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**GREEN PAPER**

**Towards a new culture for urban mobility**

(presented by the Commission)

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### COMMISSION STAFF WORKING DOCUMENT

Public consultation in preparation for the Green Paper on urban mobility  
SEC (2007)1209 – 25.9.2007

# GREEN PAPER

## Towards a new culture for urban mobility

### 1. INTRODUCTION

In the European Union, over 60% of the population lives in urban areas<sup>1</sup>. Just under 85% of the EU's gross domestic product is created in urban areas. Towns and cities are the drivers of the European economy. They attract investment and jobs. They are essential to the smooth functioning of the economy.

Urban areas now constitute the living environment of the vast majority of the population, and it is imperative that the quality of life in these areas should be as high as possible. That is why we must now pool our thoughts and consider the question of urban mobility.

*European towns and cities are all different, but they face similar challenges and are trying to find common solutions.*

Throughout Europe, increased traffic in town and city centres has resulted in chronic congestion, with the many adverse consequences that this entails in terms of delays and pollution. Every year nearly 100 billion euros, or 1% of the EU's GDP, are lost to the European economy as a result of this phenomenon.

Air and noise pollution is getting worse year by year. Urban traffic is responsible for 40% of CO<sub>2</sub> emissions and 70% of emissions of other pollutants arising from road transport.

The number of road traffic accidents in towns and cities is also growing each year: one in three fatal accidents now happen in urban areas, and it is the most vulnerable people, namely pedestrians and cyclists, who are the main victims.

While it is true to say that these problems occur on a local level, their impact is felt on a continental scale: climate change/global warming, increased health problems, bottlenecks in the logistics chain, etc.

Local authorities cannot face all these issues on their own; there is a need for cooperation and coordination at European level. The vital issue of urban mobility needs to be addressed as part of a collective effort at all levels: local, regional, national and European. The European Union must play a leading role in order to focus attention on this issue.

*Europe has a capacity for reflection proposal-making and mobilisation for the formulation of policies that are decided and implemented locally.*

In 2006, when the mid-term review of the Transport White Paper was presented<sup>2</sup>, the European Commission announced its intention of presenting an Urban Transport Green Paper.

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<sup>1</sup> Of over 10 000 inhabitants (source Eurostat).

<sup>2</sup> COM(2006) 314.

The Commission has carried out a broad public consultation in recent months. Two conferences and four workshops have brought together the main stakeholders. An Internet consultation has been launched. Numerous contributions have been received by the Commission<sup>3</sup>, and the European Economic and Social Committee has also expressed its views<sup>4</sup>.

This consultation process resulted in the avenues mapped out in this Green Paper. Above all, it confirmed the existence of strong expectations on the part of stakeholders for the formulation of a genuine European urban mobility policy. With this Green Paper, the Commission wishes to launch a broad public debate as to what a European policy on this issue might contain.

Rethinking urban mobility involves optimising the use of all the various modes of transport and organising "co-modality" between the different modes of collective transport<sup>5</sup> (train, tram, metro, bus, taxi) and the different modes of individual transport (car, motorcycle, cycle, walking). It also involves achieving common objectives in terms of economic prosperity managing transport demand to guarantee mobility, quality of life and environmental protection. Lastly, it involves reconciling freight transport and passenger transport interests whatever the mode of transport used.

### ***A European urban mobility strategy that lives up to people's expectations.***

Urban mobility is recognised as an important facilitator of growth and employment with a strong impact on sustainable development in the EU. The Commission therefore has decided to present a Green Paper on urban mobility in order to explore if and how it can add value to action already taken at local level. Several EU policies have already addressed urban transport issues in past years. Legislative initiatives have been developed, sometimes in a rather fragmented way.

The consultations exercise organised by the Commission in view of the preparation of the Green Paper has provided information resulting in a set of policy options and 25 open questions about these options. With this Green Paper, the Commission launches a second consultation process until 15 March 2008, with a view to presenting, in early autumn 2008, an Action Plan which will identify a series of concrete actions and initiatives towards better and sustainable urban mobility. For each proposed action, the Action Plan will indicate a time line for implementation and the allocation of responsibilities between the various actors.

The Commission's role is to organise this debate with all the stakeholders with a view to proposing an overall strategy compatible with the principle of subsidiarity. The target audience of the new consultation process will be, amongst others, social groups like citizens living in towns or cities, users of urban transport (public or not), employers and employees in collective transport organisations; economic groups like business at local level, including SMEs, the urban transport industry, the car industry; national, regional and local authorities, stakeholders' representatives and associations in the relevant fields.

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<sup>3</sup> Commission Staff Working Paper: Public consultation in preparation of the Green Paper on urban mobility -SEC(2007)1209 25.9.2007.

<sup>4</sup> CESE 615/2007.

<sup>5</sup> Collective transport is wider than public transport and includes e.g. taxis or transport on demand.

This strategy will be based on the past and future consultations and the experience already acquired by the Commission in the urban transport field since 1995 and its Green Paper and Communication on a Citizens' Network<sup>6</sup>. In addition, use will be made of the numerous lessons that have been learned from research and development projects.

However, there is one overriding idea that constantly recurs: To be effective, urban mobility policies need to be based on an approach which is as integrated as possible, combining the most appropriate responses to each individual problem: technological innovation, the development of clean, safe and intelligent transport systems, economics incentives and amendments to legislation.

This overall strategy will take into account all the relevant initiatives undertaken in the context of Community policies, the constant concern being to make a practical contribution to implementing the Lisbon Strategy.

The European Union must play a facilitating role in helping to bring about this change, but without imposing top-down solutions which may not necessarily be appropriate for the diverse local situations.

European added value may take various forms: promoting the exchange of good practice at all levels (local, regional or national); underpinning the establishment of common standards and the harmonisation of standards if necessary; offering financial support to those who are in greatest need of such support; encouraging research the applications of which will make it possible to bring about improvements in mobility safety and environmental; simplifying legislation and, in some cases, repealing existing legislation or adopting new legislation.

Any strategy formulated at European level can only be successful if decisive action is taken at the local level; concrete actions will be taken over and implemented by local authorities.

### *Creating a new urban mobility culture.*

The challenge facing urban areas in the context of sustainable development is immense: that of reconciling the economic development of towns and cities and accessibility with improving the quality of life and with environmental protection, on the other.

In order to address these issues, which have many and varied implications, a joint effort will make it possible to encourage the search for innovative and ambitious urban transport solutions with a view to arriving at a situation where towns and cities are less polluted and more accessible and where traffic within them flows more freely.

Working together, we must seek ways of achieving better urban and suburban mobility, sustainable mobility, and mobility for all the inhabitants of Europe, while allowing economic operators to play their role in our towns and cities.

## **2. ADDRESSING THE CHALLENGE**

Urban mobility should make possible the economic development of towns and cities, the quality of life of their inhabitants and the protection of their environment. To this end,

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<sup>6</sup> COM(95) 601, COM(1998) 431.

European towns and cities face five challenges which need to be met as part of an integrated approach.

## **2.1. Towards free-flowing towns and cities**

### **The issue:**

Congestion in towns and cities is one of the main problems identified during the consultations. It has negative economic, social, health and environmental impacts and degrades the natural and built environment. It is often located on urban ring roads and affects the capacity of the Trans-European Transport Network (TEN-T). A fluid transport system would allow people and goods to arrive on time and to limit these negative effects. At local level, it is a major challenge to reduce the negative impacts of congestion whilst ensuring that urban areas continue to do well economically. The effort of cities that are pioneers in combating congestion must be recognised.

### **The options:**

Experiences from stakeholders show that there is no single solution to reduce congestion. However, alternatives to private car use, such as walking, cycling, collective transport or the use of the motorbike and scooter, should be made attractive and safe. Citizens should be able to optimise their travel through efficient links between the different modes of transport. Authorities should promote co-modality and reallocate space that becomes available after congestion mitigation measures. Intelligent and adaptive traffic management systems have also proven their efficiency in reducing congestion.

### **Promoting walking and cycling...**

To improve the attractiveness and safety of walking and cycling, local and regional authorities should ensure that these modes are fully integrated into the development and monitoring of urban mobility policies. More attention should be paid to the development of adequate infrastructure. There are innovative ways of ensuring the full involvement of families, children and youngsters in policy development. Initiatives in cities, companies and schools can promote cycling and walking, for example through traffic games, road safety assessments or educational packages. Stakeholders have proposed that bigger towns and cities could consider appointing a policy officer specifically for walking and cycling.

### **...Optimising the use of private cars**

Less car-dependent life-styles can be promoted through new solutions like car-sharing. More sustainable use of the private car should be encouraged for example by carpooling, which will lead to roads with fewer cars each of them carrying more people. Other options may also include “virtual mobility”: tele-working, tele-shopping, etc.

As suggested during the consultation, adequate parking policy is also necessary to reduce the use of cars in the centre of the cities. Providing more parking spaces may, in the long term, encourage car transport, in particular if they are free of charge. Parking fees can be used as an economic instrument. Differentiated fees can be considered to reflect the limited availability of public space and create incentives (e.g. free parking spaces at the periphery and high fees in the centre).

Attractive Park&Ride facilities can provide an incentive for combining private and collective transport. Seamless links to efficient, high quality public transport have allowed, in this way, to free inner urban areas from traffic through integrated transport systems, such as in Munich.

In certain cases new infrastructure might be needed, but the first step should be to explore how to make better use of existing infrastructure. Urban charging schemes, such as in London and Stockholm, have demonstrated positive impacts on the fluidity of transport. Intelligent transport systems (ITS) allow for optimised trip planning, better traffic management and easier demand management. Flexible and multiple use of infrastructure such as in Barcelona (flexible bus-lanes, flexible loading zones/parking places), can lead to reducing pressure on road space.

Mobility Management complements traditional infrastructure-based measures by influencing travel behaviour before it starts and shifting people's attention towards more sustainable transport options. For example, developers could be encouraged to prepare a site-specific mobility plan as part of the procedure for obtaining planning permission. The idea of a "mobility impact assessment" for large scale infrastructure developments was also proposed by stakeholders.

### **And freight transport...**

Freight logistics has an urban dimension<sup>7</sup>. In view of stakeholders, any urban mobility policy must cover both passenger and freight transport. Distribution in urban areas requires efficient interfaces between long-haul transport and short distance distribution to the final destination. Smaller, efficient and clean vehicles could be used for local distribution. Negative impacts of long distance freight transport passing through urban areas should be reduced through planning and technical measures.

The "service economy" leads to new demands for road space. There is evidence that 40% of all vehicles other than passenger cars are service-related (vehicles for removals, maintenance services, small deliveries, etc.). Courier services often use motor-cycles or mopeds. Consolidated distribution in urban areas and zones with access regulations is possible but requires efficient planning of the routes to avoid empty runs or unnecessary driving and parking. The development of these solutions requires the involvement of all stakeholders.

Urban freight distribution could be better integrated within local policy-making and institutional settings. Public passenger transport is usually supervised by the competent administrative body while freight transport distribution is normally a task for the private sector. Local authorities need to consider all urban logistics related to passenger and freight transport together as a single logistics system.

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<sup>7</sup> This dimension will also be elaborated in the "Logistics Action Plan" currently under preparation.

1. Should a "labelling" scheme be envisaged to recognise the efforts of pioneering cities to combat congestion and improve living conditions?
2. What measures could be taken to promote walking and cycling as real alternatives to car?
3. What could be done to promote a modal shift towards sustainable transport modes in cities?

*What could be the potential role of the EU?*

## **2.2. Towards greener towns and cities**

### **The issue:**

The main environmental issues in towns and cities are related to the predominance of oil as a transport fuel, which generates CO<sub>2</sub>, air pollutant emissions and noise.

Transport is one of the most difficult sectors to manage in terms of CO<sub>2</sub> emissions. Despite progress in car technology the growth in traffic and the 'stop-go' nature of driving in urban areas means that cities are a major, and growing, source of CO<sub>2</sub> emissions which contribute to climate change. Climate change is causing dramatic shifts in the global eco-system and urgent action is required to keep impacts to a manageable level. The European Council<sup>8</sup> has set a target to reduce EU greenhouse gas emissions with 20% by 2020. Contributions from all sources are necessary.

CO<sub>2</sub> emissions from new passenger cars sold in the EU have decreased by 12.4% between 1995 and 2004, following a voluntary agreement between the European Commission and industry. To enable the EU to reach its 120 g objective by 2012, the Commission, in a Communication of February 2007<sup>9</sup>, outlined a comprehensive new strategy. A legislative framework should ensure 130 g CO<sub>2</sub>/ km by improvements in vehicle motor technology, and a further reduction of 10 g CO<sub>2</sub>/ km by other technological improvements and by an increased use of biofuels. Pollutant emissions from vehicles have also been successfully reduced through a gradual tightening of the EURO emissions standards. As a result of the EU regulation setting, on a continuous basis, lower limits for new vehicles, an overall reduction of 30-40% nitrogen oxide and particulate emissions from road transport has been achieved over the past 15 years since the adoption of the first EURO standard, despite rising traffic volumes.

However, despite these improvements, environmental conditions are still not satisfactory: local authorities are facing serious problems to meet the requirements on air quality, such as the limits of particulates and nitrogen oxides in ambient air. These have a negative impact on public health.

Noise abatement measures have also been facilitated by a European directive on noise mapping. On the basis of the information collected under the noise directive<sup>10</sup>, local authorities are now able to draw up noise abatement plans and implement concrete measures. Noise abatement plans can profit from an exchange of information at EU level. According to

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<sup>8</sup> European Council Conclusions, 8/9 March 2007; compared to the level in 1990.

<sup>9</sup> COM(2007) 19.

<sup>10</sup> Directive 2002/49/EC.

stakeholders, noise reduction at source could be reduced by tightening EU standards for noise emissions from road and rail vehicles and from tyres. Underground transport systems also contribute to reducing noise in cities.

Extension, rehabilitation and upgrading of clean urban public transport such as trolley buses, trams, metros and suburban rail as well as other sustainable urban transport projects should continue to be promoted and supported by the EU.

### **The options:**

#### **New technologies ...**

Driven by industry and in response to the European emissions thresholds, conventional combustion engine technology is becoming cleaner. Catalytic converters and particulate filters will yield significant improvements in reduction of pollutant emissions in the future. Research and technological development co-funded by the EU has had a strong focus on clean and energy efficient vehicle technologies and alternative fuels, such as biofuels, hydrogen and fuel cells<sup>11</sup>.

The environmental performance of the existing vehicle fleet could be further improved by setting harmonised minimum performance standards for the operation of vehicles. A gradual tightening of these standards over time could lead to a continuous process of upgrading or phasing out of old heavily polluting vehicles. Such a general approach could help to increase the use of clean and energy efficient vehicles in urban transport and on the longer term prevent a fragmented patchwork of different low-emission zones.

Further promotion of a broad market introduction of new technologies could be achieved through economic instruments, such as incentives for the purchase and operation of clean and energy efficient vehicles by public authorities, and non-economic instruments, such as restrictions for heavy polluters and privileged access for low-emitting vehicles in sensitive areas, provided they do not distort the internal market rules.

There are opportunities to promote the exchange of best practices in the field of clean urban transport beyond Europe's boundaries and to capitalise on the knowledge and experience gained in EU initiatives such as CIVITAS<sup>12</sup> where certain projects allow third countries to profit from experiences of European Union cities with integrated urban mobility approaches. Europe has a strategic interest, from a long term energy availability and price perspective, to contribute to low energy intensive growth elsewhere. Such international dialogue can also help to create export opportunities for European industry.

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<sup>11</sup> See for example the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Towards Europe-wide Safer, Cleaner and Efficient Mobility: The First Intelligent Car Report - COM(2007) 541, 17.9.2007.

<sup>12</sup> CIVITAS website: [www.civitas-initiative.eu](http://www.civitas-initiative.eu)

### **... Supported by green procurement**

As already envisaged by the Commission<sup>13</sup> and proposed by stakeholders during the consultation, the market introduction of clean and energy efficient vehicles could be supported by green public procurement.

A possible approach could be based on the internalisation of external costs by using life-time costs for energy consumption, CO<sub>2</sub> emissions, and pollutant emissions linked to the operation of the vehicles to be procured as award criteria, in addition to the vehicle price. Inclusion of life-time costs in the procurement decision process would increase the awareness for running costs. This would give a competitive advantage to the cleanest and most energy efficient vehicles and at the same time minimise the overall cost. The public sector thereby could set an example for “sustainable economics”, to be taken up by other market actors. In addition, public procurement could give preference to new Euro standards. The earlier use of cleaner vehicles could also improve air quality in urban areas. The Commission intends to present a revised proposal along these lines before the end of 2007.

### **... And joint green procurement**

Some authorities have improved the environmental performance of their public transport fleet and taxis by procuring cleaner vehicles and offering economic incentives to private operators. Public financial support for new infrastructure for the distribution of alternative fuels also has been instrumental in several towns and cities. Joint procurement of clean and energy-efficient vehicles by public authorities could accelerate the building of a market for new technologies and ensure their economic viability. The Commission is already providing support for the development of joint green procurement schemes by public authorities across the EU through pilot projects<sup>14</sup>. On the basis of the results of these projects, the Commission could envisage a wider application of such measures.

### **... And new ways of driving**

Eco driving, which reduces energy consumption through a change of driving habits should be encouraged, in particular by driving schools and through the training of professional drivers. Electronic driver support systems could help to improve driving behaviour. Improved infrastructure and traffic management systems and more "intelligent" cars will also have an important contribution to make.

### **What about traffic restrictions?**

In some cases local traffic restrictions and urban charges have been introduced. These individual actions are laudable for the impacts that they have already achieved. But, according to some stakeholders, there is the risk of creating a fragmented patchwork of urban areas with new “border lines” across Europe. For example, some authorities restrict access to city centres on the basis of EURO standards, others use a different basis.

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<sup>13</sup> Proposal for a Directive on the promotion of clean road transport vehicles - COM(2005) 634.

<sup>14</sup> STEER programme [http://europa.eu.int/comm/energy/intellinget/index\\_en.html](http://europa.eu.int/comm/energy/intellinget/index_en.html)

A lot of stakeholders have called for guidance and development of harmonised rules for urban Green Zones (pedestrianisation, restricted access, speed limits, urban charging, etc.) at the EU level in order to enable a wide use of such measures without creating disproportionate barriers to mobility for citizens and goods. Furthermore, harmonisation and interoperability of similar technologies will reduce costs. The issue of a European registry of all vehicles and cross-border enforcement across cities could be further examined at EU-level, as suggested by some stakeholders.

4. How could the use of clean and energy efficient technologies in urban transport be further increased?
5. How could joint green procurement be promoted?
6. Should criteria or guidance be set out for the definition of Green Zones and their restriction measures? What is the best way to ensure their compatibility with free circulation? Is there an issue of cross border enforcement of local rules governing Green Zones?
7. How could eco-driving be further promoted?

*What could be the potential role of the EU?*

### **2.3. Towards smarter urban transport**

#### **The issue:**

European towns and cities are confronted with a constant increase in freight and passenger flows. However, there are substantial limits to the development of the infrastructure needed to cope with this increase, as a result of a lack of space and environmental constraints. Against this background, stakeholders have highlighted that Intelligent Transport Systems (ITS) applications are currently underexploited for the efficient management of urban mobility, or are developed without due attention to interoperability.

#### **The options:**

Traffic and travel data processing can provide information, assistance and dynamic control of transport to travellers, drivers, fleet operators and network managers. A number of applications are already available for road, rail or transport on waterways. In the years to come, these applications will be further enhanced by the Galileo satellite system that will allow for a more accurate positioning.

#### **Smart charging systems ...**

There is increased awareness of smart charging as an effective method of managing demand. In collective transport, the use of ITS ensures a better management of operations and new services (fleet management, traveller information systems, ticketing systems, etc). To allow data to be shared between these applications, data exchange protocols need to be in place. Stakeholders have emphasised that standards should be interoperable and open to innovation; that intelligent payment systems should use smart cards, interoperable between transport modes, between various functions (such as transport-related payments, non-transport services, parking, and customer loyalty schemes), between areas and, in the longer term, between

countries. Possibilities for differentiated tariffs according to time or target group (for example peak/off-peak) could be part of the system.

### ... Better information for better mobility

One of the critical success factors for mobility in urban networks is, for travellers, to be able to make informed choice on mode and time for travel. This relies on availability of user-friendly, adequate and interoperable multi-modal trip information for planning a journey.

Stakeholders indicate that ITS allows a dynamic management of existing infrastructure. Additional capacity in excess of 20-30% or more can be gained by more effective use of road space. This is particularly important since there is usually little scope to provide additional road space in urban areas. The active management of urban transport infrastructures can also have a positive impact on safety and the environment. A particular area for ITS could be the management of seamless connections between networks at the urban-interurban interface.

The efficiency of urban freight distribution can also be increased with the help of ITS, in particular through better timing of operations, higher loading factors and more efficient use of vehicles. It requires integrated systems that combine intelligent route planning, driver assistance systems, intelligent vehicles and interaction with infrastructures.

Local authorities and private stakeholders should be fully engaged in the implementation and operation of these applications and services from the early stages onwards. Stakeholders will include technology providers, transport and infrastructure operators, industry, value-added service providers, digital mapmakers, enforcement agencies and infrastructure users.

Stakeholders have proposed that the Commission should support a wider dissemination of good practices in the field of ITS. In particular, the establishment of a framework for ITS deployment in EU towns and cities has been proposed to address the interoperability and exchange of data and information.

8. Should better information services for travellers be developed and promoted?
9. Are further actions needed to ensure standardisation of interfaces and interoperability of ITS applications in towns and cities? Which applications should take priority when action is taken?
10. Regarding ITS, how could the exchange of information and best practices between all involved parties be improved?

*What could be the potential role of the EU?*

## 2.4. Towards accessible urban transport

### The issue:

Accessibility primarily concerns people with reduced mobility, disabled people, elderly people, families with young children, and the young children themselves: they should have easy access to urban transport infrastructure.

Accessibility also refers to the quality of access that people and business have to the urban mobility system, made up of infrastructure and services.

Urban infrastructure, including roads, cycle paths etc., but also trains, buses and public spaces, parkings, bus stops, terminals, etc., should be of high quality. Efficient connections inside towns and cities, connecting cities with the surrounding region, between the urban and interurban networks, and with the Trans-European Transport Networks (TEN-T) are also considered essential. Good connections to airports, railway stations and ports, and to intermodal freight terminals, are of particular importance to interconnect the different modes of transport.

Furthermore, citizens expect public transport to cater for their needs in terms of quality, efficiency and availability. In order to be attractive, public transport has to be not only accessible but also frequent, quick, reliable, and comfortable. Experience shows that an obstacle to modal shift from private to public transport is often the low quality of service, slowness and unreliability of public transport<sup>15</sup>.

According to stakeholders, there is insufficient attention to co-modality and a lack of integrated collective transport solutions, such as suburban railway systems, tram-train systems, and well-located Park&Ride facilities at collective transport terminals in the outskirts of towns and cities. Freight logistics distribution often requires centres or terminals in suburban areas.

### **The options:**

#### **Collective transport meeting citizens needs ...**

The mid-term review of the Transport White Paper emphasised the need for basic passenger rights in all modes of transport, with a particular focus on passengers with reduced mobility. Stakeholders have recommended that the Commission should promote the idea of a European Charter on rights and obligations for passengers using collective transport.

Stakeholders emphasised that citizens expect collective transport to meet their needs for basic mobility and to satisfy their needs for accessibility. Society is changing, is getting older, and is expecting more intelligent mobility solutions. Efficiency is essential; without travel times that are comparable to the car, collective transport cannot become competitive.

Citizens also expect more flexible transport solutions for both freight and passenger mobility. In many places, taxi companies have already started to explore new markets. Smaller vehicles could also be used for demand responsive services.

Social aspects of mobility in towns and cities present a challenge. Urban transport needs to be affordable, also for people with low incomes. Citizens with reduced mobility and senior citizens expect increased and higher quality mobility. Personal mobility is key to independence.

#### **... Building upon an appropriate EU legal framework**

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<sup>15</sup> According to studies on services of general interest, urban transport is the service of general interest which consumers in the European Union are least satisfied with. 13% EU-25 consumers have difficult access to public transport while 4% have no access at all.  
[http://ec.europa.eu/consumers/cons\\_int/serv\\_gen/cons\\_satisf/index\\_en.html](http://ec.europa.eu/consumers/cons_int/serv_gen/cons_satisf/index_en.html).

The two Public Procurement Directives<sup>16</sup> apply in full to public service contracts such as transport by bus and tram. Furthermore, the new regulation on public passenger transport services by rail and by road<sup>17</sup> will offer increased transparency and help authorities and operators improve the quality and efficiency.

The new Regulation allows competent authorities to define public service obligations in order to guarantee services of general interest in the field of land passenger transport. It allows authorities to impose social tariffs. Where the fulfilment of public service obligations involves financial compensation and/or the award of an exclusive right, it requires a contract to be concluded between the authority and an operator selected following a tendering procedure.

Both under the Directives and the new Regulation, competent authorities are free to carry out the services themselves or tender them out. They can introduce selection criteria with respect to the capacity of tenderers and award criteria with respect to the quality of services.

### **... And by means of innovative solutions and appropriate skills**

One of the recommendations that emerged from the consultation was that the European Commission should promote less costly collective transport solutions, such as bus rapid transit, as an alternative to the more expensive tram and metro systems. "Bus rapid transit" systems offer fast and frequent public bus transport services along dedicated corridors, usually with stations that have metro-type characteristics. Innovative best practices that have already been developed could be promoted. One specific area is the use of (clean) taxis in the collective transport chain and for demand-responsive transport, with the help of ITS. The need to develop guidance on intermodal terminals for collective transport was also raised during the consultation.

Good accessibility also requires that shops, companies and zones where economic activities take place, including freight terminals and ports, are well served via the urban transport networks to enable freight transporters, service providers, workers and customers to get there easily. This is particularly important when restricted access zones are implemented.

Urban transport needs to attract and keep highly qualified staff. Training programmes, for example for ecodriving, as suggested during the consultation, can increase the skills of collective transport or freight transport staff and reduce CO<sub>2</sub> emissions and pollution.

Europe is a major tourism destination at a global level and many tourists go to towns and cities. Tourism can contribute to economic development and employment. According to stakeholders, tourists are a specific group of transport users with their own requirements, both in terms of size and patterns, which can put specific pressures on urban transport systems. This should be kept in mind when one looks at accessibility inside the urban area, and also at access to this area from outside.

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<sup>16</sup> Directive 2004/17/EC and Directive 2004/18/EC of 31 March 2004.

<sup>17</sup> Regulation on public passenger transport services by rail and by road and repealing Council Regulations (EEC) No 1191/69 and (EEC) No 1107/70 (interinstitutional file 2000/0212 (COD)).

### **... Through balanced coordination of land use and an integrated approach to urban mobility**

The stakeholders that are the most concerned, and in particular the representatives of towns and cities belonging to networks for the exchange of experience have stressed the problems of urban conglomerations which have to meet the challenges of better accessibility to all the catchment areas affected by metropolitan development. The trends towards suburbanisation and urban sprawl lead to low-density, spatially segregated land use. The resulting dispersal of home, work and leisure facilities results in increased transport demand<sup>18</sup>. The lower densities in peripheral areas make it difficult to offer collective transport solutions of a sufficient quality to attract substantial amounts of users. Health care for the elderly can become more difficult to organise if the transport solutions are not right (on top of “social isolation”). Customised solutions could serve better suburban areas, such as transport on demand or transport services that interlink the usually radial and city-centre oriented connections.

According to stakeholders, coordination between authorities could help tackle the challenges of urban mobility. Furthermore, urban mobility could benefit from integrating several policy sectors, such as urban planning, economic and social affairs, transport, etc.

Mobility plans integrating the wider metropolitan conurbations, covering both passengers and freight transport in the city or town and in its surrounding region, also form a sound basis for efficient urban mobility planning. Stakeholders have emphasised that appropriate organisational structures need to be established to facilitate the development and implementation of these plans.

The Thematic Strategy on the urban environment<sup>19</sup> identified a number of environmental problems which could be improved by the development and implementation of sustainable urban transport plans (SUTPs)<sup>20</sup>. In its Strategy, the European Commission committed itself to prepare guidance on how to prepare such SUTPs. Given the launch of this Green Paper and the wide ranging discussion on urban transport, it seems appropriate to take the opportunity to address the question of the follow-up on SUTPs as part of Action Plan on urban mobility.

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<sup>18</sup> Report from the European Environmental Agency "Urban sprawl in Europe - The ignored challenge", 2006.

<sup>19</sup> COM(2005) 718.

<sup>20</sup> See: [http://ec.europa.eu/environment/urban/urban\\_transport.htm](http://ec.europa.eu/environment/urban/urban_transport.htm)

11. How can the quality of collective transport in European towns and cities be increased?
12. Should the development of dedicated lanes for collective transport be encouraged?
13. Is there a need to introduce a European Charter on rights and obligations for passengers using collective transport?
14. What measures could be undertaken to better integrate passenger and freight transport in research and in urban mobility planning?
15. How can better coordination between urban and interurban transport and land use planning be achieved? What type of organisational structure could be appropriate?

*What could be the potential role of the EU?*

## **2.5. Towards safe and secure urban transport**

### **The issue:**

Every EU citizen should be able to live and move in urban areas with safety and security. When walking, cycling, or driving a car or a truck, one should be able to do so at minimum personal risk. This requires a good design of infrastructure, especially at intersections. Citizens are becoming increasingly conscious that they must act responsibly, to protect their own and other people's lives.

In 2005, 41 600 people were killed on the roads in the EU<sup>21</sup>. This is far from the joint target of no more than 25 000 fatalities a year by 2010<sup>22</sup>. About two thirds of the accidents and one third of the road fatalities are in urban areas and affect the most vulnerable road users. The risk of being killed in a road accident is six times higher for cyclists and pedestrians than for car users. Often, the victims are women, children and elderly citizens.

The sometimes perceived low personal security of passengers inhibits certain social groups from travelling, or from using public transport services. This concerns not only vehicles, terminals and bus/ tram stops but also the walk to and from the stops. The result may be unnecessary car use and may prevent people from living an active life.

### **The options:**

The European road safety policy covers behavioural, vehicle and infrastructure issues.

### **Safer behaviour ...**

Stakeholders have proposed that the Commission could improve road safety by further promoting best practices and engaging in a more intensive and structured dialogue with local and regional stakeholders and with Member States, notably on new technologies - in particular ITS - for increasing safety.

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<sup>21</sup> CARE: Community database on road accidents.

<sup>22</sup> COM(2001) 370.

To make citizens more aware of their traffic behaviour, education and information campaigns are of high priority. Special road safety campaigns and special initiatives for training young persons could be organised and one of the next European road safety days could focus on urban areas. Stakeholders have also suggested encouraging safe behaviour among cyclists, for example by promoting the use of bicycle helmets across Europe or by encouraging research on more ergonomic design of helmets. Strict enforcement of traffic rules is also essential for all motorcyclists, scooter drivers and cyclists. Stakeholders have suggested that the EU could support activities to generalise the use of enforcement devices in towns and cities for all road users.

### **... Safer and secure infrastructures**

In the view of stakeholders, improving perceived safety and security depends on a number of measures in the urban environment. High quality infrastructure, including good pavements for pedestrians and cyclists, can make a difference. Enhancing visibility, for example by providing better lighting, and more visible enforcement officers on the street can help to increase the feeling of security. ITS solutions can also make a substantial contribution by providing rapid and appropriate information and safety-based traffic management. Stakeholders have suggested that the EU could also define recommendations for incorporating urban transport safety and security standards in urban infrastructure design.

A specific matter is anti-terrorism security in urban transport. The Commission will examine a Communication on this topic in the near future.

### **Safer vehicles ...**

Safer vehicles are of a particular importance in urban areas where they share the street with pedestrians, bikes and collective transport. Technologies such as night vision, break assistant, collision avoidance and sleep warning can make a difference to the safety of all street users. The European Commission communications on e-Safety<sup>23</sup> and on the i2010 intelligent car initiative "ICT for safe and intelligent vehicles"<sup>24</sup> present valuable solutions that could be applied to urban context. Passenger transport could also be handled by "city vehicles", while stakeholders have suggested that over-dimensioned trucks and cars, could have restricted access only.

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<sup>23</sup> COM(2003) 542

<sup>24</sup> COM(2006) 59

16. What further actions should be undertaken to help cities and towns meet their road safety and personal security challenges in urban transport?
17. How can operators and citizens be better informed on the potential of advanced infrastructure management and vehicle technologies for safety?
18. Should automatic radar devices adapted to the urban environment be developed and should their use be promoted?
19. Is video surveillance a good tool for safety and security in urban transport?

*What could be the potential role of the EU?*

### **3. CREATING A NEW URBAN MOBILITY CULTURE**

#### **3.1. Improving knowledge...**

It has become clear during the consultations that in order to create a new "urban mobility culture" in Europe, there is a need to set up partnerships. New planning methods and tools can also play a major role in this new urban mobility culture. Education, training and awareness rising have an important role to play.

The competencies of professionals working in the urban mobility field have to be strengthened. According to stakeholders, the EU could play a greater role here by facilitating the organisation of staff training and exchange actions in a systematic way.

Urban mobility is an issue which already figured in networking initiatives launched as part of the EU's regional policy, such as URBACT and the Regions for Economic Change initiative<sup>25</sup>. The European Commission intends to further strengthen and support new networks related to urban mobility within these initiatives.

As suggested during the consultations, the Commission could actively explain and promote its work in the field of urban mobility policy. The Commission could organise a European public awareness campaign on its activities regarding sustainable urban mobility, together with stakeholders already active in this field. This could include focused information and awareness campaigns to influence the mobility behaviour of specific target groups. Another proposal is for the development of an annual European conference on "advanced urban transport solutions". This could be steered by the CIVITAS Forum.

#### **3.2. ...and data collection**

The consultations and earlier data collection initiatives have demonstrated that there are big gaps in urban mobility statistics at the EU level and that, despite some initiatives developed under the EU's regional policy, there is lack of common definitions. These gaps should be addressed in order to provide the necessary information to decision-makers and practitioners at all levels.

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<sup>25</sup> See: [http://ec.europa.eu/regional\\_policy/index\\_en.htm](http://ec.europa.eu/regional_policy/index_en.htm)

Stakeholders have suggested that the European Commission could play a role in this field by establishing an observatory, based on its general experience with collection, harmonisation and exploitation of statistics at European level. This observatory could help to provide the policy-makers and the general public with the necessary data and improve knowledge on urban mobility. It could also serve as an information provider and exchange platform for best practices.

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| 20. Should all stakeholders work together in developing a new mobility culture in Europe? Based on the model of the European Road Safety Observatory, could a European Observatory on Urban Mobility be a useful initiative to support this cooperation? |
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#### **4. THE FINANCIAL RESOURCES**

Substantial financing of various kinds is needed in order to invest in infrastructure and passenger interchanges, the maintenance and operation of networks, fleet renewal and maintenance, and public awareness and communication campaigns. For the most part, the responsibility for this investment lies with the local authorities concerned.

According to a recent study<sup>26</sup>, over 40% of the urban tram and light rail fleet in the EU-15 and 67% of the fleet in the new Member States is over 20 years old and ought to be replaced before 2020.

The successful financing of urban transport projects requires a mixture of budgetary, regulatory and financial instruments, including specific local taxes. A long-term view must be taken.

##### **Financing tools for cities and towns ...**

All stakeholders at local, regional, national and EU level must contribute. Users should also contribute and pay a fair price for collective transport services. They are willing to pay for a high-quality service. Private financing, usually in the form of public-private partnerships, can play a role but requires stable legal frameworks. Parking charges and urban road user charging could also contribute to urban transport financing, in particular by earmarking the revenues raised for the financing of urban transport measures. The congestion charging scheme in London has provided useful lessons for improving bus services.

Stakeholders proposed that the EU could consider enlarging the scope of the "Eurovignette directive" by introducing an urban dimension, so that road charging could apply to all types of vehicles and infrastructures. This could also be linked to the development of a harmonised methodology, by mid-2008, to calculate external costs in transport.

According to stakeholders, market-based mechanisms such as the possible use of the Emissions Trading Scheme (ETS) - by granting emission rights or equivalent credits to authorities investing in new and cleaner infrastructure - could be further analysed. However, negative impacts on the functioning and the environmental effectiveness of the system must be avoided.

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<sup>26</sup> Light rail and metro systems in Europe, ERRAC, 2004.

In its policy on State aid, the Commission is committed to taking into account the environmental benefits of investment in clean transport and of the need for a shift to less polluting means of transport. By way of example, the draft guidelines for environmental protection<sup>27</sup> allow for specific exceptions, in the case of aid for the acquisition of new transport vehicles to speed up the adoption of Community standards before they become mandatory. Furthermore, the Commission's proposal for a new block exemption Regulation<sup>28</sup> explicitly singles out as eligible asset investments in means of transport and transport equipment other than road freight and air transport. Finally, the Commission is currently considering issuing guidelines on State aid in the railway sector, to improve transparency and legal certainty in an economic activity that is opening gradually to competition, and is crucial to ensuring sustainable mobility in Europe. One of the issues that the Commission will have to consider is the need to replace quickly an ageing rolling stock in the interest of reliability, safety and improved interoperability. In certain geographic areas of Europe, this need is particularly acute, and regional aid thus appears to be an appropriate instrument to address this challenge.

### **... European financial support has many facets**

At EU level several sources of financing are available, for instance the Structural Funds, the Cohesion Fund and loans from the European Investment Bank. As in the past, the EU's Cohesion Policy will remain an important source of funds in the eligible regions during the period 2007-2013. In the previous period 2000-2006, the funding for transport projects from the European Regional Development Fund (ERDF) was around €35 billion, of which slightly more than €2 billion went on urban transport. According to the programming documents, ERDF and Cohesion Fund will contribute to almost €8 billion for urban transport during the 2007-2013 period. Another €9.5 billion is set aside for integrated projects for urban and rural regeneration that may contain transport-related investments.

The cohesion instruments in the current period 2007-2013 provide a more broad and solid basis for co-financing urban transport and collective transport across Europe<sup>29</sup>. The ERDF and Cohesion Fund regulations make explicit reference to clean urban transport and public transport but also, for the first time, to integrated strategies for clean transport. Authorities, in particular in the new Member States, should take advantage of these opportunities to upgrade their urban transport systems.

Most of the National Strategic Reference Frameworks submitted by the Member States include sustainable urban transport as an area for action. EU co-financing from the cohesion instruments is possible for investments in infrastructure (e.g. railways and terminals) and rolling stock such as clean buses, trolley buses, trams, metros and suburban rail. The same applies to measures such as retrofitting and upgrading or other components that form part of an integrated and user-friendly urban transport system (ITS, traveller information, integrated ticketing, traffic management, etc). The ERDF can also finance installations related to environmentally sustainable urban transport projects and provide support for certain target groups of the population (elderly, handicapped) to access normal public transport services. It increasingly finances projects related to intelligent transport systems.

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<sup>27</sup> Draft Community Guidelines for State aid for environmental protection  
[http://ec.europa.eu/comm/competition/state\\_aid/reform/guidelines\\_environment\\_en.pdf](http://ec.europa.eu/comm/competition/state_aid/reform/guidelines_environment_en.pdf)

<sup>28</sup> Commission Proposal for a new Block Exemption Regulation - SEC(2007) 513, 24.4.2007.

<sup>29</sup> See: [http://ec.europa.eu/regional\\_policy/index\\_en.htm](http://ec.europa.eu/regional_policy/index_en.htm)

On average, the European Investment Bank<sup>30</sup> lends around €2.5 billion for urban transport projects every year. Projects include the construction, extension or rehabilitation of collective transport infrastructures or the acquisition of rolling stock in major agglomerations and mid-sized towns and cities across Europe. On top of its normal lending operations, the EIB has joined forces with the Commission and the European Bank for Reconstruction and Development to develop new financial instruments or initiatives.

The Seventh Framework Programme for research and technological development (FP7) promotes research, technological development and demonstration activities for urban mobility, the energy aspects of transport, clean urban transport and sustainable mobility for all citizens.

FP7 includes under the theme "transport" an activity area on "Ensuring sustainable urban mobility". It covers technical research, demonstration and policy support in the area of new transport and mobility concepts, innovative demand management schemes, high-quality public transport, and innovative strategies for clean urban transport. Other actions will focus on the development of highly innovative, not polluting, smart transport and mobility concepts, including their deployment. FP7, under the theme "ICT" is also funding activities related to mobility and services. Research in road infrastructure and smart and clean vehicles are addressed independently of the geographical context but results can usefully be applied to the urban framework

CIVITAS is a Commission demonstration and research programme for clean urban transport. The CIVITAS Initiative helps towns and cities to test and demonstrate integrated packages of both policy and technology measures that aim to achieve a more sustainable, clean and energy-efficient urban transport system. CIVITAS has so far co-financed actions in 36 towns and cities with €100 million in EU funding. CIVITAS-Plus has already been launched under FP7.

Stakeholders have stressed the importance of continuing the CIVITAS Initiative. The CIVITAS "approach" could pave the way for a dedicated EU support programme for financing clean urban transport activities outside the research framework, as suggested by stakeholders. This programme could concentrate on actions on a larger scale, focussing on the integration of innovative actions in towns, cities and their periphery. Ideas for such a programme could be considered once the Action Plan on urban mobility has been adopted.

The Intelligent Energy Europe (IEE) Programme, financed under the Competitiveness and Innovation Programme (CIP)<sup>31</sup>, includes the ALTENER and STEER sub-programmes, which support initiatives relating e.g. to new and renewable energy sources, the promotion of alternative fuels and the promotion of energy efficiency in transport.

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<sup>30</sup> See: [www.eib.org](http://www.eib.org)

<sup>31</sup> Decision No 1639/2006/EC of 24 October 2006 (OJ L 310, 9.11.2006, p. 15).

21. How could existing financial instruments such as structural and cohesion funds be better used in a coherent way to support integrated and sustainable urban transport?
22. How could economic instruments, in particular market-based instruments, support clean and energy efficient urban transport?
23. How could targeted research activities help more in integrating urban constraints and urban traffic development?
24. Should towns and cities be encouraged to use urban charging? Is there a need for a general framework and/or guidance for urban charging? Should the revenues be earmarked to improve collective urban transport? Should external costs be internalised?
25. What added value could, in the longer term, targeted European support for financing clean and energy efficient urban transport, bring?

*What could be the potential role of the EU?*

## 5. CONSULTATIONS

The Commission wishes to continue to incorporate in its further work the views of stakeholders. This Green Paper launches the second intensive consultation that will last until **15 March 2008**. All interested parties are invited to contribute to the vision of a European policy for urban mobility and reply to the 25 questions in this paper and also to the general issues it addresses. Their views, unless confidentiality is explicitly requested, can be made public.

Comments and suggestions can be put forward:

- via e-mail to:

tren-urbantransport@ec.europa.eu

- in writing to:

European Commission  
Directorate General for Energy and Transport  
Clean Transport and Urban Transport Unit  
(DM28 02/64)  
200, rue de la Loi  
B - 1049 Brussels

Further information can be found on the European Commission's website at:

[http://ec.europa.eu/transport/clean/index\\_en.htm](http://ec.europa.eu/transport/clean/index_en.htm).

It is important that this Green Paper rapidly leads to concrete action. The Commission believes that, after the consultation exercise, a concrete Action Plan should be drawn up. This

will be published in early autumn of 2008. The plan will include possible actions at the EU, national, regional, and local levels and at the level of the industry and citizens. It will carefully identify the appropriate instruments for each action.