



Carlos Bergera



**FROM PROJECT  
TO MARKET**

**A STORY OF INNOVATION**

## Energy transition, electromobility and innovation

“ ... the energy transition is the area of innovation par excellence.”

“ ... mobility electrification, ... is a clear driver to transform the activities of European energy companies through innovation. ... They should generate internal processes of disruption ... taking advantage of the innovative **internal potential**.”

“... beyond a moral duty imposed by the climate change, **the energy transition is a tremendous industrial opportunity for Europe to generate growth, employment and competitiveness.**”

## SMART MOBILITY: DEMO PROJECTS

| 2010            | 2011                           | 2012                        | 2013           | 2014          | 2015 | 2016 | 2017         | 2018 |
|-----------------|--------------------------------|-----------------------------|----------------|---------------|------|------|--------------|------|
| ANDALUCÍA 13 CP |                                |                             |                |               |      |      |              |      |
|                 | VALLADOLID - PALENCIA<br>43 CP |                             |                |               |      |      |              |      |
|                 | GUIPÚZCOA / SARECAR 5CP        |                             |                |               |      |      |              |      |
|                 | BARCELONA 34 CP                |                             |                |               |      |      |              |      |
|                 | MADRID 24 CP                   |                             |                |               |      |      |              |      |
|                 |                                | PAMPLONA / CARSHARING 16 CP |                |               |      |      |              |      |
|                 |                                | CASTILLA Y LEÓN 18 CP       |                |               |      |      |              |      |
|                 |                                | VIZCAYA 4 CP                |                |               |      |      |              |      |
|                 |                                |                             | SALAMANCA 5 CP |               |      |      |              |      |
|                 |                                |                             |                | PAMPLONA 4 CP |      |      |              |      |
|                 |                                |                             |                |               |      |      | BILBAO 2 FCP |      |



## SMART MOBILITY: R&D PROJECTS

| 2010  | 2011 | 2012 | 2013 | 2014  | 2015 | 2016   | 2017 | 2018 |
|---|------|------|------|---|------|--|------|------|
| <b>SURTIDOR</b><br>Fast charging ChaDeMo system   |      |      |      |   |      |  |      |      |
| <b>MUGIELEC</b><br>Charging system development  |      |      |      |   |      |  |      |      |
| <b>GREEN EMOTION</b><br>Standard and interoperable charging systems development in Europe |      |      |      |   |      |  |      |      |
| <b>ICT4 EV EU</b><br>Interoperability and public charging                                 |      |      |      |   |      |  |      |      |
|   |      |      |      | <b>AZKARGA</b><br>Fast, smart, flexible and manageable charging for electric vehicles |      |  |      |      |
|   |      |      |      |   |      | <b>REMOURBAN</b><br>Energy, mobility and ICT integration in Smart Cities |      |      |



## SMART MOBILITY: EVOLUTION AND RESULTS

2010

2018



PRODUCT



INVESTMENT & EMPLOYMENT

CHARGING INFRASTRUCTURE

25.000 charging points by end 2021  
9.000 in companies and publicly accessible parkings  
200 high power charging stations by end 2019

1.600 charging points in Castilla y León  
20 high power charging stations

## SMART MOBILITY: EVOLUTION AND RESULTS

2010

2018





# REMO URBAN PROJECT. 2015 - 2019

REgeneration MOdel for accelerating the smart **URBAN transformation**



Develop and demonstrate a **holistic and highly replicable urban regeneration model** to

- leverage the **convergence of energy, mobility and ICT**
- accelerate the **development of innovative technologies**, organisational and economic solutions
- increase resource and energy efficiency improve the sustainability of urban transport and drastically **reduce greenhouse gases (GHG) emissions** in urban areas
- facilitate **replication** across Europe
- **empower citizens** to be actors in their cities' transformation

## Mobility

Create a **new culture of urban transport** reducing demand for emission-intensive transport models





# REMO URBAN PROJECT. 2015 - 2019



## Drive urban innovation

Interventions and expected impacts

### Low Energy Districts



Retrofitting, renewable heating and cooling, distributed energy generation, monitoring tools for energy efficiency, electricity distribution and advanced building energy management systems

**CURRENT DISTRICTS**  
4,500 kWh/person-yr  
1,485 kg of CO<sub>2</sub>/person-yr



Energy reduction: 34%  
CO<sub>2</sub> emissions reduction: 50%

### Sustainable Mobility



Clean energy vehicles, renewed transport infrastructures and plans for reduced energy consumption and CO<sub>2</sub> emissions

**CURRENT MOBILITY**  
8,340 kWh/person-yr  
2,752 kg of CO<sub>2</sub>/person-yr



Energy reduction: 5,1%  
CO<sub>2</sub> emissions reduction: 5%

### Integrated Infrastructures



Smart grid connectivity, city information platforms, optimized traffic flows, multi-modal transport solutions and collaborative information transfer

### 19 Charging Points

- 14 upgraded to 7,4 Kw Shucko + Mennekkes (type 2)
- 4 of 22 Kw
- 1 fast charger

**Connected to IBERDROLA's back end system to operate and monitor**

**Accesible from IBERDROLA's Public charge APP**

- Easy and intuitive
- EV user doesn't need to have a previous contract
- Features: Charge, Reserve, Route to the Location, Charge session, Historical, ...

# REMOURBAN PROJECT. 2015 - 2019





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**THANK YOU FOR YOUR ATTENTION!**