



EUROPEAN CITIES AND REGIONS NETWORKING
FOR INNOVATIVE TRANSPORT SOLUTIONS

An Introduction to European Electromobility projects for a more sustainable urban and regional mobility

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This introduction:

- What is Polis and what does it stand for?
- Polis' activities on electromobility
- European projects examples

What is Polis today:

Network

Exchange of experiences

European cities & regions

European Initiatives

Innovation

European Institutions

Sustainable urban & regional mobility



environment
& health



mobility
& traffic efficiency



safety
& security



economic
& social aspects



Vehicle
manufacturers



INDUSTRY

RESEARCH

AVERE



NGOs

EU INSTITUTIONS



DG MOVE

DG RTD

DG CONNECT

TRAN

INTERNATIONAL
ORGANISATIONS



Polis Electromobility activities

European Institutions

- Clean Power for Transport (CPT)
- Strategic Transport Technology Plan (STTP)
- Urban Mobility Package (UMP)
- EU funding programmes

Polis network

- **Positions** on CPT, STTP and UMP
- Created **Electrification Platform**
- ERTRAC EV roadmap suggests **research priorities**
- EEO, Clean Vehicle Portal (CVP)
- **EU projects on electromobility**
- Cooperation Green eMotion, ELECTROMOBILITY+ , UNPLUGGED...

Legislation
& Support



Expertise
& Needs



LOCAL AND REGIONAL AUTHORITIES IN EUROPE



Image:
<http://greenbuildtv.com/>

Deployment of alternative fuels infrastructure: Electromobility

- **Common plug across EU**
- **Minimum coverage recharging points:**
 - Technical specifications wireless charging, electric buses, exchange of batteries...
 - Member States: **National policy frameworks**
- **User acceptance**
 - Information campaigns
 - Large-scale demonstrations
 - EU funding sources (ERDF, Cohesion Funds,...) to encourage best practices in alternative fuel infrastructure deployment and management between local and regional authorities

Member States next steps:

- **Set and make public their targets, presenting their national policy frameworks by end 2016**
 - Reporting on implementation every 3 years
- **An appropriate number recharging points accessible to the public by end 2020 at least in **urban and suburban areas****
- **Supporting actions for market development**
- **Close **cooperation with regional and local authorities** and with the industry concerned**

Cooperation at the urban/regional level

- **Poor Air Quality estimated to cause 3.7 million premature deaths worldwide in 2012 (WHO, 2014)**

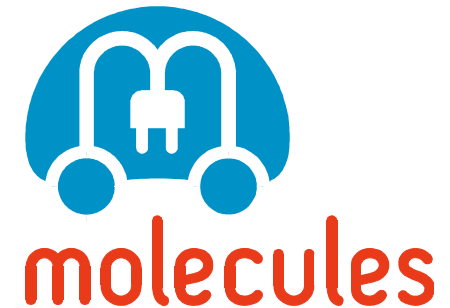
- **Urban mobility package:**
 - Urban mobility plans including electromobility
 - Road charging and access restriction schemes: exemptions electric vehicles
 - A strategy for near –'zero-emission urban logistics' by 2030: Procurement vehicles in commercial fleets, charging and new vehicle technologies

European projects: typical role for cities and regions

- **Research projects with demonstration component**
 - Cities / regions as test case / 'living labs' for new technologies
- **Pilot projects**
 - Implementation / roll-out of innovative measures
 - Market take-up, deployment
- **Exchange of experiences and good practice, campaigns and awareness raising, cooperation with other cities and regions**

EU projects on electromobility

- Definition of future research priorities
- EVs market
- European pilots electromobility:
 - Public/private vehicles-including freight
 - Vehicles performance real conditions
 - Users acceptance and services including ICT
 - Business models
 - Recommendations future roll-out
- Best practices exchange, policy analysis, implementation guidelines



Transport Innovation Deployment for Europe

Enhance the take-up of 15 innovative urban transport measures and establish them as mainstream measures

- **Local benefits:**
 - Tailored support to integrate urban transport innovation into local transport policy
- **Polis members:** Rotterdam, Milan, Budapest, Bologna, Reading, Gent, Aalborg, Rome, Barcelona, Bologna
- **Electromobility:**
 - Clean city logistics
 - Financing schemes for charging stations
 - Inductive charging for public transport



Outputs:

- Implementation scenarios for 15 cities
- Transferability handbook
- Implementation guidelines for practitioners
- Training and e-learning
- Cost-benefit and impact analyses
- Policy and research recommendations

www.tide-innovation.eu

Clean Vehicle Portal (CVP)



Web database for procurers to compare lifetime impact of road transport vehicles

➤ Local benefits:

- Compare lifetime costs of vehicles;
- Supports joint procurement

➤ <http://www.cleanvehicle.eu/>

Outputs:

- Database of lifetime-cost-calculation of cars, trucks, buses
- Best practices collection and exchange
- Assistance to implement Directive 2009/33/EC

European Electromobility Observatory

Monitoring uptake of electromobility in Europe;
database on vehicles, charging infrastructure, etc.



➤ Local benefits:

- Submit and access data;
- Enable fact-based policy making;

➤ <http://ev-observatory.eu/>

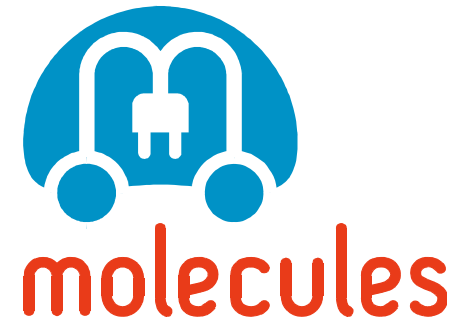
Outputs:

- Database on electromobility development in Europe
- Webinars and workshops

Mobility based on eLEctric Connected vehicles in Urban and interurban smart, cLEan, Environments

Using ICT services to help achieve a consistent, integrated uptake of Smart, Connected Electromobility (SCE)

- Local benefits:
 - Integrating EVs in overall mobility system
 - Open architecture, different services (e.g. Intermodal trip planner, vehicle support, carbon footprint, etc.)
- Pilots:
 - **Berlin:** free floating fleet
 - **Barcelona:** e-bikes sharing scheme
 - Grand Paris: sharing and pooling schemes
 - <http://www.molecules-project.eu/>



Outputs:

- Enhance EV user experience through evolution and adaptation of different ICT services

Freight Electric Vehicles in Urban Europe

Overcoming barriers for new solutions for EV s in logistics operations



Local benefits:

- Integrating EVs in overall mobility system/last mile operations
 - Cooperation with local industry
- Pilots: Amsterdam, Rotterdam, London, Milan, Madrid, Oslo, Stockholm, Lisbon
- <http://frevue.eu/>

Outputs:

- Evidence-based practices in the promotion of EVs in Europe: 127 vehicles!
- White paper and recommendations for future deployment

Zero Emission Urban Bus Systems

Answering Environmental Urban Challenges
Through the Electrification of Urban Buses

- Local benefits:
 - Offer a valuable alternative to diesel vehicles
 - Support well-designed local policy

- Pilots: Barcelona, Bonn, Glasgow, London, Münster, Plzen, Stockholm

- <http://zeeus.eu/>



Outputs:

- Extend fully-electric solution to the core part of the urban bus network:
- Observatory bus system, guidelines

Some extra points

- **Vehicles costs, availability**
- **Public recharging infrastructure:**
 - Maintenance
 - Information, services
 - **Multimodal: integration transport modes**
- **Business models**
- **New technologies**
- **Users acceptance**
- **Role of local authorities**

Thank you!

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Polis Conference: 27-28 November Madrid