



# IRSC 2022

INTERNATIONAL RAILWAY  
SAFETY COUNCIL

SEVILLA, OCTOBER 16-21, 2022





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# DIGITAL SAFETY AND SAFETY MANAGEMENT

## CYBER SECURITY MANAGEMENT AND PERFORMANCE AT INFRASTRUCTURE MANAGER



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# INDEX

**CURRENT STATE OF TRAFFIC CYBER SECURITY**

**KEEPING US AND DATA SAFE- BUILDING AND LIVING CYBER SECURITY AS PART OF A MANAGEMENT SYSTEM**

**CONCLUSION**

# CURRENT STATE OF TRAFFIC CYBER SECURITY



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# TRAFFIC IS INFORMATION



## CYBER CHALLENGES IN RAIL TODAY

- According to European Network and Information Security Agency railway cyber challenges are
  - Low digital security awareness
  - Difficulty in reconciling safety and cyber security worlds
  - Digital transformation on railway core business
  - Dependence on supply chain
  - Geographic spread and legacy systems
  - The need to balance security, competitiveness and operational efficiency
  - Complexity and lack of harmonization of regulations



# DIGIRATA – DIGIRAIL

**DigiRail**

Foundation for the future railway traffic is formed now

**A SOLUTION THAT STANDS THE TEST OF TIME**

- AI-based optimisation of traffic management
  - real-time refining of data
- continuously updated capacity and schedule data
  - dynamic reactions

**FOR FINLAND'S RAILWAY NETWORK**

- Maximum utilisation of investments
- Proactive maintenance, also by digital methods
- Safety in e.g. railway maintenance and level crossings
- Simplifying the infrastructure, less trackside equipment

**FOR PASSENGERS**

- Punctual and safe journeys
- More connections and smooth travel chains
- Personalised passenger information

**FOR THE ENVIRONMENT**

- Reduced CO2 emissions
- Shifting transport volumes to the rails from other modes of transport
- Energy efficiency through capacity optimisation and more economical and energy-saving driving

**FOR BUSINESS**

- More flexible transport services for industry
- A platform for the growth of new services
- Conditions for more sustainable business

5G





# KEEPING US AND DATA SAFE - BUILDING AND LIVING CYBER SECURITY AS PART OF A MANAGEMENT SYSTEM



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# CYBER SECURITY MANAGEMENT SYSTEM

- Identification and analysis
- Competences
- Sharing of information



- Changes in working environment and effects on "traditional" cyber security workstreams
- Risk identification, assessment and management
- Identification and protection of business critical environments
- Contingency planning

## CYBER PREPAREDNESS



- Contingency plan
  - Updated regularly
  - Adds to normal traffic procedures for degraded operations (ie. OPE TSI EU/773/2019)
- Training
- Auditing
- Analysing potential threats
- Risk management
- Programmes to continuously improve cyber security

# RAIL CYBER SECURITY PROGRAMME

- Goal is to further strengthen reliability of the rail system and its various components through administrative, physical and IT measures

## Accomplishments so far

- Subsystem and present state of cyber security mapped
- Boost on knowledge
- Information security requirements done
- Cyber security principles and requirements for traffic management done
- Cyber risk management concept improved



# CONCLUSION



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# CYBER SECURITY IS NOT JUST TECHNICS



**Attempts to influence start with people and end with people**

**We together make our operations cyber secure!**



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