ARTES ISAAC
Life Sciences & Healthcare Tech

IOT Applications management, data analytic and dashboarding

Gianni Pantaleo

DISIT Lab, DINFO dept., University of Florence

Https://www.disit.org, https://www.snap4city.org, gianni.pantaleo@unifi.it, paolo.nesi@unifi.it

Cell: +39-335-5668674

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SNAP4CITY

KM 4 CITY

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Snap4City is a Collaborative

No-Coding Platform to build Smart Applications (IoT devices)

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SNAP4CITY
www.snap4city.org

KM 4 CITY

Powered by FIWARE

SNAP4 Appliances and Dockers Installations

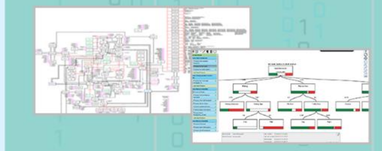
FREE TRIAL

PEN Test Passed

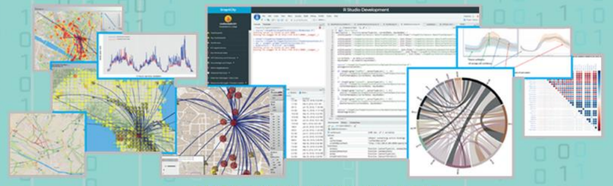
EU GDPR COMPLIANT

100% OPEN SOURCE

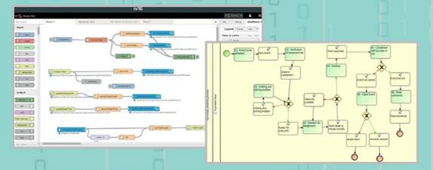
DASHBOARDS AND APPS - CONTROL ROOMS - DECISION SUPPORT SYSTEMS - WHAT-IF ANALYSIS



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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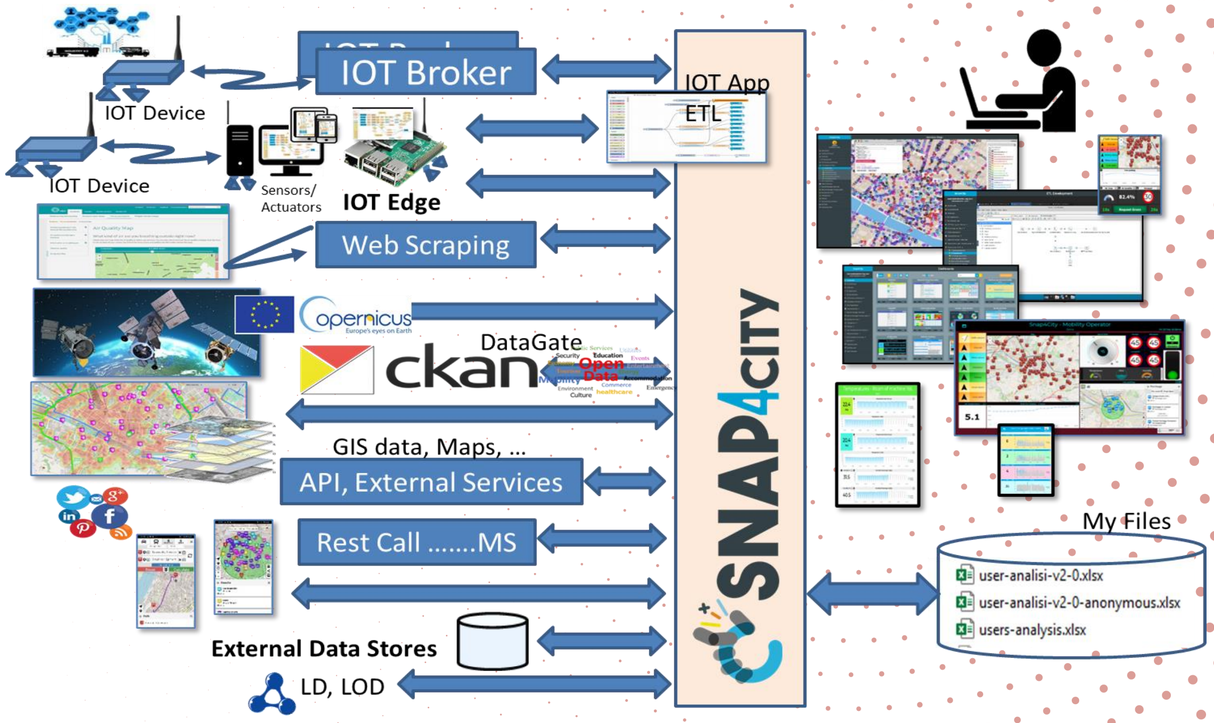
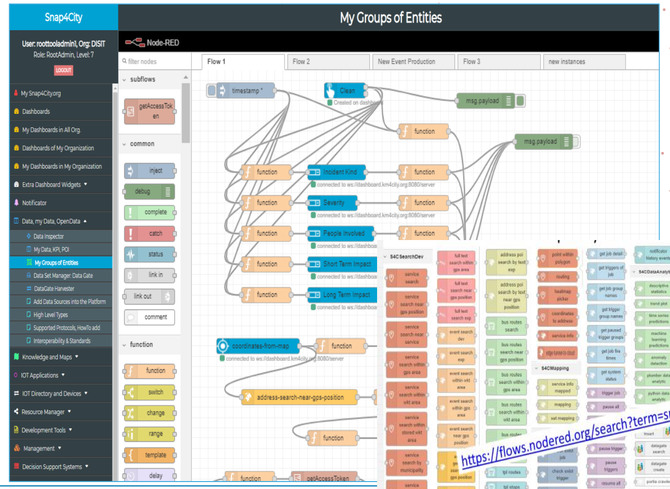
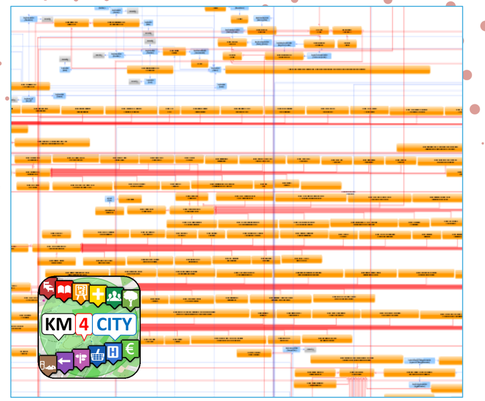
Snap4City: Platform Purpose

- **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**







Health Domain: *Snap4City is a Collaborative*

No-Coding Platform to build Smart Applications

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IOT Devices:

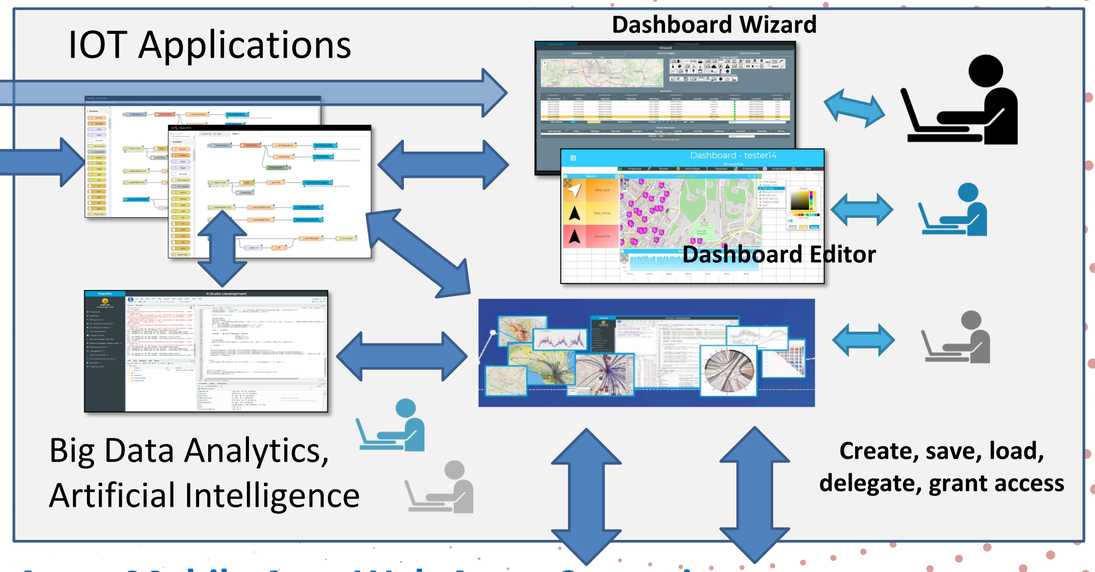
- **Smart Ambulance:**
  - Collecting and managing local data
- **Personal health devices (Snap4City):**
  - for example: glucometers
- **Smart Bed (LAID project)**
  - Monitoring sleeping conditions
  - Personal beds & beds managed by the hospital

Contextual data:

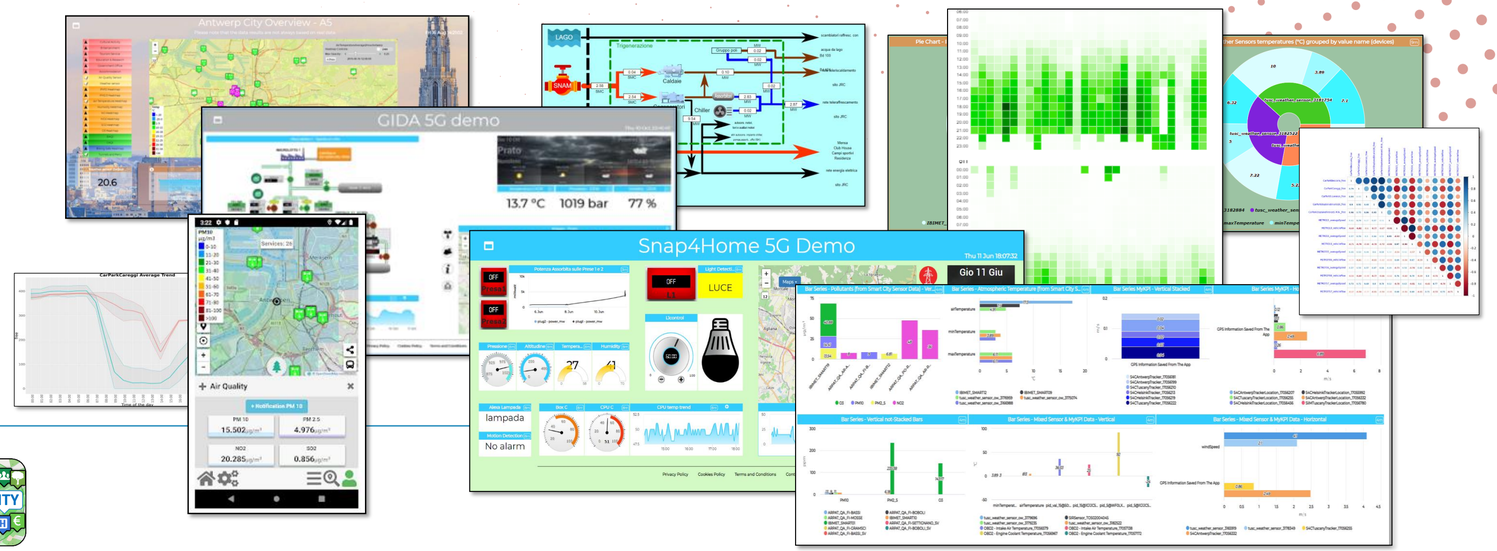
- COVID-19
- Environment, user behaviour, etc.

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

Any Device
Private/Public



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



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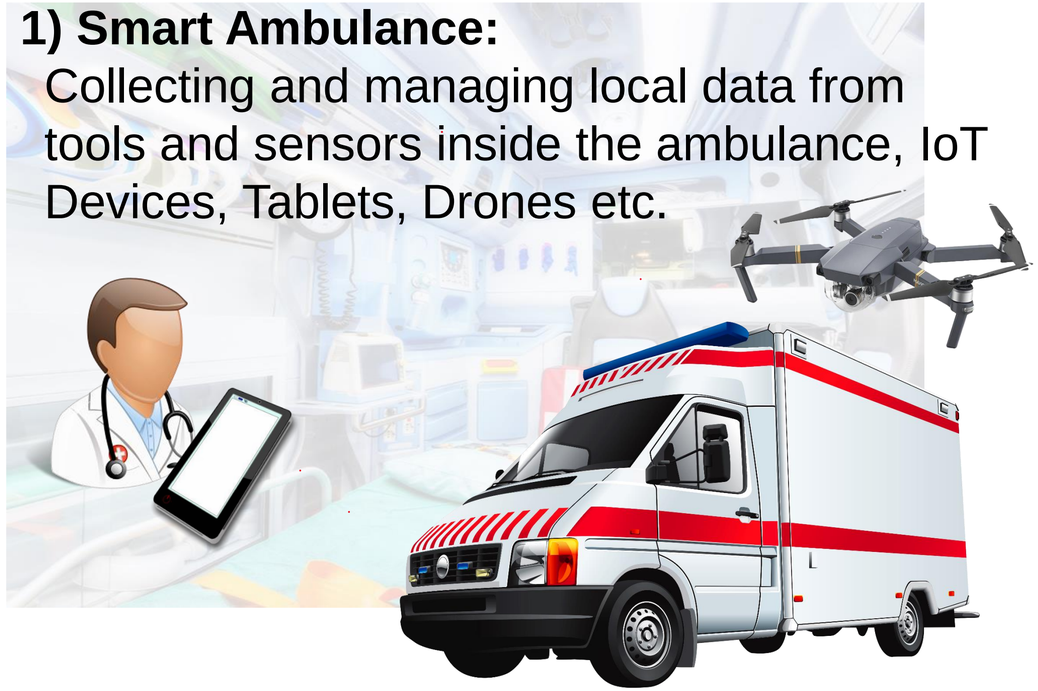
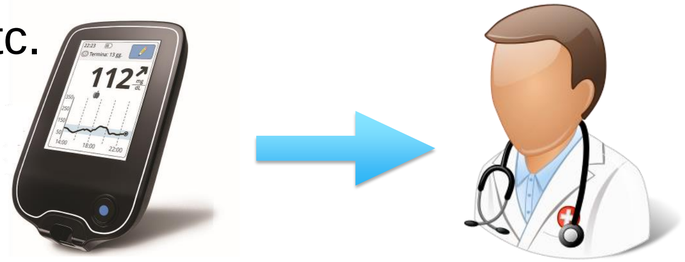
Scenarios

- **1) Smart Ambulance:**
  Collecting and managing local data from tools and sensors inside the ambulance, IoT Devices, Tablets, Drones etc.



- **2) Personal Health devices:**
  e.g.: glucometers, etc.



- **3) Smart Bed:**
  Collecting and managing data from smart bed sensors, monitoring parameters in real-time

Conclusions on Snap4City

- **Type of POC: Platform**
- **TRL: 8**
- **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
  - NGSI-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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