



Smart mobility

The problem

In Europe transportation is responsible for about the 60% of air pollution and gives a relevant contribution in terms of CO2 emissions. The increase of GHG emissions was observed for both passenger transport and freight transport and was mainly due to growing transport demand. Freight transport is a real problem and its total volume, measured in tonne-kilometres for EU-15 member states, increased by 35 % between 1996 and 2006.

Policy Relevance

- The EU Green Paper on the Urban Environment (1990).
- The EU White Paper on Transport Policy (2001).
- The EU Green Paper "Towards a new culture for Urban Mobility" (2007).
- The EU Action Plan on Urban Mobility (2009).

Good experience

- Frankfurt's Mobility Centre
- Austria: network of Mobility Centres
- Barcellona bike sharing
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The problem

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Since the seventies, the economic growth of the west European Countries has been accompanied by a real boom of car's sales. Private car has become the principal mean of transport for European citizens, often used for short distances (less than 5 km) and for frequent and unplanned movings.

Our territory and cities have been undergone radical changes, with streets, infrastructures and facilities dedicated to car drivers. The city and mobility net planning's have been also heavily influenced by the presence of cars.

The result is that transportation is responsible for about the 60% of air pollution and gives a relevant contribution in terms of CO₂ emissions. Emissions of green house gas in Europe related to transportation have increased by 26% (180 million tonnes) between 1990 and 2006, excluding international aviation and marine transport (EU-15). Between 1990 and 2007, CO₂ emissions from road transport rose by 29 % in the EU-27: this increase was observed for both passenger transport and freight transport and was mainly due to growing transport demand.

For passenger road transport, a relative decrease in the use of public transport is also noteworthy and efficiency improvements in passenger cars have not been sufficient to counteract this trend.

As said, freight transport continues to grow, with the largest increases being for the least energy efficient transport modes (road and air freight). The total volume measured in tonne-kilometres for EU member states increased by 35 % between 1996 and 2006.

Policy Relevance

The EU Green Paper on the Urban Environment (1990)

In the 1990 EU Green Paper on the Urban Environment it was stated that the Commission should encourage innovative approaches to the use of public transport and the environmental management of urban traffic.

The EU White Paper on Transport Policy (2001)

In the 2001 White Paper, the European Union has recognized that regardless of the means to consider the problem (pollution, congestion, lack of infrastructure), the current society is now oriented toward limiting the role of private cars.

The EU Green Paper "Towards a new culture for Urban Mobility" (2007)

The European Commission adopted the Green Paper Towards a new culture for Urban Mobility on 25 September 2007. With the Green Paper, the Commission has set a new European agenda for urban mobility, aiming to facilitate the search for solutions by, for example, sharing best practices. Moreover, this document addresses, for example, how the quality of collective transport can be improved, how the use of clean and energy efficient technologies can be increased, how walking and cycling can be promoted and how the rights of passengers on public transport can be protected.

The EU Action Plan on Urban Mobility (2009)

The European Commission adopted the Action Plan on Urban Mobility on 30 September 2009. The Action Plan proposes twenty measures to encourage and help local, regional and national authorities in achieving their goals for sustainable urban mobility. With the Action Plan, the European Commission presents for the first time a comprehensive support package in the field of urban mobility. The actions are being launched over the four years following the Action Plan's adoption. The European Commission will conduct a review of the implementation of the Action Plan in the year 2012, and will assess the need for further action.



Good experience

Frankfurt's Mobility Centre

A Mobility Centre is an important tool of mobility management. In different European Countries it is the main point of interaction between citizen and the mobility services available in a certain area. Usually a Mobility Centre provides:

- Integration of services for sustainable mobility

In collaboration with institutions and transport companies, it proposes new actions to improve the quality of public transport and implement the different forms of modal integration.

- New mobility products and services

It sells mobility cards, special fidelity subscriptions and all-inclusive packages. It promotes new commercial agreements in order to offer combined tickets to commuters, tourists and participants to special events (e.g.: a daily card for the use of train and bike sharing and the entrance to a museum).

- Information and assistance

It is conceived as a well-organized Info Point, where everyone can find informations on tariffs and timetables, maps, lists of the bike services, touristic routes and lot more. It helps customers to manage their complaints. It also communicates via web (and new technologies), gives update information's on major events and promotes the city image.

In Germany the first Mobility Centre opened in 1991. Nowadays, there are more than 60 Mobility Centres.

The experience of Frankfurt's Mobility Centre has shown that, just giving information's and advices on mobility services in the right way, it's possible to determine a significant change in the personal modal split of the people involved (8% of the Mobility Centre customers have changed their habits and now use public transport more frequently).

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Austria: network of Mobility Centres

In Austria it works the first - and, so far, unique - network of Mobility Centres: in september 2007 in the Styria Region four Mobility Centres joined forces and layed a foundation with the aim of helping each other and offering a customer-oriented service with extensive information's and guidance.

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Barcellona bike sharing

Bike sharing is the latest service developed worldwide giving people the opportunity to find an easy and less expensive access to rental bikes.

How much is the impact of bike sharing in a city life? Barcelona measured its cycle mode share in 2005 (before bike sharing) and in 2007 (after bike sharing) to find out that cycle mode jumped from 0.75% to 1.76%. In Paris, cycle mode share increased from about 1% in 2001 to 2.5% in post-launch 2007. Based on these two cities, it appears that bike sharing has the affect of raising bike mode share between 1.0 - 1.5% in cities with pre-existing low cycling use. These percentages equate to tens of thousands more cycle trips each day. (<http://bike-sharing.blogspot.com>).

Seemingly, it is possible to presume that people that possess bike sharing cards would use public transport, car sharing and taxi's more frequently than they were used to do, especially in case of bike sharing stations set nearby rail and subway stations, bus stops and mobility exchange centre's.

Bike sharing has been developed as another mean of public transport and it will probably become an essential frame in mobility strategies.

At the end of June 2009, after 27 months of functioning, the bike sharing service in Barcelona (Bicing) can count on 193.000 registered users, 6.000 bicycles and 420 stations. The 48,45% of bicycle journeys in Barcelona during a favourable climate day have been made through Bicing.

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Safage, the carsharing experience in Zurich

Car sharing is the most important innovation in the mobility market of the 90's with regard to technology, partnerships, and the high standards of the organization and the operating system. Moreover, car sharing is the most effective key to combined mobility.

One of the earliest European experiences of car sharing can be traced to an early cooperative, known as "Safage", that started the service in Zurich in 1948. Membership in "Safage" was primarily motivated by economics and attracted people who could not afford to purchase private cars.

In Switzerland the cooperative Mobility offers one of the most important European car sharing service: 1.150 stations and 2.250 vehicles available, with special discounts for the cooperative affiliates.

Travelling in the Zurich region is particularly easy: with a personalised ZVV Annual Travelcard (NetworkPass, 9 o'clock Pass or BonusPass), people can travel freely 365 all year round in the travel zone for which the travelcard is valid and for only CHF 25 more they can get the Mobility card, giving access to all Mobility car sharing Switzerland's vehicles in 360 locations across the ZVV region.

In Germany DB Rent car sharig service is available in 66 cities, with 600 stations and about 1.100 vehicles.

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Data and Indicators

In the period 1990-2007 road transport was responsible of the largest negative change in green house gas emissions in Europe (EU-27): + 200,7 Mt CO₂-equivalent, equal to a 29,7% increase.

The main negative drivers of CO₂ emissions trends from road transport (passenger and freight) are linked to the growing transport demand: increases of passenger kilometres and freight tonne kilometres.

Download here the Report on Greenhouse gas emission trends and projections in Europe 2009, that presents an assessment of the current and projected progress of EU Member States, EU candidate countries and other EEA member countries towards their respective targets under the Kyoto Protocol and of progress towards the EU target for 2020. http://www.eea.europa.eu/publications/eea_report_2009_9

Links and References

To download the European Commission Action Plan on Urban Mobility
http://ec.europa.eu/transport/urban/urban_mobility/action_plan_en.htm

The EU website on transports <http://www.eea.europa.eu/themes/transport>



The Bike-sharing Blog provides information on the emerging public transportation mode of bike-sharing
<http://bike-sharing.blogspot.com>

To download the European Commission *White paper: European transport policy for 2010*
http://europa.eu/legislation_summaries/environment/tackling_climate_change/l24007_en.htm

To download the EEA Report Greenhouse gas emission trends and projections in Europe 2009:
http://www.eea.europa.eu/publications/eea_report_2009_9