



EMTA WORKSHOP OF 21st OCTOBER 2002 IN FRANKFURT AM MAIN

# EMTA Workshop

EUROPEAN METROPOLITAN TRANSPORT AUTHORITIES

## ► Transport and land use policies: what lessons for public transport authorities?

### SUMMARY

**I**n the association of European Metropolitan Transport Authorities (EMTA), which gathers nearly 30 authorities responsible for the organisation and financing of public transport in the main European cities, organised a seminar on October 21st 2002 on the subject of the interaction between transport and land use policies. This seminar took place in Frankfurt on the invitation of the Rhein-Main Verkehrsverbund (RMV), the authority responsible for the organisation and coordination of public transport in the Frankfurt-Rhein-Main region.

The spontaneous trend for urban development observed over the last few decades in most European countries led to an expansion of sparsely populated peri-urban territories, coupled with the concentration of shopping and leisure centres on the outskirts of cities, in areas designed to be mainly accessible by car. In this situation, the rapid increase in mobility, and particularly in individual mobility by car, to the detriment of alternative modes of transport, which, however, take up less space – extremely precious in urban areas – and bring less nuisances to society, is a logical evolution.

This systematic phenomenon, labelled by certain experts as “generalised car dependency” renders the usual policies of modal rebalancing obsolete, those which content themselves with attacking the symptoms but not the real causes of this evolution, which have serious consequences on quality of life.

## The need for integrated policies to achieve modal rebalancing

As numerous research projects on the subject of interactions between land use policies and mobility have shown (European projects COST 332, TRANSLAND and TRANSPLUS notably), only an integrated policy for reduction in car dependency is likely to reverse current trends.

The new paradigm of an integrated policy for land use planning and urban mobility management relates to:

- densification of city centres and areas well served by public transport (poly-nuclear expansion);
- mixing of the functions present in the town centres (housing, jobs, trades and leisure pursuits);
- regulation of the use of the individual car, in order to reduce congestion and nuisances generated by its excessive use, through the limitation of the capacities of networks and parking;
- qualitative and quantitative improvement of public transport services and promotion of non-motorised modes of transport (walking and cycling mainly), which often have significant potential for growth;
- recourse to a large range of measures, of both “hard” (physical constructions, regulations) and “soft” (communication, awareness) measures.

The concern for integration and coordination of policies must be considered in all the different stages of the processes of town development and management, from the planning of urban development projects and the construction of new infrastructures, to the daily management of urban areas.

This coordination is easier where authorities, themselves integrated, are responsible for land use planning and the mobility policies of the metropolitan area at the same time. So in Helsinki the Metropolitan Area Council (YTV) has developed the structuring concept of “public transport town”, which comprises many concrete policies, such as the densification of areas that are well served by public transport, and the proximate location of collective transport networks for public traffic generator systems. This integrated policy has enabled the market

introduction

share of public transport over the whole agglomeration to be maintained at a constant level since 1995 (39% of motorised travel), whereas the total number of trips increased by over 10% over the same period.

In the same way, in **Copenhagen**, an integrated authority responsible for the management of urban problems ("Greater Copenhagen Authority") oversees urban planning and mobility issues. The **development plan in the form of fingers** ("Finger Plan"), which dates from immediately after the war, continues to be the basis for urban planning in the Danish capital, even if the length of the fingers has grown since its origin. This approach, coupled with a policy of densification of territories located within a radius of 1km around stations, essentially in offices, enables an increased market share to be retained for public transport and alternative modes of transport, in spite of a rapid increase in the amount of cars owned by households (313 vehicles for 1,000 inhabitants in 2001). The bicycle is thus the main mode of transport for people living between 1 and 1.5km from stations.

Some large **integrated development projects** show that the supremacy of the car is not inevitable. The business



▲ *The finger plan in Copenhagen: 50 years ago and now.*

and commercial area of **La Défense** in Paris, which from the beginning was developed around a high level of service by public transport (regional trains, metro, trams and buses) and with a limitation to the car parking capacities, is today benefiting from the fruits of this policy implemented over more than three decades. 85% of the 120,000 people working at La Défense use public transport for their trips to and from work. In addition, only 17% of people going to La Défense to do their shopping use their car. Such results should inspire us more in the construction of shopping and business centres that are built today on the outskirts of numerous towns, and which are often only served by car. As the old



▲ *La Défense in Paris.*

proverb says, it is more difficult to repair erroneous choices than to act preventatively.

## What tools are needed for the implementation of policies?

**W**hile co-ordination of urban planning and transport networks is an essential element to achieve a situation which encourages the use of public transport, this is only a starting point. How many plans and draft guidelines that appear perfect on paper are never implemented, or have been diverted so far from their original spirit that the results have been precisely the opposite of the objectives which were intended!

This acknowledgement highlights two key factors for success: **firstly, the political will for its implementation, and secondly the existence of suitable tools.** It is not up to us to comment on the lack of conviction observed among numerous local managers who, blinded by prejudices and under-estimating the needs of their fellow citizens in the matter of improvement in quality of life, balk at committing themselves on these matters. It should be noted however that the constitutional context, notably with regard to the relevance of the organisation and the tasks of local councils involved in the implementation of urbanism plans, may have a significant impact on the coherence of the policies practised. In addition, measures for comparison of policies and the results achieved at a European level may contribute in the acceleration of public awareness.

Incentive policies for the location of transport generators close to public transport infrastructures, the densification of zones that are well served, and the limitation of parking capacities, constitute powerful levers to achieve these objectives.

The **location of traffic generators in sites benefiting from good public transport services** is a common-sense policy which has been the object of numerous experiences in the **Netherlands**. The **ABC policy** for location of equipment, adopted in 1990 as part of the urban development strategy called "Vinex", which proposed as its model a compact town, the reduction in the use of car and the protection of natural spaces, constitutes an interesting attempt in this direction. The ABC policy aimed to reduce the use of car for travel to and from work by locating the right business in the right place, which meets the accessibility needs of different types of company with the level of accessibility of various possible places. In spite of

tools



positive results, this policy has also shown its limits: too controlling and bureaucratic, on the one hand, and still not guaranteeing a good public transport service on the other.

In addition to the examples already noted in the Scandinavian countries, the German transport authorities are becoming more and more in favour of the **densification of territories close to the main public transport centres**. In Frankfurt, the regional transport authority, RMV, is playing a significant role in the urban development of areas around railway stations. Since the railway reform of 1994, the national railway company, DB, launched a policy of development of its significant property holdings, which are often located in the centre of built-up areas and present numerous advantages in terms of urban development. In this context, RMV adopted a central guideline for the development of stations in 1996, which also concerned the internal fitting of these important exchange centres, as well as the densification of their surroundings. The paradigm of these new developments rests on a sustainable density, a mixture of functions and the creation of quality public spaces, as shown in the European district development project (Europaviertel) over 104 ha in Frankfurt. RMV coordinates the driving of the projects and provides finance for the completion of planning studies.

Studies carried out periodically in **Paris** show the **strong correlation between the existence of a carpark at workplace and the use of the car by employees**. This observation enabled the parking variable to be integrated into the urban development plan approved in 2000 for a period of five years. The proposed policy contains measures with regard to the parking provision (reduction in parking capacity at the workplace by introducing maximum standards for premises that are well served by public transport, and promotion of park-and-ride set-ups for the move towards common transport) and others on the demand side (company mobility plans).



▲ Relationship between car use and workplace parking possibilities in Paris Ile-de-France.

The **taxation of parking spaces at the workplace** in order to dissuade the use of the car for travel to and from work is a simple idea, but has however proved difficult to implement, as illustrated in this example from **Great Britain**. One such measure, promoted by the British government as part of the road toll systems specified in the transport law of 2000 (Transport Act 2000), firstly aroused significant interest in local authorities who saw it as a tool to reduce road traffic and generate new resources for the finance of transport or environmental

protection projects at the same time. However, very few towns have adopted this measure so far because its true impact seems difficult to determine. Some experts feel that it could have led to effects which were the opposite of the desired objectives.

## funding

### Land use and funding of public transport networks

The co-ordination between land use and mobility projects must also be considered in a financial perspective. As numerous scientific works have shown, the existence of effective public transport systems contributes to the rise in value of land holdings and property in well-served urban areas. There is therefore significant potential for recovery of these additional values by authorities that invest in public transport, according to the “payer-beneficiary” principle.

At a time where the question of financing of the new infrastructures necessary to increase the attractiveness of public transport is particularly acute, this method would certainly merit being explored in a more in-depth manner. Private companies who developed the railways of the 19<sup>th</sup> century were well aware of this virtuous correlation and their investments in new railway infrastructures were often made profitable in part by urban development projects close to the stations. This type of approach, which internalises the positive external effects of public transport infrastructures, is also currently used in Japan, worldwide leader in the matter of density of public transport infrastructures. It is to be hoped that the reflections currently being led in the United Kingdom and Ireland on this issue will pave the way to a generalisation of these practices in Europe.

The **European Investment Bank**, which has been granting loans for urban transport infrastructure projects since 1987, gives particular importance to the assessment of the **socio-economic profitability of the projects** which are submitted to it, and to the coherence with urban development projects carried out simultaneously. Indeed, the Bank oversees that these transport infrastructure projects contribute to increase the economic efficiency of towns. An infrastructure is all the more easily profitable if its frequentation is high, which is why the size of increased urban densities close to stations and the integration of various public transport networks so as to offer citizens with quality services that are easy to use is so important. The use of direct beneficiaries, notably landowners, for the financing of transport infrastructures is pertinent when they can be precisely identified.

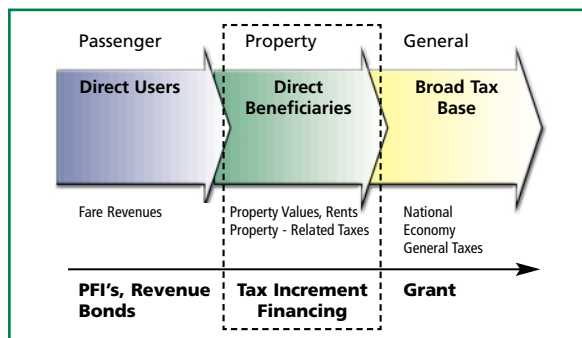
A study was carried out in 2002 in the **Paris-Ile-de-France** region to determine the possible impact of the presence of transport infrastructures on property and land values. This analysis, which used the values of transactions recorded by solicitors, was based on a hedonic methodology in that it assessed the different attributes of a property. Initial results obtained show that, all other things being equal, there is a strong correlation between the presence of public transport infrastructures such as trams, metro and regional railway services (RER) and property values. The distance separating the property and the public transport station has a significant impact on



this correlation: the closer a property is to the public transport station, the more it is worth. Conversely, the proximity of a major road infrastructure has a negative impact on property prices with more than 50% of the reduction in value being due to noise nuisance. This effect, in addition, is felt over a much larger area than the public transport infrastructures.

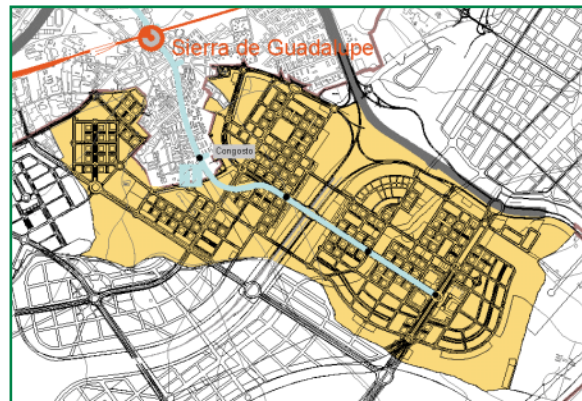
In Ireland, the new law on land use (Planning and Development Act 2000) gives public authorities legal tools to recover part of the cost of public transport infrastructures by means of “development contributions” (section 49 of the law). This measure is written as part of the policy for densification of sectors well served by public transport systems and the removal of private profits generated by the opportunity of the completion of transport infrastructures. It has the objective of internalising the positive external effects of public transports, and rests on a profit-sharing approach (“win-win”) between the community and the constructor. Contributions, which must respect certain constitutional principles such as equity, transparency, predictability and simplicity, may only be taken for territories where a development scheme has been established, which must clearly determine the amount each participant will be responsible for. These contributions only concern new development projects, and not existing buildings.

The expected increase in income from taxes (“Tax increment financing”) is a tool frequently used in the United States for the financing of infrastructure projects (metro lines in Chicago for example). The underlying principle is that the users of an infrastructure are not the sole beneficiaries of this infrastructure, and that it must thus be possible to request contributions from indirect beneficiaries, notably land owners, for the financing of



▲ Tax Increment Financing.

the infrastructures concerned. This mechanism was used for the first time in California in the 1950's. During the last five years more than 10 billion euros have been contributed to the USA as part of these measures, which take the form of bonds issued by public authorities. Tax increment financing rests indeed on an expectation of increase in land values, and thus the income from taxes from the communities, and consists of investing the expected additional tax income in the completion of the infrastructures necessary to the rise in value of the land. The measure, which is applied to territories with limited space, doesn't involve nominal rates of local taxes to be increased since the council then reimburses the capital based on the additional tax income it collects.



▲ Example of land and railway development in Madrid.

In Madrid, several suburban railway stations and facilities such as park-and-rides (P&R) are financed as part of new development projects (La Garena, Soto del Henares) which directly benefit from the existence of these public transport infrastructures. This type of mechanism is also used for the building of metro lines. Thus, the extension to metro line n°1 will be financed at a proportion of 37% by property projects.

The seminar organised by EMTA on the subject of the relationship between land use and transport policies highlighted several fundamental lessons for the viability of urban areas:

- the integration of land use policies and mobility management policies is a necessary condition for the sustainable development of urban areas. In the same way as the European town was a pedestrian town up until the 20<sup>th</sup> century, the town of tomorrow must be designed as a public transport town (“public transport oriented development”);
- public authorities must pursue objectives that are consistent and compatible with each other. The densification of territories that are well served by public transport systems and the location of traffic generator equipments in these same well served territories must be at the heart of urban construction projects;
- public transport systems offer a potentially high socio-economic profitability, and they contribute to increased urban economic efficiency. The policies implemented must thus aim to ensure increased frequentation as a guarantee of this overall efficiency;
- increases in the value of land constitute a potential source of finance for transport infrastructure projects, which at the moment is underused. Various mechanisms exist already however (contribution of developers, tax increment financing, purchase and then resale of land by the public authorities), which only need to be implemented more often.

We are hoping that these promising perspectives can be the object of deeper reflection and can be put quickly into action. EMTA also intends to pursue its works on these subjects, notably as part of an internal working group which is going to discuss the question of finance of transport infrastructure projects by capture of the increase in land values.