EU Agency for Railways - Cybersecurity

FORESEE EU Project – Final conference, 22/02/2022

- **Improve competitiveness** of rail with other modes in order to increase the market share of the most environment-friendly mode of transport

- Spend **public money** more efficiently on **public rail transport** services

- Encourage **market entry** by:
  - reducing administrative and technical barriers
  - ensuring non – discrimination through a better governance of the infrastructure

- Open domestic rail passenger transport to **competition**

European strategies
White paper 2011

A timeline of EU Railway Regulation

2001
European Commission's White paper
A strategy for revitalising the Community's railways

2001
Rail infrastructure package
- levying of charges for the use of railway infrastructure
- licensing of railway undertakings

2004
Second railway package
- Interoperability and Safety Directives
- Establishment of ERA

2007
Third railway package
- Access rights rail freight service from 2007
- Opening of the international passenger transport service market from 2010

2008
- Interoperability Directive **extended to the whole EU Network**
- Directive 2008/110/EC amending Safety Directive:
  duties for entity in charge of maintenance (ECM)

2016
Fourth Railway Package
- Recast of all major railway Directives
- Single EU wide vehicle authorisation and certification

European Union Agency for Railways – Main tasks

- "4th Railway Package" (EU 2016/796) → ERA = Authority for
    - Single Safety Certificates
    - Vehicle (type) Authorisations valid in multiple European countries
    - ERTMS Trackside approval

- Technical contribution to the EU railway legislation
    - Enhancing the level of interoperability of railway systems
        → Technical Specifications for Interoperability
    - Developing a common approach to safety on the European railway system
        → Common Safety Methods
    - Single European Railway Area without frontiers

- Monitoring:
    - National Safety Authorities, against a compliance scheme or a maturity model
    - Notified Bodies

Regulation considerations

- Monitor relevant activities related to **cybersecurity in the railway context**
- Cover safety requirements of the rail system, e.g. the assessment of **safety consequences originated by security threats**
- Reflect the above in **Technical Specifications for Interoperability** and **Common Safety Methods**

Cooperation building

- Close relationship with **ENISA** and **European Commission** in support of railway stakeholders
- Cross-fertilisation with **EASA** and **EMSA** to develop a transport cybersecurity policy
- Review with **National Cybersecurity Agencies** (e.g. ANSSI, BSI) potential gaps
- Support **European Railway – Information Sharing and Analysis Center**
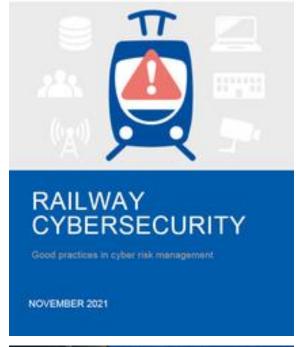
Railway cybersecurity @ENISA

Support Operators of Rail Essential Services

- Implementation of the **NIS Directive**
- Reports on **Security measures** and **Good practices** in the Railway Transport Sector
- Partner of the **European Railway ISAC**

Support standardisation and certification

- Support **CEN CENELEC /TC9X/WG26**
- CLC/TS **50701 on Railway applications - Cybersecurity**

Collaborate closely with ERA

- LANDSEC Rail Security Working Party
  - Permanent Agenda Item dedicated to Cybersecurity

- [EC Transport Cybersecurity toolkit](#)
  - Insights for understanding cyber threats and mitigating their impact on transport services/systems/operations

Relevant railway cybersecurity activities

TC9X - Working Group 26

– TS 50701 "*Railway Applications – Cybersecurity*"

→ Consistent approach to introduce risk analysis methodology and recommendations for cybersecurity within the railway sector

Technical Committee CYBER

– Technical Report: "*Implementation of the NIS Directive*"

→ Guidance on considerations for incident notification; best practices in cyber security risk management

• IP2 - Technical Demonstrator 2.11

– Definition of a security by design system, dedicated to railways (e.g. Protection Profiles Specification)

→ Application of the methodology to railways (demonstrator)

Cyber Security Solutions Platform

– Practical solutions for cybersecurity, focusing on critical elements of the railway system

ER-ISAC

– European Rail – Information Sharing and Analysis Centre
– Circa. 50 members under the lead of IMs/RUs (FR/DE/BE/NL)
  → Share best practices, discuss common vulnerabilities, influence regulation and standardisation

Moving Europe towards a sustainable
and safe railway system without frontiers.

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