The MOLECULES Consortium

The MOLECULES project will deploy ICT solutions for Smart Connected Electro-mobility in the following vanguard European cities: Barcelona (Spain), Berlin (Germany), Marne-la-Valle and Neuilly-sur-Seine (Grand Paris area, France).

The MOLECULES consortium comprises 10 partners from 5 different European countries and is formed by experts in the field of mobility and transport, and stakeholders from the public and private sector:

ETRA Investigación y Desarrollo (coordinator), the European city network Polis, the German Aerospace Center (DLR), operator of the Berlin Traffic Information Centre (VMZ), the Barcelona Digital Technology Centre (BDigital), MOPeasy (France), Going Green (Spain), Greenwheels (the Netherlands), the city of Berlin (Senate Department for Urban Development) and the Municipality of Barcelona.

More information

For more information please visit the project website:

www.molecules-project.eu

and sign up to the MOLECULES e-newsletter!

Or contact the project coordinator at ETRA:

Mr. Antonio Marqués
Phone: +34 96 3134082
Fax: +34 96 3503234
amarques.etra-id@grupoetra.com

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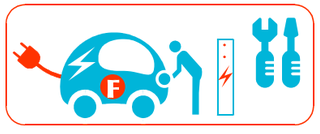
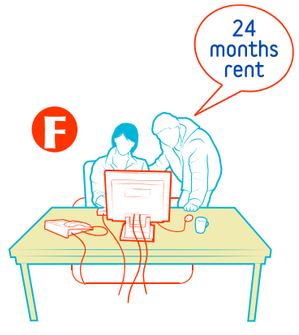
Pilot Grand Paris

With its population of 11.7 million people making 10 million journeys every day, Île-de-France represents a highly significant potential field of application of electro-mobility. Intermodality at train stations and sharing schemes with EVs are key issues in the "Grand Paris Programme", a plan aimed to improve the transport links of the French capital and its suburbs.

MOLECULES will focus on two cities: Marne-la-Valle and Neuilly-sur-Seine. The pilot will deploy the first local to global car sharing solution for enterprises. Based on the concept of a global platform, the service provider will integrate every kind of vehicles, from cars to bicycles, and complete the existing network transportation of an extended metropolitan area.

The users working at the companies in the area will have easy access through a smartphone application to electric vehicle fleets which can be shared between companies in the same area, and enterprises will benefit from optimizing transport cost.





molecules

mobility based on electric connected vehicles in urban and interurban smart, clean environments

SEVENTH FRAMEWORK PROGRAMME

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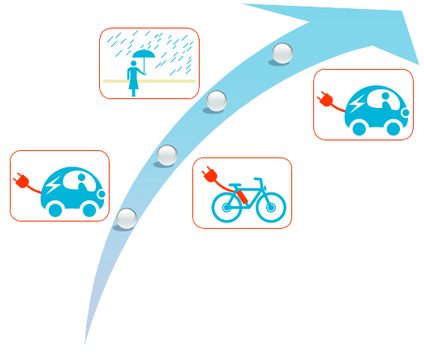
C O N T E N T S

Fostering Smart Connected Electro-mobility solutions in European cities



ICTPSP
ICT POLICY SUPPORT PROGRAMME
part of the Competitiveness and Innovation Framework Programme CIP

Pilot Barcelona

With ten new charging points installed in 2012, Barcelona is a leading city in Europe with regard to electric vehicles for private use or integrated in the municipal fleet. Existing services operated by both public and private initiatives boast 230 EVs and 250 charging points in total reaching out to 3.400 users per year.

The city has adopted various incentives for EV users: free charging for LIVE Barcelona card owners at municipal charging points, free on-street parking and 75% reduction in EV's registration tax. Whilst the Spanish government provides a subsidy for EV purchase up to 25% of the price.

In Barcelona's pilot MOLECULES will integrate three different experiences: an innovative service of public electric motorbikes, joint e-motorbike and public mobility services to tourists, deployment of electrical fleets in municipal services for urban maintenance.

What is MOLECULES?

MOLECULES is a demonstration EC funded project (CIP-ICT-PSP-2011-5-297244) with several large scale pilots in Barcelona, Berlin and Grand Paris (Marne-la-Vallée and Neuilly-sur-Seine). The project aims to use ICT services to help achieve a consistent, integrated uptake of Smart Connected Electro-mobility (SCE) in the overall framework of an integrated, environmentally friendly, sustainable mobility system.

Why Smart Connected Electro-mobility?

The need to address environmental threats in cities, nonrenewable resource scarcity, and financial restrains are posing huge challenges to society. 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 motorized transport modes.

The European Union has pledged to decarbonise the transport sector by 2050 and has introduced various initiatives (e.g. the European Green Cars Initiative) seeking to promote new technologies to modernize the sector. Promoting a wider use of "green" vehicles can support the shift towards a resource efficient and low-carbon economy that is efficient in the way it uses all resources.

The use of Electric Vehicles (EV) can respond to these challenges, yet there is a need for coordination between the recharging infrastructure, the EV and the overall mobility schemas of a city or interurban road network. MOLECULES will test multiple types of vehicles for individual transport and public urban fleet, and will help enhance user experience and acceptance of electric vehicles by offering various ICT services for urban and inter-urban mobility while at the same time Green House Gas emissions are reduced.

Join the MOLECULES Interest Group!

Are you involved in Smart Connected Electro-mobility projects in your company, institution or public authority? Would you like to learn more about MOLECULES's demonstrations and be informed about the project's results?

MOLECULES is establishing an Interest Group which will gather key stakeholders from the private and public sector who are developing services and technologies for Smart Connected Electro-mobility throughout Europe. They will follow MOLECULES to monitor the project's progress, to provide end-user feedback and to validate the results the project is producing.

The Interest Group is an open platform aimed at maximizing the involvement and contribution of the widest possible community of potential users of the project results. Group members will exchange via the MOLECULES website, social media and workshops. Sign in your LinkedIn account and join the discussion room at http://www.linkedin.com/groups/MOLECULES-Interest-Group-4415627/about

To join the MOLECULES Interest Group contact Polis, dissemination partner in MOLECULES at fboschetti@polisnetwork.eu

MOLECULES Services

The three sites in MOLECULES already have electro-mobility experiences running and ICT-based mobility services in place, nevertheless diverse systems exist in each site. MOLECULES will address the challenge of integration by identifying a number of common ICT service categories and integrate them on an open architecture enabling Smart Connected Electro-mobility (SCE). The seven categories of services identified by MOLECULES are:

- Personal trip planning
- Electric Vehicle sharing/pooling
- Personal recharging advisor
- Personal carbon footprint advisor
- Electro-mobility billing support
- Incentives to electro-mobility
- Network strategies

According to the specific context of each of the demonstration sites, MOLECULES will offer the public alternative electro-mobility modes of transportation supported by ICT technologies (e-bikes, e-cars and e-motorbikes) and will seek to engage the public sector in integrating Smart Connected Electro-mobility services and technologies in their transport systems.

How can you benefit from MOLECULES?

MOLECULES will propose a user-oriented strategy where the common beneficiary of most of the services is the citizen:

- You will be able to plan your trips using EVs seamlessly as part of the multimodal offer, booking the service and paying for it from your smartphone or from your desktop at home. You will be assisted during the entire length of your trip with real-time information about the traffic, the available charging points and services for EVs (e.g. free parking). Once on the move, you will be informed about the battery level and the nearest charging point based on the trip conditions.
- Private companies will use EVs for business journeys in urban areas or as a charter for the personnel to get to the office.
- Public authorities will register the environmental footprint of their EV fleet and will get feedback about the impact of their electric transport based services.

All users, including EV service providers will get personal charging advice about the most efficient way of charging their vehicles according to the price and source of electricity at each time of the day, status of the battery(-ies), etc.

Pilot Berlin

Berlin is challenged by considerable environmental transport induced problems, mainly air pollution and high noise levels at night. In 2011 the Senate of Berlin adopted the New Transportation Strategy "mobil 2015" and set Berlin as one of the eight national demonstration site for electro-mobility.

Currently in Berlin seven car sharing companies supply station based car sharing with 278 vehicles. The city has plans to introduce additional EVs for car sharing and other fleet operators and intends to increase the number private and public charging points in the years to come. The uptake of e-mobility in Berlin has lately registered several private vehicles in the whole urban area.

In Berlin's pilot MOLECULES will integrate car sharing schemes within the traditional transport solution to enhance the users experience with electric vehicles and to foster multi-modal mobility options.