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Preparation of the Green Paper on urban transport

Third Technical Workshop
"Public transport, intermodality and intelligent transport"
Szentendre, Hungary, 7 March 2007

Background paper

1. A Green Paper on Urban Transport

In its mid-term review of the 2001 Transport White Paper[1] the Commission announced the publication of a Green Paper on Urban Transport in 2007 to identify potential European added value to action that is taken at the local level.

The Green Paper will examine whether obstacles to successful urban transport policies exist at the EU level. The Green Paper on urban transport will address all transport modes, including public transport, walking, cycling, motor cycles and motor vehicles, and will cover both urban freight (and logistics) and passenger transport. The functioning of the private car in cities will be addressed. In addition, the paper will emphasise the need for an integrated policy approach. The paper will have a strong technology component and may also address issues related to the Commission's proposals on public service obligations in public transport and clean vehicle procurement.

The conference "Urban transport: problems, solutions and responsibilities" on 31 January 2007 marked the launch of the preparations of the Green Paper on Urban Transport[2]. Several clear messages were given during the conference. The first clear message was that there was broad support for our initiative to prepare a Green Paper. There was consensus on the need for a joint approach, despite the fact that urban transport has traditionally been considered a too controversial issue.

Subsidiarity was considered not to be an obstacle, but rather a challenge and an opportunity that could enrich actions taken at different levels, be it local, regional, national or European. The speakers recognised that European cities offer a successful model for urban transport and that the cities themselves are in the best position to select and implement the right portfolio of measures. The role of EU will be to identify, in partnership with all parties, whether there are obstacles to successful urban transport policies and, for specific actions, propose joint solutions.

Another important message from the conference was the unanimous agreement on the need for an integrated approach. The speakers underlined the importance of urban transport, not only in the context of the European transport policy, but also in a wider context of other European policies.

The importance of the EU's Regional Policy was stressed on several occasions during the conference. The need for financial support for public transport through the structural funds, the cohesion fund and other, innovative, instruments, is essential for a successful urban transport policy. A strong appeal was made to the cities in the new Member States, not to repeat mistakes made by the old Member States, for instance, not to abolish existing public transport infrastructure, like tramways.

[1] Keep Europe moving – Sustainable mobility for our continent. COM (2006) 314 final
[2] The preparatory work for the Green Paper can be followed via http://ec.europa.eu/transport/clean/index_en.htm

The preparatory phase of the Green Paper will come to an end in June 2007. During this phase the Commission will organise four technical workshops with stakeholders and experts. In addition, the Commission will organise two public stakeholder conferences: one at the beginning of the process and the second one at the end. For each of them the Commission will prepare and distribute a background paper in advance.

This is the background paper for the Third Technical Workshop which deals with public transport, intermodality and intelligent transport. It should be seen against the background and in combination with the other background documents that the Commission has presented so far. For example, the paper that was prepared for the Launch-Conference "Urban transport: problems, solutions and responsibilities" provides information on governance related issues as well as an overview of the planning of the preparations of the Green Paper.

The objective of this paper is to provide background to the workshop participants, define questions and guide the debate during the workshop. This is a public document that the Commission will publish on its website, together with a summary of the discussions that will take place during the workshop.

2. An overview of the main issues

Different aspects of urban transport will be elaborated during four workshop sessions. These sessions will deal with the efficiency and effectiveness of public transport; intermodality in urban areas, safety and security; intelligent transport systems and environmental performance and noise. Some of the main issues that will be addressed during the sessions are elaborated below.

2.1 Intelligent transport systems: a role in urban areas

Background

A majority of European citizens live in urban areas, which, whilst playing host to significant economic activities, are a place for work, leisure and living. Despite the fact that we become increasingly reliant on electronic methods of working, there is a significant increase in demand for mobility of both people and goods. This has led to acute congestion and associated problems including road accidents, serious delays, degradation in air quality and noise. Building additional road space is not an option for most urban conurbations.

A major challenge for urban areas is to reduce the harmful impacts of congestion whilst ensuring that the areas continue to do well economically. Intelligent Transport Systems (ITS) have proved to be an effective tool for the active management of existing infrastructure and mobility in the face of rising demand and increased congestion and also for supporting the promotion of alternative modes to the car such as public transport.

This is particularly important with little option for providing additional road space. Additional capacities in excess of 20-30% can be realised by more effective use of existing road space using innovative traffic management techniques. In addition, active management of transport infrastructure and mobility can also result in a positive impact on safety and environment. It can also contribute to a more sustainable use of transport modes. In built up areas it becomes even more important to use innovative traffic management strategies as this is where the majority of the traffic related problems arise.

ITS applications or services collect and process traffic/travel data using computers, communications, multi-media and other technology to provide information for advice, assistance or control of traffic and public transport operations. They are used by a variety of stakeholders including travellers, drivers, fleet operators and network managers. In the domain of information, there is strong emergence of Value Added Service Providers (VASP) that specialise in providing real time information on the status of traffic.

There is a wide range of ITS applications already in use in our towns and cities. These include traffic management, traveller information (pre-trip and on-trip), information for strategic management of transport infrastructure (both for the private vehicle and public transport, such as bus priority at traffic lights), driver assistance and the fast emerging use of payment systems (ticketing, parking, road user charging, etc).

ITS applications are of benefit to all domains of transport including public transport, freight transport, private car, soft modes (such as the management of public bicycle schemes) and emergency services. A particular area where ITS can be effective is the seamless management of networks at the urban/interurban interface and the integration of services.

Issues

The major challenge for ITS is that of supporting efficient, sustainable, accessible and safe transport systems, which will improve the competitiveness of business and the attractiveness of cities. Whilst the cultural heritage and economic well being need to be safeguarded, the urban areas need to be an attractive place to work and live with a choice of leisure facilities.

The majority of our towns and cities need to address different challenges, such as emissions and climate change; congestion; safety and financing transport solutions.

The tools and policies in relation to ITS which can help to face these challenges should, in an integrated way, address:

- Co-modality
- Urban freight delivery
- Demand management through parking management and/or charging, access restriction, etc.
- Integrated ticketing systems and policies
- Public Private Partnership
- Harmonisation and interoperability

- Innovative procurement
- Cross-border issues e.g. enforcement
- Managing seamless urban/interurban interface
- Travel information
- Network management
- The full exploitation of satellite based services (Galileo)

The city authorities often have the overall responsibility for the provision of transport and should therefore have a key role in developing a cohesive deployment strategy for ITS in urban areas. However, in addition to the individual public authority, there are a number of stakeholders that have an important role to play in the successful deployment of these systems and services.

It is essential to recognise that others involved in the successful implementation and operation of these applications and services are fully engaged in this process. This includes infrastructure operators, industry (manufacturers of both vehicles and components; ITS products and communications), value added service providers (VASPs), digital mapmakers, enforcement agencies and infrastructure users.

The EU could use different means to support the deployment of ITS in cities. These include the compilation of a comprehensive inventory of ITS applications for towns and cities; the preparation of a good practice guide for developing cohesive ITS deployment plan for cities; support the dissemination of good practice; help stakeholders to set up a European platform to exchange information on ITS services and systems; launch a pro-active demonstration programme and offer support to the development of an innovative procurement model.

Considerations at EU level

The speakers and stakeholders in this technical workshop are invited to focus their interventions on the following questions in the context of ITS in urban areas:

1. What are the critical success factors behind economically vibrant, culturally rich and liveable towns and cities? How can ITS solutions be harnessed to achieve these critical success factors?

2. What is the scope for generic ITS solutions to be tailored to specific needs?

3. What European actions would result in more European cities following the road to success in ITS deployment?

4. What priority should be given to ITS for intelligent cars and for public transport?

2.2 Public transport and intermodality in urban areas

Background

Good public transport is a key element of cities' attractiveness. To attract employment and facilitate growth, cities need attractive and effective public transport systems. They need public transport systems that can respond to the needs for increased mobility of businesses and citizens. Urban public transport offers daily mobility solutions to millions of Europeans who are not willing to use their car or who don't have access to a car, to people with reduced mobility[3] that suffer, temporarily or permanently, difficulties to travel. It also offers an instrument to fight social exclusion.

Particularly important is the integration of transport systems. Well integrated public transport systems, combining train, metro, tramway and the bus, have been developed in many urban areas in Europe. But their attraction for the user often depends on the link between private and public transport (e.g., efficient Park and Ride facilities connected to public transport). Public and company supported measures have contributed to a large extent to an uptake of public transport. These success stories could serve as examples for wider replication in the EU.

The Commission's proposal to revise regulation 1191/69 plays a major role in modernising the legislation for urban public transport operations in Europe. Our existing rules on inland public transport date from 1969 and have become inadequate, especially in the urban transport sector. The market has evolved a lot. Regulation 1191 from 1969 has become a source of legal insecurity, most of all because it fails to specify the procedures for the award of public service contracts.

The proposal that the Commission made in 2005, to revise the rules, will remove this uncertainty and at the same time improve the efficiency and quality of public rail and road services. This proposal is simpler, more flexible and leaving more space to transparency and to subsidiarity, than earlier proposals. The institutional process to adopt these rules is well under way. The Council has reached a common position in December last year and the European Parliament is now undertaking its second reading.

One of the main ideas is to make public service contracts between the authority and the operator mandatory. There will be rules for the introduction of competition but we also recognise the option of providing public transport services by the public authority itself, or via an internal operator, without a competitive tendering procedure, provided that there is greater transparency, that precise criteria are used for compensation, and that the operation of such an internal operator is limited to his own geographical area.

Questions linked to the analysis of long-term market trends and to product innovation don't seem to have received sufficient attention from the public transport sector. In the longer term, urban public transport, especially in smaller cities, seems to be at risk.

[3] This includes disabled people, older people, people with temporary injuries, people with large luggage or shopping bags, expectant mothers, and people with children in prams or buggies.

The security of public transport travellers is one of the indicators for the quality of urban public transport. The fact that travellers and also staff are feeling less and less secure is linked to the wider problem of increasing insecurity on our streets and in our society. In addition, the threat of terrorist attacks puts the effectiveness of our intrinsically 'open' public transport systems at risk. The Commission is undertaking separate work, outside the framework of the Green Paper, on this issue.

Issues

One of the key questions for the future of good public transport in urban areas is funding, not only for new investments but also for maintaining and improving existing infrastructure. Funding is also closely linked with restructuring and modernising the public transport sector, especially in the new Member States.

The question of funding will be addressed in detail during the Second Technical Workshop (Urban transport financing). Public budgets are under pressure in many cities but will continue to play an important role, as do the revenues raised from users. The EU makes funds available to eligible regions through its Cohesion Policy. The European Investment Bank and the European Bank for Reconstruction and Development can contribute with loans and expertise.

In those cases where authorities financially contribute to the operation of public transport services, it is important that they apply quality parameters in the definition of the service – in order to be able to measure 'value for money'. Examples of quality criteria are the frequency of the services, the security of passengers, the accessibility of services for all citizens, the tariff levels applied to various groups of users, and the quality of the vehicles and infrastructures (such as stations or bus stops). Environmental and energy characteristics are among the key indicators for the quality of urban public transport, but there are also others – such as accessibility, intelligent information and ticketing, integration and reliability.

People with reduced mobility[4] are all citizens that suffer, temporarily or permanently, from difficulties to move about easily. In order to allow for an acceptable access-level for all, a door-to-door approach needs to be followed. Such an approach must ensure that ‘seamless trips’ can be made through a maximum integration between the modes and removing organisational ‘gaps’. In addition, all the transport stakeholders should apply the principle of ‘design for all’ to minimise physical barriers. This brings a clear benefit to all the transport users. For instance, the introduction of low floor buses has in some cases lead to an increase in ridership of 15%.

According to the Treaty[5] specific action is needed to ensure passengers’ rights in all the transport modes. EU citizens should have the possibility to have access to transport services of quality and at reasonable prices. The Commission has already defined passenger rights in other sectors. One could consider improving user rights in urban public transport, for example through a ‘mandatory’ customer charter, the publication of performance indicators -including on accessibility- and harmonised procedures for complaints and damages.

[4] This includes disabled people, older people, people with temporary injuries, people with large luggage or shopping bags, expectant mothers, and people with children in prams or buggies.
[5] Article 153.

One area that will need special consideration in the Commission's passenger rights approach is the 'intermodal gap' when travellers change modes – where it is not always fully clear where the 'integrative' responsibilities lie. And even if there is a huge scope to improve the rights of passengers in their relationship with operators, one must remember that also the passengers themselves should respect a 'citizen code of conduct' while travelling. For instance, they should pay for the service and not damage the operator's or other travellers' possessions.

Considerations at EU level

The speakers and stakeholders in this technical workshop will be invited to focus their interventions on the following questions in the context of efficiency and effectiveness of public transport:

1. How could the effectiveness and efficiency of urban public transport be measured and compared?

2. What could be the role of quality standards in urban public transport and intermodality?

3. Should user rights in urban public transport be strengthened at European level? If yes, what should be done?

4. The use of public transport is often linked to walking or cycling. Should the parallel promotion of safe walking and cycling be another priority and if yes, what should be done at EU level?

2.3 Safety, environmental performance and noise

Background

Urban transport ensures access to and facilitates mobility inside the city, but to be successful in that it must be safe and secure. On the other side, transport infrastructure takes up space; it creates serious physical barriers that can result in social segregation. Air pollution and noise caused by transport affects the health of everybody.

Every EU citizen has the right to live and work in safety. So, when you are walking, cycling, biking or driving a car or a truck, you should do so with a minimum risk to be being injured or killed. Likewise, other road users should not be damaged by your own participation in traffic. Today, car manufacturers build ever safer cars and trucks, road engineering produces safer roads, and we are becoming increasingly conscious that we must act responsibly in traffic, to protect our own and other people's lives.

Road safety has deservedly become a true society issue in Europe and on a global scale, and the European Commission contributes actively to this. Activities cover behaviour, vehicle and infrastructure issues, the three components which make up the traffic system. Work should concentrate on all these sectors in a balanced way, by involving all concerned parties. We speak of an "integrated approach".

The main environmental challenges facing cities are air pollution and noise. They have significant consequences for human health, the quality of life of urban citizens and the economic performance of the cities themselves. The environmental performance of an urban area much depends on the implementation of existing EU policies and legislation at local level (see annex 1). Supporting and encouraging Member States to adopt an integrated approach to urban management could lead a better implementation and a better environmental performance afterwards. An integrated management should contain a Sustainable Urban Transport Plan, because urban transport, while being fundamental to citizens and business, is by large the most responsible for urban air pollution, noise and congestion, and significantly contributes to CO2 emissions.

Effective, transport planning requires long-term vision to plan financial requirements for infrastructure and vehicles, to design incentive schemes to promote high quality public transport, safe cycling and walking and to coordinate with land-use planning at the appropriate administrative levels. Transport planning should take account of safety and security, access to goods and services, air pollution, noise, greenhouse gas emissions and energy consumption, land use. It should cover passenger and freight transportation and all modes of transport. Solutions need to be tailor-made, based on wide consultation of the public and other stakeholders, and must reflect the local situation. On top of compliance with the EU and national legislation specific local targets may be developed. The Commission strongly recommends local authorities to develop and implement sustainable urban transport plans.

The Commission's Communication on a Thematic Strategy on Air Pollution (COM (2005) 446) recommended objectives for the protection of health and the environment from air pollution to be attained by 2020 relative to the position in the year 2000. These objectives include among others:

- a 47% improvement in premature mortality (expressed as life years lost over the whole population) due to exposure to fine particulate matter ($PM_{2.5}$) in air [3.62 million life years lost in 2000 roughly equivalent to 350,000 deaths];

- a 10% improvement in acute deaths from exposure to ozone from [20,000 cases in 2000].

These objectives have no legal force. The intention is that the objectives are delivered by a concerted series of measures at EU, national and local level. Community measures include already adopted new vehicle emission standards EURO 5&6, currently developed EURO VI for heavy duty vehicles and national emission ceilings, and new environmental objectives in the ambient air quality legislation currently in co-decision. Measures to address ship emissions will deliver important improvement in particular in port cities. All these measures will however not achieve permanent improvement without the implemented sustainable solution in transport.

The Directive 2002/49/EC on assessment and management of environmental noise requires competent authorities designated by Member states to draw up strategic noise maps using common noise metrics, inform the public about noise exposure and its effects, and draw up, on this basis, action plans to manage ambient noise in areas identified by the maps.

Ambient noise emitted by urban transport is particularly targeted since the Directive requires that noise maps and action plans are drawn up in 'agglomerations' delimited by Member States while putting emphasis on transport sources. Strategic noise maps and action plans have to be drawn up according to a fixed timetable and should be reviewed every 5 years.

Issues

Let's first address road safety. In 2001, 50 000 people were killed on the roads in the countries which in 2006 made up the EU. The joint target proposed in 2001 and updated after enlargement in 2004 is that by 2010 there should be no more than 25 000 fatalities a year. The 2005 figures suggest that the target of maximum 25000 fatalities will probably not be met. About two thirds of casual accidents one third of the road fatalities are located in urban areas.

The vast majority of all cyclist and pedestrian deaths occur in urban areas. The risk of being killed in a road accident is six times higher for cyclists and walkers than for car users. The likelihood that a vulnerable road user dies in an accident with a car is exponentially linked with the speed of the car. When a car drives 30 km/h, the chance that a vulnerable road user is killed is 10% - this increases to 40% at 50 km/h, to 70% at 60 km/h and to almost 100% at 80 km/h.

Road transport generates about one fifth of the EU's CO2 emissions, with passenger cars responsible for around 2/3 of transport emissions. Although there have been significant improvements over recent years in vehicle technology - particularly in fuel efficiency, which translates into lower CO2 emissions – these have not been enough to neutralise the effect of increases in traffic and car size. While the EU-25 reduced overall emissions of greenhouse gases by almost 5% between 1990 and 2004, CO2 emissions from road transport rose by 26%.

The EU is acting at many levels to reduce exposure to air pollution: through EC legislation, through work at the wider international level in order to reduce cross-border pollution, through working with sectors responsible for air pollution and with national, regional authorities and NGOs, and through research. Urban transport is the sector most targeted by the air management measures under air quality legislation, as Member States declare that roughly 80% of exceedances of NO_2 upcoming yearly limit value and 50% of daily PM_{10} limit value exceedances are due to local traffic.

The new Community Strategy to reduce carbon dioxide emissions from new cars and vans together with a revision of EU fuel quality standards proposed on 31 January 2007, further underline the Commission's determination to ensure the EU meets its greenhouse gas emission targets under the Kyoto Protocol and beyond.

The midterm review of the Transport White Paper acknowledges that “{transport} noise pollution (….) needs continuous attention”, that “{road traffic} noise will worsen” and that “attention must also be paid to noise pollution from different modes of transport”. The renewed Sustainable Development Strategy sets overall objectives, targets and concrete actions for the coming period until 2010 and one of them is “sustainable transport”, “reducing transport noise both at source and through mitigation measures to ensure overall exposure levels minimise impacts on health”.

The focus for the next ten years in the environmental domain will be on the implementation of air quality standards and coherency of all air legislation and related policy initiatives. The available knowledge on exposure to environmental noise could be soon improved as in the year 2007 the EU Member States have to publish first sets of strategic noise maps and report harmonized statistics on exposure to environmental noise based on those maps.

Possible measures/actions in order to solve the main challenges:

- Improve the effectiveness of the fuel efficiency labelling directive 1999/94/EC
- Designating environmental or restricted access zones
- Encourage Member States to exploit the funds available under Cohesion, Research and Environmental Policies, for example to support sustainable transport systems, sustainable and cleaner energy supplies
- Shifts towards less polluting modes of transport
- Alternative fuels
- Green procurement of cleaner vehicles
- Better implementation of existing legislation regarding transport

Considerations at EU level

1. Should more be done to developing a safer road-infrastructure and safer and more secure means of travel for all users? What would be the added value of action at EU level?

2. Given the large spectrum of environmental pressures (air pollutions, environmental noise, greenhouse gas emissions) brought about by urban transport and the structural trend to increased urban mobility dominated by car, should the EU consider supplementing initiatives or policies aimed at managing urban transport demand to underpin policies focused on environmental standards of vehicles and fuels? In that case, which should be the roles of the EU? Which initiatives, measures and instruments should be considered at EU level?

3. How could the following three objectives in transport policy in urban areas most effectively be reconciled:

    - elimination of hot spots exceedances (often linked to compliance with Air Quality Directive limit values);
    - implementing more cost-effective strategies to reduce urban background concentrations throughout the urban area (more closely reflecting population exposure, also new fine particles PM2.5 objective in the Air Quality Directive proposal currently in co-decision);
    - reduction of the contribution of the city to regional background concentrations[6] (and climate change).

[6] The regional background concentration (basic emission) is the basic concentration which exists "without" the city's emissions in the area around the city.

4. At EU level, there is a possibility to facilitate action to collect in a harmonised way the information which can support development as well as follow the effectiveness of local and EU transport policies as they relate to environmental effects. This might include transport data, real vehicle emissions, air quality on a regional/local scale, advanced monitoring of pollutants, and information on spatial development.

   What information is currently lacking, or how can information already available be more effectively used for these purposes? What would be the requirements for a dedicated GMES[7] service?

[7] GMES: Global monitoring for environment and security; user driven process to design monitoring/modelling services which support implementation of Community policies. See http://www.gmes.info/

Annex 1

Overview of main environmental policy documents and legislation relevant for urban transport

- Thematic Strategy on Urban Environment COM(2005)718 The measures offered under this Strategy aim to contribute to a better implementation of existing EU environment policies and legislation at the local level
- Thematic Strategy on Air Pollution (COM(2005) 446) with the objective to attain "levels of air quality that do not give rise to significant negative impacts on, and risks to human health and the environment"
- Air Quality Framework Directive 96/62/EC Set the main environmental objectives and defines a common frame for assessment and management of AQ in Europe
- First Daughter Directive (1999/30/EC) relating to limit values for NOx, SO_2, Pb and PM_{10} in ambient air
- Second Daughter Directive (2000/69/EC) relating to limit values for benzene and carbon monoxide in ambient air
- Directive 2002/49/EC the main aim is to provide a common basis for tackling the noise problem across the EU