



evs|27

# ZeM2All

## Zero Emissions Mobility to All

The 27th INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION  
Barcelona. Gran Vía Venue. November 17<sup>th</sup>-20<sup>th</sup>, 2013

Ayuntamiento  
de Málaga



malaga valley



ZEM2ALL

Project developed under the framework of JSIP (Japan-Spain Innovation Program) for technological cooperation.

eVS|27



Participant Companies:



Telefonica



 Mitsubishi Corporation



**HITACHI**

The 27th INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION  
Barcelona. Gran Vía Venue. November 17<sup>th</sup>-20<sup>th</sup>, 2013

Ayuntamiento  
de Málaga



malaga valley



LASTING	2011-2015	Kick-off 05.2012	JSIP (Japan-Spain Innovation Program)	E-Mobility ICT Energy Cities R&D Centres
FINANCING	CDTI, NEDO, COMPANIES	BUDGET	SPAIN JAPAN	15 M € 45 M €



evs|27

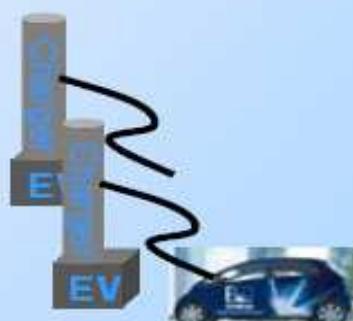
¿Why Málaga?



The 27th INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION  
Barcelona. Gran Vía Venue. November 17<sup>th</sup>-20<sup>th</sup>, 2013

Ayuntamiento  
de Málaga  malaga valley

## NEDO Smart Community System Demonstration Project



### Description

To develop a recharging infrastructure, according to user's needs, integrated in a distribution network, with information and rational use of resources, related systems and communication technologies.

Developing a platform under open eco-sustainable mobility, enabling the transfer of knowledge, experiences and indicators for the implementation of electric vehicles in our society.

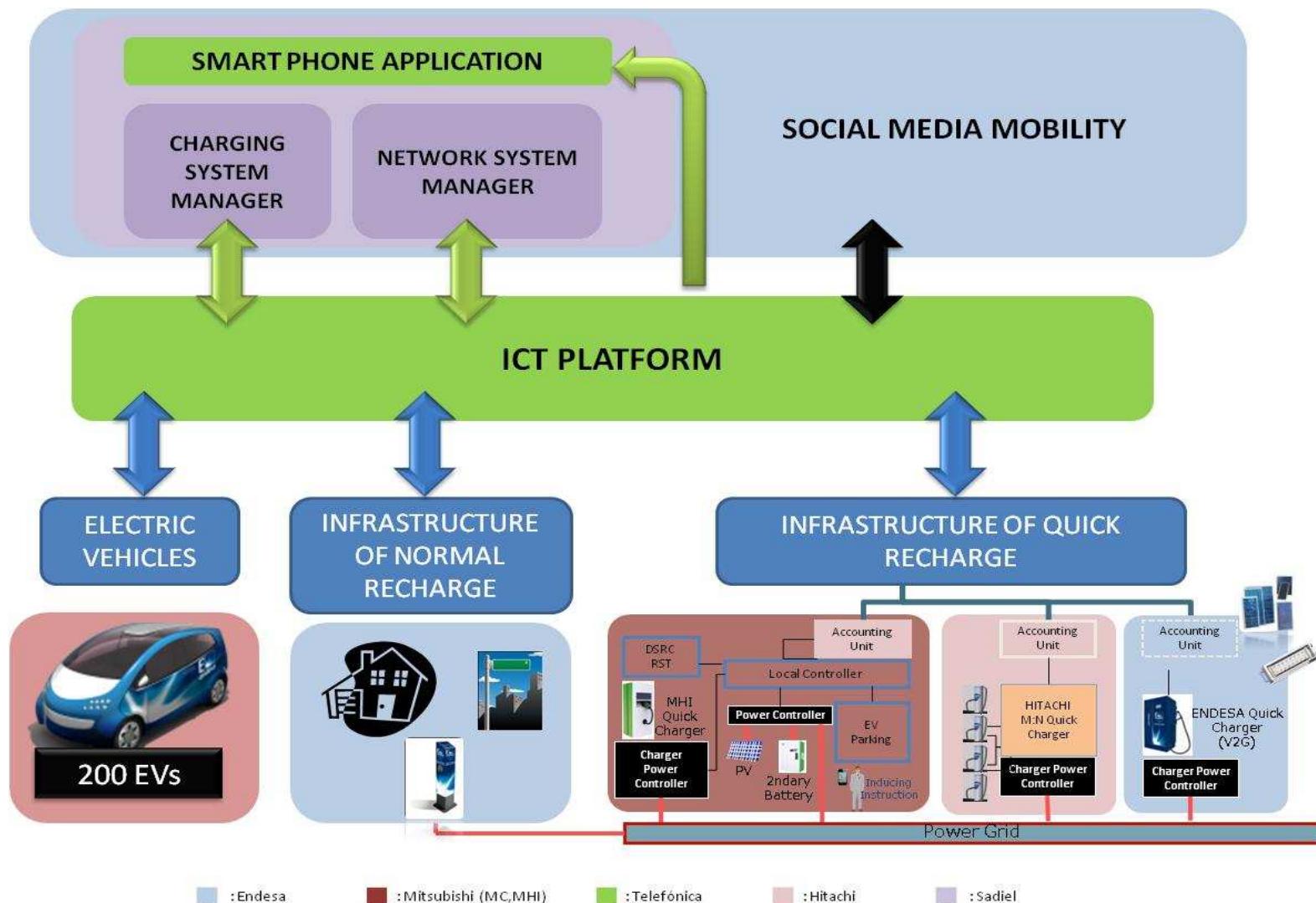
Development of systems that will allow the integration and control of all these elements in the networks.

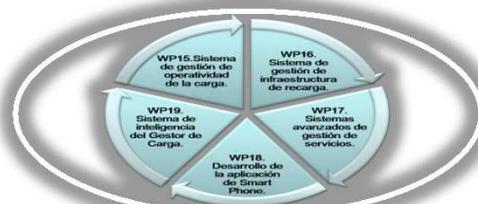
## Targets

- Demonstrate technologies related to "smart communities"
- Prepare urban infrastructure for large-scale incorporation of next generation vehicles
- Implementation of a new infrastructure that includes management systems and facilities for EV recharging
- Efficient management of EV fleets
- Implementation of quick charging stations control systems
- Navigation to best quick charging point
- Coordinated management of EV parking and recharging
- Mitigate the impact of recharge on the power grid
- Improve EV user comfort
- New added value services
- Reduction of CO2 emissions

evs|27







## Activity 1. Development of the charging infrastructure solutions for electric cars

## Activity 2. Distribution network for electric charging

### Activity 3. ICT Platform

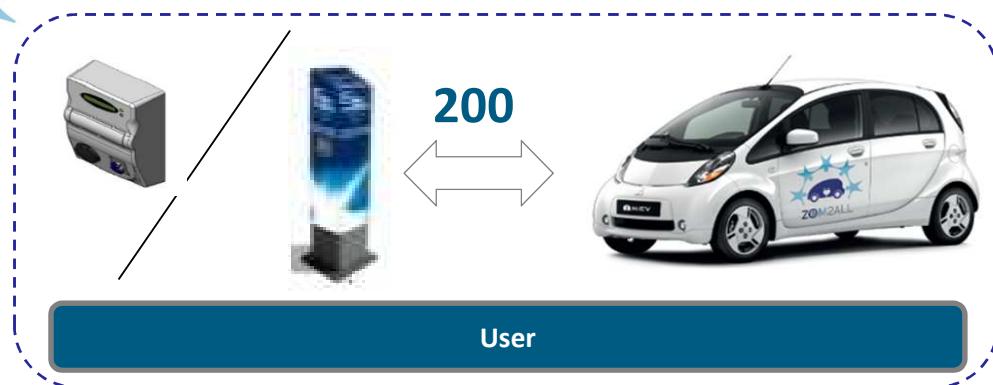
## Activity 4. Information systems of electric mobility

## Activity 5. Social Media Mobility



**ZEM2ALL**

## - Vehicles -



**evs|27**

**ICT  
Platform**



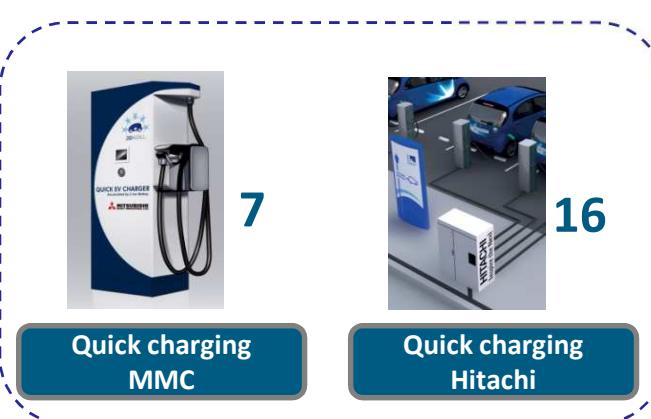
## - Recharging infrastructure -



PROYECTO DE:



CON EL APOYO DE:



**The 27th INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION**  
Barcelona. Gran Vía Venue. November 17<sup>th</sup>-20<sup>th</sup>, 2013

Ayuntamiento  
de Málaga



**malaga valley**

## Quick charging technologies

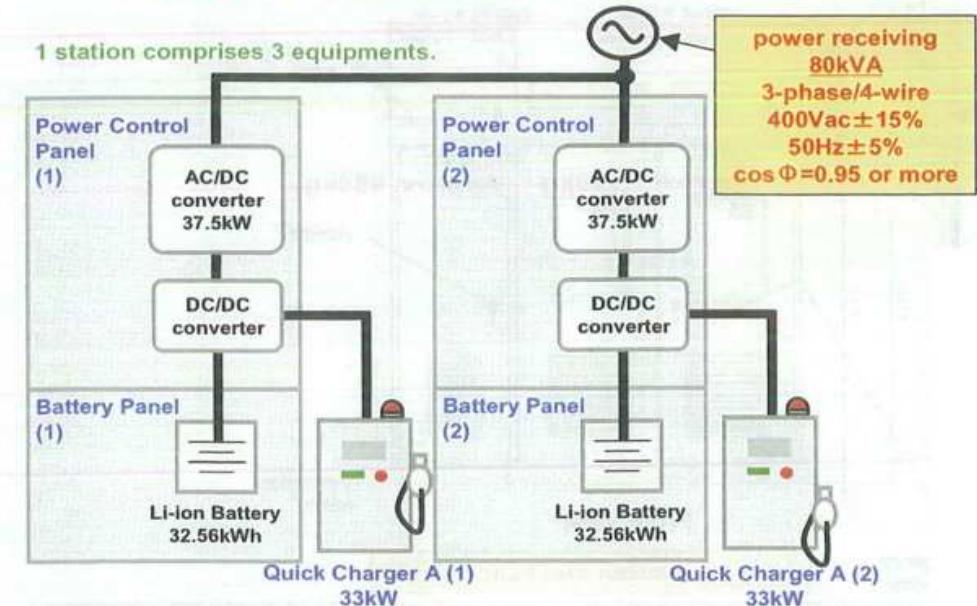
- CHAdeMO protocol
- 4 stations Hitachi with 4 chargers (60 kW max)
- 2 stations Mitsubishi with 2 chargers and batteries (33 kW each)
- 3 stations Mitsubishi with 1 charger (50 kW each)



### (1) Li-ion battery type

1 site has 2 stations.  
There will be 2 installation sites separately.

1 station comprises 3 equipments.



## Quick charging stations



9 stations with 23 chargers

## Quick charging stations



Ref	City	Location	Chargers	Power (kW)
#1	Málaga	Airport	4	60
#2		Parking	4	60
#3		Parking	4	60
#4		Parking	4	60
#5		Municipal Premises	2	33
#6		Access to Mall	2	33
#7		Access to University.	1	50
#8	Fuengirola	Access to Mall	1	50
#9	Marbella	TF&Congress Centre	1	50

## Quick charging stations



evs|27



## V2G charging station



evs|27

- 6 chargers (Endesa technology)
- Located on Municipal Premises of “Tabacalera” site
- V2G: EV communicates with power grid and can give energy from its batteries



The 27th INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION  
Barcelona. Gran Vía Venue. November 17<sup>th</sup>-20<sup>th</sup>, 2013

Ayuntamiento de Málaga

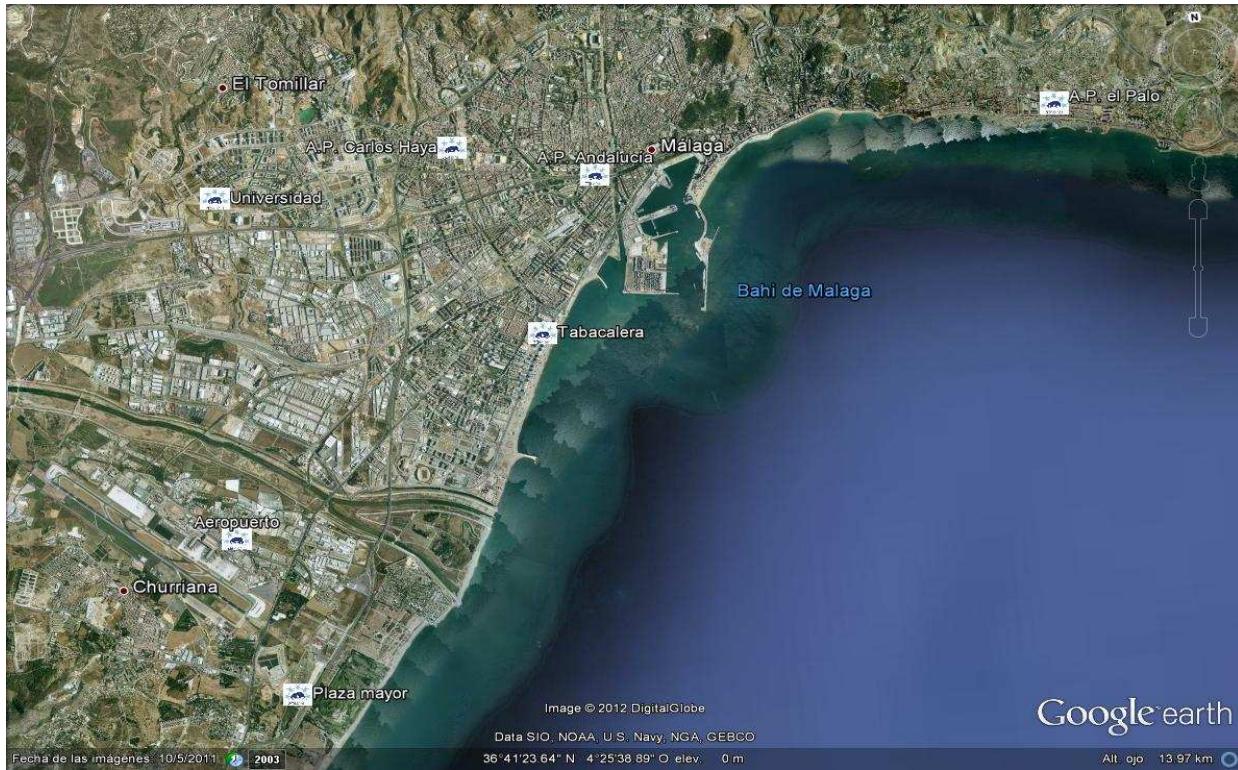
## - Municipal participation -

- Providing premises for the information and control centre



evs|27



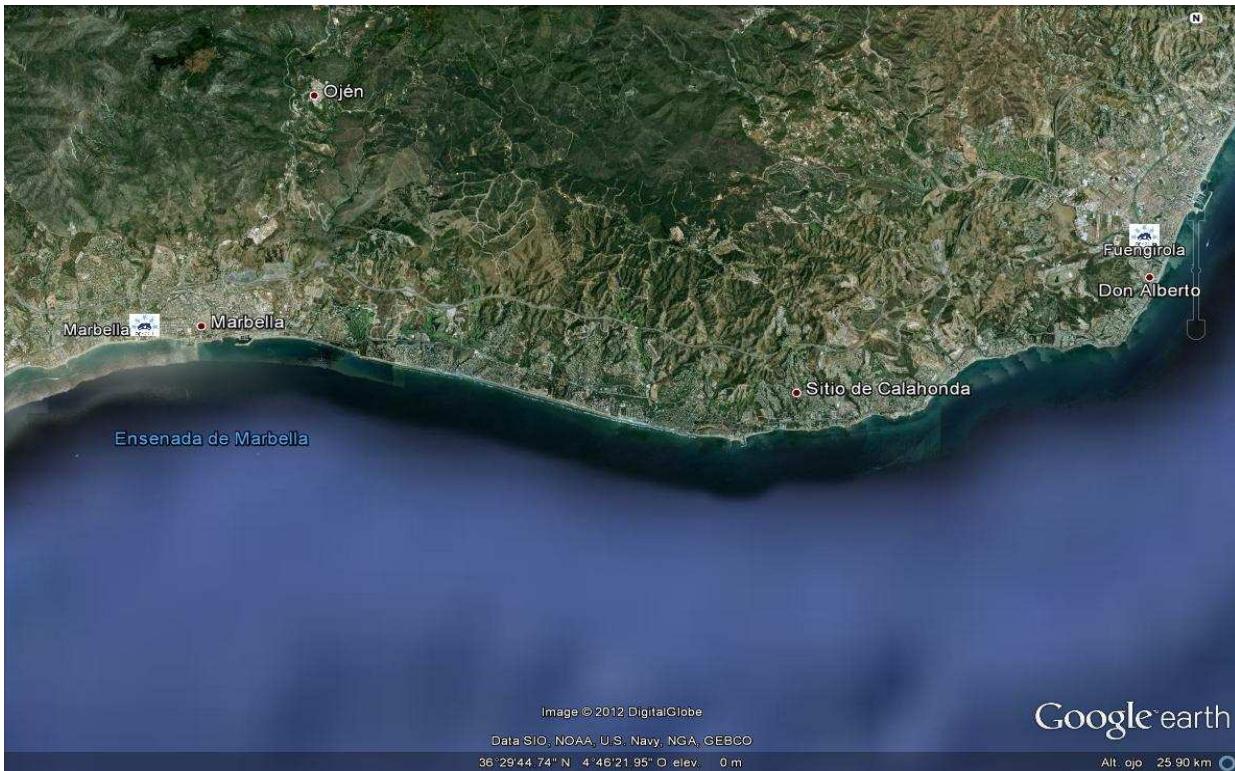


evs | 27



### - Municipal activities -

- Provide 7 quick chargers locations
- Cooperation with Fuengirola and Marbella to locate and install 2 Quick Chargers
- To use 20 EV (45 finally)
- 75% annual tax bonus



### - Municipal activities -

- Access to restricted areas of the historical city center
- Reserve free surface parking for EV
- Bonus rates for EV parking (SARE zones)
- Bonus rates for EV parking (Municipal Parking)
- Reserve public parking spaces for quick charging
- Signaling charging points and exclusive EV parking on road



evs|27





evs|27

# ZeM2All

## Zero Emissions Mobility to All

Jaime Briales Guerrero  
Municipal Energy Agency  
City of Málaga  
[www.energia.malaga.eu](http://www.energia.malaga.eu)  
[jbriales@malaga.eu](mailto:jbriales@malaga.eu)

The 27th INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION  
Barcelona. Gran Vía Venue. November 17<sup>th</sup>-20<sup>th</sup>, 2013

Ayuntamiento  
de Málaga



malaga valley