

# MOBI.Europe

## Integrated and interoperable ICT applications for electro-mobility in Europe



**MOBI.Europe is an integration project based on ICT systems that aims to guarantee interoperability of electro-mobility services across countries (roaming) and the smart integration of electric vehicles into the transport and energy systems, and to ease users' adoption of electro-mobility solutions. The MOBI.Europe pilots will contribute to the standardisation and openness of the electric vehicle ecosystem through a System of Systems (SoS) approach, establishing open interfaces between them and allowing for the exchange of information, setting the basis for a pan-European network of services associated with electro-mobility, whilst respecting national and local differences. MOBI.Europe applications will be piloted in Portugal, Ireland, Amsterdam (Netherlands) and Galicia (Spain).**

### At a Glance

**Project:**

MOBI.Europe

**Programme:**

CIP - ICT PSP (Competitiveness and Innovation Programme - ICT Policy Support Programme)

Objective 1.3: Smart Connected Electro-Mobility

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**Start date:** 1 January 2012

**End date:** 31 December 2014

**Total cost:** EUR 5 115 700

**EU funding:** EUR 2 400 000

**Project website:** [www.mobieurope.eu](http://www.mobieurope.eu)

**Further general information:**

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### OBJECTIVES

MOBI.Europe will put users at the centre, providing them with universal access to an interoperable charging infrastructure independent of the electricity provider and the region. It will therefore focus on different layers of ICT applications for smart connected electro-mobility: cross-national integration (roaming), smart charging, integration of home and public charging, and provision to users of valuable information about the environmental impact of mobility habits, helping to promote the use of clean energy sources. At the end of the project, the goal is to allow users to drive an electric vehicle (EV) across different countries using compatible mobile applications and enjoying integrated services associated with electro-mobility, such as car-sharing or services related to advanced parking. Other objectives of the project are to promote and demonstrate energy efficiency in mobility through smart charging and the seamless integration of electric vehicles with transport systems.

## SERVICES

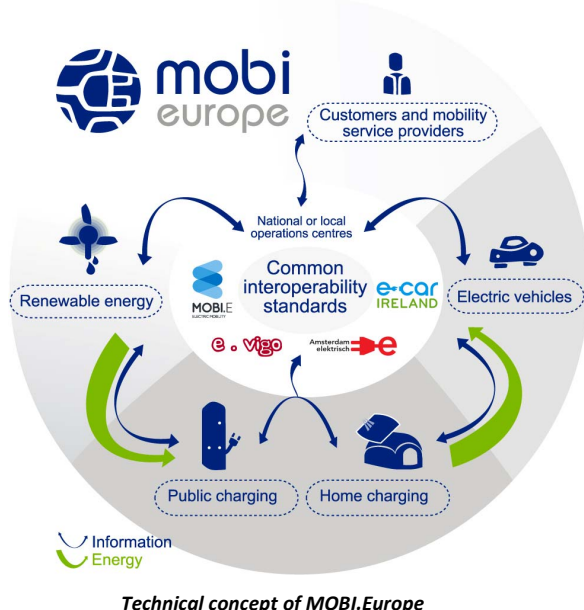
The MOBI.Europe project will use services already provided by national and local initiatives and provide interfaces to integrate them in a large-scale pilot:

- **End-user services:** The project will provide mobile applications capable of operating in both modes, online (connecting users with the electric-vehicle infrastructure and other modes of transportation) and offline (allowing users to use it, for example, for authentication and authorisation). A web portal and on-board navigation system will give valuable information to users, and tools to monitor and assess the environmental footprint associated with mobility will be provided.
- **Mobility services:** The mobility services piloted in MOBI.Europe will be mainly car sharing and electric vehicle parking. However, other services may be identified.

## TECHNICAL CONCEPT

The proposed solution will be based on a System of Systems (SoS) approach. Each system acts as a black box; its inherent technology is not relevant for the integration work, with the relevant technologies being:

- implementation — service-oriented architectures (SOA);
- user interface — web and smartphone applications (e.g. Android, iPhone);
- authentication — smart phones and GSM devices;
- communications — 3G;
- hardware — infotainment hardware and car-sharing embedded controllers.



Technical concept of MOBI.Europe

MOBI.Europe will interconnect service agents, final users and regulators. The project looks at it from the collaborative point of view – all

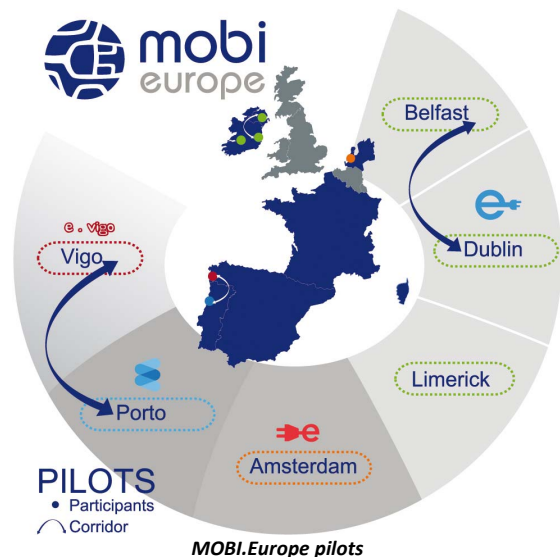
stakeholders are both information users and information providers.

## IMPLEMENTATION

MOBI.Europe interoperability standards will be tested and implemented in four countries at a city, region and also national level. The effective implementation of the project depends on promoting awareness and sharing information with users and the communities, easing a faster EV acceptance.

The following will be the main MOBI.Europe demonstrators:

- Portugal (nationwide);
- Ireland (nationwide);
- Amsterdam (city wide);
- Galicia (region wide);
- Limerick;
- Corridor Porto-Vigo;
- Corridor Dublin-Belfast;
- Vigo.



## IMPACT

The medium- to long-term impact of the MOBI.Europe pilot is expected to be very important in shaping the deployment of electro-mobility in Europe. Users will be able to travel across countries, accessing electro-mobility services in a seamless and easy way. MOBI.Europe will also contribute to a paradigm shift towards sustainability of the European transport sector, the reduction of greenhouse gas emissions, an improvement in energy efficiency and the promotion of clean energy sources.

By providing tools for interoperability and common interfaces for the building of value-added services, MOBI.Europe will integrate different ongoing initiatives, thus minimising the replication of resources and costs, and maximising users' awareness and consideration of the benefits and services associated with electro-mobility.