



CitySCAPE: City-level Cyber-Secure Multimodal Transport Ecosystem

Jason Sioutis, ICCS

Cybersecurity Webinar,
19/01/2023

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:** 4.998.057,88 € 
- **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
- **Join us:**  @EUCityscape  CitySCAPE Project



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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

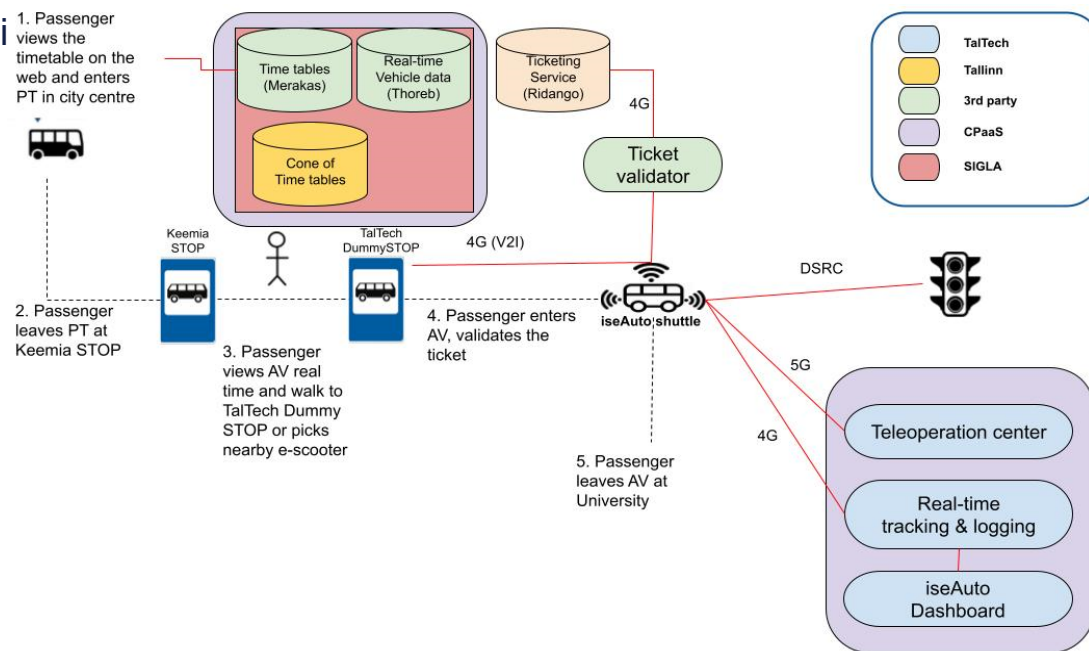


Use Cases-Tallinn



- Last-mile extension/Mobility-as-a-Service (MaaS)
 - Journey Planning
 - Ticket Validation
 - Real-Time Information
 - Last-Mile Extension Transitioning

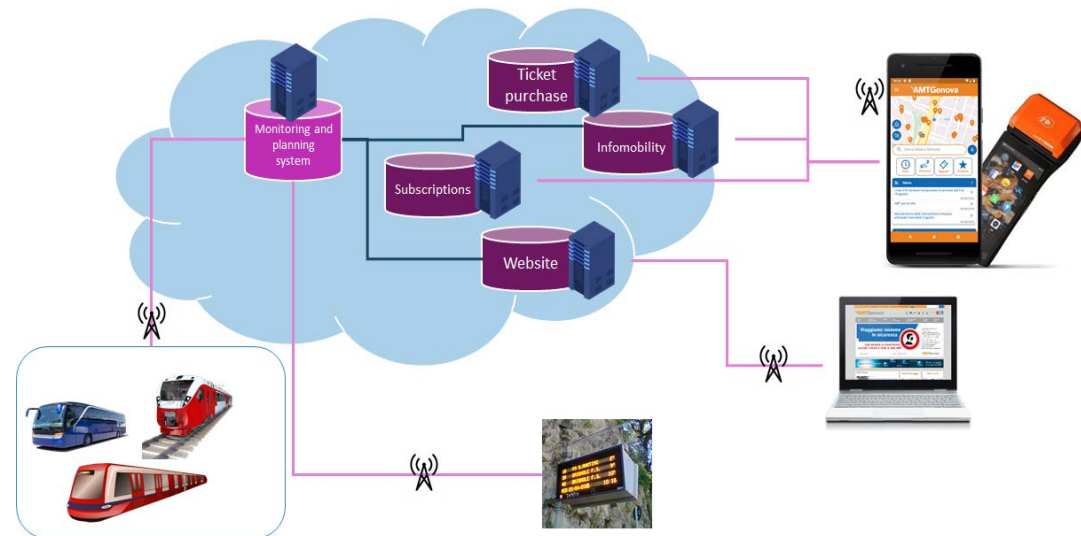
- Adaptive Traffic Management
 - Intersection Pass-through
 - Intersection Stop



Use Cases-Genova



- Info mobility
 - Waiting time at the stop
 - Service schedule
 - Waiting time to the next train
 - Metro station
 - Notifications to passengers on service update
- Ticketing
 - Ticket from the mobile app
 - CityPass subscription dematerialization
 - Using urban train with CityPass subscription



Any questions?

Thank you!



Iason Sioutis, MSc, MBA

ICCS

 iasonas.sioutis@iccs.gr



This project has received funding from the EU's Research and Innovation programme Horizon 2020 under grant agreement No 883321. Content reflects only the authors' view and European Commission is not responsible for any use that may be made of the information it contains.