

Colophon

Dutch Cycling VisionDutch Cycling Embassy, October 2018

This publication is produced
with the help of the following partners:
KiM Netherlands Institute for Transport Policy Analysis
Tour de Force
Goudappel Coffeng
APPM
Fietsersbond
BikeMinded
Loendersloot Groep
WOBS warm on bikes

Graphic Design: Goudappel Coffeng,
Dutch Cycling Embassy

Copyright © 2018 Dutch Cycling Embassy



















CONTENT

Cycling without frontiers

How come the Dutch cycle so much

Benefits of cycling

How to get there?

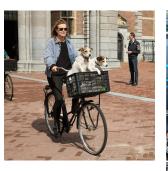
Let's do it together!

Sources



























Cycling without frontiers

The Netherlands is a country of bikes. We have a population of around 17 million people, and almost 23 million bicycles! For short distances — especially in cities — bicycles are a popular alternative to public transport and cars. In fact, one quarter of all journeys in the Netherlands are made by bike. So, cycling rules!

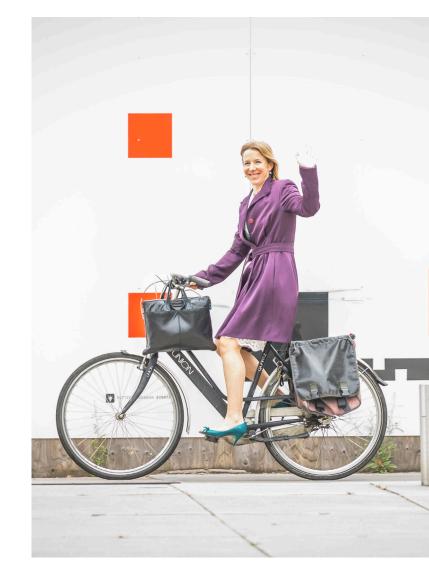
Cycling has many benefits and helps us achieve accessibility, liveability, sustainability and health goals. The urban population will continue to grow in the coming years. Tackling climate change is a key concern, and the role cycling plays in this is increasingly important. The good news is that there are still gains to be made. For example, central government, working with employers, aims to get 200,000 commuters out of their cars and onto their bikes in the next few years by encouraging the use of bicycles and e-bikes through tax incentives.

Local, regional and central government are all keen to boost cycling. That's why

we've earmarked a quarter of a billion euros to encourage cycling and make it a serious transport option. And our Tour de Force Joint Bicycle Agenda 2017-2020 is bringing government, the private sector, NGOs and knowledge platforms together to make our country even more bicycle-friendly. The agenda centres on flexibility and an integrated approach, with special focus on improving bicycle highways and and, for example, providing bicycle lockers and racks at train stations to facilitate the first and last parts of longer journeys (the 'last mile').

Of course, the Dutch approach to cycling can be applied in other countries too, so cities and regions around the world can benefit from Dutch expertise. Our Dutch Cycling Embassy experts are keen to share their knowledge worldwide. So let's face the challenges ahead together, and allow everyone to enjoy the benefits of cycling!

Stientje van Veldhoven Minister for the Environment



How come the Dutch cycle so much

A brief history of dutch cycling



Cycling in the Netherlands hasn't always been taken for granted. The Dutch have been early adopters of building highways. From the end of the 1950s, the car became the dominant mode of transportation and the number of cars on the road increased continuously. The few bicycle paths built at that time were not aimed at bringing comfort to cyclists but intended as a way of moving them to the sides in order to create more space for cars on the roads.

What has changed then, to explain that most people see the Netherlands as a cycling paradise these days? Several factors came together in the mid to late 70's. The high number of traffic casualties, particularly amongst children, was a reason for public outrage and demonstrations. The oil crisis made everyone aware that society heavily depended on oil and of the risks that came with it. As a consequence, several grassroot movements were created and called for change. Grassroot movements also became stronger in their pursuit of safer cities and safer cycling. But there was no national policy on cycling

yet and differences between cities were vast.

As a result of public pressure, urban planning policies gradually evolved and started considering the bicycle as part of mobility. The bicycle regained an importance in city planning which led to an effort to increase the density of urban development and the containment of urban sprawl. It also led to a bicycle infrastructure construction programme.

As infrastructure for cycling was built, planners started to shift their thinking from considering infrastructure in isolation to designing full networks of cycle paths in cities. The city of Delft was one of the first to create a whole network of cycle paths. These initiatives transformed cities into places where children and the elderly, rich and poor, and even the queen cycled. As a consequence, the number of people cycling started to increase again. Fast forward from there, a national cycling policy was adopted in the 1990's and cycling networks are now present in almost every

city in the Netherlands. This led to a large reduction in the number of cyclists killed in traffic. Nowadays, even with a growing population of people in their sixties and seventies, everyone in the Netherlands cycles. The older age group shows a rise in the distance travelled by bicycle every year. This increase is primarily due to the combination of an improvement of the fitness-level of this age group and the

growing use of electric assisted bicycles. What happened in the Netherlands is special and it delivers. But it is not that special that it can't be done anywhere else.









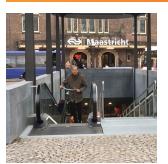




















Benefits of cycling

Why cycling is beneficial



Over the last few years, there has been a growing attention on cycling worldwide. An increasing number of cities are elaborating strategies to increase levels of cycling.

Although many cities set ambitious goals, progress is often slow and very localized.

Despite these disparities, research on cycling is clear: cycling is good for people and society as a whole. People cycling regularly live longer and healthier lives.

People also report feeling happier when they commute by bicycle than with any other form of transport.

With an increasing proportion of people living and working in cities, the bicycle represents a practical alternative to the current car-oriented societies we live in. With the appropriate infrastructure and bicycle-friendly policies to make cycling safe in cities, it is possible to reduce and avoid traffic congestion and spend the time saved on more meaningful activities. Because of the small amount of space required to cycle, the bicycle is a more

efficient way to move people in the constrained physical space of cities than for example by car. Furthermore, as the visibility of the effects of climate change increases, cycling helps us reduce our impact on the environment.

Cycling is also beneficial to the economy. A bicycle is cheaper to buy and maintain than a car, which also makes it more equitable. Businesses in areas with higher levels of cycling tend to perform better than the more car-oriented areas.

Taking cycling as a mode of transport seriously, per example by developing cycling friendly policies and comprehensive bicycle infrastructure makes cycling easier and safer for cyclists. Investing in cycling benefits not only cyclists, but also other road users, including car drivers, as cities become less congested and less polluted.



Cycling is beneficial for the economy



Riding a bicycle costs less!

The annual cost of riding a bike is approx. 300 euros whereas the annual cost of driving a car is approx. 8500 euros.¹

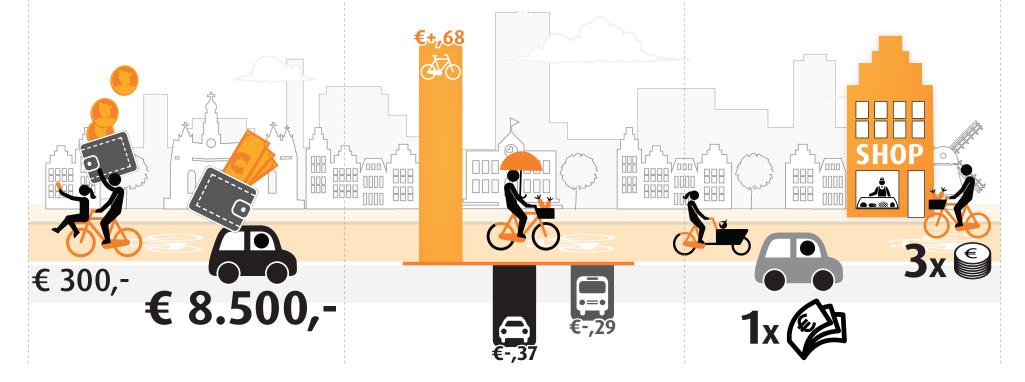
Society benefits from an urban km travelled by bicycle

A kilometer covered by bike yields a social benefit of 0.68 euro, whereas cars and buses cost society 0.37 and 0.29 euros per km travelled respectively.²

Cyclists spend more!



Cyclists shop more locally, more often and are more loyal compared to car drivers. Although cyclists spend less per visit, they spend more overall because they shop more often than people driving.³





Cycling is good for our planet and our cities



Bicycle use reduces CO² footprint

Compared to cars and buses, the product life cycle of a bicycle generates minimal carbon emissions.⁴

Cycling improves the local air quality

Local air quality improves drastically when switching from cars to bicycles. Switching from car to bicycle reduces 65% NOx pollution per km travelled.⁵

Cycling helps to improve the quality of our public space

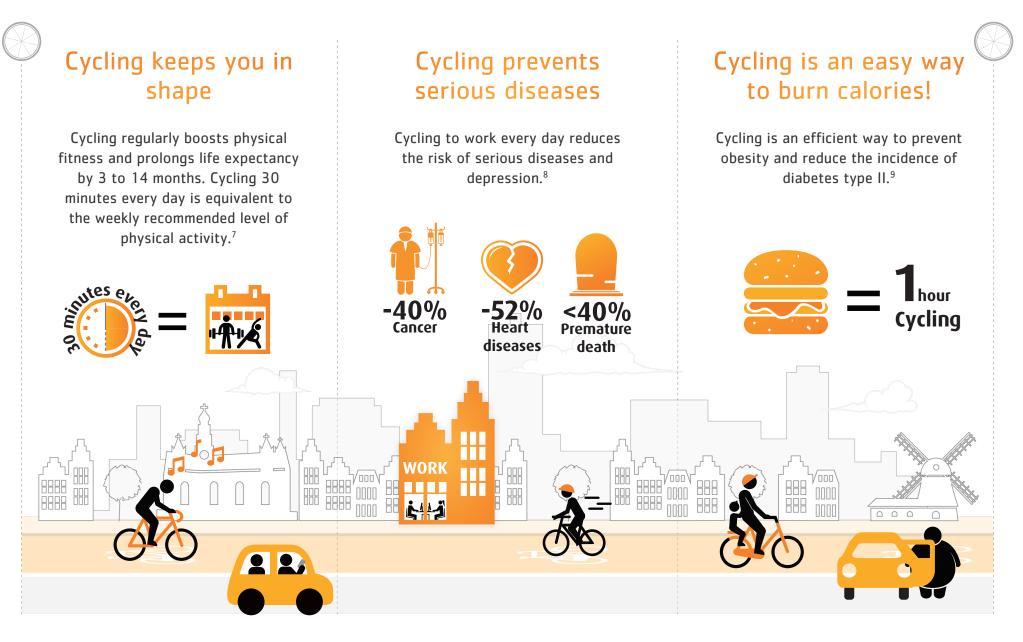
Public space will be improved by turning car parks into bike lanes and playgrounds with green areas to improve the local environment.

Cycling is silent and helps to reduce traffic noise.⁶



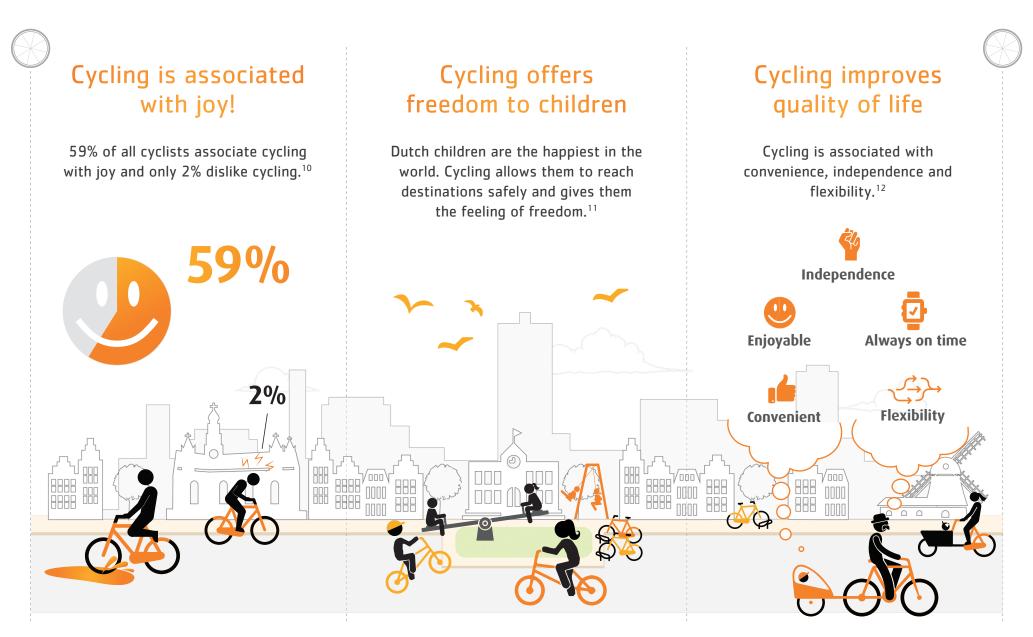


Cycling leads to a healthier life



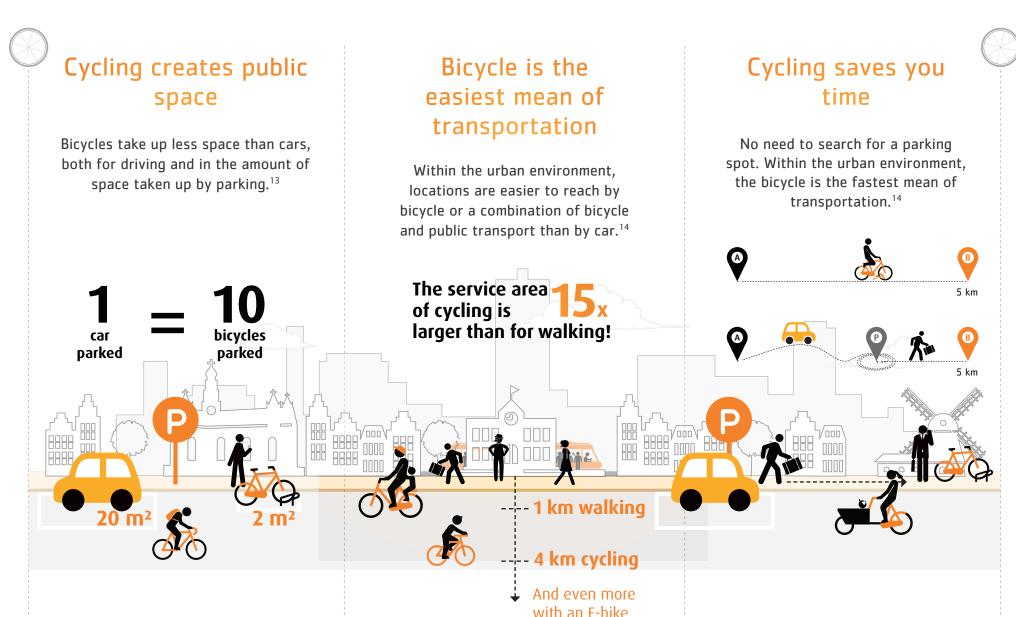


Cycling increases happiness





Cycling cities are pleasant cities





Cycling leads to safer cities



Cycling cities have fewer casualties among cyclists

Cycling cities embrace cycling in their policies and city planning.

They build a cycling culture by teaching the future generations to cycle.

Cycling cities develop safe cycling infrastructure. 15

Separating cyclists from motorised traffic results in fewer accidents

Developing a clear road safety program reduced 1.600 traffic casualities between 1998-2007 in the Netherlands. 16

Lower traffic speeds result in fewer deadly accidents

The likelihood of a deadly accident at speeds 30km/h or less is aprox. 75% less than at 50km/h. 17





Cycling encourages social participation



Cycling allows people to get access to more opportunities

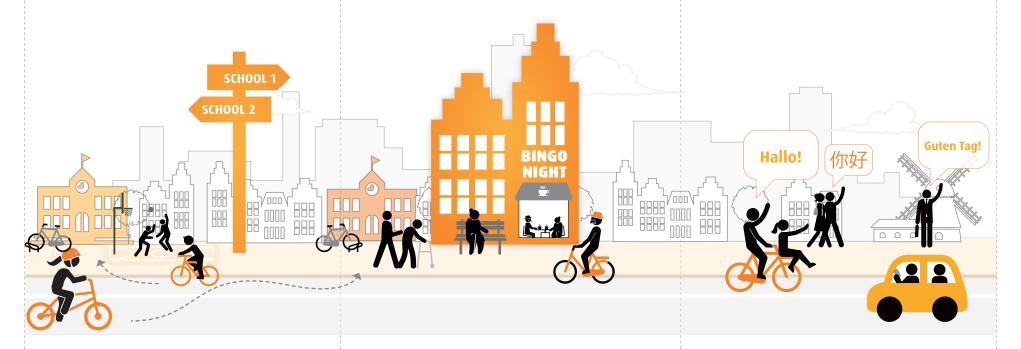
Cycling is more affordable than driving a car and allows people to get access to a larger range of options for jobs and activities. 18

Cycling keeps the elderly socially connected

Cycling allows the elderly to remain socially active for longer. 19

Cycling increases social interaction

Cycling requires social interaction with other road users to mediate traffic flows or to prevent collisions. As a result, cycling is experienced as a social activity.²⁰



How to get there?

Cycling for everyone

The Dutch have not only created a safe and extensive network for cycling. They designed this network to make cycling safe and suitable for people of all ages, all abilities and for different types of bicycles. Cycling as a mode of transport is therefore accessible to everyone.

Take cycling seriously

The Dutch take cycling seriously and treat it as a proper mode of transportation on the same level as the car or public transport. Transport policies should aim at

Stationweg 1990, The Hague (photograph Jos van Leeuwen)



the optimal mix of transport of which the bicycle is an integral part.

An integrated cycling policy is based upon hardware, software and orgware. It is not enough to focus only on building the hardware (e.g. development of infrastructure, cyclepaths). We need to

attract cyclists by working on the software (campaigning, equity in traffic laws, etc). And the orgware (capacity building of the different institutional actors) is needed to strengthen the strategy on a broader basis.

Stationweg 2016, The Hague (photograph Frank Jansen)



Main barrier to cycling is safety

People are more influenced by perceived safety than actual safety statistics. In places where the chances of an accident are statistically low, people will not consider cycling a viable transport option if the physical environment looks dangerous. Therefore, policies and design should create and promote a safe environment inviting to cycling. The Dutch have long preferred promoting active safety (prevention of accidents) rather than passive safety (softening the outcome of accidents) through the creation of bicycle infrastructure rather than recommending, or enforcing, wearing a helmet and reflective clothes.

Groothertoginnelaan 1995, The Hague (photograph Willem Vermeij)



To enable people to reach all destinations, the Dutch have built an extensive network of cycling infrastructure adapted to the environment to ensure safety and comfort for all cyclists.

"Road safety is not a goal, it is a precondition for cycling!"

This effort not only focused on building cycle paths but also making intersections

safer by changing layouts or by adding lights for cyclists, thereby reducing the chance of conflicts with vehicular traffic. Where the physical space is too small for physical separation, vehicular traffic is slowed down by a change in the street layout as well as signs. Dutch planners also create areas where cars are allowed to enter but were they are guests and cyclists and pedestrians have priority.

Groothertoginnelaan 2016, The Hague (photograph Frank Jansen)



Cycling and public transport

The bicycle is the ideal mode of transportation for short distances. Its reach can be increased when it is considered in association with other modes of transportation notably public transport (e.g. trains, trams or ferries). It is therefore important to ensure an easy transition between cycling and other modes of transport (e.g. cycle path to and from the station, bicycle parking next to stations, shared bicycles at egress stations). We talk about chain mobility.

In order to make cycling a sensible transport option, urban development should be oriented around public transport nodes, so that people can walk or cycle to the station. In the Netherlands, around

Stationsplein station Hollands Spoor 1995, The Hague (photograph Sjoerd van der Hucht)



40% of train passengers arrive by bicycle. Planning for the bicycle further increases the catchment area of the station up to 15 times compared to just considering walking. This model extends the TOD (Transit Oriented Model) concept into a HOD: 'Hybrid Oriented Development'.

Planning for density and proximity

In denser neighborhoods the modal shift for cycling is much higher than in more rural areas. The bicycle is a good mode of transport for short distances, therefore its benefits are greatly increased when urban areas are designed for proximity between different uses (residential, commercial, health services, shops ...). No large supermarkets or 'hypermarché's' on the edge of the town that can only be reached by car, but a spread of smaller shops on a cycling distance.

Cycle paths don't have to be alongside roads

The Dutch don't limit themselves to building cycle paths on or along roads. When

Stationsplein station Hollands Spoor 2016, The Hague (photograph Frank Jansen)



planning new neighborhoods for example, planners will sometimes create cycle paths completely isolated from roads for cars. Usually, these cycle paths will offer a more direct route to interesting destinations. (e.g. Leiden Merenwijk to Leiden station, Schippersbrug in Utrecht). Sometimes this is created by diverting traffic to other roads to create simpler, safer, faster paths for cyclists through neighborhoods. This is called 'filtered permeability'.

Protecting the cyclists in the law

In complement to building the infrastructure to making cycling safe, The Netherlands also changed its laws to further increase the protection of cyclists. In the case of a collision between a car and a

Javastraat 2010, The Hague (photograph Claudia van Noord)



bicycle, the car driver is liable by default. It is considered that due to its size and power drivers should pay extra attention to other, more vulnerable, road users.

Creating a bicycle agenda

The government sets out objectives to promote and increase the level of cycling. The current bicycle agenda is named 'Tour de Force 2020'. The objective of this plan is to increase the number of kilometres cycled over the period 2017–2027 by

20 percent. To do so, the agenda defines the different actions needed to reach the objective as well as the different actors required. This plan follows several other national bicycle plans going back to the early 1990s. These plans are then integrated in the regional and local plans. The national plan helps creating a continuity and consistency of the bicycle infrastructure and a coordinated action for better cycling.

Javastraat 2016, The Hague (photograph Frank Jansen)



Let's do it together!

No need to reinvent the wheel

Transforming the Netherlands into a cycling nation required overcoming numerous challenges. There is no need to reinvent the wheel: the Dutch cycling experts who realised change in the Netherlands are more than happy to help cities and regions around the world making cycling an option for everyone!

The Dutch Cycling Embassy can help you by connecting you with these experts in order to become a bicycle friendly place.

Let us know what challenges you are facing and let us help!

Contact us via info@dutchcycling.nl or call +31 15 202 6116.



Sources

- 1. Hendriksen, I. and R. van Gijlswijk (2010), Fietsen is groen, gezond en voordelig [Cycling is green, healthy, and economical]. Leiden: TNO Quality of Life group.
- 2. Decisio (2016), Waarde en Investeringsagenda Fietsen Verantwoordingsrapportage [Justification report on the social value of and investment agenda for cycling]. Amsterdam: Decisio.
- 3. Decisio (2017), Waarderingskengetallen MKBA Fiets: state-of the art [Rating indicators of cycling SCBA: state-of-the-art]. Amsterdam: Decisio.
- 4. European Cyclists' Federation. (2016). Shopping by bike: Best friend of your city centre | ECF. [online] Available at: https://ecf.com/groups/shopping-bike-best-friend-your-city-centre [Accessed 5 Sep. 2018].
- 5. Harms, L. and Kansen, M. (2018). Cycling Facts. [online] Ministry of Infrastructure and Water Management, p.13. Available at: https://english.kimnet.nl/publications/publications/2018/04/06/cycling-facts [Accessed 11 Sep. 2018].
- 6. Institute for Transport Studies, University of Natural Resources and Applied Life Sciences (BOKU), Vienna (2010). Cycle-friendly cities How

- cities can stimulate the use of bicycles. [ebook] CIVITAS GUARD Evaluation, Monitoring and Dissemination for CIVITAS II. Available at: http://civitas.eu/sites/default/files/civitas_ii_policy_advice_notes_03_cycling_and_walking.pdf [Accessed 5 Sep. 2018].
- 7. De Hartog, Jeroen Johan, et al. (2010), "Do the health benefits of cycling outweigh the risks?" Environmental health perspectives 118.8 (2010): 1109.
- 8. Hans Nijland (2017): Fietsen leidt tot langer en gezond leven [Cycling leads to a longer and healthier life]. The Hague, Netherlands Environmental Assessment Agency.
- 9. Harms, L. and Kansen, M. (2018). Cycling Facts. [online] Ministry of Infrastructure and Water Management, p.11. Available at: https://english.kimnet.nl/publications/publications/2018/04/06/cycling-facts [Accessed 11 Sep. 2018].
- 10. Harms et al. (2017), Stablele beelden verdiept; trends in beleving en beeldvorming van mobiliteit. [In-depth look at stable images; trends in perception of mobility]. The Hague, Netherlands Institute for Transport Policy Analysis.

- 11. Taskovski Films. (2018). Why We Cycle Trailer. [Online Video]. Available at: https://vimeo.com/246432864. [Accessed 12 Sep. 2018].
- 12. Harms et al. (2017), Stabiele beelden verdiept; trends in beleving en beeldvorming van mobiliteit. [In-depth look at stable images; trends in perception of mobility]. The Hague, Netherlands Institute for Transport Policy Analysis.
- 13. 1 Fietscommunity [Cycling community] (2017), Van wie is de stad? [Who owns the city?] The Haque: Platform 31.
- 14. Tetteroo, E. (Erik), 2015. Urban Cycling = HOD. Master City Developer.
- 15. Pucher, J. and Buehler, R. (2012). City cycling. Cambridge, Mass.: MIT Press.
- 16. Schepers, P., Methorst, R., Thüsh, M., van der Voet, M. and Wegman, F. (2014). Ontvlechten van fiets en snelverkeer. [ebook] Available at: https://library.swov.nl/action/front/fulltext?id=339618 [Accessed 5 Sep. 2018].
- 17. Archer, J., Fotheringham, N., Symmons, M. and Corben, B. (2008). The Impact of Lowered Speed Limits in Urban and Metropolitan Areas. [ebook]

Monash University Accident Research Centre. Available at: https://www.monash.edu/_data/assets/pdf_file/0007/216736/muarc276.pdf [Accessed 5 Sep. 2018].

- 18. Eur.nl. (2017). Hoe fietsen sociale participatie kan verbeteren. [online] Available at: https://www.eur.nl/nieuws/hoe-fietsen-sociale-participatie-kanverbeteren [Accessed 5 Sep. 2018].
- 19. VeiligheidNL (2018). Toolkit fietsveiligheid. [online] Veiligheid.nl. Available at: https://www.veiligheid.nl/valpreventie/voorlichtingsmateriaal/toolkit-fietsveiligheid [Accessed 5 Sep. 2018].
- 20. Avila-Palencia, I., Int Panis, L., Dons, E., Gaupp-Berghausen, M., Raser, E., Götschi, T., Gerike, R., Brand, C., de Nazelle, A., Orjuela, J., Anaya-Boig, E., Stigell, E., Kahlmeier, S., Iacorossi, F. and Nieuwenhuijsen, M. (2018). The effects of transport mode use on self-perceived health, mental health, and social contact measures: A cross-sectional and longitudinal study. Environment International, 120, pp.199-206.

Photography:

Front page: photo by Diga Verde Fotografie

page 3:



photo's: 1, 3, 4, 5, 8, 13 by Shirley Agudo photo 2 by Maurits Lopes Cardozo photo's: 6, 7, 10, 12 by Chris Bruntlett photo 9 by Urban Arrow photo 11 by WOBS

page 6: by Jos van Leeuwen

page 7:



photo's: 1, 13 by Diga Verde Fotografie photo's: 2, 3, 4, 5, 7, 12 by Shirley Agudo photo's: 6, 8, 11 by Mark Wagenbuur photo's: 9, 10 by Chris Bruntlett page 9: photo by Chris Bruntlett page 11: photo by Goudappel Coffeng

page 13: photo by Diga Verde Fotografie

page 15: photo by Barbra Verbij Fotografie

page 17: photo by Chris Bruntlett

page 19: photo by Goudappel Coffeng

page 21: photo by Chris Bruntlett

page 23: photo 1 by Jos van Leeuwen, photo 2 by Frank Jansen

page 24: photo 1 by Willem Vermeij photo 2 by Frank Jansen

page 25: photo 1 by Sjoerd van der Hucht photo 2 by Frank Jansen

page 26: photo 1 by Claudia van Noord photo 2 by Frank Jansen

page 27: photo by Shirley Agudo



The Dutch Cycling Embassy members:



















































Movares



mOve mObility





















MOBYCON



























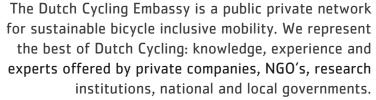












About the Dutch Cycling Embassy

Would you like to know more about the Dutch Cycling Embassy?

Visit: www.dutchcyclinq.nl















