Promotion of Transport Walking and Cycling in Europe:
Strategy Directions

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PROMOTION OF TRANSPORT WALKING AND CYCLING IN EUROPE: Strategy Directions

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Executive summary

1

This document is a follow-up of the European Charter on Transport, Environment and Health put forward by WHO Europe and the European Commission in 1999. The Charter states, based on scientific evidence, that physically active forms of transport, such as walking and cycling, offer significant health gains through the reduction of the ill effects of motorised transport and the utilisation of the health benefits of increased physical activity, and that strategies to design and engineer a modal shift from motorised to physically active transport should be effectively pursued.

2

The European Network for the Promotion of Health-Enhancing Physical Activity, as one of the European Commission´s Health Promotion Networks, has taken the task of furthering the Charter´s principles into strategic directions for the promotion of physically active transport. Thus the purpose of this document is to identify strategic directions that the member states can use in defining their own strategies and actions for the national promotion of transport walking and cycling.

3

The nature of transport walking and cycling in terms of frequency, duration and intensity suggests that, in principle, such activity can contribute significantly to people´s health-enhancing physical activity. On the other hand, the current practices of such activities are sufficient for health gains in only a few EU countries, and very minimal in most, and in particular in the southern Member States. Furthermore, the trends in physically active transport indicate a rather dramatic decline over the past few decades.

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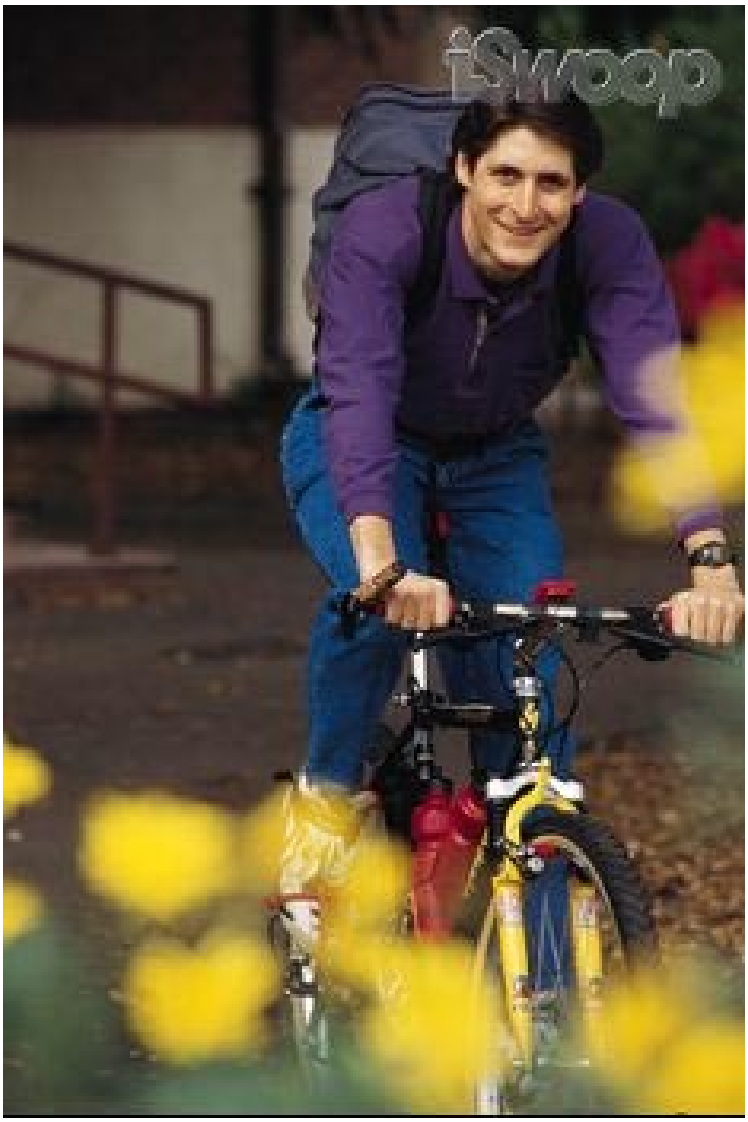
Knowledge of the health potential of active transport, factors influencing the choice of the transport mode and attitudes among many European populations, as well as increasing experiences of local, regional and even some national promotional efforts, suggest that physically active transport can be substantially increased by appropriate policies, strategies and actions. Therefore, the development of target-oriented national strategies is justified.



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A major issue affecting such development is the overwhelming and increasing role of car culture in the transport scene. The car is the first choice of transport for many people and for many reasons. This culture sets many obstacles for the promotion of walking and cycling. Their social status is low as compared to driving a car, and the physical environment is often non-conducive, if not hostile, for walking and cycling. These obstacles need to be overcome in order to make real progress towards more active transport.

6

One key strategic objective in the promotion of physically active transport is to make walking and cycling contribute towards sustainable transport. Together with public transport it constitutes an essential element for energy-efficient, low resource-consuming means of transport. It also contributes to the reduction of congestion and pollution, the enhancement of the local environment, the improvement of quality of life, increased accessibility, injury prevention and social equity. Urban design, land use planning and traffic planning are critical in ensuring an environment conducive to sustainable transport.

7

Another fundamental strategic objective is to achieve a modal shift from car driving to walking and cycling. A substantial shift requires reduction in car dependence and acceptance of user-pays-the-cost policy. A reduction in the need to travel by car can be effectively achieved by proper urban design and land use planning for short and accessible connections to trip generator locations, and by comprehensive public transport with effective linkage to walking and cycling.

8

Effective strategy includes well-defined targets. It is advisable to set them in quantitative, measurable terms that correspond to political will and available conditions. Headline targets can include defined increases in the proportion of walking and cycling trips of all journeys within a given time period. Supplementary targets may include quantitative increases in walking and cycling according to journey distances, journey purposes, infrastructure, facilities and promotion.

9

Comprehensive strategic planning and implementation requires active collaboration and partnership between several parties and their consensus on key issues and roles. The main actors are the health, education, sports, transport and land use authorities. Other important collaborators include the traffic safety authorities, transport operators, the health care industry, the cycle industry as well as various voluntary and consumer organisations promoting exercise, sports, recreational activities and sustainable transport.

10

Creating a pro-walking and cycling culture is one of two main action areas for implementing the defined strategies and objectives. To obtain a significant level of growth in walking and cycling requires an acceptance of walking and cycling as desirable transport modes among the public, professionals and the transport providers. Well-planned communication programmes with clearly identified messages, target groups and delivery channels, incentives and regulatory and legal measures are important means in establishing such a culture.

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Promoting walking and cycling without the provision of proper environment, conditions and facilities may turn futile. Effective interventions include land use and transport planning, traffic calming and speed reduction, highway design and transport engineering with foot and cycle paths and networks, linkage of public transport with walking and cycling, cycle parking, traffic signals and signs, road lighting and other conditions and vehicle design. A comprehensive walking and cycling audit ensures the consideration of the needs of pedestrians and cyclists in all relevant development schemes.

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In order to develop and maintain pro-walking and cycling infrastructure, considerable funding from national and local transport authorities is required. A fixed proportion of their total annual budget for the infrastructure would ensure the realisation of the set strategies and targets. Further funding can be obtained from other collaborators through mutual ownership of the strategic plan.

13

Persistent advocacy and lobbying by the principal acting parties will ensure the necessary collaboration, partnership and ownership for effective networking. Political sensitivity, understanding of media power, broad cultural penetration and evidence support are important elements in this work.

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It is imperative to integrate monitoring and evaluation in the walking and cycling strategy. They provide the necessary evidence to assess the efficacy, cost-effectiveness and feasibility of the adopted strategies and actions.

Foreword

Our health is a product of many factors. Some we can influence, like our behaviour, and some we cannot, like our genetic make-up. The environment is a major determinant of health. It belongs, at least partly, to those factors that are influenced by us. Unfortunately, the way we have allowed our environment to develop is not always positive for our health. All Europeans, and especially the urban dwellers, experience this every day: air pollution, noise, congestion, accidents – mostly produced by the traffic.

We can make a change. Instead of driving a car, we can walk or ride a bike. If enough of us break the old habit, the air will get cleaner, noise and congestion will diminish, and fewer accidents will happen, not immediately, but inevitably in the long run. And using our own engine by walking and cycling enhances our health. It is health promotion at its best.

In many European cities, fine practical measures have demonstrated that this can be done with simple, inexpensive and friendly measures. Moreover, some far-sighted countries are already implementing this health potential in their national health policies. This example of good practice should be widely disseminated and put into practice Europe-wide. There is assistance available for taking the first step in this direction. The European Network for the Promotion of Health-Enhancing Physical Activity, one of the European Commissions seven health promotion networks, has taken the promotion of transport walking and cycling as one of its top priorities. As a result of this work, the present guidebook in your hand provides strategic directions for the European countries to develop country-wide strategies to promote public health by increasing transport walking and cycling. The guidelines build on the encouraging and increasing local, regional and national experiences gained in several countries. They are intended to stimulate national action in the right direction, rather than suggesting ready-made recipes.

I hope that this initiative will find fertile ground to take forward the development in this important field – important for health and important for the environment – in whole Europe. It would certainly be fully in line with the health promotion strategies of the European Commission.

Matti Rajala
Head of Unit
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1. CONTEXT

The CHARTER ON TRANSPORT, ENVIRONMENT AND HEALTH (WHO Europe 1999), approved by the Ministers and representatives of the European Member States of WHO and members of the European Commission (EU) responsible for transport, environment and health in London, 16-18 June 1999, prioritises the following health-related issues linked with transport:

Links between transport and health

- traffic accidents are a major cause of death and serious injury;
- road transport is a major contributor to human exposure to air pollution with a link to respiratory and cardiovascular diseases;
- people are exposed to increasing levels of traffic noise (e.g. loss of sleep);
- physically active forms of transport offer significant positive health effects;
- heavy road traffic can divide communities and reduce social support;
- vulnerable groups are affected more by traffic – particularly people with disabilities, older people, the socially excluded, children and young people, people living/working in areas of high air pollution and noise.

The Charter identifies the key principles by which transport and health can be unified, broad objectives for integrated policies and an action plan for member states. It is a commitment by the member states to make transport sustainable to health and the environment. One of the

key elements in the proposed action plan is to promote modes of transport, such as public transport and cycling and walking, and land use planning, which have the best public health impacts.

Need to increase physically active transport

The Charter states: “Forms of transport that entail physical activity, like cycling and walking, separately or in conjunction with public transport, offer significant health gains; however, these transport modes have often been overlooked in planning and decision-making”.

This statement is based on scientific evidence indicating that public and non-motorised forms of transport offer opportunities for regular physical activity to be integrated into daily life at minimal cost for a large segment of the population. Modal shifts to physically active transport are likely to bring major benefits to public health, the environment and quality of life and are likely to decrease congestion. Strategies designed to engineer such a shift should be energetically pursued, especially in urban and suburban areas, and their effects monitored and evaluated. (Dora C & Phillips M 1999).

Purpose of the strategy directions

The European Network for the Promotion of Health-Enhancing Physical Activity is one of the European Commission’s Health Promotion Networks. It aims, among other things, at promoting and facilitating the development of national health-enhancing physical activity (HEPA) policies in the EU Member States. As part of this task, the HEPA Network has participated in providing the evidence on the health significance of walking and cycling (Vuori I & Oja P 1999) for the CHARTER ON TRANSPORT, ENVIRONMENT AND HEALTH.

This document sets out strategy directions, based on the CHARTER, that can be used for promoting physically active transport. The purpose of these directions is to identify strategic objectives and actions the member states can use when designing national strategies and actions for the promotion of health-enhancing walking and cycling as part of their overall HEPA policies.

2. ISSUES INVOLVED

2.1. Health potential of transport walking and cycling

Accumulating and reliable scientific evidence shows that the highly prevalent and increasing sedentariness causes a great and increasing burden on the health of populations and that physical activity has significant health-enhancing effects (US Department of Health and Human Services 1996). The available evidence indicates that a substantial, if not major, part of the health benefits can be attained by many common activities, such as walking and cycling, that take place frequently and are moderate in terms of the required effort and time. A few available studies support the idea that walking and especially cycling as practised as a means of transport can result in functional and health benefits among sedentary populations.

The current transport patterns in EU countries (WALCYNG 1998) show that car use is by far the dominant transport mode accounting for 50 to 70% of all road trips. The majority of short trips of up to 5 km are also made by car. Two to four trips out of ten are made by bicycle or on foot. Car use has steadily increased during the past decades at the expense of other transport modes, including walking and cycling. Some data suggest that active transport has halved during the last 20 years.

Current surveys in EU countires (WALCYNG 1998) indicate that the average distance of walking trips is about 2 km and that for cycling 3-4 km. The number of weekly walking trips averages from about three to almost six. Cycling trips are frequent in countries with a rich bicycle culture, such as the Netherlands (on average one daily trip) and Denmark (every other day), but much less in all other EU countries. These data suggest that while the current walking and cycling patterns fall mostly short of the criteria for HEPA, increasing practice of short trips by walking and cycling could contribute substantially to health-enhancing daily activity.

Knowledge of the distribution of the length of the journeys, factors influencing the choice of the mode of transport, and attitudes among the population suggest that physically active transport can be substantially increased by appropriate policies, strategies and measures. The validity of this rationale has been clearly demonstrated by several projects and programmes aiming at increasing physically active transport (see box p. 11). Simultaneously, the number of traffic accidents involving vulnerable road users has decreased. If similar development took place on a larger scale, the direct and indirect benefits to individual, community and population health and well-being are likely to be substantial.

Successful schemes to increase cycle use in European Cities

(Cyclists' Touring Club 1995)

City	Population	% of journeys by cycle (city centre)	Increase in cycle use (over time)	Main traffic measures
Basel	172 000	16	8 -16 % (1970-90)	- tram priority - traffic restraint - cycle network (city-wide)
Graz	240 000	14	7 - 14 % (1979-91)	- pedestrian measures - parking reduction - traffic calming - cycle parking & cycling
Hannover	550 000	16	9 - 16 %	- land use - traffic calming - cycle routes (450 km) - car parking control
Münster	280 000	43	29 - 43 % (1981-92)	-quality cycle routes - links to public transport - traffic calming
Delft	80 000	43	40 - 43% (1982 - 85)	- compact land use - traffic cells - complete cycle network

2.2. Car culture

Car culture is increasingly taking over the transport scene. The car is the first choice of transport for many people for many reasons. In this prevailing culture there are many obstacles, real and perceived, for walking and cycling.

There is a lack of safe, convenient and pleasant places to walk and cycle because the needs of motor traffic dominate land use, transport infrastructure and traffic regulations. Integration of walking and cycling with public transport is poorly developed. The danger of accidents to walkers and cyclists from motorised road users is a real one. Facilities supporting cycle use such as quality parking and transport of cycles in public transport vehicles are also insufficient.

The social status of walking and cycling is low in comparison to driving a car. Perceived long distances, bad weather, hilly roads, hard work, theft and violence prevent many from walking and cycling even if the travel distances were suitable and routes were available for walking and cycling.

3. IDENTIFYING STRATEGIC OBJECTIVES

3.1. Walking and cycling contribute to sustainable transport

Walking and cycling must be seen as part of sustainable transport strategy. Along with public transport they constitute an essential element for energy-efficient, low resource-consuming means of transport. Walking and cycling can contribute to a wide range of sustainability benefits, including reduction of congestion and pollution, enhancement of the local environment, the improvement of quality of life, increased access opportunities and injury prevention. They can also be a more equitable mode of transport by being more affordable to a larger cross-section of society.

Urban design and land use and traffic planning are key elements in ensuring that journeys are possible on foot and by bicycle. Urban design has a critical role in providing an environment in which healthy transport choices are possible. Design measures can also reduce traffic speeds to encourage walking and cycling. Land use planning can reduce the need to travel in general, and by car in particular. Good traffic planning can make these modes desirable by providing convenient and safe access to schools, jobs, facilities, services, hobbies, entertainment, etc.

3.2. Modal shift from car to walking and cycling

The key prerequisite for sustainable travel patterns is the creation of an environment in which walking and cycling are made more attractive than using private motor vehicles. This modal shift from using an external engine to one's own engine for travel provides benefits for the individual, for communities and for businesses.

To secure the benefits of a significant increase in walking and cycling, changes are required which reflect the full cost of, and reduce dependence on, the car. This can be done by:

- ensuring that the full external costs of the car, including the use of it, are paid by the user;
- using urban design and land use planning effectively to reduce the need to travel by car and to shorten the lengths of the trips;
- giving high priority to local accessibility in location decisions for jobs, shopping, education, health, leisure and other public and private facilities;
- having comprehensive, co-ordinated, safe and reliable public transport;
- ensuring that transport planners and public transport operators enable walking and especially cycling to be combined with the use of public transport by providing cycle parking facilities at transport interchanges and cycle transport in public transport vehicles.

The experience in implementing the Dutch Bicycle Master Plan (Directorate-General for Passenger Transport 1999) yielded a lack of understanding of how, why and when car users would switch mode for short journeys. Thus, there is a need for research to provide an in-depth analysis of the transport mode-related behaviour of car users.

The strategic goals of the Dutch Bicycle Master Plan present a good example of goal setting. They are presented in Appendix 1.

4. DEFINING TARGETS

The strategic targets should be defined in quantitative, measurable terms that correspond to the political will and the possibilities of the respective country. It is advisable to set both primary and supplementary targets. It is inevitable that the targets should be different for those countries that have already advanced in integrating the promotion of walking and cycling into their transport policies and for those that have not taken such steps for cultural, environmental or other reasons.

Guidelines and possibilities for target setting include:

4.1. Headline targets

Increase in walking:

- increase the number of walking trips by a defined percentage of all journeys within a given time period.

Increase in cycling:

- increase the number of cycling trips by a defined percentage within a given time period.

4.2. Supplementary targets

Journey distances:

- increase the number of walking trips of short distances of under 3 km by a defined percentage within a given time period.

Journey purposes:

- increase the proportion of walking and cycling for work commuting by a defined percentage within a given time period;
- increase the proportion of walking and cycling for school commuting by a defined percentage within a given time period;
- increase the number of combined public transport and cycling trips by a defined percentage within a given time period.

Infrastructure:

- increase the percentage of the local road network where speeds are limited to e.g. less than 30 km/h;
- increase the local on-road cycle/ pedestrian network by a defined number of km;
- increase the provision of walking and cycle ways to schools by a defined number of km;
- upgrade the maintenance priority, including lighting, of cycle/pedestrian ways (to meet specified target criteria).

Facilities:

- increase the number of adequate cycle parking facilities at travel interchanges, in public sites and by major employers;
- increase the provision of shower and locker facilities at public and major private work sites.

Promotion:

- provide sufficient pedestrian and cycling education, including personal safety, in schools and for the general public.

The target setting of the Dutch Bicycle Master Plan (Directorate-General for Passenger Transport 1999) is given as an example in Appendix 1.

The UK Government targets for health improvement and sustainable transport (Health Education Authority 1999) are given in Appendix 2.

5. ESTABLISHING CONSENSUS

Comprehensive strategic planning and implementation thereof of walking and cycling transport requires active collaboration, and eventually a consensus, between a number of parties. The key collaborators in developing local plans are the authorities responsible for health, education, sports, transport and land use. Other important collaborators are transport operators, the cycle industry, the health care industry and the traffic safety authorities, including the police. Voluntary and consumer organisations promoting exercise, sports, recreational activities and sustainable transport and environment are also important contributors in developing and carrying out an effective strategic plan.

The Dutch experience (Directorate-General for Passenger Transport 1999) suggested that the government's role is initially to be a catalyst. Other lessons learned indicated a lack of understanding from bus and rail operators, lack of meaningful input from the cycle industry, and a lack of enthusiasm from the police to tackle cycle thefts. It was also learned that closer contact with urban developers was needed.

6. TAKING ACTION

The strategic measures for the development of walking and cycling fall into two broad areas: creating a pro-walking and cycling culture and improving infrastructure.

6.1. Creating a pro-walking and cycling culture

To obtain a significant level of growth in walking and cycling will not only require local improvements in conditions and facilities but also an acceptance of walking and cycling as desirable transport modes among the public, professionals and the transport providers. They need to be convinced that more walking and cycling is a practical transport option offering desirable community and personal benefits.

Communication programmes, incentives and regulatory and legal measures are important methods in establishing pro-walking and cycling culture.

6.1.1. Communication programme

The communication strategy may be built on theoretical models that have been used successfully in health promotion. The Social Marketing theory has proved popular in recent national HEPA promotion programmes (Foster C. 2000). Effective communication campaigns need parallel changes in the social and physical environment.

Messages

Communication messages should focus on promoting alternatives to the car-dependent lifestyle and minimising car dependency. They should highlight the advantages of walking and cycling compared to other means of transport. Such characteristics include the facts that they are omission-free, energy efficient, healthy, cost effective, quick, and have low space requirement. The commonly perceived obstacles, e.g. suburban lifestyle, dispersed land use, need to drive children to school and leisure services, declining public transport, insecurity and danger, and bad weather and hilly roads, should be weighted against the advantages of walking and cycling.

In order to have facts and arguments penetrate effectively, they need to be repeated frequently, in different ways and via numerous channels.

Target groups

The campaign target groups are road users, transport providers, professionals and journey generators.

Road users include the key groups of motorists, commercial and public transport drivers, cyclists and pedestrians. They shape the transport environment into which the potential walkers and cyclists must consider venturing on foot or by cycle. All groups must understand and accept their rights and responsibilities towards other road users. Motorists are to understand the impact of excess speed and of giving insufficient space to pedestrians and cyclists while the latter must acknowledge the negative consequences of poor traffic behaviour. Proactive attitudes towards personal safety when cycling, including helmet use and other protective measures, should be emphasised.

The main groups of direct transport providers are the Ministry of Transport, municipalities, and public transport operators, companies and organisations. Intermediary providers include interest groups, regional transport authorities and transport consultants. It is important that these groups understand and comprehend the environmental and health significance of shifting the prevailing dominance of car culture towards pro-walking and cycling culture, and that they contribute in their capacity towards the strategic goals.

Professionals in transport, environment and health fields are key players in the forming of a more favourable social culture for walking and cycling. The information indicating the need and evidence for modal shift, and the strategic and practical measures to achieve it, are to be included in their basic and continuing education.

Journey generators can play a powerful role in developing a pro-walking and cycling culture. The major generators are work sites, shops, educational institutions, health and social service providers, and leisure service providers. They should consider the needs of pedestrians and cyclists and provide their support to meet them.

Delivery organisation

In delivering the communication campaign, all concerned parties should join forces for concerted action. Local expertise should be identified and with the support of national and regional authorities a local communication strategy should be designed. Walking and cycling interest groups may play an important role in initiating and implementing such a strategy.

The communication messages to different target groups in the Dutch Bicycle Master Plan (Directorate-General for Passenger Transport 1999) are described in Appendix 1.

6.1.2. Incentives

Incentives aim at making walking and cycling more competitive transport modes compared to the car. Possible successful incentives for cycle use include tax benefits, health insurance benefits, salary bonuses, other material rewards, and free bicycles. More appropriate incentives to be used in different cultures and environments are to be developed through research and experimentation.

6.1.3. Regulatory and legal measures

In addition to informational communication campaigns and incentives, regulatory and legal measures are important "hard" methods to create a more favourable social climate for walking and cycling. Experiences in reducing and containing tobacco smoking by strict legal regulations

indicate the potential impact of such measures. Successful options with regard to promoting transport walking and cycling include taxation of work commuting by car, promotion of work site-specific travel policies, car parking regulations in public areas and venues and through building codes.

6.2. Improving the transport infrastructure

Promoting walking and cycling without improving the facilities for their use is meaningless. The following are examples of effective environmental interventions:

Land use and transport planning

- Encourage multiple use development in urban planning where possible.
- Encourage development patterns and the location of developments which ensure that short trips to work, places of education, and local facilities can be made on foot or by bicycle.
- Incorporate pedestrians and cyclists safely in traffic schemes; they should not be considered as separate road users.
- Avoid unsegregated shared use of space for pedestrians and cyclists, particularly in a dense urban context.
- Link foot and cycle paths to public transport.
- Facilitate transport of bicycles by public transport.
- Restrict car parking provision.

Speed reduction

- Use traffic calming measures to their fullest in pedestrian and cycling areas.
- Use the 30 km/h maximum speed limit in all existing and potential areas dense with pedestrians and walkers.

Highway design and transport engineering

- Ensure that changes to the highway infrastructure or new developments do not sever existing or proposed pedestrian/cycle routes, and do not reduce accessibility or increase perceived or real danger for pedestrians and cyclists.
- Improve pedestrians' and cyclists' safety and give them improved priority in terms of access and journey time.
- Establish best practice design and construction standards in all highway improvements which incorporate on-road walking and cycling facilities and route networks.
- Ensure that highway schemes that do not include specific walking and cycling facilities are designed to minimise deterrents to walking and cycling.
- Avoid deterring people from walking and cycling by longer, less convenient and less secure routes when building safety improvements such as pedestrian and cycling barriers and bridges and underpasses.
- Modify traffic rules to give priority to pedestrians and cyclists in motor traffic interfaces.

Walking and cycling networks

- Prepare a specific proposal for a hierarchy of on- and off-road walking and cycling routes to form a safe, coherent, continuous and convenient network across major trip generators such as large shopping centres, major job, education and leisure facilities and public interchanges.
- Take into account the type of user group most likely to make increased use of them in the design and prioritising of pedestrian and cycling

network with particular emphasis on the needs of commuters to workplaces, schools and public transport interchanges with short trip distances.

- The walking and cycling network should provide:
  - on-road alternatives to main radial/ orbital roads;
  - off-road alternatives to main radial/ orbital roads whenever possible;
  - local area networks of shorter roads from residential areas to local trip generators;
  - links to nearby countryside recreational areas.

Public transport infrastructure

- Encourage multi-modal journeys by easy and safe access to public transport interfaces and by adequate storage facilities for cycles.
- Provide built-in facilities for the carriage of cycles on trains, trams and buses.

Cycle parking

- Provide quality cycle parking at educational and other public establishments, leisure facilities, major trip generators and public transport interchanges.
- Encourage public and private organisations to provide cycle parking at or near their premises for staff, customers and visitors.

Traffic signals and signs

- Adopt traffic signals to cater for pedestrian and cyclists' flows and speeds.
- Design urban road signs not only for drivers but equally for pedestrians and cyclists with easy-to-read street names and appropriate distances.

Road lighting and other conditions

- Consider not only the drivers but also the needs of pedestrians and cyclists in the design of lighting for main streets and areas dense with walkers and cyclists.
- Use lighting effectively to make pedestrian precincts and cycle routes safe, inviting and pleasurable.
- Keep pedestrian and cycle ways clean of dirt, rubbish, snow and ice by upgrading their maintenance status.

Vehicle design

- Promote bicycle design that improves the visibility of cyclists.
- Encourage vehicle design that permits cycle transport.
- Discourage the design of heavy duty vehicles and cars with aggressive bull bars and other gimmicks conducive to increased accident risk for pedestrians and cyclists.

Walking and cycling audit

- Establish auditing procedures for walking and cycling to ensure that the needs of pedestrians and cyclists are considered at key stages of all land use, highway and other relevant development schemes.

7. OBTAINING FUNDING

Developing and maintaining a pro-walking and cycling infra-structure requires sufficient funding in annual budgets of national and local transport authorities. The local funding is critical in order to provide the proper facilities in places where most people live, work and spend their leisure time. It is important to secure a fixed, e.g. one third, proportion of the total annual infrastructure budget for the development and maintenance of walking and cycling facilities.

Further funding can be obtained by establishing mutual ownership between the collaborators in the development of walking and cycling. Important potential contributors are the cycling industry, public transport providers, insurance companies and major employers.

8. ADVOCACY AND LOBBYING

The real potential of walking and cycling in promoting health and sustainable environment is only just emerging. In order for all involved parties to understand and accept its significance, vigorous and persistent advocacy and lobbying is needed by the key HEPA promoters. Some of the general principles in doing this are:

- advocacy and lobbying need to be part of the political sphere;
- successful lobbying needs a network of collaborating partners;
- media is a major force in influencing peoples' attitudes and behaviour;
- pro-walkers and cyclists need to penetrate into all sectors of life;
- the case for walking and cycling must be based on reliable research evidence.

9. MONITORING AND EVALUATION

Monitoring and evaluation procedures must be integrated into the walking and cycling strategy. Monitoring and evaluation must be closely linked to the strategic goals with measurable target indicators. They provide evidence to assess the efficacy, cost-effectiveness and feasibility of the adopted strategies and actions. Indicators for monitoring need to be incorporated into existing information gathering systems.

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APPENDIX 1

Selected parts of the Dutch Bicycle Master Plan

1. An example of a successful strategy

Step 1.
Dealing with the source

This means clean and efficient vehicles, limiting land use for infrastructure and limiting vehicle access to towns and areas of natural interest.

Step 2.
Reducing and managing mobility

This requires shorter distances between places where people live, work, shop and spend their free time. It will be necessary to increase the price of mobility.

Step 3.
Improving the alternatives to the car

In terms of passenger transport this means the bicycle, public transport and carpooling.

Step 4.
Providing selective accessibility by road

All places should not always be totally accessible to all modes of transport.

Step 5.
Strengthening the foundations

This involves communications, government co-operation at all levels, finance, enforcement and research.

2. An example of target setting

The universal objective: “Promoting bicycle use while simultaneously increasing bicycle safety and appeal”.

Spearhead 1:
The switch from the car to the bicycle

Primary target: An increase of 3.5 million passenger kilometres by bicycle by the year 2010 in relation to 1986, resulting in a contribution of 8.75 per cent to the desired reduction in the growth of car use.

Spearhead 2:
The switch from the car to the public transport + bicycle

Primary target: An increase in train transport of 1.5 billion passenger kilometres (15 per cent) in 2010 in relation to 1990, by means of improving the transport chain of public transport and the bicycle.

Spearhead 3:
Cyclist safety

Primary targets: Fifteen per cent fewer cyclist fatalities in 1995 than in 1986 and 50 per cent fewer in 2010. Ten per cent fewer injured cyclists in 1995 than in 1986 and 40 per cent fewer in 2010.

Spearhead 4:
Bicycle parking facilities and theft prevention

Primary target: A substantially lower number of bicycle thefts in 2000 in relation to 1990.

Spearhead 5:
Communication

Primary targets: In 1995 bicycle policy is an integral part of all traffic and transport plans carried out by the state, provinces, municipalities and transport regions. The transfer of knowledge in 1995 is completed with regard to the results of the pilot and model projects.

3. An example of communication messages

Citizens:

many trips are short: 70 per cent of all trips made in the Netherlands are shorter than 7.5 kilometres;
the bicycle is the most efficient mode of transport for many short trips and inexpensive at that;
cyclists experience reliable arrival times and no traffic congestion;
cycling is good for staying in shape and is relaxing;
cycling, as an individual mode of transport, offers privacy; the bicycle is always available and takes you from door to door;
it does not rain quite as often in the Netherlands as is commonly believed.

Decision-makers of direct target groups (municipalities and provinces, public transport operators, the business community and institutions):

cycling is an important mode of transport; 28 per cent of all trips in the Netherlands are covered by bicycle (48 per cent by car, 17 per cent on foot, 5 per cent by public transport);

practically everyone cycles; young and old, men and women, rich and poor;

there is an abundance of potential for more bicycle use: people say that bicycle use may be stimulated at the expense of car traffic; motorists say that nearly half of those short car trips in the city and village could have been made by bicycle without any inconvenience;

bicycle use in transport to and from the train and regional transport can improve the efficiency of the combined use of public transport and the bicycle considerably, and can increase the use thereof as an alternative to long car trips;

cycling is clean; if half of all short urban trips had been made by bicycle it would have reduced the CO2 emissions by approximately half of the reduction that would have been achieved through the effective reduction of speed limits on highways from 120 to 100 km/hr;

cycling creates no noise pollution;

bicycle routes do not split up urban and rural areas;

bicycles take up little space, both when being ridden as well as when parked;

bicycle traffic and bicycle parking facilities are inexpensive in comparison to facilities for car traffic and public transport; the infrastructure for bicycle traffic costs an average of two to three cents per kilometre cycled, while every kilometre covered by a passenger in urban public transport costs around forty cents subsidy on average just to cover shortages on operation costs;

cyclists form an important group of shoppers; they spend less money per visit on average, but visit shops more frequently.

APPENDIX 2

The UK Government targets for health improvement and sustainable transport

Issue	Target
Coronary heart disease and stroke (and related diseases)	Reduce death rate in people under 75 by at least two fifths
Cancer	Reduce the death rate from cancer amongst people under 75 by at least one fifth
Accidents	Reduce death rate from all accidents by at least one fifth and serious injuries by at least one tenth
Mental health	Reduce death rate from suicide and undetermined injury by at least one fifth
Air quality	Achieve national air quality objectives on benzene, 1,3-butadiene, carbon monoxide, lead and nitrogen dioxide, ozone, sulphur dioxide and particulates. Achieve national target for CO2 reduction in the local transport plan
Road safety	Local targets to be set in road safety strategy for 2005
Traffic reduction	Local targets to be considered under the local transport plans
Walking	Targets to be set in the National Walking Strategy, due 1999
Cycling	To double 1996 levels of cycle use by 2002, and again by 2012