



Snap4City/Industry a FIWARE based platform for Industry-City Integration

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Industry Plant Supervision and Maintenance

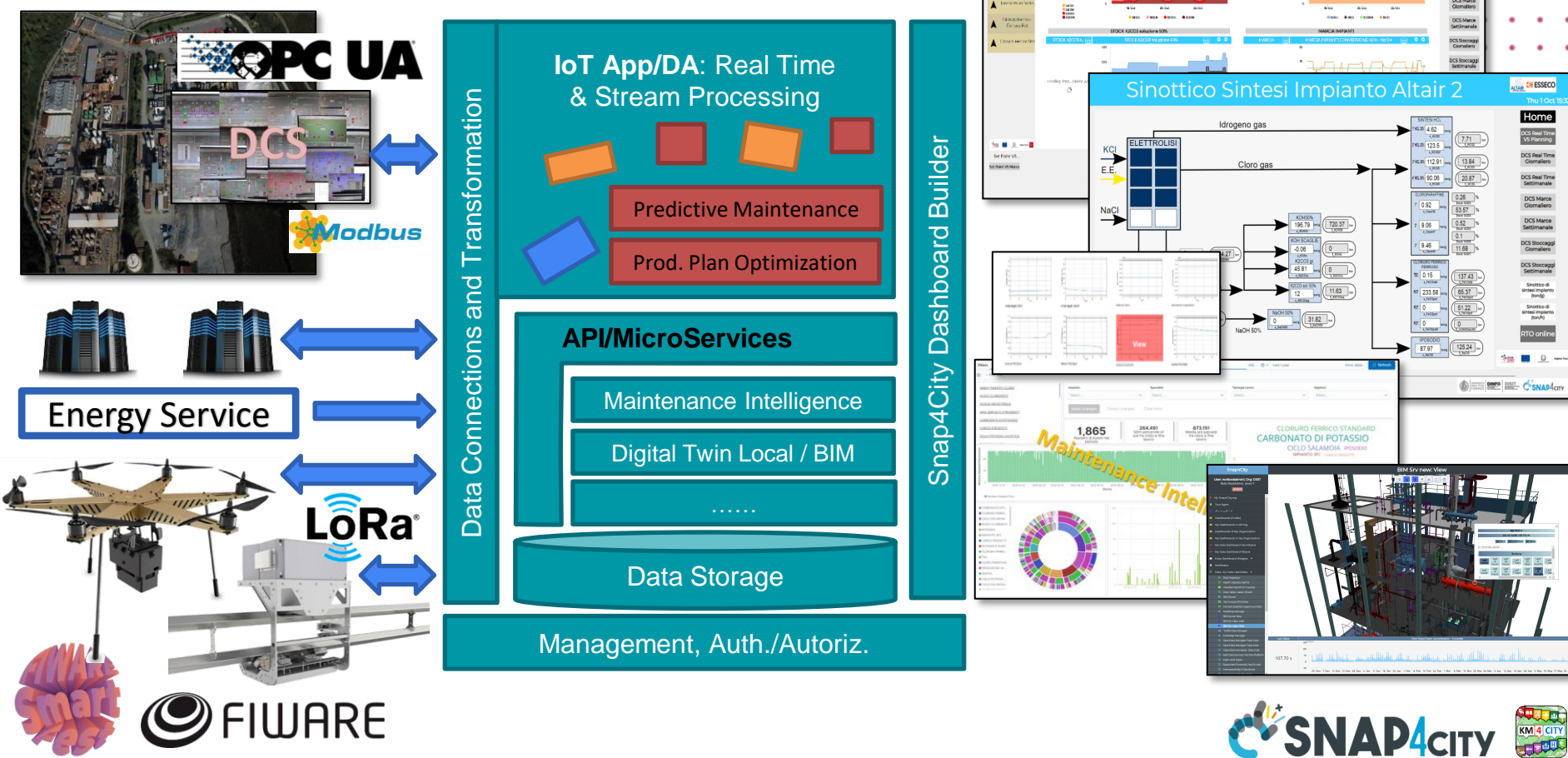


Aims

- **Control Room:** Higher level supervision and monitoring (since 2020)
 - Management of Production Plan *Optimization*
 - Control of Perimeter with drone and sensors
- **Maintenance ticketing** (since 2017)
 - *predictive* (in deploy)
 - 3D Digital Twin (in development)



MicroService Architecture



Powered by
FIWARE

SNAP4
Appliances and Dockers
Installations

**FREE
TRIAL**

 **PEN Test
Passed**

 **EU GDPR
COMPLIANT**



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



**EXPERT SYSTEM
KNOWLEDGE BASE
STORAGE**



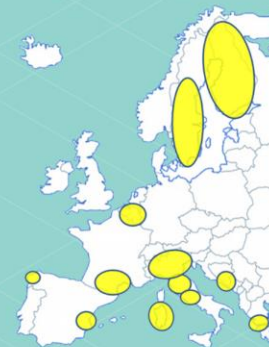
**BIG DATA ANALYTICS
ARTIFICIAL INTELLIGENCE
BUSINESS INTELLIGENCE
MACHINE LEARNING**



**DATA FLOWS, WORKFLOWS
MICROSERVICES
MANAGEMENT**



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

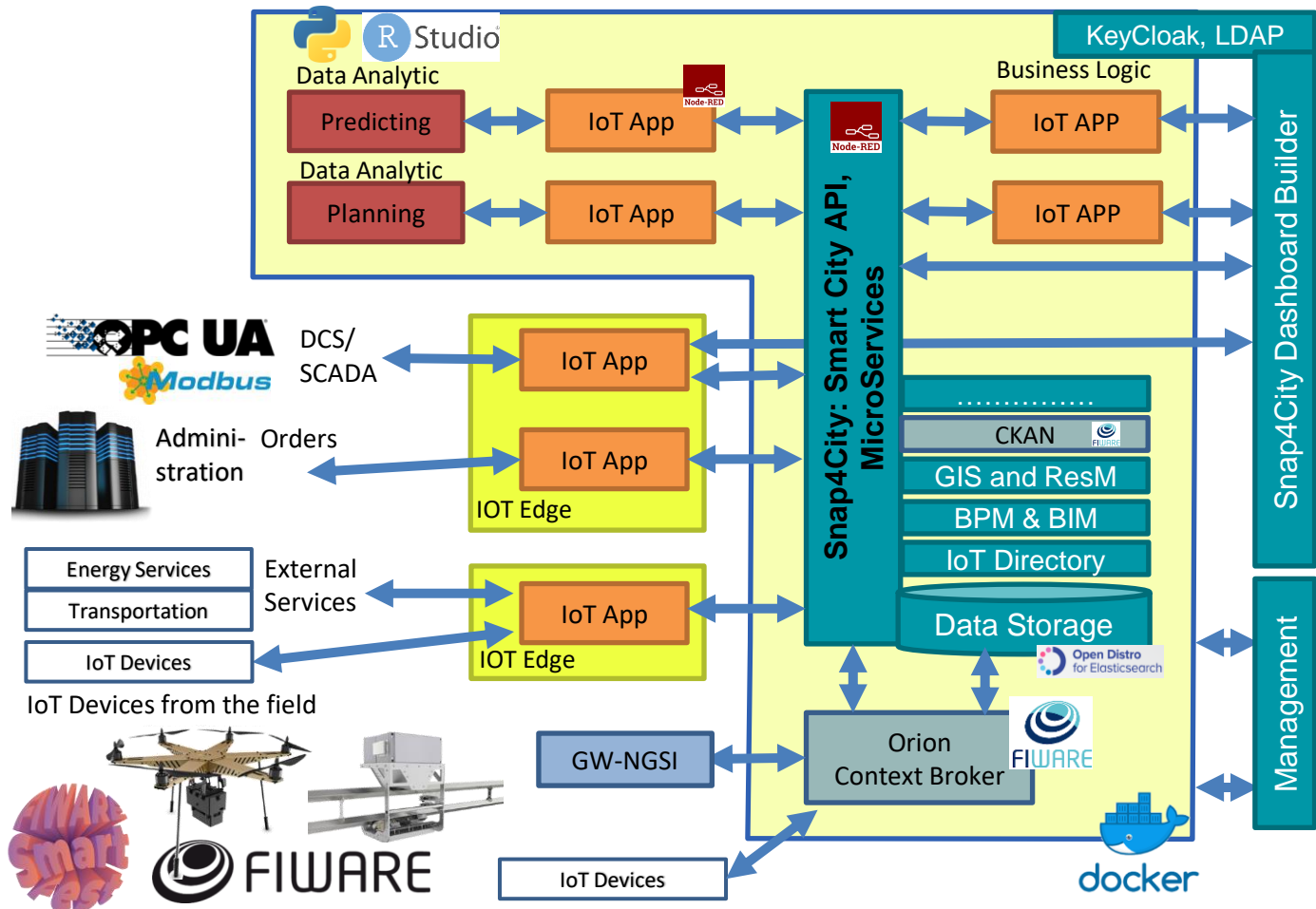


Snap4City/Industry

 **FIWARE**



Snap4City/Industry Detailed Architecture



Production Parameters

Dashboards, Visual Analytics, Synoptics, 3D, Maps

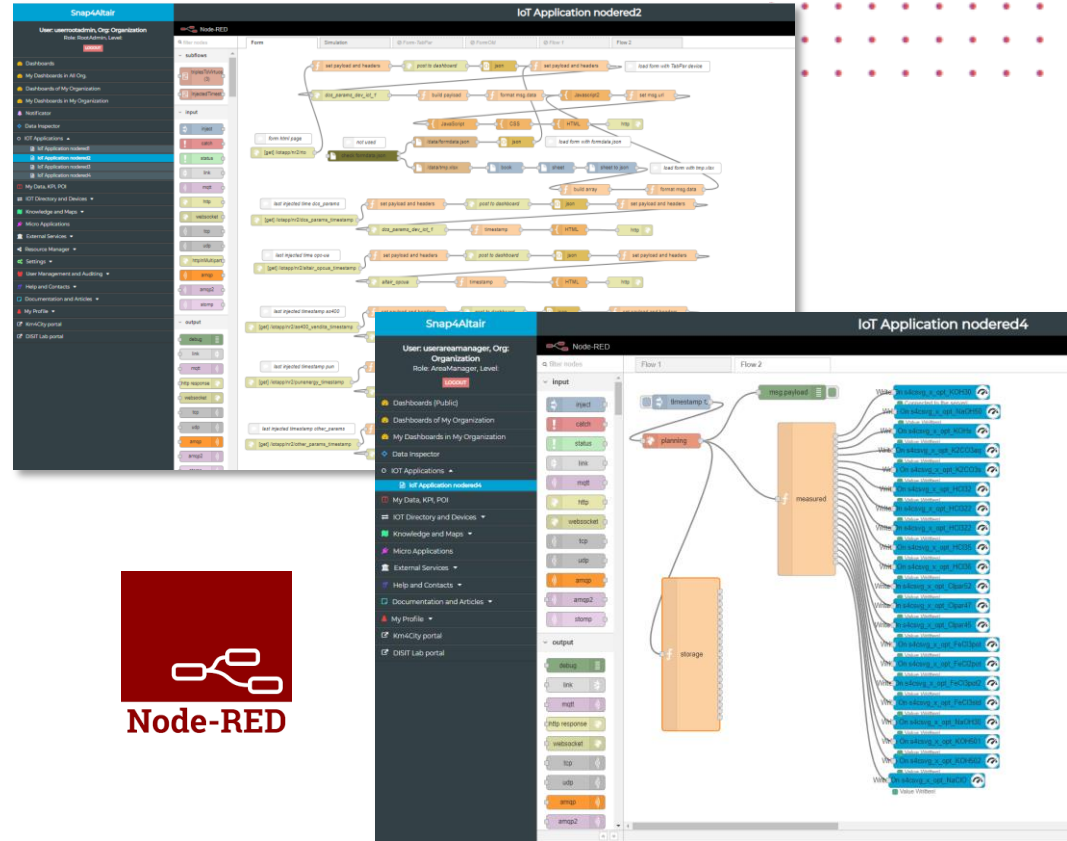
The collage displays several examples of the system's output:

- DCS Real Time - Settimanale:** A dashboard showing real-time data trends over a week.
- Sinottico Sintesi Impianto Altair 2:** A complex process flow diagram for an industrial plant.
- Maintenance:** A dashboard with a circular gauge and data points for equipment maintenance.
- 3D Models:** 3D visualizations of industrial structures and equipment.

SNAP4CITY

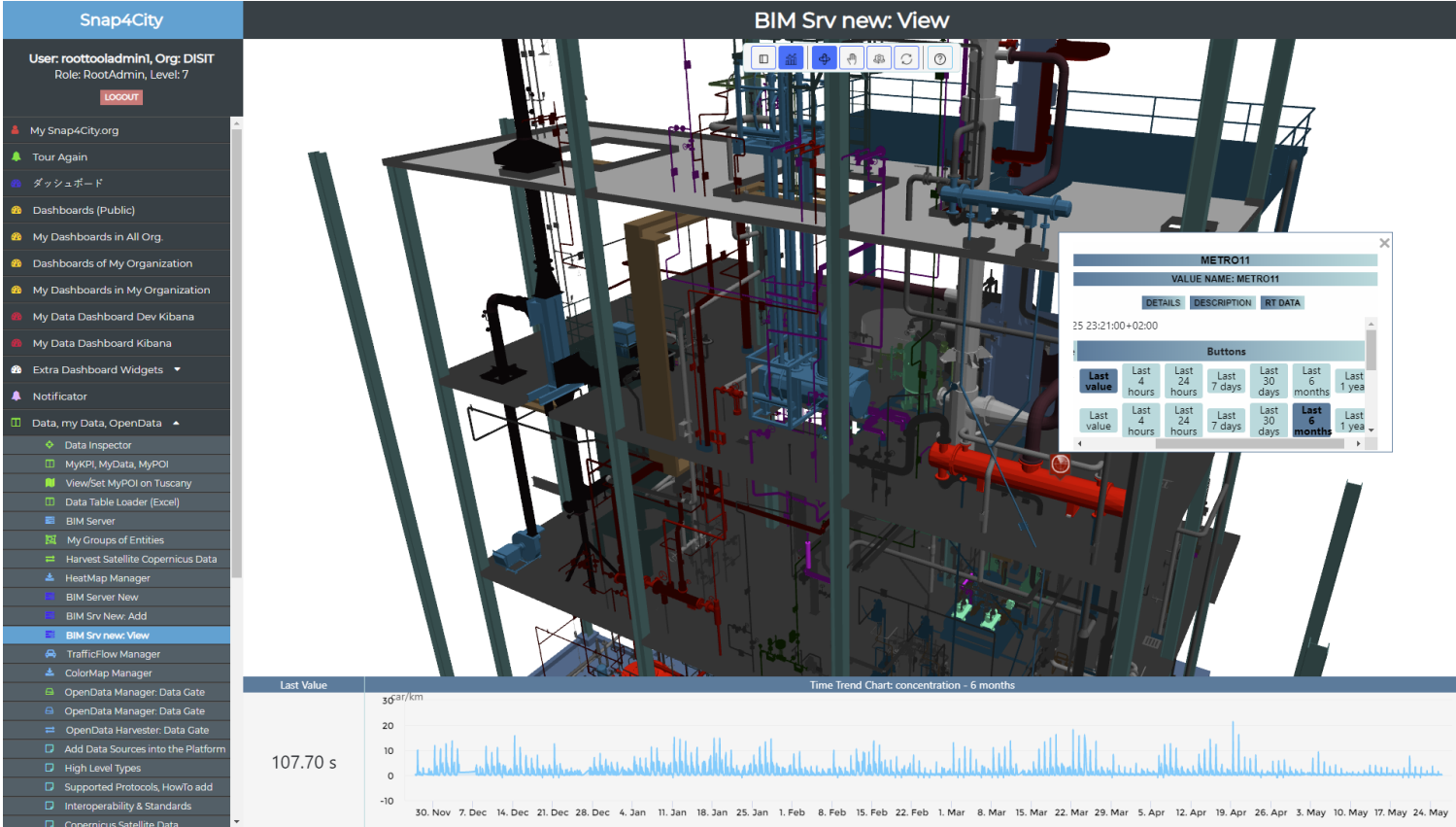
Snap4City/Industry IoT Apps

- Integration
 - Connection with Brokers, GWs, External services
- Data Driven Processing
- Data Analytics Manag.
- Smart City API
 - Search, discovering
 - Routing, Picking
- Dashboard Business logic
- Workflow, Digital Twin
- Management
- Scheduling
- ...etc...





Digital Twin Local, 3D vs Real Time Data



Tue 8 Jun 11:04:55

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Snap4City is a FIWARE enabled solution as



- **ORION Context Broker** is central on Snap4City/Industry Solutions.
- **ORION** enables the interoperability of the ingestion of data coming from the:
 - Field: robots, sensors/actuators
 - Control Systems: DCS, SCADA, ..
 - IoT App:
 - on IoT Edge and on Cloud/containers
 - on user interface as decisions taken
 - Taking results from Data Analytics



Snap4City is a FIWARE enabled solution as










































- **Snap4City/Industry** solution has been used in a number of installations
 - With **ORION FIWARE** in all cases
 - on premise/on cloud
 - *OnLine development environment with low or No-coding*
- **Snap4City/Industry** provides an easy way to develop complex smart solutions including
 - Interoperability with almost any protocol and format
 - Dashboards: widgets data driven, Synoptics, visual analytics
 - Uniform visual programming language for ingestion, data transformation, integration, business logic:
 - IoT App = Node-RED + Snap4City Libraries
 - Smart data transformation in real time, even driven
 - Data Analytics in Python, Rstudio, etc.



To know more: the training course

<https://www.snap4city.org/577>

On Line Training Material (free of charge)

	1st part (*)	2nd part (*)	3rd part (*)	4th part (*)	5th part (*)	6th part (*)	7th part (*)
what	General	Dashboards	IOT App, IOT Network	Data Analytics	Data Ingestion processes	System and Deploy Install	Smart City API: Web & Mob. App
PDF							
Inter active							
Video1							
Video2							
Video3							
Video4				none		none	none
duration	2:55	3:16	3:41	2:00	2:48	2:35	1:47



THANK YOU!

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