>Asset</u>	<u>Priority</u>
Stations and buildings	1
Tunnels	2
Viaducts / Bridges	2
Rolling stocks	2
Open Air Track (Viaduct and Tunnel excluded)	3
Yards and depots	4
Plants, signaling and ITT systems	5
Power supply systems	5



## Threats already identified

<u>Threats</u>	<u>Priority</u>
<b>Terrorist attacks</b> <ul style="list-style-type: none"><li>• Explosive</li><li>• CBRN</li><li>• Fire</li><li>• Hijacking of trains/cars</li><li>• Sabotage of tracks/equipments</li><li>• Black mail</li></ul>	1
<b>Thieves attacks</b> <ul style="list-style-type: none"><li>• Theft of copper</li><li>• Theft of equipment</li><li>• Theft of technology</li><li>• Theft of passenger's properties</li></ul>	2
<b>Vandalism attacks</b> <ul style="list-style-type: none"><li>• Graffiti</li><li>• Equipment damaging</li><li>• Interiors of trains damaging</li><li>• Stone throwing</li></ul>	3



# User Requirements prioritized

<u>Requirements</u>	<u>Priority</u>
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 armoured 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 form other threats	14



## First list of synthesized Scenarios

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1. Abandoned Luggage (2 scenarios) - RFI
2. Sensitive tunnel protection (3 scenarios) - RFI
3. Track protection (5 scenarios) – RFI
4. Hijacking of a passenger train (1 scenario) – PKP-PLK
5. Hijacking of a cargo (fuel) train (1 scenario) – PKP-PLK
6. Explosion in a station (1 scenario) – SNCB
7. Theft of catenary between two stations (1 scenario) – NRIC
8. Suicide bomber at a station or on a train (1 scenario) – ISRAEL R.
9. Fuel and metal theft on a cargo train (1 scenario) – LITRAIL
10. High Speed track protection (1 scenario) – SNCF-RFF



# 5 main scenarios chosen DEMO

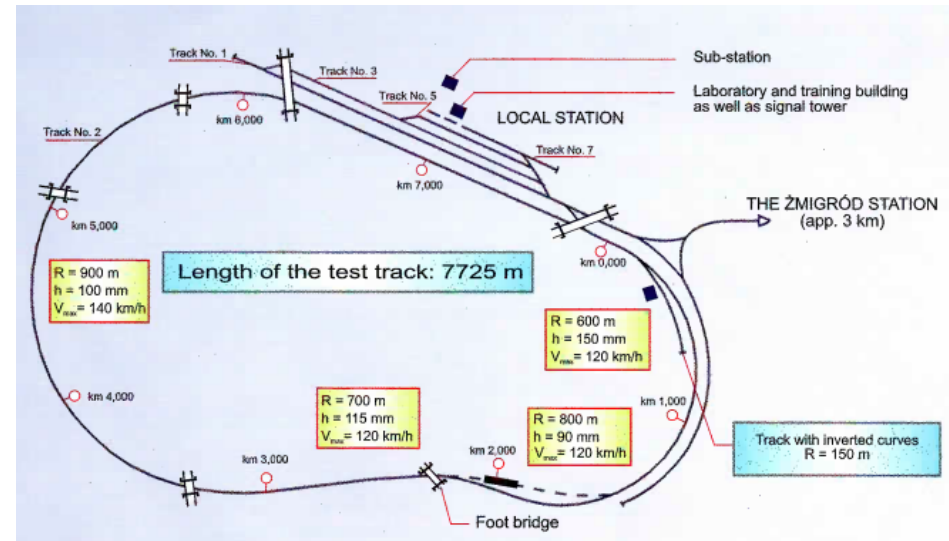
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1. People tracking
2. Intrusion detection
3. CBRN-E event on-board
4. Tunnel protection
5. Protection of the HSL

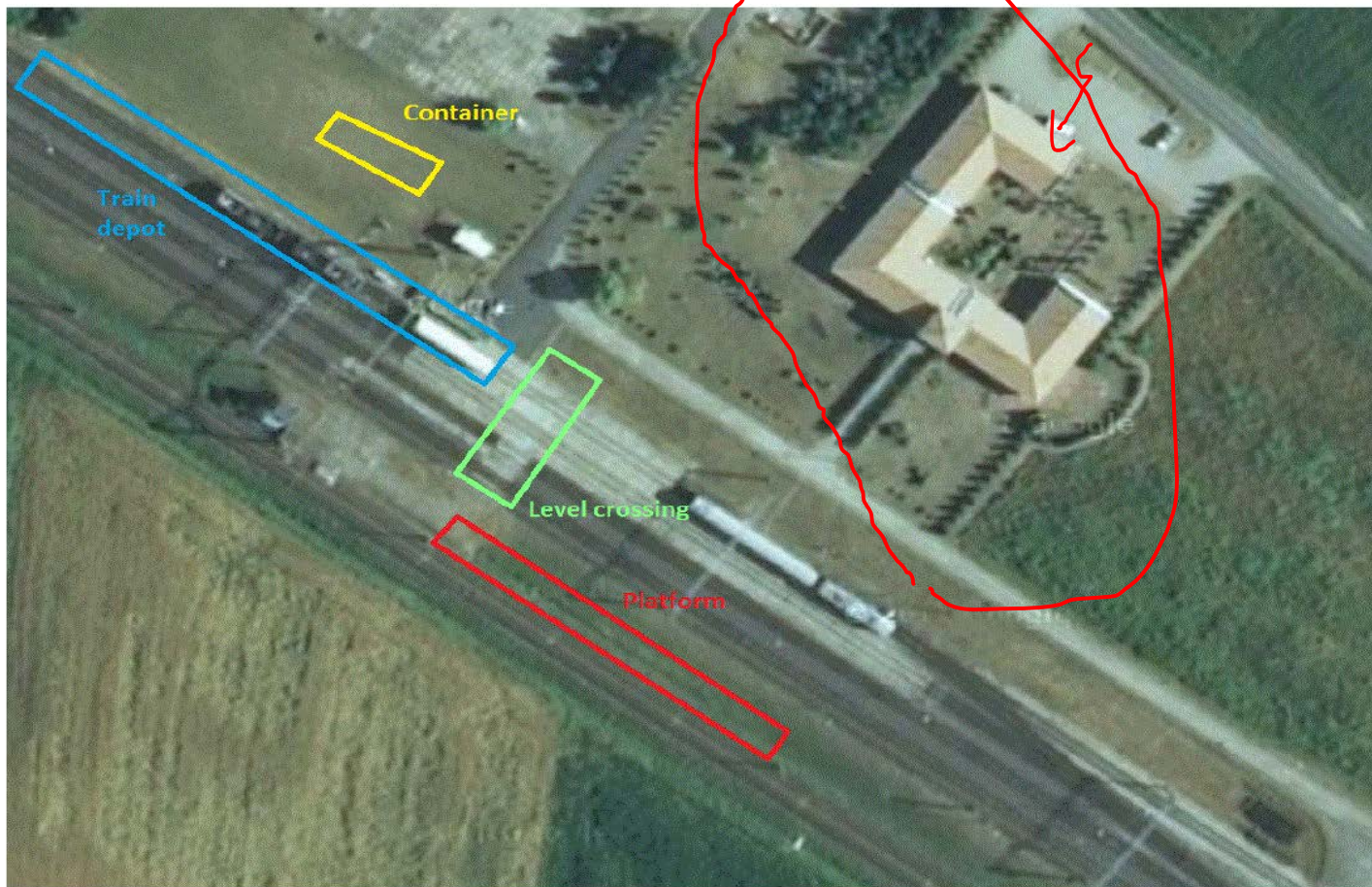


# Demo site characteristics

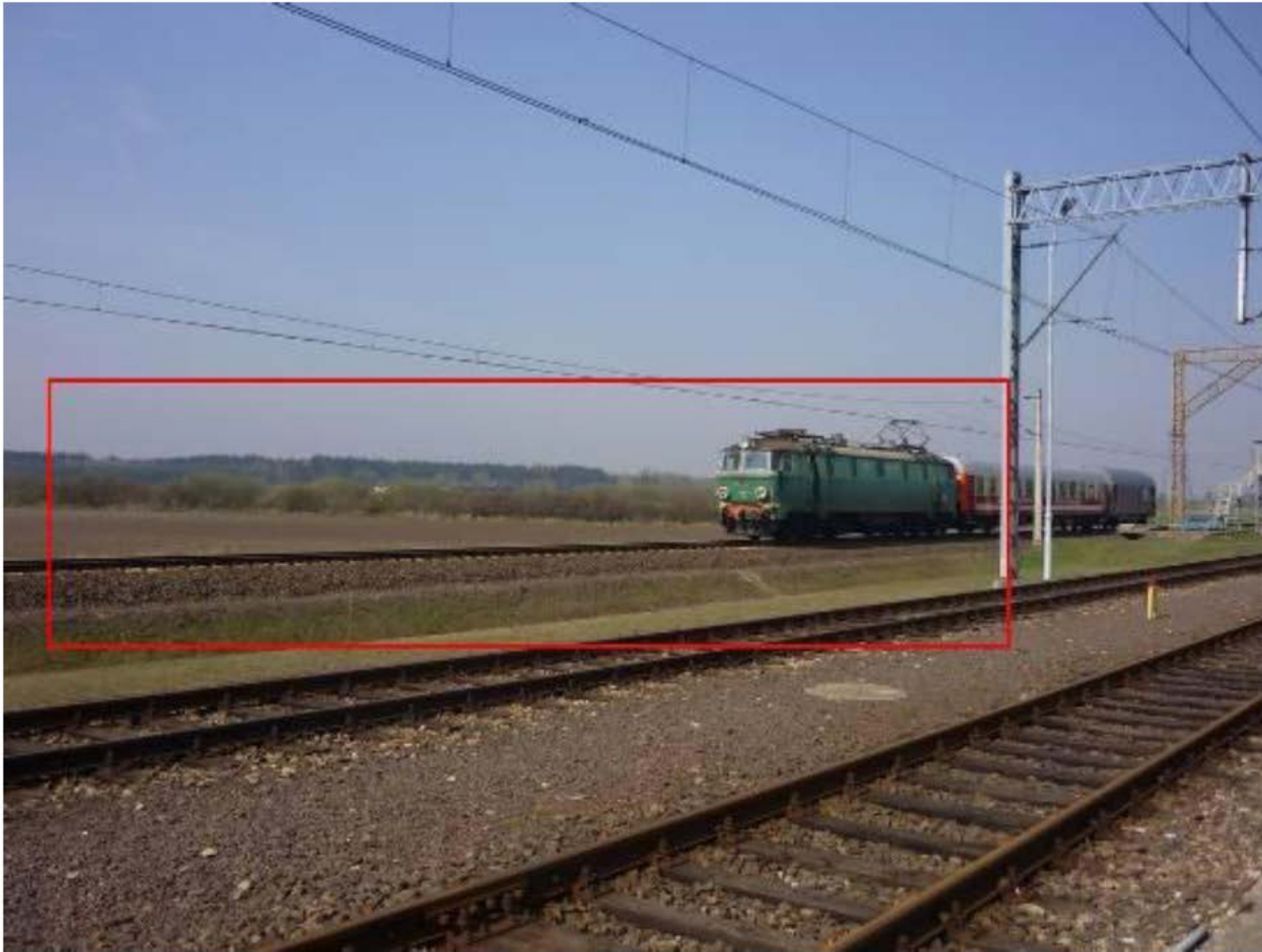
- Owned and managed by the Instytut Kolejnictwa
  - Electric substation
  - Approximately 8 km of electrified tracks
  - Link with the Zmigrod railway station (3 km)
  - 5 viaducts and 1 footbridge
  - 4 freight wagons and 2 passengers' wagons



# Infrastructure of the Demo site



# Air tack



# Level Crossing Area





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Thank you