Consortium

Advisory Board

BOMBARDIER

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Ajuntament de Barcelona
Charging Scenarios

› **STATIC charging**
  - The vehicle is not moving for a medium/long period of time (>5 minutes)
  - The driver does not intend to use the vehicle soon
  - Scenarios: Parking at home / the office / the supermarket etc.

› **STATIONARY charging**
  - The vehicle is not moving for a short period of time (<5 minutes)
  - The driver is likely still on the vehicle, on the way to his/her target location or intends to use the vehicle again very soon
  - Scenarios: Traffic light, Bus stop, Taxi stand, Delivery truck

› **DYNAMIC charging**
  - The vehicle is moving
  - The driver is on the way to his/her target location
  - Scenarios: Highway, Strategically chosen roads
Interoperability is the key
Test sites

Aachen
(Research only)
- Positioning
- Communication
- EMI shielding
- Low power transfer (3.7 kW)
- Test vehicle: Fiat 500

Zaragoza
(Research & Demonstration)
- Interoperability
- Billing
- Integration into public environment
- High power transfer (50 kW)
- Test vehicle: Iveco Daily (Distribution truck)
Passenger Car System @ 3.7kW

Vehicle Pickup

Primary coil
Commercial vehicle system @ 50kW
Communication

› If power transfer is wireless, communication must be wireless, too.

› An existing wireless standard should be used.

› The wireless charging communication should follow the IEC15118 standard as much as possible.
Communication/Positioning

Authorization per WLAN

Position detection by RFID

Position detection by camera

Start 1000 m 100 m 10 m 1 m Charging Coil
Positioning System

- Camera
- RFID Antennas
- RFID Tags
- Inductive Charging Pad
- Visual Markers
Static and dynamic en-route inductive charging study

› Technical feasibility of en-route charging
› Power grid power request and grid management strategies
› Economic feasibility of en-route charging
› Social impact of en-route charging technical
› Dynamic charging feasibility
Join us for the Final Demo in Zaragoza the 25\textsuperscript{th} and 26\textsuperscript{th} of March 2015 unplugged-project.eu