

Quality / Recognition





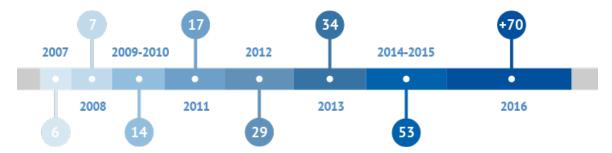


Team





of team members

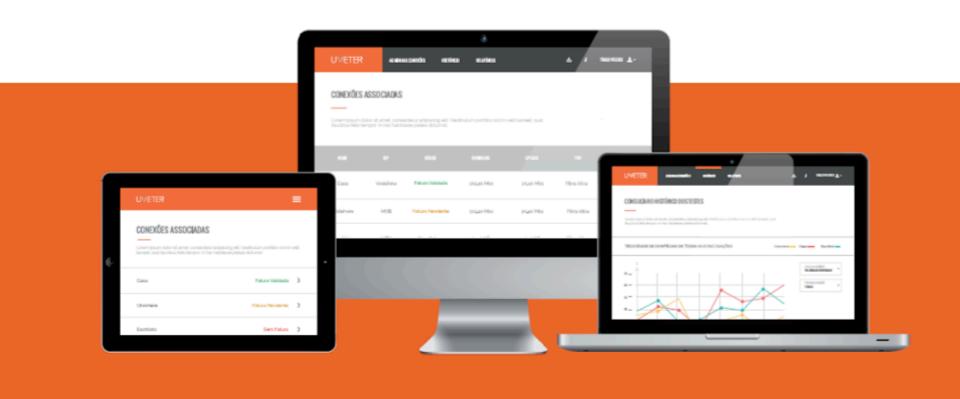


90% with a Master's degree

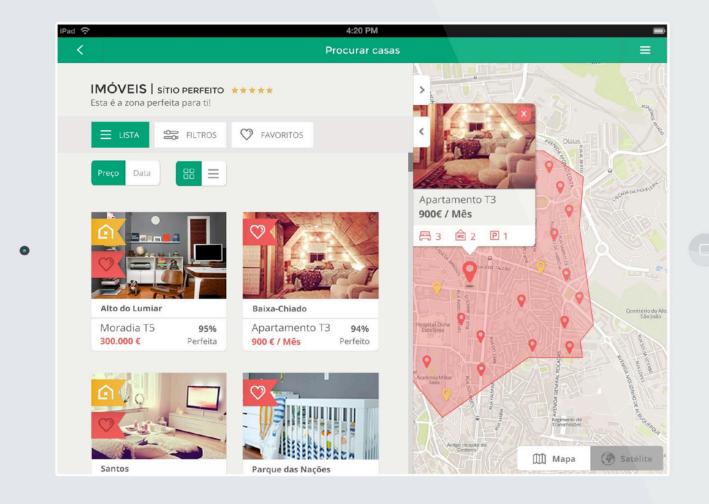


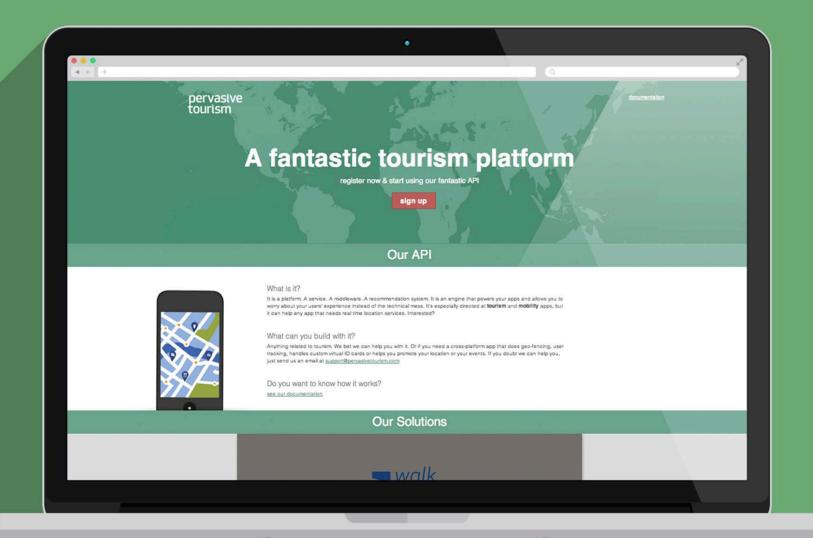
SOLUTIONS















1st Ubiwhere spin-off on Smart Cities

















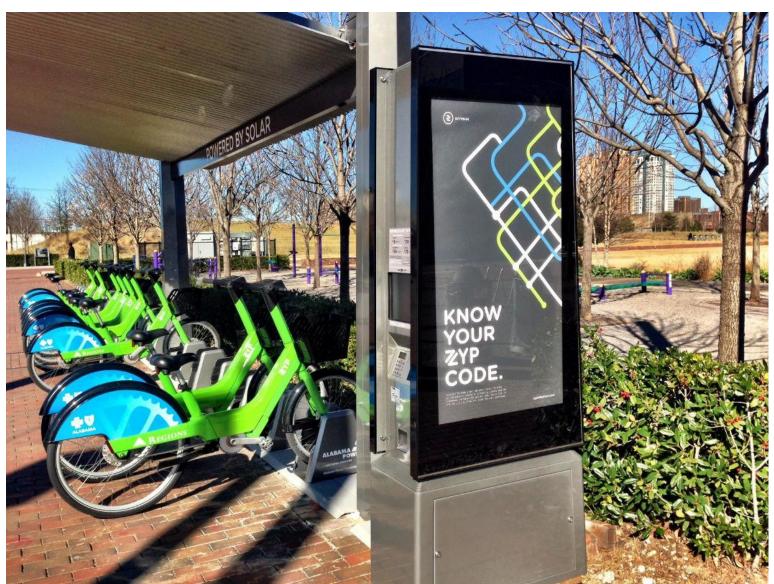
Starting...



1 st	Wolfsburg	Germany, Europe	50
2 nd	Birmingham	Alabama, US	400
3 rd	Algarve	Portugal, Europe	25
4 th	Richmond	Virginia, US	250
5 th	Baltimore	Maryland, US	500
6 th			

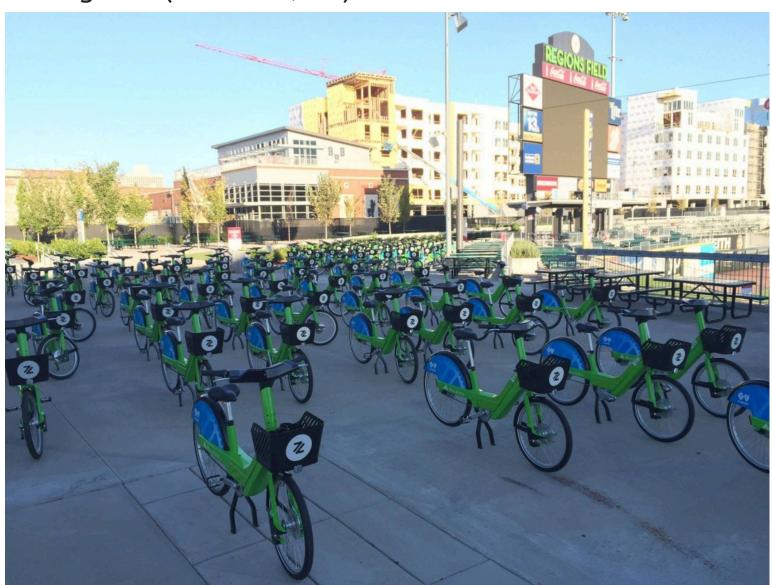


Birmingham (Alabama, US)





Birmingham (Alabama, US)



Birmingham (Alabama, US)







Urban Intelligence on Smart Cities

Urban Intelligence on Smart Cities



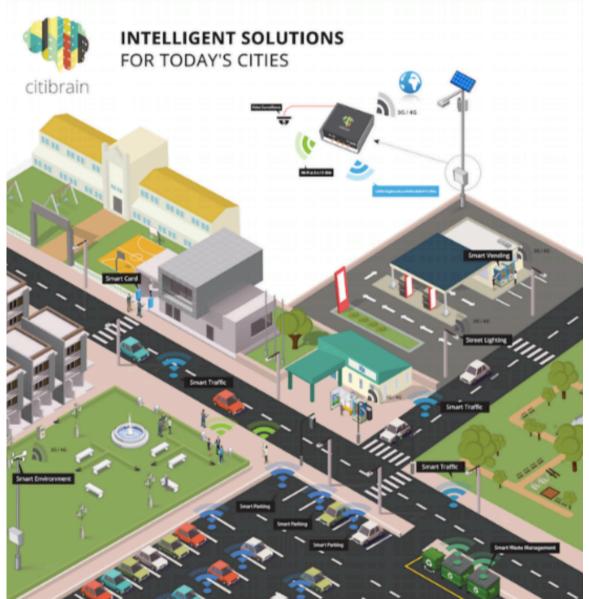




Unified Smart Cities' Solutions

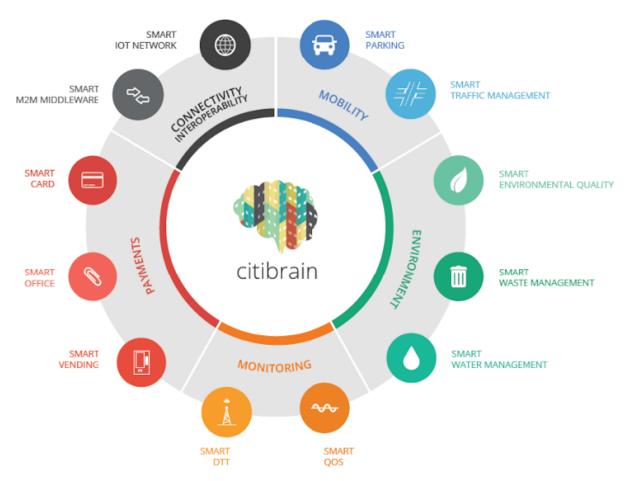
Unified Smart Cities' Solutions











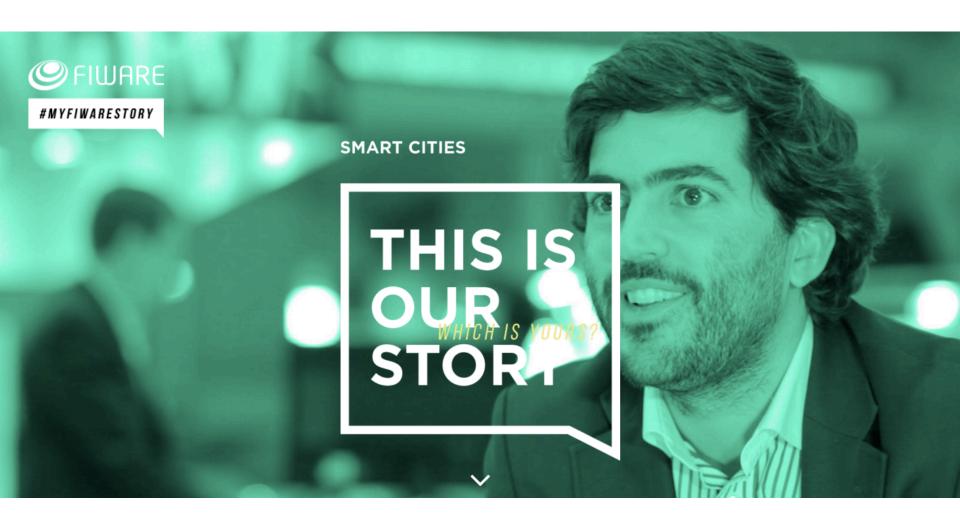
www.citibrain.com



FIWARE

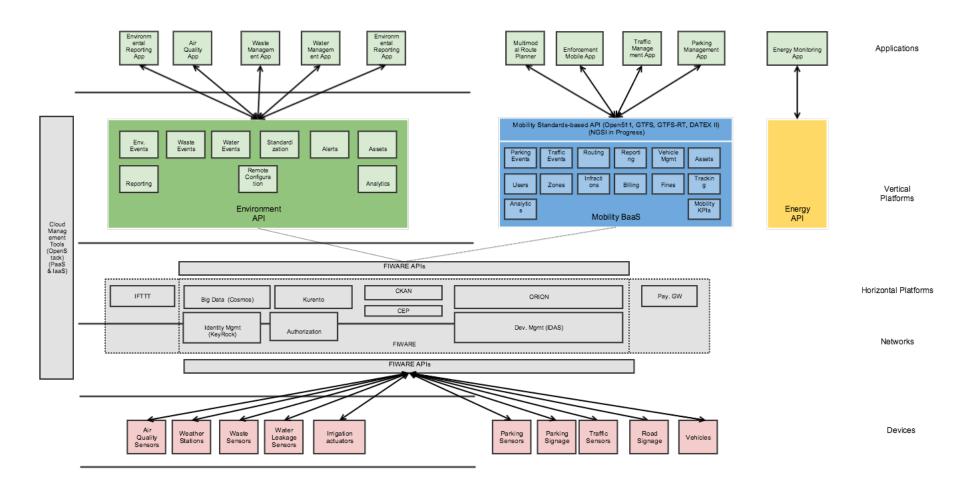
FIWARE





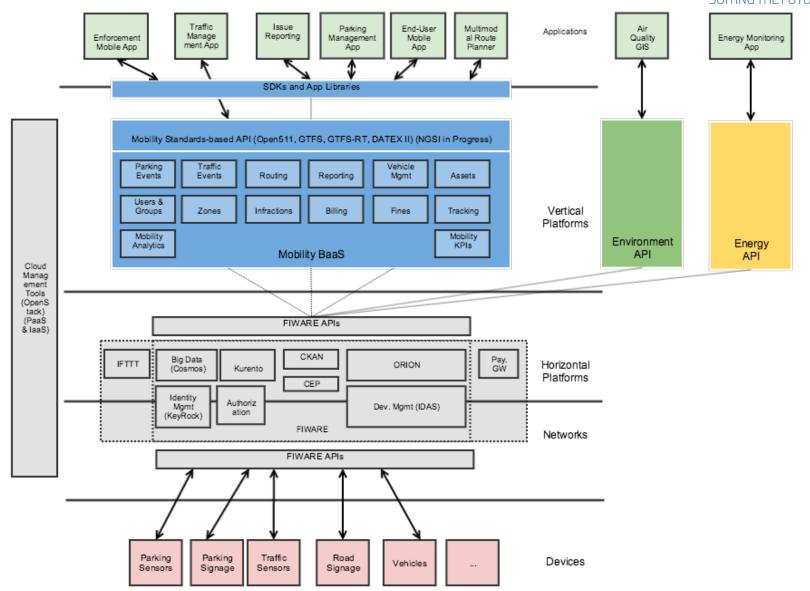
Ubiwhere & FIWARE – Vertical BaaS





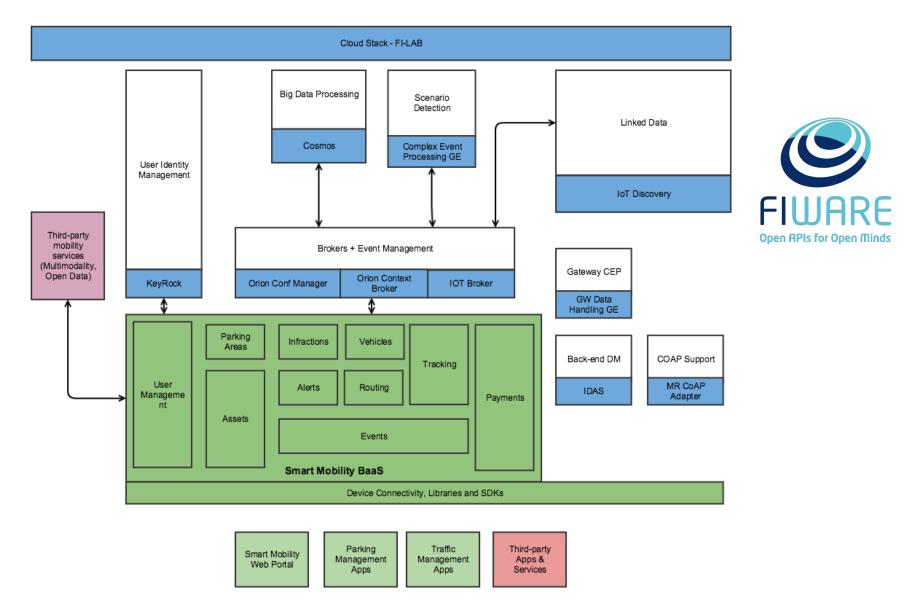
FIWARE – Mobility BaaS





FIWARE – Smart Parking







FIWARE in use with third parties

Demos on FIWARE Smart Cities' Solutions Ubiwhere



- Vodafone
 - Vodafone Parking http://parking.vodafone.citibrain.com/
 - Vodafone Waste http://waste.vodafone.citibrain.com/
- Telefonica (ongoing)
- Indra (ongoing)
- SigFox / Narrownet
 - Smart Parking
- Citibrain
 - Control Center http://control.citibrain.com
 - Smart Parking http://parking.citibrain.com
 - Smart Waste http://waste.citibrain.com
 - Smart Environment http://environment.citibrain.com



FIWARE @ Porto, Portugal

PORTO: A FIWARE ENABLED CITY





The Porto FIWARE Ecosystem



Ubiwhere activities...

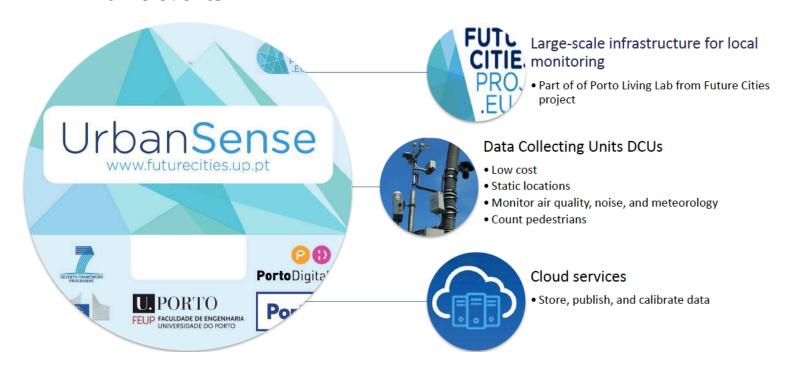
- 1. Making happen the Porto FIWARE Node
- 2. Improving the Quality of Life (QoL) in a Smart City (through 75 connected sensors)
 - Air Quality... 15 different sensors/parameters
 - Noise
 - Temperature
- 3. Making touristic POI "openly available" (using CKAN)
- 4. Integrating the *Porto FIWARE Node* with
 - 1. the UrbanSense project/ platform
 - 1. Taxis, Buses, Waste trucks
 - 2. the VideoSensing project/ platform
 - 3. the One.Stop.Transport project/platform
- 5. Developing the MoodSensor iOS app
- 6. Developing the Water Metering Platform and Mobile App

FIWARE use @UrbanSense Project



Data Sources to reach real Urban Intelligence on Unified Smart Cities' Solutions

- Porto City (FutureCities and UrbanSense) data
 - Environment events
 - Traffic events





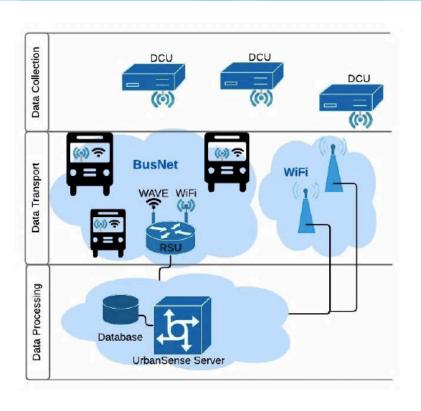
UrbanSenseMobility

FutureCities Project / UrbanSense Platform UbiWhere



UrbanSense platform architecture





- Data collection Units (DCUs)
 - Sensors
 - Pedestrian counters
 - Environmental sensors
 - Static DCUs locations
 - 75 environmental in static locations
 - 60 pedestrian counters in static locations
- Data communications: WiFi
 - Large availability around the city
 - City hotspots: Porto Digital or Eduroam
 - Use buses as data mules
- Data storage
 - Relational database stored in the cloud
 - Acknowledgments for received data



UrbanSense

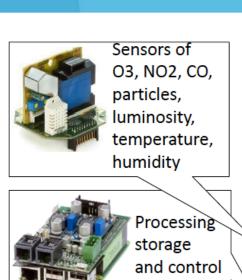
Environment

FutureCities Project / UrbanSense Platform Ubiwhere

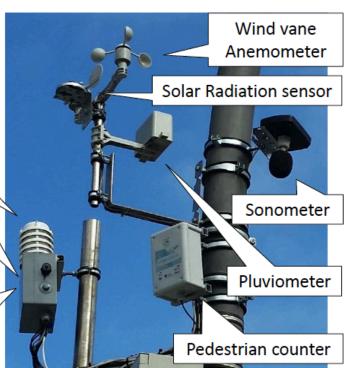
Data Collecting Units components



- Developed within FC
 - Software
 - Hardware
- Based on Raspberry Pi
- Control Board
- Sensor board
- Low cost sensors
- 2 Wi-Fi interfaces
- Enclosure and shield





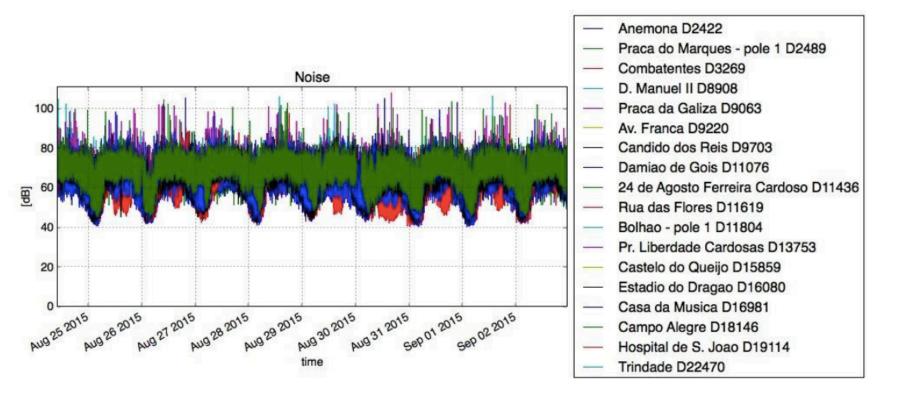


FutureCities Project / UrbanSense Platform UbiWhere



Noise measurements



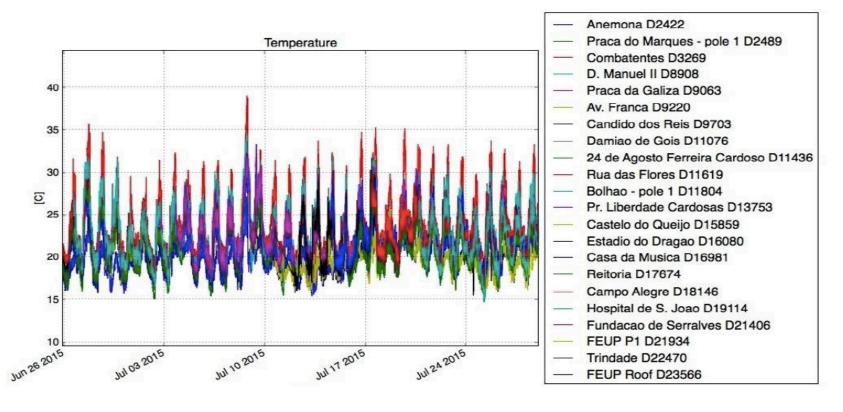


FutureCities Project / UrbanSense Platform Ubiwhere



Temperature measurements







Water Consumption App

PORTO, Water Consumption App





Solicitar Acesso à Aplicação

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras at libero sit amet tortor suscipit molestie id in justo. Proin lacinia lobortis augue dignissim molestie.

Número de Cliente	
Número de Contador	
Email do Utilizador	
Sistema Operativo do Smartphone	
Android	~

Solicitar Acesso à Aplicação

PORTO, Water Consumption App





Sair



Q Utilizadores

₩ Água Consumo

🐴 Água Balnear

△ Alertas

Estatísticas

MAIS



Total do consumo de água



Qualidade Média



Qualidade de água excelente PEAASAR II

& Utilizadores

- . Anabela Silva
- . João Pedrosa
- . Joana Fitas
- Bruno Garcia
- . Mafalda Capelo
- . Ana Santos

△ Alertas

Obras nos Aliados

MAIS

- . Intervenção programada no dia 24 de julho na avenida
- . Intervenção técnica 06/2015
- . Alteração ao trânsito devido a obras de reparação de conduta ...

⊠Notificações

- . Foi lançada a versão 1.0.4 da aplicação, com novas funcionalidades
- . Dia 15 de agosto, não perca a festa da água no porto
- . Inauguração da estação de águas dos aliados

MAIS

Ajuda Contactos

PORTO, Water Consumption App





Parabéns!

A sua família está a fazer uma utilização responsável de água.





mg/L

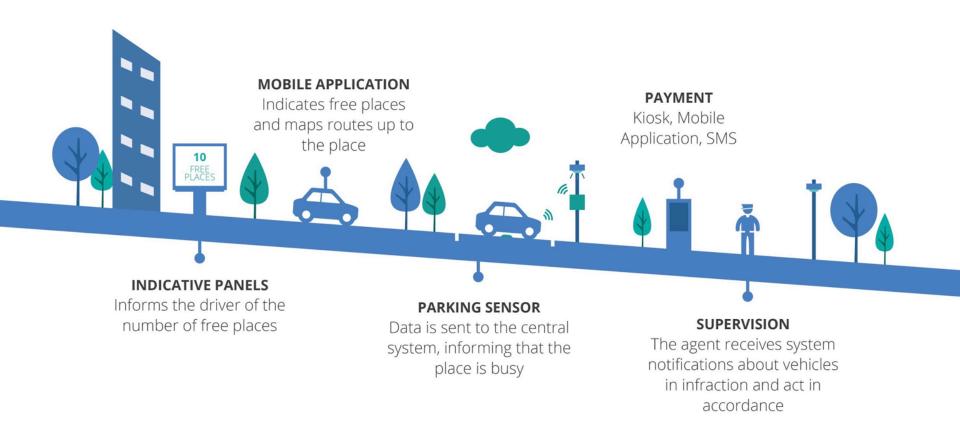


Citibrain Vertical Applications



SMART PARKING

A PARKING TICKET THAT NEVER EXPIRES





SMART TRAFFIC MANAGEMENT

NO ONE LIKES TO WAIT

SENSOR

Transmits the volume and flow of traffic through gateways

CENTRAL SYSTEM

- . Infers inputs from the sensor network detecting and predicting traffic congestion;
- . Redirects vehicles through suggestions in the vertical panels;
- . Provides directions in mobile applications;
- . Provides alerts on websites of public consultation;
- . Controls the vertical signalling privileging the traffic flow in critical areas;
- . Accessible and integrated with civil protection systems, creating privileged routes in case of catastrophes, accidents and emergencies of any kind.



SMART WASTE MANAGEMENT

VALUE URBAN WASTE

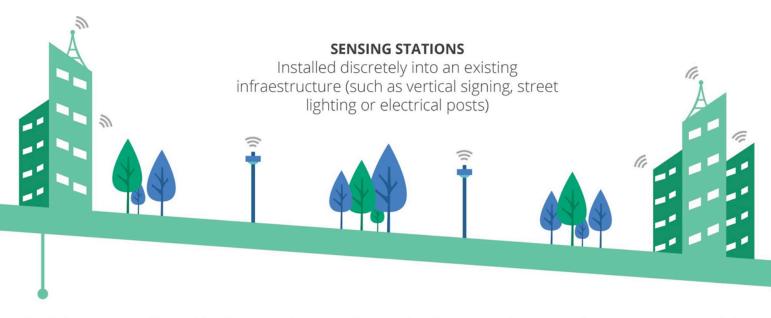


The system allows the access to waste containers through RFID cards. The garbage bags used by each citizen allow the identification, meaning that the waste placed by them will be recorded in his user account. After confirming the contents of the bags in the selection phase of the waste processing company, these "points" can be used to calculate the rate of urban waste



SMART ENVIRONMENTAL QUALITY

ENVIRONMENT IS AN ESSENTIAL GOOD



The information collected by these stations can be used to improve urban planning and strategy and the interaction with the residents of the city, but also be combined with information from other Citibrain systems to define new strategies for managing traffic, detect risk situations or emergencies, and how to measure parameters of urban space by citizens.

These stations communicate in real time with Citibrain's Core Management System (through Smart IOT Nerwork or through Wi-Fi or GPRS), and are powered energetically by the structure in which they are installed.

