

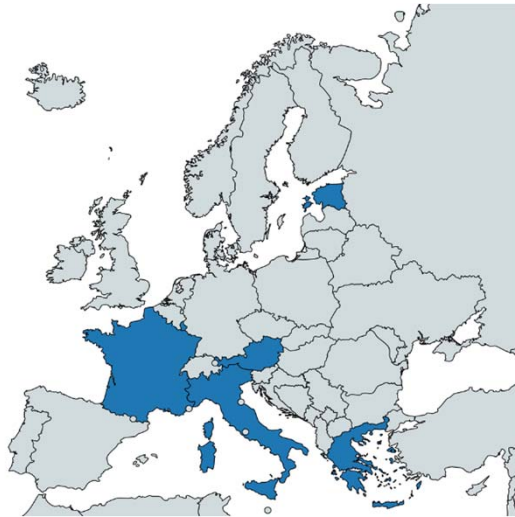


# CitySCAPE General Presentation

Thierry Henault  
CS GROUP

ITxPT Cybersec WG  
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# Project at a Glance



- **Call identifier:** H2020-SU-DS-2019
- **Topic:** SU-DS05-2018-2019 - Digital security, privacy, data protection and accountability in critical sectors
- **EC Funding:** 6 293 011,25 € 
- **Duration:** 36 months
- **Consortium:** 15 partners
- **Coordinator:** Institute of Communication and Computer Systems (ICSS), Greece – Dr. Angelos Amditis (a.amditis@iccs.gr)
- **Learn more:** [www.cityscape-project.eu](http://www.cityscape-project.eu)
- **Join us:**  @EUCityscape  CitySCAPE Project



# Cybersecurity and multimodal transport: The Challenges



- Realization of truly interconnected transport systems
- Need for globally cyber-secure systems
- The mosaic of ICT services integrated over interconnected infrastructures makes it increasingly vulnerable to cyber-attacks
- Personal hand-held devices of users increase the system's attack surface
- Transport services relate to other NIS Directive areas that scale-up relevant cybersecurity and security-assurance challenges.
- Authorities' collaboration is needed

# CitySCAPE Objectives



- **Enhance** cybersecurity technologies in the multimodal passenger transportation ecosystem at city-level addressing users and data privacy concerns
- **Introduce** risk analysis tools to identify threats and their propagation mechanism focusing on transport/ digital infrastructure but also relevant in other NIS Directive critical sectors and assess the impact of a potential attack
- **Improve** the proactive approach of handling cybersecurity challenges and actively contribute to the predictability of threats in (regional) multimodal transport systems
- **Enhance** end-user engagement towards the definition and provision of multimodal passenger transport requirements about digital security, privacy and personal data protection

# CitySCAPE Objectives



- Further **strengthen** the role of CERTs/CSIRTs by providing them with direct/real-time informative notifications about observed cybersecurity incidents and facilitate the collaborative investigation of incidents in line with the NIS Directive
- Significantly **contribute** to multimodal transport standards and gain experimental evidence on the feasibility of security labelling in city-level multimodal transport
- **Showcase** and **validate** the CitySCAPE solution efficiency in large scale pilot demonstrators involving all relevant entities and digital infrastructure of transport providers, under use cases of interest
- **Analyze** and **outreach** the multimodal transport security market to maximize the CitySCAPE footprint and exploitation.

# CitySCAPE Solution



CitySCAPE introduces innovative risk analysis techniques and orchestrates a number of software solutions to realize an interoperable toolkit that seamlessly integrates to any multimodal transport system.

More specifically, the CitySCAPE software toolkit will:

- Detect suspicious traffic-data values and identify persistent threats
- Evaluate an attack's impact in both technical and financial terms
- Combine external knowledge and internally-observed activities to enhance the predictability of zero-day attacks
- Instantiate a networked overlay to circulate informative notifications to CERT/CSIRT authorities and support their interplay.

# CitySCAPE Solution



# Impact



## CitySCAPE

- ✓ will offer the **concrete technical basis** for a unique opportunity of an efficient collaborative threat investigation among a broad set of CERTs/CSIRTs by introducing **a platform capable of sharing information coming from different sources** and therefore achieve the maximization of the CSIRT network added value
- ✓ will allow **an accurate identification of so-far under-explored/hidden privacy risks** serving the in-depth application of privacy-by-default principle and GDPR regulation in all city-level transportation stakeholders
- ✓ will **introduce and validate an agile concept of a standalone interoperable solution** to manage current cybersecurity/privacy risks across complex interconnected infrastructures
- ✓ will **estimate the attack impact on both technology and financial terms** that will drive a cost-benefit analysis on potential further investments to cybersecurity and privacy countermeasures
- ✓ will provide a scheme for **cybersecurity labelling** for City-level multimodal travel



# Impact



## CitySCAPE

- ✓ will address related security issues of mobile devices, **increasing passengers' safety** in city-level transport
- ✓ will **identify and track the potential path of a cyber-attack** across the whole multimodal transport chain showcasing how an attack may unexpectedly affect modules that are not directly connected to its entry point
- ✓ will immediately **strengthen the CERTs/CSIRTs link to the transportation stakeholders**
- ✓ will **promote best practices in cybersecurity management solutions** to the multimodal transport community and through **training of security experts** will seek to communicate their value and thus, increase their acceptance
- ✓ will **fill the gap in security labelling** showcasing the solid basis of a mature EU market and rendering the compliance to standards a clear path for commercial growth

**Standardisation  
and security in  
multi-modal**

**Thierry Hénault**

Project Manager

**CS GROUP**

**Aix-en-Provence France**

# Toulouse

# 2022

29-04-19

@ERTICO | ERTICO.COM

# Multi Modal transport systems vs Cybersecurity



- ITS sector evolution, revolution
  - Societal
  - Technical
    - Accessibility
    - New modes
    - MaaS
  - Regulation
- CyberSecurity
  - **From** „Niche domain“ for experts
  - **To** Mainstream domain

# 2 worlds of Standardisation



- **ITS**

- CEN

- Transmodel
    - SIRI
    - NeTEx
    - ...

- Private efforts

- Mobility Data Suite
      - GTFS
      - GTFS/RT
      - GBFS

- **Cybersecurity**

- ISO Efforts

- ISO 27000 serie
    - Common Criteria

- European Effort

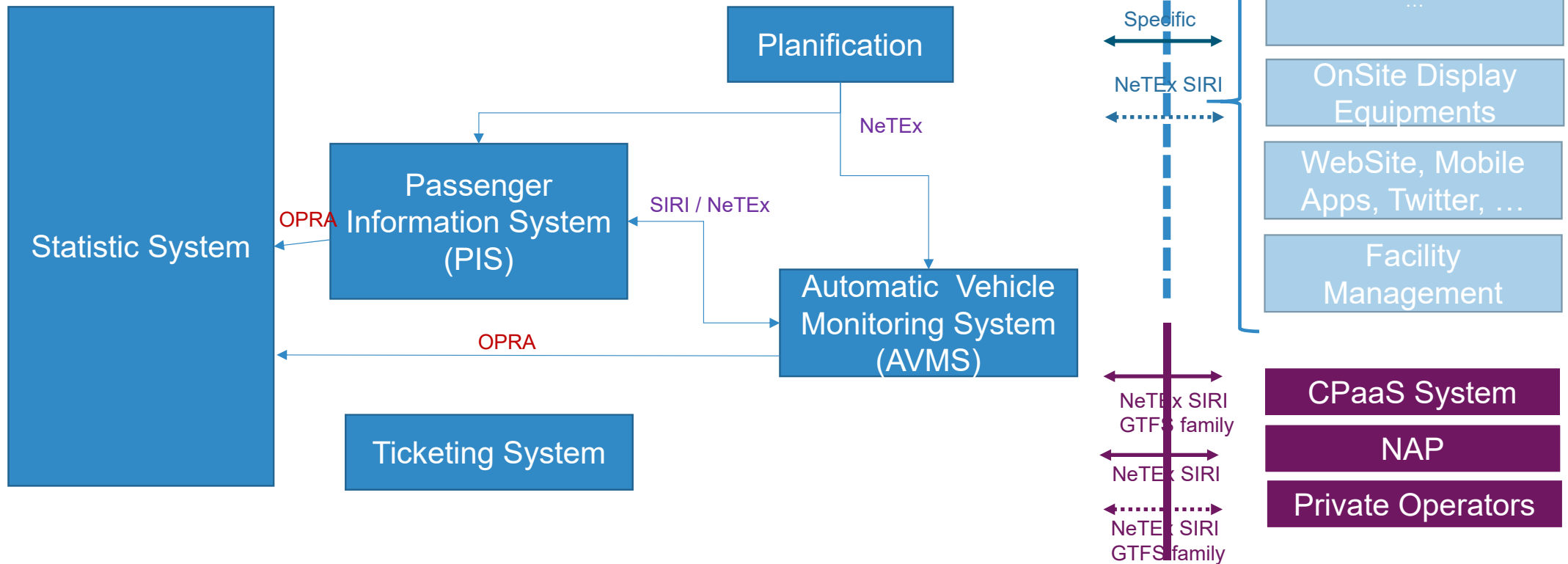
- ENISA

- EUCS

- National Efforts

# Multi modal Transport Systems (MTPS) specificities

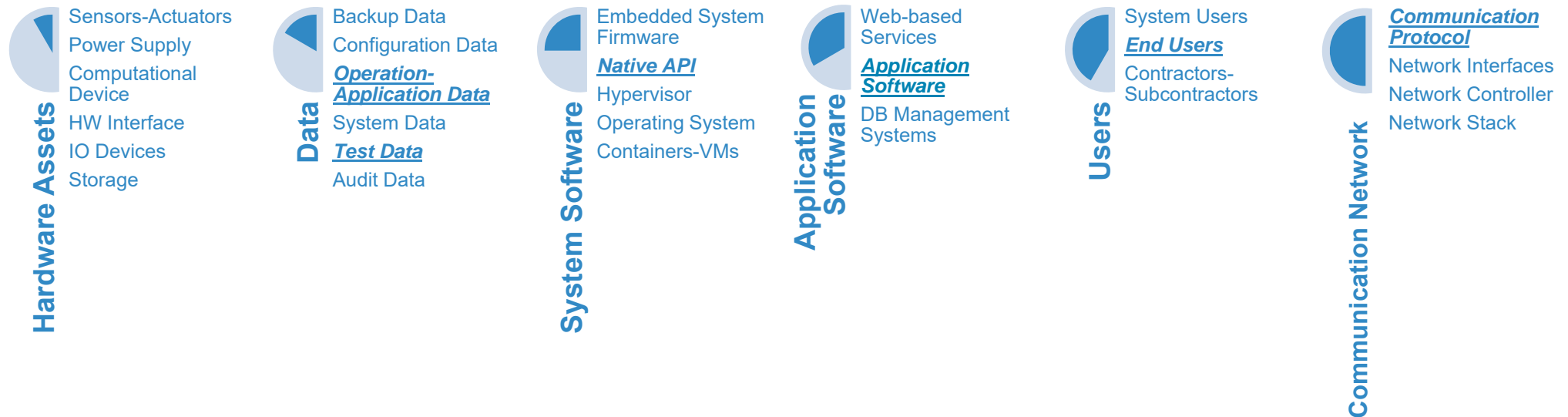
- Multiples types of interfaces



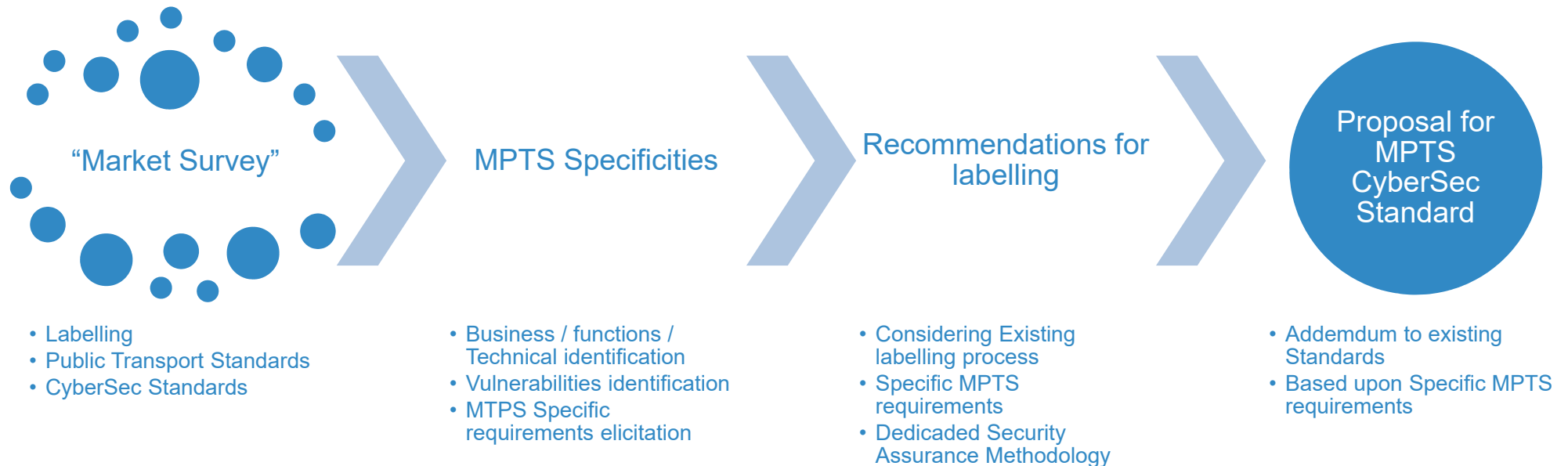
# Multi modal Transport Systems specificities Assets



- MPTS system specificities analysis on a Cybersecurity perspective



# Multi modal Transport Systems specificities Cybersecurity Analysis







Smart and  
Sustainable  
Mobility  
for all.

its

EUROPEAN  
CONGRESS  
TOULOUSE  
30 May - 1 June 2022



Thank you!



Any questions?

Thank you!



Thierry Hénault – CS GROUP



[thierry.henault@csgroup.eu](mailto:thierry.henault@csgroup.eu)



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