Summary

The daily mobility of the Dutch population is a source of problems in numerous places and at many different times. Traffic jams and delays have become a regular feature of Dutch society.
Between 2000 and 2006 there was an increase of 53% in lost travel time on the motorways. Had no policy measures been taken – new roads and additional lanes and measures to improve usage such as the provision of route information – this lost travel time would even have been twelve percentage points higher. This increase in lost travel time can primarily be attributed to growth in population, car ownership and economic activity, which has resulted in a general increase in traffic. Since 2003, lost travel time has increased at a faster rate than the amount of traffic on the roads., as is especially clear during the morning and evening rush hours on roads around the major cities in the Randstad conurbation. Because these roads are used so intensively, even a slight increase in traffic can cause additional congestion during the rush hour. This is generally not the case on roads outside the Randstad, despite the fact that these areas are also seeing a substantial growth in traffic. The morning and evening rush-hour periods are also becoming longer, as can be seen in figure S1.

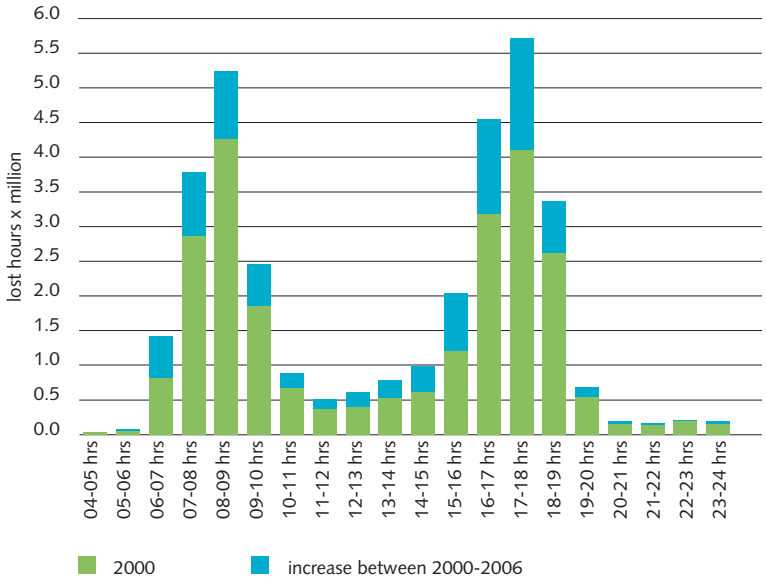

Figure S1
Increase in lost travel time from 2000-2006, according to the time of day.
Source: KiM

A comparison with the congestion in other European urban regions such as Germany's Rhine-Ruhr area, the Flemish Diamond (the area between Brussels, Ghent, Antwerp and Leuven in Belgium) and the North-West of England confirms this picture.

Compared to these regions, there is more traffic on the Randstad motorway network and the network is used more intensively. As a result, there is a greater likelihood of delays and congestion in the Randstad during the rush hour. The higher population density, combined with the favourable economic situation and the structure of the road network in the Randstad, leads to greater pressure from mobility and more traffic on the motorway network.

Current mobility and spatial policy reflects a range of opinions about congestion. In addition to measures relating purely to traffic, mobility management and improved coordination of spatial and mobility policy play a key role. Road pricing has also become increasingly important. Starting in 2011, lorry drivers will be the first to be charged for every kilometre driven and pricing for passenger traffic will be phased in starting a year later. The aim is for the road pricing system to be fully operational by 2016.

But are there other possible solutions to the congestion problem? Congestion is not limited to roads and is also about more than the number of cars on the road: limited capacity can often be a problem at specific times and places. Maybe it would be possible to apply solutions devised to tackle these other aspects of congestion to also help with the problem of the number of cars on the road.
For example, dynamic traffic management has already been developed much further in civil aviation and shipping than for road traffic. Corrective measures are taken at an early stage in a system of dynamic traffic management. The railways are also trying to provide passengers with faster and better information about delays. Dynamic traffic management could also be deployed more intensively in similar ways in relation to road traffic. If motorists are informed about alternative routes and travel times before and during their journey, traffic management will play a more proactive role.

The hospitality sector shows that capacity can be reserved in advance and in principle this idea could also be applied to road capacity. Road users could contact a central planning system with details of their planned journey and the system could then determine whether this journey can be accommodated within the network, taking account of the time of departure and the desired route. Motorists would then be granted access to the network if their journey did not cause congestion. Specific stretches of road could also be reserved, perhaps also combined with pricing according to time and place. Further study will be required to assess the potential advantages and disadvantages of such a system.

Key mobility figures

Table K1 on page 74 shows the most recent key mobility figures. A brief summary of the most important developments in 2007 is given below.

- The number of airline passengers at Schiphol Airport once again increased in 2007 - this time by 3.7%.
- Freight transport by rail, water and air also increased substantially, by 5.5%, 5.2% and 6.3% respectively.
- Lost travel time on the trunk road network increased by more than 7%.
- The number of people killed in traffic accidents decreased again in 2007, from 811 to 791, which is a reduction of 2.5% compared to 2006.
- Train punctuality increased in 2007: 87% of trains arrived with a delay of three minutes or less (the equivalent figure in 2006 was 84.8%). According to Dutch Railways (NS), this increase can partly be attributed to its completely new timetable.

Table K1
Key mobility figures
Source: different sources (revised by KiM)

	1995	*2005*	*2006*	*2007**
Passenger transports (billions of passenger kilometres)				
Total	166.9	183.7	183.5	*185.2*
Car	123.6	138.6	137.5	*138.9*
Public transport	20.5	20.3	21.7	*21.9*
Bicycle or moped	14.5	15.2	15.0	*15.0*
Other	8.3	9.6	9.3	*9.4*
Civil aviation (millions of passengers)	25.4	44.2	46.1	*47.8*
Freight transport				
On national territory (billion tonne kilometres)	93.3	118.0	119.8	*121.9*
Road	43.5	53.7	54.5	*55.7*
Inland shipping	35.5	43.1	43.6	*44.3*
Raiway	3.0	6.4	7.2	*7.6*
Pipelines	11.3	14.8	14.5	*14.3*
Transhipment (million tonnes)	381.0	488.9	506.3	*532.7*
Civil aviation	1.0	1.5	1.6	*1.7*
Ocean shipping	380.0	487.4	504.7	*531.0*
Traffic and transport expenditure (billions of euros)				
By government		12.9 (2007)		13.3(2008)
By consumers		27.5	29.5	-
By business		40.5	43	-
Problems				
Lost time in traffic jams and delays (index: 1996=100)	100	153	171	184
Train punctuality (%)	85.5	84.8	84.8	87.0
Aircraft punctuality: arriving/departing (%)	79.1 / 74.9	80.6 / 71.6	81.5 / 73.3	81.0 / 71.1
Traffic fatalities (number)	1334	817	811	791
Emissions of CO_2 (greenhouse gas) (billion kg)	31	39	39.8	*40.5*
Emissions of NO_x (air quality) (million kg)	300	217	207	*200*
Emissions of PM_{10} (particulates) (million kg)	19	13	13	*13*
Social costs of traffic jams. accidents and environmental damage (billion Euros)		Ca. 20	18 – 23	18-24
Other factors determining mobility				
Population (millions)	15.4	16.3	16.3	16.4
Gross Domestic Product (GDP) (index: 1995=100)	100	129	133	138
Employment (index: 1995=100)	100	115	117	120
Commuting distance (average, single journey in km)	18	22	22	*22*

* Figures in *italics* are provisional