## Towards more efficient urban transport systems

**Sylvain Haon** 

executive director

**UNECE** Workshop on urban transport and mobility

### What is Polis

Exchange of experiences **Network European Projects** 65 European cities & regions Innovation **European Institutions** Sustainable urban mobility

environment & health

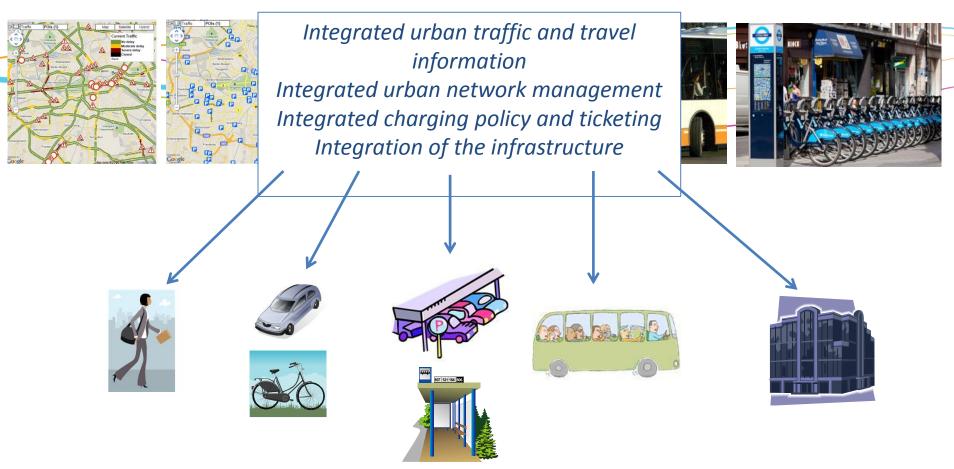








### **Enabling the movement of persons and goods**









### mobility & traffic efficiency



### **Smart Mobility - POSSE**



- Polis brought together UTMC (UK) and OTS (D) initiatives on open ITS systems in Oct. 2012
- Reading BC (UK), Burgos (ES), Pisa (IT), NPRA (NO), CDV (CZ), La Spezia (IT), Klaipeda (LT), UTMC Ltd (UK), OCA e.V (D) and Polis (B)
- Objective: to promote concept of open ITS systems around Europe

#### **Key project outputs**

- Report on study of usage of UTMC and OCIT/OTS specifications
- Good practice guide to implementation of open ITS systems and standards
- Open ITS systems and standards guidelines
- Implementation plans for lead and follower partners



### **Smart Mobility – CONDUITS**



- **Evaluating the impact of Intelligent Transport Systems in urban** areas by defining a set of Key Performance Indicators (KPIs) to help city authorities identify where ITS can improve performance
- KPIs developed and tested in four cities in relation to traffic efficiency, transport safety, social integration and land use.
- Decision support tool developed for pollution reduction = predicting impact of ITS on pollution reduction based on KPI
- EC project ended in June 2011, but extended thanks to sponsoring of Kapsch.
- http://www.conduits.eu/





### **Automated vehicles**









### Improving the efficiency of urban freight delivery

- Improved efficiency of urban logistics
- Improved efficiency of the urban mobility system: less congestion, greater safety
- Cleaner urban logistics















**Vehicles** 

Urban network management/ logistic profile

Urban logistics/delivery solutions

Planning strategies, consultation processes, labelling schemes











### Barcelona urban freight policy

**EXCLUSIO** DILLUNS-DIVENDERES 8-10 HORES 17-21 HORES

Trial for multi use lane and night time delivery

Extension of the schemes, further technological developments, improvement of measurements methods and technical knowledge

**Further** technological innovation, supporting wider scale deployment of the trialed solutions with new vehicle technologies

**Example** and Best **Practice** 

Zona de Regulació Especial

2002

2006

2008

2012

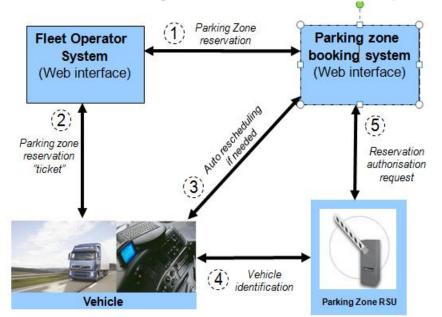




### Bilbao in Freilot - www.freilot.eu



- Booking of delivery places in advance
  Relying upon cooperative systems
- Once trialled, the scheme has now been extended
- \* The partnership with the feight operators is a key factor for success











### Lille organic recovery centre & biogas bus fleet

#### from1994

 Methane fuel Production trials using biogas.
 This supplies 4 buses.

#### 1999

• decision to replace the diesel bus fleet with gas and biogas-powered buses.

#### 2004

 decision to choose methane fuel for recovering biogas produced by biowaste digestion.

#### 2005

- Selective collection of biowaste involves 500,000 inhabitants.
- Organic recovery centre commissioned. Biogas Production equivalent to
   4.5 million litres of diesel/year

#### 2007

- •Construction of Organic Recovery Centre (Loos/Sequedin) to treat 100,000 tonnes of biowaste /year.
- Construction of gas/biogas bus depot in Sequedin.
- 100 of the 150 buses stationed there are supplied with biogas from the Organic Recovery Centre.





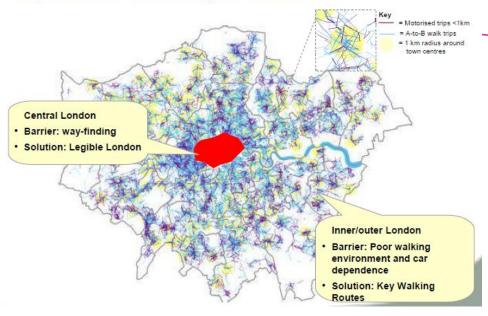
### **Electromobility - LIVE in Barcelona**





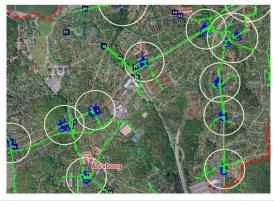
### **Active travel – London and Gothenborg walking** strategy

#### **Barriers to Walking in London**





#### INVENTORY OF FOOTPATHS



Goal: At least one accessible footpath to each bus / tramstop

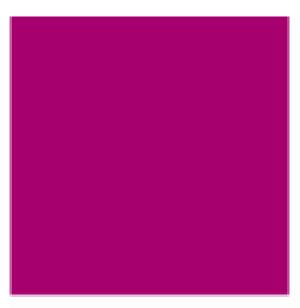
Ex: "Majorna" - 700 obstacles - cost 200 000 Euro



### Active travel and health

- **Position paper released in March 2012:** "Securing the benefits of active travel in Europe"
- A shift to active mobility and public transport combined with improved land use can yield immediate health benefits, much greater than those achievable by focusing only on improving air quality and the local environment through greater fuel and vehicle efficiencies.
- More walking and cycling, for all trip purposes to work, education, shopping, social and leisure trips – can generate important economic benefits through large public health gains (which are not offset by accident costs) in addition to reduced pollution and congestion.
- Physical activity deficiency is one of the leading risk factors for ill-health in the 53 Member States in the World Health Organization (WHO) European Region, where nearly 1 million deaths/year are estimated to be attributable to physical inactivity.
- Calls upon European institutions and other European actors: to take action to ensure that the promotion of health benefits of active travel is maximised in all relevant European policies and programmes





### economic & social aspects



### **Parking**

- Key component of a demand management policy
- One minute fraction tariffs in Barcelona
- **Mobile parking payment**





### Financing – the northern line extension in London



#### **NLE Potential Funding and Financing Sources**

- •Funding developer contribution
- -Community Infrastructure Levy (CIL), tax on planning permission by boroughs
- -Section 106 contributions (S106)
- -Business rates supplement (BRS)
- -Tax increment financing (TIF)
- Finance borrowing
- -Private sector borrowing more expensive option
- -Public sector borrowing less expensive option



### The major challenges are not technological!

### **Key success factors include:**

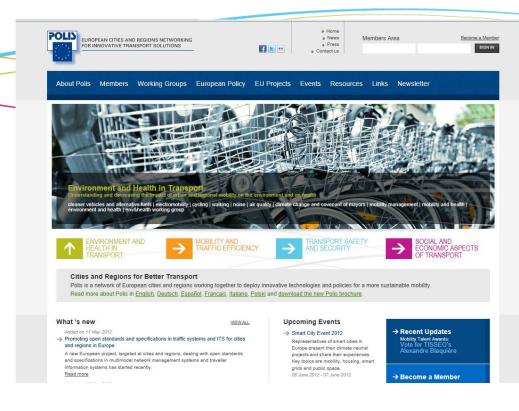
- **Efficient governance structure**
- Sustainable urban mobility planning, inclusive of all !



### **More information**

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www.polisnetwork.eu



Other European initiatives offering case studies on innovative urban transport solutions:

NICHES & NICHES + : <u>www.niches-transport.org</u>; CIVITAS, ELTIS, SUGAR & BESTFACT, Covenant of Mayors, etc.



### **Electromobility**



# molecules

#### **MOLECULES**

- ICT Policy Support Programme
- Develop & demonstrate ICT applications to promote integrated uptake of smart connected electromobility
- Reference Group Meeting: 26 June Paris



#### 7 Service categories





#### PTP · Personal Trip Planner

Multimodal solution integrating electric car sharing and carpooling schemas. Will allow the user to book the electric part of the trip.

#### ESS: EV Sharpooling Support

Combines carsharing with carpooling services at better prices.

#### **EBIS: Electromobility Billing** Support

Integrates seamless ticket and billing facilities for electro-mobility.

#### **PECA: Personal Carbon Footprint Advisor**

Registers the user carbon footprint based on his/her behavior when using MOLECULES, and gives advice to

#### ITEM: Incentives to Electromobility

Will integrate two groups of incentives: (i) those applied to any EV user. (ii) those depending on the user carbon footprint.

#### **PERA: Personal Recharging Advisor**

Offers the user advice on the most energy efficient way of recharging according price, origin of electricity, foreseen trips, battery status, etc.

#### NSE: Network Strategies for **Electromobility**

Based on the real-time carbon emissions registered, applies traffic and public transport strategies in order to balance emissions and recover the acceptable values

#### VEHICLE INFRASTRUCTURE



Smooth integration of the EV in the overall mobility system.

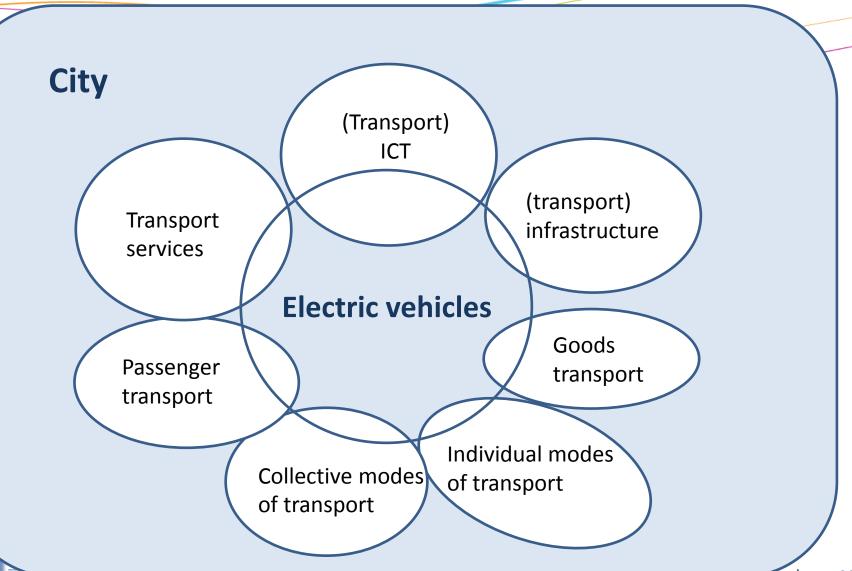
Optimization of the energy used/emissions generated by passenger transported.

Operational new business models for the deployment of Evs.

ITS contribution to the long term sustainable success of Evs.

vork.eu

# Integrating electromobility in the urban mobility system





- Subsidies:
  - Company cars
  - Charging points
  - Electricity
- Location and real-time availability of Amsterdam charging stations released as open data

