

ARTES ISAAC
Life Sciences & Healthcare Tech

Multimodal data aggregation and management

Paolo Nesi

DISIT Lab chair, DINFO dept., University of Florence

<https://www.disit.org>, <https://www.snap4city.org>, paolo.nesi@unifi.it

Cell: +39-335-5668674



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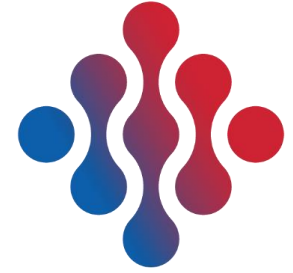
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SNAP4CITY





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Snap4City is a Collaborative No-Coding Platform to build Smart Applications (IoT devices)



Powered by
FIWARE

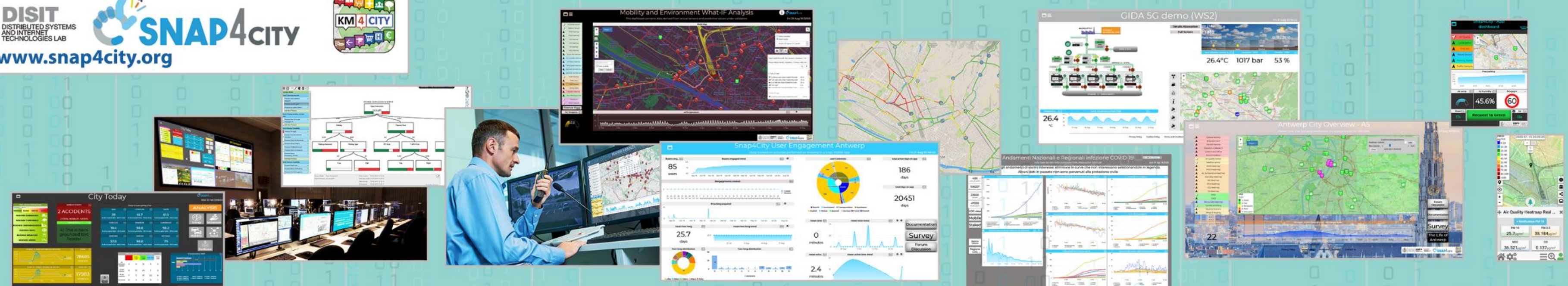
SNAP4
Appliances and Dockers
Installations

FREE TRIAL

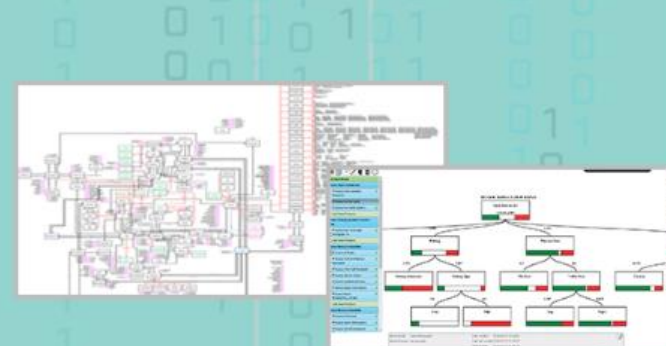
PEN Test Passed

EU GDPR COMPLIANT

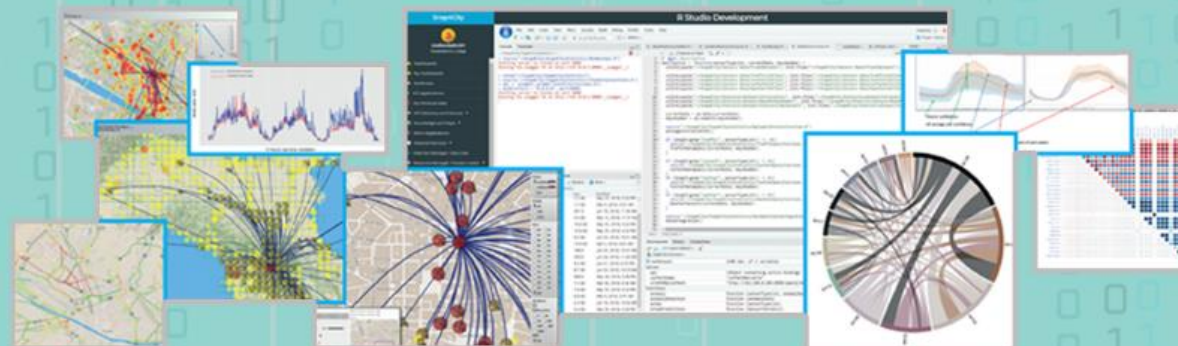
100% OPEN SOURCE



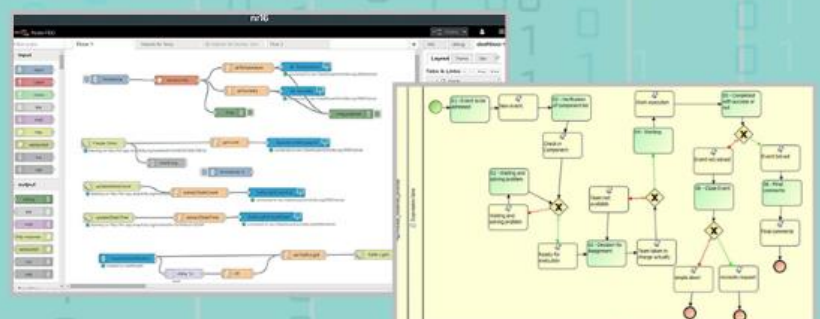
DASHBOARDS AND APPS - CONTROL ROOMS - DECISION SUPPORT SYSTEMS - WHAT-IF ANALYSIS



**EXPERT SYSTEM
KNOWLEDGE BASE
STORAGE**



**BIG DATA ANALYTICS
ARTIFICIAL INTELLIGENCE
BUSINESS INTELLIGENCE
MACHINE LEARNING**

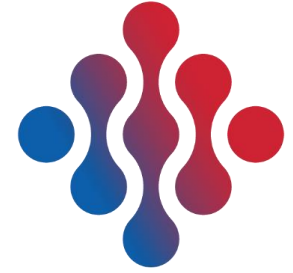


**DATA FLOWS, WORKFLOWS
MICROSERVICES
MANAGEMENT**



**METHODOLOGIES
COURSES AND COMMUNITY
LIVING LABS
DEVELOPMENT TOOLS**

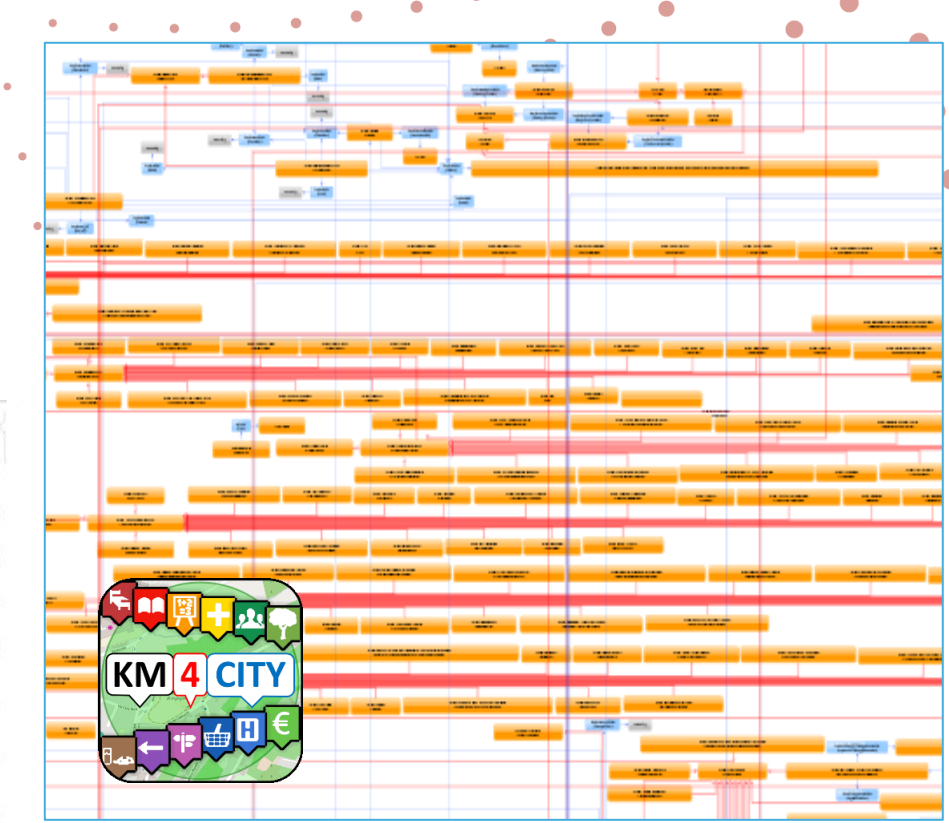
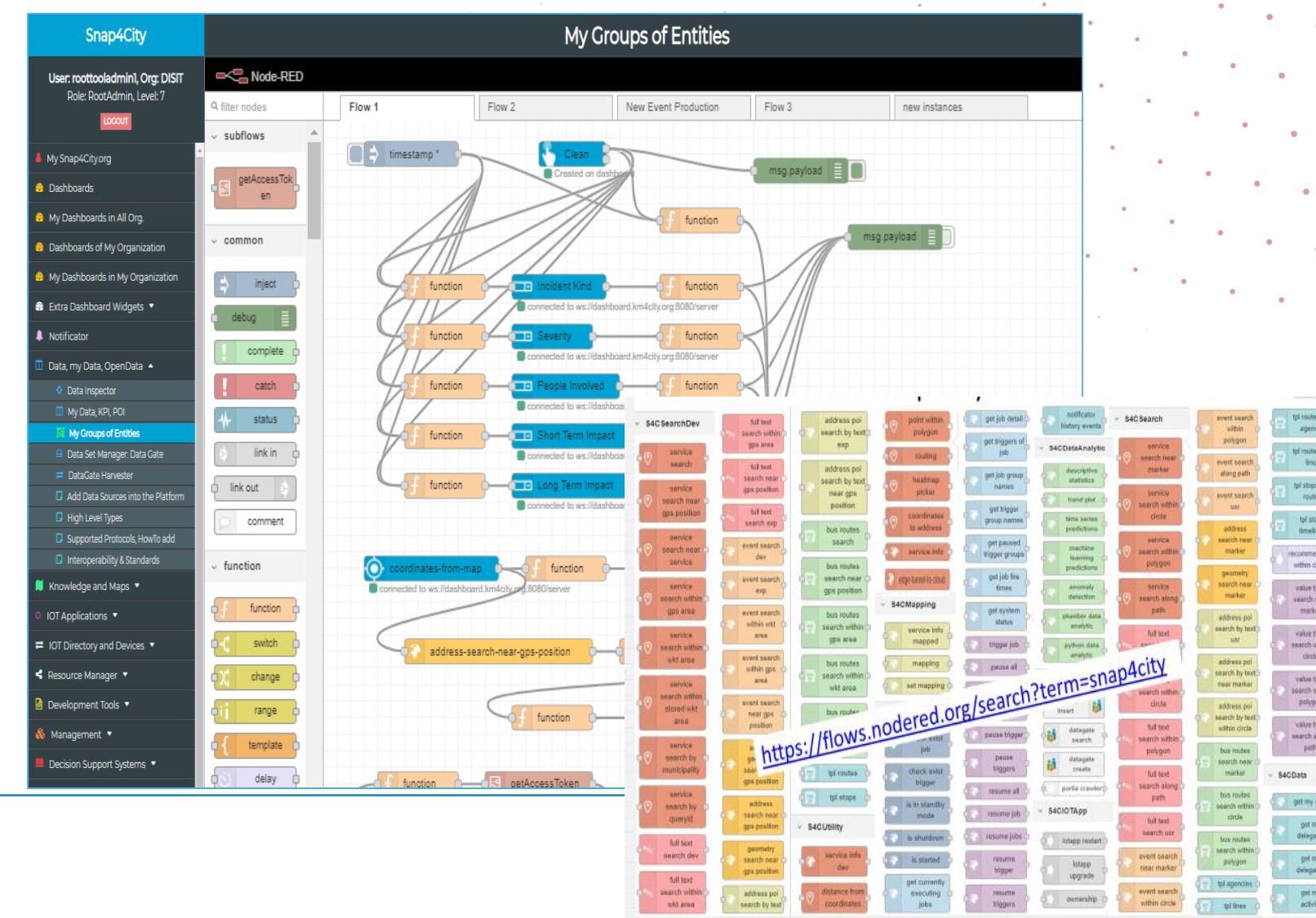
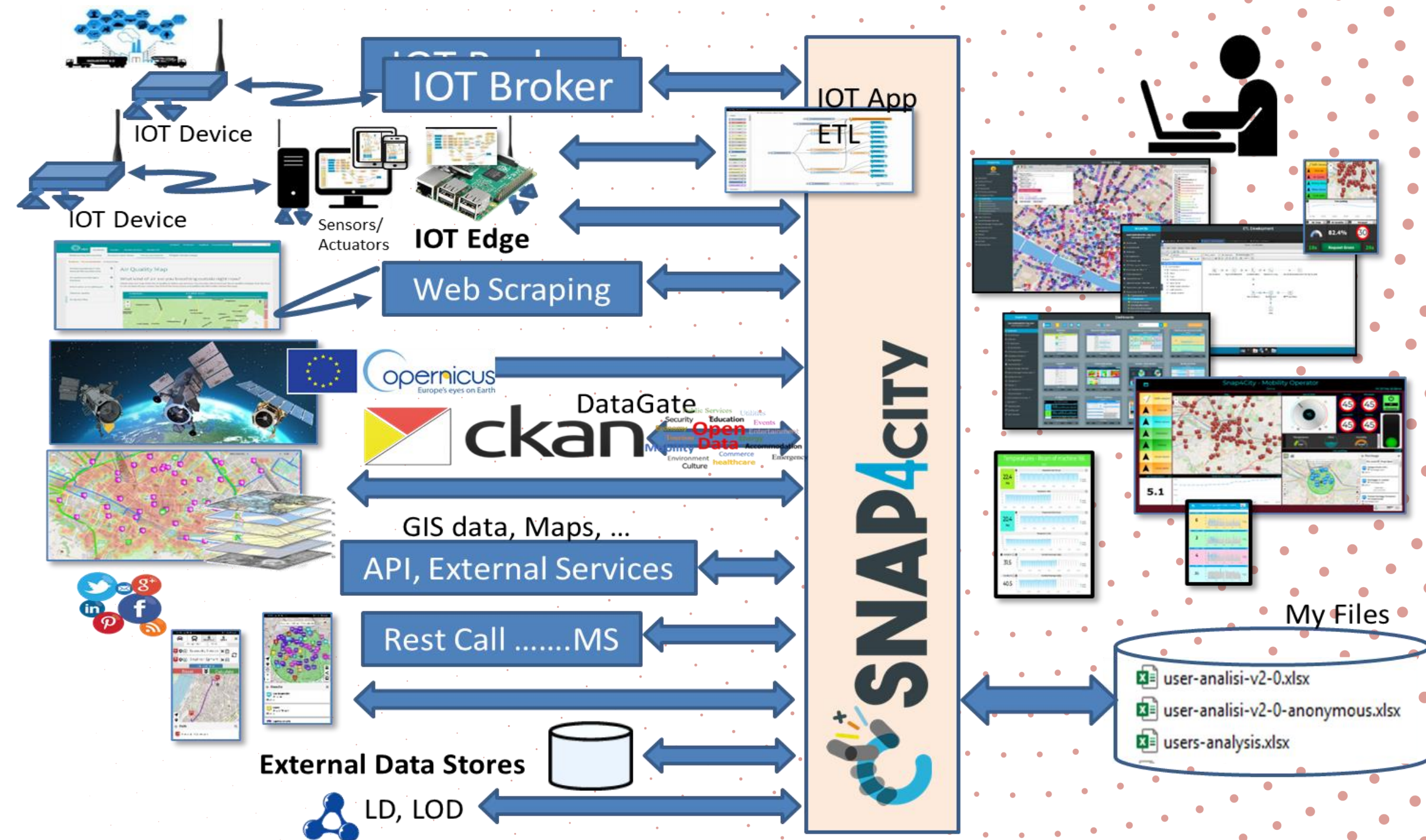




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Snap4City: Platform Purpose

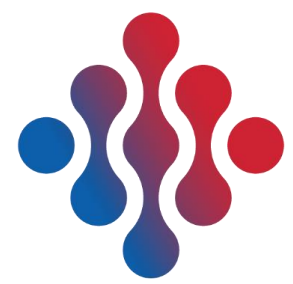
- ▶ **interoperability** processes, data communication protocols, standards,
 - ▶ Data aggregation, transformation and integration
 - ▶ **Snap4City Library on Node-RED**
 - ▶ More than 100 protocols and any formats
- ▶ **access control:**
 - ▶ **Snap4City:** GDPR Compliant, PENTest passed
- ▶ **semantic normalization:**
 - ▶ **Km4City ontology:** Knowledge Base, expert system
 - ▶ Based on Virtuoso
- ▶ **data management and analysis:** multi-modal big data, data analytics and AI-based algorithms
 - ▶ **DataDriven/Stream, RT:** Node-RED, broker based, WebSocket, End-to-end secure, FIWARE Platform
 - ▶ **Big Data storage:** Elastic Search, Kibana
 - ▶ **Data Analytics:** Rstudio, Python, Keras, TensorFlow,
 - ▶ **Visual Analytics/Dashboards:** **Snap4City**
 - ▶ **Business Intelligence:** **Snap4City**



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Health Domain: *Snap4City* is a Collaborative No-Coding Platform to build Smart Applications

▶ Smart Bed (LAID project)

- ▶ Monitoring sleeping conditions
- ▶ Personal beds & beds managed by the hospital

▶ Smart Ambulance:

- ▶ Collecting and managing local data

▶ Personal health devices (Snap4City):

- ▶ for example: glucometers

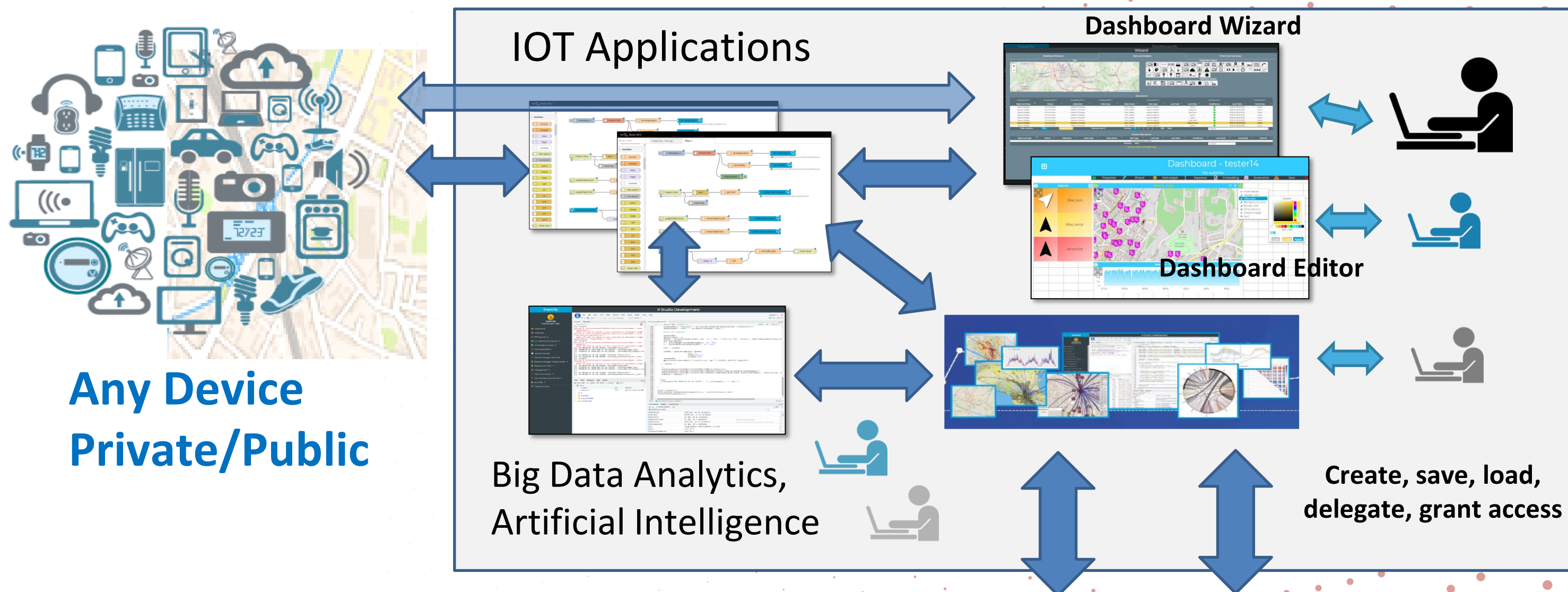
▶ Contextual data

- ▶ COVID-19
- ▶ Environment, user behaviour, etc.

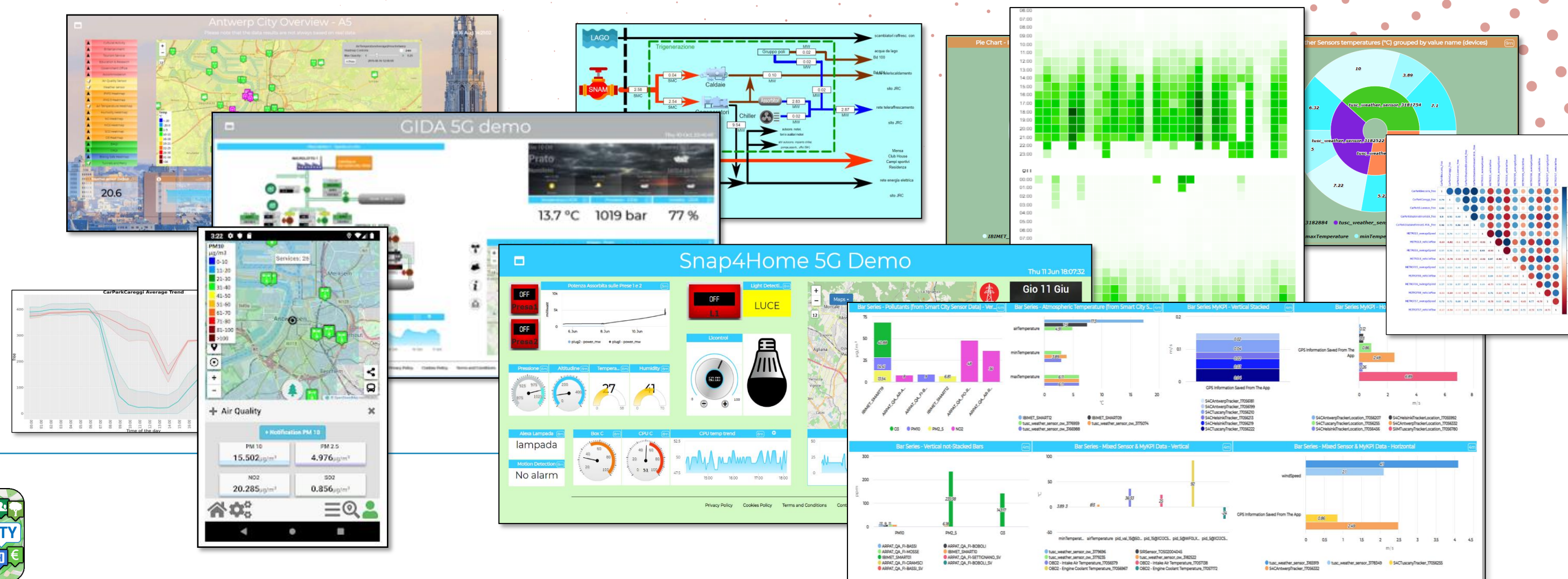
▶ ...

▶ Facts:

- ▶ *Any device can be connected*
- ▶ *Management GDPR compliant*
- ▶ *→ Data Analytics, Visual Analytics*
- ▶ *→ Dashboards, Business Analytics*



My Dashboards, Smart Apps, Mobile App, Web Apps, Synoptics



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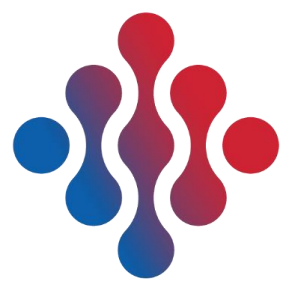
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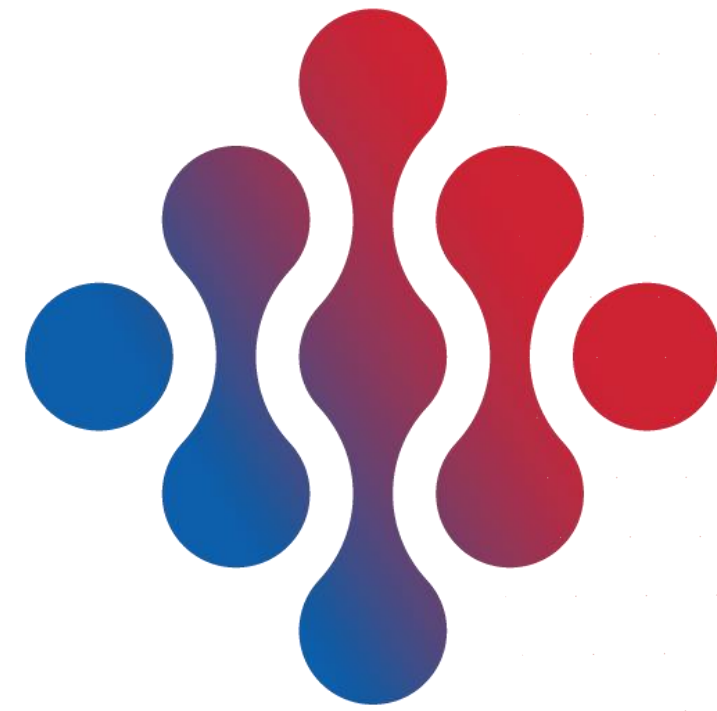


Conclusions on Snap4City

- ▶ **Type of POC: Platform**
- ▶ **TRL: 7**
- ▶ **Projects (solutions) which are using (have adopted) the platform:**
 - ▶ SmartAmbulance, Herit-data, Mobimart, AMPERE, Italmatic, SODA, AMPERE, Herit-data, etc..
 - ▶ (SmartBed, Sii-Mobility, REPLICATE, RESOLUTE, Trafair, PC4City, etc.)

- ▶ **Next Steps**
 - ▶ Continuous improvement of system capabilities in the health domain
 - New Version of the Reasoner for dashboard composition
 - Making simpler and faster the applications production
 - Improving Ontology
 - ▶ NGS-LD FIWARE
- ▶ **How to go further**
 - ▶ Specific domain trials are very important to improve the coverage and capabilities
 - ▶ Scaled up with larger trials in terms of users and device kinds





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