Making electromobility more attractive

BCN strategy & NeMo project

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The current Sustainable Urban Mobility Plan 2013-2018 (safe, sustainable, equitable and efficient mobility) has as a priority to facilitate the modal shift towards more sustainable modes, such as non-motorized ones.

Secondly, betting on the most efficient modes and public transport.

Finally, within private vehicles, prioritize those that are more efficient, such as ELECTRIC VEHICLES.
01 Barcelona Electromobility Strategy

**Health & Environment**

Public Health:
Local pollutants reduction.

Impact on the Global Warming:
Reduction of the CO₂ emissions.

Noise pollution:
Decrease in the traffic-based sound level.

“Traffic-based air pollution induces a higher mortality than traffic accidents”

**Energy**

Reduction of fossil fuel energy dependency

Improvement of the electric grid management

“An electric vehicle could supply power to a standard household for more than 2 days”

LIVE, January 2015

**Industrial transformation**

Industrial innovation and competitiveness

Requires and gathers skilled workforce.

Evolution of the value chain:
New services and actors involved.

“The automobile sector will undergo a deep transformation in the next 5 years, as far reaching the past 50 years mutation.”
01 Barcelona Electromobility Strategy
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Fast charging points in Barcelona/Catalonia
01 Barcelona Electromobility Strategy

**Electromobility challenges**

Electric vehicle usage and provision of charging facilities are increasing, but there are still barriers.

- Diverse actors involved
- Limitation in Electric Vehicle range lack of interoperability in electromobility services
- Lack of common data exchange and commercial framework
- Impact to the Electric grid network
02 Interoperability

Solving the lack of interoperability with Open Source Standards
03 NeMo Hyper-Network
Adding new services to make electromobility more attractive

Call identifier: H2020-GV-2015

Topic: GV-8-2015 Electric vehicles’ enhanced performance and integration into the transport system and the grid

EC funding: € 7.8 million

Duration: October 2016 – September 2019

19 partners

5 test sites & 1 cross-country demonstration

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Website: http://nemo-emobility.eu

Join us at:
LinkedIn NeMo_Electro  @NeMo_Electro

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03 NeMo’s approach

Develop a Hyper-Network of tools, models and services, which will enable the provision of seamless and interoperable electromobility services creating an open, distributed and widely accepted ecosystem for e-mobility.

- improved accessibility to charging infrastructure and ICT services through a pan-European Inter-Roaming framework
- facilitate increased availability, better planning and more secure electric grid operation
- create business opportunities (increased B2B connectivity)
03 NeMo’s strategic objectives

- Common Information Models
- Standard ICT interfaces
- Core system for provision of ICT services
- Horizontal services
- Open APIs that will enable an open B2B cloud Marketplace for electromobility
03 Planned NeMo services

Horizontal Hyper-Network services:
- Electromobility actors’ monitoring and profiling
- Finder and optimiser
- Brokerage
- Service pricing (static and dynamic)

EV driver / owner services:
- Smart navigation and journey planning
- Wireless authentication solution

Grid related services:
- Navigation to Charging Point based on user and grid requirements
- Global customer charging behaviour
- Grid load management
- Load forecasting due to EV charging
- Local energy management

EV and battery related services:
- Adaptive State-of-Charge limit
- Capacity calculation; Load management; etc.
**04 Electromobility use cases**

**Smart navigation**
- Availability and location of CPs
- Road traffic and
- Battery SOC

**DAILY COMMUTE**

**Smart Journey Planner**
- Route planning

**CPO monitoring and profiling**
- CP availability
- Irregular activity
- Generate valuable personal and non-personal information

**EV driver monitor and profiling**
- Mobility patterns
- User interests
- Generate valuable personal and non-personal information

**Service Brokerage**
- Fit the actors’ requests to existing services
04 Electromobility use cases

Smart navigation
• Route calculation
• CP availability
• Required EV charge time
• Battery SOC

Rating/pricing services

CP Booking

CPO monitoring and profiling
• CP availability
• Irregular activity
• Generate valuable personal and non-personal information

Wireless authentication service
• Access control
• Identification, authentication and authorization
04 NeMo test sites

Five test sites to validate the Hyper-Network via complementary use cases

A cross-country test crossing France, Belgium Netherlands, Germany, Czech Republic, Austria, Slovenia, Italy and Spain

Representative e-roaming testing with different participants
- NeMo partners
- Additional roaming platforms
- CPO/EMP not connected to a roaming platform
05 Invitation to NeMo

The NeMo Hyper-Network is open for testing

Organisations providing or consuming e-mobility services are invited to join as a Hyper-Network partner:

• Easy creation and registration of e-mobility services via the NeMo Marketplace
• Use interoperable e-mobility services: Improve competitiveness
• Free membership until the end of the project in September 2019
• Contact the NeMo Coordinator (http://nemo-emobility.eu) or a NeMo partner
• Bilateral presentation and discussion, followed by signature of a MoU
• From October 2019 a new Business Alliance will take over the Hyper-Network. This will be a membership organization with an annual fee and operate on a not-for-profit basis.
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Thank you for your time!

http://nemo-emobility.eu