



**ubiwhere**  
SUITING THE FUTURE

**Rui A. Costa**

# Quality / Recognition

**ubiwhere**  
SUITING THE FUTURE

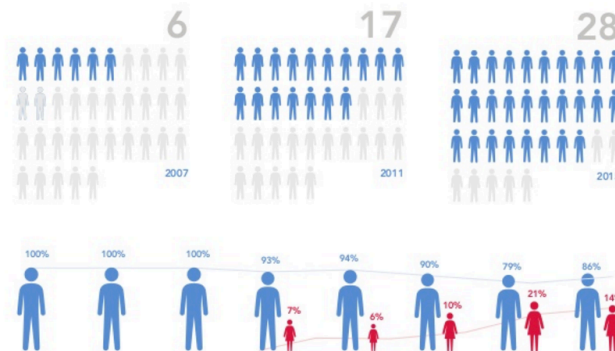


**CMMIDEV / 3** <sup>SM</sup>  
Exp. 2017-12-12 / Appraisal #23133

# Team



EMPLOYEES

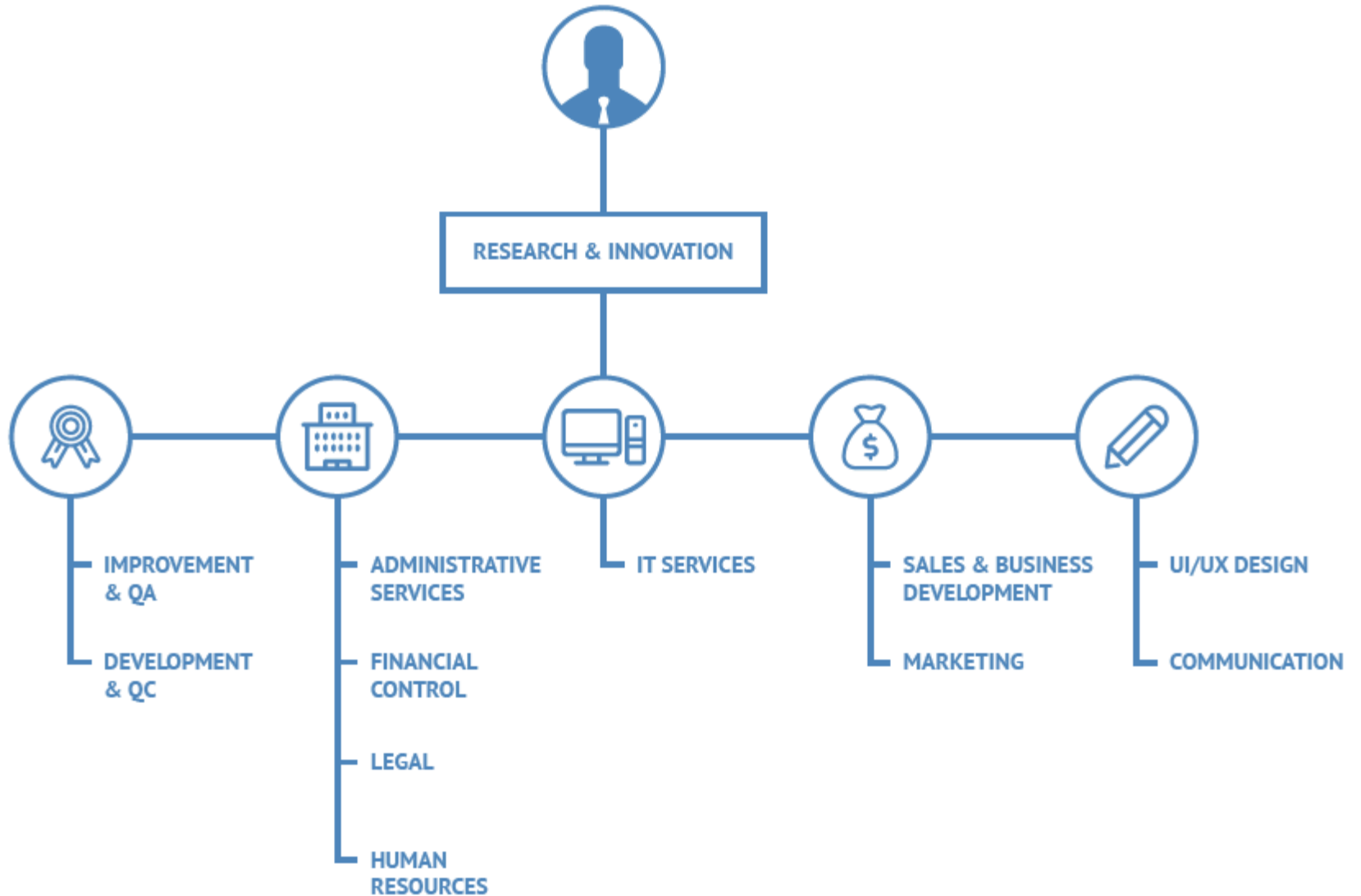


**90%**  
with a Master's  
degree

# ORGANOGRAM



# Organogram



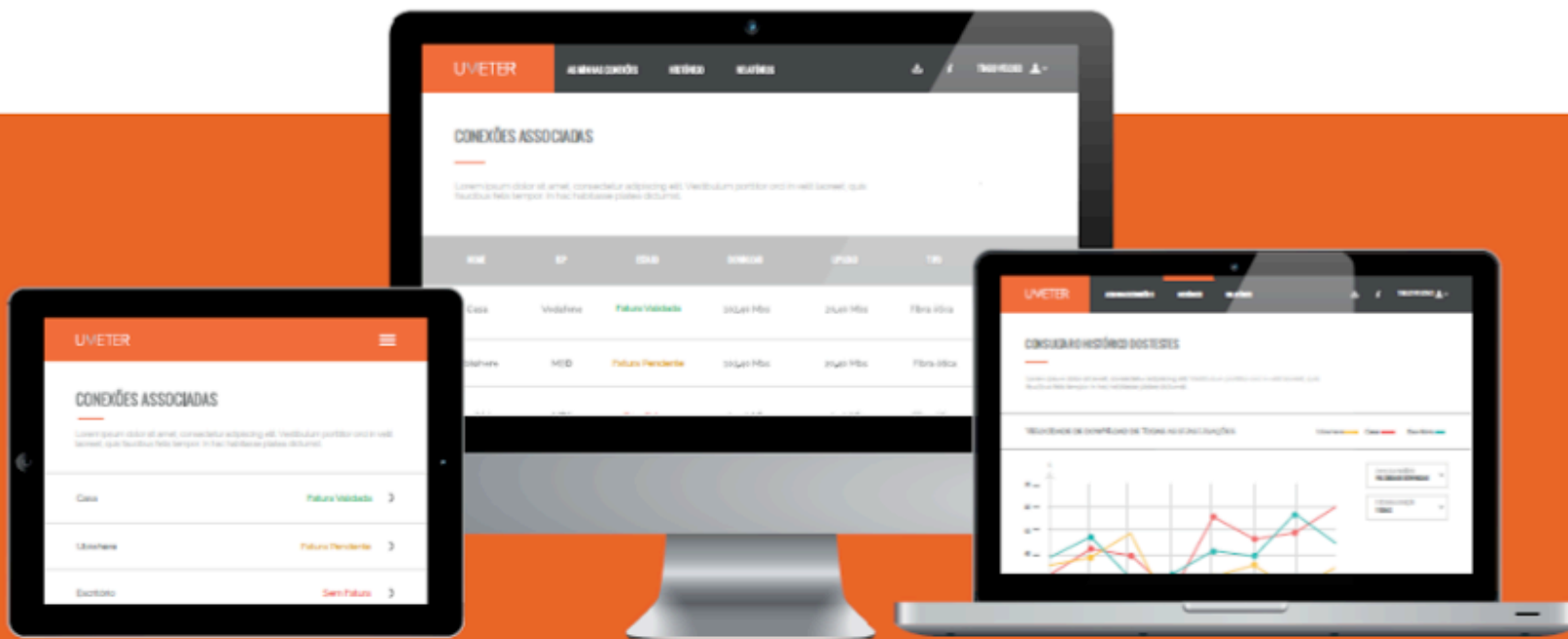
**SECTORS  
&  
R&I TOPICS**

## TELECOM & FUTURE INTERNET

Our portfolio of solutions is quite vast, and ranges from areas such as QoS (Quality of Service) and QoE (Quality of Experience), Opportunistic Networks, Indoor and Outdoor Positioning Systems, Networking Convergence and Future Internet Services.



# TELCO SOLUTIONS



PORTUGAL COIMBRA SONDA 777



**GRAVAR TS STREAM** **CONFIGURAR SONDA**

**MORADA**  
Rua do Padrão - Eiras 3025-045 Coimbra

**COORDENADAS**  
LA 40.180447 LO -8.426514

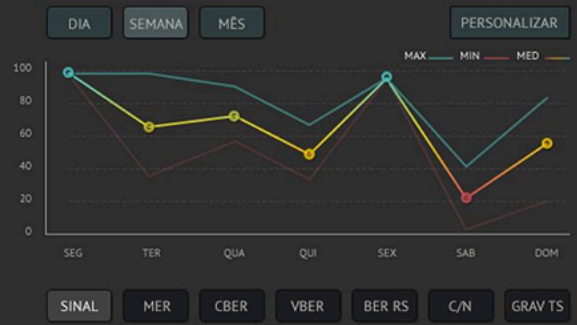
**Nº DE SÉRIE**  
S57XZ427WXIPO88

### ESTATÍSTICAS GERAIS DA SONDA 777

27-06-13 às 18:30



### ESTATÍSTICAS POR TEMPO



### ALERTAS

- 29-06-13 às 18:30**  
Valor de sinal demasiado baixo: 33 dB
- 25-06-13 às 13:30**  
Valor de sinal demasiado baixo: 13 dB
- 27-06-13 às 11:00**  
Valor de sinal baixo: 53 dB

### GRAVAÇÕES

- 29-06-13 às 18:30**  
Sinal: 33 dB **DOWNLOAD VIDEO**
- 29-06-13 às 18:30**  
Sinal: 13 dB **DOWNLOAD VIDEO**
- 12-05-13 às 10:35**  
Sinal: 93 dB **DOWNLOAD VIDEO**

DETALHES DA INSTALAÇÃO



# TELCO R&I

# TELCO R&I

## QoS/QoE

Monitoring Platforms  
Analytics

## Security

Analytics

## 5G - SDN/NFV

MEC

## EU PROJECTS | TELCO

FLEXMETER  
SELFNET (5G-PPP)  
SONATA (5G-PPP)  
SHIELD

## SMART CITIES

Our company is committed to create smart solutions for smart cities in areas such as mobility, tourism, energy and efficient resource management. We embrace interoperability, Open Data and smart cloud-based services as fundamental components of what we do.



# 1<sup>st</sup> Ubiwhere spin-off on Smart Cities



bike  
emotion<sup>®</sup>  
BIKE SHARING TECHNOLOGY

ENJOY FREEDOM

[www.bikeemotion.com](http://www.bikeemotion.com)

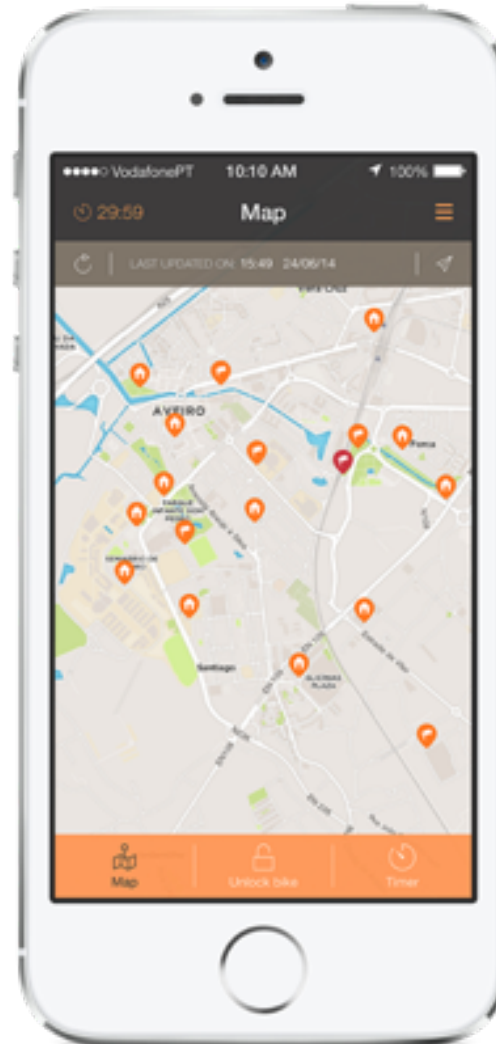
# THE ULTIMATE URBAN VEHICLE

It will change the way  
you move.









## Starting...

1 <sup>st</sup>	<b>Wolfsburg</b>	Germany, Europe	50
2 <sup>nd</sup>	<b>Birmingham</b>	Alabama, US	400
3 <sup>rd</sup>	<b>Algarve</b>	Portugal, Europe	25
4 <sup>th</sup>	<b>Richmond</b>	Virginia, US	250
5 <sup>th</sup>	<b>Baltimore</b>	Maryland, US	500
6 <sup>th</sup>	<b>Summit County</b>	Utah, US	100
7 <sup>th</sup>	<b>Seattle</b>	Washington, US	1.200
8 <sup>th</sup> ...			



# Birmingham (Alabama, US)





# Birmingham (Alabama, US)





# Birmingham (Alabama, US)





# Baltimore (Maryland, US)



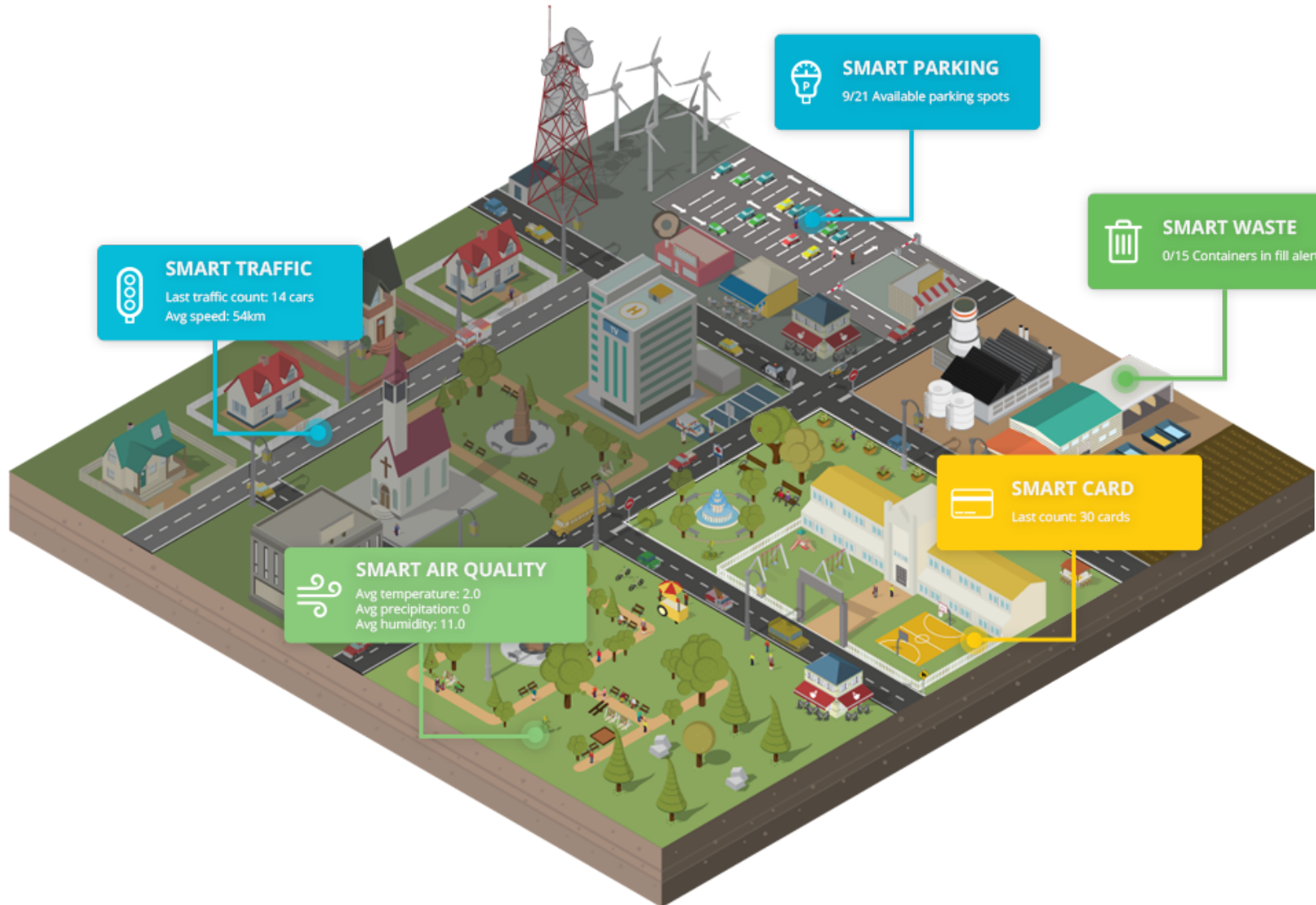


Richmond (Virginia, US)



# Urban Intelligence on Smart Cities

# Urban Intelligence on Smart Cities



# Smart Cities Vertical Applications

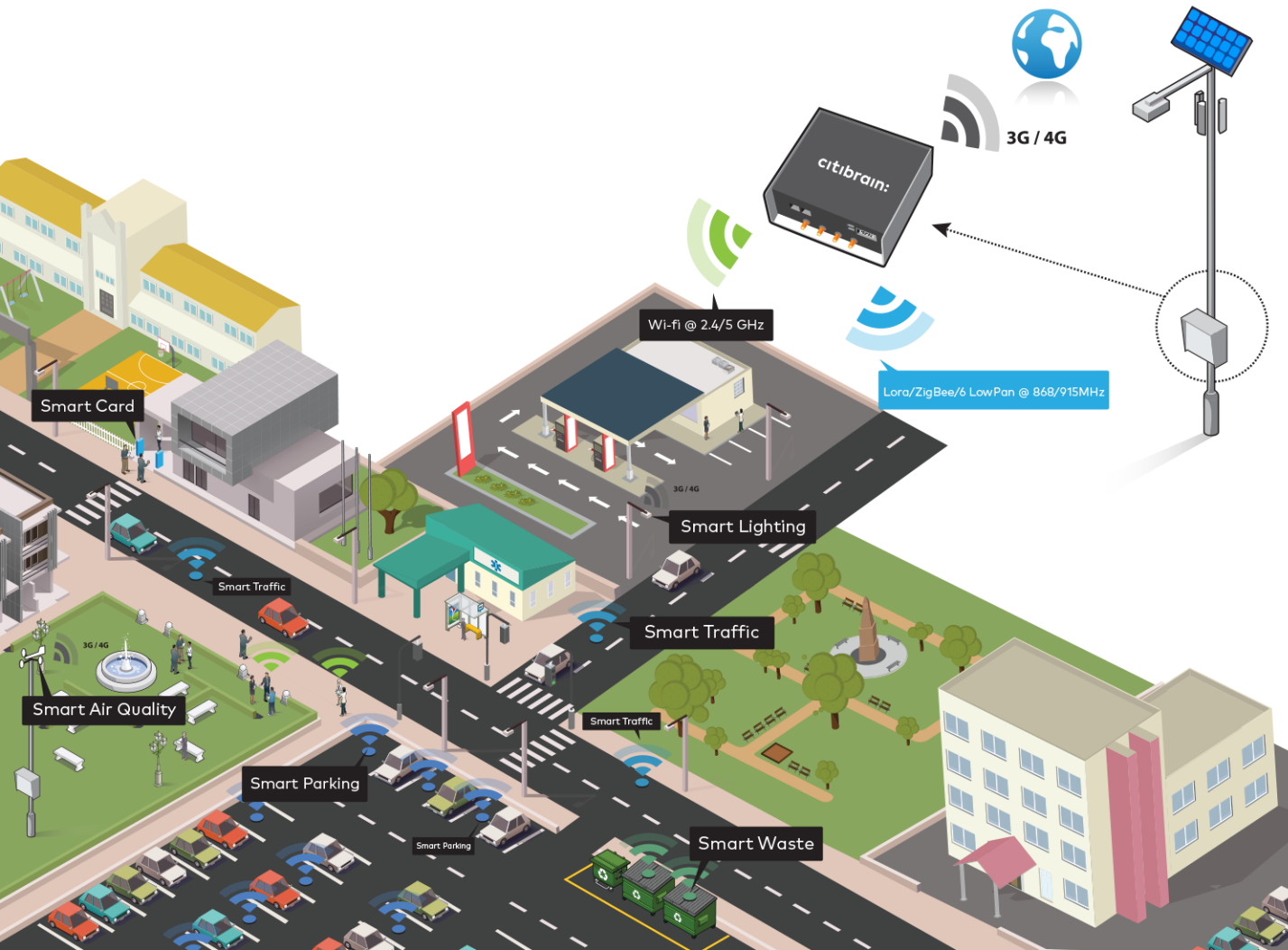
**citibrain:**



# citibrain:

"smart solutions  
for global challenges"

ubiwhere  
SUITING THE FUTURE



**smart solutions for  
global challenges**

[www.citibrain.com](http://www.citibrain.com)

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**MICRO I/O**  
serviços de electrónica, lda.

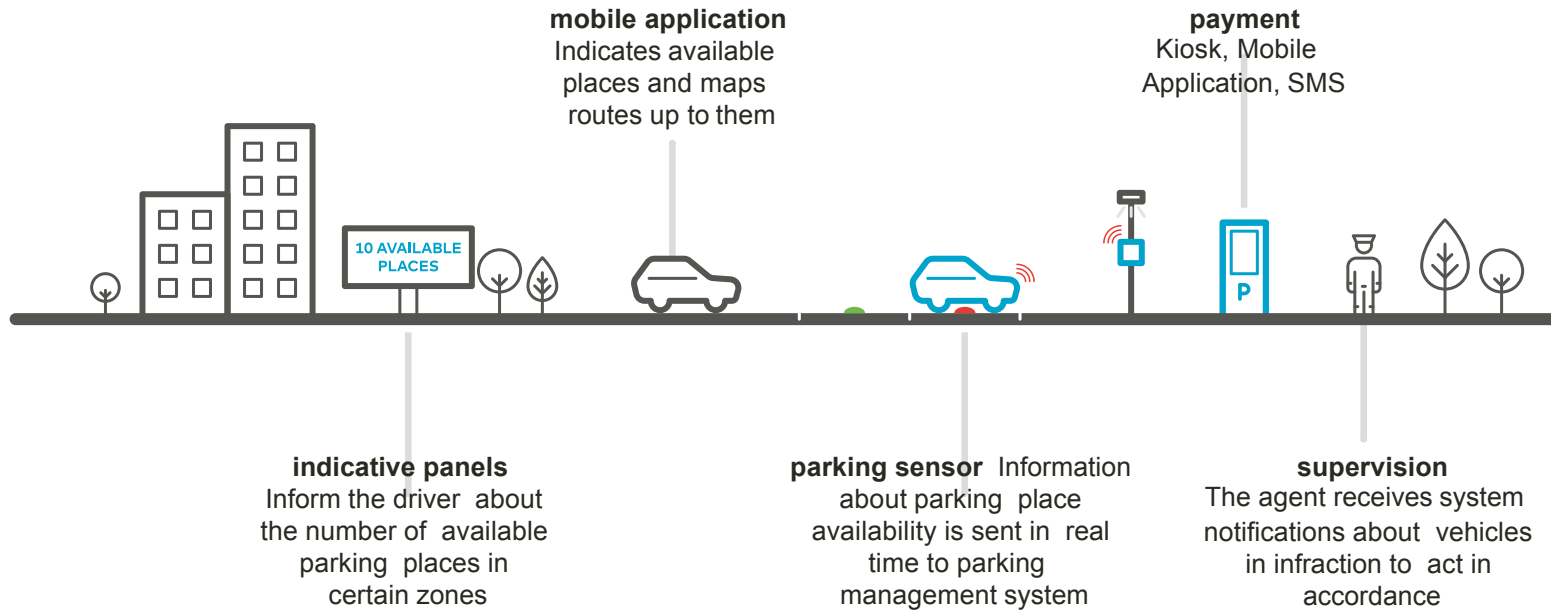
  
**wavecom**  
wireless experts



# smart parking

A PARKING TICKET THAT NEVER EXPIRES

# how it works



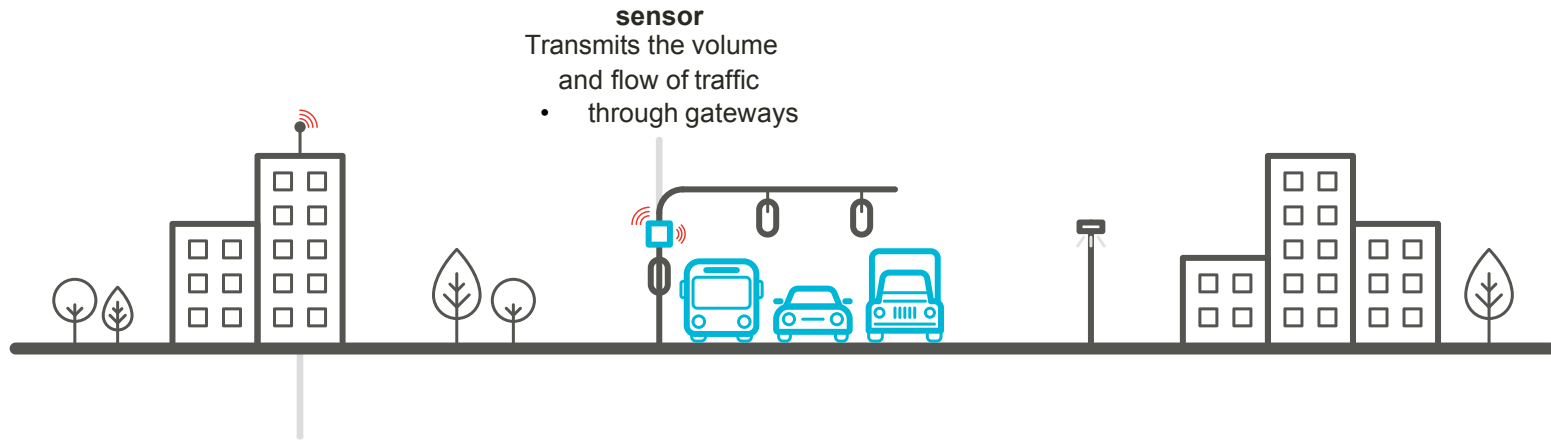




# smart traffic

NO ONE LIKES TO WAIT

# how it works



**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





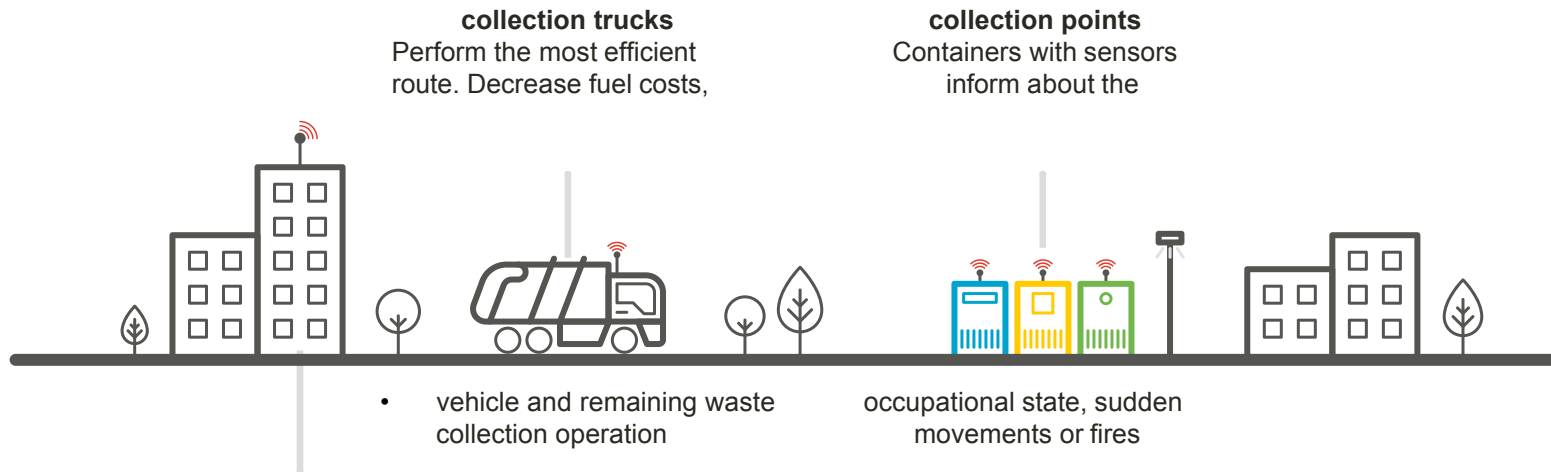
**smart  
waste**

**RECYCLABLES**

**VALUE URBAN WASTE**



# how it works



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 their user accounts. 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 air quality

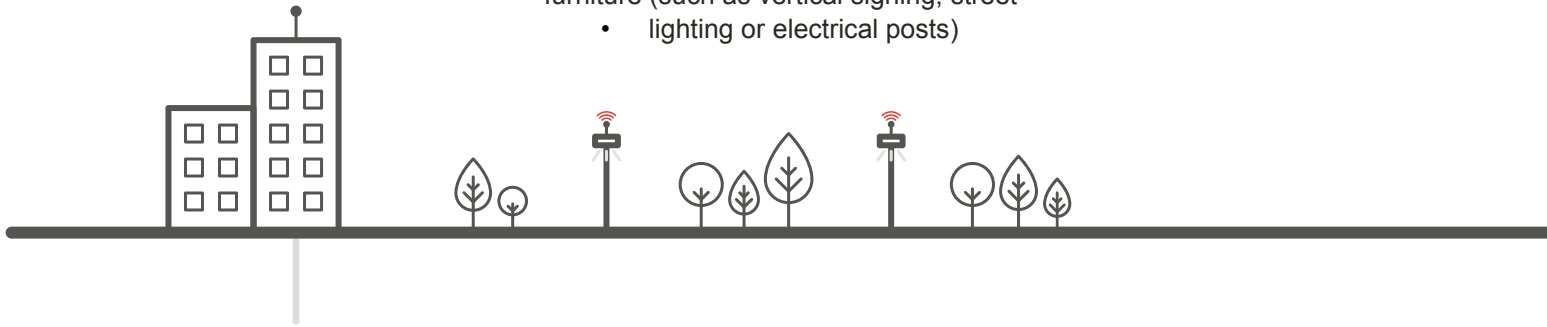
AIR IS AN ESSENTIAL GOOD

# how it works

## sensing stations

Discretely installed into the existing urban furniture (such as vertical signing, street

- lighting or electrical posts)



The information collected by these stations can be used to improve urban planning, strategy and interaction with the city residents, but also be combined with information from other Citibrain systems.

These stations communicate in real time with Air Quality Management System through Wi-Fi or GPRS, and are powered energetically by the structure in which they are installed.



[info@citibrain.com](mailto:info@citibrain.com) · [www.citibrain.com](http://www.citibrain.com)

# Enabling Unified Smart Cities' solutions with 5G technologies



# The City Nervous System



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INTEGRATED MOBILITY

IMPROVED ENVIRONMENT

ENERGY EFFICIENT

## Concept

### Central Nervous System (Urban Platform)

City Services Providers  
Integration  
Urban Intelligence  
Interoperability



### Peripheral Nervous System (Urban Physical Infrastructure OS)

5g Compliance  
Modularity



### Circulatory System (Integrated Mobility)

Bike-sharing  
Parking



### Respiratory System (Environment Improvement)

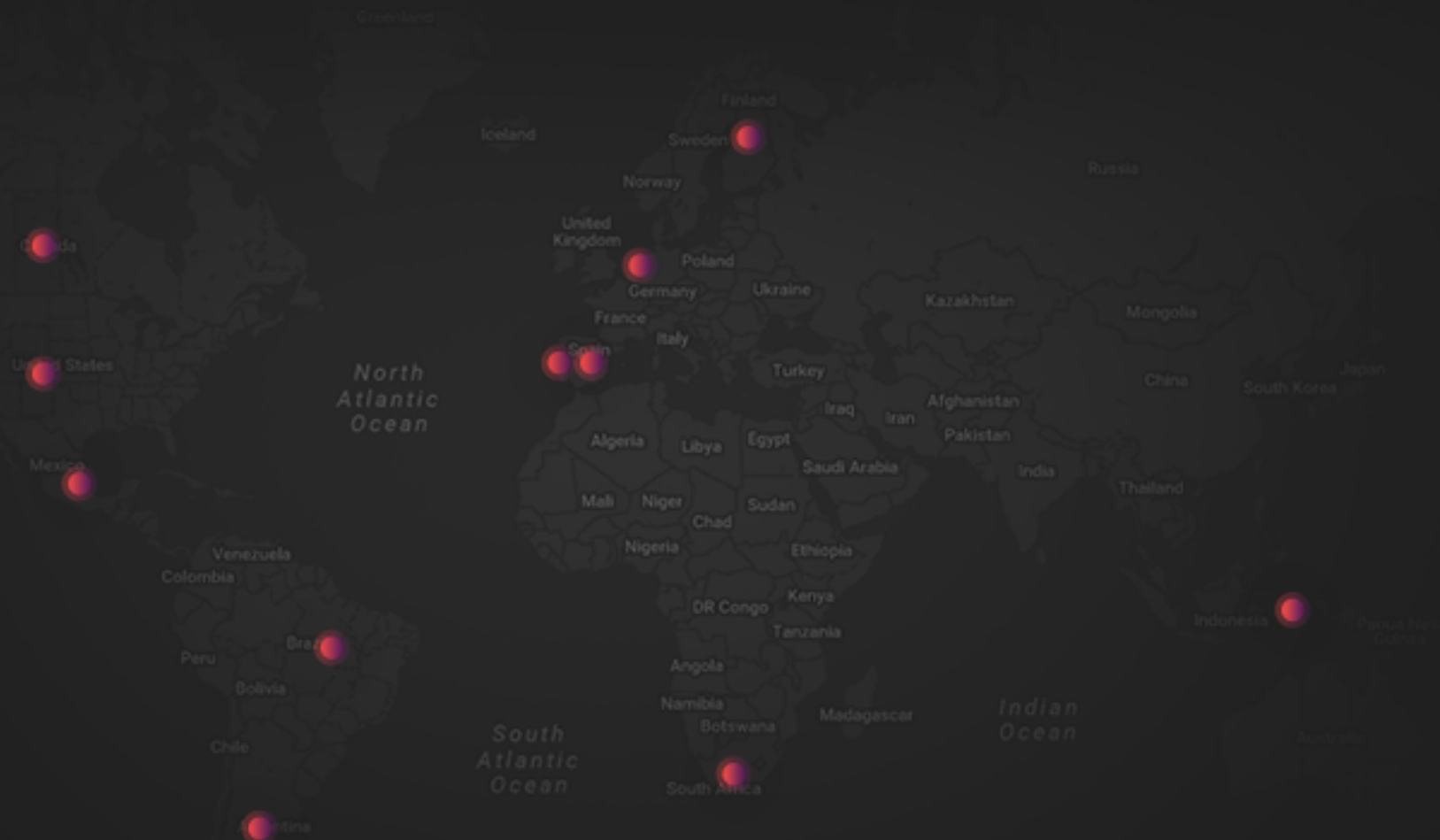
Waste Collection  
Urban Cleaning



### Muscular System (Energy Efficiency)

Lighting  
EV Charging





**WORLD: MONTREAL • PORTLAND • TORREÓN • RECIFE • BUENOS AIRES • PORTO • BARCELONA •  
EINDHOVEN • HELSINKI • CAPE TOWN • SINGAPORE**



**ubiwhere**  
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**THANK YOU!**