CYCLING

DELFT (Netherlands)

THE CITY

Delft is a town of 96 000 inhabitants, located in Southern Holland, between Rotterdam and Den Haag. It has a historical centre and dense residential area. A nuclear research centre is here as well as chemical and food industries. Delft is known throughout the world for its porcelain (Delft blue). Other activities are mechanical and electrical manufacturing, plastics and tourism. Delft also has a technical university. The skilled sector employs the most people, with about 6 000 workers.

GLOBAL TRAVEL POLICY

People have been encouraged to use bicycles for a long time in the Netherlands. Of 16 million Dutch people, about 14 million own a bicycle.

One of the main aims of transport planning in the Netherlands is to reduce the use of cars. At the end of the 1970s, transport programmes gave priority to measures which encouraged the use of bicycles and improved safety by providing better conditions for using them. Within the context of this policy, Delft town council was chosen as a model for transport planning.

In the Netherlands, 40% of trips are over less than 5 km. Considering this, we can see that cycling provides a reasonable alternative to using a car. Consequently, this method of travel must develop in line with two trends:

- for short distances (up to 5-10 km), transfer from car to bicycle, with the aim of considerably increasing the number of km covered using non-motorized forms of transport;
- transfer from car to public transport, with the aim of doubling the number of km / passenger by 2010, especially over long distances at regional level.

For medium-sized towns (50 000 to 200 000 inhabitants), the modal percentage for bicycles varies from 20 to 50%. There are approximately 19 000 km of cycle tracks in the Netherlands.

EXPERIENCE OF DELFT

Planning

The main purpose is to encourage the use of bicycles. Research has shown that growth can be achieved by improving infrastructure. It has also been established that the network structure is the best way of encouraging people to use bicycles. The extension of cycle routes improves traffic conditions and gives the population a feeling of safety which is an important factor relative to a modal transfer from car to bicycle.

The bicycle plan was implemented from 1979 to 1985. The main effort was made in the construction of equipment which could help to complete the town's network of cycle tracks. This plan included several measures from the construction of infrastructures to traffic regulation.

At the end of 1999, the Town Council drew up a new action plan for bicycles which had the following objectives:

- to encourage the use of the bicycle as an alternative means of transport to the car for distances up to 7.5 km by creating new cycle tracks, linked to the existing network and limiting problems engendered by other forms of traffic;
- to increase the modal share of bicycles even further;
- to reduce the number of accidents to cyclists by improving infrastructures;
- to reduce the number of accidents involving schoolchildren through traffic education;
- to increase the parking facilities for bicycles in the neighbourhood of the original sites and destinations by providing cycle garages, particularly in residential areas, and by converting carparks into cycle parks;
- to reduce the number of cycle thefts by creating more guarded cycle garages and installing deposit services for bicycles (particularly close to the two railway stations, schools and businesses) and by equipping cycle parks with efficient anti-theft devices.

Developments / measures in favour of cycling

The main characteristic of the Delft cycling network is that it is split into three levels:

- "town" level: the cycle network is a grid of cycle tracks which are about 500 m apart. This network is intended to carry large numbers of cyclists to the main centres of activity: schools, universities, bus stops and railway stations, offices and industrial areas, sports fields and leisure areas. The physical barriers which are the canals and railway lines require heavy infrastructures to be built if detours are to be avoided;

- "district" level: the cycle network has two main functions, which are to serve the various strategic points of the district (schools, shops, etc.) and provide a link to the "town" network (to join it and to return). At this level, tracks are 200 to 300 m apart. The flow of circulation is less dense than for the "town" network; the distances covered are shorter. The developments required at this level are less heavy: cycle lanes, little bridges, etc.

- "sub-district" level: the cycle network links residential areas with local amenities. The routes covered by this network are usually short and often covered by children. The cycling infrastructures are about 100 m apart and are mixed: they are also used by pedestrians.

This global network is characterized as follows:

- two tunnels and three bridges for bicycles;
- 7 modified crossroads;
- 14 cycle boxes at three-colour lights;
- 3.3 km of new connection cycle tracks;
- 2.6 km of two-way roads for bicycles but one way only for cars;
- 8.5 km of cycle tracks and lanes parallel to roads;
- 10 km of mixed cycle tracks with new asphalt surface.

A cycle parking area

A mixed pedestrian/bicycle pavement

Communication and information

Cooperation between various organizations resulted in the drawing up of a new bicycle action plan which was passed at the end of 1999. The Delft Entrepreneurs Federation, the first Dutch Cycling Federation (ENFB), the University and the "Priority to Children" organization, to name but a few. These local operators had a large influence on the plan's contents. Note that in all other action plans, the Town Council (for the districts, the old centre, etc.), systematically brought up the question of cycling with the citizenry.

EVALUATION

Through the policy implemented, the average number of daily trips made by bicycle has increased by 12%, rising from 25 000 to 28 000, and the total distance covered by 6 to 8% depending on the type of trip. The increase in the number of trips is mainly attributed to men, using their bicycle more often to go to work or study. The average distance of a trip has risen from 3.7 to 3.9 km, which seems to reflect an increasing interest in cycling among the inhabitants of the town's peripheral districts. Note that this increase has not occurred to the detriment of the time needed to make the trips, which has remained the same, and therefore tends to demonstrate the effectiveness of the network.

An evaluation study has shown that these results are mainly due to a change in use of the network. The following factors have contributed towards this improvement:

- the hierarchical structure is an important part of town planning because it gives priority to urban centres and links between the various levels described;
- 60% of the kilometres covered by bicycle were at "town" level, which only represents 30% of the total length of the network;
- the use of cycle tracks has increased, rising from 30 to 35%, while at the same time, the use of roads for cycling has fallen from 45 to 40%.

Improved comfort and safety therefore seem to encourage residents to choose the bicycle as a means of transport.

The number of cars travelling into the town centre has fallen, which is good for its attraction and creates a pleasant atmosphere.

Modal distribution has risen from 40 to 43% for the bicycle. Cars and walking have remained stable at 26% while public transport has fallen from 6% to 4%, although the number of passengers carried has not changed.

Delft town council allocated 12 705 846 € to finance its cycling policy between 1982 and 1992. 80% of this amount was from subsidies granted by the Minister of Transport, Public Works and Water Management.

PROSPECTS

With a modal share of 43%, the national objective of 30% of all trips to be made by bicycle has already been largely exceeded. By passing a new cycling action plan at the end of 1999, the Town Council has demonstrated that it wishes to continue its effort to increase this figure even more (the aim is to exceed 50%). By the end of 2003, 2 800 000 € will be allocated to measures in favour of cycling.

FOR FURTHER INFORMATION

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