



# *PROTECTRAIL*

*The Railway-Industry Partnership for Integrated Security of Rail Transport*



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## *The experience of a Project*





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- Consortium of 28 partners from 11 countries
- Launched in September 2010
- Planned activities in 42 months (extended to 46)
- Over 21 million € cost and 13 million € of EC contribution
- 3 Live demo (Zmigrod, Villecresnes, Sicily)

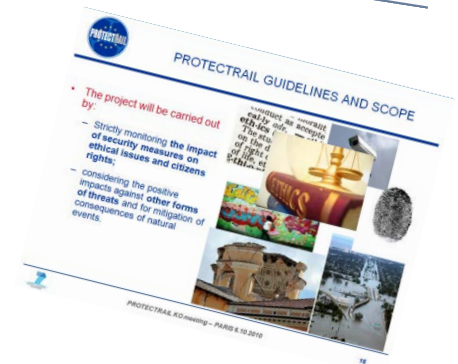
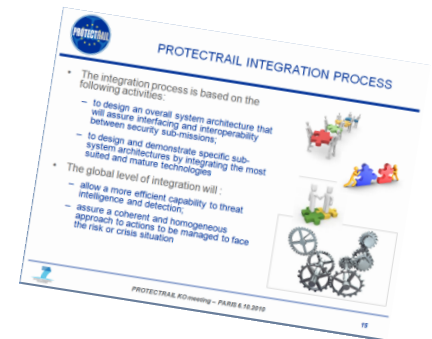
## A SYNTHESIS OF EXPERIENCE OF A RESEARCH PROJECT

- The technical results
  - *Expectations vs Findings*
- The management results
  - *Planned time & cost*
- The cooperation results
  - *Teamworking*
  - *knowledge /experience share*



## MAIN TECHNICAL RESULTS AND EXPECTATIONS

- The integration of security technologies into the railway sector is a complex but feasible challenge, within:
  - *the current European legislative and national framework*
  - *existing and on progress standard*
- The system integration tools and technologies developed inside the project activities and experimented during the PROTECTRAIL demonstrations have shown to be:
  - *adequate to the scope of the project objectives*
  - *Interoperable, scalable and able to evolve in time and missions*
  - *simple, non-proprietary, prone to be get higher level of standardization*





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- In particular, from the Zmigrod demo:
  - *with the minimum set of information available in the event (time, nature and geo-location) together with smart services like discovery it is possible to flexibly manage situational awareness in both fixed and mobile security applications;*
  - *the integration of different wired (Ethernet and MPLS) and wireless (LTE, ZigBee, WiFi, UMTS) communication technologies has shown to be a key success factor.*
- However
  - Still remains a gap to get sensing and mitigation technologies
    - *at a reasonable and practical cost*
    - *fully usable in an open railway context*
      - *Low false alarms rate*
      - *No passenger flow reduction*
  - Privacy and ethical legislation still remains a significant obstacle for a large market uptake of security technologies



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PROTECTRAIL findings are ready to be exploited and able nowadays, to produce several improved tools for the different stakeholders involved in rail operation and security:

- *for protection against major terrorist attacks*
- *to contrast ordinary criminal actions or violence against assets and persons.*

Beneficiaries are:

- *the security staff of the operators at different levels*
- *crisis management structures run by authorities or police officers*
- *finally the “end users” of railways, passengers and citizens*







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To overcome the above-mentioned gap it is necessary to continue from PROTECTRAIL experience the fruitful cooperation and relationships between railway undertakings, research and industry for future development of technologies and/or their improvement in a common and enlarged vision.

PROTECTRAIL could be a real “incubator” for new and further initiatives in railway security.

Security is still a fundamental value in our society and it is a duty for the operators to guarantee it. However security has a cost:

- *in economic terms investment, operation and maintenance,*
- *in terms of potential reduced freedom and privacy rights for the citizens.*



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Due to the current (apparent) lower level of terroristic alert in Europe, nowadays European stakeholder concern on passengers protection seems to be reduced.

Increasing concerns are in asset protection, mainly from high-probability low impact (HPLI) events affecting property and service quality:

- *copper cables theft that has a direct impact both on costs to replace them and on the continuity and quality of service and in same case on safety.*

PROTECTRAIL enlarged the scope in order to analyze these events, related costs and benefits.

- Security technologies of PROTECTRAIL could be profitably use for facing HPLI events.







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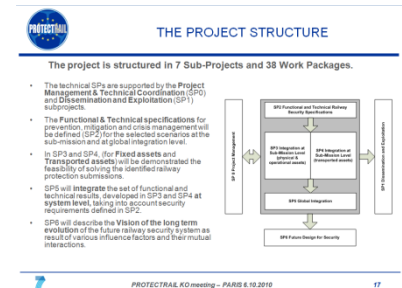
## THE MANAGEMENT EXPERIENCE

The project structure on organization of responsibilities has correctly worked:

- *Project coordination & Steering Board*
- *Subproject Leadership*
- *Quality assurance procedures*

allowing

- to keep the project in the tracks :
  - *No significant deviation from the planning*
  - *No significant overspending or under spending for the whole project*
- to face efficiently some critical events and refine the scope of some missions





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## THE COOPERATION RESULTS

Integration – Interoperability of capacities & technologies in a Open System architecture (SOA) was the key factor to get project results.

However, the most relevant success key was the integration of competences and the strong commitment deployed in the project by all the project partners and stakeholder and EC

- Partner in the project – competitors
- Supplier - Customer

*A good example of European and international cooperation*





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*Thanks for your attention*

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