



## CYCLING AND URBAN EFFICIENCY

This briefing outlines the following topic areas:

- The current situation
- Goals to be achieved
- The benefits of promoting cycling
- 1. Quality of life
- 2. City vitality and prosperity
- A sustainable society

### Current Situation:

Over 75% of the European Union's population lives in an urban area (European Commission, 2003). Urban transport systems therefore, are vital in ensuring mobility and accessibility for this population. However, such systems have brought negative side-effects. Cities are experiencing problems related to urban sprawl, congestion, air and noise pollution, poor health and safety and road accidents, with an overall loss of quality of life and efficiency. Instead of "serving them", traffic is "consuming" cities (UITP, 1996). This is only likely to worsen. Between 1995 and 2030, total kilometres travelled in EU urban areas are expected to increase by 40% (European Commission, 2003). Current levels and such projected growth of car use, are unsustainable and desirable (Alayo *et al.*, 1998). Without change, they will have dire consequences. A good transport system is a key element of an efficient and successful economy. Therefore, a poor, inefficient system hinders urban success (I-ce, 2000). The current transport system is even counterproductive – "too much traffic kills traffic" (EEA, 2003).

- The urban environment is threatened by escalating levels of motor traffic and the associated problems of congestion, noise, air pollution, road safety and ultimately quality of life. (Vlasveld, 1993).
- Whilst cycling offers accessibility like motorised transport, cycling also protects quality of life due to the lack of the many of the negative side-effects of motorised transport, for example by being space-efficient. Urban transport systems are characterised by competition for space. The car is the least space-efficient mode of transport yet is currently given preferential treatment.
- Neighbourhoods that are purported to foster high levels of cyclist and pedestrian activity are characterised by high population density, a good mixture of land use, high connectivity, and adequate design for walking and cycling. Proximity and connectivity are considered the main factors that influence the choice to use motorised or non-motorised transport (Saelens, Sallis and Frank, 2003).



Low density neighbourhoods are more likely to contribute to motorised transport and social isolation (Jackson, 2002), consequently excessive traffic can sever communities and make sustainable modes of transport, such as walking and cycling, more difficult to use.

**There is a need to:**

Consider new ways to plan urban transport, which will allow cities to develop in a more environmentally and economically sustainable manner, whilst retaining mobility and accessibility.

- Recognise that attempts to reduce car traffic will require changes in patterns of consumption, expectations and lifestyles and a shift in the balance between travel by car and travel by environmentally-friendly, sustainable modes (UITP, 1996).
- Recognise that problems cannot be solved by simply increasing transport supply, but instead must focus on demand management, focusing on the need to reduce car use and providing viable alternatives such as cycling and walking.
- Recognise that transport issues are inextricably linked to the urban form of cities and land-use policies. The dispersed nature of cities has tended to create an urban structure that is reliant on the car and that discourages alternative transport modes (UITP, 1996). The car currently dominates, representing about 75% of all kilometres travelled in EU conurbations. (EC, 2003).
- Focus on the creation of an urban form that is biased towards more sustainable modes such as walking and cycling. This could involve developing transport and land use policies together in a way that promotes land use favouring shorter trips.
- Restrain transport growth and foster increased market share of non-motorised modes of transport. This can be achieved through policy tools such as fair and efficient pricing mechanisms, more targeted investments and spatial planning (EEA, 2003).

Cities are suffering from the major social and environmental consequences of car use. Trips undertaken through the use of sustainable modes of transport such as walking or cycling could replace many of those trips currently made by car, however such 'green' modes are the ones most affected by the increase in motorised traffic. The successful use and promotion of sustainable modes are hindered by increases in danger and trip length, poor facilities, pollution and noise. To prevent against the further destruction of cities the "sustainability of urban life" must be fostered with an increase and acceptance of non-polluting modes of transport (Tolley, 1990):



### **Benefits of Promoting Cycling:**

- Cycling can:
  - Improve urban traffic fluidity;
  - Reduce traffic jams and congestion and hence increase mobility and accessibility;
  - Reduce use of space, allowing use of the space for more productive means;
  - Improve quality of life and attractiveness of urban areas (EC, 1999).

In addition the following benefits can be realised:

### **Quality of life:**

- There is a need to create a better quality of life in cities through the adoption of a lasting and sustainable environment. Vlasveld (1993) suggests that in order to do this, urban strategy needs to be designed to reduce cars and as a result provide appropriate land use and traffic safety.
- In urban areas there is a visible need to ensure the existence of a transport system that efficiently provides for the mobility and accessibility of people and goods in an ecologically and economically sustainable manner, and hence affording a high quality of life (Richardson *et al.*, 1993, EC, 2003). Cycling can play a key role in this; with evidence suggesting that European cities with higher levels of cycling (as well as walking and public transport use) emerge clearly as attractive, efficient, prosperous centres with a higher quality of life (Bicycle Association, 1995). European cities with high levels of cycling, that are rich and well-functioning, show that cycling can play an important role without detriment to functionality and efficiency. In Amsterdam 20% of all journeys are made by bicycle, similarly in Cambridge the figure is 27% (EC, 1999).

### **City vitality and prosperity:**

- The city centre is the core of life for many cities, generating the most money and reflecting their whole image and thus impacting upon the economic significance of the city in question. The rise in car use, in many European cities, has culminated in polluted, unattractive and congested city centres which are difficult to access and unpleasant to be in (I-ce, 2000).
- This situation can cause damage to the city's economy as it often leads to crime and degeneration. Many cities have tried to react against this phenomenon through the reclamation of space (in the form of pedestrian areas, bicycle facilities and public transport) from the car (I-ce, 2000). The VNG (Association of Dutch Municipalities) (I-ce, 2000), highlight the example of Copenhagen whereby between 1962 and 1996, 95,000m<sup>2</sup> of pedestrian areas were constructed, public transport improved and the number of parking spaces was reduced from 3100 to 2000 in conjunction with programme of introducing plans, facilities and parking for bicycles.



This resulted in a shift to 28% of journeys in Copenhagen being made by bicycle. Similarly, Utrecht is highlighted as it experienced improvements to city centre business after through traffic was excluded from the city centre.

- Public space has to be transformed into real public domain. This will enhance social integration and social safety.
- Vitality needs to be brought back into city centres; the resulting improvements to quality of life and accessibility can improve the climate for attracting new economic investment and promoting the viability of cycling and walking. This is reinforced by the UITP Secretary General (2003), stating that “cities without a sustainable transport system will be less able to compete economically over the long term”. It should also be noted that for high density cities and where the majority of journeys are made by foot, bicycle or public transport, the least amount of financial resources are spent on the mobility of their inhabitants (UITP, Secretary General, 2003).
- A good physical environment is a good economic one. It is important to promote the role of cycling and walking in the renovation of cities, working towards the creation of pleasant city environments (Roberts cited in Tolley, 1990)

### **A Sustainable Society:**

The ultimate goal to work towards is that of a “sustainable society”, whereby all areas of society, from residential areas to the city centre, can function without the private car. This can be achieved through urban design (reinforced by an urban strategy including transport, environment and parking policies etc.) placing limitations upon the mobility of the car and thus improving quality of life, road safety, air pollution and noise (Vlasveld, 1993).

A city must be vibrant – a thriving urban environment, resident friendly and with the redesign of urban roads to encourage more sustainable modes of transport and other urban activities such as living, shopping, working and cultural and social services. Cyclists, pedestrians and public transport need freedom, accessibility and protection for movement in order to achieve optimal activity and mobility in urban areas (Vlasveld, 1993).

### **Other Relevant Briefings:**

Cycling and Planning

Cycling and Accessibility and Mobility



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