The Golden Bike-Train Combination.

Chris Bruntlett, Dutch Cycling Embassy
Marise Bezema, NS
Simone Jorink, Movares
Roland Kager, Studio Bereikbaar

Dutch Cycling: For a Cycle-Friendly World

The Dutch Cycling Embassy is a vast network of public and private organizations from the Netherlands who wish to share their knowledge and expertise to help cities experience the many advantages of cycling.

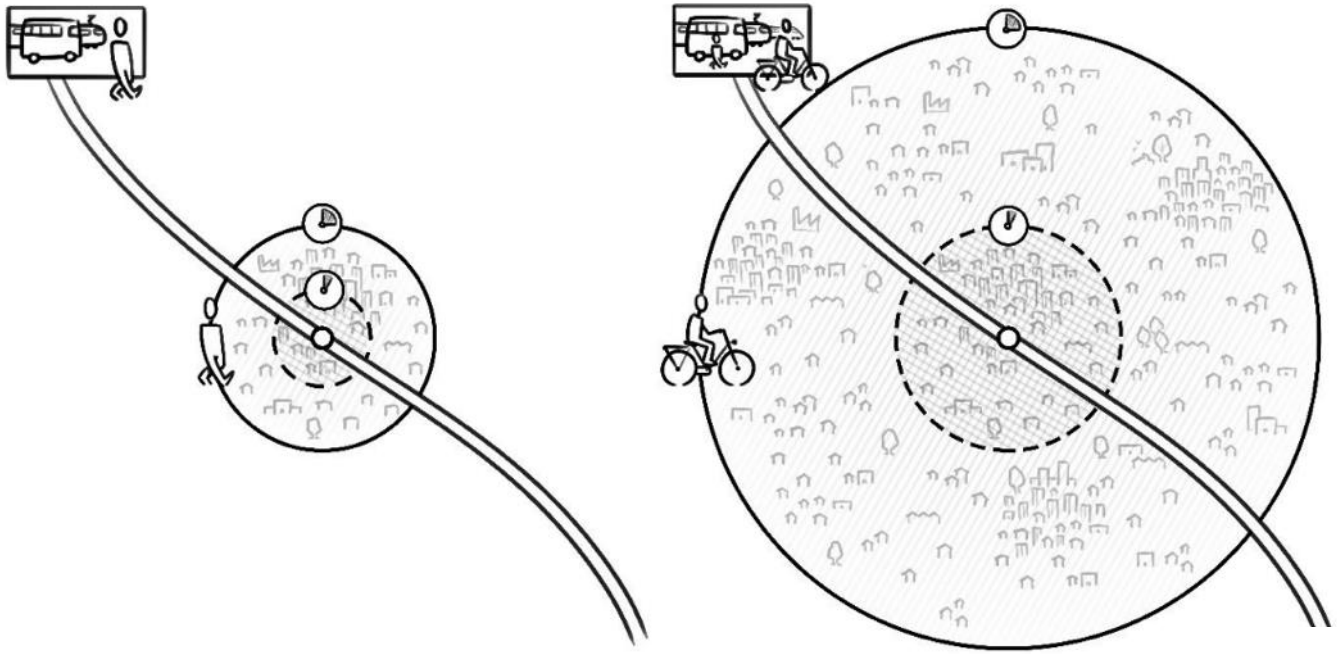
- **Experience** the Dutch cycling culture first-hand
- **Think** about best possible solutions and achievable results
- **Act** by applying these solutions to your local context
- **Learn** more about effective policies and best practices

DCE Public-Private Partnership

DUTCH
CYCLING
EMBASSY

“THE BICYCLE IS NOT AN ALTERNATIVE TO THE CAR. NEITHER IS THE TRAIN. THE COMBINATION, THOUGH...” – MARCO TE BROMMELSTROET

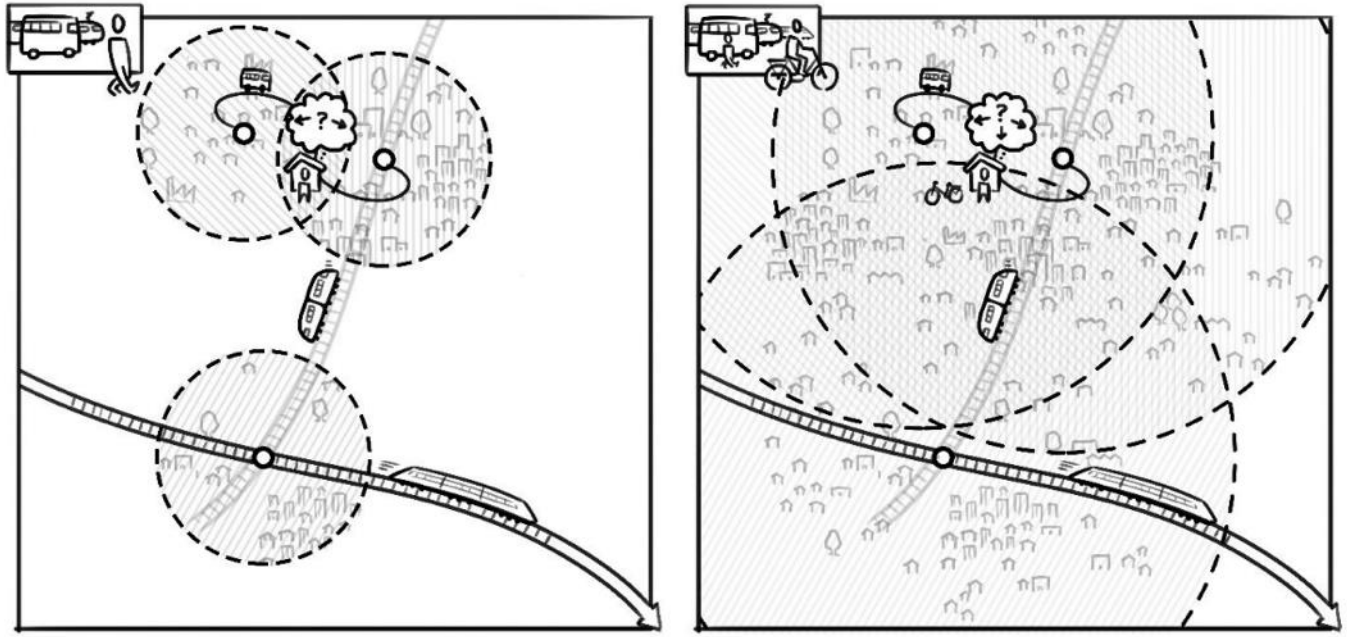
Figure 1. **Mechanism of increased catchment areas**



DUTCH CYCLING EMBASSY

bit.ly/dcebiketrain

Figure 2. **Mechanism of increased choice**



How does integrating cycling and public transport improve regions? It increases:

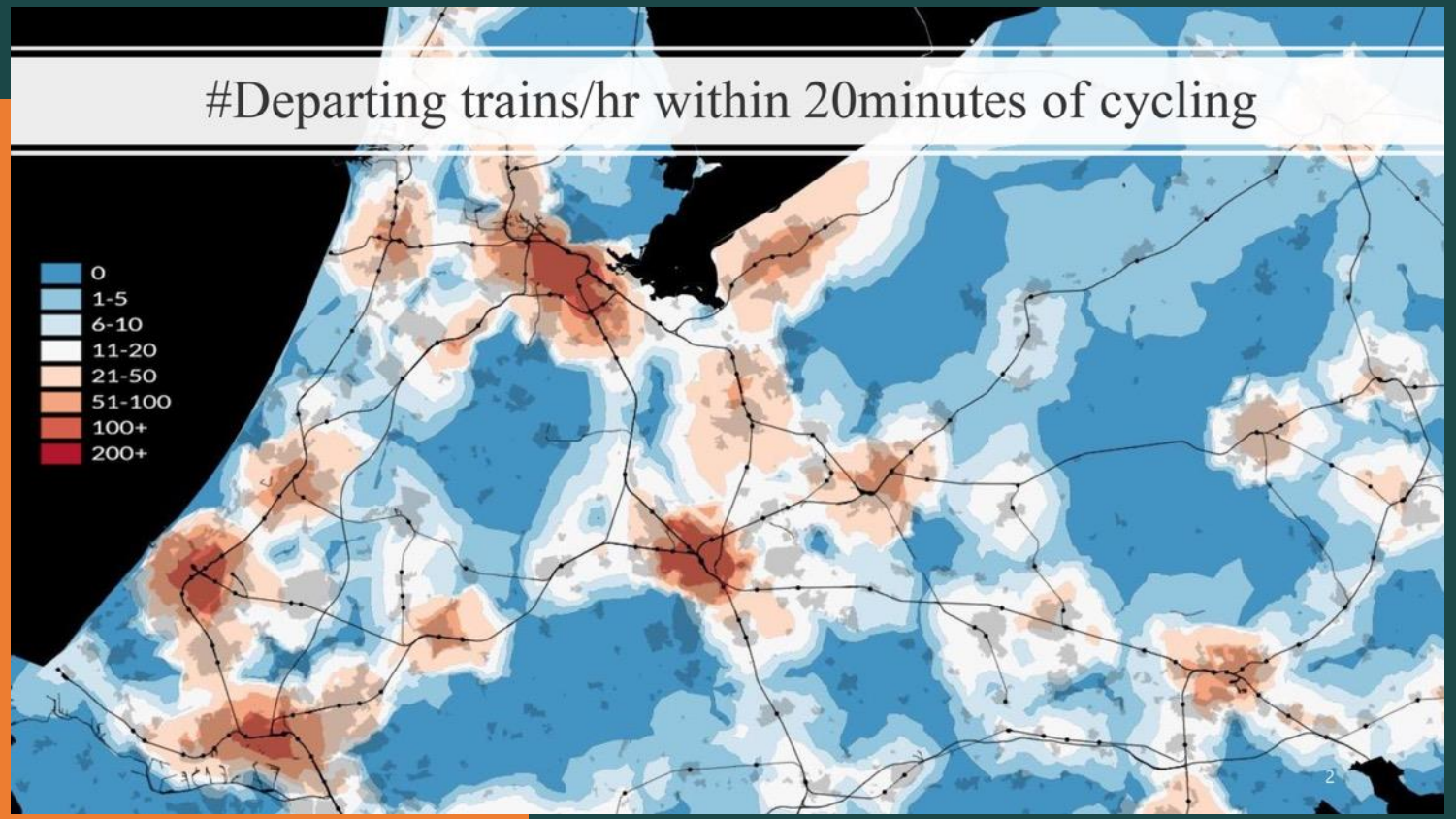
1. Catchment areas
2. Station choice
3. Personalisation/customisation
4. Market base
5. Competitiveness of transit
6. Liveliness of public space
7. Agglomeration effects

MODE
Linus
BROOKS

Carlsberg

OV-fiets.nl

The Magical Bike-Train Combination: More Riders, More Cyclists, Fewer Cars

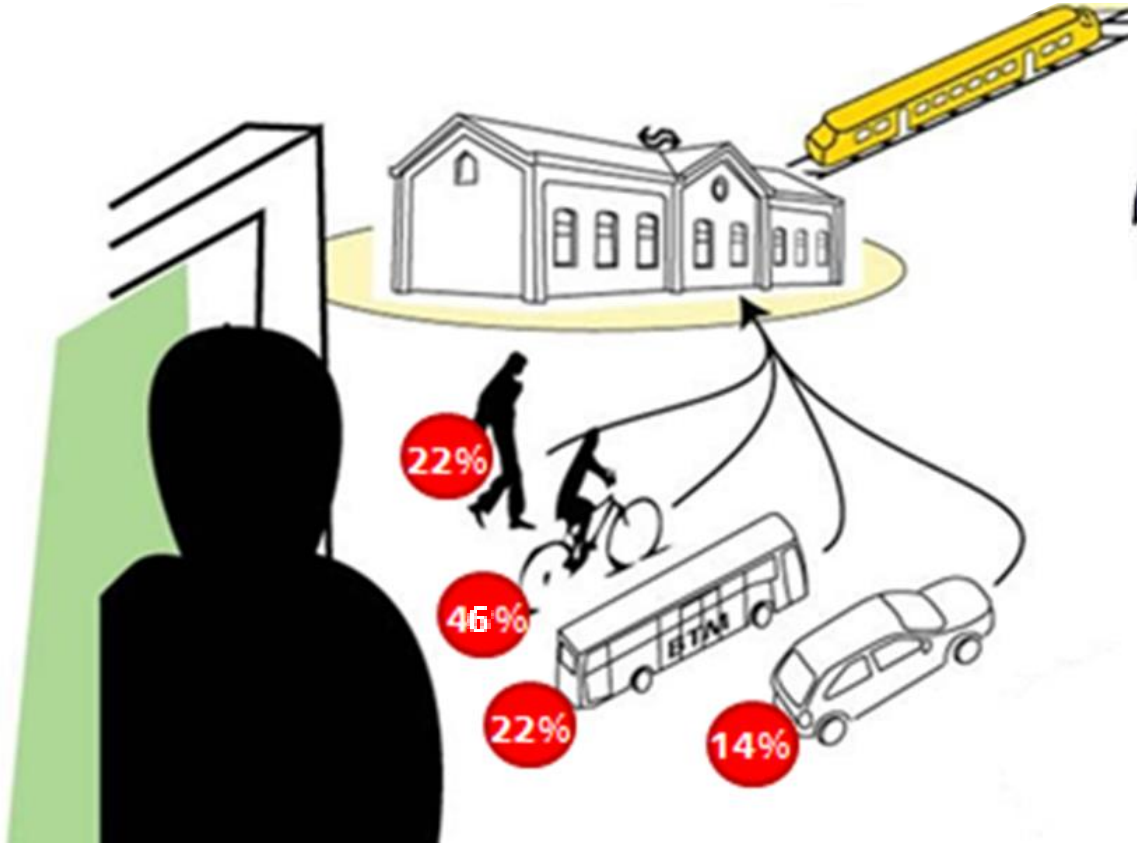


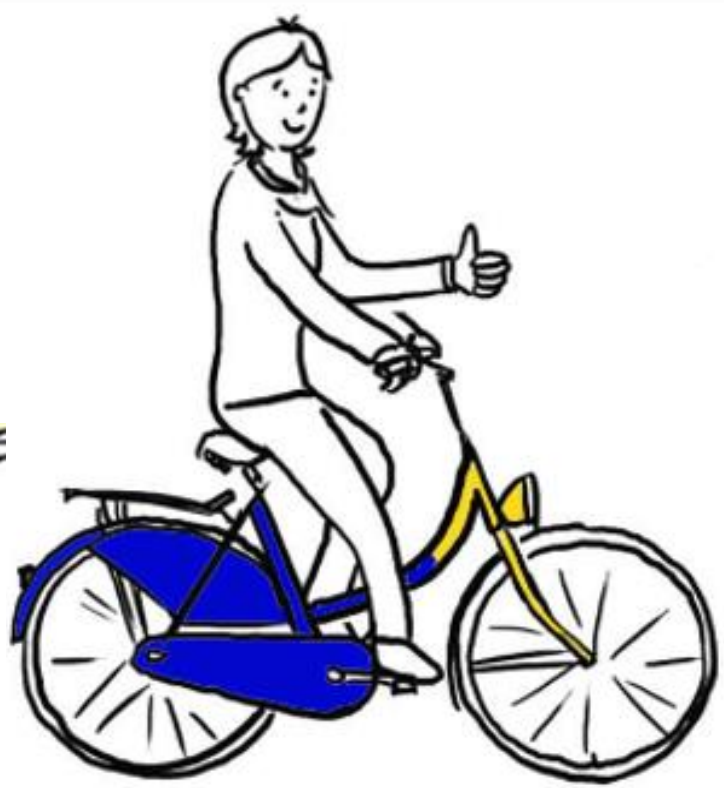
- Roughly HALF of all train journeys in the Netherlands begin with a bicycle ride to the station (approximately 650,000 journeys per day)
- Nearly a quarter ALL kilometers cycled in Dutch cities are to or from a station
- 21% of bike-train trips replace car trips; 66% of bike-train users have access to a car but prefer not to use it
- 20% of Dutch people live within one kilometer and 80% live within five kilometers of at least one station

DUTCH CYCLING EMBASSY

EMAIL INFO@DUTCHCYCLING.NL
WEBSITE WWW.DUTCHCYCLING.NL

Introduction: Marise Bezema, NS Stations


22%
46%
22%
14%



Fietsreparatie
binnen 1 dag
Fietsverhuur
Verkoop van
top-occasions en
stationsfietsen
www.zilt-bikes.nl

Rij 40
Centrum
Westerlaan
Rij 39
Rij 38
Rij 37
Rij 36
Rij 35
Rij 34
Rij 33
40
39

Providing a seamless trip

- Available
- Safe
- Affordable
- Easy to use

- Available at nearly 300 locations; mostly railway stations but also at bigger public transport hubs.
- The seamless trip pyramid also applies here: OV-Fiets present, available and easy to use.
- We have 26.000 bikes and in 2023 travellers made 6,7 million trips
- Popular with travellers for their last mile
- Less second bikes at destination
- Less demand for taking a bike into the train

Operational excellence

Tailormade solutions per type of station:

- A guarded parking option with staff at the largest garages (#56)
- A guarded self service option for the mid-size garages (#53)
- OV-Fiets for rent
- Bicycle repair shops (#33)

Uniform operation in our parking garages; standard processes for travellers, parking enforcement and safety.

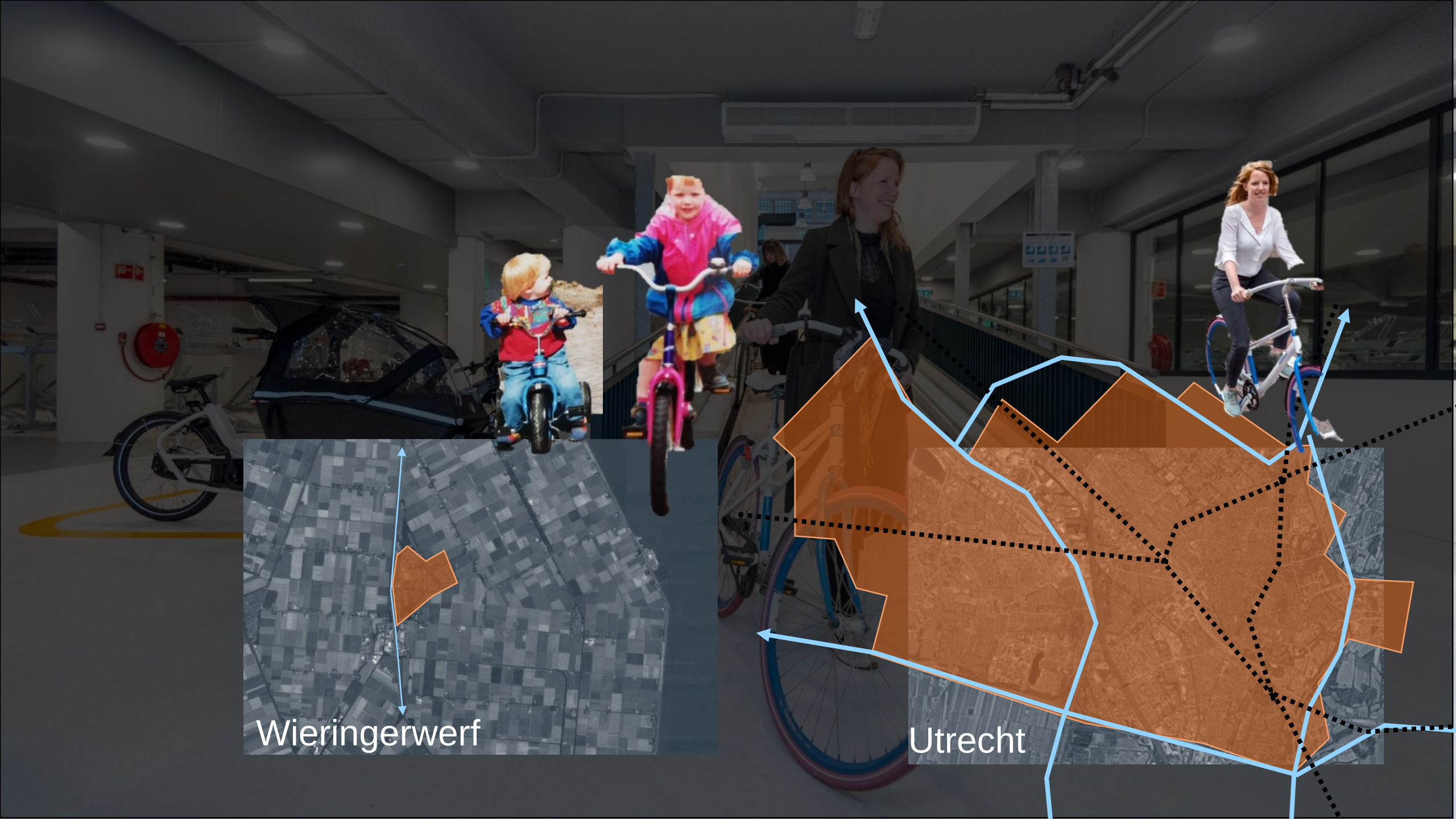
fiets P+R WC Services

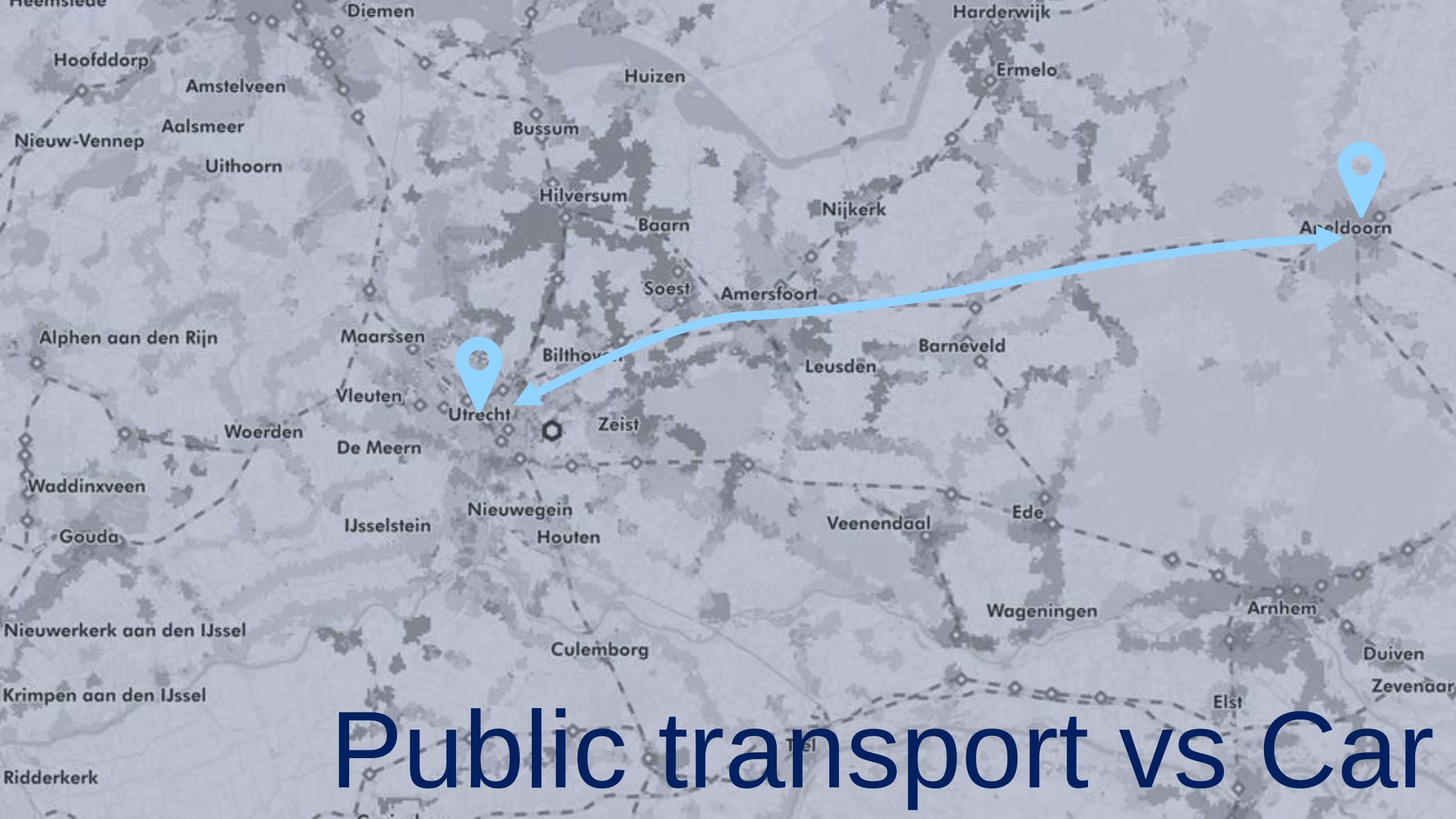
Kies een reis
Zwolle
Lelystad Centrum
Vertrek: 11:13 wo. 10-3
Opties
11:07 - 11:37
SPR Sprinter
11:17 - 11:42
IC Intercity
11:37 - 12:07
SPR Sprinter

Questions?

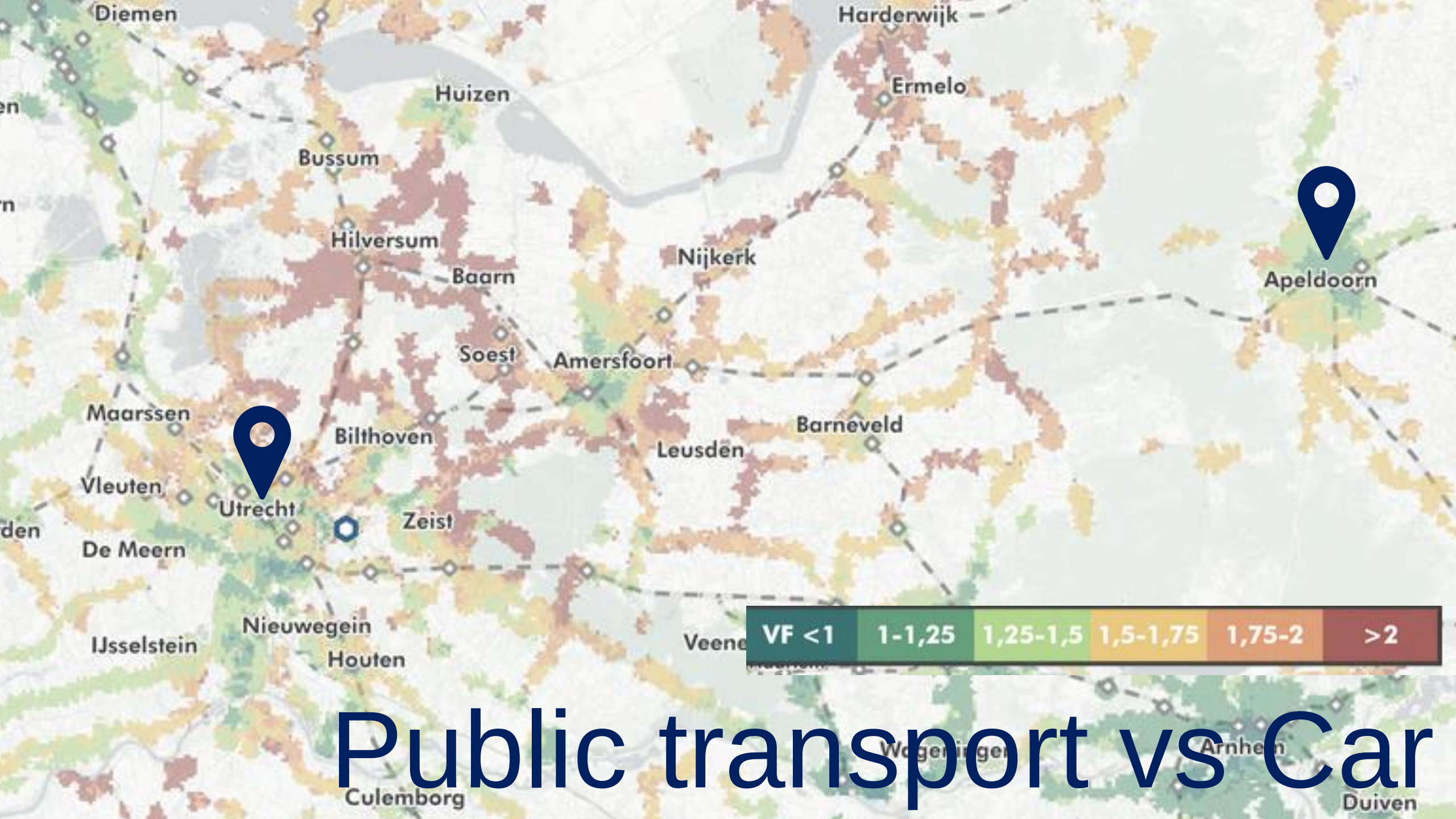
Simone Jorink

Movares


Wieringerwerf
Utrecht



Public transport vs Car



Public transport vs Car

“At the origin and destination you need space to park the bike

“At the **origin** and destination you need space to park the bike

5
FREE WHEELY

buurtstalling

60%

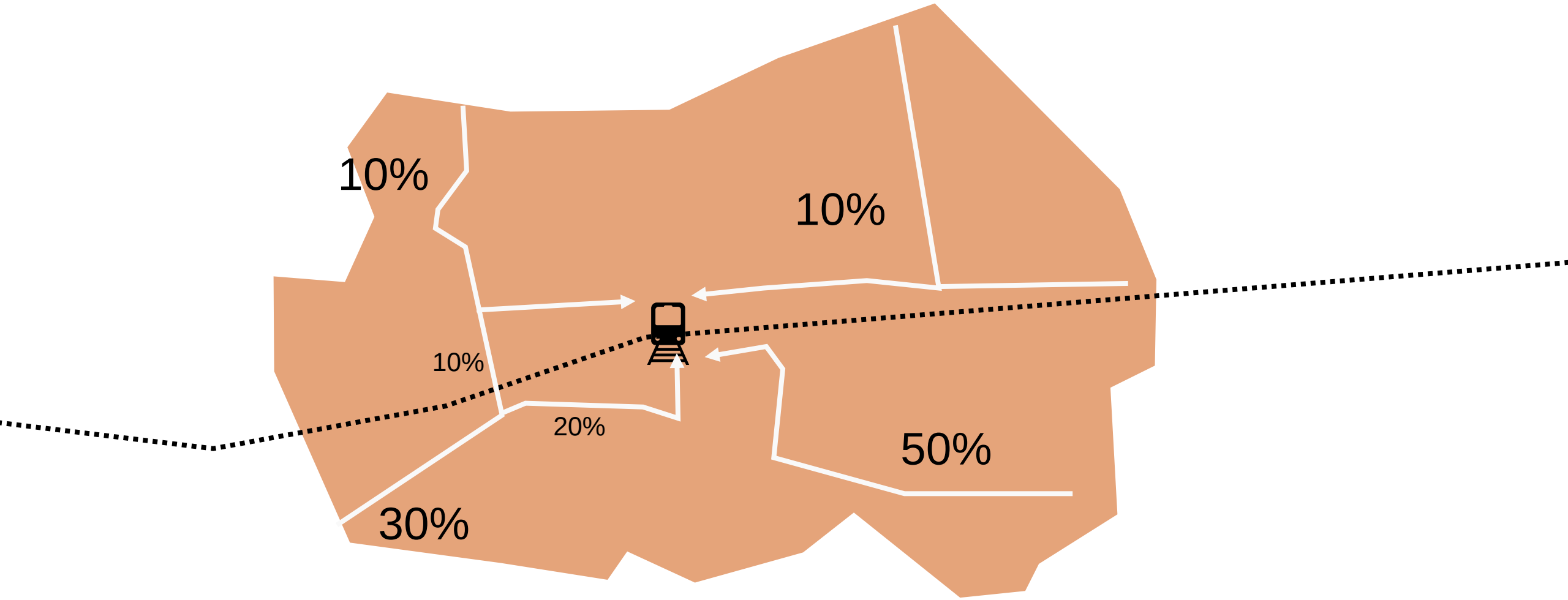
20%

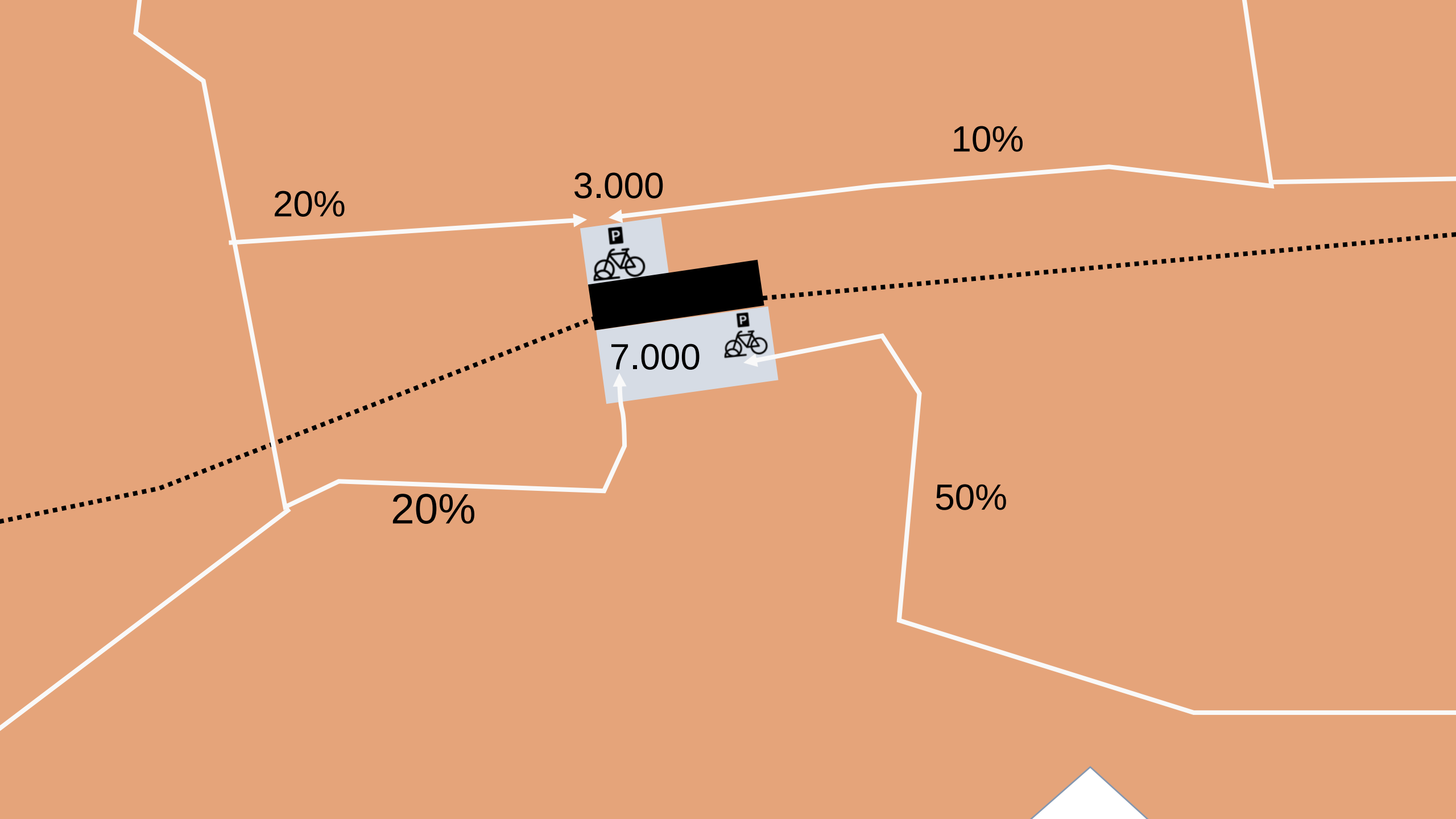
20%

46%

bicycle
parking

bicycle
parking
bicycle
network


10%
10%
10%
20%
50%
30%


10%
3.000
20%
7.000
20%
50%

Stationsplein
randstad
randstad

2016

2020

Utrecht Central Station

Stadsarchief Amsterdam (Doriann Kransberg)

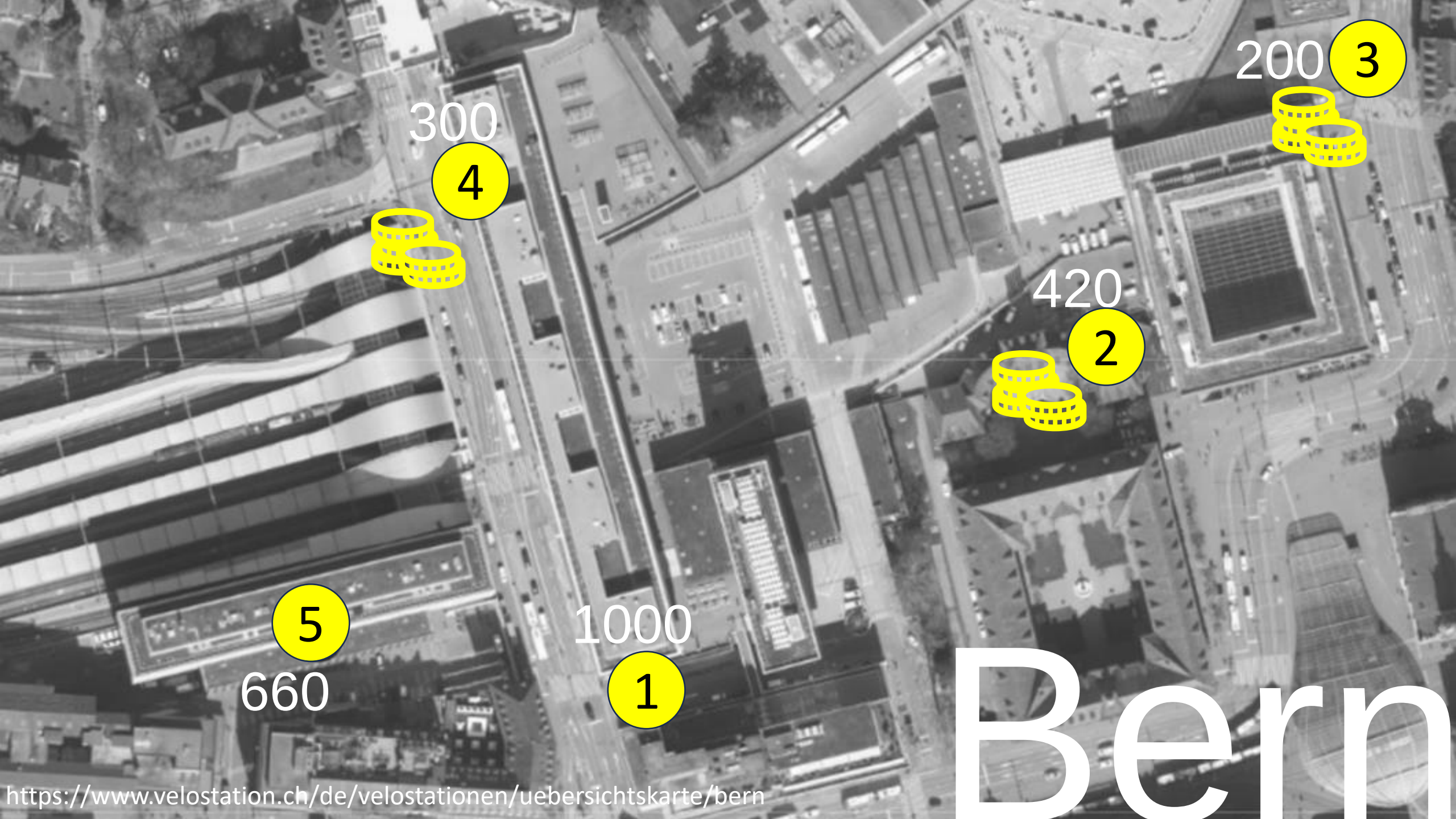
500 - 1.800

before

Rij 7
Boven 75
Onder 100
after

VELO
NICOLAS

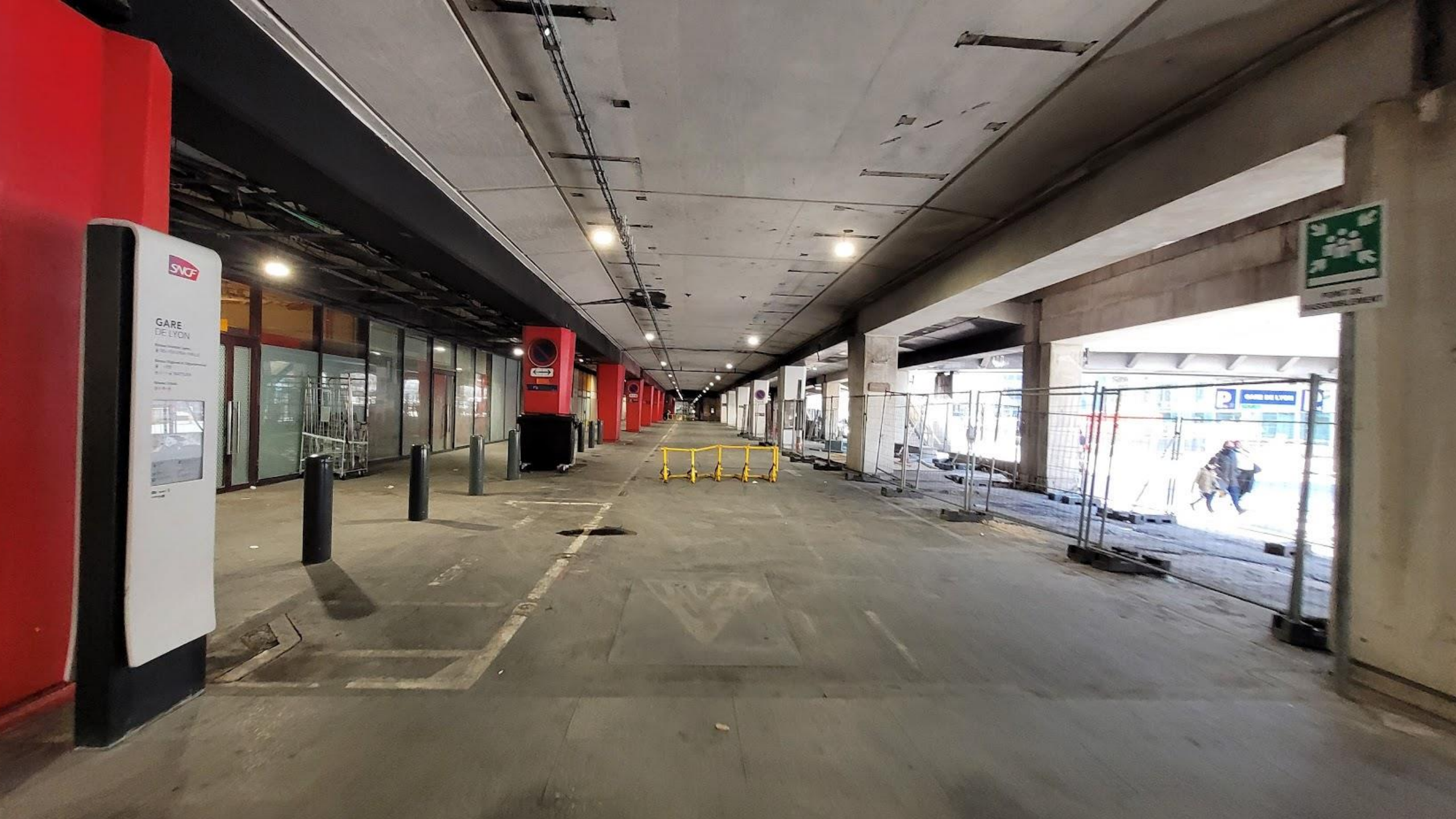
SNCF
Véligo
Bienvenue dans votre espace Véligo
Véligo
ÎledeFrance mobilités



https://www.velostation.ch/de/velostationen/uebersichtskarte/bern

https://www.velostation.ch/de/velostationen-uebersichtskarte/bern

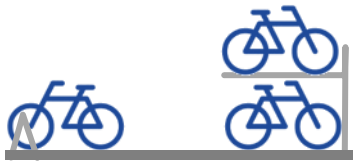
Paris


SNCF
GARE
DE LYON

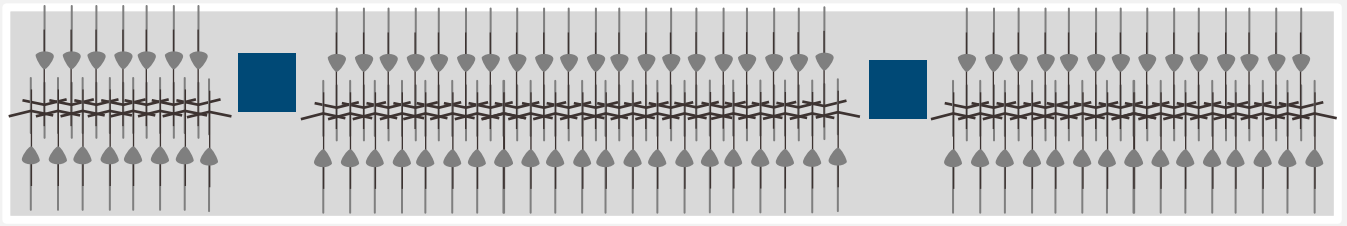
rix

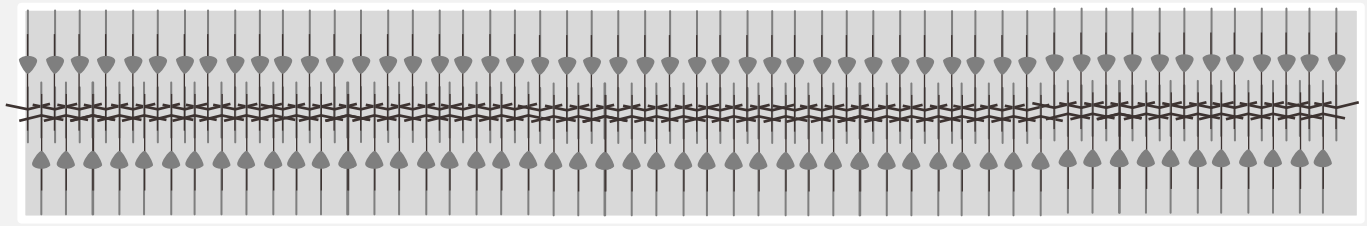
GARE DE LYON
franprix

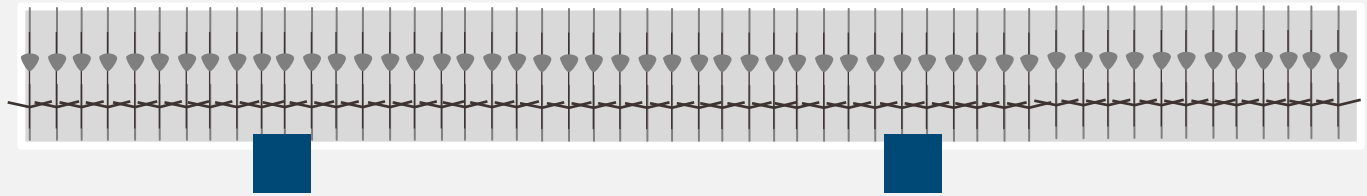
Zuidplein
uitgang
OV-fiets



125 to 250 spots for bikes



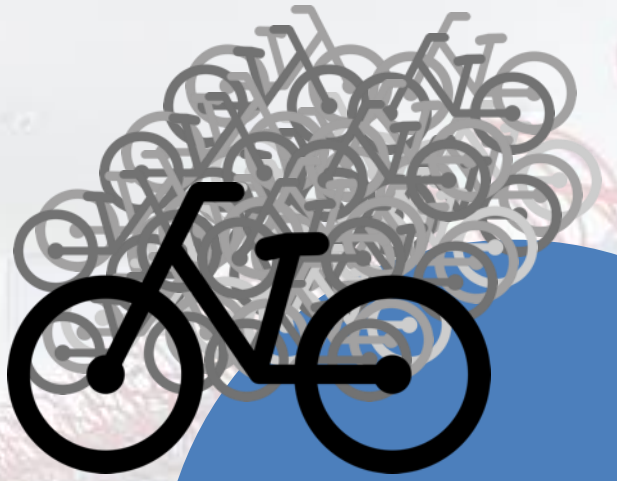




6 spots for cars

MOSZKOWICZ

10. Sijpesteijn (herontwikkeling)
12. Onder forum/sijpestein
01. VL post
11. Parkeergarage Stadskantoor
03 Jaarbeurspleingebouw
02. Beatrixtheater
13. Dubbele knoop
05. Wonderwoods
09. Poortgebouw
08. Gildekwartier
07. Radboud/oude HC
06. Voorzetgebouw
04. Apotheek
0 20 40 60 80 100m
+5.000

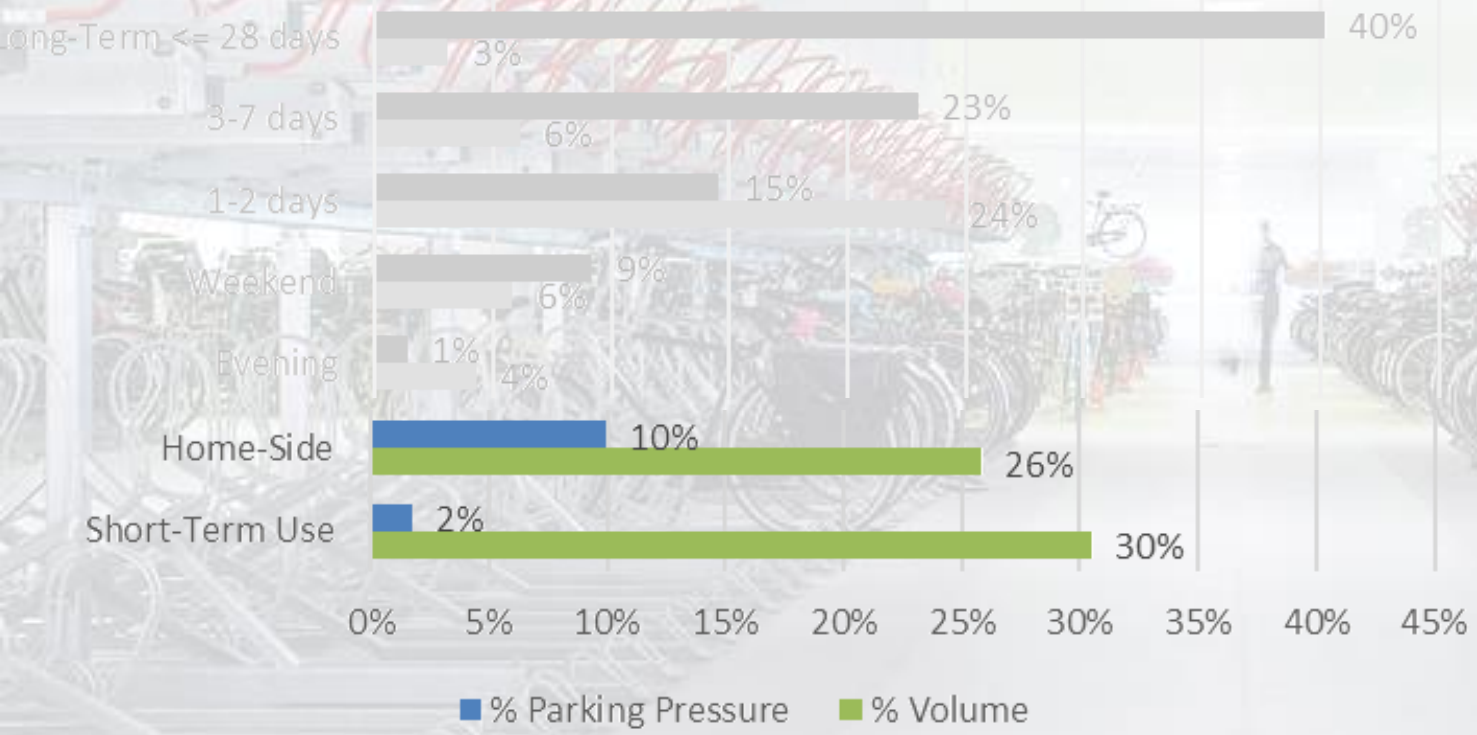


60%

9%

Last mile

Source: Data of Stationspleinstalling

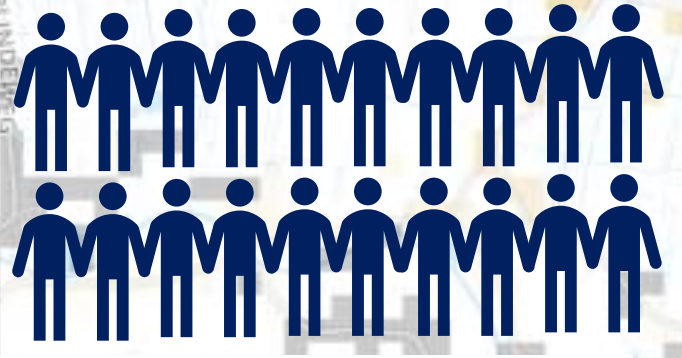


Source: Data of Stationspleinstalling

12%

56%

First mile



580.662 people

1.009.615 people

45 min

Simone Jorink

Movares

Cycling, transit & urban revival

Roland Kager, Intertraffic, April 17, 2024

STUDIO —— BEREIKBAAR

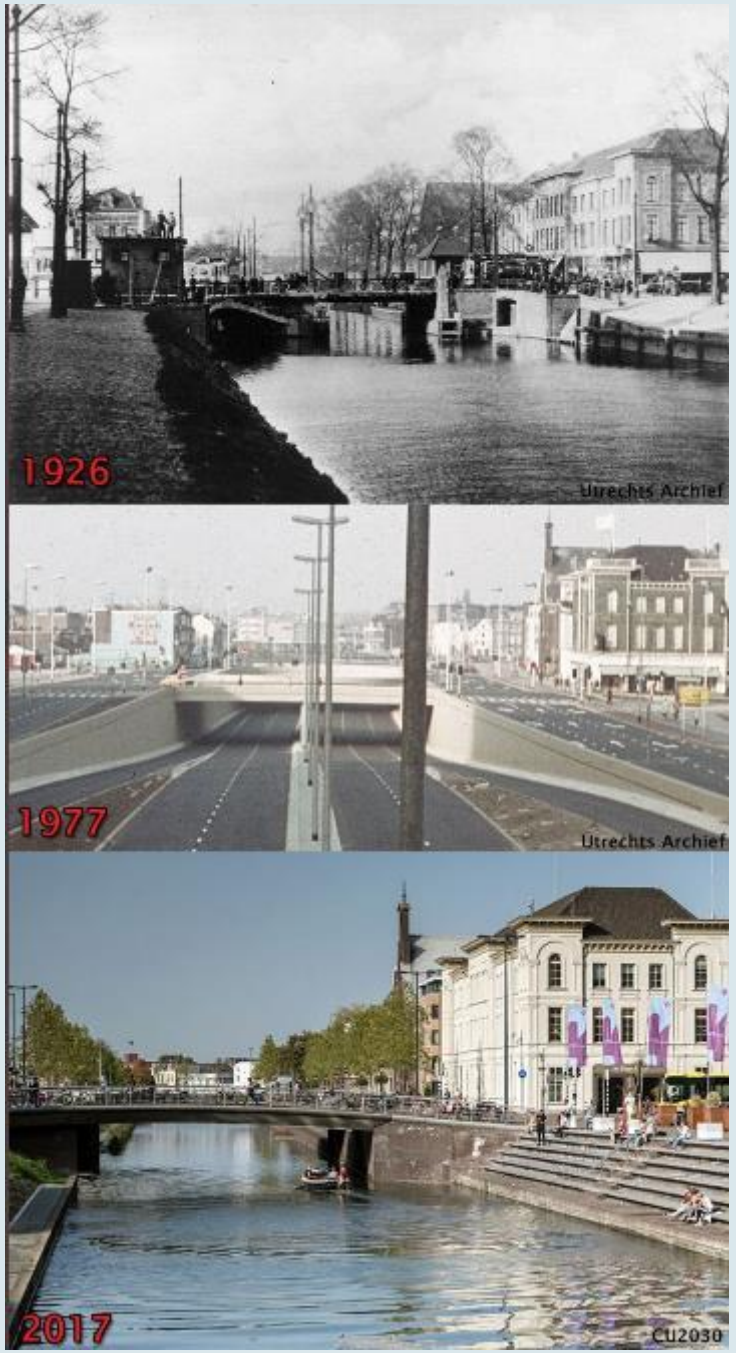
Road is closed…?

+ Or… The street is open?

+ How come we almost exclusively find such places (better: such recent transformations) within cities?

Urban transformation…

It only started 20-25 years ago, how about the next 25 years?



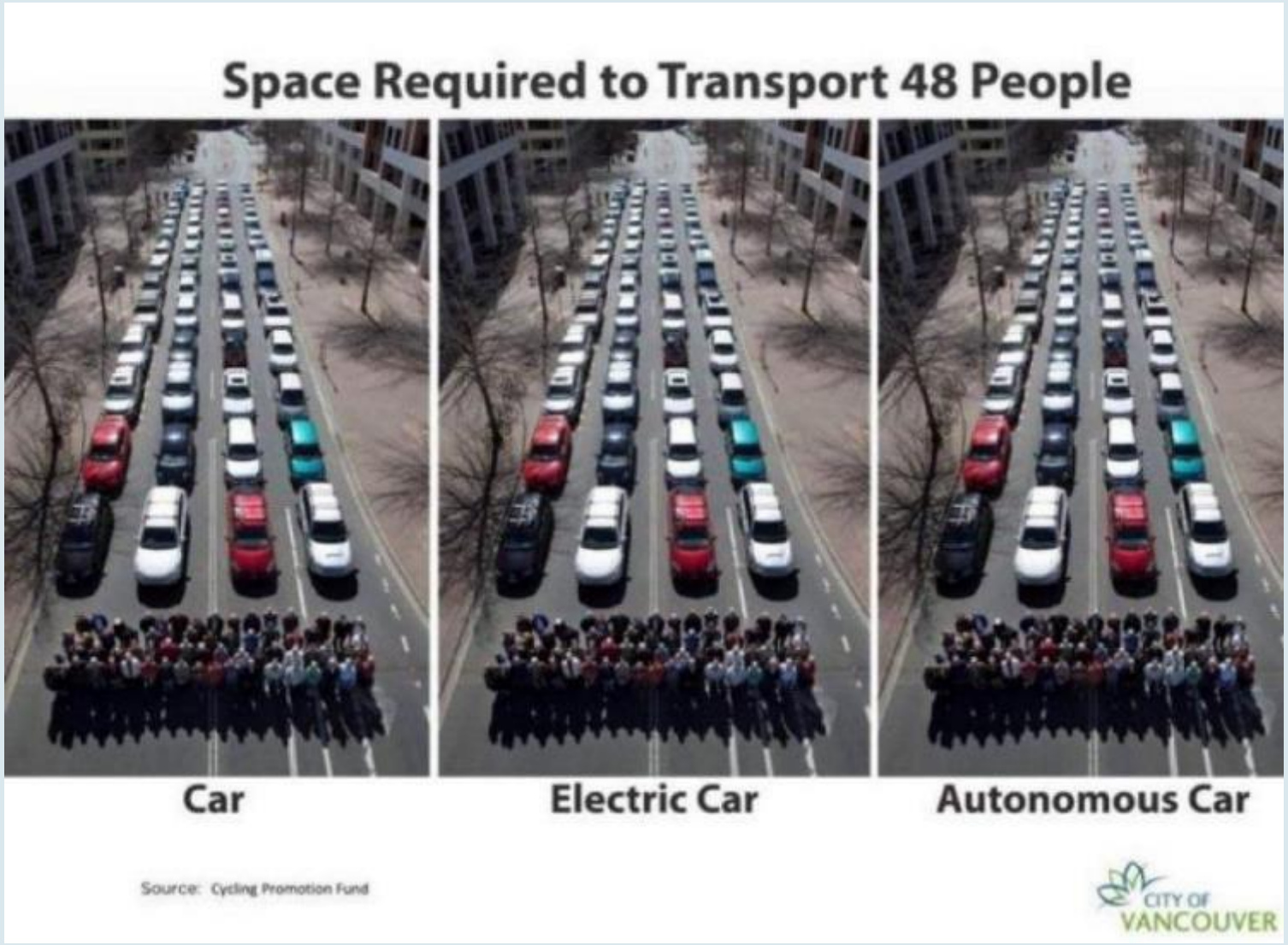
Urban transformation…

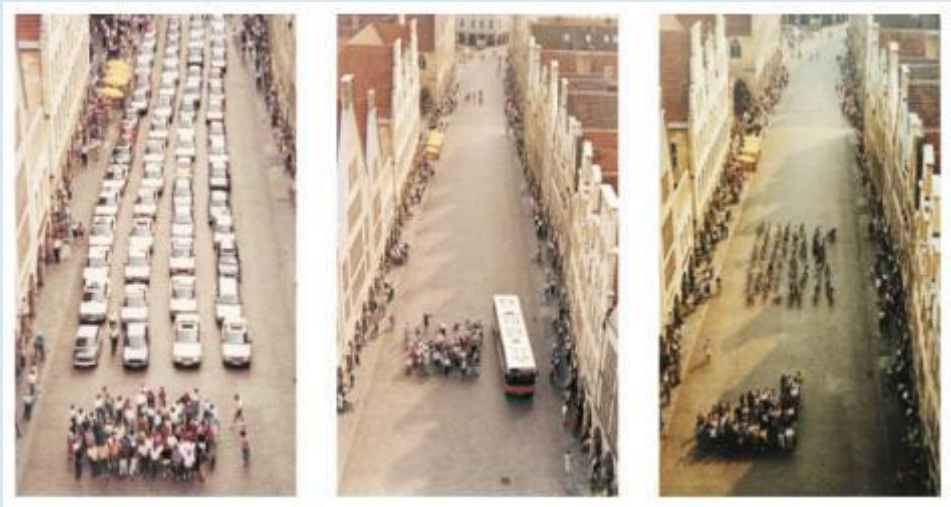
It only started 20-25 years ago, **how about the next 25 years?**

Source: Jan Kamesnky in: https://decorrespondent.nl/12574/kijken-zo-kan-een-levensgevaarlijk-rotterdams-kruispunt-er-ook-uitzien

Transport innovation?

+ ‘It’s striking that 1918’s Motor Car of the Future doesn’t look - or operate - all that different in concept from the 2013’ ~ NY Times, 2013





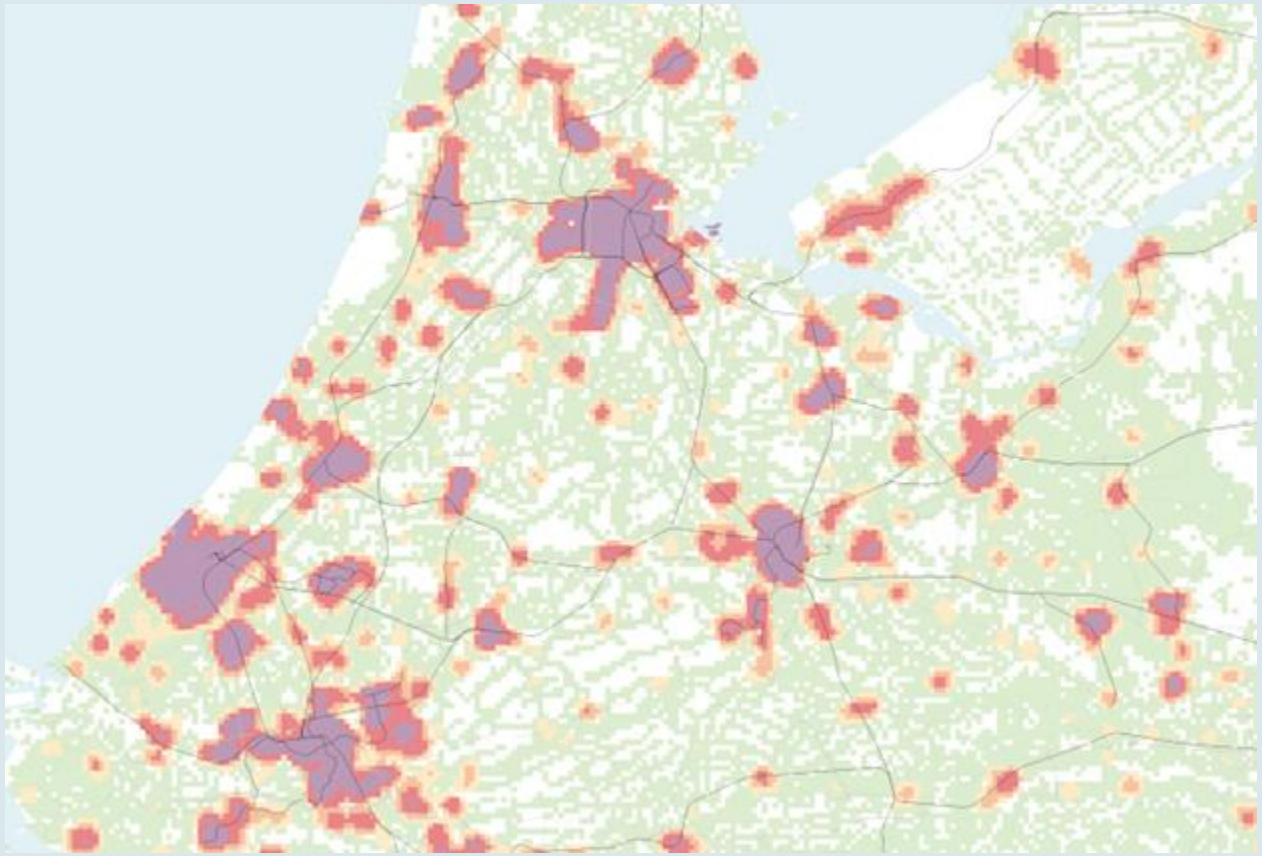
‘Space required to transport 60 people by car, bus or bike’ (Münster, 1990)

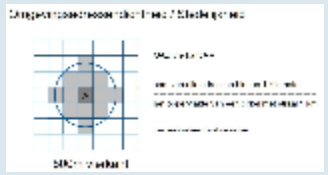
Source: https://www.stadtwerke-muenster.de/blog/verkehr/das-wohl-bekannteste-muenster-foto-der-welt/

Electric car’s contribution to better (public) space…

'Justicia Urbana' by Fabian Todorovic (via @fabiantodorovic)

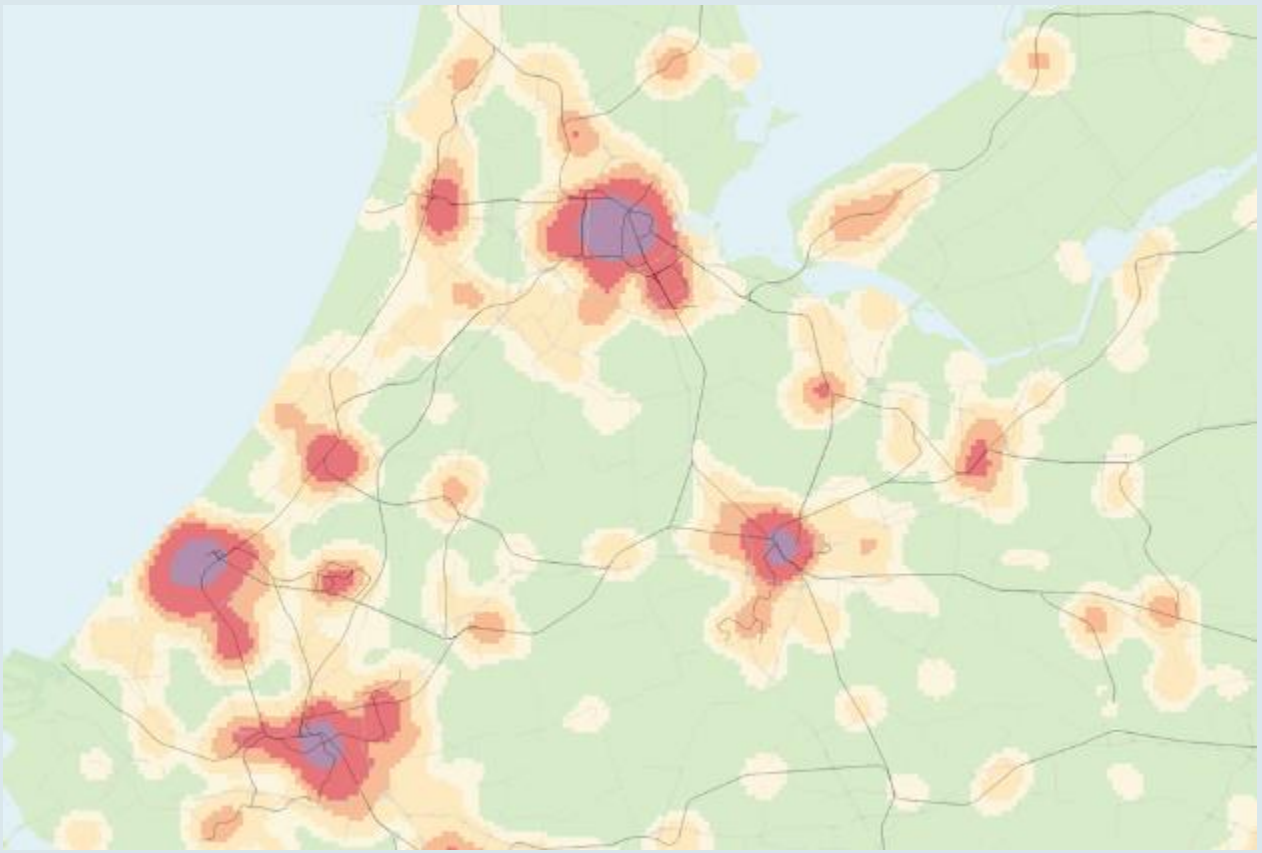
So.. other than in imaginated futures or religious battles, how is space distributed really?

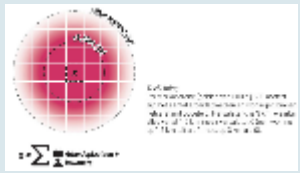




- Zeer sterk stedelijk (>2500 adressen/km2)
- Sterk stedelijk (1500-2500 adressen/km2)
- Matig stedelijk (1000-1500 adressen/km2)
- Weinigstedelijk (500-1000 adressen/km2)
- Niet stedelijk (<500 adressen/km2)

Urbanity based on CBS:
https://www.cbs.nl/nl-nl/onze-diensten/methoden/begrippen/stedelijkheid--van-een-gebied--





Nabijheids-klasse	Nabijheids-score	Dichtheid in cirkel van r=2,3 km
Hoogstedelijk	Meer dan 2.000	Meer dan 12.000 inwoners + banen per km²
Stedelijk	960-2.000	8.000 - 12.000 inwoners + banen per km²
Suburbaan	640-960	4.000 – 8.000 inwoners + banen per km²
Laag suburbaan	320-640	2.000 – 4.000 inwoners + banen per km²
Dorps	160-320	1.000 – 2.000 inwoners + banen per km²
Landelijk	Minder dan 160	Minder dan 1.000 inwoners + banen per km²

Urbanity based on Dashboard Verstedelijking:
www.collegevanrijksadviseurs.nl/projecten/dashboard-verstedelijking

High correlation of travel behaviour with urbanity!

? → ?	↔			
Rural → Rural	5 – 10 km	58%	1%	21%
Rural → Urban	5 – 10 km	34%	25%	35%
Urban → Urban	5 – 10 km	9%	25%	54%
Rural → Rural	25 – 40 km	69%	3%	0%
Rural → Urban	25 – 40 km	47%	33%	0%
Urban → Urban	25 – 40 km	12%	82%	0%

Note: Percentages not adding to 100% because not all modalities shown

Source: CBS-Dutch National Travel Survey 2018+2019 (N = 316k trips door 94k resp.)

Modal split, based on urbanity of origin & destination

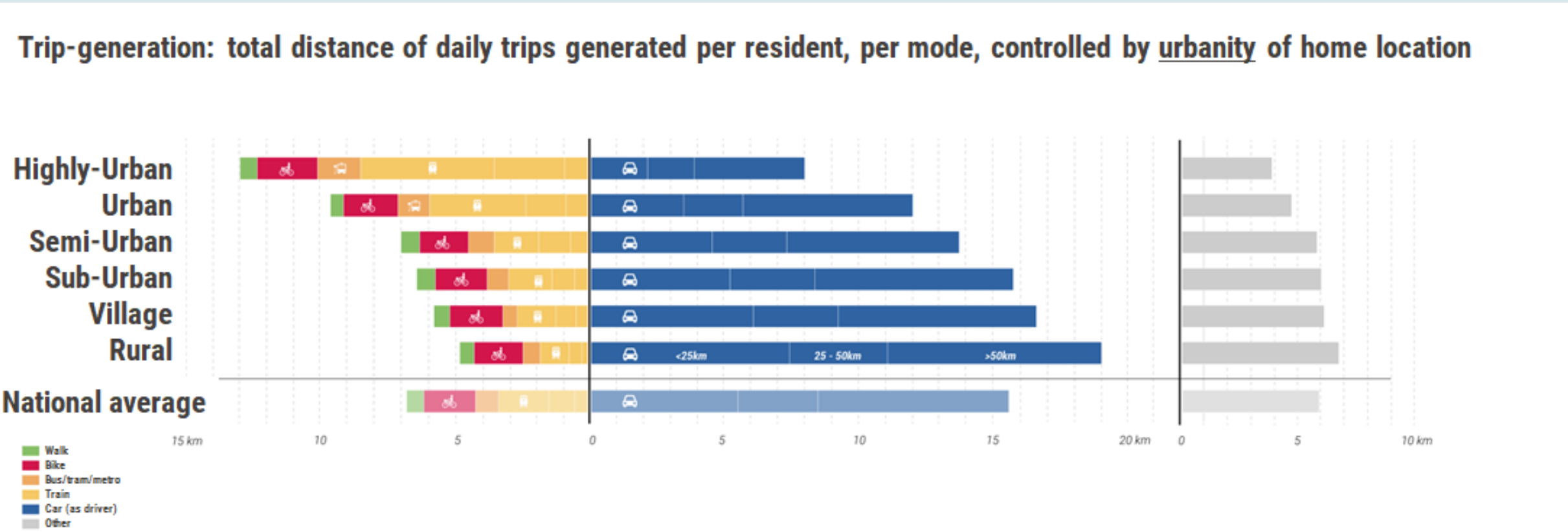
? → ?	↔			
	5 – 10 km	55 %	1 %	16 %
	5 – 10 km	42 %	11 %	25 %
	5 – 10 km	28 %	23 %	23 %
	25 – 40 km	67 %	4 %	0 %
	25 – 40 km	47 %	21 %	0 %
	25 – 40 km	14 %	71 %	0 %

2012/2013

? → ?	↔			
Rural → Rural	5 – 10 km	58%	1%	21%
Rural → Urban	5 – 10 km	34%	25%	35%
Urban → Urban	5 – 10 km	9%	25%	54%
Rural → Rural	25 – 40 km	69%	3%	0%
Rural → Urban	25 – 40 km	47%	33%	0%
Urban → Urban	25 – 40 km	12%	82%	0%

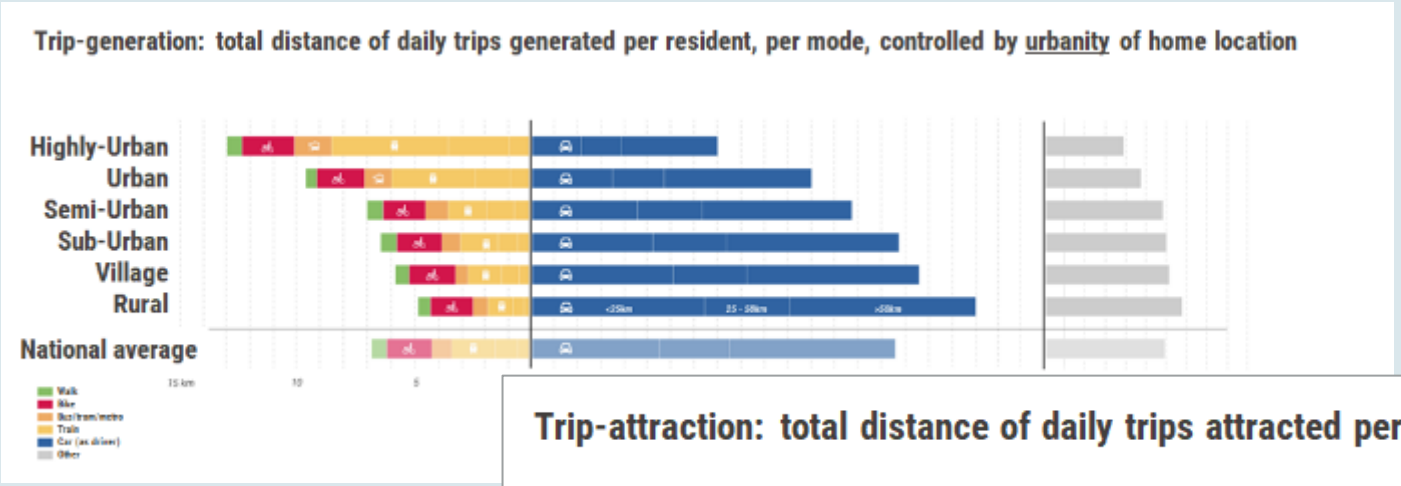
2018/2019

Note 1: These trends are diverging in time

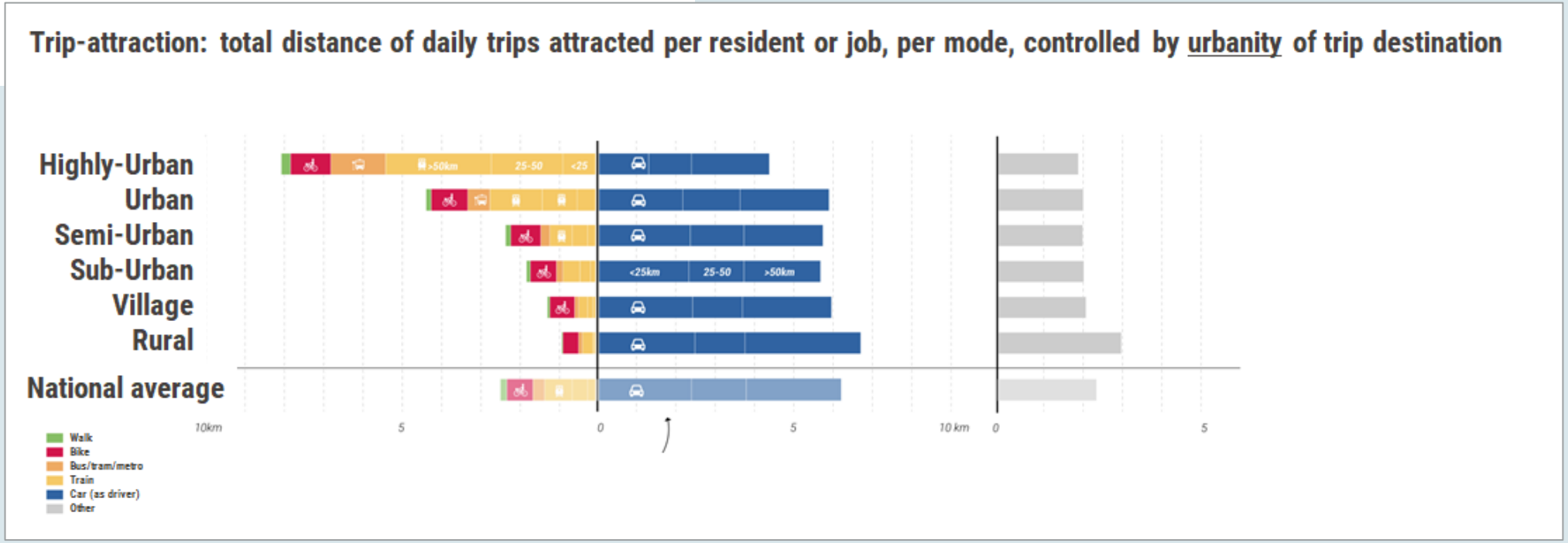


2018/2019

Note 2: Not just modal split, also trends in #km/day



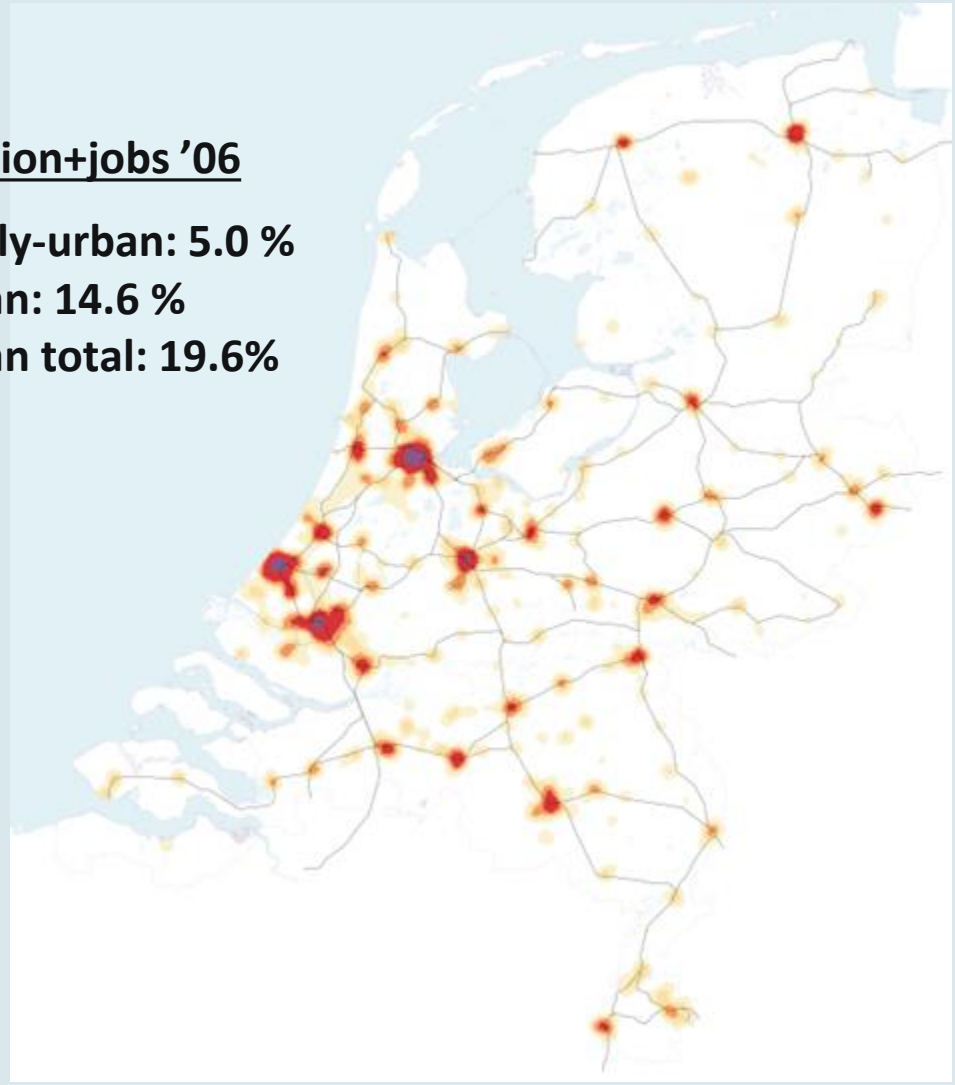
2018/2019



Note 3: Not just trends in trip generation also in trip attraction

Population+jobs ’06

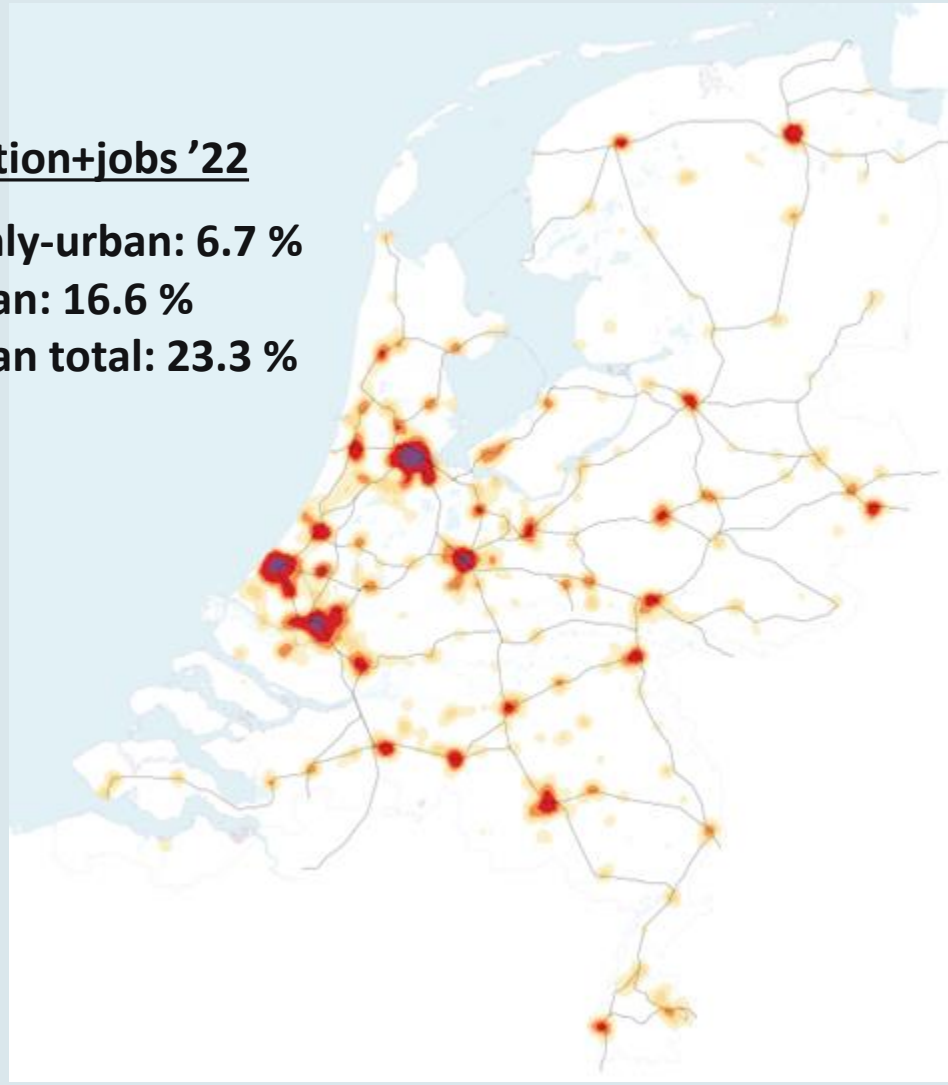
- **Highly-urban: 5.0 %**
- **Urban: 14.6 %**
- **Urban total: 19.6%**



2006

Population+jobs ’22

- **Highly-urban: 6.7 %**
- **Urban: 16.6 %**
- **Urban total: 23.3 %**



2022

Note 4: Urban centres increasing in weight

+ Increased <u>share of population + jobs</u> residing in urban locations.

+ Increased <u>share of trip attraction</u> to urban locations. <u>Also by non-urban residents</u>.

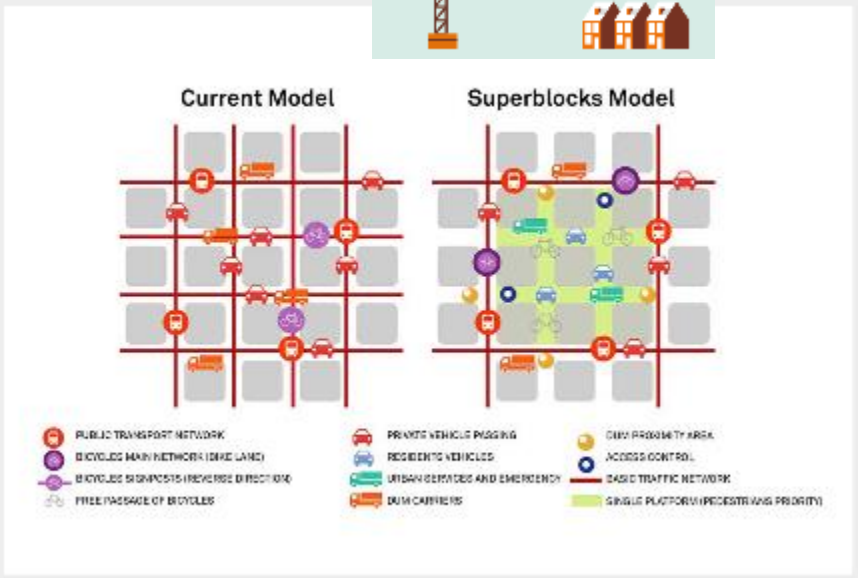
+ <u>Less space for traffic/transport</u> in/around urban locations (=push for space-efficient modes)

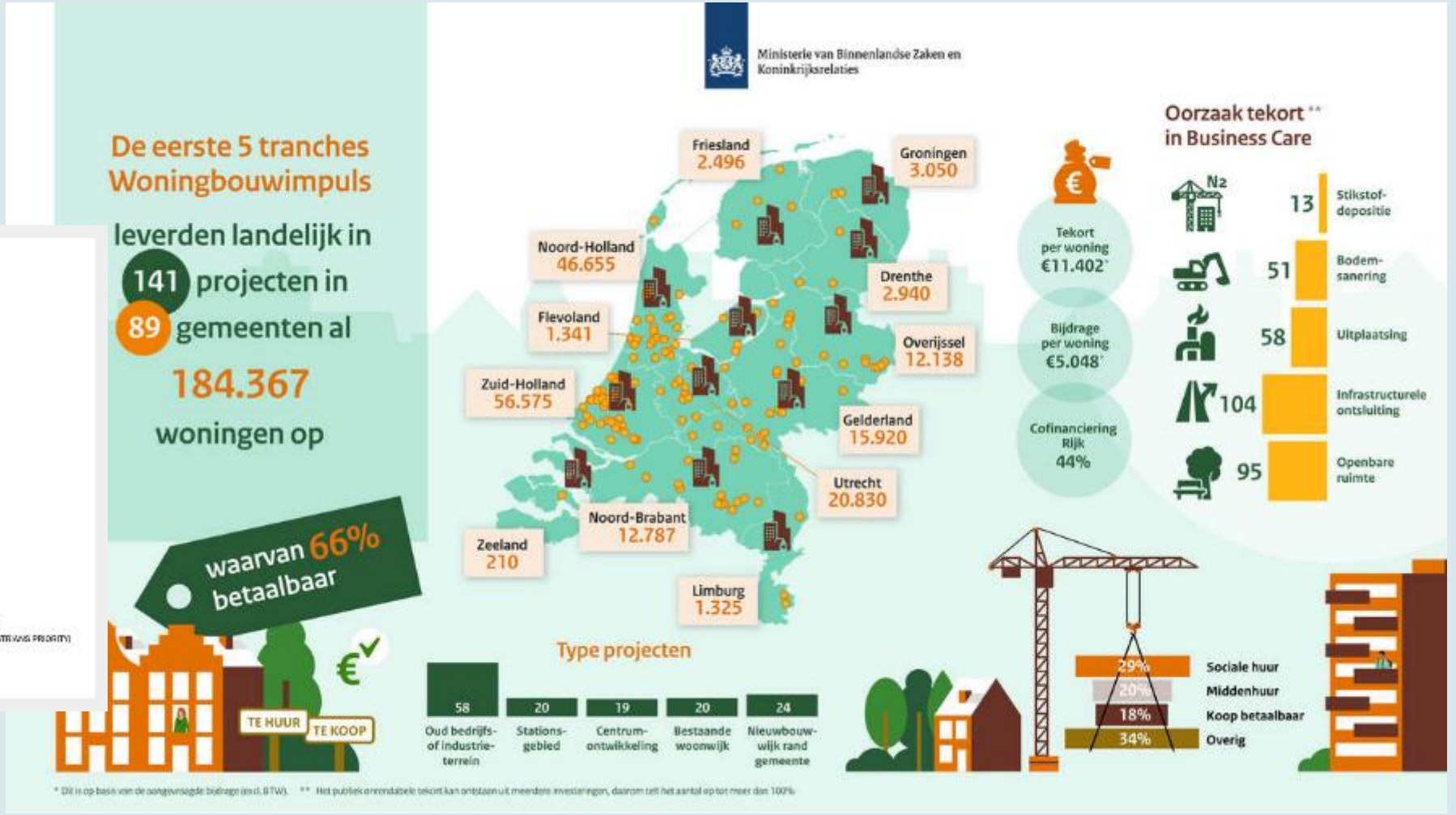
+ Urbanisation (on average) occurs at fastest pace at increased distances from ‘established’ centres or transit hubs

+ Year-by-year <u>divergence</u> of above trends

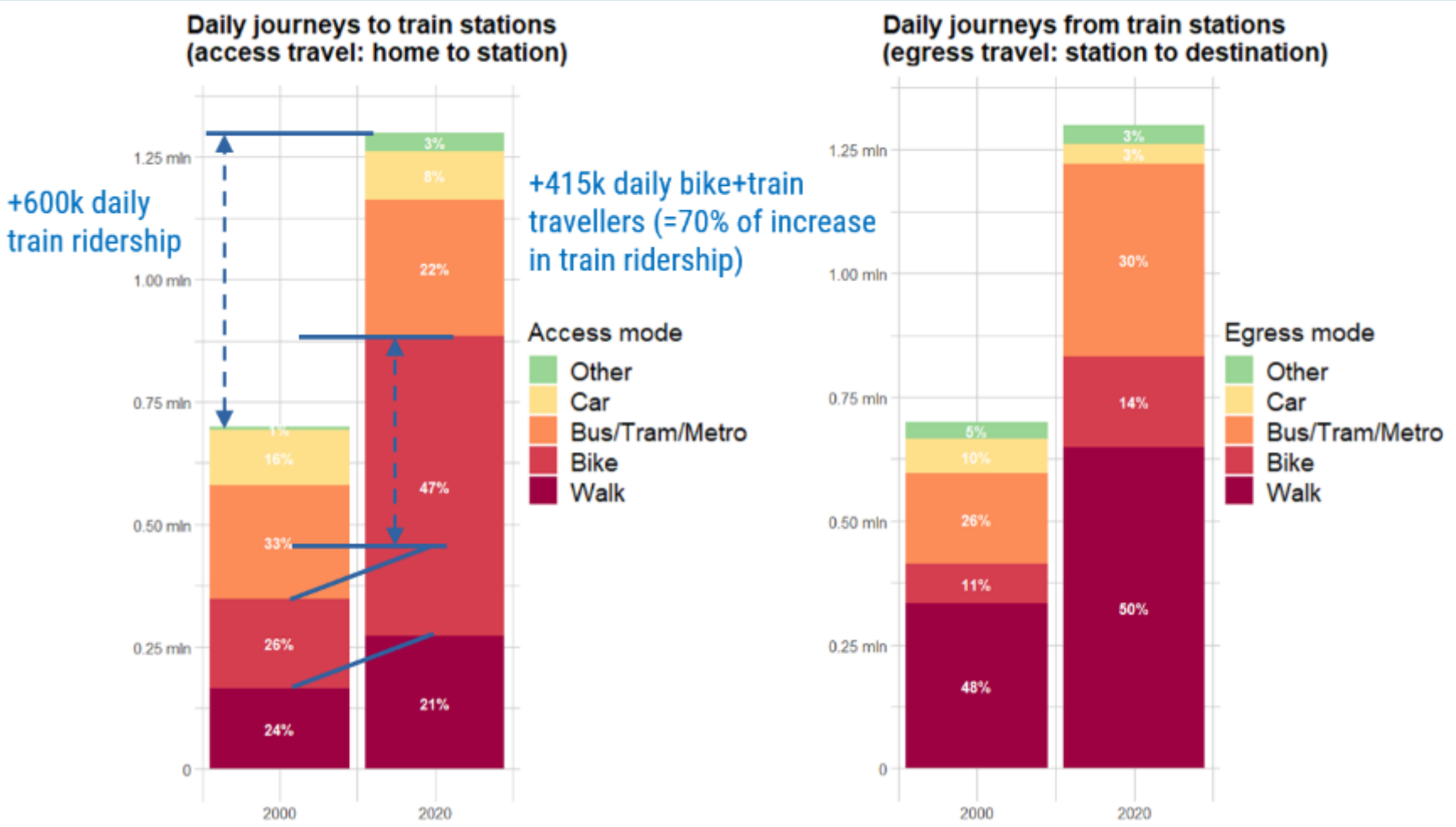
+ ‘Bike+train’ has serious challenges for delivering the required upscaling…
  … but much less so than cars or public transport alone would have (or cycling alone)
  … and ‘bike+train’ has a track record: it accommodated rapid urban growth 2006-2022

Effects of rise of city for bike+train





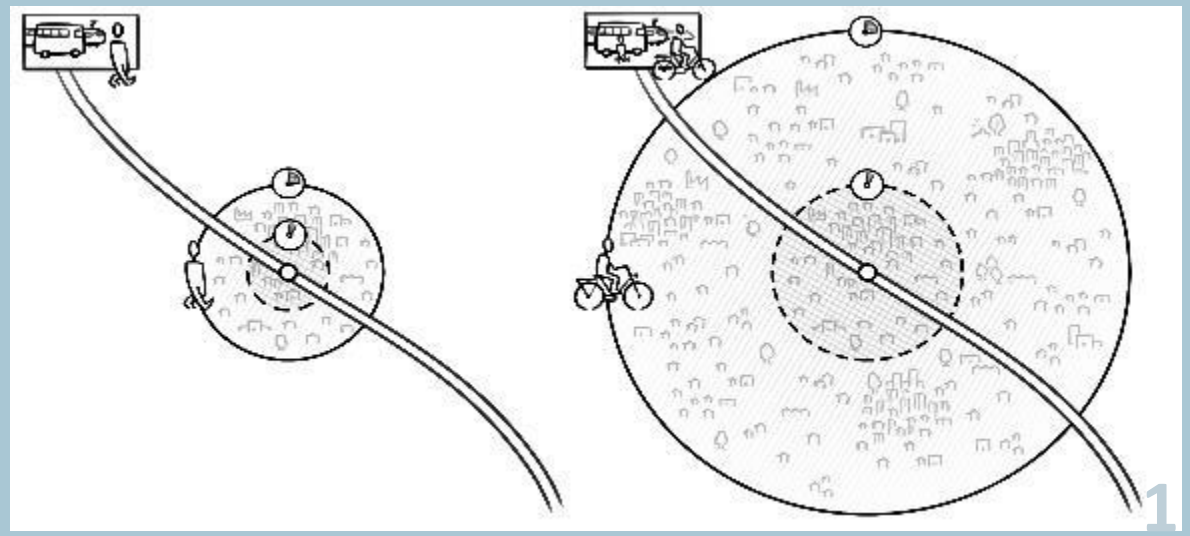
When cities keep growing, and transforming, then bike+train needs to upscale further



Bike+train accommodated near doubling of train ridership, but powered only by access travel

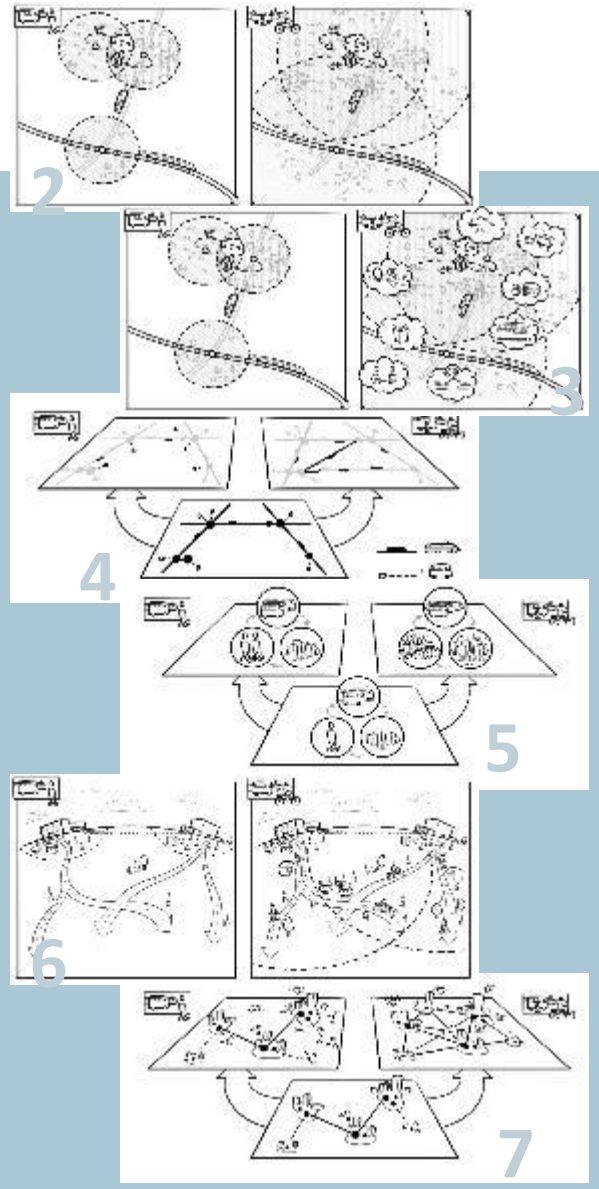
So… let’s think about the future of bike+train, not just upscaling bike-parks, also transforming the concept

Thanks for your joining this session!



BikeTrainGuru
@BikeTrainGuru

STUDIO —— BEREIKBAAR



Cycling, transit & urban revival

Roland Kager, Intertraffic, April 17, 2024

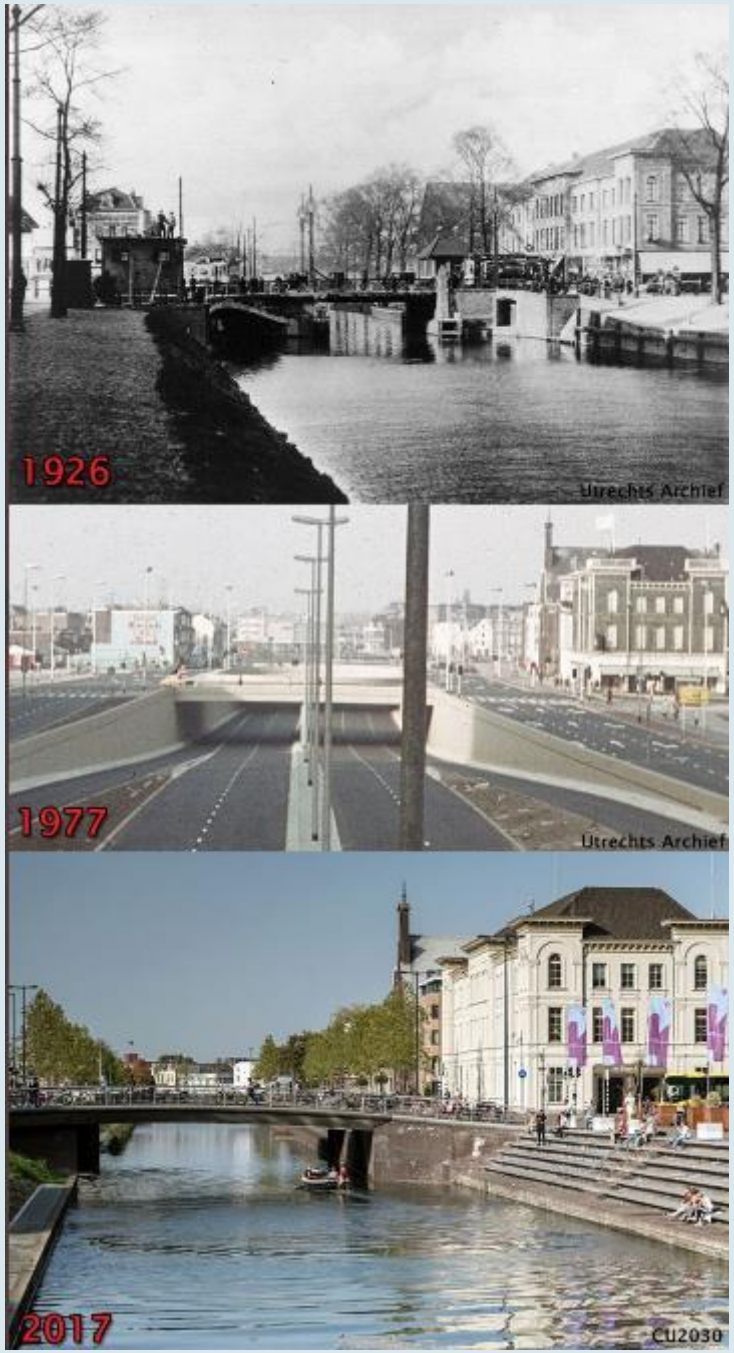
STUDIO —— BEREIKBAAR

Road is closed…?

+ Or… The street is open?
+ How come we almost exclusively find such places (better: such recent transformations) within cities?

Urban transformation…

It only started 20-25 years ago, how about the next 25 years?



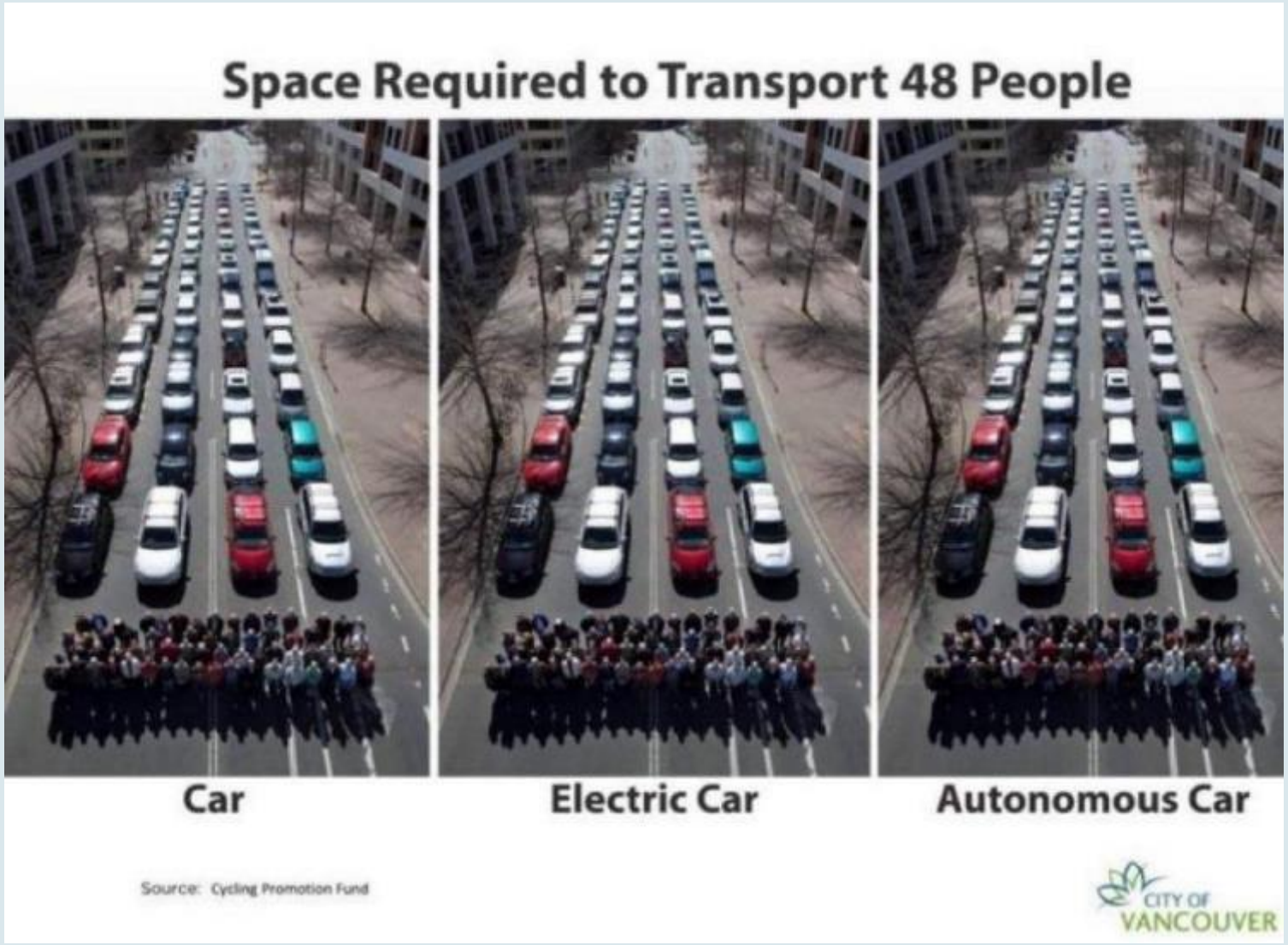
Urban transformation…

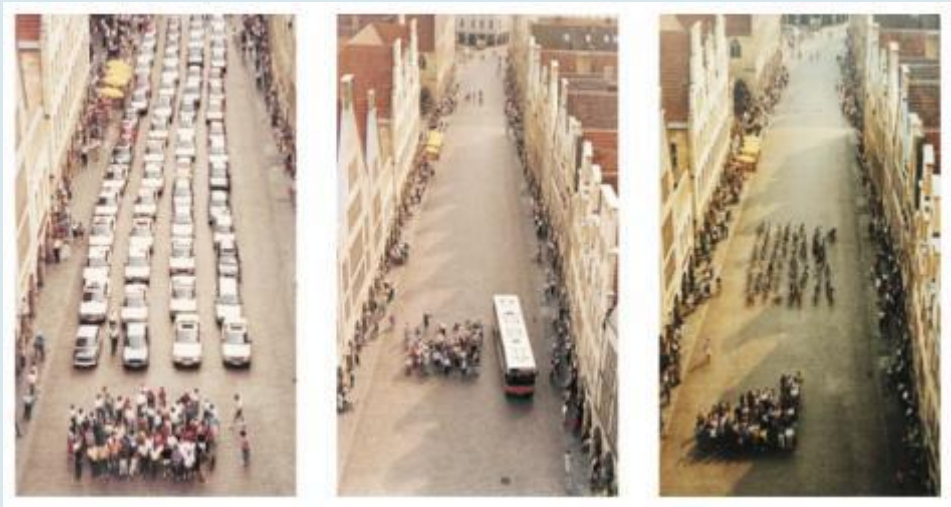
It only started 20-25 years ago, **how about the next 25 years?**

Source: Jan Kamesnky in: https://decorrespondent.nl/12574/kijken-zo-kan-een-levensgevaarlijk-rotterdams-kruispunt-er-ook-uitzien

Transport innovation?

+ ‘It’s striking that 1918’s Motor Car of the Future doesn’t look - or operate - all that different in concept from the 2013’ ~ NY Times, 2013





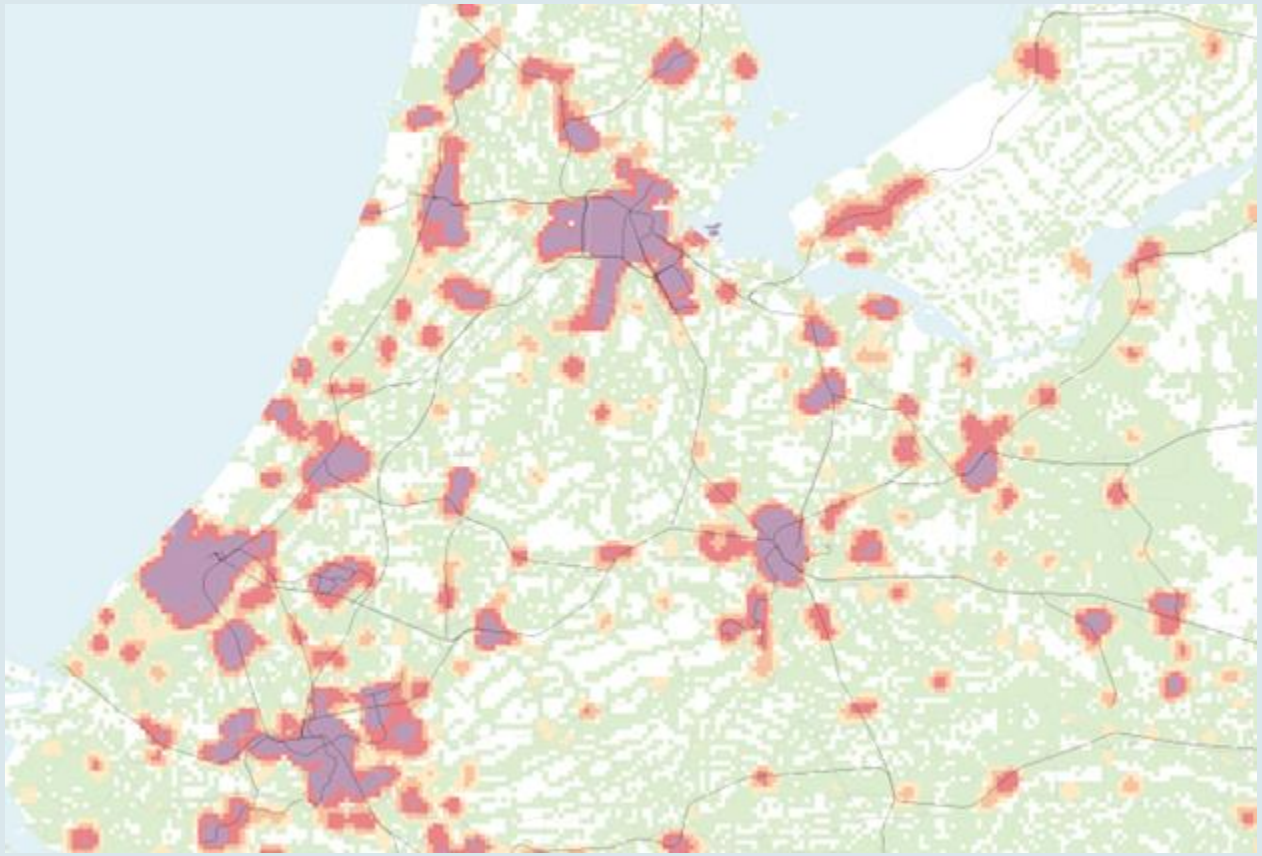
‘Space required to transport 60 people by car, bus or bike’ (Münster, 1990)

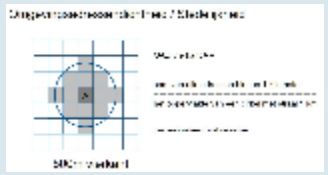
Source: https://www.stadtwerke-muenster.de/blog/verkehr/das-wohl-bekannteste-muenster-foto-der-welt/

Electric car’s contribution to better (public) space…

'Justicia Urbana' by Fabian Todorovic (via @fabiantodorovic)

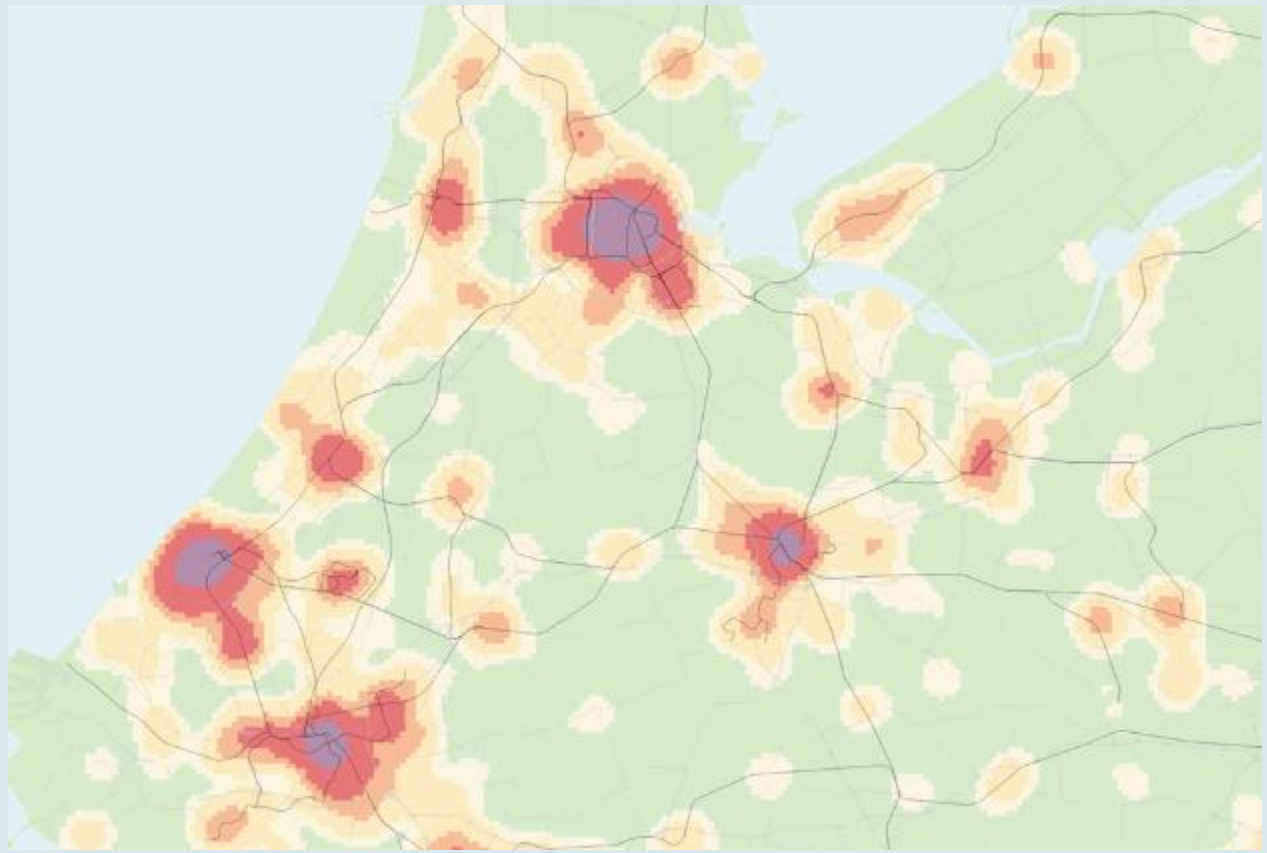
So.. other than in imaginated futures or religious battles, how is space distributed really?

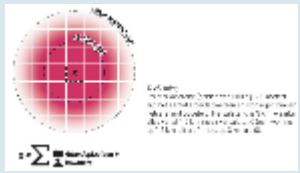




- Zeer sterk stedelijk (>2500 adressen/km2)
- Sterk stedelijk (1500-2500 adressen/km2)
- Matig stedelijk (1000-1500 adressen/km2)
- Weinigstedelijk (500-1000 adressen/km2)
- Niet stedelijk (<500 adressen/km2)

Urbanity based on CBS:
https://www.cbs.nl/nl-nl/onze-diensten/methoden/begrippen/stedelijkheid--van-een-gebied--





Nabijheids-klasse	Nabijheids-score	Dichtheid in cirkel van r=2,3 km
Hoogstedelijk	Meer dan 2.000	Meer dan 12.000 inwoners + banen per km²
Stedelijk	960-2.000	8.000 - 12.000 inwoners + banen per km²
Suburbaan	640-960	4.000 – 8.000 inwoners + banen per km²
Laag suburbaan	320-640	2.000 – 4.000 inwoners + banen per km²
Dorps	160-320	1.000 – 2.000 inwoners + banen per km²
Landelijk	Minder dan 160	Minder dan 1.000 inwoners + banen per km²

Urbanity based on Dashboard Verstedelijking:
www.collegevanrijksadviseurs.nl/projecten/dashboard-verstedelijking

High correlation of travel behaviour with urbanity!

? → ?	↔			
Rural → Rural	5 – 10 km	58%	1%	21%
Rural → Urban	5 – 10 km	34%	25%	35%
Urban → Urban	5 – 10 km	9%	25%	54%
Rural → Rural	25 – 40 km	69%	3%	0%
Rural → Urban	25 – 40 km	47%	33%	0%
Urban → Urban	25 – 40 km	12%	82%	0%

Note: Percentages not adding to 100% because not all modalities shown

Source: CBS-Dutch National Travel Survey 2018+2019 (N = 316k trips door 94k resp.)

Modal split, based on urbanity of origin & destination

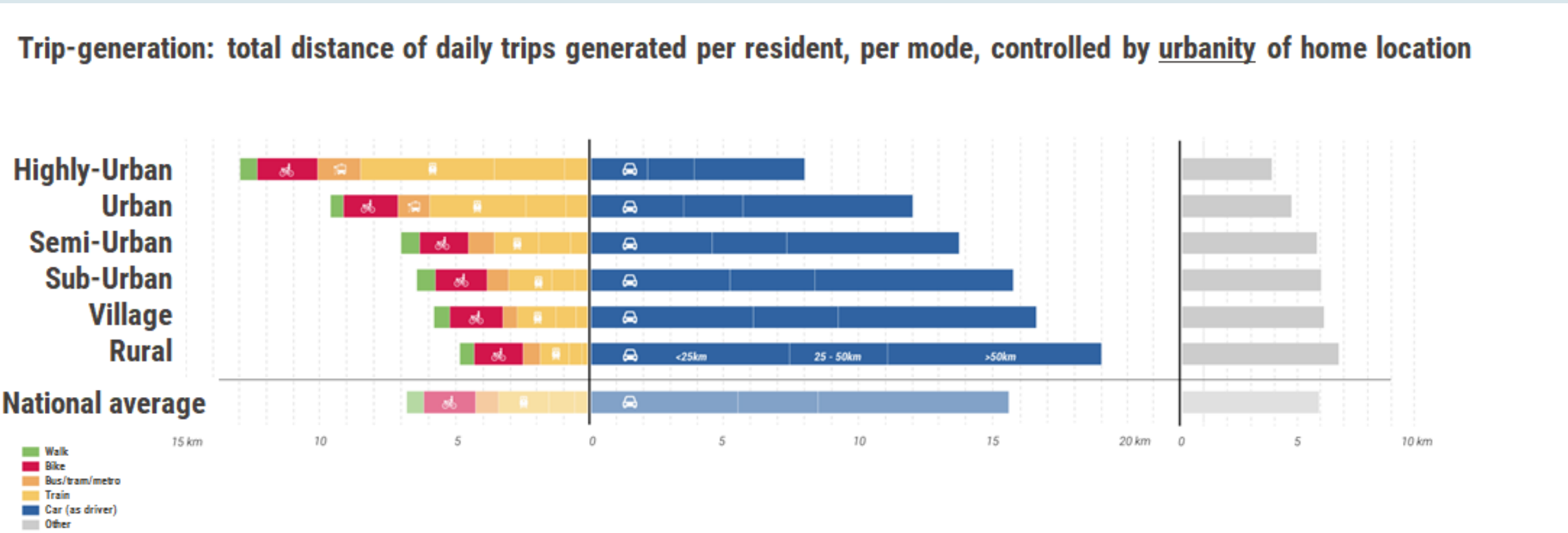
? → ?	↔			
	5 – 10 km	55 %	1 %	16 %
	5 – 10 km	42 %	11 %	25 %
	5 – 10 km	28 %	23 %	23 %
	25 – 40 km	67 %	4 %	0 %
	25 – 40 km	47 %	21 %	0 %
	25 – 40 km	14 %	71 %	0 %

2012/2013

? → ?	↔			
Rural → Rural	5 – 10 km	58%	1%	21%
Rural → Urban	5 – 10 km	34%	25%	35%
Urban → Urban	5 – 10 km	9%	25%	54%
Rural → Rural	25 – 40 km	69%	3%	0%
Rural → Urban	25 – 40 km	47%	33%	0%
Urban → Urban	25 – 40 km	12%	82%	0%

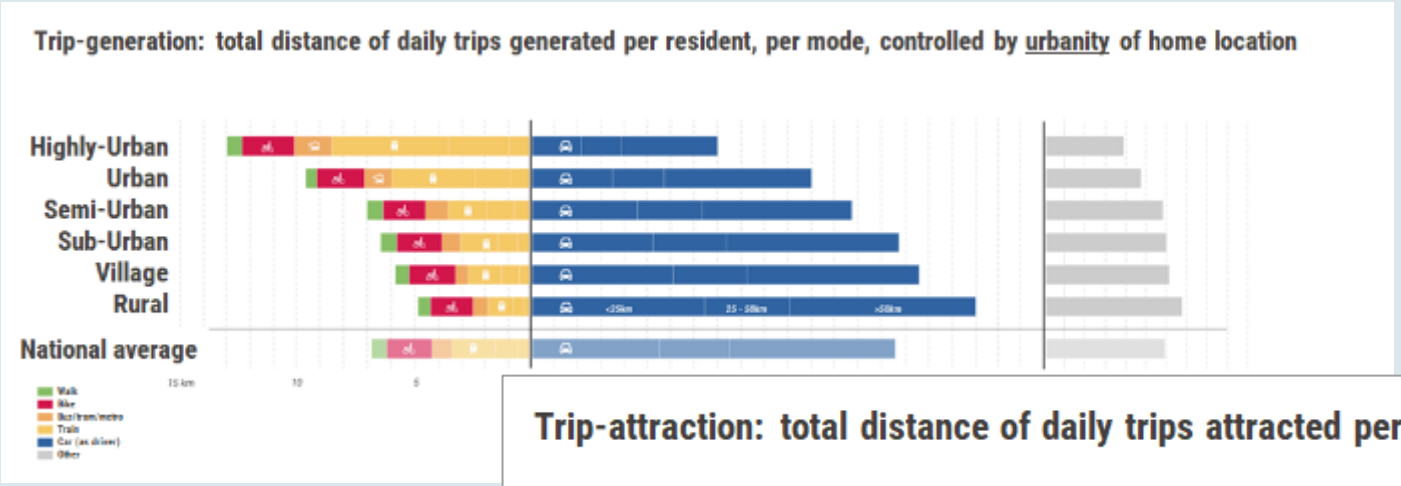
2018/2019

Note 1: These trends are diverging in time

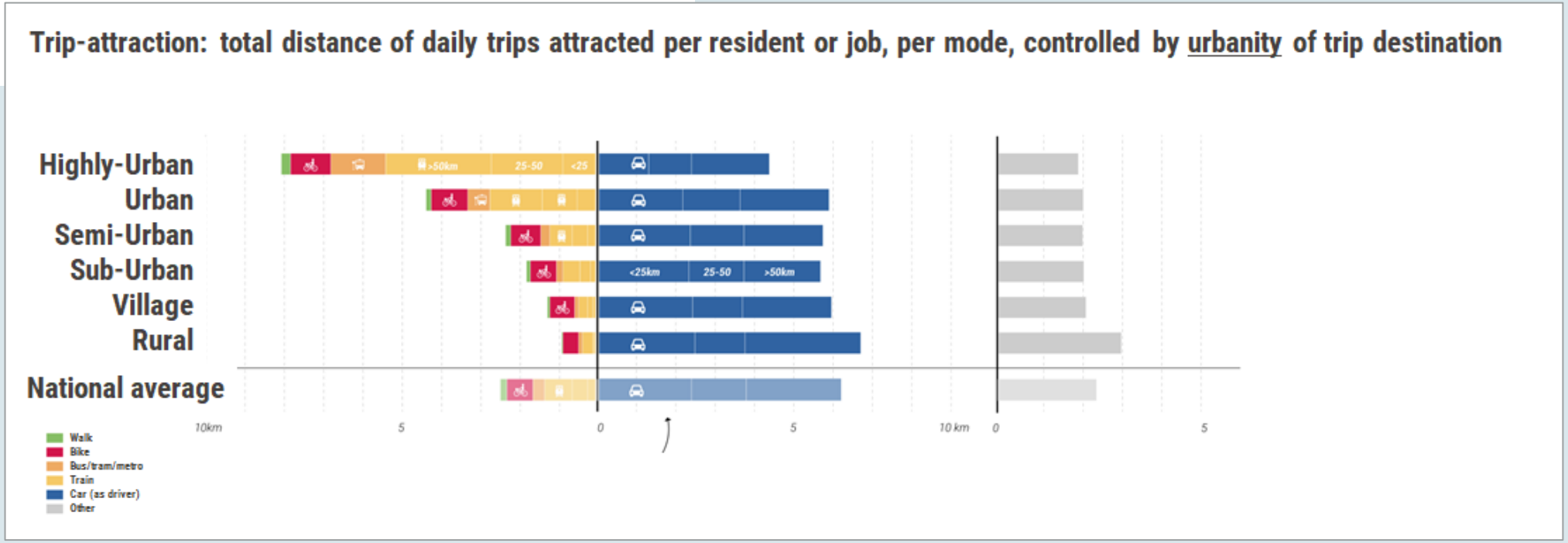


2018/2019

Note 2: Not just modal split, also trends in #km/day



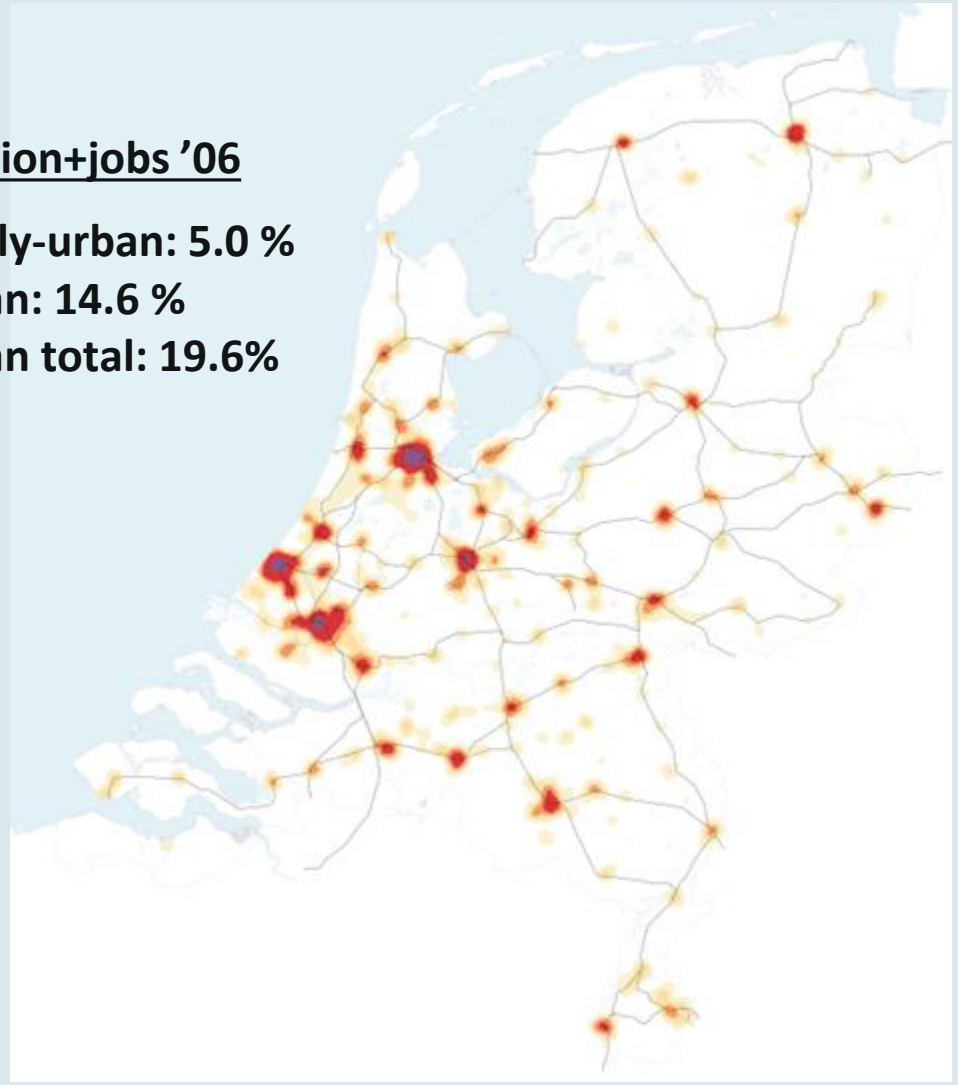
2018/2019



Note 3: Not just trends in trip generation also in trip attraction

Population+jobs ’06

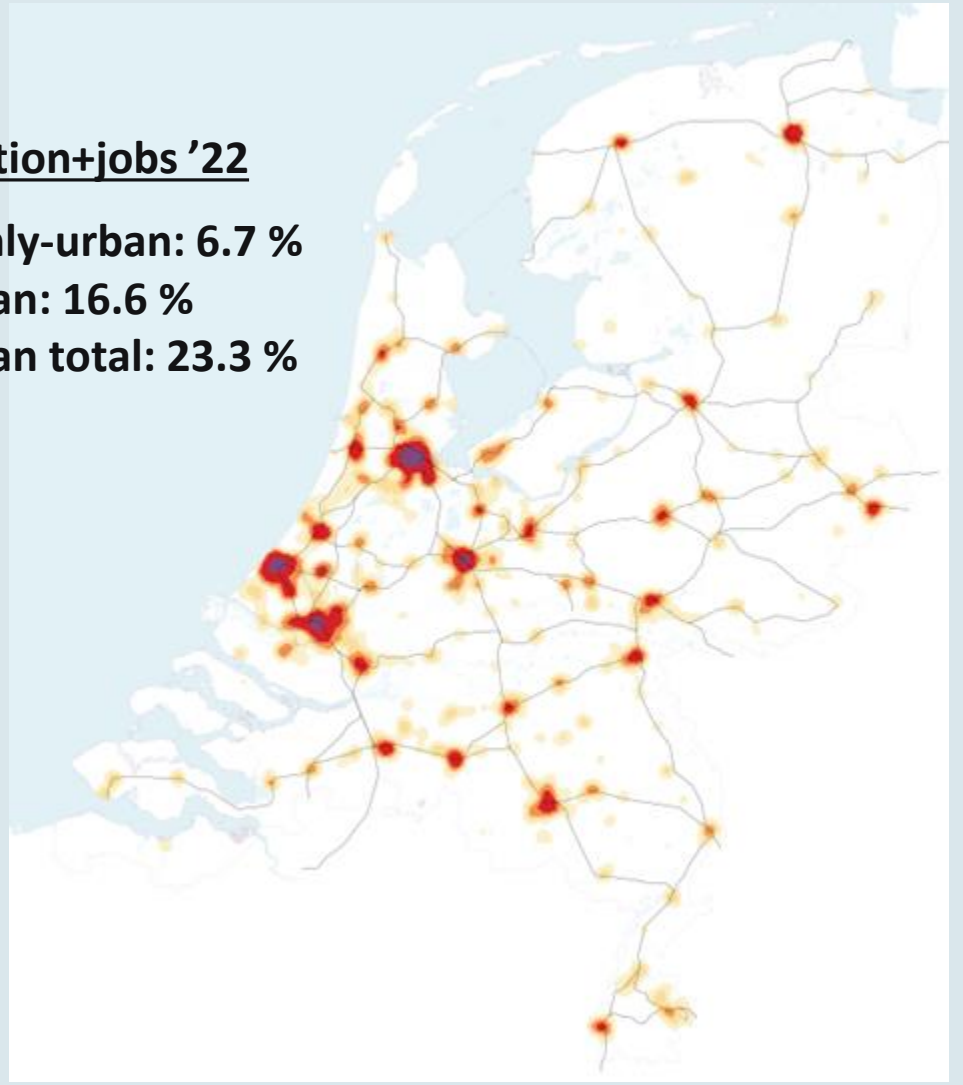
- **Highly-urban: 5.0 %**
- **Urban: 14.6 %**
- **Urban total: 19.6%**



2006

Population+jobs ’22

- **Highly-urban: 6.7 %**
- **Urban: 16.6 %**
- **Urban total: 23.3 %**



2022

Note 4: Urban centres increasing in weight

+ Increased <u>share of population + jobs</u> residing in urban locations.

+ Increased <u>share of trip attraction</u> to urban locations. <u>Also by non-urban residents</u>.

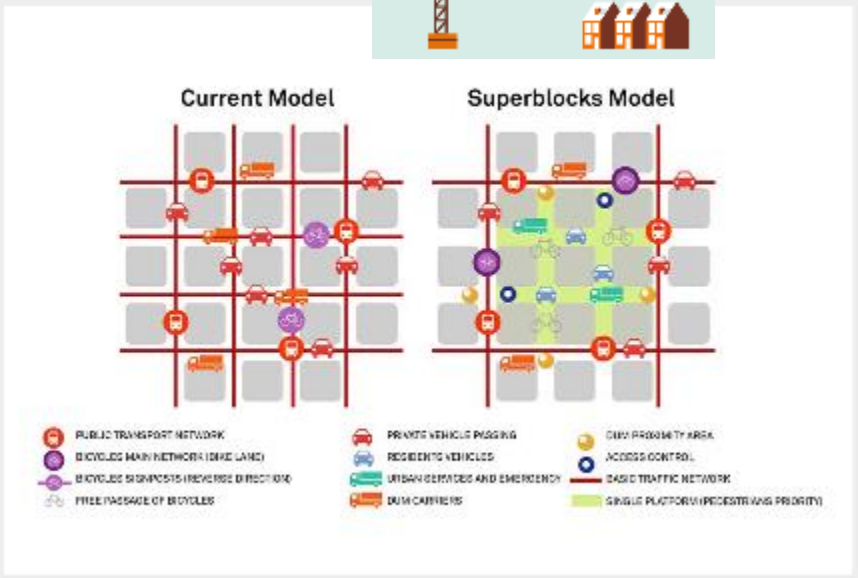
+ <u>Less space for traffic/transport</u> in/around urban locations (=push for space-efficient modes)

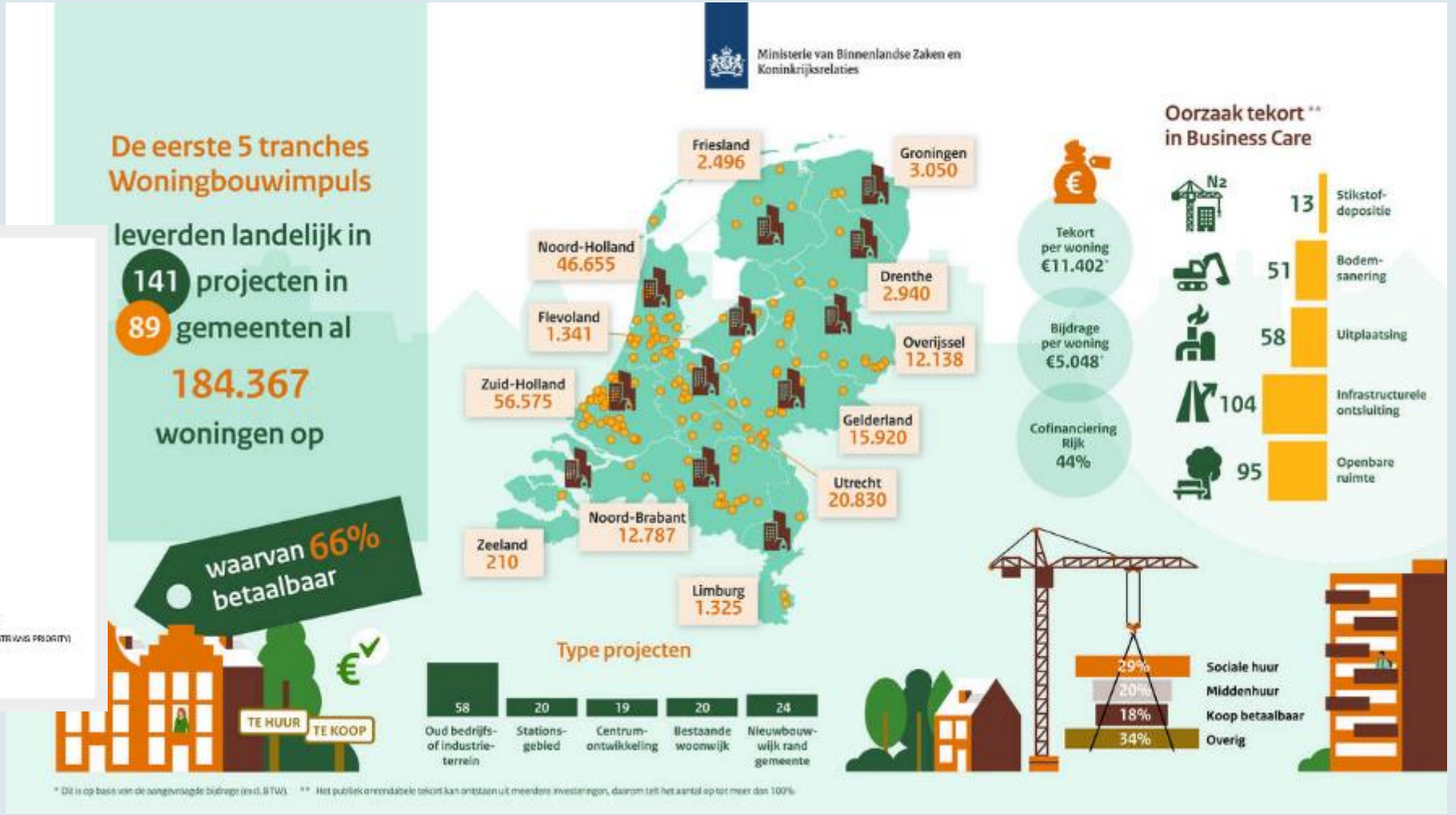
+ Urbanisation (on average) occurs at fastest pace at increased distances from ‘established’ centres or transit hubs

+ Year-by-year <u>divergence</u> of above trends

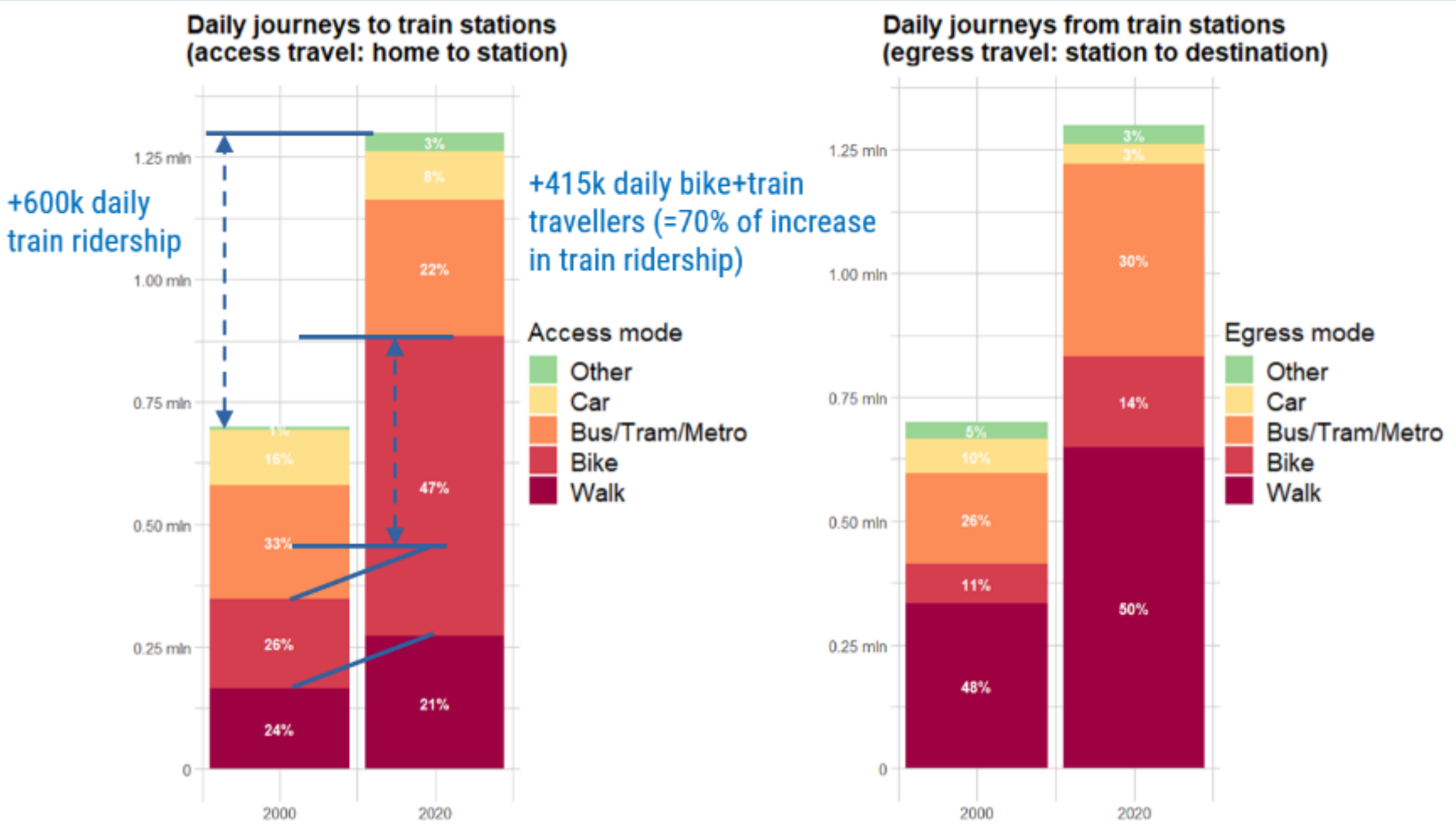
+ ‘Bike+train’ has serious challenges for delivering the required upscaling…
  … but much less so than cars or public transport alone would have (or cycling alone)
  … and ‘bike+train’ has a track record: it accommodated rapid urban growth 2006-2022

Effects of rise of city for bike+train





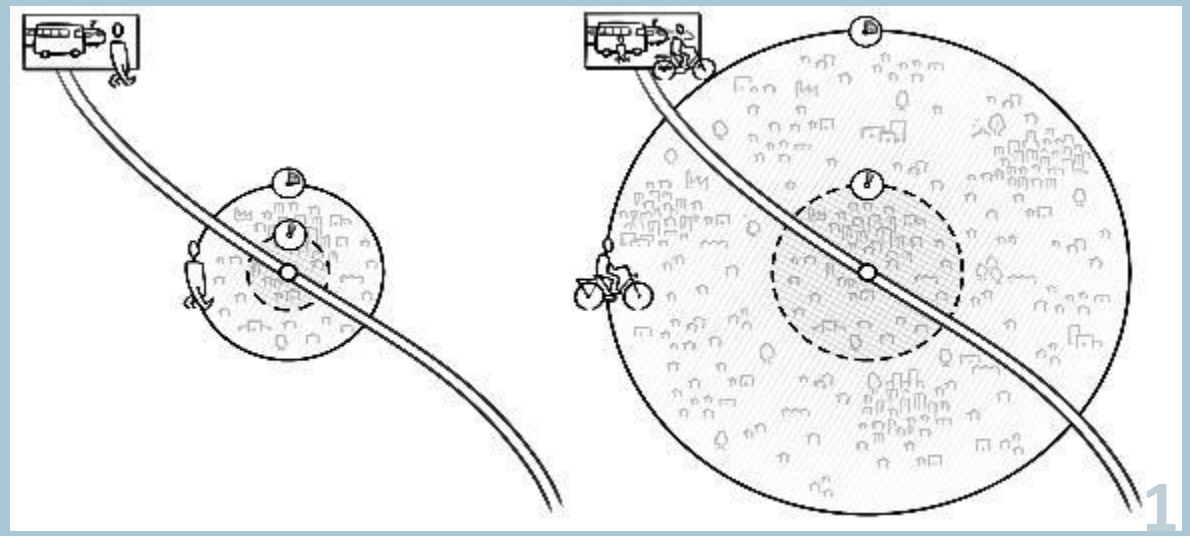
When cities keep growing, and transforming, then bike+train needs to upscale further

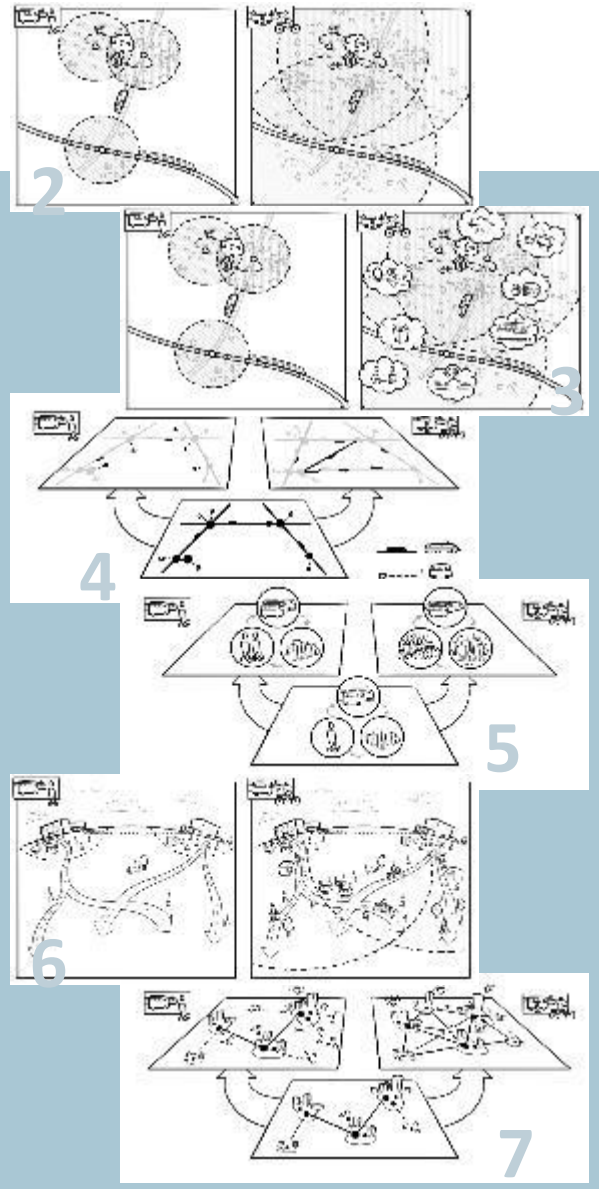


Bike+train accommodated near doubling of train ridership, but powered only by access travel

So… let’s think about the future of bike+train, not just upscaling bike-parks, also transforming the concept

Thanks for your joining this session!



BikeTrainGuru
@BikeTrainGuru

STUDIO —— BEREIKBAAR