Innovation and sustainable mobility
Electro-mobility services in La Rochelle

BIOSIRE/CIVITAS Conference
Clean Fuels, Clean Vehicles, Cleaner Cities
Donostia-San Sebastián
15th and 16th June 2011
LA ROCHELLE URBAN COMMUNITY

Population 145,000 inhabitants; 18 towns; 21,000 hectares; around 700 inhabitants/km²

Industrial sector: boat industry, transport (Alstom, Delphi, Rhodia…), commercial harbour …

Other sectors: tourism & services, leisure harbour, University
Assets and constraints:

- Car traffic doubled at the end of 90’s; 11% increase of the population over the last decade
- Need to assess the situation and plan actions

Answer: A Urban Transport Plan

- A set of measures implemented over a ten-year period (2000-2010) to reduce urban car traffic & foster alternative modes of transport on the territory
- A new Urban Transport Plan (2011-2021) is being prepared: consultation with all stakeholders...
Developing policies towards soft modes

1976: first PT bike rental service

2011: 300 bikes, 50 stations, 700 subscribers

PROMOTING CYCLING

le vélo - the bike
Developing clean and efficient collective transport means

• New buses complying with EURO 5 and EEV standards (Enhanced Environmentally friendly Vehicles)

• Buses equipped with catalytic converters and particulate filters, running with Diester

• Bus with a High Level of Service

• Dedicated bus lane
TOWARDS SUSTAINABLE MOBILITY: Practical and easy-to-use

Beyond the bus, a large range of transport modes and mobility services

Objective: To make ALL modes of transport easier & more practical to use.

=> Electro-mobility services are fully integrated in the PT offer.
Electro-mobility in La Rochelle: a long-standing story...

- Late 80’s - Early 90’s:
  - Vehicles manufactured in La Rochelle and tested by La Rochelle municipality: Volta cars
  - Partnership with Peugeot EVs tested by selected households
  - The City of La Rochelle buys electric vehicles and scooters for short-duration rental towards inhabitants and companies

- Late 90’s: the City of La Rochelle buys some utility electric vehicles: cleaning vehicles, garbage truck used in the city centre, and electric cars for the municipal fleet

- Development of various electric modes: boat, car, truck, micro-buses
Within CIVITAS-SUCCESS: Find a sustainable organisation for the electromobility services

- Main output: a long-term PPP (2006-2018) : delegated management of public services with Proxiway (Veolia) for three electromobility services
  - Electric car-sharing
  - Urban goods deliveries using electric vehicles
  - Electric / Hybrid Shuttle to the Park-and-Ride

- This organisation could be considered as innovative:
  - Innovation in the contractual aspects: activities made durable
  - Innovation in the management
  - Technological innovation

1st Delegated management of public services in France on new electric and hybrid transport services

- The services have to be financially sustainable by the end of the contract

- The main barrier encountered within CIVITAS-SUCCESS: the lack of electric/hybrid vehicles available on the market!
ELECTRIC SHUTTLE BOATS

1988 : new route from both side of the Old Port
1998 : 1st solar electric shuttle boat in France

- 30 passengers
- Crossing La Rochelle’s channel in a few minutes
- On-demand service; all year long
- Bikes can also be brought on-board
- Accessible to people with reduced mobility
- 300 000 passengers / year
- Induction system + night charging
ELECTRO-SOLAR « SEA BUS»

- 2 electro-solar boats from May 2009
- 75 passengers; full accessibility
- PV panels (26 m²) providing 20% energy
- Charging to the grid during the night
- Ni-Cd batteries
- Speed 6 knots (13 km/h)
- 200,000 passengers/year
- First electric boats with enough power and range for seagoing navigation
La Voiture  / the car... differently!

ELECTRIC CAR-SHARING from 1999 (« LISELEC/YELOMOBILE »)

Activity

- 1999: initiation of Liselec experiment with PSA + EDF
- Self-service round the clock, 7 days a week - Complementary to the bus network
- 7 stations - 50 vehicles (25 Peugeot 106; 25 Citroën Saxo)
  - 75km autonomy
  - Ni Cd Batteries
- 500 subscribers

Addressing specific needs

- Temporary / short duration use, short distances (7km/trips av.)
- 1st/2nd car ownership, even as a company fleet

How does it work?

- A simple Procedure: one contract, one pass
  - Can be used with the regular PT smartcard
La Voiture / the car… differently!

Electric carsharing (« YELOMOBILE »)

currently : 10 stations
- equipped with slow charging points
- 3 stations open in January 2011
- 3 stations to be launched on 24th June

=> 13 stations available this summer

- A pricing offer adapted for most of the users

=> The more you use the service, the less you pay per hour

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La Voiture / the car… differently!

- New generation electric cars for the car-sharing system (1/2)
  - Launch of a call for tenders among 19 electric car manufacturers (worldwide)
  - 7 tenders received

  - **4 vehicles** pre-selected
    - technical performance
    - commercial offer
    - compatibility with the car-sharing management system
o New generation electric cars for the car-sharing system (2/2)

- **Event** organised on 22th September 2010: presentation to the public, press conference
- Technical tests on the ground
- Qualitative Analysis: Focus group 50 drivers
  - Yélomobile users
  - Drivers not used to electric vehicles
- In December 2010, two types of EV were chosen:
  - 20 Mia +10 in option
  - 20 C0 + 10 in option
- Implementation in two steps:
  - 30 C0 in June 2011
  - 20 Mia in Summer 2011
ELCIDIS: Electric City Distribution

Objectives

• Reorganizing deliveries to reduce pollution, noise and congestion caused by lorries in the city centre
• Facilitating traffic fluidity (municipal decree restricting access to the very city centre between 6am and 7.30 am)

How does it work?

• One central platform strategically located between the city centre and surroundings areas

Last mile with Evs:
• small/medium Parcels: transferred to electric vans
• Big parcels and Pallets: truck

- 5.5 electric truck in May 2010: Modec
  - payload capacity of 2 T
  - autonomy of 100 km.
- Not an adaptation: a 100 % electric vehicle
- 1T Lithium iron phosphate pack - installed under the floor of the vehicle.

⇒ Carriers do more and more resort to the service
⇒ Another Modec truck to be purchased in 2011
Parking… differently!

PARK-AND-RIDES (P+R)

- 3 Electric microbuses between the Park-and-Ride (P+R) and La Rochelle city centre
  - implemented in 2003
  - 22 seats
  - load/unload the batteries in the vehicle: uneasy

- 2-year experiment of 2 hybrid microbuses within CIVITAS-SUCCESS project

- New electric/hybrid micro/midi buses to be purchased in 2nd semester 2011. Tests carried out throughout 2011.
Accompany the change for the inhabitants and companies

- Parking: free for electric and hybrid vehicles for the off-street and public parkings.

- Already several slow or fast free charging points available for electric vehicles when needed:
  - Off street: 5 slow charging points; 2 fast charging points.
  - In public parkings: eg: 7 park places equipped with plugs in the new public parking.

- Inform the inhabitants/companies/local authorities on the possibilities to obtain subsidies for the purchase of EVs.
Cybercars : explore new potential electromobility services

- New type of e-mobility : electric cybercars without any driver
- First time that cybercars are operating on an open and public space
- Technical innovation
- On-demand service
- Anticipate what could be the mobility of the future
- A national media coverage for the launch and the conference
Conclusion

• From pilot projects to electro-mobility services fully integrated in the PT offer
• A long term-vision as regards electric vehicles (notably through 12-year PPP)
• A will to go further:
  o Confirm La Rochelle’s leading position (Leading Cities Group at national level)
  o Provide clearer and easy-to-get information on electromobility services and incentives (free parking…)
  o Accompany the involvement of private actors, notably tourism actors
  o Reassure the users of electric vehicles that they will not go out of energy and services: continue to develop the necessary infrastructures in an innovative way (car-sharing stations; public road charging points; smart grid; mutualised charging points; “green” sources of electricity)
  o Develop the exchanges with other cities and organisations, notably through EU cooperation projects and networks
Thank you!
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