Summary

Wherein lay the opportunities for regional public transportation to retain passengers and attract new ones? In order to answer this question, which was posed by the Dutch Ministry of Transport, Public Works and Water Management, the Netherlands Institute for Transport Policy Analysis (KiM) studied the areas in which, over the past years, regional public transportation use has and has not grown; the underlying factors; the market expectations for regional public transport; and the motives that determine whether people will use public transport.

Passenger kilometres remain constant nationally, increase regionally
From 2000 to 2008, the number of passenger kilometres travelled nationally has remained relatively constant for regional public transportation by bus, tram and metro. There are however major differences per region. For example, in Haaglanden and Zeeland, 15 percent more kilometres were travelled by bus, tram and metro in 2008 than in 2000, while in Noord-Holland and the Rotterdam metropolitan region 10 percent less kilometres were travelled.
In addition, various local projects reported substantial growth on individual lines during this period.

Many of the factors influencing the extent to which people use public transport are closely associated with particular places and lines, such as new neighbourhood construction projects, the relocations of schools or improved traffic circulation resulting from the building of a new bus lane. Figures pertaining to the development of passenger numbers per line are rarely published, as this is market-sensitive information. Consequently, it is impossible to determine which policy measures affect regional transport growth. It is also impossible to separate the effect of local factors and measures from general developments, such as increasing labour market participation or increased participation in higher education.

Less growth due to ticket price hikes and decreasing leisure time travel
Based on population growth figures, the increased number of people participating in higher education and the increased number of gainfully employed people, the passenger kilometres would be expected to rise by 8 percent from 2000 to 2008. Regional public transport use, however, remained unchanged. The most important reasons for this were increased ticket prices and the decreasing use of regional public transport in off-peak hours and for leisure time travel. Increases in passengers were particularly prevalent in home-to-work travel and transport to and from schools and universities.

Nationally, developments in bus, tram and metro services were not seemingly determining factors in the increase or decrease of public transportation use. The number of route-kilometres on offer rose by 9 percent. Based on this alone, some growth would be expected. The question then is if this extra supply also heightened demand. Customer satisfaction levels for city and regional transport passengers have remained the same for years; the average grade for all regions was around a 7 (out of 10). This has also not led to an increase or decrease in use.

Reasons for regional growth unclear
Many regions report regional passenger growth and attribute this to their own initiatives. However, the growth the regions reported differed from the data compiled in the so-called national WROOV research study, which provides statistics pertaining to the regional development of passenger kilometres and uses the same system to assess each region. If, according to WROOV 2000-2008 dataset, the number of passenger kilometres decreased or remained constant, that was often not perceived locally. The reasons for this are:

- Regions base their assessments on the success of a few lines that perhaps also draw passengers away from other lines.
- The period under consideration is relatively shorter and, compared to 2000-2008, has indeed experienced growth.
- The reliance on other sources, such as transport operator based statistics, which are compiled in alternate ways and usually show higher usage rates.

High level of service public transportation (HOV) has been introduced in a number of regions. This is a loosely defined form of public transport offering higher levels of service, e.g. higher service frequencies, dedicated lanes, vehicles with tram-like characteristics and a specific image with a brand name. On the level of individual bus or tram lines, the introduction of high level of service public transportation has largely been successful, in the sense that the predicted passenger volumes were achieved. What remains unclear, however, is whether introducing high level of service public transportation also leads to greater success for the entire public transportation system. Does it attract new passengers who did not previously travel on public transportation or mainly passengers who earlier already did use other forms of public transport?
Various factors are put forward to play a role in success on the line level: higher service frequencies, dedicated bus lanes, more comfortable vehicles, a better image, more marketing activities, and so forth. It cannot be determined which of these factors are decisive based on the available research data.

In order to ascertain where passengers have come from and which quality aspects are decisive, a passenger survey is needed on a number of lines that offer and do not offer high level of service public transportation.

Future regional public transport: work, rush hours and major cities
The future scenarios 'Welfare, Prosperity and Quality of the Living Environment' (WLO scenarios), compiled by the Netherlands' planning agencies, present pictures of what effects social-economic developments have on traffic and transport. Prior to the year 2040, and if policy remains unchanged, these scenarios do not indicate an increase in regional public transport use. Usage rates remain constant in one of the four scenarios, while in the other three scenarios it decreases (by a maximum of approximately 10%). The prognosis for trains is more favourable than for other public transportation modes.

Where the amount of total public transportation use falls slightly or remains constant, the composition of use, as expected, varies significantly: usage is concentrated on home-to-work travel. This leads to substantial shift towards travelling during rush hours and to the major metropolitan employment areas. As

such, the opportunities for regional public transportation growth are then especially prevalent in those areas.
Given the fact travelling by train has experienced more growth than other forms of pubic transportation, an increasingly larger portion of bus, tram and metro journeys consist of travel to and from train stations.

Accounting for traveller's perception and habitual behaviour
Based on available empirical data regarding travel behavioural patterns, no set conclusions can be drawn regarding the exact success factors of regional public transportation projects. More can however be concluded from general behavioural research.

Passengers make choices between the various transport modes based on the perception they have of a particular transport mode. Passengers however build such perceptions based on incomplete information.

Reliability and safety are preconditions that must be clearly established before passengers will consider using a particular mode of transport. Speed, convenience and price are product characteristics that public transportation can use to win passengers; however, the role that comfort and emotion also plays must not be undervalued. The more pleasant the journey, the shorter passengers perceive the journey time. Up to date and easily accessible travel information, for example via mobile phones or computers, allows passengers to feel they have more control over their journey.

Passengers who do not own cars are also sensitive to public transportation's speed and price. For shorter distances, public transportation's relative speed compared to walking or cycling is important. Passengers are also especially price-sensitive regarding leisure time travel, which people have the option of refraining from (unlike home-to-work travel).

In addition to perception, habitual behaviour also plays an important role in transport behaviour. In cases where the actual performance of the given quality factors is better than people perceive, communication and promotional activities can help to alter habitual behaviour patterns and attract more passengers. For example a reduced fee or free introduction offer may be considered. Indeed, actually knowing that a particular transportation service exists is a precondition to using it.

Public transportations usefulness differs greatly according to the circumstances for undertaking a journey: per time period, per departure or arrival address, and per reason for travelling. This fact complicates communication. Because of this it is good to focus on moments when passengers are really making choices and the passenger has not yet developed habitual behaviour patterns. For instance, focus on incidental trips or situations involving new home or workplaces. Any lasting image in the passenger's minds will only result if practical experience shows them that the communicated image is actually reflected in reality.

From the passenger's perception, more than half of public transportation journey times are spent on pre- and post-transportation and waiting times. A one minute walk to a stop or one minute wait at the stop seems to last longer than one minute sitting in a comfortable train carriage. As such, walking distances and the

convenience of bicycle stalls therefore partly determine public transportation's overall attractiveness.

Buses, trams or metros are used in access or egress for approximately one-third of all train journeys. Improving regional public transportation therefore offers opportunities for increasing railway passenger growth rates. And vice versa: increasing train use offers opportunities for facilitating the growth of regional public transportation.

Car drivers will consider public transportation as an alternative means of travel if public transportation's journey times are no more than one and a half times longer than the same journey by car. Improving journey times, as a means of attracting car owners to public transport, will be especially effective whenever the possibility exists of making journey times meet or better this time ratios. If public transportation is much slower (for example, a twice as long journey time), a slight acceleration of journey times will not help to compel car drivers to switch to public transportation.