

SMART CITIES

A different way to understand
your environment



ABOUT HOPU

We create innovate cities with the goal of improving the quality of life thanks to the customized design and deployment of Smart POIs (Smart Point of Interaction), through the action of citizen co-creation processes, tourism experience management, city monitoring and intelligent systems integration.

HOPU.EU



SOLUTION OVERVIEW:

SMART SPOT

They have the capacity to create an area of interaction for citizen and visitors.

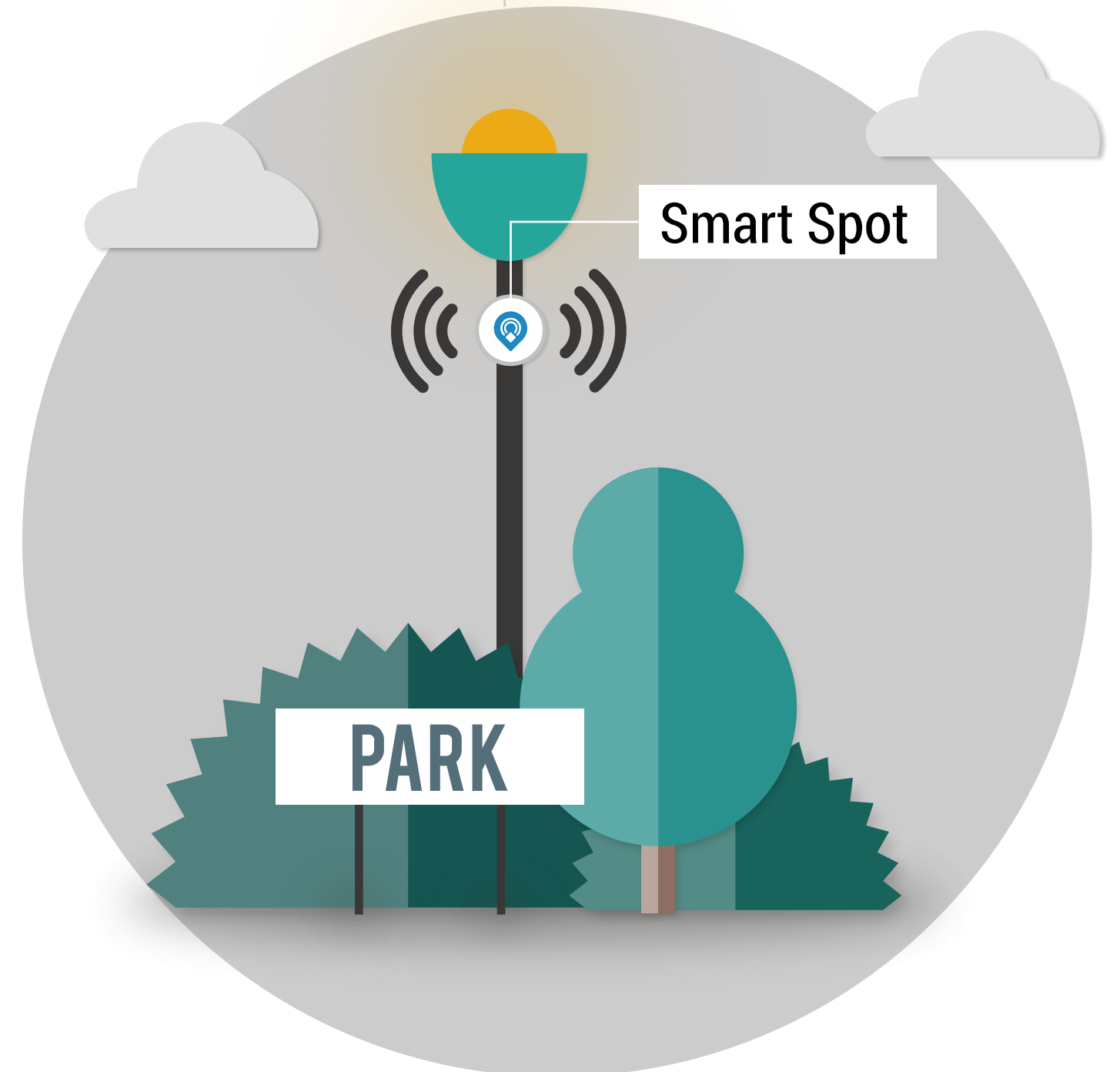
People can discover an online content since the Smart Spot sends out a URL by Physical Web, so people can find and take advantage of digital services (bookings, purchase and pay, participate, etc..) in physical places.

Also, the Smart Spot has other functions such as measuring air quality levels, temperature, humidity, energy, noise and it can count people who have their Smartphones Wi-Fi switched on in an area (Crowd monitoring).

Smart POI

Smart Spot

PARK



SMART SPOT USES



M2M

WiFi

**SCALABLE
MAINTENANCE**
(Remote Management)



**HUMAN
INTERACTIONS**
(Physical Web)

WiFi

BLE



SENSING & MONITORING
(Internet of Things)

I2C

SPI

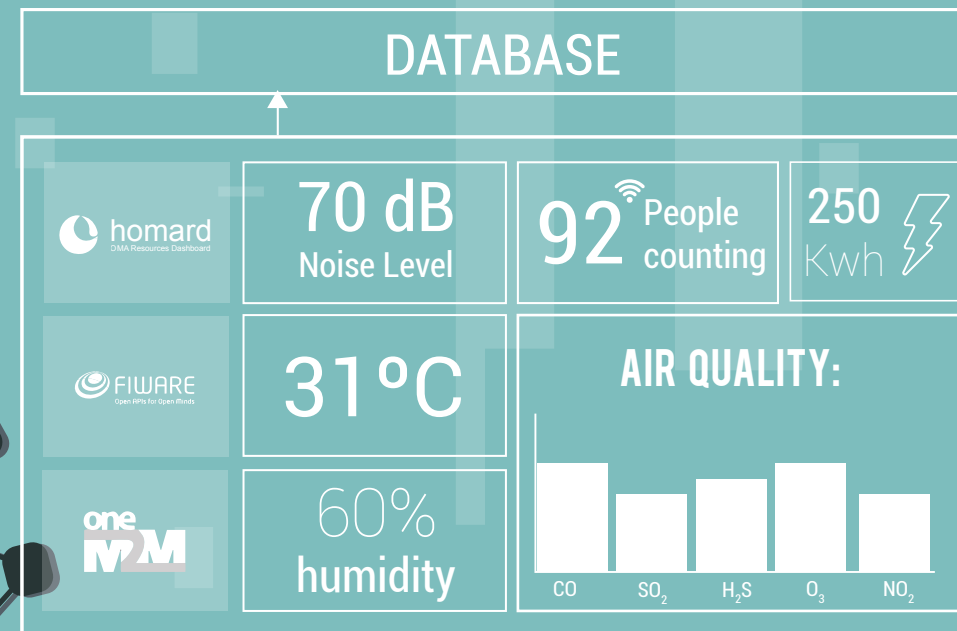
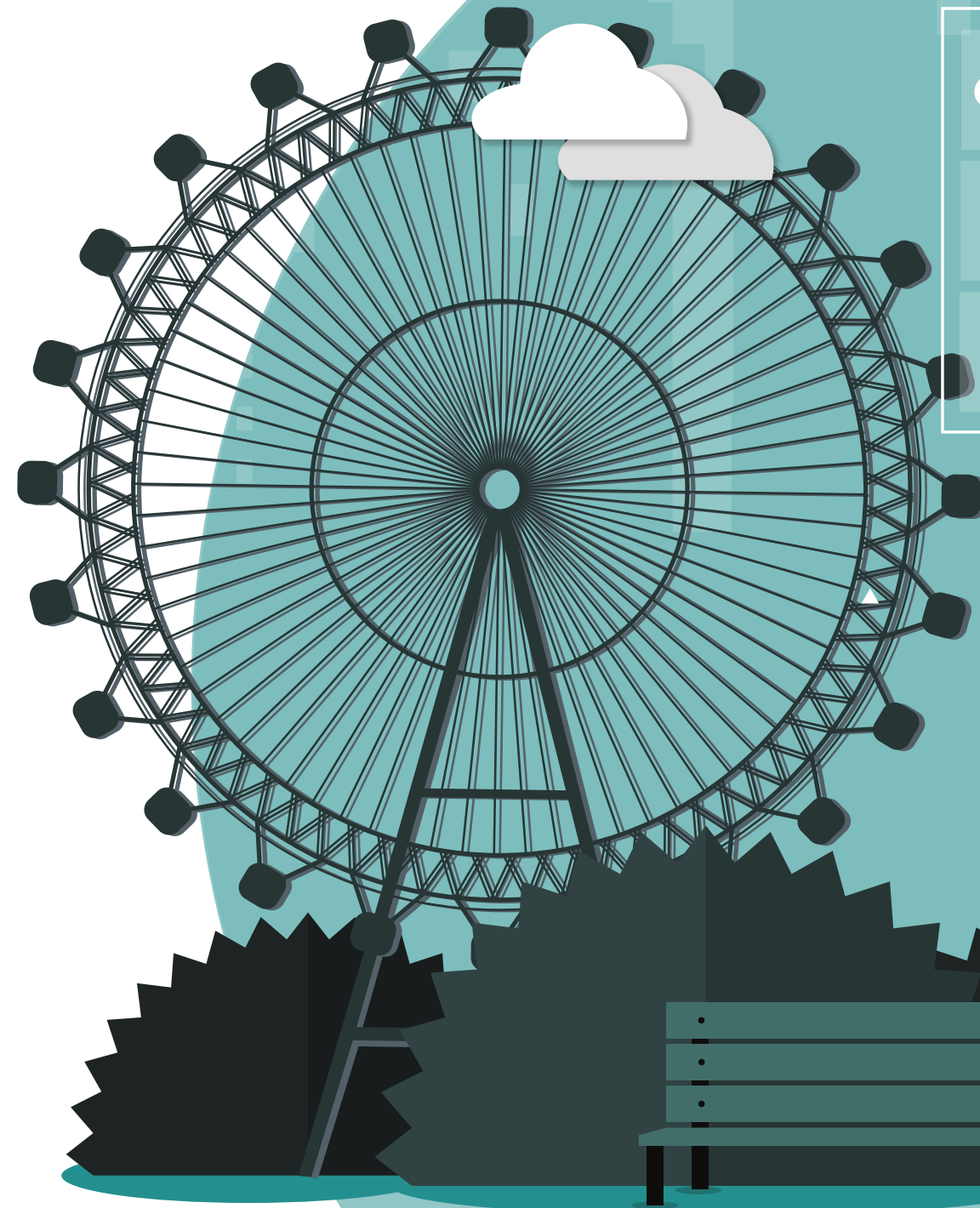
GPIO

ADC



Smart POI

(Area of interaction)



GSM /GPRS
OMA LwM2M

Physical Web

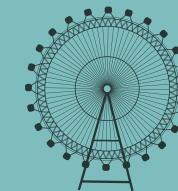
Sends a notification to
Smartphones nearby

Smart Spot
(Device)



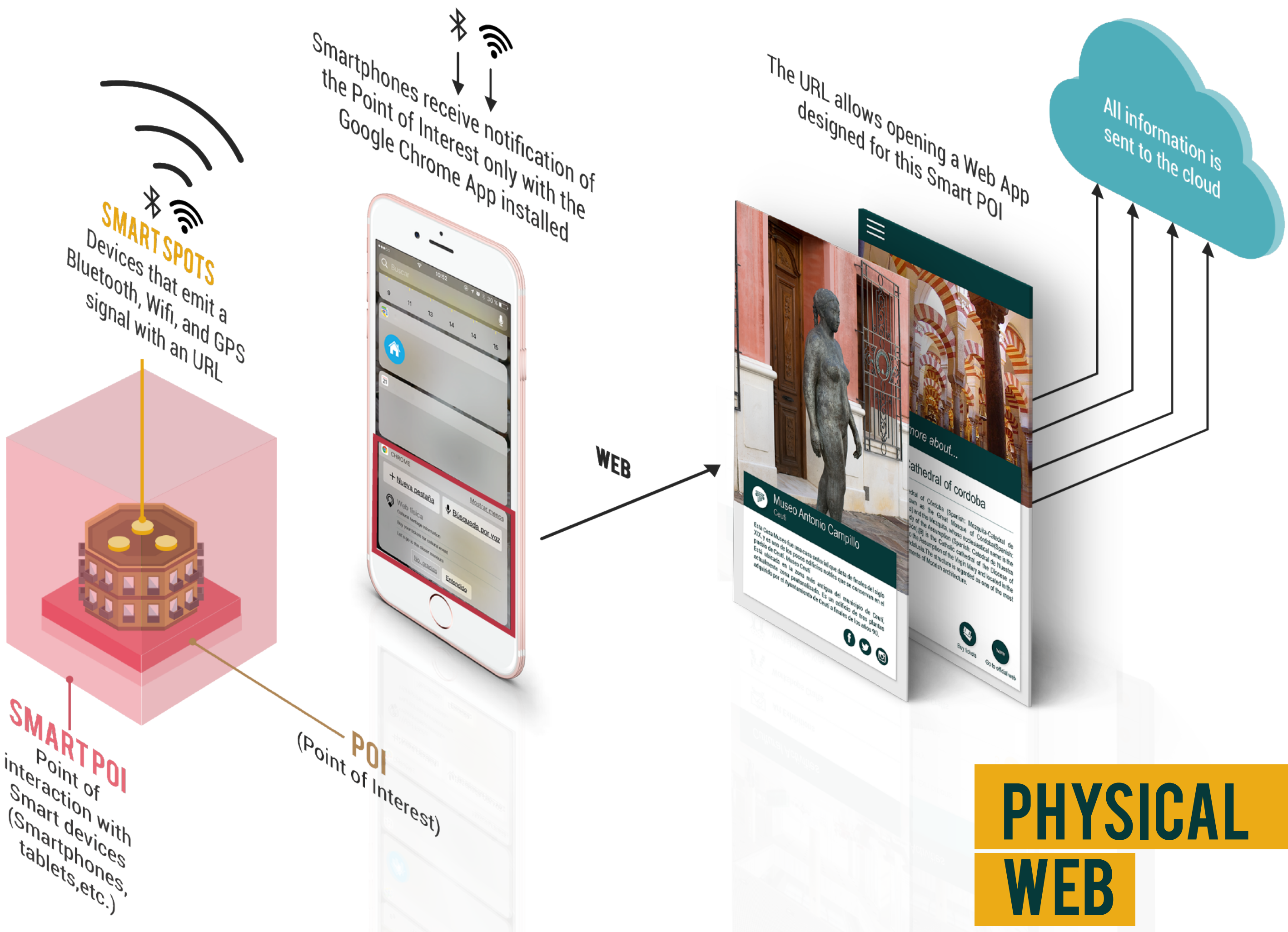
Web App

www.smartpointofinterest...



About the Noria





PHYSICAL WEB

SMART CITY SOLUTIONS

- SMART TOURISM
- CITIZEN ENGAGEMENT
- ENVIRONMENTAL MONITORING



SMART TOURISM

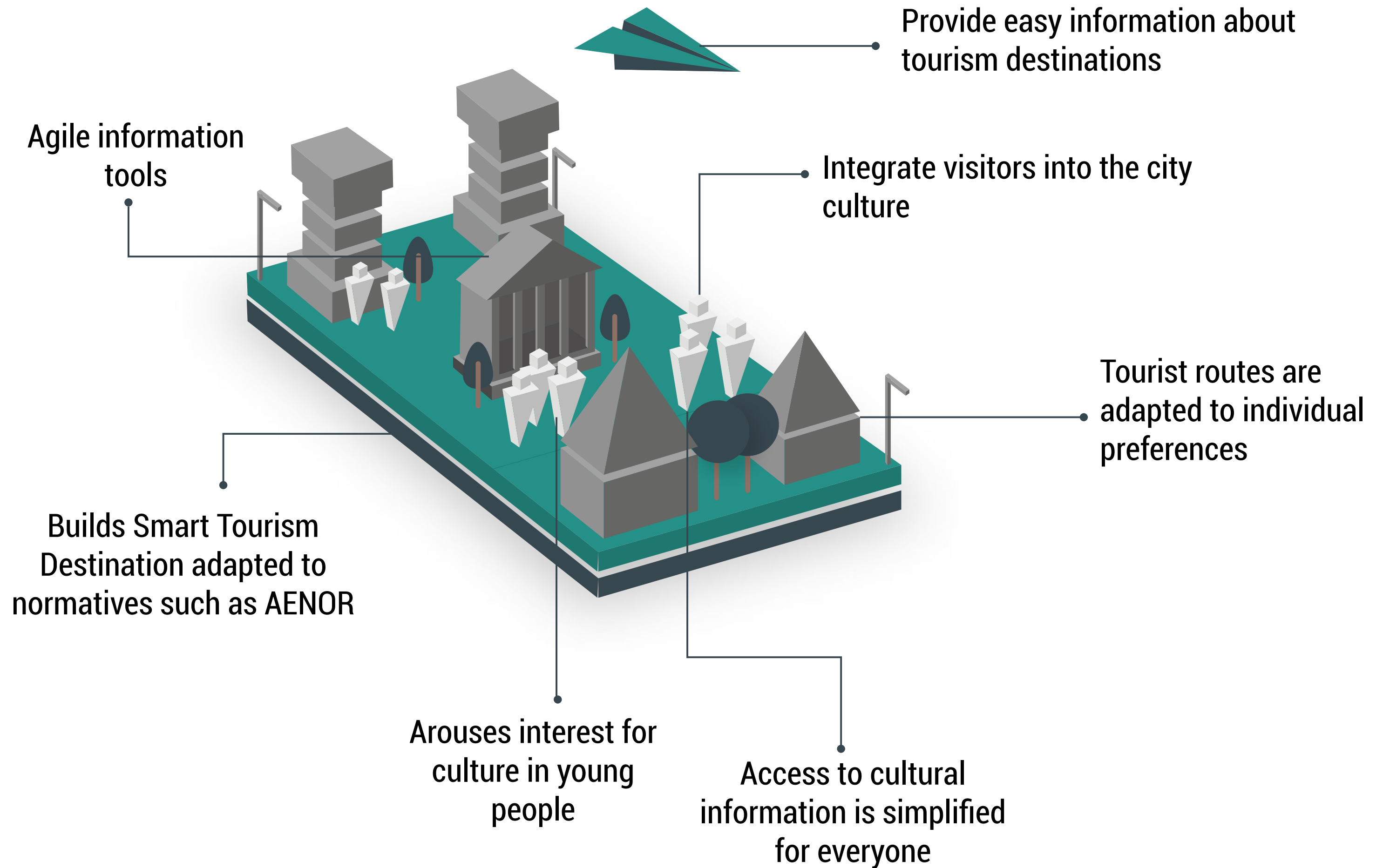
Turn tourism in an agile experience

Provide information about culture

Contribute to publicize tourism

Develop Smart Points of Interaction (Smart POIs) for visitors





SMART DESTINATION CEUTÍ



16 Smart Spot
deployed



Content adapted
to the destination



Creation of
experiences



Design and develop the
Web App

Partners



Ayuntamiento
de Ceutí

Smart Destination-Ceutí, Murcia

1. Escultura a la entrada del Museo Antonio Campillo
2. Mural de Torregar
3. Museo 7 Chimeneas
4. La Conservera
5. Iglesia Santa M^a Magdalena
6. Ruinas árabes
7. Ermita de San Roque
8. Noria del Boticario
9. Mural de Ouka Leele
10. Mural de Belzunce
11. Plaza del Ayuntamiento
12. Mural de Antonio Maya (barrio de las vacas)
13. Escultura de Manolo Valdés
14. Escultura Miguel de Cervantes junto a Biblioteca
15. Homenaje al Emigrante – Plaza Nueva
16. Escultura de Pedro Chillida – Parque del Mercado



TRANSFORMING CEUTI INTO A SMART DESTINATION



Necessity

Ceuti has a wide artistic, cultural and intangible heritage needing new tools in order to broadcast the offer and new interactive information about it that connects its citizens and visitors with the culture.



New tool

We are designing a specific solution for this village using our Smart Spot to disseminate information about its principal points of interest.



New information

We are working with the citizens of Ceuti to co-create new content about the points of interest that explains the history as told by people who have lived experiences around this heritage.



Our solution

All these stories have been collected in short time videos that upload to different web apps that have been sent by Smart Spots through Bluetooth and Wi-Fi signal to Smartphones nearby without the necessity of a native app installed.

Our solution to Smart Destination is adaptated to your needs

	Basic	Pro	Full
Smart Spot (hardware)*	●	●	●
M2M Connection	●	●	●
Data Broker Cloud	●	●	●
Open APIs	●	●	●
Device Management platform: Homard	●	●	●
oneM2M platforms conectivity	●	●	●
Format and consulting	●	●	●
Tourism Web-App design		●	●
CARTO/FIWARE data visualization			●

**The numbers of Smart Spot depends on the project*

CITIZEN ENGAGEMENT

Develop ideas

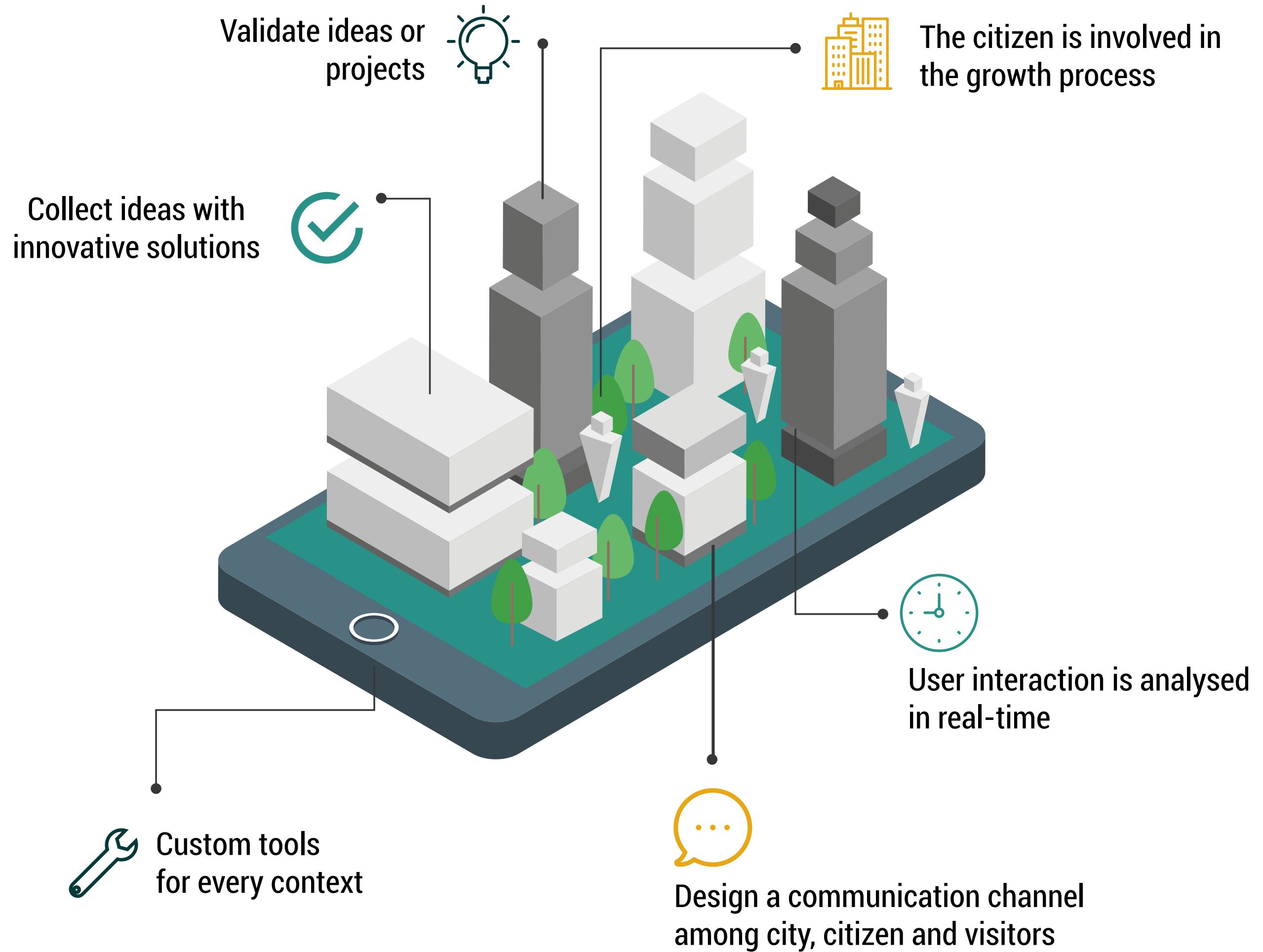
Validate and test project

Analyse people interaction in real-time

Customize tools for the city

Develop communication channels between users and city







SIIDI IN AARHUS (DENMARK)



Creation of
experience



Web app
develop and design



19 Smart Spot
deployed



150 posters &
flyer distributed



RR.SS.
campaign



Platform of data
visualization



Improvement
experience



Analysis of
results

























Partners



DOKK1



Our Co-creation solution is adaptated to your needs

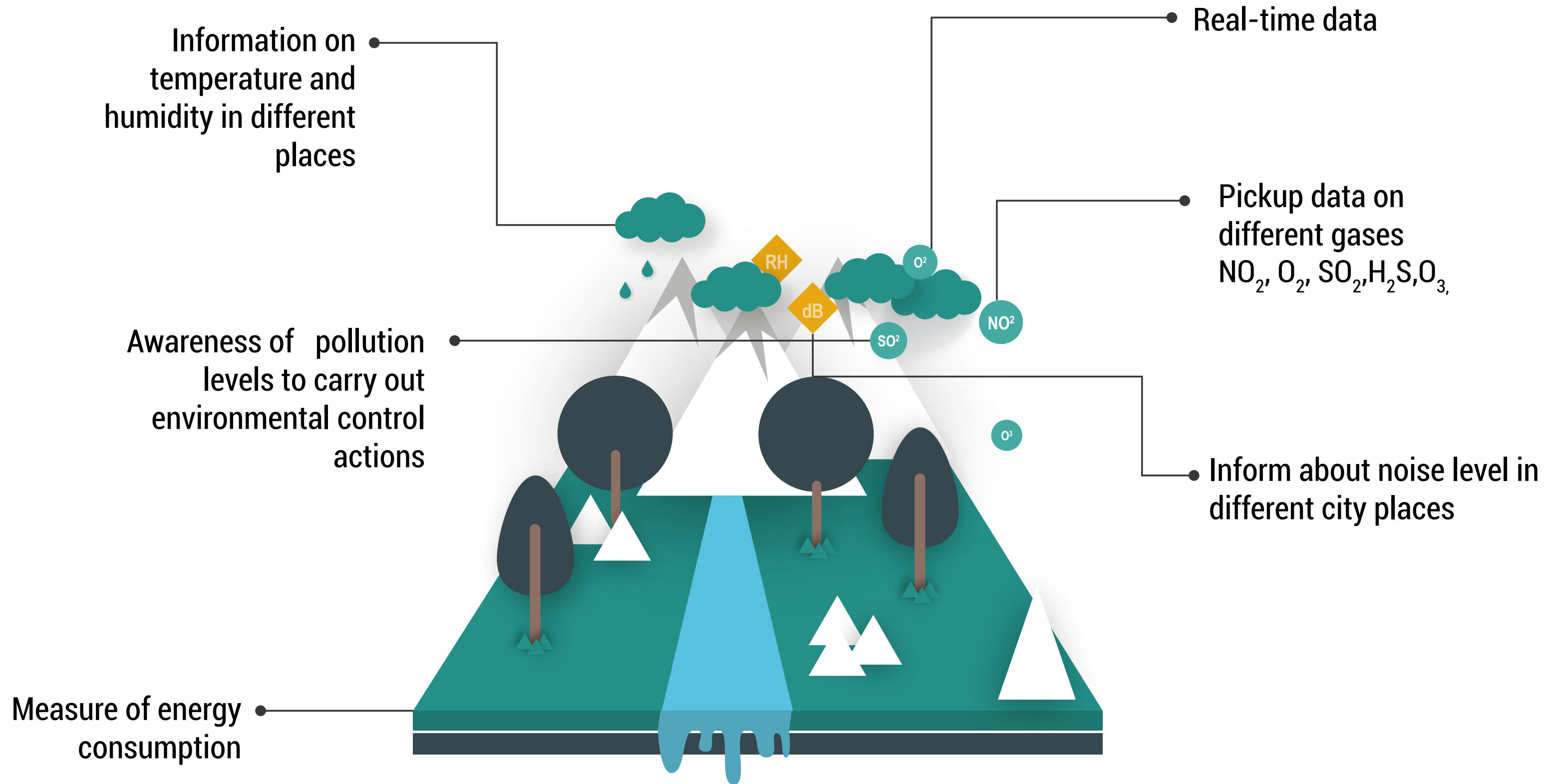
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Co-creation Web-App			
CARTO/FIWARE data visualization			

**The numbers of Smart Spot depends on the project*

SENSORIZE YOUR CITY

- Temperature
- Humidity
- Air quality (NO_2 , O_2 , SO_2 , O_3)
- Energy
- Noise
- People counting (crow monitoring)







OMA LWM2M

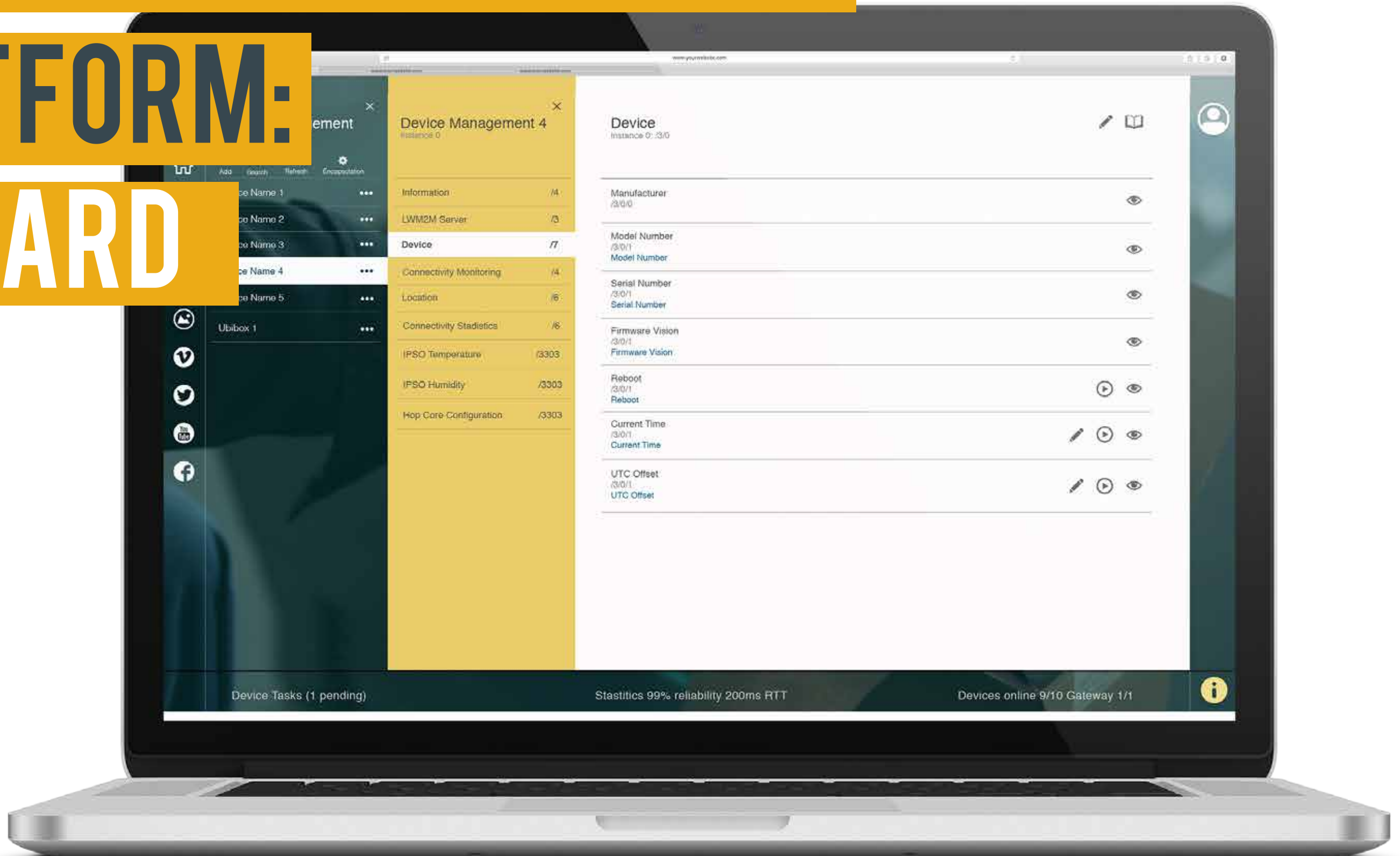


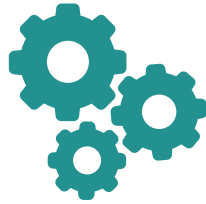
**SCALABLE
MAINTENANCE**

DEVICES MANAGEMENT

PLATFORM:

HOMARD





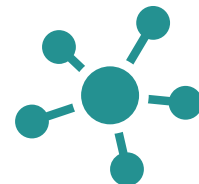
Software Management:

Enabling the installation, removal of applications, and retrieval of inventory software components already installed on the device and the most relevant firmware upgrades over the air.



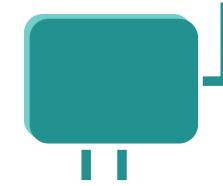
Diagnostics and Monitoring:

Enabling remote diagnostic and standardized object for the collection of the memory status, battery status, radio measures, QoS parameters, peripheral status and other relevant parameters for remote monitoring.



Connectivity and security:

Bluetooth, cellular connectivity), proxies, list of authorized servers for remote firmware upgrade and also all the relevant parameters for enabling secure communication.



Device capabilities:

Allowing to the Management Authority to remotely enable and disable device peripherals like cameras, Bluetooth, USB, sensors (ultrasound, temperature, humidity, etc.) and other relevant peripherals from the nodes.



Lock and Wipe:

Allowing to remotely lock and/or wipe the device, for instance when the device is lost (relevant for devices in open ocean, air etc.), or when the devices are stolen or sold. It enables the remote erase of personal / enterprise data when they are compromised.

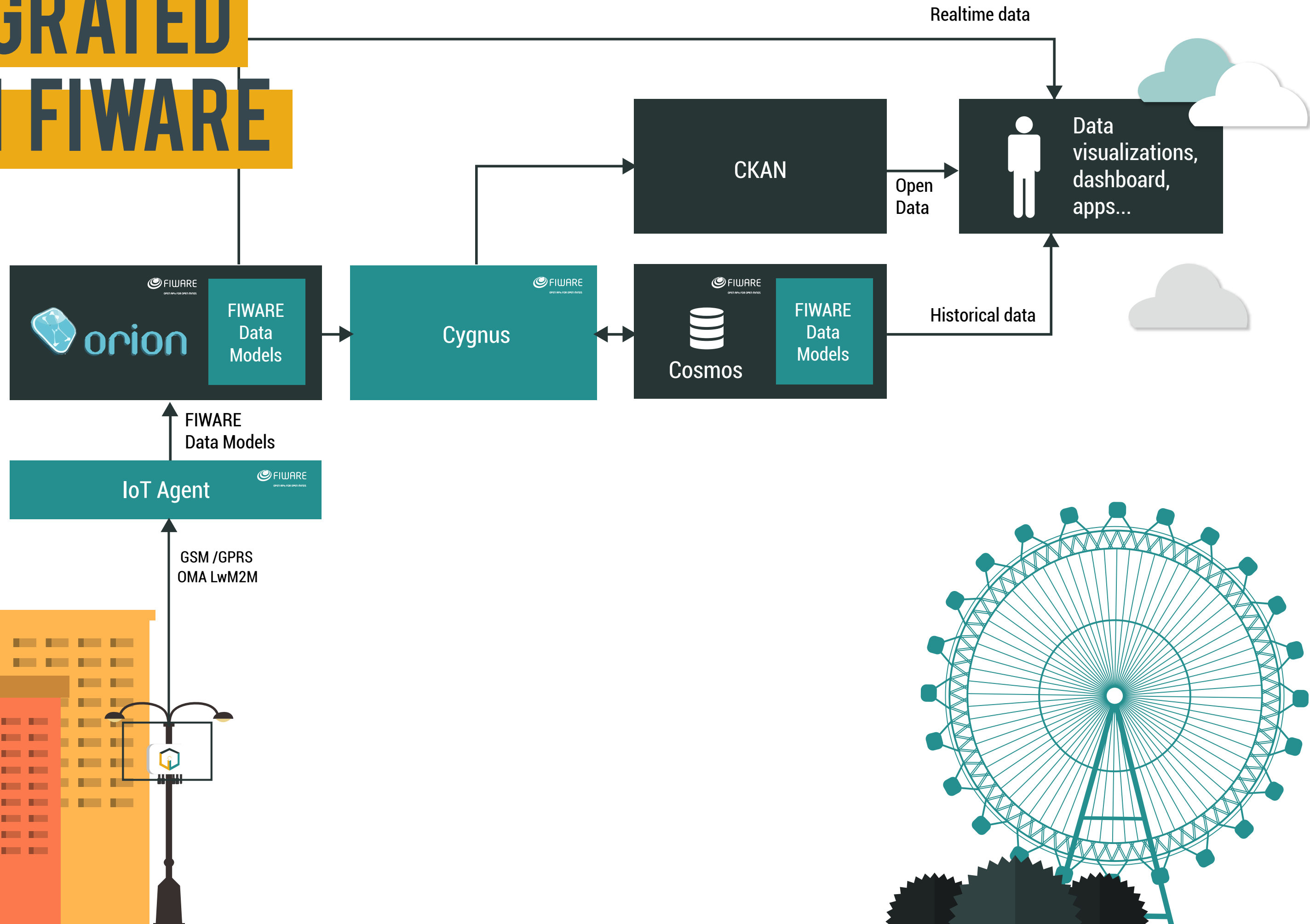


Management Policy:

Allowing the deployment on the device of policies which the client (node, device, sensor) can execute and enforce independently under some specific conditions, i.e., if some events happen, then perform some operations.



INTEGRATED WITH FIWARE



OPEN STANDARDS & OPEN PLATFORMS



The Connecting Europe Facility validate our solution



Scalable system about data gestion



Open APIs
(OMA NGSI)

Open Data
Integration
(CKAN)

Data model to
Smart Cities
(ETSI ISG CIM)
*Member of ETSI

100
Cities

Global
Data
Marketplace
(Synchronicity)



- Multiplatform connection
- IoT devices and M2M with scalable integration
- Integration and interworking with Continua Alliance, OMA, Alljoyn, etc.
- Data models and Semantic (W3C SSN XG - W3C Web of Things)



- Devices with remote control
- Software and firm actualization
- Efficiency maintenance
- FIWARE & OneM2M integration

