



Editorial

MOBI.Europe is a three years European demonstration project on smart-connected electro-mobility that started on January 1, 2012. It brings together twelve public and private entities from five different countries, and it is built on top of four different European on-going electro-mobility initiatives that are on the forefront of this new sector: MOBI.E in Portugal, e-car in Ireland, Amsterdam Electric in the Netherlands and the Galician electro-mobility initiative. The Project counts already on a network of over 2000 charging points, 1500 electric vehicles and on an increasing number of users. It presents a very heterogeneous environment with multiple suppliers and operators, and different charging points technologies and ICT systems.

We are convinced that electro-mobility will play an important role in the context of the smart cities of the future, but its ability to succeed relies mostly on answering users' needs: for example, it must be integrated with the urban metabolism and assure interoperability between different operators, hence freedom and simplicity of use. Bearing this in mind, we understand that none can act alone at national or local level, but the solutions must be adopted through strong cooperation at the European level. Based on this we have two main objectives in MOBI.Europe: the first one is showing that, locally, the solutions already adopted in the countries, regions and cities where MOBI.Europe is running are robust, technically mature and scalable; the second one is to exchange information among the four different initiatives in order to allow for the use of a common language between the different systems hence promoting interoperability.














The MOBI.Europe project started more than six months ago and during this period we spent time studying the different solutions and services of the local initiatives thus setting the basis for interoperability and pilots' operations. The Project had its first "kick-off" meeting in the city of Amsterdam in mid-January 2012 and the official launch at the European Parliament in February. We had also hold technical meetings in the different pilots regions and started working together on integration issues in the first Workshop in Vigo, held on late May.

MOBI.Europe is also cooperating with the other CIP projects financed within the same call of smart-connected electro-mobility (MOLECULES, ICT4EVEU and smartCEM). Together, we aim at finding possible synergies for projects' communication strategies. Demonstrating interoperability among the different pilots and showing that everybody can charge everywhere in a smart way, will be a first step towards designing integrated solutions capable to ease drivers experience and to reduce significantly traffic congestion in cities and CO₂ emissions from road transport.

MOBI.Europe expects to contribute to the evolution of mobility in a not so distant future, in which citizens will be able to drive electric vehicles around Europe without any technological or business barrier. We also expect to be a world showcase of how European companies are at the forefront of this exciting technological challenge. We therefore invite all the stakeholders to be involved in Project activities and discussions, and we aim to design open solutions that can be easily adopted by any electro-mobility program in Europe. In this first newsletter we give you a glimpse of what we have accomplished so far and what we expect to accomplish in the next two and a half years. We hope you enjoy what we have to offer you and please feel free to contact us with suggestions, questions or contributions.

*Dr João Jesus Caetano,
MOBI.Europe Project Coordinator (Inteli).*

CONTENTS

-  Editorial1
-  Mayor of Vigo:
Vigo is moving towards
sustainable mobility2
-  Milestones
 -  First Technical Workshop and
Project Coordination Board
Meeting3
 -  'Treaty of Vaals' enables electric
car charging in seven European
countries3
-  The Pilots
 -  Ireland: leading the charge,
Ireland's electric opportunity4
 -  The Netherlands: clean air for
Amsterdam4
 -  Portugal: the MOBI.E project5
 -  Spain: region wide Pilot in
Galicia7
-  Other CIP Projects8





Mayor of Vigo:

VIGO IS MOVING TOWARDS SUSTAINABLE MOBILITY



Vigo finds in electric mobility one of the main challenges for the foreseeable future. As a car city, this government is already working to anticipate the arrival of sustainable transport twofold: integrating and leading projects to share knowledge and experiences with other European cities, and adapting the various local regulations to facilitate and encourage its use among citizens. The objectives of the city electric and the Town Council, applied horizontally, are part of their interest and commitment to sustainable development.

The city of Vigo, the most important in Northwest Spain according to various indicators, began five years ago its way to become a pioneer city and benchmark for sustainable mobility nationally and even internationally. From the local government we understand the electric variant as a solution to implement in the short term in the cities, anticipating the still nascent but growing presence of zero-emission vehicles on our streets, setting the stage for the inexorable arrival and also encouraging the automotive market.

The electric car is still the future, but in Vigo we work on several dimensions so it can be a reality soon. The environment is a cross

variable in the various departments of the city government and, as such, our policy operates, both internally and externally, in different areas from sustainability. Externally, we seek to lead and integrate into international projects that we can broaden knowledge about the ongoing experiences of other European cities that share our sensitivity on the issue. Internally, positive discrimination for users of electric vehicles define our action criteria.

MOBI.Europe project and the technical meeting held in Vigo in late May are part of our desire to improve on the basis of learning. With a European budget of around five million euros, dozens of professionals from various countries of the old continent pose problems and propose measures, add prospects and give the model a battery of solutions that bring us closer, step by step, to the technical feasibility and procedural system.

Second, Vigo leads another European initiative – this time equipped with 1.7 million euros of European funds – aimed at implementing sustainable mobility in cities. Sum Project brings together fifteen local authorities and institutions from nine countries in order to reduce energy dependence and promote clean transportation habits, particularly electricity, also from the exchange of experiences and knowledge and coordinated actions of different actors, adding a factor in this case information to suppliers, industry and the general public.

As for the introduction of electric vehicles in Vigo, the City Council's internal planning revolves around several axes of activity, of horizontal and vertical application, namely environmental, urban, fiscal and administrative, circulation and urban infrastructure development, public services, economic development, communication and training. Each area has a strategy and an individual target to achieve jointly, transversely and in a coordinated manner.

In Vigo we endorse public awareness actions combined with others aimed at facilitating the integration of electric vehicles for private, business and industrial services. Regarding the first question, our city has an electric bus that enables citizens to know the experience as well as to incorporate this type of municipal fleet vehicles, two so far, one being the official transport of the municipality. The aim is to gain visibility, standardize their use and, in some way, serve as an example, as befits the public administration.

The adaptation of urban infrastructure to electric reality determines the second of these vectors. Along with the necessary charging stations on the streets – Vigo has several underground parking lots equipped with this technology –, the city government is currently drafting municipal ordinances and regulations, according to the ideas that we shuffle, to exempt electric cars from the blue zone paid parking, to enable outstanding preferred areas and parking, fiscal exemptions available to homeowners and to provide load patterns in the garages of new homes.

Sustainable mobility and the electric vehicle are the natural future for city transport, a road that we walk steadily from now, anticipating where possible and laying the foundation for their progressive implementation. In the car city, where one of the most productive factories in Europe and many component companies sit, it makes sense to bet for electric mobility. We should find our way to be adapted to the new times, a way to consolidate our privileged position in the economy and industry in the coming decades, and much of that future will be electric.

Abel Caballero,
Mayor of Vigo.

Milestones



First Technical Workshop and Project Coordination Board Meeting

MOBI.Europe celebrated its First Technical Workshop and Project Coordination Board Meeting in the city of Vigo (Spain) on May 22-23, 2012. During the event, participants from Portugal, Ireland, the Netherlands, Spain started the technical discussion on the interoperability of the different electro-mobility systems and the possible integration of the services associated.

This First Technical Workshop and Project Coordination Board Meeting was organised by FAIMEVI, CTAG Welgood Solutions. It took place in the city of Vigo, in the region of Galicia (Spain).

The usual workshop welcome and introduction was given by Dr. João Jesus Caetano, Project Coordinator, who presented a summary of the objectives and current status of the Project. Participants worked together in eight different Working Sessions, as well as the PCB meeting. The topics discussed ranged from financial and administrative issues to more technical discussion, reviewing the progress made in all six work packages. Sessions were led by the different partners who act as work package leaders.



Workshop participants were also invited to visit Policarpo Sanz Car Park, where they were shown how the integrated management systems for electric charging work: the access for EV users, the charging system in operation and the end of the process.

This first workshop has served as an arena to discuss, at a very early stage in the project, how the different ICT systems and approaches adopted can be integrated into a pan-European pilot.

The discussion has been carried on even after the event and the next moment of confrontation among all the partners (Workshop) will take place in December 2012.

'Treaty of Vaals' enables electric car charging in seven European countries

On 30 March 2012, the 'Treaty of Vaals' was signed by seven organisations managing a public charging infrastructure for electric cars in their respective countries in Europe. The 'Treaty of Vaals' is a collaboration agreement on 'e-roaming' between the Dutch foundation e-laad, the German cooperation ladenetz.de, the Belgium provider Blue Corner, the Luxembourg company Estonteco, the Austrian company Vlotte, the Portugese Mobi.E and the Irish company ESB eCars.

Founded and developed by the three partners ladenetz.de, e-laad and Blue Corner, E-clearing.net is an open European Clearing House System (eCHS), which enables the mutual and international exchange of electric car charging data.

Accessible electric car charging will thus be possible beyond country borders and costs can easily be settled between partners. This makes international charging ready for the future. Besides the current free charging facilities, the system is ready for payments.

The IT-system is based on an open standard, the Open Clearing House Protocol (OCHP), which facilitates automatic data exchange. In addition to that, other countries and organisations can easily join the collaboration.

Thus an open European standard is born and international charging becomes as easy as local charging. The system can be compared to international payment by debit card.



Picture: Marcel Van Hoorn.

EVENTS

12-22 September 2012,
European Mobility Week
"Moving in the right direction"
Sustainable Urban Mobility Planning
Many cities across Europe

24-26 September 2012,
CIVITAS Forum 2012
Vitoria-Gasteiz, Spain

2 October 2012,
CIP-ICT PSP Smart Electro-mobility projects event
Vitoria-Gasteiz, Spain

3 October 2012,
Green Cars 2012: Business Challenges and Global Opportunities
Vitoria-Gasteiz, Spain

25 October 2012,
International Conference "Towards Transnational E-Mobility"
Gothenburg, Sweden

31 October 2012,
Recharging the European Electric Vehicle Market
Brussels, Belgium

19 November 2012,
European Electric Vehicles Congress 2012
Brussels, Belgium

29,30 November 2012,
POLIS Annual Conference 2012
Perugia, Italy

5,6 December 2012,
3rd Annual Smart EV Infrastructure & Business Europe 2012
Munich, Germany





The Pilots

Ireland:

leading the charge, Ireland's electric opportunity

It is the Irish Government's policy that, by 2020, every tenth car on Irish roads will be powered by electricity. ESB along with key partners is already well along the road to making electric driving in Ireland an everyday reality.



Ireland has many natural advantages making it an ideal location for the successful adoption of ecars, they include:

- Short distances between urban centres
- Capacity to generate high levels of renewable energy
- Single service provider operating a unified distribution network across the country
- High levels of home ownership for overnight charging



ESB is responsible for implementing the charging infrastructure as well as the supporting IT systems and communications for ecars across Ireland. The system will have open accessibility for all energy supply companies and all types of ecars.

Ireland has a nationwide footprint of charge points:

- Home/workplace charge points installed across Ireland. (440 installed to date)
- Public charge points are being installed in on-street and in retail areas. (340 installed to date)
- Fast charge points are being installed on inter-urban routes nationwide. (30 installed to date)

ESB ecars is involved in numerous ecar research projects in Ireland. In addition, ESB ecars has formal agreements with organisations in 14 EU states with the goal of developing pan-European interoperable charging solutions for electromobility. We are also trialling an e-taxi service in Dublin using a Nissan LEAF. Other research projects include the impact of ecars on the electricity grid infrastructure as well as grid planning.



Dervla O'Flaherty, ESB ecars.

The Netherlands:

clean air for Amsterdam

The promotion of electric transport is part of the 'Clean air for Amsterdam' action plan, drafted in order to ensure that Amsterdam meets the European Union standards for air quality by 2015. It is vital that the nitrogen dioxide and particulate pollution levels are lowered in order to help improve the health of people in the city. If the air quality in Amsterdam does not improve, a building freeze may come into effect for major projects. It is expected that by 2040, almost all car and scooter kilometres driven in Amsterdam will be electric, and the prognosis is for 10,000 vehicles by 2015.

To make this possible, a network of public charging points is installed in the city in the coming years. Anybody with an electric vehicle can charge here. Green electricity will be used for charging.

Charging network

In November 2009, Amsterdam opened the first public charging points for electric transport in Amsterdam. In 2013 one thousand public charging points will be installed. Liander is the grid company (distributed system operator) in Amsterdam, which is part of Alliander. Liander is the biggest grid company in the Netherlands. Liander in partnership with Nuon installed the first 100 public charging points in Amsterdam. After this initial project Nuon and Essent are installing public charging points, which are connected to the electricity grid by Liander (www.liander.nl/evervoer).



In addition to the public points, the municipality is also stimulating the creation of charging points at private places. A subsidy scheme is currently running for the construction of charging stations on private property

With a charge card, you can charge your electric vehicle at any charging point in the Amsterdam network (or elsewhere in the Netherlands) which is vacant.

Information on where these charging points are and if they are available for charging, is as of now in real time accessible via an open API. This way the charging network provides this information in real-time and as open data. The website www.oplaadpalen.nl represents this information on their website and makes the data available for app-developers. Alliander is participating in this website.



The Pilots

The data can be used by everyone for non-commercial purposes. This makes it possible to create mobile apps, in-car navigation systems and websites that show where the nearest available charging point is. Extremely useful for the electric driver, this way he can easily find the nearest available charging point. Better information about available charging options increases the efficiency of the network of public charging points.

The different parties operating the charge points in Amsterdam all provide these data. By using these data sources, new or altered charging points show up automatically on different charging maps.

Subsidies for high mileage vehicles

The City of Amsterdam reserves 8.6 million euros until 2015 to go towards making high-mileage corporate vehicles electric. Enabling corporate vehicles in the city (such as couriers and taxis) to run on electricity is one of the most effective means of improving the air quality in Amsterdam. The funds will be made available to facilitate the purchase of lorries, delivery vehicles and cars - to be used as taxis, for example.



High-mileage corporate vehicle users are the City of Amsterdam's primary target group. These are drivers that drive around the city for their work on a daily basis. In Amsterdam, approximately 6,000 lorries, 37,000 delivery vehicles, 600 vans, 2,500 taxis and 5,000 private cars account for a high percentage of the miles driven in the city. The average taxi contributes nearly 35 times more to the nitrogen dioxide concentration in the city than the average private car.

Frank Geerts,
Alliander.

Portugal: the mobi.e project

Under directive 2009/28/EC (EC, 2009), Portugal has committed itself to a target of 31% of gross final energy consumption coming from renewable sources by 2020; in its National Energy Strategy 2020 (Portuguese Gov., 2010), it also sets the objectives of having 60% of electricity production and 10% of the energy consumption in transport coming from renewable sources by 2020. The "green strategy" underlined by these objectives, combined with the possibility to make a greater use of wind power generation installed capacity (with the potential to drastically cut CO2 emissions from transport), convinced Portugal to start its electro-mobility initiative in 2008 with the creation of the MOBI.E Program.



The initiative is nationwide and involves, for the moment, 25 of the largest Portuguese municipalities and a number of different stakeholders: from research centres, to energy and IT companies. At present, of the planned 1,300 normal charging points (CP) in public roads and 50 fast CP in primary roads and highways, 1,098 normal CP and 8 fast CP have been installed; there are also more than 300 electric vehicles on the road. The large majority of charging stations installed are supplied by EFACEC, in addition to EVSE supplied by Magnum Cap (local manufacturer) and Siemens.

The number of EVs is expected to reach 200,000 by 2020, in view of wide user adoption fostered by convenience of vehicles for certain categories of users and penetration of new mobility services incentivized by public authorities; the public charging infrastructure may count 25,000 public charging points by that time.

The first phase of piloting and testing will continue until the end of 2012.

An Integrated Approach

MOBI.E is a nationwide and integrated network with the focus on users and opened to every vehicle manufacturer, energy retailer and private operator. Differently from the majority of electro-mobility initiatives around the world, it does not follow a Bottom-up approach, but on the contrary the project is focused on users and holistically organized (Top-down approach) by a comprehensive group of partners covering all aspects of the implementation. The MOBI.E network vision goes way beyond a network of charging stations. It is also a network of information gathered and shared by the relevant stakeholders as well as with the EV users.

For mobility and energy regulators, MOBI.E means the possibility to reinforce their planning and management capabilities, and to shape mobility and energy in an integrated way.

The big advantage of having an interoperable and integrated network is that you can add services on the top (mobile apps, parking, car-sharing, real-time tariffs and identification and booking of charging points, among the others), which enables mobility operators to build their own business models.

In Portugal, the electricity market is regulated on the transmission (REN), and distribution side (EDP Distribuição), with full market liberalization on the retail side (with roughly 10 companies, among

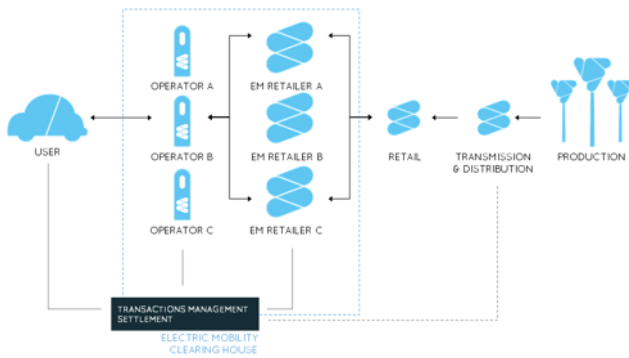


The Pilots

which EDP, Galp, Endesa). For the purpose of e-mobility, there is then the presence of multi electro-mobility retailers and multi electro-mobility operators:

Multi Electro-Mobility Retailers. This figure has been created ad hoc by the regulator in order to facilitate the entrance of new players in the market (also international ones). They will be able to re-sell electricity at special conditions to EV users, performing also a sort of brokers between retailers, and will enjoy of a simplified regulation;

MOBI.E MODEL



Multi Electro-Mobility Operators. Any person or entity performing activities related to electro-mobility can become an Electro-Mobility Operator by paying a fee to the management entity. New players, like for example shopping malls, will be able to enter the market without creating their own systems; in alternative they can invite existing operators for managing their charging stations and the services associated. Currently, there are 3 operators in Portugal (EDP MOP, which is the incumbent for the pilot network, GALP, from the oil industry, and PRIO.E, part of a large national industrial group, Martifer).

This architecture makes the system transparent and with low entry barriers, while fostering competition along the value chain. The supported business models will be able to take into consideration the “type” of electricity used, so that it will naturally promote the use of greener energy. The user is then the main beneficiary of this structure, being able to choose among different operators and electro-mobility retailers picking the best available conditions of both - while always getting access to the whole network.

Mobility Intelligence Center (MIC)

The Mobility Intelligence Center (MIC) is the technical core of the entire MOBI.E ecosystem. From a physical standpoint it is embodied by an infrastructure, which hosts the datacenter for the entire platform in addition to providing a network operations center for the services being supplied on top o (electro-mobility as of today). The MIC holds the following responsibilities/roles in the framework of the Portuguese Electric Mobility Program, MOBI.E:

- Monitoring and Operations Platform for the MOBI.E network in both its technical and business components, thus supporting the activities of the Management Authority;

- R&D and testing platform for mobility solutions, including evolutionary maintenance of the systems;
- EVSE and IT Systems homologation for MOBI.E Integration;
- R&D platform for products & services around e-mobility, in such areas as CRM, billing, services integration, open source applications and protocols;
- Training platform for network operators and service providers (e-mobility retailers);
- Commercial showroom for MOBI.E-based products and services.



André Dias, Intel.



The Pilots

Spain: region wide Pilot in Galicia

The transport sector is responsible for more than half of consumption global fossil fuel, and almost 25% of CO2 emissions related to energy consumption. In this scenario, electro-mobility will contribute to the EU to build a more environmentally friendly and economically sustainable future.

The Spanish Government and the Regional Government of Galicia have launched Action Plans aligned with the EU policies to promote electro-mobility and the development of EV charging infrastructures. Specifically, Vigo will develop a pilot where EV and PHEV users will interact easily with charging infrastructures installed in parking places and will promote a pioneering car-sharing service. This initiative searches to reduce congestion and pollution, stimulating energy-efficient mobility services through a seamless integration with the transport system and with the EV ecosystem.

Environmental and social costs of transport in terms of air pollution, traffic accidents and congestion can cost about 10% of the GDP of a region or country. The transport sector is responsible for more than half of consumption global fossil fuel, and almost 25% of CO2 emissions related to energy consumption. In this scenario, electro-mobility, currently in phase of deployment, will contribute to the EU and its Member States to build a more environmentally friendly and economically sustainable future.

Lined-up with the EU policies, the Spanish Action Plan 2010-2012, Plan MOVELE, promotes a series of measures to be implemented over the next two years to encourage decisively the introduction of electric vehicles (EV). The goal of that strategy is to reach the figure of 250,000 EV by the end of 2014. Electric cars do not pollute, do not make noise and their recharge is cheaper than gasoline. It is worth noting that electro-mobility in Spain and especially in Galicia is supported through its energy mix. Specifically, Galicia has a great potential in clean and renewable energy sources, representing by itself the fourth EU wind power region (behind Spain, Denmark and Germany) and the sixth of the world. The EV, once integrated into the electric grid through smart charging ICT systems, will optimize electricity consumption and production, as well as exploiting surplus production of renewable sources.

Regional government of Galicia has also launched the Galician Plan for Research, Innovation and Growth 2011-2015 (Plan i2c), which has transport as a priority actuation line pursuing the goals showed in the EU2020 Strategy. Galician government has approved a regional order for EV charging infrastructure developed from cooperation among different stakeholders (energy suppliers, car manufacturers, technological centers, etc) gathered throughout the Electromobility Chair.

The electro-mobility initiative in Vigo goes one step further of the National and Regional Plan and will focus its efforts in charging infrastructures and promotion of EV by ICT applications. Vigo will develop a pilot where EV and PHEV users will interact easily with charging infrastructures installed in parking places. This new service will assure that EV users can have a more efficient parking experience by providing the ability to remotely check parking availability and make parking reservations through the ICT systems provided. The parking facilities will be provided of Wifi access points available for EV users therefore enabling the users both to update

infotainment systems as well as mobile applications, provided that this can be a very important service specially when travelling abroad due to higher data telecom tariffs. In order to test the interoperability of these charging infrastructures, the pilot will use the already existing infrastructures on the electro-mobility corridor between the cities of Vigo (Spain) and Porto (Portugal).

Through this new charging infrastructure, Vigo will launch a pioneering car-sharing service. This model of car rental will allow people to rent cars for short periods of time. This service is attractive to customers who make only occasional use of a vehicle, as well as others who would like occasionally access to a vehicle of a different type than they use day-to-day. The principle of car-sharing is simple: individuals gain the benefits of private cars without the costs and responsibilities of ownership. However, car-sharing differs from traditional car rentals in the following ways:

- Reservation, pick up, and return is all self-service.
- Vehicles can be rented by the minute, by the hour, as well as by the day.
- Users are members and have been pre-approved to drive (background driving checks have been performed and a payment mechanism has been established).
- Insurance and fuel costs are included in the rates.
- Vehicle locations are distributed throughout the service area, and often located for access by public transport.



Car-sharing can also help to reduce congestion and pollution. Replacing private vehicles by shared EV directly reduces demand for parking spaces and GHG emissions. This car-sharing initiative in Vigo will give to the customers the opportunity of using EV in a comfortable way, helping them to face the range anxiety and promoting energy-efficient mobility services through a seamless integration with the transport system and with the EV ecosystem.

Ana Paül
CTAG.

Other CIP-ICT PSP Projects



ICT4EVEU

Navarra regional government is leading ICT4EVEU: ICT services for Electric Vehicles. Enhancing the user experience, an EU project assigned an overall budget of €4.4 million. Its objectives are to achieve full integration of electric vehicles in Europe's public transport system and to reduce CO2 emissions, particularly in urban areas.

The ICT4EVEU project aims to improve the services offered to public and private electric vehicles user. The initiative promoters intend to achieve this goal by implementing ICT services that integrate the various management systems in operation within the infrastructure/recharging stations, control centres and vehicles.

Read more

<http://www.ict4eveu.eu/>



Molecules

Environmental threats in cities, non-renewable resource scarcity, and financial restraints are posing huge challenges to society. People's In the future people will be much more conscious of time spent in transit, energy use, costs and environmental implications and will look for more sustainable alternatives to private motorised transport modes. Electro-mobility holds the potential to tackle these challenges, yet there is a need for coordination between the recharging infrastructure, the electric vehicle and the overall mobility schemas of a city or interurban road network.

Read more

<http://www.molecules-project.eu/>



Sm@rtCEM

The smartCEM project is putting in place a platform for multimodal electro-mobility services based on information and communication technology. Services that will be piloted will run for cars, scooters, electric vans, hybrid buses with the aim to accelerate the market take-up of these vehicles. Through the introduction of communication and information technology, smartCEM is convinced aspects like range anxiety and comfort can be sensibly reduced in the very near future.

Read more

<http://www.smartcem-project.eu/>



MORE INFORMATION

Visit us in our project website:
www.mobieurope.eu

Check our Twitter:
<https://twitter.com/mobieurope>

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Check our YouTube channel:
<http://www.youtube.com/user/MOBIEurope>

And check our LinkedIn Networking Group:
<http://www.linkedin.com/groups/MOBIEurope-promoting-electromobility-in-Europe-4539612?home=&gid=4539612&trk=tracking>

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