



**1st Transport Cybersecurity Conference
Lisbon, 23rd January 2019**

European Collaboration in the Field of Cybersecurity for Inland Navigation



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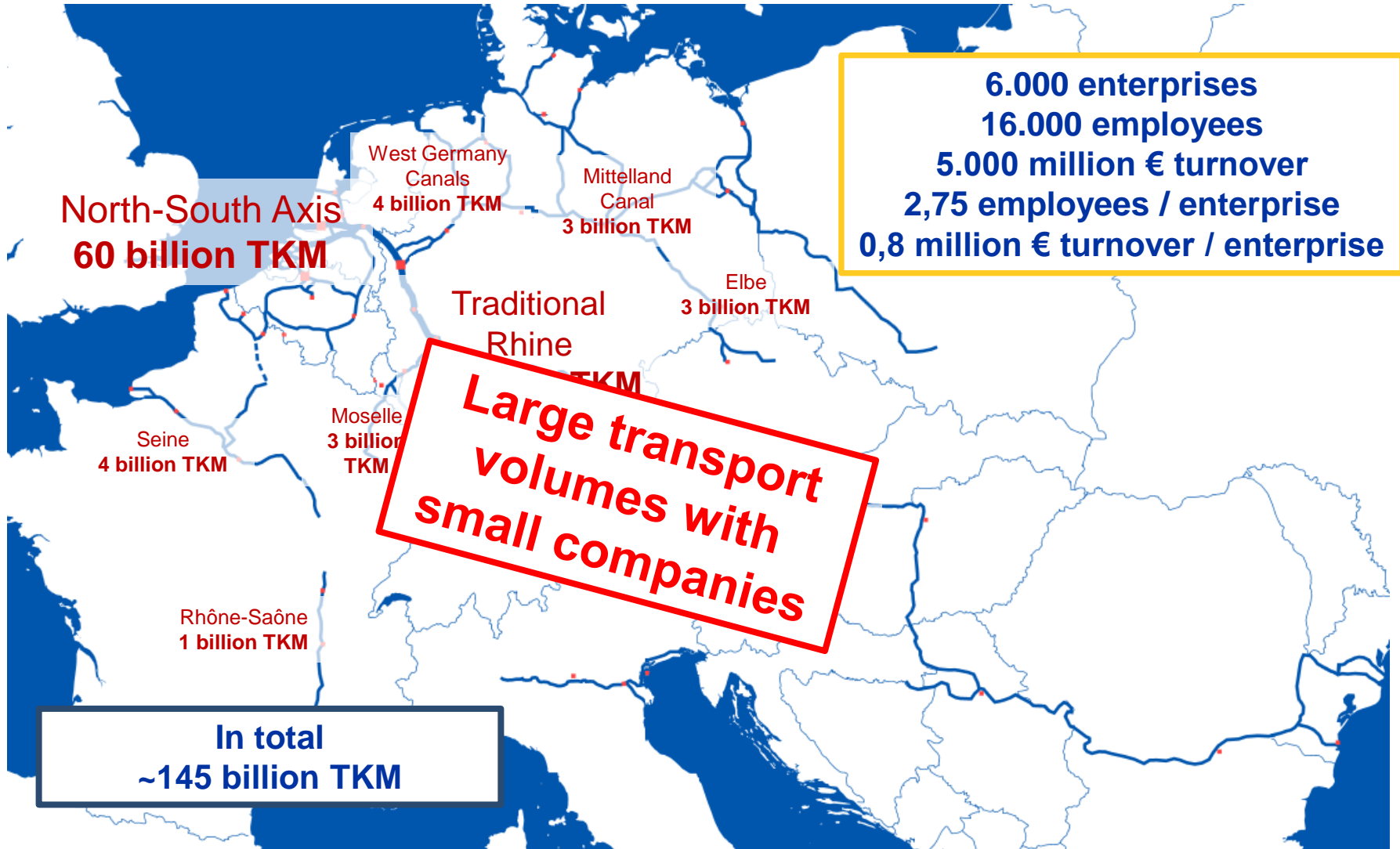


What to expect?

- | **Introduction to European inland navigation**
- | **Introduction to CCNR**
- | **Safety of inland navigation**
- | **Sustainability of inland navigation**
- | **ICT in inland navigation**
- | **European collaboration in inland navigation cybersecurity**
- | **Conclusion**

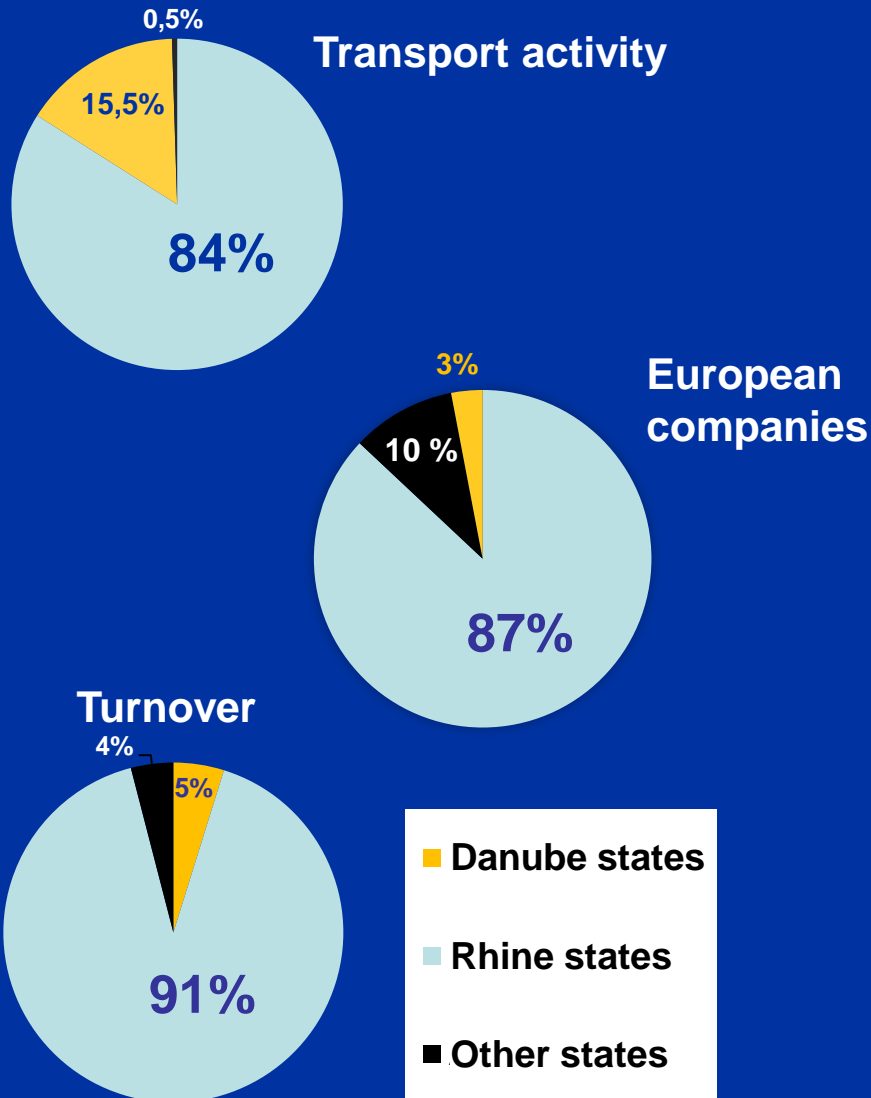


Freight transport in European inland navigation





Economic weight of the Rhine States in inland navigation



Source: CCNR based on Eurostat



CCNR



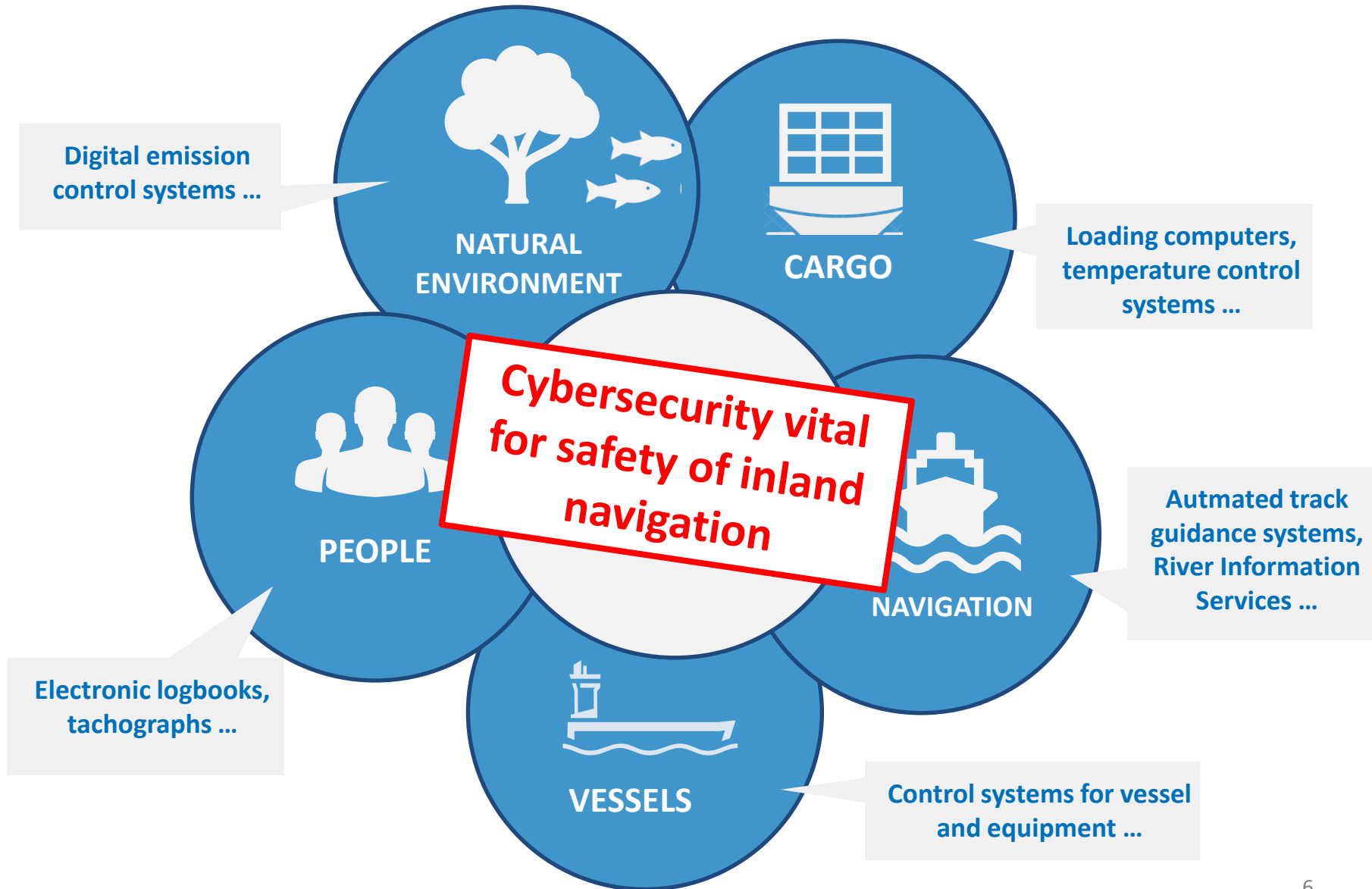
- Governs navigation on the Rhine
- Oldest international organisation (200 years)
- Based on Mannheim Convention (150 years)
- Guaranteeing free navigation and protection of the Rhine
- Promoting safety regulations for inland navigation
- Binding technical requirements for vessels, crew qualification, manning
- Rhine regulations blue print for others
- CCNR regulations complementary to or harmonized with EU regulations

CCNR exemplary safety regulations for inland navigation



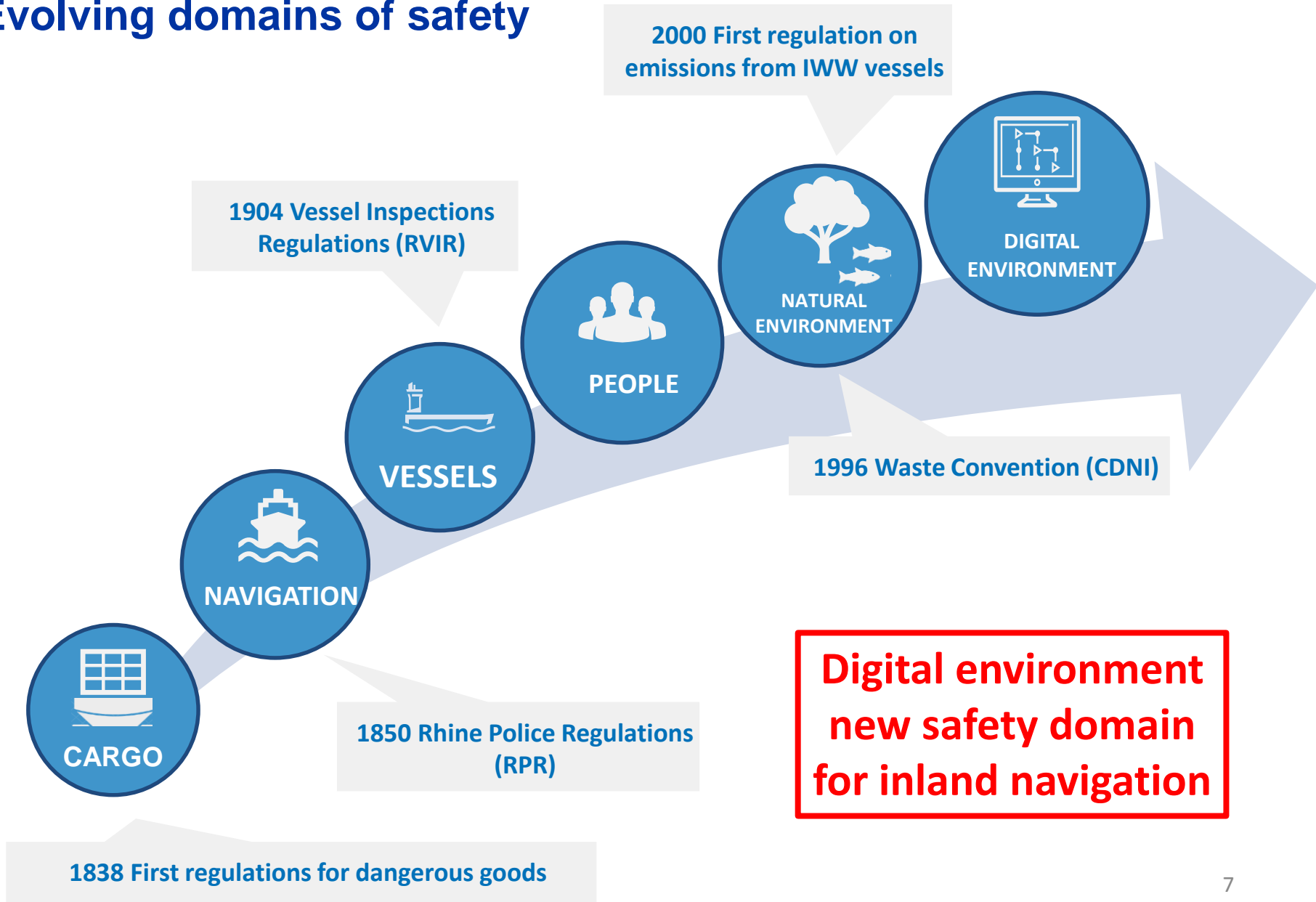


| ICT widely used to ensure safety





| Evolving domains of safety





A sustainable transport system is one that ...

... allows the basic access needs of individuals and societies to be met **safely** and in a manner consistent with human and ecosystem health, and with equity within and between generations;

... is affordable, operates efficiently, offers choice of transport

... limits emissions and waste within the planet's ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise!

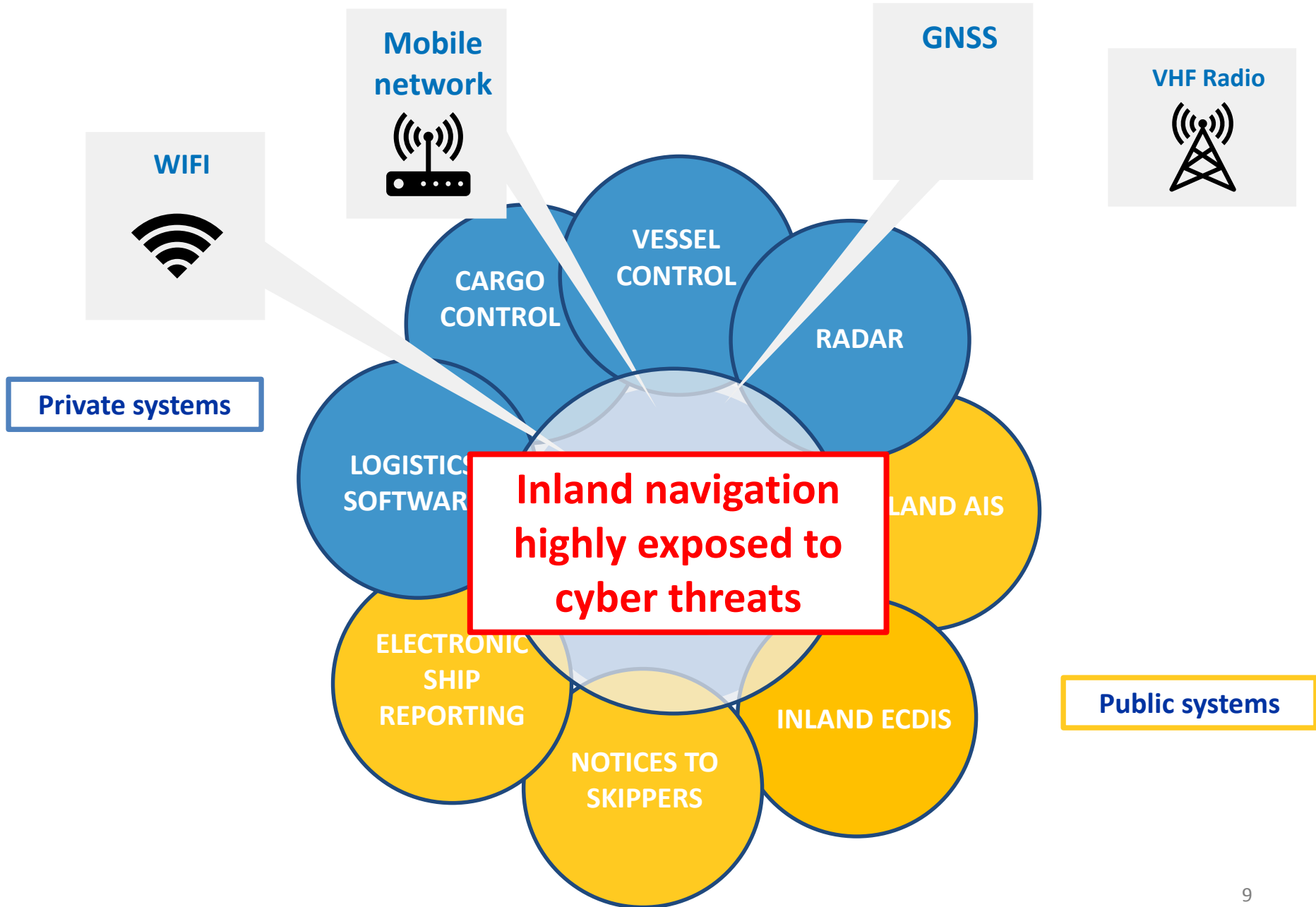
**Cybersecurity
important role for
sustainability of
inland navigation**

social

economical

ecological

Ministers of Transport of the EU (2001)





Perspectives for ICT in inland navigation



CCNR October 2018 Mannheim ministerial declaration

*“WE urge the CCNR to promote the further development of **digitisation, automation and other modern technologies**, thus contributing to the competitiveness, safety and sustainability of inland navigation.”*



Digital Inland Waterway Area (DINA)

*“This research has identified that **digitalisation** is critically important for IWA (management of traffic, digital hubs), reduction of the administrative burden (https://ec.europa.eu/studies/2017-10-dina.pdf)*

Inland navigation's exposure to cyber threats will increase



Climate vision communication

*“A more efficient organisation of the entire mobility system based on **digitalisation, data sharing** and interoperable standards is of utmost importance to make mobility cleaner.*

COM(2018) 773 final



European Collaboration - *Why?*

-  small sector with few resources on national level
-  typical small and medium enterprises
-  highly international (in Rhine-Alpine corridor 50% of all cross-border freight transport)
-  cross-border vessel traffic services (RIS)
-  governance with international organisations
-  regulation based on international legal instruments

European Collaboration - *How?*

Complement, not duplicate other activities and efforts

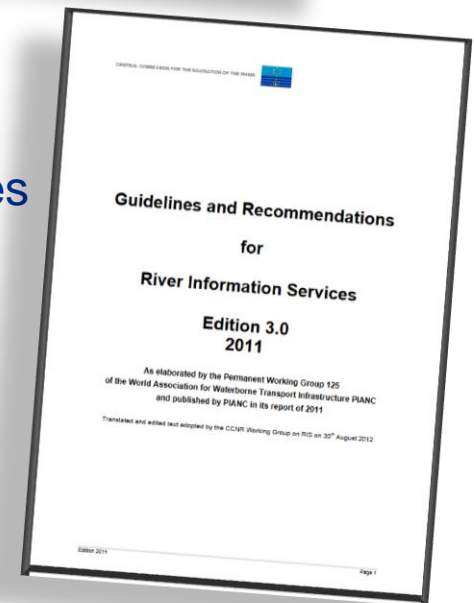
Learn from other modes of transport and from other safety domains

Be practical and strategic



European Collaboration - *What?*

- Raise awareness – f. e. PIANC TG 204 Report
- Explore preparedness – Ask national administrations
- Stimulate stakeholder exchange
→ Workshop 5 September 2019 in Bonn
- Develop and implement practical non-regret measures –
f. e. guideline documents for administrations and enterprises
- Analyse entire sector –
f. e. gap analysis of regulations and standards
- Strategize – based on the measures above



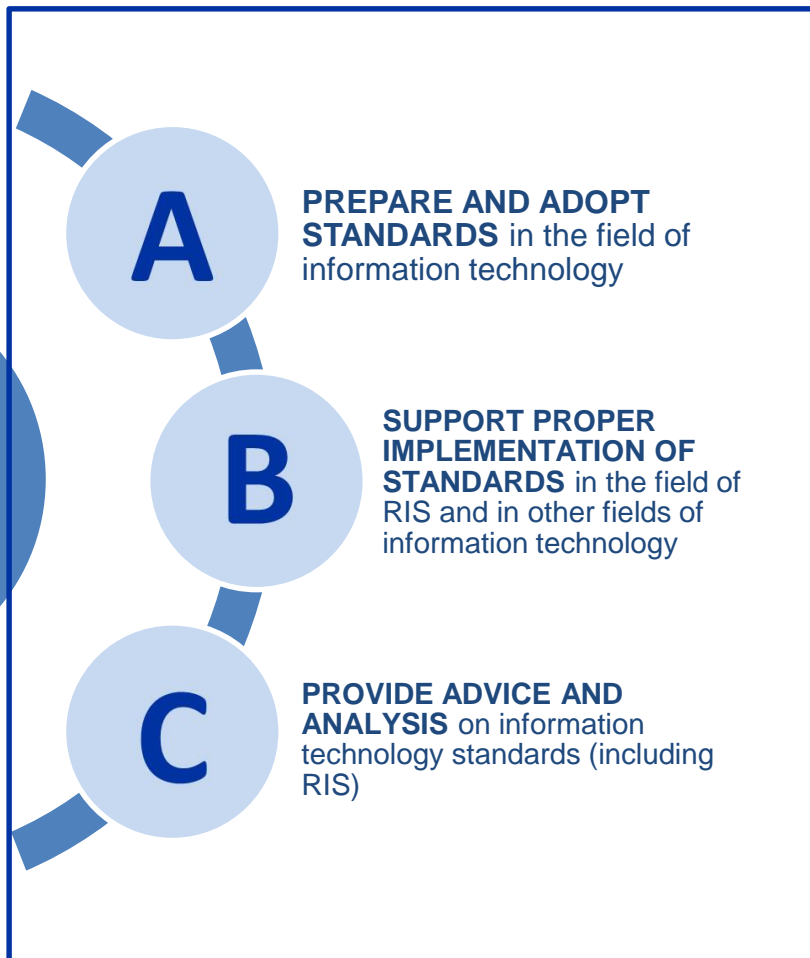


European Collaboration - *Where?*



**European
Committee for
drawing up
standards in the
field of inland
navigation**

**Strategic
guidelines for
information
technology
2019-2021**





Key findings

- Cybersecurity increasing importance for safety and sustainability of inland navigation
- Inland navigation faced with significant and growing exposure to cyber threats
- Particularities of inland navigation (large volumes, small enterprises, cross border) requires tailored approach to cybersecurity

Key objectives

- Support European collaboration to mitigate cyber risks for inland navigation
- Develop regulatory and administrative framework to keep inland navigation running when major ICT systems are compromised

An aerial photograph of a wide river curving through a valley. On the left bank, a town with several buildings and a marina is visible. On the right bank, a larger town with white buildings and a road is situated. A large white and green ferry boat is moving through the river, leaving a white wake. Other smaller boats are visible in the distance. The background shows rolling green hills under a clear sky.

Thanks for your attention!

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