

subjects to take advantage of the occasion given by the procedure in order to start a collective reflection upon the formal as upon the non-formal resources offered to coordination.

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The Long-Term Position of Public Transport in Medium Sized Cities

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Introduction

Since the Second World War the use of public transport in the Netherlands has fallen from a major transportation mode to a somewhat quieter role. The main reason for this downward slope has been the widespread introduction of the car in the fifties, followed by the process of suburbanisation in the sixties. Since then, the government has been trying to influence the flow of people by building new towns around the major cities at a distance of about twenty kilometres. When this turned out to drain the main cities of their resources and to worsen the accessibility problems the focus changed to the four major cities again. The policy of "the compact city" was adopted and new housing sites were only built in or in the immediate vicinity of the main cities. Despite results on the sustainability of the cities themselves, this policy did not have any influence on the transportation problems, simply because the jobs in the cities are taken by the commuters from the suburban towns around the cities. Looking at the increasing congestion in this area, one could say there is some potential for the public transport. It is sad, but true that the public transport did not benefit from the enormous rise in mobility since the sixties. Despite large investments in public transport infrastructure in recent years, the portion of public transport in the modal split has rather diminished than grown. Part of this can be explained by the fact that the public transport network does not match the current transport patterns of the people in the region. The public transport is not able to match the nowadays 'cris-cross-relations' in the region (le Clercq, 1996; Raad voor Verkeer en Waterstaat, 1996). Another problem is the fact that the 'quality' of the public transport compared to that of the car is low. For public transport it is almost impossible to compete with the characteristics of the car. At the moment the situation is even

worse, as the budgets for public transport have been cut and the transport companies have to become self-proficient.

When dealing with the problems of the public transport it is a logical decision to give full attention to the four main cities in the Netherlands. The chances for a successful exploitation are at their best, because of the growing congestion in the cities which frustrates car-use. This research however focuses on the possibilities for the public transport in a more competitive environment; where the chances to use either transport mode are even. This is one reason why the focus is on the medium sized cities: the large cities offers the best opportunities for public transport, the rural areas offers best opportunities for the car and the medium sized cities have equal opportunities. A second reason is the fact that the medium sized cities are on the rise in the way that plans for city-extensions are made and the amount of office space in these cities is growing (Ministry of Economic Affairs, 1994).

Research: the long-term position of public transport in medium sized cities

To find possibilities to deal with the encountered problems most emphasis has been laid on the 'supply' side: building more connections should increase the use of public transport. Little research has been done on the demands of the users. Especially when the living environment and demographic and socio-economic and cultural characteristics of the (potential) users is taken into account. This research is trying to fill this gap. It tries to determine whether it is possible to influence the use of a transport system by long-term changes in the spatial structure of a city. This can be done directly, by changing the structure itself. For instance, the future development of new cities or city extensions could be built in such a way as to maximise the conditions for the use of public transport. In a more indirect manner the characteristics of a spatial structure (e.g. a neighbourhood) could be changed in such a way that the city attracts groups with a different life-style than before. On a long term basis the demand for a specific transport system will change. Research needs to be done to discover mechanisms between space and people.

To accomplish this, research has to be done on three basic topics, and especially the relations between these topics has to be made clear. These three topics are all related to mobility. Looking at the topics behind mobility it is possible to speak of a triangle of relations, with three «corners»:

* One «corner» is the spatial structure of the city. The spatial structure is a set of variables which explain the structure of the city, it contains aspects like the age and form of the city, the amount of houses and/or citizens on a square kilometer, the properties of the buildings. The spatial structure provides the conditions for the transportation system, and is also related to certain characteristics of its inhabitants.

* A second «corner» is the transport system, which can be seen as the form of the transports networks and types (buses, light rail or trains). The transport network is a necessary condition for determining the option a commuter has to use different modes of transport.

* The third «corner» in this triangle are demographic characteristics of the population of the region. These characteristics can be quite basic like age, household size but on an advanced level it is possible to speak of a certain lifestyle.

Between the corners of this triangle there are two-sided relations. Between the spatial structure and the transport system there is the possibilities of the transport system and network which people can use. It is not possible to change this relation on a short term basis. The result of investigating this relation will be the design of a set of city patterns, which will be used as a basis for the study. The relation between the spatial structure and the population is a different one. Here it is not known whether there is a relation between a certain city pattern and a certain characteristic of the population. Only on a macro level it is possible to investigate the population in the city centres (Bootsma, 1998). Finally, after the relations between city patterns and a typical population has been set, it is possible to see what the relation is between the population and the forms of the transport network. The question needs to be answered whether there is a relation between a certain number of characteristics of space and certain characteristics of the population. Recent studies have shown that variables as age, size of the household and income, though important, are not sufficient any more to explain the choice of a living environment. For this reason the term 'lifestyle' has been introduced (Van Engelsdorp Gastelaars e.a., 1992). A lifestyle

can be viewed as a set of demographic, cultural and social factors that influences a persons behaviour.

After the mechanisms in this triangle have been determined a framework will be developed to explain the relations between transport networks, population and spatial structures. With this framework it is possible to determine whether it is possible to change mobility by changing the spatial structure and also what has to be done to change the car-mobility to use of public transport. system more environmentally friendly transport system. There is also established whether there is a connection to a specific lifestyle and a specific neighbourhood. This offers opportunities to give specific characteristics to the system of public transport. A lot of factors can determine the form of the transport network. A certain neighbourhood with mainly elderly people has other demands to the public transport than a neighbourhood which consist of most commuters in possession of a car. If the mechanisms behind the location of these population groups can be determined it might be possible to make the public transport more appropriate to the needs of the inhabitants. Also it will be possible to assess what characteristics of a spatial structure are needed to attract a certain population group. This could help future extension plans and might help to fulfil the need for a more qualitative level of housing in stead of a quantitative need.

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