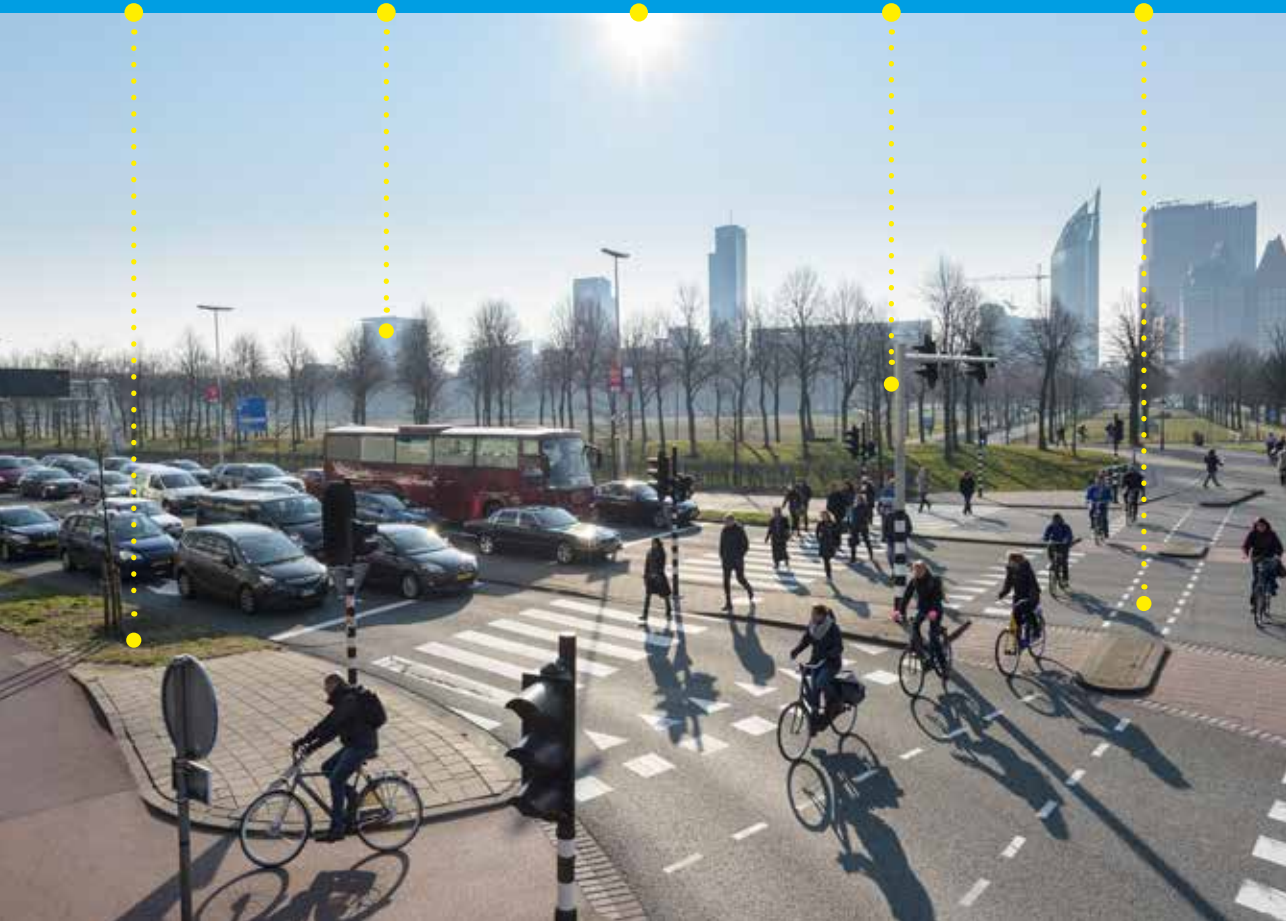
Ministry of Infrastructure and the Environment

Optimising Use Programme

Working together is key



Optimising Use
programme

Working together is key

1 The need for Optimising Use

The Netherlands is an international logistics hub, for goods as well as passengers. Rotterdam is Europe's largest sea port. Amsterdam Schiphol Airport is one of Europe's major airports. The Ministry of Infrastructure and the Environment wants the Netherlands to have a good infrastructure of roads that provide optimal mobility to people and businesses. The ministry's aim is to tackle traffic jams and to create an efficient network of roads, railways, waterways and airways.

Around 2010 the Dutch government noticed that accessibility issues were becoming increasingly urgent. This is why it has committed to major investments in new roads; approximately EUR 88 billion until 2028. However, especially around cities, there is limited space available for new infrastructure. Consequently, new ways were explored for optimising the use of existing roads. The government realised this is not something it could do by itself. The mobility issues needed to be addressed in a more integrated and cooperative manner.

One reason for this is that society requires the government to be effective and efficient. The problems that users face are not limited to those parts of the transport system for which the national government is accountable. Therefore, it has broadened its scope and is working together with all relevant stakeholders. Another important reason for this integrated approach has to do with various developments within our society. People and organisations are becoming increasingly vocal; they want to be included in the decision-making process. A third factor is the growing rate of technological innovations. These innovations can offer new solutions to problems. However, as these innovations are often developed by companies, the government's role is to facilitate, rather than develop.

Furthermore, because of the growing access to information, people want to know exactly when and where traffic jams are or where they will occur, and they want to be offered an alternative. Briefly put: users want easy access to reliable, up-to-date information, as well as flexibility. Therefore, in 2011, the Ministry of Infrastructure and the Environment launched the 'Optimising Use' ('Beter Benutten') programme.

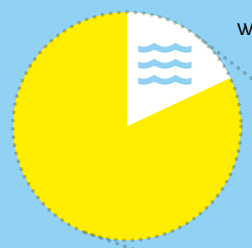
Our ambition

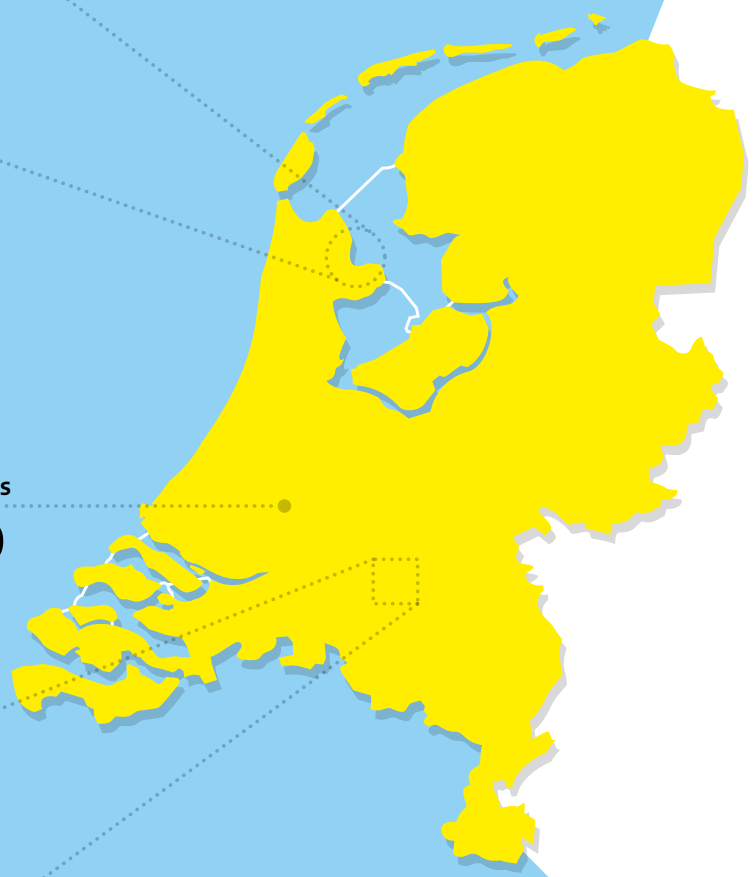
The programme consists of two parts: the first, that ran from 2011 till 2014, and the second, that runs from 2015 till the end of 2017. The goal of the programme's first part was to reduce congestion by 20% during rush hours. After this, the goal for the second part became to improve door-to-door journey times for motorists in the busiest regions during rush hours by 10% as compared to the situation without the Optimising Use programme.
Reducing CO_2 and NO_x emissions are not objectives as such, but rather a positive side-effect that are monitored.

Country facts and figures[1]

Land area

41.543 km²





Number of inhabitants

17.000.000

Population density

410 persons per km²

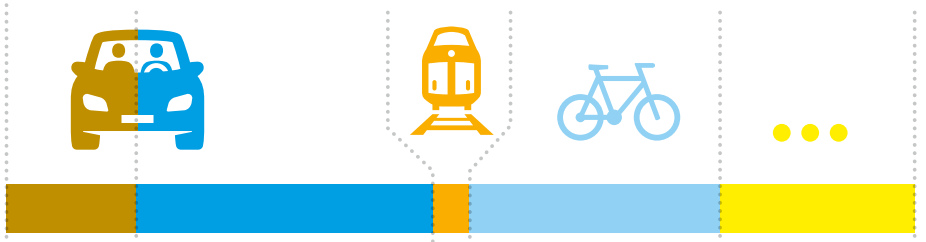
Total number of travel kilometers

184.000.000.000 km

Trips per day per inhabitants

2,7 trips

Modal split as percentage of total number of rides



Car passenger	Car driver	Public transport	Bike	Miscellaneous
14%	32%	4%	27%	21%

Cars per household

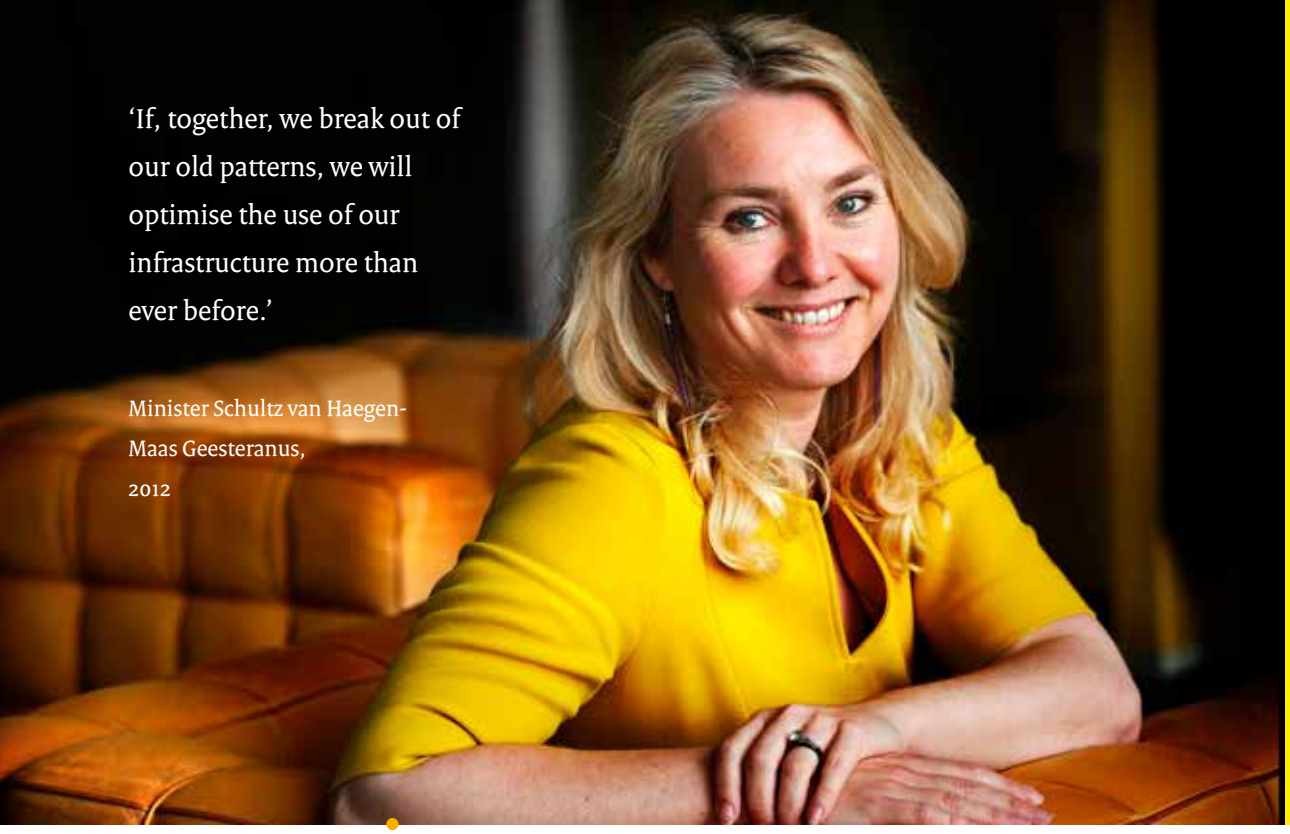
Households that have at least one car

75%

Two cars or more

almost 25%

[1] Sources used : CBS, Transport and Moblity 2016; CBS Statline ; KiM, Mobiliteitsbeeld 2016;



‘If, together, we break out of our old patterns, we will optimise the use of our infrastructure more than ever before.’

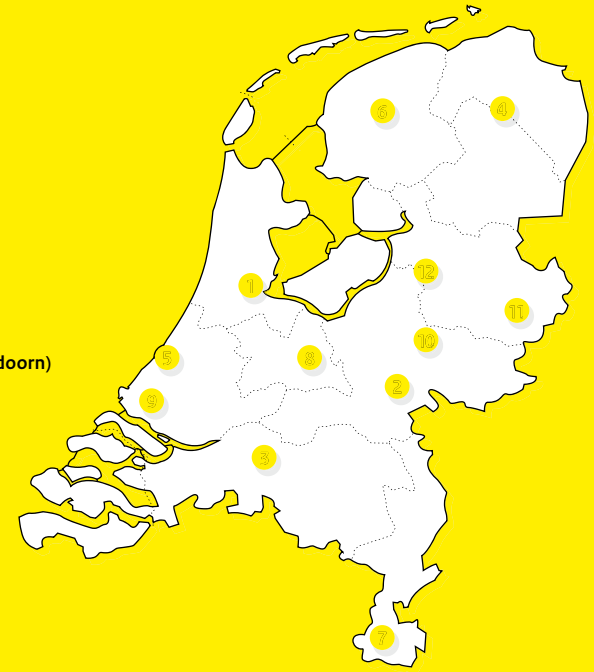
Minister Schultz van Haegen-Maas Geesteranus, 2012

2 The approach

In 2012, the Netherlands’ Minister of Infrastructure and the Environment wrote: ‘If, together, we break out of our old patterns, we will optimise the use of our infrastructure more than ever before.’ Five years later, we can indeed say that those old patterns have been broken. Not only by the innovative collaboration, but also by innovation in the approach, and innovation in the projects themselves.

The Optimising Use programme is organised as an innovative collaboration. The programme has clear, concrete objectives and ambitions. It brings together regional governments, businesses and the national government, which work together to achieve better accessibility in twelve regions as indicated in the picture.

1. Metropoolregio Amsterdam
2. Arnhem-Nijmegen
3. Brabant
4. Groningen-Assen
5. Haaglanden
6. Leeuwarden
7. Maastricht
8. Midden Nederland
9. Rotterdam
10. Stedendriehoek (Deventer, Zutphen, Apeldoorn)
11. Twente
12. Zwolle-Kampen



The measures are realised through close cooperation with the regional governments and the business sector. All parties jointly invest on the basis of co-finance. That means that 50% of the funding comes from the national government and the other 50% from regional governments and businesses. A total of EUR 1.7 billion has been invested by the participants. The national government directs, coordinates, bundles and shares knowledge and experience, and evaluates the measures.

For each region, the main accessibility issues are identified, and for each region a set of measures is developed to tackle these bottlenecks. This means customisation. After all, something that works in one region is not necessarily appropriate for another region. The measures have been clustered into three types: supply, demand, and Intelligent Transport Systems & Services (ITS)/dynamic traffic management measures. The Optimising Use programme monitors and evaluates all measures to ensure that we know what works and what does not.

In each region, a range of partners are involved, for example: municipalities, provinces, urban regions, the national road and water authority ('Rijkswaterstaat'), the confederation of industries and employers (known as VNO-NCW), individual businesses (usually combined in regional organisations), port authorities, etc. Various structures and organisational forms have arisen in the twelve regions; in each case, a programme manager is responsible for the day-to-day management of the package of measures. Decisions are made by an administrative trio. This trio is comprised of the Minister of Infrastructure and the Environment, a representative of the regional government and a CEO from a regional business.

The approach consists of four elements:

1 Good diagnosis by broad problem analysis

Together with interested parties and stakeholders (public as well as private), the accessibility problem is determined in a technical fashion in order to assess what, or rather who, is causing the problem. Next, the group of users is looked at more closely. This is done by looking at relevant stakeholders that influence the users and by a behavioural analysis of these users. In doing this, the perspective of the user is taken as the starting point.

2 Develop cost-effective solutions: departing from knowledge of traveller behaviour

Once we know what the traveller regards as a problem, and why (s)he does what (s)he does - e.g. joining the rush hour - the quest for suitable solutions that take this into account starts. Ultimately, this can lead to alternative, innovative and smart measures that improve accessibility. A cost-effectiveness analysis is performed on these solutions in order to estimate the effects.

3 Strength by (administrative) cooperation with other parties (public and private)

Working together on the problem analysis together increases the commitment of regional governments and the business sector. The result: a solution that is backed by all. At the same time, the close cooperation with parties able to exercise influence on traveller behaviour (employers, educational institutions, public attractions) provides more possibilities for influencing traveller behaviour.

4 Monitoring & Evaluation

Information is gathered on whether the measures are (cost-)effective. To that end, a comprehensive monitoring & evaluation scheme has been set up. It allows evidence-based statements about the effectiveness of measures to be made. This way, insight is gained in which types of measures work, and which do not.

3 Effects

Over 354 measures have been concluded and 400 measures are being implemented before the end of 2017. There are three types of measurements: supply, demand, and Intelligent Transport Services (ITS) /dynamic traffic management measures. Supply or demand measures for example are: stimulating public transport, improve the road infrastructure, new carpool lots and Park and Ride lots. The results vary from the development of over 17,000 new bicycle parking lots to the development of five (multimodal) information services consumers can use to make smart travel plans. In the area of dynamic traffic management, traffic lights were optimised and traffic management schemes were introduced.

354
concluded measures

400
measures being implemented

Together, these measures had the following results in the first part of the programme:

traffic lights
were optimised

traffic management schemes
were introduced

↑ 17.000
new bicycle parking lots

↑ 5
(multimodal) information services

↓ 19%
reduction of congestion in specific areas during the morning and evening rush hours

↓ 48.000 (±)
times per average working day the rush hour is avoided

↑ 2.100 +
employers and

↑ 176.000 (±)
employees have actively participated in measures (and most still do)

Even though sustainability was not an objective as such, the measures made a positive contribution to sustainability:

CO_2 ↓ 70.000 tons
a CO_2 reduction of more than 70,000 tons annually

NO_x ↓ 150 tons
a reduction of nitrogen (NO_x) emissions of 150 tons annually

The added value of Optimising Use is in:

1 **The combination of supply and demand measures**
For instance, do not just put a bicycle path in place and expect people will start using it. Also involve the employers to encourage their employees to use it.

2 **Cooperation between the State, the region and the business sector**
Travellers do not want to be confronted with State, provincial or municipal borders. They want to travel from A to B in a smart way, no matter whose road they are on. Furthermore, businesses can often help governments to increase the impact of meausures. And sometimes, the key to the solution is not in the hands of the government, but in the hands of the private sector. So cooperation is a must.

3 **Applying behavioural knowledge, can be broken down into three results:**

- It contributes to better projects, more-motivated participants, greater effectiveness and more structural effects:
  In projects in which behavioural principles have been applied, the number of rush hour avoidances is almost twice as high per participant as in projects where this was not done.

- Of the behavioural principles applied, trial programmes and application of social influence stand out:
  Projects with trial programmes yield almost twice as many rush hour avoidances per participant as other projects using behavioural principles. In projects where social influence was used, the effect is 1.5 times as strong.

- A good start is half the battle:
  The better the understanding is of the behaviour of the target group, the better the chance that the message reaches them. By starting with a thorough target group analysis, the behaviour principles can be geared better to the target group. To illustrate: using social influence is effective only if the target group considers what other people do to be important, for example in terms of travel behaviour.

4 Three effective measures

Example of an Intelligent Transport Services (ITS)/ dynamic traffic management measure

Target group: commuters on the A58

Shockwave traffic jam service as starting point for upscaling ITS services
A service that can reduce traffic jams caused by shockwaves. That is the basis for the project partners in 'Spookfiles A58' to develop building blocks for new mobility services on which numerous new ITS-applications can easily be accessed.

Description
Private partners and the government jointly developed the ingredients for a shockwave traffic jam service. Road users receive customised speed recommendations via an app. As the foundation needs to be in order, the project partners developed various building blocks, such as a wifi-p infrastructure and fast data access. Large-scale tests of new technologies are performed in a real environment for the first time. Everything is based on international standards, so the project's significance far exceeds the regional scope: it is relevant both inside and outside the Netherlands.

Results
- Development of wifi-p infrastructure, data security, test protocols for new services; all based on international standards
- Multiple services connected, including Road Works Warning - ITS-Corridor service successfully tested
- Data quality much improved
- Market cooperation and knowledge development
- More than 4,000 people have meanwhile downloaded the apps. Since Q2 2016, regular road users have been able to test the shockwave traffic jam service in practice on the wifi-p infrastructure

Example of a supply measure

Target group: commuters and transporters

Rush-hour lanes on A7 and A8 motorways in Amsterdam metropolitan region
Rush-hour lanes were introduced along the busy A7 and A8, enabling a faster flow of traffic from Purmerend to Amsterdam.

Description
The national road and water authority ('Rijkswaterstaat') introduced rush-hour lanes along the A7 and A8 between Purmerend and Zaandam. On both the north and southbound routes the national road and water authority had an entirely new rush-hour lane put in. This way, the capacity of these motorways was better geared to that of the renovated Coen tunnel (2013). The construction of the rush-hour lanes has optimised the use of the existing roads and enables a faster flow of traffic.

Intended result
Reduction of 400 vehicle loss hours per (working) day

Example of a demand measure

Target group: businesses and employees

Rush-hour reduction of home care staff in Twente
The staff of home care institutions now use E-bikes to travel to patients, rather than travelling by car.

Description
The measure was developed in close cooperation with several home care institutions in Twente. Their staff was motivated to use an electrical bike to travel to patients during the day. Before this intervention, these employees would take the car to their patients. But because most of them were living within cycling distance, the institution was willing to give it a try. During the trial period, employees were provided with E-bikes. After the trial period, participants were able to purchase the E-bikes with a discount and the home care institutions contributed with payment schemes.

Results
- 165 rush-hour avoidances per working day
- 25% cost reduction for the home care institutions
- Participants reported that the E-bikes were healthier, eco-friendlier, easier and cheaper than using their cars

Optimising Use
Programme

An edition of the Ministry of Infrastructure and the Environment

www.beterbenutten.nl/en

May 2017