

TS 50701 & IEC/ISO 62443 Standards

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# Seminar on Cybersecurity of Rail transport

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1 Section title1

2 Section 2

3 section X

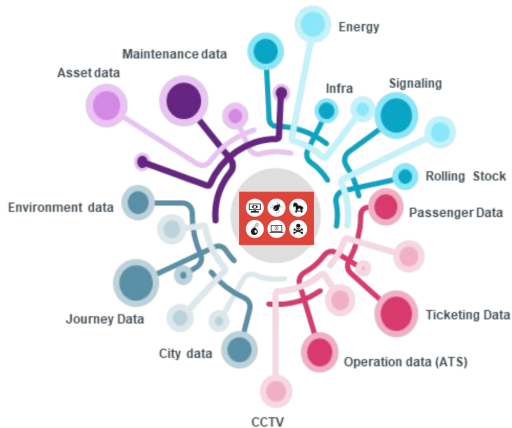
4 Conlusion

Section title1



# frame title

sub title



## Adoption of new technologies

- New connectivity (LTE, Ethernet, ...)
- Software
- New services
- IoT
- Artificial Intelligence

# frame example

## item with subitem

- Railway-specific challenges need to be addressed
  - ⊖ Attackers have fairly easy physical access
  - ⊖ The train is only one part of an diverse cross-border eco-system
  - ⊖ There are safety-critical and non safety-critical systems in the environment
- Commercially viable methods for operators, Manufacturers and vendors are needed
- Synchronization points between stakeholders as well as safety and security required

# frame example

## item and highlight

- Important number of **heterogeneous information systems(s)**
- A **wide and distributed** geographical footprint
- Limited resources (physical, electrical, connectivity, etc)
- Very **long lifecycle** of assets
- Importance of legacy
- **Reuse of components** not design for railway
- **Boundaries** are vanishing
- New **passenger-centric** services

# frame example

full size image

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## Danish train standstill on Saturday caused by cyber attack

Reuters

COPENHAGEN, Nov 3 (Reuters) - A major breakdown of Denmark's train network during the weekend was the result of a hacker attack on an IT subcontractor's software testing environment, Danish train operator DSB said on Thursday.

"We were contacted by our subcontractor who told us that their testing environment had been compromised by criminal hackers," DSB's chief of security, Carsten Dam Sonderbo-Jacobsen, told public broadcaster DR.

## Section 2





# Title...

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Figure: caption

subsection title



# Title

subtitle

section X



# Title

sub title

Conlusion



# Conclusion



Thanks for your time. Questions?

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