

# EMBERS

## Mobility Backend-as-a-Service

André Duarte  
aduarte@ubiwhere.com



# About EMBERS

- Innovation Action funded by the European Commission:  
Create Prototype Solutions to concrete mobility challenges

- Consortium of:



- Main Events:



**HACKATHON**

November 2016



**APP CHALLENGE**

November 2017



**OPEN CALL**

January 2018

**Ubiwhere**

## Who we are

- Software development SME founded in 2007
- Four offices and 50 employees
- Five spin-offs: Bikeemotion | Parkware | ARO Consulting | OAKREACTIVE | Smart Lamppost
- Gold members of FIWARE Foundation & Full members of ETSI (ISG CIM)
- Quality Certifications: ISO 9001 | CMMI DEV 3 | CMMI SVC 3 | UNE 1157



# Team



Rui A. Costa  
CO-FOUNDER, CEO

Nuno Ribeiro  
CO-FOUNDER, COO





# Core areas

TELECOM  
&  
FUTURE  
INTERNET



SMART  
CITIES



# Smart Cities Products

# 1st Smart Cities product



bike  
emotion®



# 1st Smart Cities product



## Bikeemotion - started in 2015...

• Wolfsburg - Germany, Europe	50 bikes
• Birmingham - Alabama, US	400 bikes
• Algarve, Lagoa - Portugal, Europe	30 bikes
• Richmond - Virginia, US	220 bikes
• Baltimore - Maryland, US	500 bikes
• Summit County - Utah, US	88 bikes
• Barreiro - Portugal, Europe	10 bikes
• Howard County - Maryland, US	78 bikes
• Rio Maior - Portugal, Europe	24 bikes
• Coruche - Portugal, Europe	27 bikes
3 new systems (to be deployed)	600+ (next couple of months)

## Smart Cities brand

**citibrain:**



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

# Smart Cities brand

## **citibrain:**

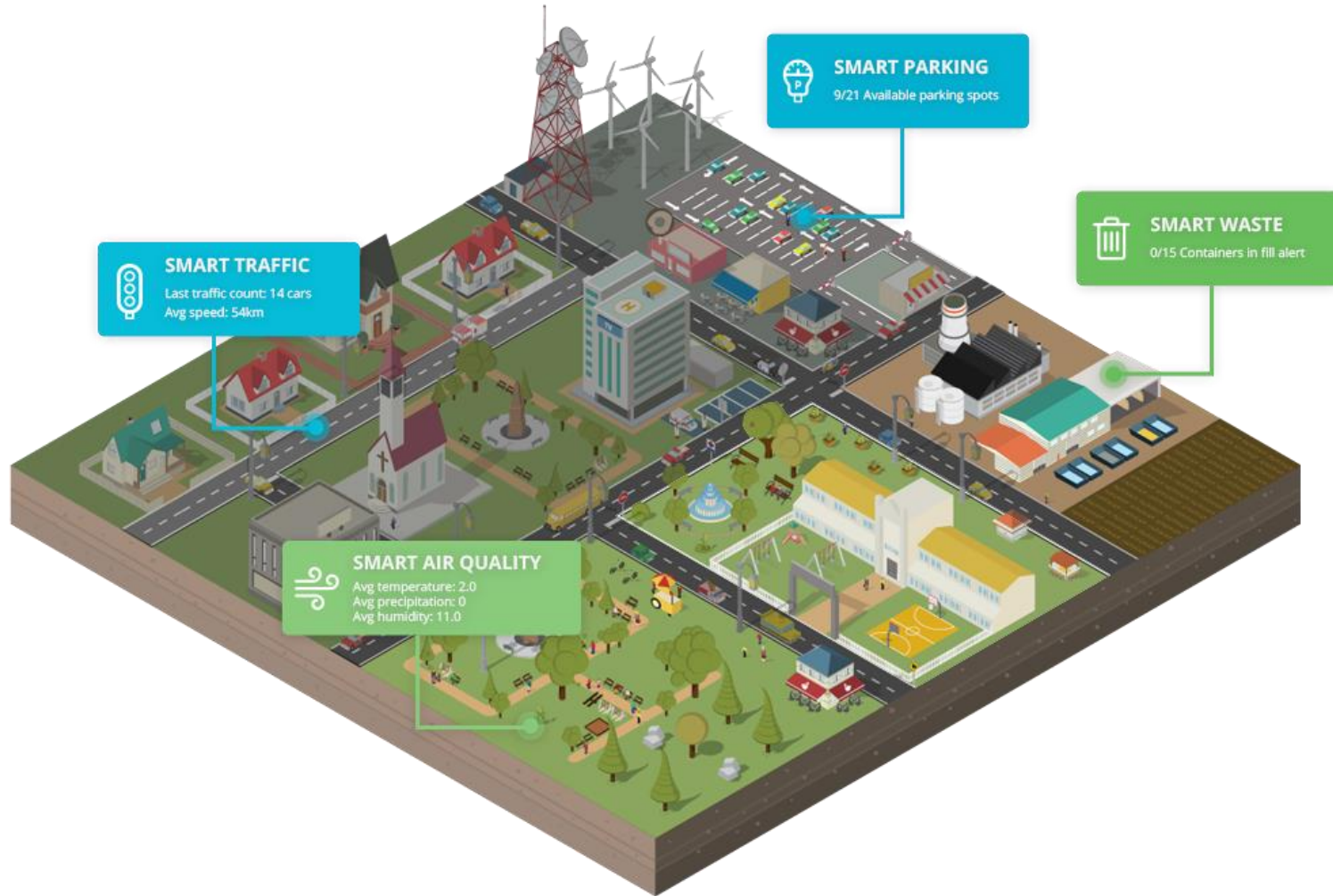


[www.citibrain.com](http://www.citibrain.com)

# **Our vision for Mobility**

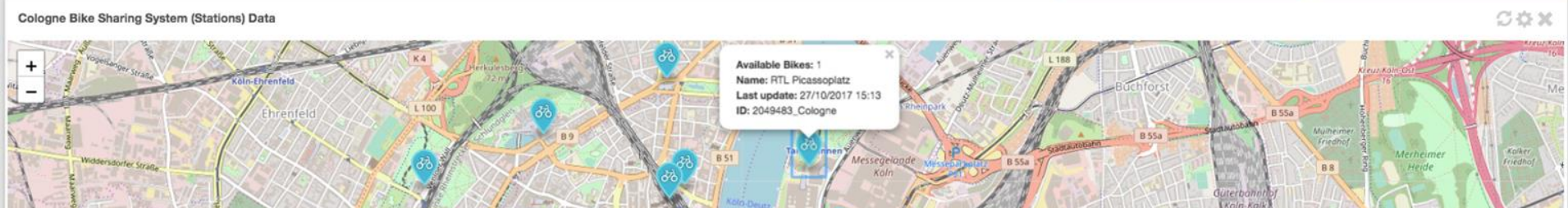
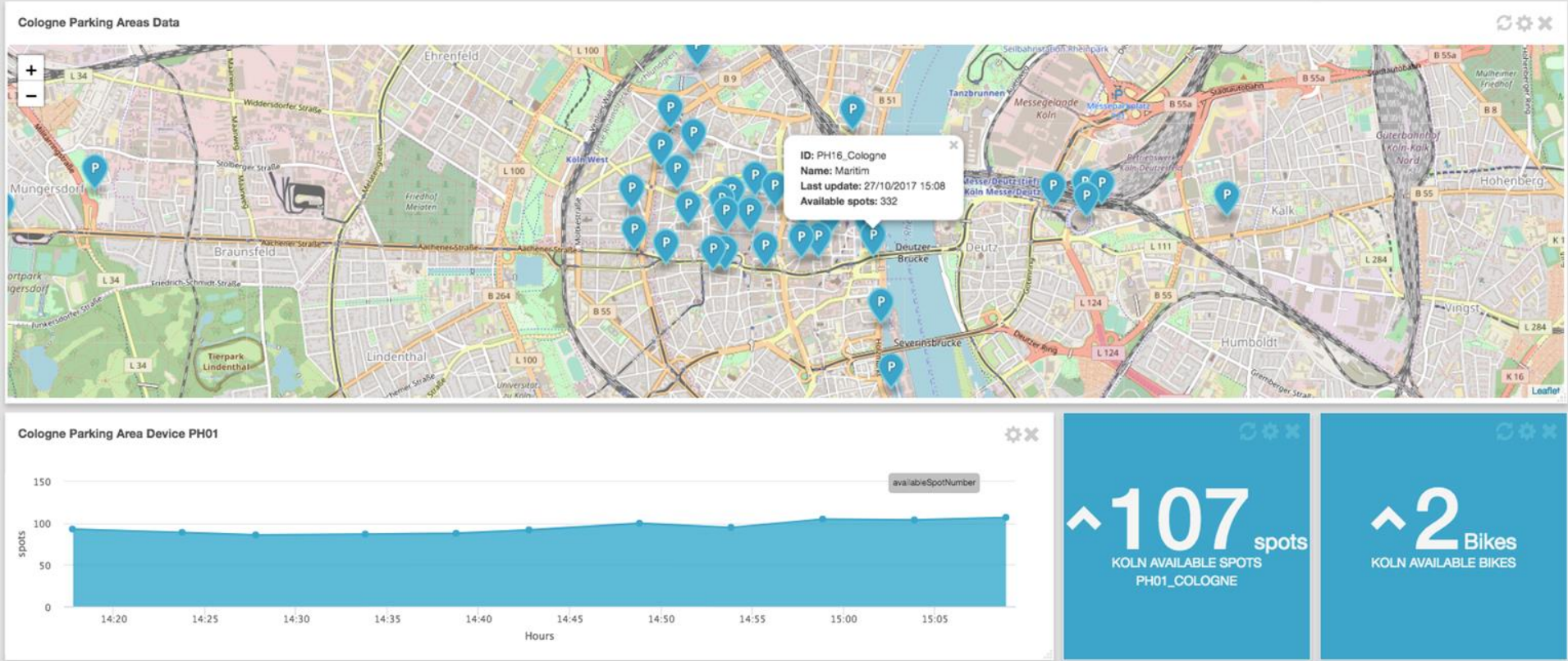


# Unified Vision on Smart Mobility

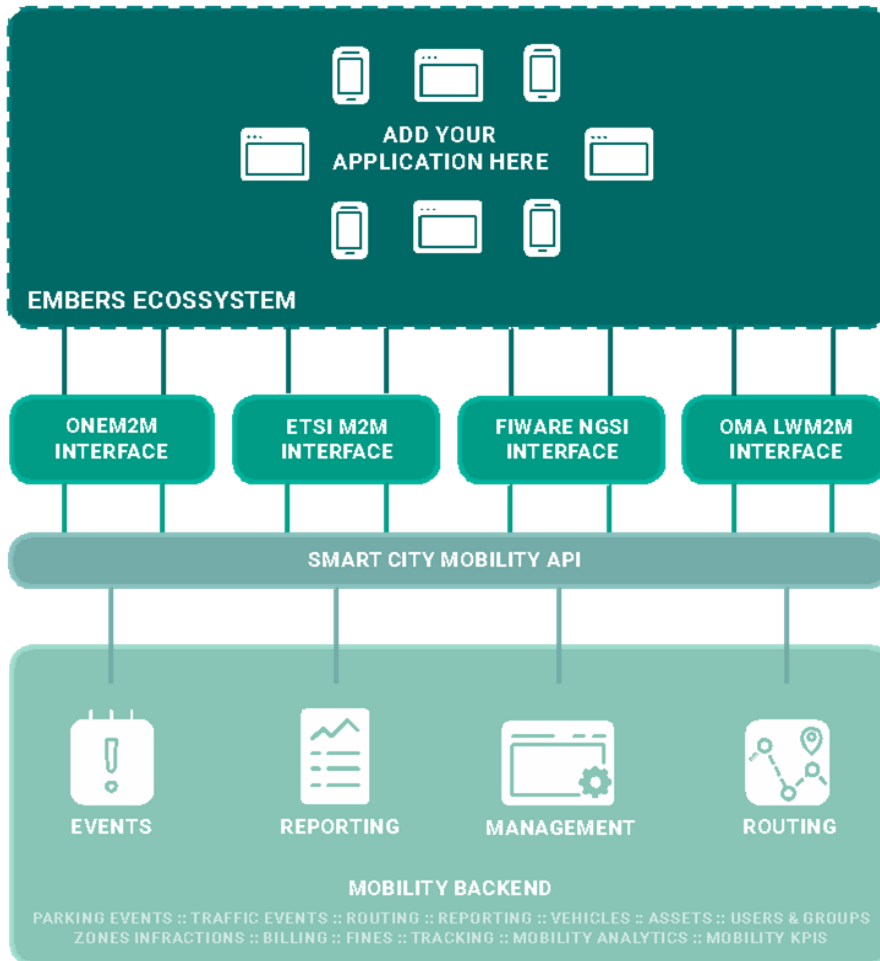


# Unified Vision on Smart Mobility

EMBERS



# Smart Mobility Ecosystem



Cities can choose best-of-breed apps:

No vendor lock-in

Choose your way of accessing the API

Open smart city mobility API:

Works across cities

# Mobility Backend-as-a-Service (MBaaS)



# Technical Overview

City (Service provider or Citizen) provides real-time data such as: transit feeds, status waste bins, parking places, etc.



The unified data is used by the app developer to solve the Mobility Challenge



Back-End receives the City's data and open data from other sources (e.g. OpenStreetMaps), processes and harmonises all the information

The end-user (citizen, municipality, waste haulage company, etc.) makes use of the app

\* MBaaS: Mobility Back-End as a Service



# Technical Overview

- Mobility Backend-as-a-Service (MaaS): web platform for urban mobility
- Intelligent services APIs
- Making the bridge between City Service Providers and Citizens
  - Improving **Mobility** with different use cases
  - Creating a Mobility **Ecosystem** for the city
- Supports processing and storage of historical and real-time datasets
- Seamless integration with existing infrastructure (traffic lights, panels, kiosks, vehicles, etc.)
- Ultimate Goal of providing a **Unified vision of Mobility**



TRAFFIC



PARKING



ROUTING



ENVIRONMENT

# Mobility Backend-as-a-Service Platform

- Real-time and historical data APIs
  - Intelligent services APIs
  - City data integrated typically via SDKs
  - We are currently integrating data from several cities, including:
    - Porto
    - Cologne
    - Trikala
    - Santander
    - Valencia
    - Lyon
    - Aarhus
    - Turin
    - Ghent
- Open Call
- Experimentation with Open Data

# Launching of the Open Call

# EMBERS Open Call

- Currently accepting bidders!
- Open until **16th February 2018 12:00 CET**



**30.000€ FOR EACH CHALLENGE WINNER**  
[www.embers.city](http://www.embers.city)

## Beyond the Open Call...

We aim at optimising the operational efficiency of city service providers, making the bridge with municipalities and their citizens!



Avoid vendor lock-in, embracing openness and interoperability.



Empower your city with a Unified Vision on Mobility!



EMBERS

# THANK YOU

[www.embers.city](http://www.embers.city)

EUROPEAN COMMISSION



INITIATIVE



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement n° 687992