



UNIVERSITÀ  
DEGLI STUDI  
FIRENZE

**DINFO**  
DIPARTIMENTO DI  
INGEGNERIA  
DELL'INFORMAZIONE

**DISIT**  
DISTRIBUTED SYSTEMS AND  
INTERNET TECHNOLOGIES LAB  
DISTRIBUTED DATA INTELLIGENCE  
AND TECHNOLOGIES LAB



[www.km4city.org](http://www.km4city.org)

<https://www.disit.org/>

<https://www.snap4city.org>

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# *Digital Twin for Sustainable Decision Supports & Business Intelligence*



**SMARTCITY**  
EXPO WORLD CONGRESS

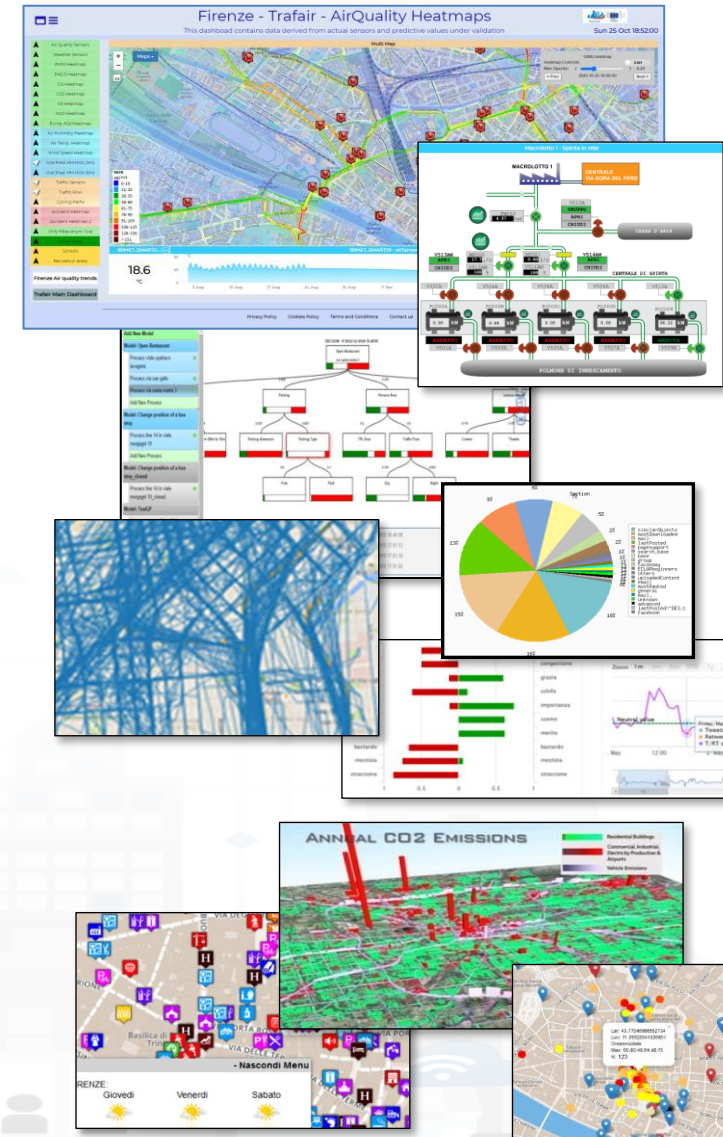
7-9 November 2023, Barcelona, Spain

Visit Snap4City in Hall 1

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# Competence

- **artificial intelligence** (generative AI, deep learning, Bert, continuous learning, etc.), Explainable AI, neuro-symbolic AI, big data, knowledge engineering, security and privacy, GDPR, Digital Twins, What-if analysis, decision support, expert systems, digital twins, NLP, LLM, etc.
  - <https://scholar.google.com/citations?user=c2S3Ni0AAAAJ&hl=en>
  - **H-index = 40**
- **Domains of:**
  - mobility and transport, energy, environmental, Tourism, Control Rooms, security/safety, etc.
- **solutions** for predictions, traffic flow reconstruction and predictions, parking/bike predictions, landslide predictions, user behavior analysis, pollutant flow predictions, recommendation, matchmaking, decision support, 15Min Indexing for cities, community of energy, 3D local and global city reconstruction, people flow, engagement, decision making systems, expert systems, predictive maintenance, early warning, anomaly detections, etc.



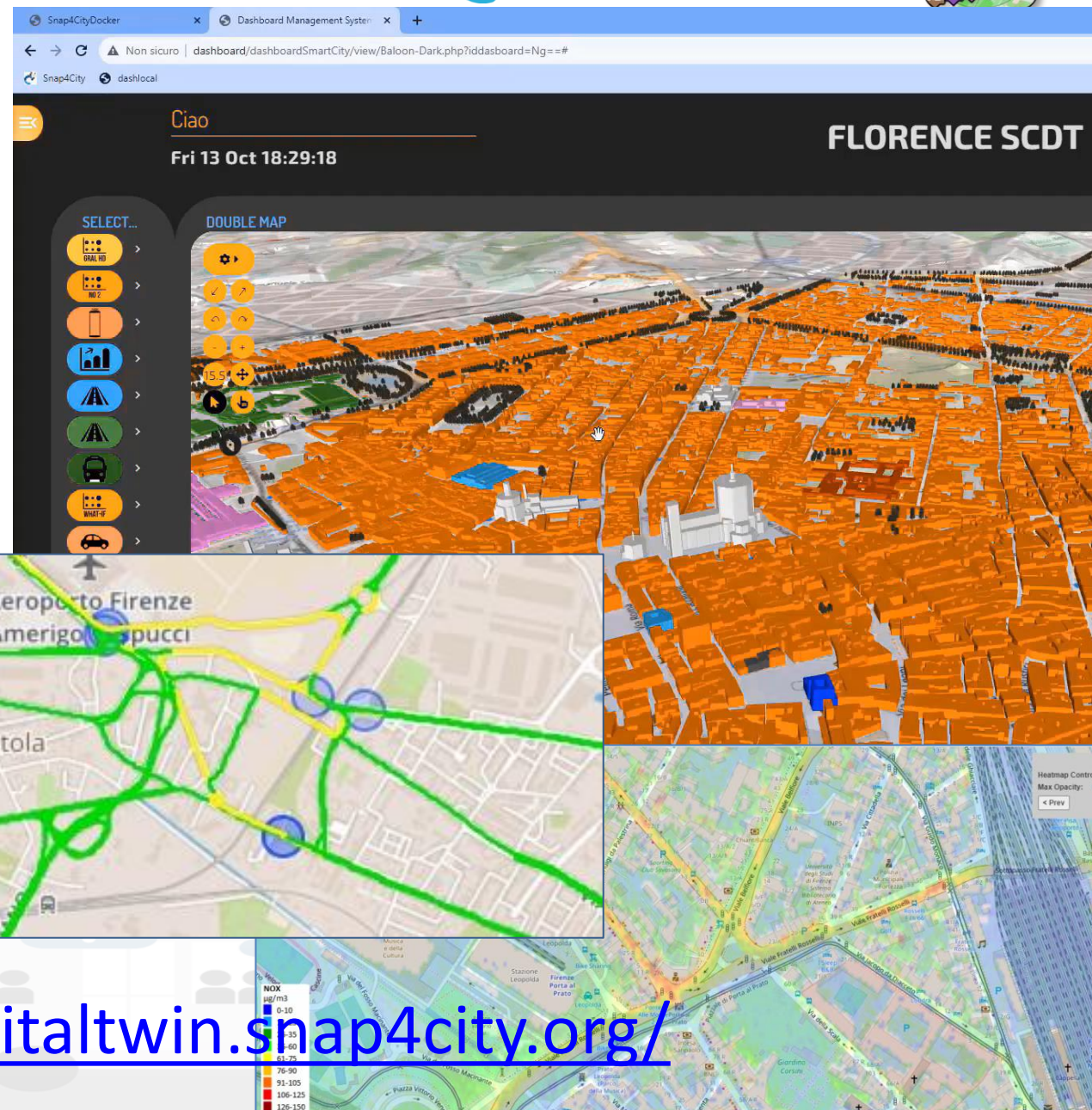


# Digital Twin

- Intuitive platform
- Any Data TYPE, any data source, any protocol
- Data storage seamless
- Data analytics → artificial intelligence, AI/XAI
- Data Ethics, AI Ethics, GDPR
- Data Representation
- Key performance Indicators
- What-IF analysis – Simulation, prediction, 2D/3D
- Operation, planning tactic and strategic
- Collaborative and shared representation
- Sustainable, shared, open source 100%

## Complex and heterogeneous information, interoperability

- GIS, ITS, AVM, IoT, BIM, CKAN, etc.
- Satellite services
- MaaS, lastmile delivery HUBs
- etc.

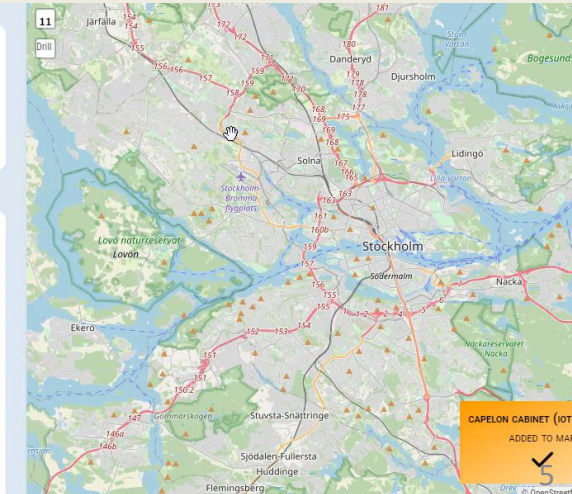
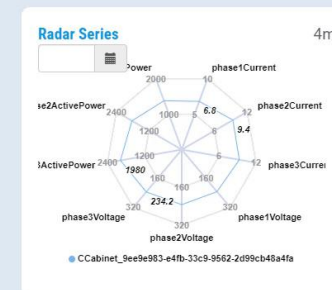
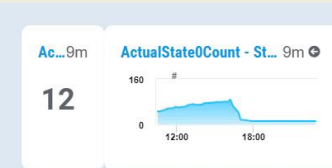
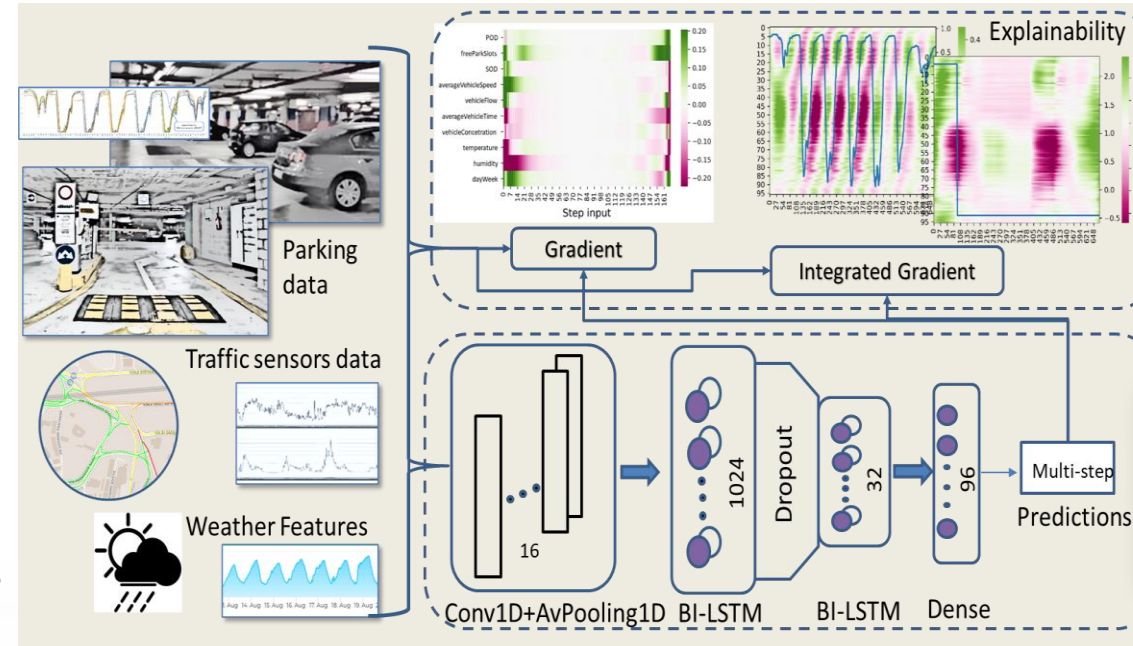






# Recent Track Record <https://www.snap4city.org/135>

- **Ammirare:** AI for costal erosion and changes
- **Tourismo:** AI for tourism management and control
- **CN Most:** AI for mobility and transport
- **ISPRA JRC:** Site Management Operation, energy, parking, people
- **Smart Light/Energy** management: Merano, CER, etc.
- **Herit-Data:** AI Digital Twin for Tourism management
- **PC4City:** Land Slide Predictions
- **REPLICATE:** Control Room, and mobility and transport
- **RESOLUTE:** Resilience of Transport Systems



# Interested Calls

- **CLUSTER 3 - CIVIL SECURITY FOR SOCIETY**
  - Disaster-Resilient Society 2023 (HORIZON-CL3-2023-DRS-01)
  - Increased cybersecurity 2023 (HORIZON-CL3-2023-CS-01)
- **CLUSTER 4 - DIGITAL, INDUSTRY AND SPACE**
  - Twin Green and Digital Transition 2024 (HORIZON-CL4-2024-TWIN-TRANSITION-01)
- **CLUSTER 5 - CLIMATE, ENERGY AND MOBILITY**
  - Safe, Resilient Transport and Smart Mobility services for passengers and goods (HORIZON-CL5-2024-D6)
  - Cross-sectoral solutions for the climate transition (HORIZON-CL5-2024-D2)
  - Efficient, sustainable and inclusive energy use (HORIZON-CL5-2024-D4)
  - Sustainable, secure and competitive energy supply (HORIZON-CL5-2024-D3)
  - other Mobility, Climate and Energy related topics
- **CLUSTER 2 - CULTURE, CREATIVITY AND INCLUSIVE SOCIETY**
  - Research and innovation on cultural heritage and CCIs (HORIZON-CL2-2024-HERITAGE-01)
  - A sustainable future for Europe (HORIZON-CL2-2024-TRANSFORMATIONS-01)



# 2023 booklets



- Smart City



[https://www.snap4city.org/download/video/DPL\\_SNAP4CITY.pdf](https://www.snap4city.org/download/video/DPL_SNAP4CITY.pdf)

- Industry



[https://www.snap4city.org/download/video/DPL\\_SNAP4INDUSTRY.pdf](https://www.snap4city.org/download/video/DPL_SNAP4INDUSTRY.pdf)

- Artificial Intelligence



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