Electro-mobility as means against Climate Change in German Cities

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Arguments for a change:

- Pollution, CO2 emission, climate change
- Preparing for post oil mobility
- No sufficient contribution of traffic to prevent climate change up to now
- Alternatives?

CONCEPT OF URBAN MOBILITY

**Environmental quality**
Reduce air pollution and noise

**Quality of public spaces**
Less cars - more space for people

**Quality of mobility**
Offer mobility for all
How to address climate goals in traffic / alternatives

- limits for CO2 emission for car producer (combustion engines, diesel and gasoline motors)
- promote electric cars
- Change drive mode: bioethanol, natural gas (NGL), liquefied petroleum gas (LPG), fuel cell etc.

Problems/Barriers:
- traffic growth (1,2 % more vehicles per year, more traffic performance, km/person)
- low oil price
- Estimated growth for transport of goods on German highways: 30 % till 2030

Result: Not many alternatives
How to get run electro-mobility?

- First step: Development of vehicles and charging infrastructure
- Second step: Testing in the urban lab
- Third step: Run-up market
- Fourth step: Self-sustained market
Many show case projects

- Show cases in German towns and regions
- Cities like Berlin, Stuttgart or Leipzig built up electric fleets for car sharing, taxi or municipal cars
New mobility solution with electric vehicles

Fotos: E-Taxi in Stuttgart, Projekt GUest, Federal Showcase project Dresden, Teilauto Carsharing with E-cars, Association for Carsharing Germany
E-Bus and Pantograph for charging in the City of Hamburg
Public transport as part of electro-mobility solutions

Foto/Graphik: © E-Mobil BW
Environmental friendly = public transport!

Fotos: Tram, Bus, Train in Berlin, Tram in Dresden, E-Bus Emil, City of Braunschweig
National e-mobility objectives

National Objective in Germany:
2 Mio. electric vehicles in 2020,
but statistics (01-01-2017):
- 62.2 Mio. vehicles total
- 684 vehicles per 1.000 person total
- 34.000 full electric cars
- 165.000 hybrid cars

Government declared in May 2017:
Goal for electric vehicles will not be reached! Challenge to reach the goal at its best!
Electric bikes: Since 2009 more than 3 Mio. E bikes sold without any subsidies, 2016: 600.000 sold
State financial support

- 1,2 Billion Euro buyers support up to
  - 4.000 Euro for full electric car
  - 3.000 Euro for hybrid car
  - car basic price not over 60.000 Euro
  - bought after July 2016
  - owner has to stay at least 6 month with the car
- 300 Mio. Euro on charging points
- subsidies for electric fleets
- subsidies for electric busses
- state guidelines to encourage the use of electric vehicles
  - federal climate change initiative
  - electric initiative of federal ministry for traffic
Advantages by law

- Municipalities can offer advantages
  - priority parking place
  - reduced parking prices
  - use of bus lanes
  - exception of access restriction

- tax reduction
  - no tax on car matriculation (no tax on mineral oil)

- Who can use the advantages
  - full electric or hybrid cars
  - less than 50g CO2 emission
  - at least 40 km full electric range
  - “E” traffic matriculation
Cities start mobility planning


- EU toolkit for sustainable urban mobility planning: http://www.eltis.org/mobility-plans

- In Germany: Climate protection plans, Traffic development plans, SUMP
Develop sustainable city logistics

Fotos: Senator of the City of Bremen on a Cargo E-bike, Bavarian Minister for Traffic at Cargo bike project in Nuremberg
Environmental report and sustainable reports of parcel services in Germany, UPS parcel service with bike
From post car to E-logistics

Fotos: Post car fleet in the Cities of Munich, Cologne, Regensburg, Bonn, more to come
Be aware: biking and walking is better than e-mobility

Fotos: Berlin examples (T. Kiel)
Keep solutions simple!
Solution for urgent problems first

Deficit of finance in street construction in Germany 2016
34 Billion Euro EUR (27 % of municipal finance deficit)

- You can’t construct a charging point at a non fixed road
- Citizens will not understand priorities of the administration

Foto: Small street in the outer City of Hamburg (Altona)
Open questions

- How to convince people of new mobility items?
  - overcome comfort and convenience orientation
  - no car use for short trips
  - Promote public transport
  - promote car- und bike sharing
- Who are the actors and promoters?
- How to win players?
- How can enforcement be financed and organized?

Get connected with the future!
Thank you for your attention!

Bike rickshaw in Paris!

Tourism as a player

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