



**10<sup>th</sup> UIC World  
Security Congress**  
Lisbon 2014



# Cyber Threats

How to answer new challenges, while  
keeping systems security



INTERNATIONAL UNION  
OF RAILWAYS



COMBOIOS DE PORTUGAL

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# Cyber Threats

- Definition
- The Railway Case
- Threats
- Challenges
- Solutions





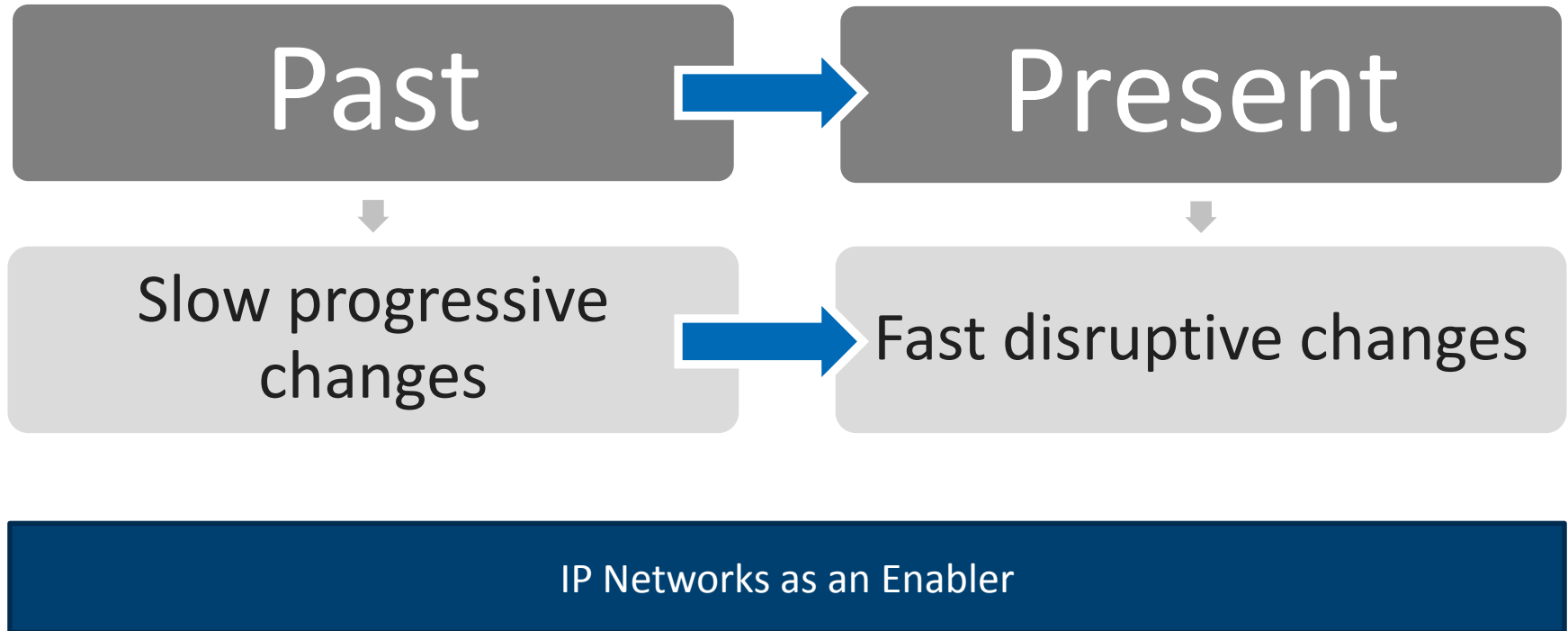
# Cyber Security

- What it means ?
  - The process of protecting your information in a digitally connected world
- How ?
  - By applying the proper contra-measures needed for each environment

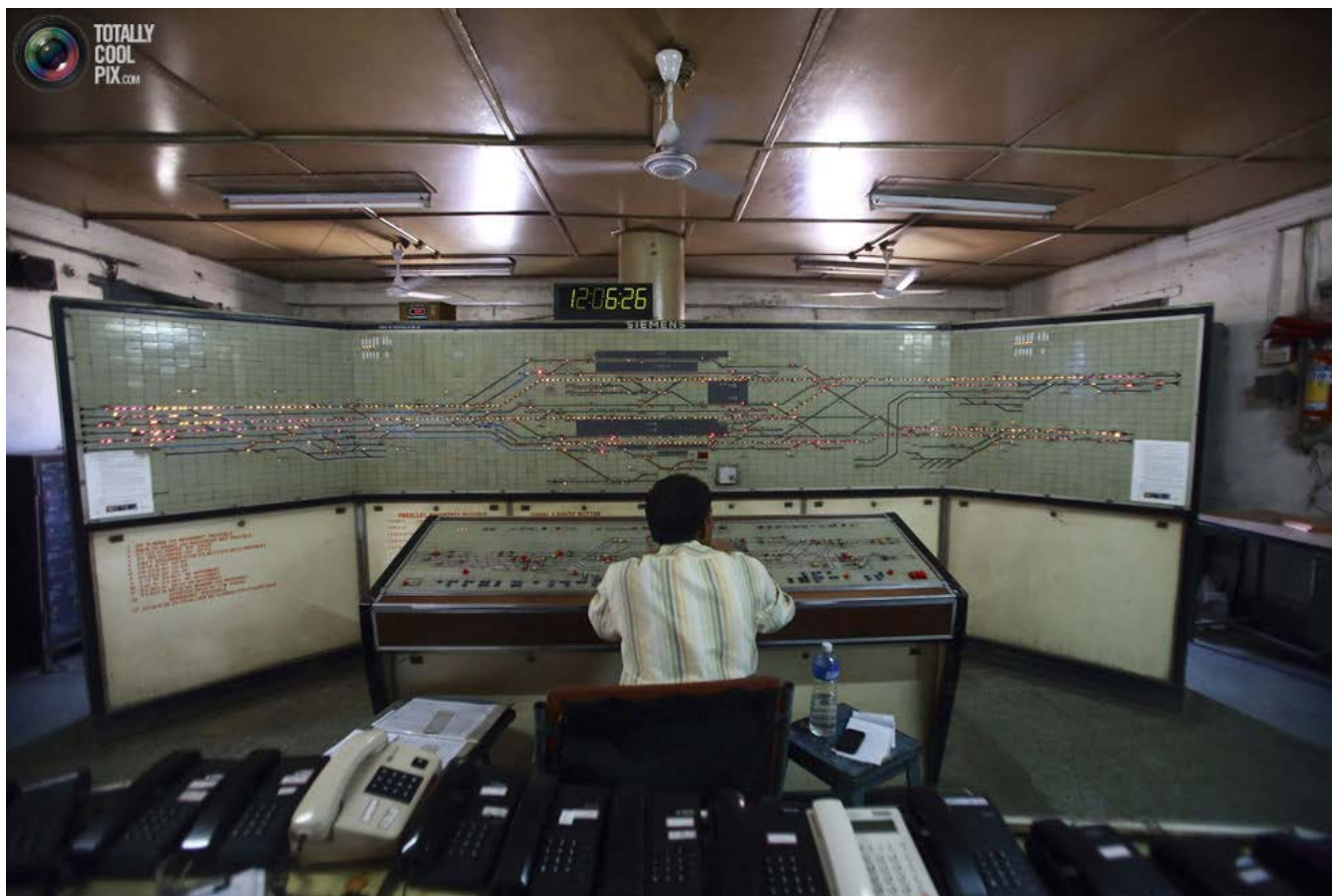




# The Railway Case



# Past



# Present

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Lisbon, 26-28 November 2014



# Threats



```
masscan — sh — 35x9
sh-3.2$ env x='()' { : }; echo vulne
rable' sh -c "echo this is a test"
vulnerable
this is a test
sh-3.2$
```





# The Railway Case

- Challenges
  - Public eye
    - Visibility – service levels, availability, corporate information
    - Presence in new media channels
  - Users
    - Increase demand for connectivity anywhere
    - Demand for social interaction
  - Technology
    - Adoption rate – Apps, Cloud, BYOD, WiFi, Mobility
    - Internet of Things – Sensors, smart devices
    - Network topology – change from closed to hybrid







# Challenges

## Social Media Landscape 2014







# Challenges





# Solutions

- The TCP/IP network as the enabler for:
  - Connecting systems and services
  - Decrease TCO
  - Mobility
  - Simplify the integration with Clients and Social demands





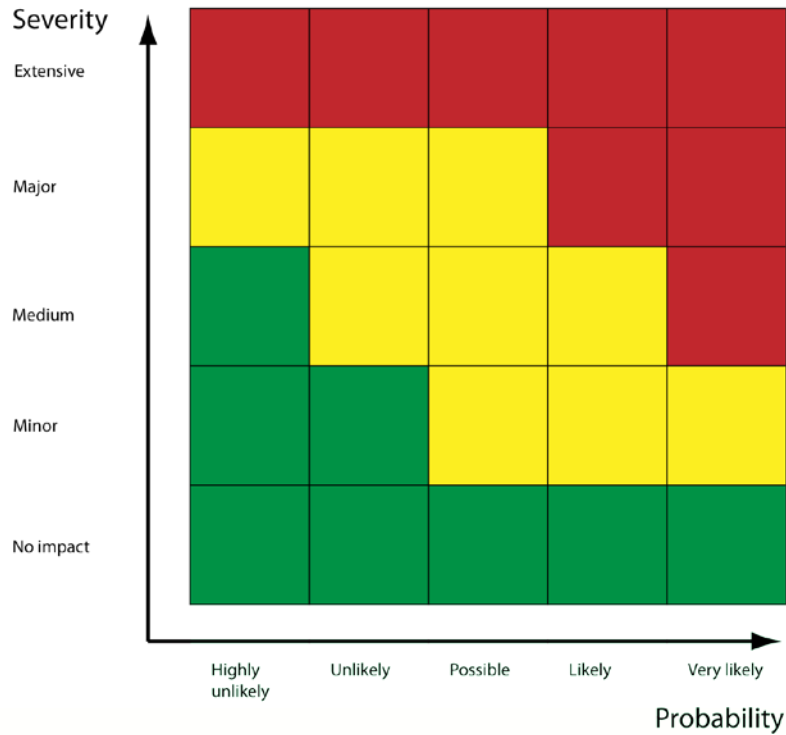
# Solutions

- Correct risk assessments
- Create a Cybersecurity Strategy
- Run your Drills – example CiberPerseu (Portugal)
- Know your CERT
- Smart analysis & correlation of events tools
- People

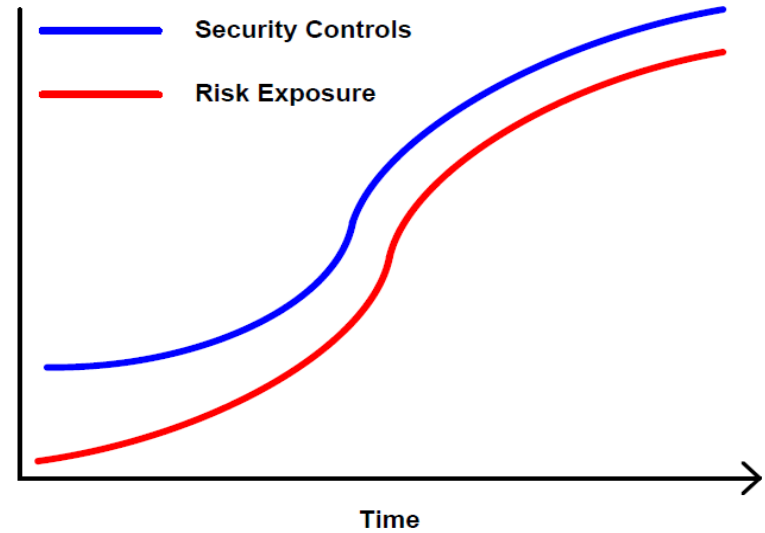




# Solutions



Categories  
 Not acceptable  
 ALARP  
 Acceptable



**Risk Matrix**

**Security control vs Risk**





# Conclusions

- Promote Mind change
- Know and Manage your security strategy
  - We can define what we understand
  - We can measure what we define
  - We can manage what we can measure





# Q&A

# Thank you

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