Urban mobility

Shifting towards sustainable transport systems

IN-DEPTH ANALYSIS

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The document looks at the issue of urban mobility, examining in the background part the factors affecting mobility (demography, the different evolution of cities, mobility patterns, governance and funding, behaviours) and the challenges stemming from congestion. In the second part, the document presents the response provided by the EU. Even though urban mobility measures rest primarily with local, regional and national authorities, the EU supports urban mobility through several policies and instruments. The last part of the document describes the most recent development in the field, namely the December 2013 urban mobility package.

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EXECUTIVE SUMMARY

Urban mobility is confronted by many challenges, the key one being traffic congestion: urbanisation and a high dependence on cars having led to congestion in urban areas. Traffic congestion adversely impacts the urban environment itself in a direct way, leading to poor air quality, noise emissions, high levels of CO₂ and road safety problems. It also affects current and future economic competitiveness, social cohesion and the continent's sustainable growth.

Tackling urban mobility while minimising its undesirable impacts on the economy, society and the environment i.e. improving sustainable urban mobility goes beyond focusing on improving the efficiency and effectiveness of transport systems, also covering in particular demand-orientated measures, such as promoting walking, cycling, and a reduction in the need to travel.

While many cities are experiencing serious mobility issues, the effects of demographic and socio-economic changes such as ageing populations, migration, processes of suburbanisation and urban sprawl touch them in different ways and thus confront them with different mobility challenges. The ability of local entities or cities to act on mobility issues is also dependent on their regulatory and funding powers as well as their situation in terms of wealth and resources. Though dealing with urban mobility is primarily the responsibility of local, regional or national authorities, the EU has for many years placed urban mobility at the top of the EU agenda.

The EU's response in this field can be delivered by several EU policies and instruments. These range from the adoption of legislation to the definition of guidelines and recommendations, applying in particular to the urban level and/or urban transport, or funding of urban mobility projects. While urban transport systems fall within the scope of European transport policy, several other EU policies such as the Cohesion Policy, the Trans-European Networks policy, environmental policy, health policy, and research policy have to take into account the urban dimension, including mobility, to reach their objectives.

The most recent European Strategy in the area of transport - the 2011 White Paper - in particular underlined that urban mobility called for the setting-up of a mixed strategy embracing land-use planning, pricing schemes, efficient public transport services and infrastructures for non-motorised modes, charging/refueling of clean vehicles and that cities above a certain size should be encouraged to develop urban mobility plans.

In December 2013, the European Commission adopted an Urban Mobility Package. With this it intends to intensify its support in the areas where the EU adds value and to encourage Member States to create the right framework conditions for local authorities to develop and implement comprehensive and integrated urban mobility strategies.

The European Parliament has, on several occasions, highlighted its support for initiatives in the field of urban mobility, underscoring especially the importance of sustainable and integrated mobility plans, of tackling the mobility needs of certain groups e.g. the disabled, the elderly or the least affluent, and of providing alternatives to car use such as walking, cycling, and public transport so that citizens can change their habits. The new EC urban mobility package is to be examined by the EP under the new legislature.
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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CEB</td>
<td>Council of Europe Development Bank</td>
</tr>
<tr>
<td>EBRD</td>
<td>European Bank for Reconstruction and Development</td>
</tr>
<tr>
<td>ECA</td>
<td>European Court of Auditors</td>
</tr>
<tr>
<td>EEA</td>
<td>European Environment Agency</td>
</tr>
<tr>
<td>EIB</td>
<td>European Investment Bank</td>
</tr>
<tr>
<td>EMTA</td>
<td>European Metropolitan Transport Authorities</td>
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<tr>
<td>ERDF</td>
<td>European Regional Development Fund</td>
</tr>
<tr>
<td>ESI</td>
<td>European Structural and Investment Funds</td>
</tr>
<tr>
<td>FUA</td>
<td>Functional Urban Area</td>
</tr>
<tr>
<td>ITS</td>
<td>Intelligent Transport Systems</td>
</tr>
<tr>
<td>JASPERS</td>
<td>Joint Assistance to Support Projects in European Regions</td>
</tr>
<tr>
<td>JESSICA</td>
<td>Joint European Support for Sustainable Investment in City Areas</td>
</tr>
<tr>
<td>MUA</td>
<td>Morphological Urban Area</td>
</tr>
<tr>
<td>NSRF</td>
<td>National Strategic Reference Framework</td>
</tr>
<tr>
<td>OP</td>
<td>Operational Programme</td>
</tr>
<tr>
<td>PTA</td>
<td>Public Transport Authority</td>
</tr>
<tr>
<td>RCE</td>
<td>Regional Competitiveness and Employment</td>
</tr>
<tr>
<td>SUMP</td>
<td>Sustainable Urban Mobility Plan</td>
</tr>
<tr>
<td>TEN-T</td>
<td>Trans-European transport network</td>
</tr>
</tbody>
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Glossary

**Urban Mobility:** Closely connected to the geographical space it relates to (city/urban area), the concept of urban mobility can be understood as referring to all travel options and activities either within a certain city or urban area, or having either their origin or destination in the city or urban area.

**Sustainable transport system and sustainable urban mobility:** According to the European Council a sustainable transport system is a system that meets society’s economic, social and environmental needs whilst minimising its undesirable impacts on the economy, society and the environment. Deriving from this, sustainable urban mobility can be described as referring to any form of mobility (e.g. walking and cycling, driving a private car, using public transport) occurring within an urban area (including journeys that begin, end or go through urban areas), that meets society’s economic, social and environmental needs while minimising undesirable economic, social and environmental impacts.

**Urban sprawl:** Urban sprawl can be described as the incremental urban development in suburban and rural areas outside of their respective urban centres, characterised by a low density mix of land uses on the urban fringe. Commonly used to describe physically expanding urban areas the term urban sprawl is also presented by the European Environment Agency (EEA) as “the physical pattern of low-density expansion of large urban areas, under market conditions, mainly into the surrounding agricultural areas”.

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1. Definitions from, or based on: EP study on “Integrated Urban Transport Plans and Cohesion Policy”; Study on the financing needs in the area of sustainable urban mobility; and EC guidelines on soil sealing and the EEA report on urban sprawl in Europe.
1 Background

Accounting for over 70% of the EU population and over 80% of the Union's GDP, European cities are an essential contributor to EU growth and competitiveness. Most journeys start and end in cities which in many cases face increasing demand from passengers and freight transport and are experiencing serious mobility issues. Traffic congestion has direct adverse impacts upon the urban environment itself, leading to poor air quality, noise emissions, high levels of CO2 (urban areas represent around 23% of all CO2 emissions from transport and are also responsible for other emissions from road transport), and road safety problems. Congestion incurs an estimated annual cost of 80€ billion and also affects current and future economic competitiveness, social cohesion and the continent's sustainable growth.

While the United Nations highlights that many of the world's cities are confronted with an unprecedented accessibility crisis\(^2\), it also underlines that the ultimate goal of 'transportation' and 'mobility' is to gain access to destinations, activities, services and goods. Sustainable urban mobility should thus go beyond focusing on improving the efficiency and effectiveness of transport systems to cover demand-orientated measures, such as promoting walking, cycling, and the reduction the need to travel. Resolving congestion issues and tackling urban mobility is therefore not only about improving urban transport's efficiency but also about shifting away from a 'transport bias' in urban mobility planning to focus on accessibility.

Fig 1: Cities and metropoles

Source: Eurostat\(^3\)

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3 Map derived from Eurostat Statistics on regions and cities, and based on Eurostat data (online data code: urb_icity).
1.1 Different cities, different challenges

1.1.1 Increased importance of cities
In the 20th century Europe turned into a predominantly urban continent and the vast majority of citizens now live in urban agglomerations of more than 5000 inhabitants. Europe has urban areas which are more polycentric and less concentrated than other world areas such as the USA or China. While in the USA, a quarter of the population lives in cities of over 5 million inhabitants, this is only the case for 7% of the population in the EU. The majority of the European urban population lives in small and medium sized cities and towns of between 5 000 and 100 000 inhabitants.

Whilst the overall share of the urban population in Europe is still expected to grow, though at a much slower pace than in previous decades (according to estimates in 2050 around 82% of the European population will be concentrated in urban areas), there is no even pattern of evolution across the continent. The effects of demographic and socio-economic changes such as ageing populations, migration, processes of suburbanisation and urban sprawl touch cities in differing ways and thus confront them with different issues in terms of mobility.

1.1.2 What is meant by cities and urban areas
Until recently, there have been many definitions of a 'city', referring to an administrative unit or a certain population density. Cities can refer to different realities: the administrative city or de jure city on the one hand, the larger socio-economic agglomeration or de facto city on the other. The de facto city can be treated from a morphological or functional point of view. A Morphological Urban Area (MUA) describes the continuity of the built-up space with a defined level of density while a Functional Urban Area (FUA) is characterised by its labour market basin, the mobility patterns of commuters, and covers the wider urban system of nearby towns and villages, economically and socially dependant of a major urban centre. FUAs can either be monocentric or polycentric i.e. encompassing tightly related cities or agglomerations with no dominating centre. Both the MUA and FUA can evolve as they relate to features such as the urban landscape, economic, demographic and mobility patterns that change over time. The two examples below illustrate the scope/coverage of these different notions: the population of the administrative city of London is 7.43 million, 8.27 for the MUA and 13.71 for the FUA, while in Vienna the figures are, respectively, 1.60 million people for the administrative city, 1.67 for the MUA and 2.58 for the FUA. One city that shows near identical values between the concepts is Bucharest, whose population stands at 1.93 million in the administrative city, 2.06 at MUA level and 2.06 at FUA level.

In order to allow comparisons and analysis across countries, the European Commission developed in 2011, jointly with the OECD, a relatively simple definition based on population size and density. Once the cities are identified, it also looks at the identification of a commuting zone based on commuting patterns. The Larger Urban Zone consists of the city and its commuting zone.

The expansion of de facto cities has to a certain extent blurred the traditional delimitation between urban and rural leading to the emergence of a new rurban condition.

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4 Report “Cities of tomorrow, Challenges, visions, ways forward / European Union, Regional Policy, 2011.”
1.1.3 Different issues in terms of urban mobility

Experts identify three main types of cities in terms of socio-economic and demographic change. The first group includes the cities that are economically dynamic and experience strong population increases, in particular inflows of migrants, whether skilled or less skilled. They are principally located in Western Europe and are tightly connected with the global or world economy. The second group mostly includes small and medium sized cities which combine a strong economic background but which are confronted with stagnating or gradually shrinking populations. For these cities, these changes are not necessarily negative, the challenge being for them to set urban strategies that cater for or take advantage of these demographic and socio-demographic changes. The last group covers cities that can be confronted with both demographic and economic decline, the combination of which can be conducive to declining local tax revenues and lower demand for goods and services. Population decline can thus lead to fewer users of public infrastructure, thereby raising its cost per head. The cities of that group are mostly situated in Central and Eastern Europe, but also cover some peripheral urban areas in Western Europe such as southern Italy or northern England.

As part of the developments which impact upon people’s mobility and transport in urban areas, increased social polarisation and the spatial segregation it causes are particularly significant, making it difficult for certain low-income groups to find affordable housing in cities and access certain services such as transport.

Closely linked to spatial segregation is the phenomenon of urban sprawl (see glossary). This can be driven for instance by the increased gentrification of cities, leading people to find affordable housing further from the city centre or, on the contrary, by the out-migration of wealthy social groups leaving the less privileged groups in run-down city centres. Stimulated by people’s desire to settle in better housing with more land surface per capita, urban sprawl has negative impacts on transport and mobility. It leads in particular to an increased use of private cars due to public services being more costly and more difficult to provide in low density settlements. This leads in turn to transport congestion in and around cities, alongside road infrastructure upgrades made in order to reduce travel time and improve accessibility, thereby further fuelling urban sprawl and further congestion, creating a vicious circle.

1.2 Mobility patterns

Urban areas use more public transport than rural areas and within the former, larger cities tend to show lower car usage. The modal share of trips i.e. the percentage of trips carried out using different transportation modes (cycling, walking/public transport/rest of motorised modes) in Public Transport Authority areas and in the main cities (figure 2) show diverse mobility patterns.
Overall, the use of soft modes such as walking and cycling seem to be more widespread in main cities than in the whole metropolitan areas covered by this European Metropolitan Transport Authorities (EMTA) Barometer.

The proportion of trips made by public transport also tends to be higher in the main cities than in the whole metropolitan areas.

Metropolitan areas have higher proportions of other motorised modes (i.e. mainly private car use) than main city areas which can be due to higher commuting distances and lesser provision of convenient and accessible public transport services to more sprawled settlements.

According to the European Environment Agency (EEA)\(^8\), the grounds for personal journeys are typically work (commuting), school (education), shopping, leisure and business. Journeys relating to commuting and education represent at least 25% of all journeys carried out in the metropolitan areas. Commuting times are especially long in Europe’s capitals and larger cities.

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\(^7\) EMTA Barometer of Public Transport in the European Metropolitan Areas, 2012.

1.3 Quality of life and the environment

Though crucial in socio-economic terms, urban transport has many negative impacts on both the environment and the quality of life of people residing in urban areas. Urban areas indeed represent around 23% of all CO₂ emissions from transport. Diesel vehicles in particular are major emitters of PM (particulate matter) and NOₓ (oxides of nitrogen) and up to a third of European city dwellers are exposed to air pollutant levels exceeding EU air quality standards.

People living in cities are also exposed to noise pollution which a majority of them consider to be a major problem in their city.

Furthermore, the proportion of land allocated to car transport and off-street car parking appears to be disproportionate with the land actually available and conflicts with both softer modes of transport such as cycling and walking as well as the need for green and recreational areas.

Road safety remains an issue as urban areas account for 38% of Europe's road fatalities. While road fatalities⁹ on urban roads fell by 39% between 2001 and 2010 in 19 EU countries⁹, this compares relatively less favourably with the total number of fatalities which in the same period reduced by 42%. Besides, while the absolute number of fatalities decreased between 2001 and 2010 in 19 EU countries, the percentage of fatalities occurring within urban areas increased slightly.

1.4 Governance and funding

Public authorities (at local, regional or national level) have different roles when it comes to addressing urban mobility issues as they have different funding, taxation and regulatory powers. In general most powers and roles for urban mobility rest with local authorities who are likely to be responsible e.g. for providing and operating public transport services and also have responsibility for local road networks, pedestrian and cycling facilities. They may have powers to raise taxes from land use, parking charges or accrue revenue from public transport fares, and are likely to have a key strategic role in determining options, solutions and priorities for urban mobility. Considering their close connections with users, communities, taxpayers and businesses, most Member States tend to see local authorities as best placed to undertake this strategic role in urban mobility. Some Member States, however, have regional, state or provincial administrations which may have a strategic role in the governance of transport across a region or a wider metropolitan area.

National authorities typically have the primary tax raising powers and can raise the revenues that are essential for road infrastructure; they are in particular responsible for setting up the policy, legislative and funding frameworks relevant for urban mobility. The interactions between the different levels will therefore have an impact on urban mobility strategies. The differences in regulatory and funding powers on the one hand as well as differences in wealth and resources can significantly impact on the ability of local entities or cities to act on mobility issues.

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⁹ European Road Safety Observatory, Traffic Safety Basic Facts 2012, Urban areas.

¹⁰ The countries covered by the trend analysis are Belgium, the Czech Republic, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Finland, Sweden and UK.
In terms of funding, a study\textsuperscript{11} on financing needs in the area of sustainable urban mobility points out that where revenues are concerned, urban transport expenditure is limited by public transport fare levels which are typically below the costs of operating and renewing the capital of such systems. So, in the future, the primary source of funding for urban transport is likely to remain grants funded by taxation to support subsidies and selected capital investments. This capacity is thus likely to be constrained both by countries' efforts to contain or reduce their debt and the future economic outlook. As to the scope for developing new sources of revenue such as direct pricing of road use, increased fares and parking charges (i.e. increased charges on existing infrastructures and services), these might also be limited by political concerns over their public acceptability.

Cities have thus to adapt to an evolving environment in particular in terms of urban landscape, demography and mobility patterns that can change relatively rapidly. They should be also able to work with different governance levels as well as to cooperate with other cities in order to share the investments and services – as might be the case in the field of transport – that are needed at a larger territorial scale. According to experts\textsuperscript{12}, the scope of many challenges may require a level of government or governance that reflects the \textit{de facto} city rather than the \textit{de jure} city. Consequently, the strategic planning and delivery of public policies on economic development or mobility and transport cannot be tackled at too local a level.

\subsection*{1.5 Citizens' views}

A survey on the quality of life\textsuperscript{13} in cities, carried out in 2012 in 79 European cities, showed huge variations in the level of satisfaction when it came to public transport. The spread between the most satisfied city (Zurich) and the least satisfied (Palermo) spans over 80 percentage points. In half of the cities surveyed, at least 7 out of 10 respondents said they were satisfied with public transport. Public transport is viewed as one of the top three issues their city is confronted with in only 15 of the cities surveyed. Although less of a concern than other issues such as health services, unemployment, education and training, public transport is increasingly perceived (compared to the 2009 survey) as an important issue in a majority of cities.

Another Eurobarometer survey carried out in May-June 2013\textsuperscript{14} among the public at large i.e. including European citizens living in rural areas, attempted to capture citizens' perception and behaviours in terms of urban mobility.

Setting aside walking or riding a motorbike (marginally used considering that 88\% of respondents declared never having used one either as a driver or passenger), the data (see Figure 3) shows clearly that the mode of transport most used on a daily basis is the car (whether as a driver or a passenger).

Overall, half of all Europeans use a car every day, as opposed to 16\% who use public transport and 12\% who cycle.

\begin{itemize}
\item \textsuperscript{11} Study on the financing needs in the area of sustainable urban mobility, Booz & Company, for European Commission, DG Mobility and Transport, 2012.
\item \textsuperscript{12} Report \textquotedblleft Cities of tomorrow, Challenges, visions, ways forward / European Union, Regional Policy, 2011.
\item \textsuperscript{13} Flash Eurobarometer 366, Quality of life in European Cities, fieldwork Nov-Dec 2012.
\item \textsuperscript{14} Special Eurobarometer 406, Attitudes of Europeans towards urban mobility, fieldwork May-June 2013.
\end{itemize}
Fig 3: How often do you use a car/public transport/cycle? – 'At least once a day'

Source: Special Eurobarometer 406, 2013.

In socio-demographic terms, daily cars users are more likely to be found in the working age population group (between 25 and 54 years old), in rural villages or in small and medium sized towns. Europeans who use public transport on a daily basis are more likely to be found in the youngest segment of the population surveyed (people aged between 15 and 24), to live in large towns and, in occupational terms, to be students. At EU level, close to 40% of respondents declared having encountered (either often or sometimes) problems that limit their access to activities, goods or services when travelling within cities; country results, however, show huge differences. The countries in which this perception is the most pronounced are Malta (74%), Greece (65%), Cyprus (63%), Italy (59%) and Belgium (49%), while citizens are least likely to encounter such accessibility problems in Finland (11%), Sweden (15%) and Denmark (18%).

When asked to identify from a pre-defined list measures that could improve urban mobility within cities (see figure 4), most Europeans are inclined to select the ones that relate to public transport - lower prices for public transport (59%), better public transport (56%), followed by improved cycling facilities (33%).

EU respondents, however, are much less likely to select measures which either restrict their access or put extra charges or constraints on them, as demonstrated by the relatively low attractiveness of measures such as access restrictions for certain types of vehicles (e.g. trucks) (27%), lower speed limits (16%), access restrictions at certain times (15%), charges for road use (e.g. city tolls) (9%), reduced number of parking spaces (7%). Lack of acceptance of coercive or constraining measures goes, to a certain extent, on par with Europeans' perception that the main responsibility for reducing traffic in cities rests with public authorities - primarily city authorities (56%), regional authorities (28%) or the national government (27%) - while less than a third consider that citizens themselves should be mainly responsible for reducing urban traffic.

To sum up, urban mobility is confronted by many challenges, foremost among them traffic congestion as urbanisation and a high dependence on cars for passengers and on trucks for freight have led to congestion in cities. This, in turn, has negative implications in terms of delays, pollution and costs which are likely to further increase over the next decades with increasing traffic levels. The challenge is therefore to create urban transport systems that meet people's mobility needs and the demand for efficient and
rapid movement of goods and people, while minimising the negative economic, social, health and environmental impacts. In doing so account has to be taken of the different levels of governance and their ability to act, whether in terms of regulatory powers or their ability to support the financial investments needed to support urban mobility.

**Fig 4: Which of the following measures could improve travel within cities?**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Lower prices for public transport</td>
<td>59%</td>
</tr>
<tr>
<td>Better public transport</td>
<td>56%</td>
</tr>
<tr>
<td>Improved cycling facilities</td>
<td>33%</td>
</tr>
<tr>
<td>Improved walking facilities</td>
<td>28%</td>
</tr>
<tr>
<td>Access restrictions for certain types of vehicles (e.g. trucks)</td>
<td>27%</td>
</tr>
<tr>
<td>Incentives for carpooling or car sharing</td>
<td>25%</td>
</tr>
<tr>
<td>Lower speed limits</td>
<td>16%</td>
</tr>
<tr>
<td>Access restrictions at certain times</td>
<td>15%</td>
</tr>
<tr>
<td>Charges for road use (e.g. city tolls)</td>
<td>9%</td>
</tr>
<tr>
<td>Reduce the number of parking places</td>
<td>7%</td>
</tr>
<tr>
<td>Don't know</td>
<td>4%</td>
</tr>
<tr>
<td>None</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: [Special Eurobarometer 406, 2013](https://doi.org/10.2760/406).

## 2 The EU response

Urban mobility issues are multi-faceted and complex, covering different sectors e.g. transport/land planning/housing/the environment and different dimensions (environmental, economic, social and societal). They also imply different level of governance as tackling urban mobility issues or setting up urban mobility policies is primarily the responsibility of local, regional or national authorities.

Irrespective of limited direct competences in that field, the EU has nonetheless placed urban mobility at the top of the EU agenda for many years and developed a policy response to urban mobility issues that is manifold, as it is delivered by several EU policies and instruments. The EU response ranges from adopting binding legislation such as Directive 2008/50/EC\(^\text{15}\) on ambient air quality and cleaner air for Europe that sets limit values for the main atmospheric concentrations of main pollutants for EU Member States; Directive 2002/49/EC\(^\text{16}\) on environmental noise that relates not only to the planning of noise reduction originating from transport but also to the protection of quiet areas both inside and outside cities; the preparation of new rules regarding the deployment of infrastructure for the supply of alternative energies or clean fuels for transport, to defining guidelines and recommendations, applying in particular to the urban level and/or urban transport.


Urban transport systems, and thus urban mobility, fall within the scope of the European transport policy governed by title VI (articles 90 to 100 of the Treaty on the Functioning of the EU (TFEU)). Though not explicitly referring to mobility or urban areas, the title XVI Treaty provisions on Trans-European Networks are of relevance as article 170 in particular mentions that "(...) the Union shall aim at promoting the interconnection and interoperability of national networks as well as access to such networks" which covers urban transport networks. Furthermore, several other EU policies such as cohesion policy, environmental policy, health policy and research policy have to take into account the urban dimension, including that relating to mobility, in order to reach their objectives.

2.1 Overall framework

A first step towards a strategy on urban transport was made in the 1990s with the adoption of two documents: in 1995 a Green Paper on the Citizens’ Network and in 1998 a Communication on Developing the Citizens’ Network whose objectives were to stimulate sustainable transport and mobility needs via information exchanges, benchmarking and the targeted use of structural and research funds.

Later on, in 2006, the European Commission adopted a Thematic Strategy on the Urban Environment which already highlighted the many environmental challenges cities were confronted with, such as "poor air quality, high levels of traffic and congestion, high levels of ambient noise, poor quality built environment, derelict land, greenhouse gas emissions, urban sprawl, generation of waste and waste-water". It suggested actions in four priority fields (urban management, sustainable transport, construction and urban design); recommended local authorities to develop and implement Sustainable Urban Transport Plans and mentioned the EC’s readiness to provide technical guidance in that field. The EC underscored the multi-faceted and integrated nature of the issue of urban mobility by highlighting that "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, cover passenger and freight transportation and all modes of transport."

Following the publication of a Green Paper on Urban Mobility in 2007, the Commission adopted an Action Plan in 2009 which represented a first comprehensive

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**Sustainable Urban Mobility Plans**

The EC, in several policy documents, refers to Sustainable Urban Transport Plans or Sustainable Urban Mobility Plans (SUMPs). There is no single or one-size-fits-all definition of a SUMP. However, exchanges between stakeholders, policy makers and planning experts, have led to the issuing of Guidelines on Developing and Implementing a Sustainable Urban Mobility Plan. According to these "A Sustainable Urban Mobility Plan is a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life. It builds on existing planning practices and takes due consideration of integration, participation, and evaluation principles."

The comparison between traditional transport planning and SUMPs enables the specificities of the latter to come to the fore. In its recent Urban Mobility Package, the EC annexed a document outlining the guiding principles for developing a SUMP.
support package in the field of mobility. In this Action Plan, the EC recognised that urban areas may be confronted with different challenges, depending on their size, wealth, and geographic location and therefore that it had no intention "of prescribing one-size-fits-all or top-down solutions". This Action Plan that included 20 actions to be launched progressively until 2012, was organised around six main policy themes: promoting integrated policies; focusing on citizens; greening urban transport; strengthening funding; sharing expertise and knowledge; and optimising urban mobility.

It provided for a cooperation partnership in which local, regional and national authorities, as well as other stakeholders such as citizens and industry, could participate. The Action Plan, for example, called for accelerating the taking-up of sustainable urban mobility plans covering freight and passenger transport in urban and peri-urban areas (see box on Sustainable Urban Mobility Plans and table 119).

**Table 1: Transport planning vs SUMP**

<table>
<thead>
<tr>
<th>Traditional Transport Planning</th>
<th>Sustainable Urban Mobility Planning</th>
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<tbody>
<tr>
<td>Focus on traffic.</td>
<td>Focus on people.</td>
</tr>
<tr>
<td>Primary objectives: traffic flow capacity and speed.</td>
<td>Primary objectives: accessibility and quality of life, as well as sustainability, economic viability, social equity, health and environmental quality.</td>
</tr>
<tr>
<td>Modal-focused.</td>
<td>Balanced development of all relevant transport modes and shift towards cleaner and more sustainable modes.</td>
</tr>
<tr>
<td>Infrastructure focus.</td>
<td>Integrated set of actions to achieve cost-effective solutions.</td>
</tr>
<tr>
<td>Sectoral planning document.</td>
<td>Sectoral planning document consistent and complementary to related policy areas (such as land use and spatial planning, social services, health, enforcement and policing; etc.).</td>
</tr>
<tr>
<td>Short and medium-term delivery plan.</td>
<td>Short and medium-term delivery plan embedded in a long-term vision and strategy.</td>
</tr>
<tr>
<td>Related to an administrative area.</td>
<td>Related to a functioning area based on travel to work patterns.</td>
</tr>
<tr>
<td>Domain of traffic engineers.</td>
<td>Interdisciplinary planning teams.</td>
</tr>
<tr>
<td>Planning by experts.</td>
<td>Planning with the involvement of stakeholders using a transparent and participatory approach.</td>
</tr>
<tr>
<td>Limited impact assessment.</td>
<td>Regular monitoring and evaluation of impacts to inform a structured learning and improvement process.</td>
</tr>
</tbody>
</table>

Source: Guidelines. Developing and Implementing a Sustainable Urban Mobility Plan. Rupprecht Consult – Forschung und Beratung GmbH.

### 2.2 The White Paper on Transport

The most recent European Strategy in the area of transport, i.e. the 2011 White Paper20 "Roadmap to a Single European Transport Area - Towards a competitive and resource...

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19 Guidelines. Developing and Implementing a Sustainable Urban Mobility Plan. Rupprecht Consult – Forschung und Beratung GmbH.

efficient transport”, covers the issue of urban mobility and contains targets and concrete initiatives, either directly or indirectly, relating to it.

Aiming at building a competitive transport system that will increase mobility, remove major barriers in key areas and fuel growth and employment, the White Paper proposals are expected to reduce Europe's dependence on imported oil and to cut carbon emissions in transport by 60% by 2050. However, it specifically mentions that curbing mobility is not an option.

Out of ten White Paper’s key goals to achieve its overall objective, one relates specifically to urban transport: the use of ‘conventionally-fuelled cars in urban transport should be halved by 2030 and phased out by 2050.

Looking at innovative mobility patterns, the White Paper in particular points out that in the urban context, mobility calls for the setting up of a mixed strategy embracing land-use planning, pricing schemes, efficient public transport services and infrastructures for non-motorised modes and charging/refueling of clean vehicles, even though it also recognises that new mobility concepts (whether or not applying in an urban context) and more sustainable behavior cannot be imposed. It underlines that cities above a certain size should be encouraged to develop urban mobility plans and that an EU-wide framework is needed to make interurban and urban road user charging schemes interoperable.

Listing up to 40 concrete initiatives, the White Paper contains a dedicated section on Integrated Urban Mobility. Initiatives in the field of urban mobility are of course not limited to that section. Though stating that the scope for changing transport varies across transport segments, namely medium distances, long distances and urban transport, many other initiatives are relevant though applying differently in an urban context.

2.2.1 Integrated urban mobility
The White Paper’s key initiatives on Integrated Urban Mobility were organised around three main themes, each of which containing one or several elements:

- Urban Mobility Plans
  - Put in place the procedures and support mechanisms at European level for preparing Urban Mobility Audits, as well as Urban Mobility Plans, and set up a European Urban Mobility Scoreboard based on common targets. For cities of a certain size, examine the possibility of a mandatory approach, according to national standards based on EU guidelines.
  - Draw a linkage between regional development and cohesion funds to cities and regions that have submitted a current Urban Mobility Performance and Sustainability Audit certificate.
  - Look at the possibility of a European support framework for a progressive implementation of Urban Mobility Plans in European cities.
  - Integrate urban mobility in a possible Smart Cities Innovation Partnership.
  - Stimulate large employers to develop Corporate/Mobility Management Plans.

- An EU framework for urban road user charging
  - To develop a framework for urban road user charging and access restriction schemes, including a legal and validated operational and technical framework covering vehicle and infrastructure applications.

- A strategy for near ‘zero-emission urban logistics’ 2030
To prepare best practice guidelines to better monitor and manage urban freight flows (e.g. vehicle sizes in historic centres, regulatory limitations, delivery windows).

Bringing together aspects of land planning, rail and river access, business practices and information, charging and vehicle technology standards, developing a strategy for moving towards ‘zero-emission urban logistics’,

To promote joint public procurement for low emission vehicles in commercial fleets (delivery vans, taxis, buses...).

Guidelines on developing and implementing a Sustainable Urban Mobility Plan were published in 2013. They explain the concept as well as the distinction between traditional transport planning and sustainable urban mobility planning (see table 1 on Traditional Transport Planning versus SUMP).

2.3 Urban Mobility and Cohesion and Regional Policy

Even though urban planning is not an EU competence and the urban dimension is not explicitly mentioned in the TFEU, provisions relating to the economic, social and territorial cohesion of the EU have a strong urban dimension. In particular through the Cohesion Policy, the EU has had a strong impact on the development of cities over the years.

While several successive EU Council Presidencies highlighted the importance of urban issues and urban development policies at all levels, the chief breakthrough occurred in 2007 with the adoption of the Leipzig Charter on Sustainable European Cities which highlighted the importance of integrated urban development and the promotion of efficient and affordable urban transport. The Toledo Declaration went a step further calling for a common understanding of an integrated approach to urban development and linking it to the goals of the Europe 2020 Strategy. In the Toledo Declaration, the Ministers responsible for urban transport agreed that a ‘green, ecological or environmental’ regeneration of cities had to be undertaken, in particular through:

"...reducing transport needs by the promotion of proximity and mixed-uses schemes, while at the same time stimulating a more sustainable mobility (on an urban, metropolitan and interurban scale) by: prioritising non-motorised ('walkable', 'cyclable' cities), less pollutant means of transport, supporting affordable and efficient public transport accessible for all - notably for deprived neighbourhoods, where it can play a key role in breaking its physical isolation - and multimodal transport networks, and optimising urban logistics;"

As for the territorial agenda that ran in parallel, it led in particular to the recognition of territorial cohesion in the Lisbon Treaty. The Territorial Agenda of the European Union, revised in 2011, reflected the Europe 2020 priorities. Ministers responsible for spatial planning and territorial development recommended in particular "applying an integrated and multilevel approach in urban development and regeneration policies", and mentioned that "... cities should, where appropriate look beyond their administrative borders and focus on functional regions, including their peri-urban neighbourhoods.' They also underlined that "urban-rural interdependence should be recognised through integrated governance and planning based on broad partnership", and welcomed "place-based strategies developed locally to address local conditions."

Urban development is about about the social, economic and physical transformation of cities, and these processes combined are considered in the EU’s approach to integrated urban development. This implies that everything from the advantages of economic activity, innovation, education and culture to the challenges of urban sprawl, poverty, migration, mobility, congestion and beyond, are treated cohesively.
Support to urban development including its transport and mobility dimensions has thus been incorporated and provided on the ground within the context of the Cohesion and Structural Funds\textsuperscript{21}. While the system is complex, with several instruments available and different conditions to fulfil\textsuperscript{22}, Urban Mobility is mainly supported via the European Regional Development Fund (ERDF).

\subsection*{2.3.1 Urban Mobility Funding through the Structural Funds}

According to Commission data, during the 2007-2013 programming period, the EU earmarked some €21.1 billion in sustainable urban development, out of which €7 billion were devoted to clean urban transport, with other investments in research and innovation infrastructure, transport and the environment for instance, also impacting upon cities.

Transport infrastructure being one of the most visible examples of what can be achieved with the EU Structural and Cohesion Funds, about €82 billion (23.8\% of the total allocation of €347 billion) was planned on transport, with a priority for TEN-T projects. The breakdown of Cohesion Policy investments in transport between 2007 and 2013 shows an allocation for TEN-T projects across all transport modes of €38 billion (11\% of the total of cohesion policy investments) which compares with the allocation of €8.1 billion (2.3\%) for urban transport or €3.3 billion (1\%) for multimodal transport and intelligent transport systems\textsuperscript{23}.

The data in Figures 5 and 6 emerging from a study on the financing needs in the area of sustainable urban mobility shows the breakdown of urban mobility funding by category and country. It shows that the indicative allocation for urban mobility funding for the period 2007-2013 was especially strong in three countries: Poland and Hungary, followed by Greece.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|}
\hline
\textbf{Category} & \textbf{Transport amount (in €)} & \textbf{Share of the total structural funds dedicated to transport} \\
\hline
Cycle tracks & 603 869 290 & 0.7\% \\
\hline
Urban transport & 1 660 210 940 & 2.0\% \\
\hline
Promotion of clean urban transport & 6 126 664 580 & 7.5\% \\
\hline
\end{tabular}
\caption{Urban Mobility Funding through the Structural Funds 2007-2013}
\end{table}

Source: Study\textsuperscript{24} on the financing needs in the area of sustainable urban mobility, Booz & Company, for European Commission, DG Mobility and Transport, 2012 and EU Budget Eurocities Background information on EU funding schemes.


\textsuperscript{22} The description of funding instruments/programmes is not deemed to be exhaustive but to provide an overview of the key tools available for supporting urban mobility.

\textsuperscript{23} Different sources show slightly different results depending of possible method of calculations or classifications or baseline used.

\textsuperscript{24} Study on the financing needs in the area of sustainable urban mobility, Booz & Company, for European Commission, DG Mobility and Transport, 2012.
Fig. 6: Funding for Urban mobility: Indicative allocation by Member State (2007-2013 million euros, 2007 prices / Total funding = €8.57 billion)

Source: Study on the financing needs in the area of sustainable urban mobility, Booz & Company, for European Commission, DG Mobility and Transport, 2012.

On top of the instruments described above, specific instruments such as JASPERS for the preparation of major projects or JESSICA for urban projects are of particular relevance.

JASPERS (Joint Assistance to Support Projects in European Regions) which is managed by the European Investment Bank (EIB) and co-sponsored by the European Commission and the European Bank for Reconstruction and Development (EBRD), provides technical assistance to the 13 EU countries which joined the EU in 2004, 2007 and 2013 as well as to Greece, the former Yugoslav Republic of Macedonia, Montenegro and Serbia during project preparation. It relates to the preparation of high quality, major infrastructure projects, including for example urban transport projects, which will be co-financed by EU funds.

JESSICA (Joint European Support for Sustainable Investment in City Areas), is an initiative of the European Commission developed in co-operation with the European Investment Bank (EIB) and the Council of Europe Development Bank (CEB), which supports sustainable urban development and regeneration through financial engineering mechanisms. EU countries can choose to invest some of their EU structural fund allocations in revolving funds. JESSICA notably supports projects in the area of urban infrastructure, including transport.
Jointly financed by the European Union (European Regional Development Fund) and the Member States, URBACT is a European exchange and learning program promoting sustainable urban development. Though not explicitly mentioning urban mobility or urban transport, the thematic objectives of URBACT III for the period 2014-2020, notably include supporting the shift towards a low-carbon economy in all sectors.

In addition to the support provided by the Structural Funds within the context of the Cohesion Policy, financial resources are also available from the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD).

A further analysis of the detailed programming for the period 2007-2013, in particular the National Strategic Reference Frameworks (NSFR) established for each Member States outlining their strategy and the list of operational programmes shows that urban development priorities are equally split between Convergence and Regional Competitiveness and Employment (RCE) operational programmes. The analysis also shows that the urban dimensions of OPs under the Convergence objective are strongly geared towards improving urban infrastructure, including transport while OPs of RCE regions (60 out 115 RCE OPs) tend to concentrate on the promotion of clean and sustainable public transport, focusing on improving access to urban mobility systems, raising the attractiveness of public transport, improving traffic management and traffic planning.

### European Court of Auditors report on EU funded urban transport projects

The European Court of Auditors (ECA) published a report in April 2014 on the effectiveness of EU-supported public urban transport projects. The audit covered 26 public urban transport projects in 11 cities in five Member States. The projects audited focussed on the creation, extension of modernisation of railways (three projects), metros (eight), light metros (four), tram (six), bus (one) as well as four small IT projects relating to operating, information or ticketing systems. All projects were co-financed by the European Regional Development Fund (ERDF) or the Cohesion Fund during past programming periods (2000-2006 or 2007-2013). The ECA conclusions were that in general infrastructures and vehicles for most projects were implemented in line with project specifications even though significant delays affected four urban transport projects and three of them faced significant overruns. While, once completed, almost all projects met users' needs, the Court nonetheless pointed out that two-thirds of the projects were underutilised, comparing planned use at specific dates to actual use, an underutilisation which is mainly due, according to the Court, to weaknesses at project planning stage. The report included concrete recommendations to the Commission to improve the quality and results of future urban transport projects. Regarding underutilisation, the Commission's reply annexed to the report pointed out that the impacts of the economic and financial crisis on mobility needs may have contributed to such underutilisation, impacts hardly predictable at the design and planning phase of projects. A second element is that the crisis has also impacted cities' financial situations and possibly their ability to maintain and subsidise public services. Recalling that projects are early in their lifetime, the Commission also mentioned that measures to stimulate utilisation in the future can still be taken.

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26. European Court of Auditors special report on “Effectiveness of EU-supported public urban transport projects.

27. The system of light metro is an intermediate system lying between tram and metro and which can be seen as a medium-capacity rapid transit system.
For the 2014-2020 programming period, European cities will benefit more from the EU's Regional Policy as urban areas are directly targeted by several of the ERDF’s investment priorities. This implies greater opportunities for urban development, including for sustainable urban mobility. Article 5 of the ERDF Regulation relating to the overall investment priorities in particular specifies that it shall promote low-carbon strategies for all types of territories, in particular for urban areas, including the promotion of **sustainable multimodal urban mobility**. Article 7 of the same Regulation also mentions regarding Sustainable urban development: "*The ERDF shall support, within operational programmes, sustainable urban development through strategies that set out integrated actions to tackle the economic, environmental, climate, demographic and social challenges affecting urban areas, while taking into account the need to promote urban-rural linkages.*" A minimum of 5% of the ERDF in each Member State will be invested in integrated sustainable urban development, with on-the-ground deployment to be decided and directed by urban authorities. Cities are encouraged to use Community Led Local Development in order to secure greater involvement of local stakeholders drawn from businesses, the public sector and civil society.

### 2.4 Research and innovation for urban mobility

Research on urban mobility has long been incorporated into the EU Research Frameworks. The Fifth Framework Programme (1998-2002) with an action called City of Tomorrow already contained provisions relating to sustainable urban development. But it was with the launching of the CIVITAS initiative (see box below) within the context of the Sixth Framework Programme (2002-2006) that innovation on urban mobility was given a boost.

Support to innovation and research in the field of Urban Mobility is provided for under the new Horizon 2020 programme. The Transport Challenge within Horizon 2020 is allocated a budget of €6 339 million for the period 2014-2020. Funding for **resource efficient transport that respects the environment** by making e.g. vehicles cleaner and quieter, by developing smart equipment, infrastructures and services and by improving transport and mobility in urban areas, will be available. Horizon 2020 also aims at **better mobility, less congestion, more safety and security**, in particular by developing new concepts of freight transport and logistics and by reducing accident rates, fatalities and casualties and improving security.

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28 Article 7 (5) mentions however that *'The managing authority shall determine, in consultation with the urban authority, the scope of tasks, to be undertaken by urban authorities, concerning the management of integrated actions for sustainable urban development. The managing authority shall formally record its decision in writing. The managing authority may retain the right to undertake a final verification of eligibility of operations before approval'*.  

29 The EU [Framework Programmes](#) for research and innovation (FP) are the EU’s primary funding mechanism for supporting collaborative, transnational research and development.  

30 Horizon 2020 follows a [challenge-based approach](#) bringing together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities. One of these challenges is dedicated to transport.
The CIVITAS initiative

Launched in 2002 as part of the Sixth Framework Programme, CIVITAS\textsuperscript{31} is an initiative co-financed by the EU addressing cities willing to introduce integrated strategies in the area of sustainable mobility. Defined as a programmes "of cities for cities", the CIVITAS initiative aims to promote a new culture of urban mobility based on integrated planning of all modes and forms of urban transport. Covering 19 cities at its beginning, CIVITAS has expanded considerably to cover over 60 cities. Based on the exchange of knowledge and experience, CIVITAS links cities with common mobility challenges and also provides financial and technical support to local authorities. The themes or building blocks that CIVITAS is exploring include:

- Clean fuels and vehicles. CIVITAS cities test biodiesel, biogas, and compressed natural gas vehicles, as well as hybrid and e-vehicles.
- Collective passenger transport must offer an accessible, fast, comfortable and safe alternative to a private car. CIVITAS cities attempt to maximise its potential.
- The contribution of demand management strategies such as access restrictions, road pricing, parking policies, marketing campaigns and corporate mobility to reducing traffic and pollution.
- Creating a new mobility culture through mobility management and activities such as marketing, communication, education and information campaigns.
- New ways of protecting (safety and security) urban travellers, especially cyclists, pedestrians and other vulnerable groups.
- Promoting car-independent lifestyles through modern information technologies, safe and secure infrastructure, bike rentals, car-pooling, car-sharing and other initiatives.
- Minimising the negative impacts of urban freight. CIVITAS cities promote the use of cleaner freight vehicles and innovative goods distribution.
- Use of transport telematics systems to help passengers make informed choices and make urban transport faster and more efficient.
- Promote SUMP\textsuperscript{s} to contribute to long term mobility planning.

Aiming at "achieving a European transport system that is resource-efficient, environmentally-friendly, safe and seamless for the benefit of citizens", Horizon 2020 contains a whole section devoted to "Smart, Green and Integrated Transport" that covers transport and mobility in urban areas. Actions envisaged in that field are in particular the development and testing of new mobility concepts, transport organisation, logistics and planning solutions; the development of public and non-motorised transport as well as other resource-efficient transport options as a real alternative to the use of private motor vehicles, supported by a greater use of intelligent transport systems.

3 Most recent development: the Urban Mobility Package

3.1 Key elements

In December 2013, the European Commission adopted a Urban Mobility Package whose main element is the Communication\textsuperscript{32} "Together towards competitive and resource-efficient urban mobility" complemented by an annex that sets out the

\textsuperscript{31} The CIVITAS initiative runs until 2016.

\textsuperscript{32} Communication Together towards competitive and resource-efficient urban mobility, COM(2013)913.
concept of sustainable urban mobility plans and four staff working documents focusing respectively on urban logistics, urban access regulations, the deployment of Intelligent Transport Systems (ITS) in urban areas and urban road safety.

With this Urban Mobility Package, the Commission seeks in particular to reinforce EU support measures in the following fields:

- **Sharing experiences, showcasing best practices and fostering cooperation**

  The Commission will in particular set up a European Platform on Sustainable Urban Mobility Plans that will support further the development of the concept and tools needed by local planning authorities, coordinate all relevant Commission-supported activities in the area and stimulate broader exchanges. The Commission will reinforce the role of URBACT (the existing European exchange and learning programme on sustainable urban development) so that for the programming period 2014-2020 URBACT III continues to support exchanges and capacity building between European cities.

  It will keep on supporting the development of an Urban Mobility Scoreboard by identifying harmonised indicators to benchmark and compare urban areas' progresses across the EU.

  The Commission will also set up a Member States' Expert Group on Urban Mobility and Transport to boost exchanges on how national and EU policies on urban mobility and transport can be reinforced and better coordinated.

- **Focusing research and innovation on delivering solutions for urban mobility challenges**

  The Commission intends in particular to launch a CIVITAS 2020 initiative that will allow cities, businesses, academia and other partners to develop and test new approaches for urban mobility and continue to help local partnerships tackling urban and road congestion, reducing the use of conventionally-fuelled vehicles in urban areas, reducing impacts and costs of urban freight, and strengthening the capacity of local authorities to implement sustainable urban mobility plans.

  A second initiative in the field of innovation and covering urban mobility is the Smart Cities and Communities European Innovation Partnership. Launched in 2012, Smart Cities aims at facilitating strategic partnerships between European cities, industry and other parties in order to develop the urban systems and infrastructures of tomorrow and to achieve widespread development of smart city solutions.

  The amount earmarked for urban mobility for 2014 and 2015 under Horizon 2020 is €106.5 million.

- **Providing targeted financial support**

  The EU will continue to support urban transport projects through the European Structural and Investment Funds (ESI). The Communication notably points out that these funds should be more systematically used for the funding of integrated package of measures, "where cities have developed an integrated local plan, such as a Sustainable Urban Mobility Plan, and identified the appropriate actions". It also underlines the importance of considering all size of cities (and not only major and capital cities) for urban mobility investments, underlying that ESI Funds should create opportunities for capacity building, technical assistance and the development of comprehensive and local mobility strategies.
Referring to the Trans-European transport network Policy (TEN-T) and the revised Regulation on TEN-T Guidelines, the Communication recalls that urban nodes are essential for the construction of a comprehensive European transport network. Urban nodes are, indeed, recognised by the TEN-T Guidelines as the starting point or the final destination (last mile) for freight and passengers moving on the Trans-European transport network as well as points of transfer within and between transport modes. The new TEN-T guidelines should provide for the development of the comprehensive network in urban nodes, in accordance with EU aims regarding sustainable urban mobility.

### Committee of the Regions

The Committee of the Regions (CoR) has on several occasions expressed its support for EU intervention in the field of urban mobility. In its 2010 opinion on the Action Plan on Urban Mobility, the Committee urged the Commission to give due consideration to urban mobility, notably through the Structural Funds and cohesion policy, and highlighted the need for more coherence across European policies and initiatives as well as for an integrated approach to urban policies.

In its opinion of 25-26 June 2014 on the Commission's Urban Mobility Package, the CoR welcomed the Commission's commitment to support the SUMP concept and called for the involvement of local and regional-authority representatives in the European Platform on SUMP and the Member States' Expert Group on Urban Mobility and Transport. It welcomed the Commission's proposal regarding urban road safety, logistics and ITS but noted, as far as urban access regulations and road-user charging are concerned, that the principle of subsidiarity would require a decision by local authorities on implementation. The Committee also highlighted the importance of fighting urban sprawl and rethinking the relationship between cities and their surrounding areas.

### 3.2 Specific recommendations

The Urban Mobility Package includes a set of specific recommendations to be taken at different levels and between the public and private sector, recommendations that will be monitored, on the following four fields:

- **Urban logistics**: they are often neglected in urban mobility policy which can be related to the fact that they represent of small share of urban traffic and also because the majority of urban logistics operations are carried out for and by private actors. Urban logistics, however, are essential to ensure that shops and businesses get their stock, equipment is repaired, home deliveries made, buildings supplied and waste removed. The Commission will notably prepare guidance documents.

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34 The revised Regulation in its article 3 (g) defines urban nodes as follows: "urban node' means an urban area where the transport infrastructure of the trans-European transport network, such as ports including passenger terminals, airports, railway stations, logistic platforms and freight terminals located in and around an urban area, is connected with other parts of that infrastructure and with the infrastructure for regional and local traffic".


36 Opinion of the Committee of the Regions on the Urban Mobility Package.

37 According to the relevant Staff Working Document, urban logistics may be defined as the movement of goods, equipment and waste into, out, from within or through an urban area.
providing technical assistance on how to improve urban logistics performance. As for Member States, they are invited to ensure that urban logistics are given proper consideration in their national approaches to urban mobility and in sustainable urban mobility plans.

- **Urban access regulations**: they are increasingly used by cities to regulate road traffic vehicles (e.g. pedestrianised areas or low speed zones). However, there is a lack of understanding on access regulations, their implementation and effectiveness. Very few of the thousands of regulations implemented across Europe have been comprehensively and independently evaluated. Only a few European cities have implemented so far urban road user charging though initial evaluations tend to show that such measures are effective and generate revenue even though their cost-effectiveness compared to other type of access regulations remains to be clarified. In order to promote a more common approach to urban access regulations and to avoid the proliferation of different and incompatible access regulations confusing for users, the Commission will support the exchange of information for users, city planners and experts. It is also inviting Member States to consider conducting a thorough review of the effectiveness and impacts of existing and planned urban access regulation schemes.

- **Intelligent Transport Systems (ITS)**: they can provide concrete solutions for example for traffic and travel operations and management. ITS can contribute to smart and efficient mobility through measures such as seamless travel information and intermodal ticketing or (on board) road safety design. To ensure greater coherence and interoperability of ITS solutions across Europe, the Commission has already set up an Expert Group on ITS for urban areas which developed guidelines for the deployment of ITS in urban areas. Within the context of this new Urban Mobility Package, the Commission encourages Member States to use these guidelines and will take forward work on supplementing the existing legislation on access to traffic and travel data.

- **Urban road safety**: the Commission will continue to gather and disseminate good practices in the area and analyse the measures for reducing the number of serious road traffic injuries in urban areas (each year, some 11 000 people are killed in road traffic crashes in EU urban areas and 37% of these are pedestrians). Member States are invited to consider ensuring that Sustainable Urban Mobility Plans take into account road safety, looking at the different measures such as safe urban infrastructure for vulnerable users or road safety education.

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38 According to the relevant Staff Working Document, urban access regulations can be defined as 'measures to regulate vehicular access to urban infrastructures'. Urban access regulations such as pedestrian areas, loading and unloading zones, low speed zones, congestion charges, low emission zones (LEZ) are strategies used throughout European cities to prioritise access for certain vehicles or certain users. They can apply to specific points (e.g. bridges, tunnels), certain road lanes (e.g. bus lanes), different cars (e.g. cars, delivery vehicles) or types of users (e.g. residents, emergency vehicles). They may apply permanently or only for certain days or times. Access regulations may also charge for access (e.g. congestion toll or parking fees), charges that may be fixed or related to usage.

39 According a 2008 Communication on the subject, Intelligent Transport Systems (ITS) mean "applying Information and Communication Technologies (ICT) to transport. These applications are being developed for different transport modes and for interaction between them (including interchange hubs)". In road transport, examples of Intelligent Transport Systems applications can include urban and motorway traffic management and control systems, electronic toll collection and route navigation.
On top of the concrete measures referred to above, the Commission seeks with this Urban Mobility Package to intensify its support in the areas where the EU adds value while encouraging Member States to create the right framework conditions for local authorities to develop and implement comprehensive and integrated urban mobility strategies. To further ease the exchange between the Commission and Member States in that field, the EC also proposes setting up a Member States Expert Group on Urban Mobility.

3.3 European Parliament views on urban mobility

The EP has on several occasions highlighted its support for initiatives in the field of urban mobility. In its resolution of 9 July 2008 it welcomed the Commission Green Paper "Towards a new culture of urban mobility" and pointed out that the EU should define an overall strategy on urban mobility conducive to a more rational use of private cars and a shift towards sustainable transport modes. Highlighting the need to have a clear delineation of the EU's role in terms of urban mobility as well as the necessity to avoid limiting the flexibility required at local level to solve mobility problems, the resolution recognised that concerted action on urban mobility within the EU could bring clear added value. As part of the actions to be taken at European level, the resolution already called on the Commission to look at how to link Sustainable Urban Mobility Plans to EU-co-financing of transport projects in cities of more than 100 000 inhabitants and to the EU legislation or activity in the field of road safety, CO2, local gas or noise emissions. It also called for an evaluation of the external costs of the different modes of transport as well as an assessment of the possibility to internalise them. The resolution furthermore pointed out the need for dissemination and an exchange of best practices in a wide range of areas for instance concerning the use of integrated ticketing and billing systems, the co-modal use of different transport modes or measures aiming at promoting virtual mobility such as e-learning, e-banking teleshopping etc. It also called for European rules or guidance touching upon the mobility of people with disability, the elderly, people with children, and the least affluent. This resolution contained moreover a dedicated section on individual responsibility highlighting the need to encourage citizens' to assess their behaviour as road users, pointing out that almost every individual could change their habits regarding car use and the use of alternative means of transport such as walking, cycling and public transport. While underscoring the importance of education and information campaigns in this regard, the resolution called for alternative mobility options to be provided by the relevant authorities (national, regional or local).

In its resolution of 23 April 2009, the EP underlined the importance of accelerating research and innovation in the field of urban mobility, proposed to upgrade statistics on urban mobility (notably data on traffic, statistics on air and noise pollution, etc.).

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40 European Parliament resolution of 9 July 2008 on "Towards a new culture of urban mobility".

41 According a recent report by Ricardo AEA commissioned by the European Commission DG MOVE external costs appear when side effects of a certain activity impose a cost upon society. The external costs of transport, contrary to the benefits, are generally not borne by transport users and hence not reflected in their transport decision.

The internalisation of these external costs implies integrating these side effects in the decision making process of transport users. It can be achieved directly through regulation, or indirectly through providing the right incentives to transport users, with market-based instruments such as taxes, charges, emission trading, etc.

42 European Parliament resolution of 23 April 2009 on an action plan on urban mobility.
accidents and congestion e.g.). It also proposed that the financing from the EU in the area of urban transport be made conditional on the existence of integrated urban mobility plans. The EP resolution\(^{43}\) of 15 December 2011 in particular requested that by 2015, support for urban mobility projects is made conditional on the submission by local authorities of sustainable mobility plans contributing to a reduction in traffic volumes, accidents, atmospheric pollution and noise, complying with the standards and targets of European transport policy, and fitting in with the needs of surrounding towns and regions. It also proposed an exchange of best practices regarding innovation and research into sustainable concepts for urban mobility.

4 Outlook

As pointed out by the 2007 Green Paper "Towards a new culture for urban mobility", there is no single solution to reduce congestion. Urban mobility issues cannot be merely dealt with by focusing only on developing or improving transport infrastructures and services, as the issues concerned are complex and cover several interwoven dimensions (environmental, economic, social and societal dimensions). They are also very much tied with global issues such as demographic changes, urbanisation, global warming, scarce energy sources and increasing energy prices. A further difficulty stems from the fact that urban mobility challenges are very much tied with the main features of our current economy and society, characterised by a hyper-mobility of people, goods and information. According to some authors\(^{44}\), such a mobility of goods and people has had a major impact on the structure and organisation of most metropolitan areas in the world.

Green solutions have therefore to be devised in order to reduce the environmental impact of transport in urban areas as well as to reduce the transport emissions related to urban traffic.

The United Nations goes along the same lines when it talks about shifting away from a 'transport bias' in urban mobility planning towards a focus on accessibility and says that in order to be more sustainable, cities should be more compact, mixed land uses should be promoted as well as sustainable modes of mobility such as public transport or non-motorised transport.

Improving urban mobility is thus about changing the mobility culture of planners, decision-makers and users, with the latter being placed at the centre of mobility strategies. Users' requirements for safe, reliable, accessible mobility needs are still too often met by private cars; the challenge therefore notably consists in providing effective alternatives to the car. Meeting mobility requirements for both people and goods calls for approaches on transport planning that need to be much more functionally and spatially coordinated than in the past and must employ sustainable mobility solutions. It is also about research and innovation, and developing smart and innovative solutions for urban transport systems.

If dealing with urban mobility is a priority for the EU, it is becoming increasingly important in other regions of the world when considering trends in terms of

\(^{43}\) European Parliament resolution of 15 December 2011 on the Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system.

Urbanisation, car ownership, and provision of public transport. The pace of urbanisation will in the future mostly affect developing countries. While developed countries will continue to be more urbanised than other areas of the world (80% compared to 55% in 2030), it is anticipated that the urban population in the developing world will increase from 2.5 billion in 2010 to 3.9 billion in 2030. By that date, more than 80% of the world's urban population will be living in Asia, Africa and Latin America. Forecasts in terms of the global fleet of vehicles also show that it should increase from 800 million to between 2 and 3 billion by 2050 as the middle classes in developing countries become richer and more dependent on private cars. Irrespective of concerns over energy supplies, climate change or congestion costs, public transport's modal share of trips is expected to decline in all areas of the world over the coming decade.

A closer examination of trends even suggests a stronger concentration in the process of urbanisation, with a shift to a world of cities. While the number of megacities of more than 10 million inhabitants is projected to increase from 16 in 2009 to 29 in 2025 and the centre of gravity of the urban world to sway towards the east and south over the next 15 years; it is also expected that medium-sized cities (of between 500,000 and 2 million inhabitants) will grow the most in the future.

Tackling urban mobility will thus increasingly become a global issue – for its consequences on the global economy and environment and the increasing number of cities in the world affected by congestion – as well as a local issue, owing to the growing economic and demographic weight of cities. The latter is also likely to have political implications as cities' management and powers will have to adapt, to cope with the challenges stemming from urbanisation.
5 Main references


Study on the financing needs in the area of sustainable urban mobility / Booz & Company, carried out for the European Commission, DG Mobility and Transport, 2012.


UE: La politique des transports - Vers une mobilité durable / La documentation française, 2009.
Urban mobility is confronted by many challenges as urbanisation and a high dependence on cars have led to congestion in cities. This, in turn, has negative implications in terms of delays, pollution and costs which are likely to further increase over the next decades with increasing traffic levels. Reducing congestion in urban areas has therefore become a growing concern for policy makers.

The present document aims at providing a comprehensive view of the issues at stake, examining firstly in the background part the various factors affecting urban mobility and in the second part providing an overview of the measures taken at EU level to tackle the issue. The final part of the document presents the recently adopted urban mobility package.