



Ideas and Proposals for the Transfer-Workshop Cluster 1 Powertrain & Electrification

STEP 1: Description of the Showcase



Location based Intelligent Charging for EV

- location based demand management + intelligent micro-grid systems to balance demand on a given geographical location
- Seamless positioning (including indoor: parkings, tunnels...)
- Exploit positioning information to provide added-value services, which enhance user acceptance and business model alternatives
- Address different operational environments:
 - Motorbikes rental for tourists
 - Garbage collection
 - Security fleets
 - Car-sharing
 - ...

STEP 2: Technical Concept



Location based Intelligent Charging for EV

Project three pillars:

- Energy demand management
- OBU: Sensing, Location & Telematic Unit
- Location based Added valued applications and services

Battery real time
State-of-Charge and
position information
in order to predict
and manage energy
micro-grids demand

Ubiquitous EV
localization even in
the most challenged
areas (urban and
indoor)

Added-value services
that enhance the EV
driving experience
and support the
mobility needs of its
users

Requirem.
and
context

Service
Prototype
Design

Service
Prototype
Dev & Int

Roadmap
& recomm

STEP 3: Partnering Concept



Location based Intelligent Charging for EV

- Positioning
- Services Developers
- Utility
- EV
- Services providers
- End Users



STEP 4: Potential Implementation / Pilot



Location based Intelligent Charging for EV

- Different pilots for analysing different business cases, from the different actors point of view (fleet operators, utilities...)

Public EV fleets



Private EV fleets



Private EV Users



STEP 5: Roll-out



Location based Intelligent Charging for EV

- Better knowledge of EV market and value chain and business models
- System prototype based on the implementation of an on-board unit, providing EV positioning and updated battery status
- Energy demand management application that benefits from the EV on-board information and achieves an optimized electricity load balance and demand distribution
- Added-value services for the end-user, which would increase user acceptance of EV while ensuring user privacy
- To link the project results with the ITS and Smart Grid community and other European projects by sharing technical results and conclusions
- Business plan addressing EV market forecasts, standardization and regulation evolution and analyzing main drivers and barriers for its market penetration.