



ZeM2All

Zero Emissions Mobility to All

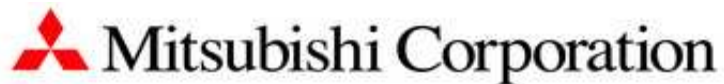




Project developed under the framework of JSIP (Japan-Spain Innovation Program) for technological cooperation.



Participant Companies:





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



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¿Why Málaga?



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

Ayuntamiento
de Málaga



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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.

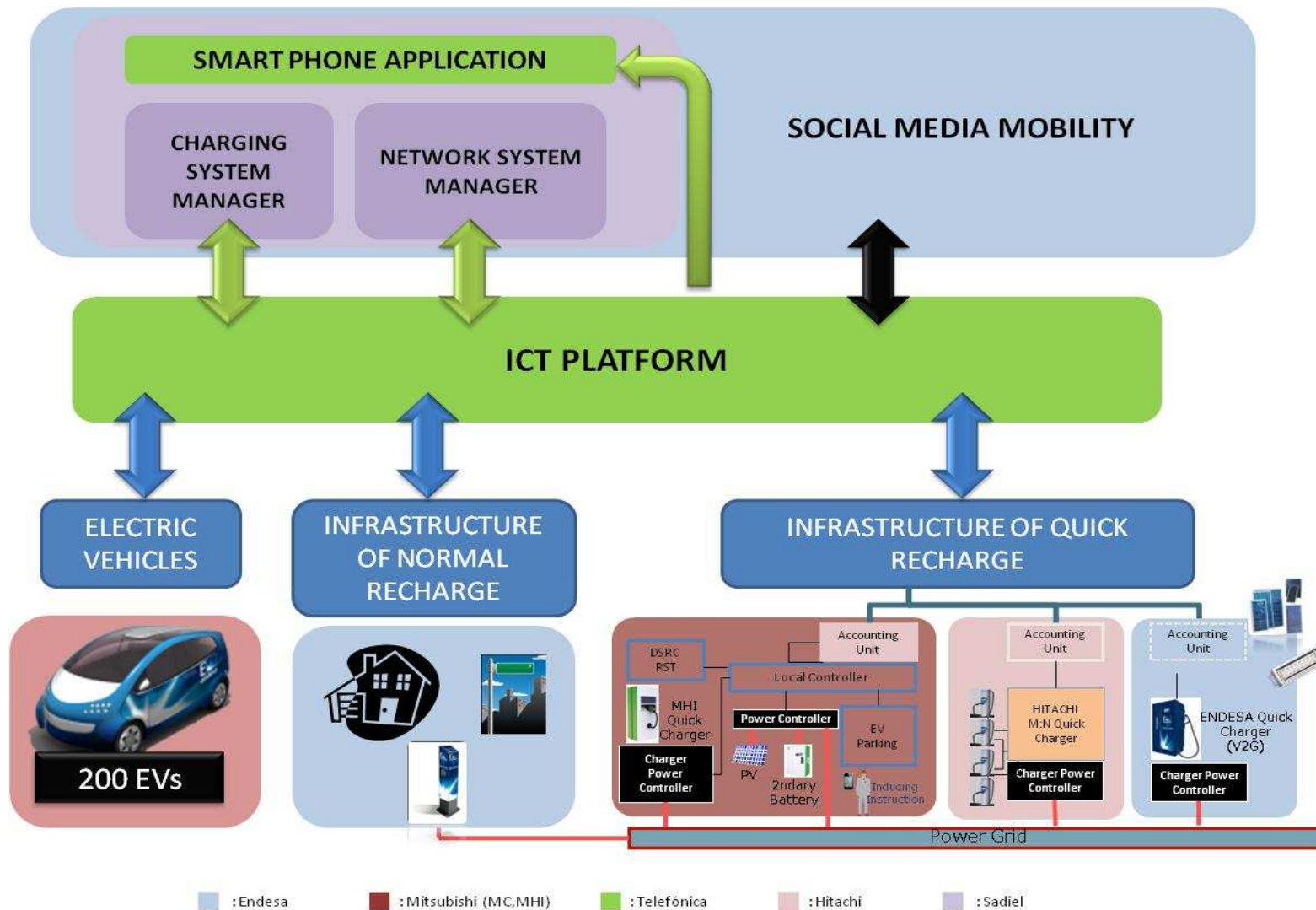
Development of systems that will allow the integration and control of all these elements in the networks.



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

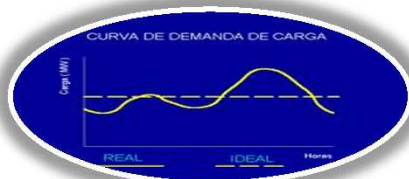




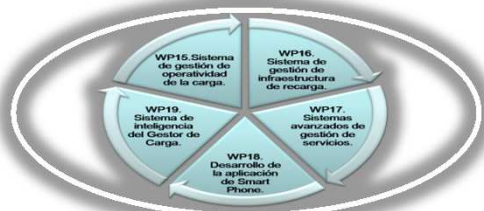
Activities



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



Activity 2. Distribution network for electric charging



Activity 3. ICT Platform



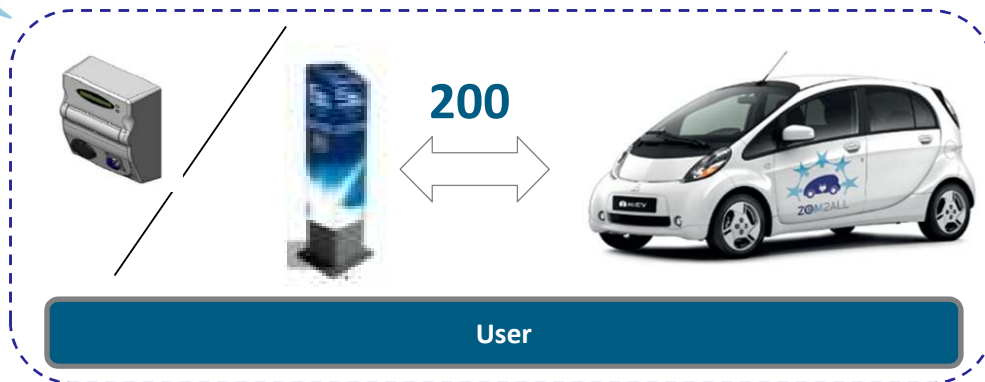
Activity 4. Information systems of electric mobility



Activity 5. Social Media Mobility



- Vehicles -



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ICT
Platform

- Recharging infrastructure -



7

Quick charging
MMC



16

Quick charging
Hitachi



6

V2G charging
Endesa

PROYECTO DE:



CON EL APOYO DE:



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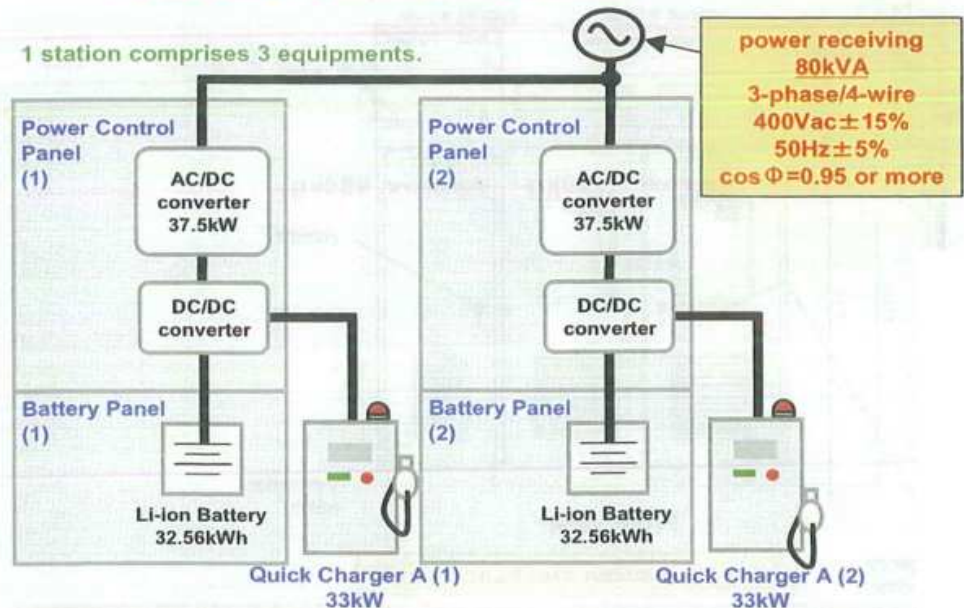
Quick charging technologies

- 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.



Quick charging stations



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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



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V2G charging station



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



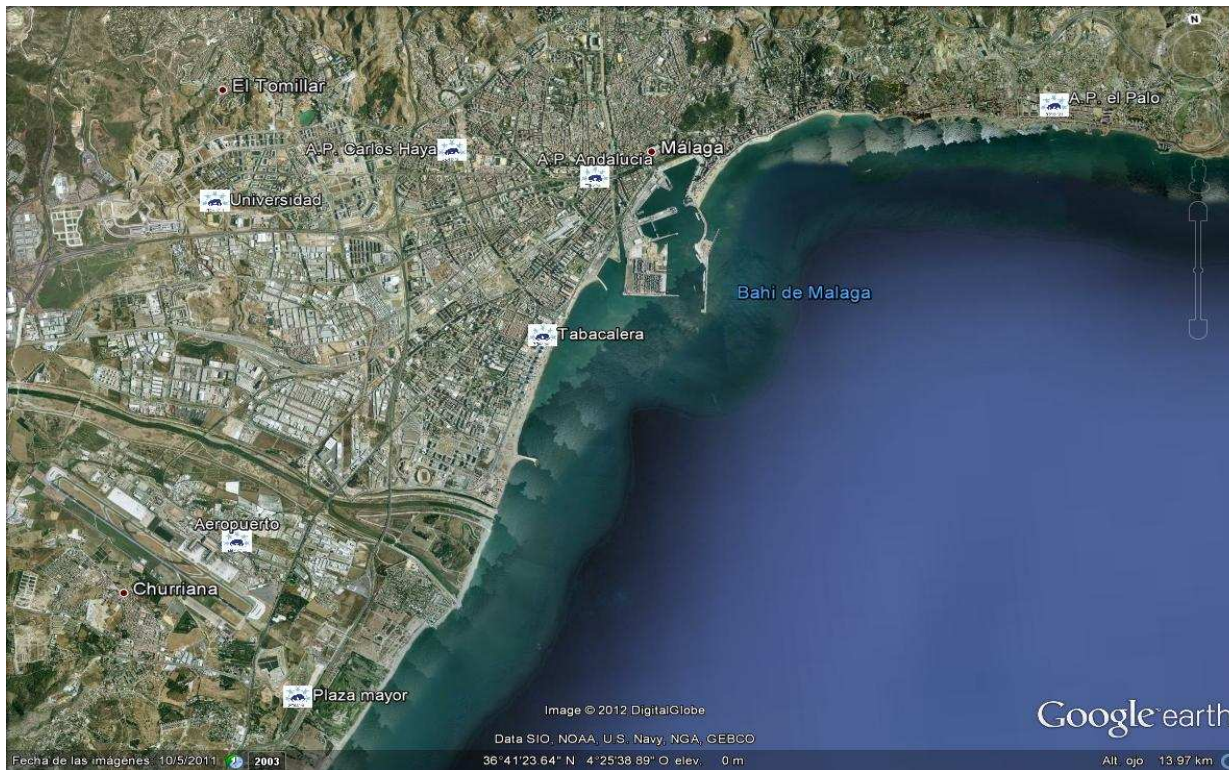
- Municipal participation -

- ❑ Providing premises for the information and control centre



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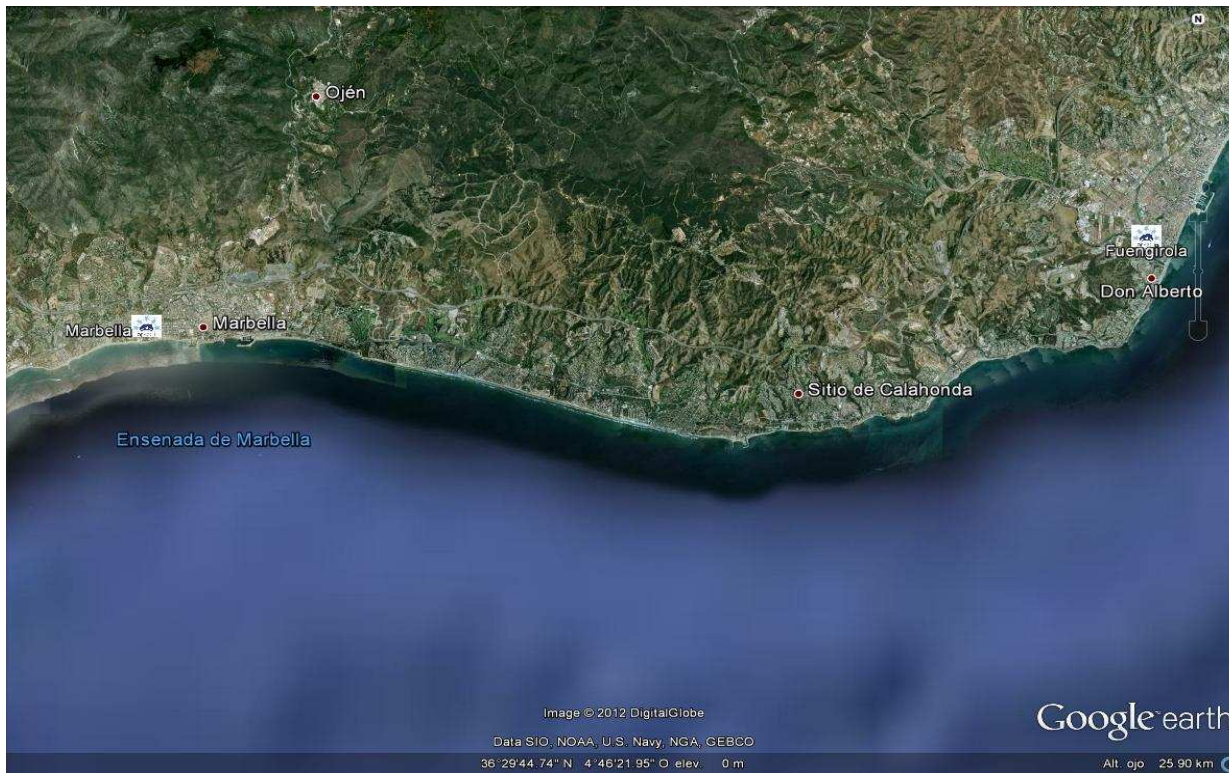


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- Municipal activities -

- ☐ 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



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- 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



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