

# CITY VISION

Snap4City, Fiware, Scorpio, NGSiv2/-LD, Open Source, Data Models, Open Data, TALQ, Multiprotocol support

# GREENSTREET IOT

Smart Streetlighting, Sensors, Massive IoT, RF mesh, Wirepas, TALQ, Gateways, Smart Edge, BLE Beacons, WiFi, Cellular, Private 5G

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## CITY VISION – SMART CITY IoT PLATFORM

- FIWARE AND SNAP4CITY PROMOTE COLLABORATIONS

**CITY VISION** is an open smart city IoT platform that promotes collaborations and innovations to accelerate development of smart city solutions.

**CITY VISION** provides harmonization of data using standard data models from FIWARE and TALQ.

**CITY VISION** is based on open-source components and leverage FIWARE, Snap4City and Scorpio NGSI-LD. With this follow openness and opportunities for cooperation both within a city and between different cities.

**CITY VISION** offers “Smart City as a Service” allowing cities a flexible and easy way to start.

## CITY VISION – IoT SERVICE PLATFORM

- ENABLER FOR SMART SOLUTIONS AND THE SMART CITY EVOLUTION

In **CITY VISION**, the different types of incoming data are standardized and harmonized and then made available for the platform’s integrated services, tools and APIs. Common data models and a data driven approach allow developers and 3<sup>rd</sup> party service providers to focus on innovation when providing smart solutions for the city.

**CITY VISION** can be considered an operating system for smart city services. **CITY VISION** makes the city itself an Enabler for smart services and smart solutions.

The **CITY VISION** promotes a city eco system that can accelerate the transformation to a “smart city”.

**CITY VISION** is powered by FIWARE and TALQ that allows compliance standard data models and smart city protocol.

**CITY VISION** is powered by SNAP4CITY that provides a complete set of smart city platform services.



## GREENSTREET IoT

- SMART LIGHTING SOLUTION

**GREENSTREET IOT** helps you get control of your lighting. You get real-time alarm and status information about your luminaires and electrical status of the lighting grid.

It is only when you have full control of your street lighting that you have the real opportunity to optimize your energy consumption and operational cost as well as being able to create a better user experience and a safer outdoor environment for the city's residents.

The city outdoor scenario is constantly changing, and it is not sufficient with only fixed time dimming. The **GREENSTREET IoT** streetlight control provides an advanced event based dynamic control for both normal streetlights and for RGBW control.

**GREENSTREET IOT** allows you to keep an inventory of your streetlight objects and to create an efficient and visible workflow for handling error reports and deviations.

## GREENSTREET IoT

- STREETLIGHTS AS AN INFRASTRUCTURE

The luminaires in a **GREENSTREET IOT** system communicate with each other via a massive IoT mesh radio network using a cutting-edge technology to manage the challenges in an urban environment. There is one single mesh network providing multiple access points to the cloud. The network is dynamic and assures that the luminaires always have an optimal path to the cloud.

The city will have an infrastructure for not only luminaires to be connected, but also other devices such as traffic and weather sensors, air quality sensors and parking sensors.

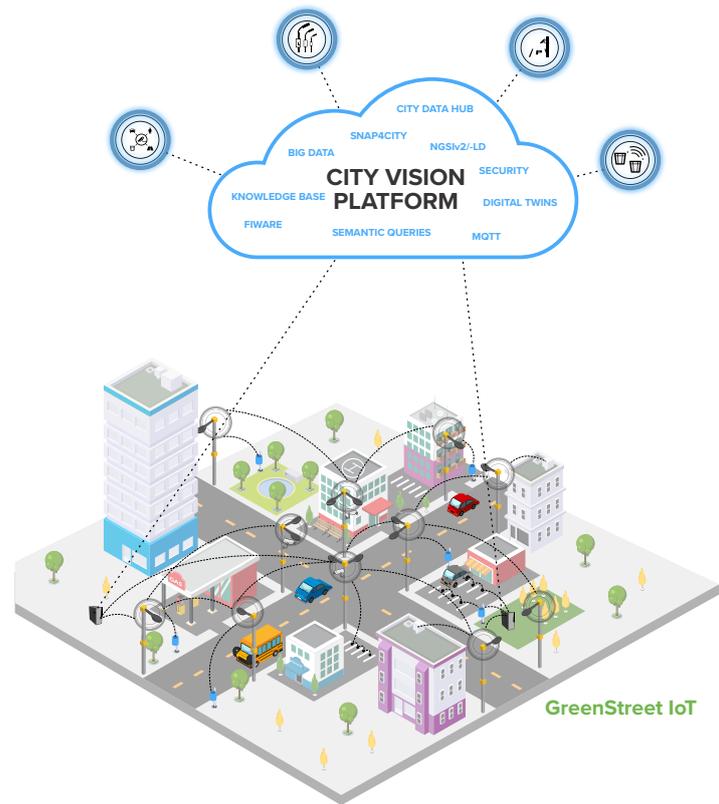
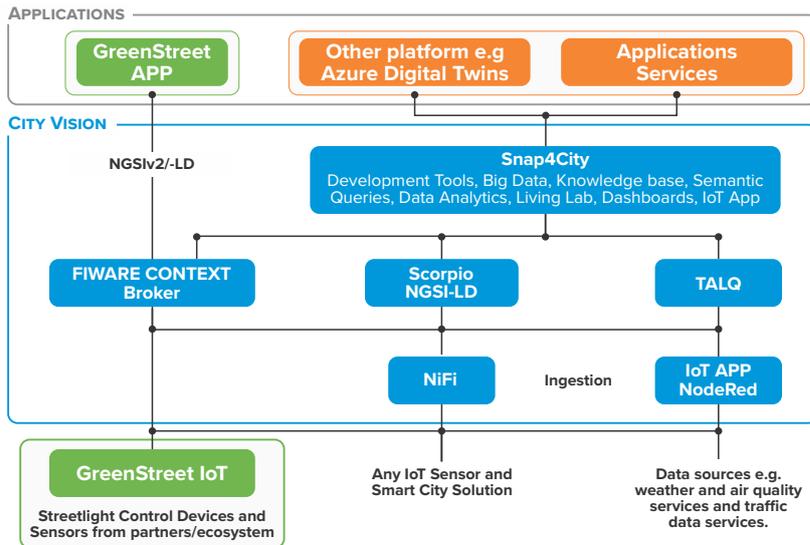
The more devices that join, the better network performance and coverage the city will get.



# SMART CITY PLATFORM

**CITY VISION** is a smart city platform powered by technologies from Fiware and Snap4City.

- Big Data and Analytics.
- Knowledge base with semantic search using Km4City ontology.
- Built-in tool chain to develop custom IoT applications and dashboards.
- A large set of ready to use resources like widgets, micro applications, dashboards templates .
- A Living Lab to promote collaboration, sharing, technical infrastructure and to manage the various types of stakeholders throughout the smart city evolution.



# SMART STREETLIGHT SOLUTION

**GreenStreet IoT** provides a city-wide infrastructure for connected streetlights and IoT sensors. The infrastructure is formed by decentralized mesh networks from Wirepas. The networks using the free global bands of 2.4 GHz or the soon to come 1.9 GHz, which is the world's first non-cellular 5G (ETSI TS103 636).

- Lamp Controllers support D4i, multiple light points and RGBW.
- Dynamic Control based on sensor events in the field.
- Measurement of electricity parameters and burning hours.
- Control and monitoring of streetlight cabinets.

# SMART WASTEBINS

Avoid empty waste bins in the collecting round! Waste bins report their fill-level by connecting to the cloud via the closest streetlight.

- Increases the fill-level when collecting.
- Reduces Unnecessary collection stops.
- Avoids overfilled trash cans.
- Allows more efficient planning and collection routes.
- Provides statistical data for city planning.



# SMART PARKING

Receive guidance to available parking space! Parking spaces report whether they are available by connecting to the cloud via the closest streetlight.

- Decreases traffic and traffic congestions.
- Minimizes car emissions.
- Reduces time and stress for drivers and passengers.
- Ensures more effective uses of packing spaces.
- Provides statistical data for city planning.



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