

BENEFITS OF CYCLING AND HOW TO ACHIEVE THEM

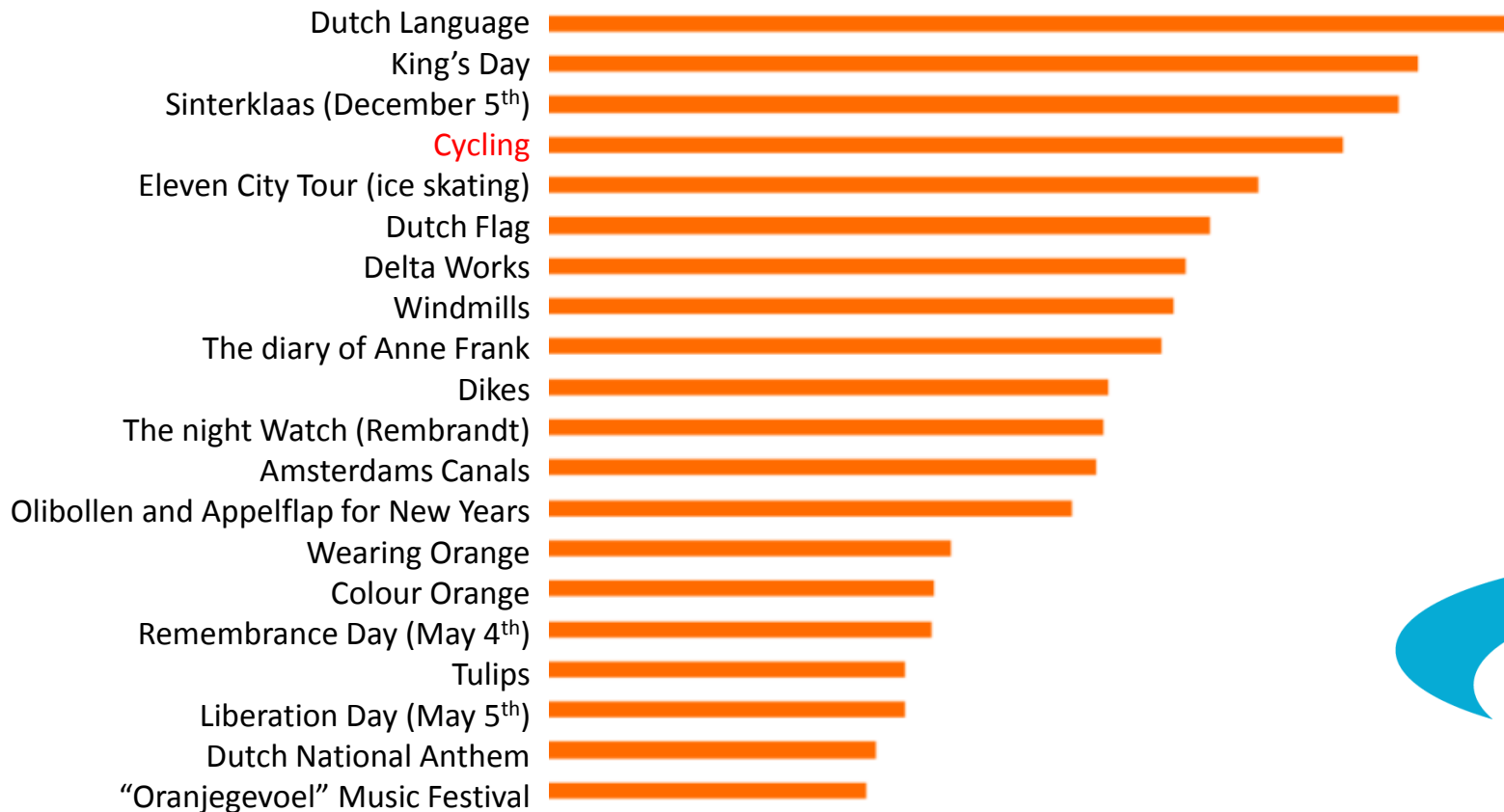
Galanta, October 22nd
Otto Cazemier





We make the world less
dependent on the car.

WHAT IS MOST TYPICAL 'THE NETHERLANDS' (TOP 20)



THE BENEFITS OF CYCLING

- Air quality – Nox / particles → 0,2 gr/km reduction
- Greenhouse gasses – Co2 → 150 gr/km reduction
- Noise
- Safety / liveability
- Health
- Economy
- Land use / public space
- More pleasant than PT
- Inexpensive
- Social

HEALTH

- 80% of Dutch cyclists meets the standards of physical movement.
- PT users reach 48%
- For car users this is just 7% *(KIM, sept 2019)*

Daily commuting by bike →

- -52% heart failure,
- - 40% cancer *(KIM, 2018)*

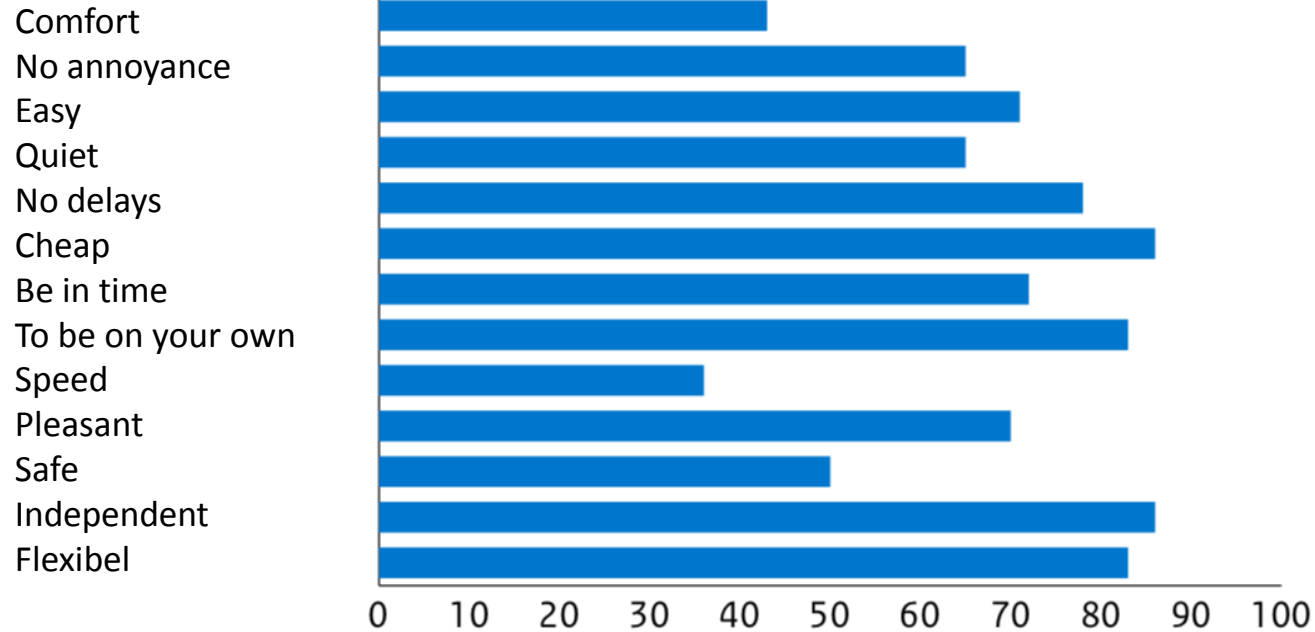
Share of turnover in Kopenhagen shops:

- Active modes 50%
- Car users 36%
- PT users 15%

(Danish Cycling Embassy, sept 2019)

Cycling employees have 1,3 days/yr less sick leave

ASSOCIATED WITH CYCLING



Source: KIM 2018

USE OF PUBLIC SPACE



....IN FUTURE....



Motor vehicle



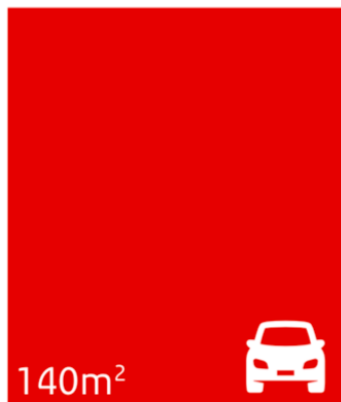
Electric vehicle



Self-driving vehicle



Land use



Car
50 kmh, 1 occupant



Car
parked



Tram
50 occupants



Pedestrian
walking



Pedestrian
standing still



Cyclist
15 kmh



Bicycle
parked

Credit: (Zaken, 2018)



Here are **six ways** cycling
makes the world a
better place

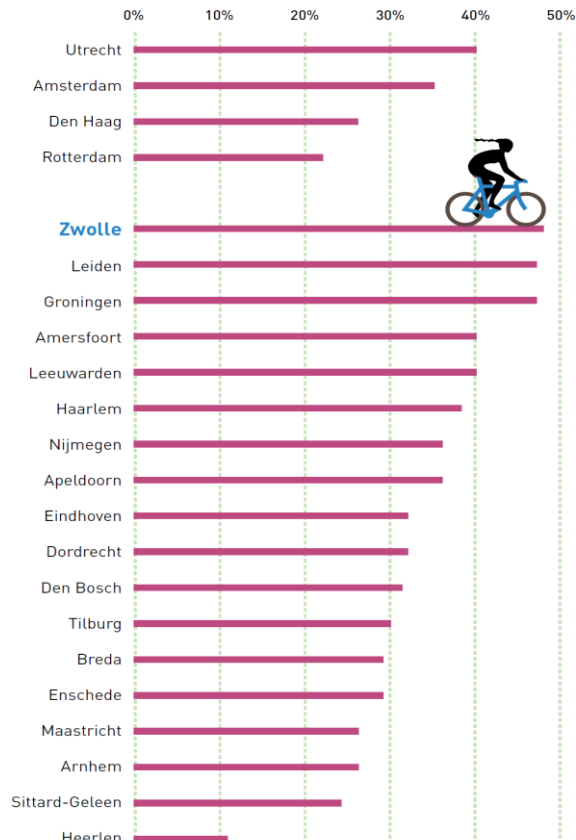
THE EXAMPLE OF ZWOLLE

- Typical midsize city, 268 comparable cities in Europe
- Growth from 49.000 inh (1950) to 126.000 today (2nd largest growth since 1972).
- Bible Belt – Stewardship
- Promoting cycling since the seventies



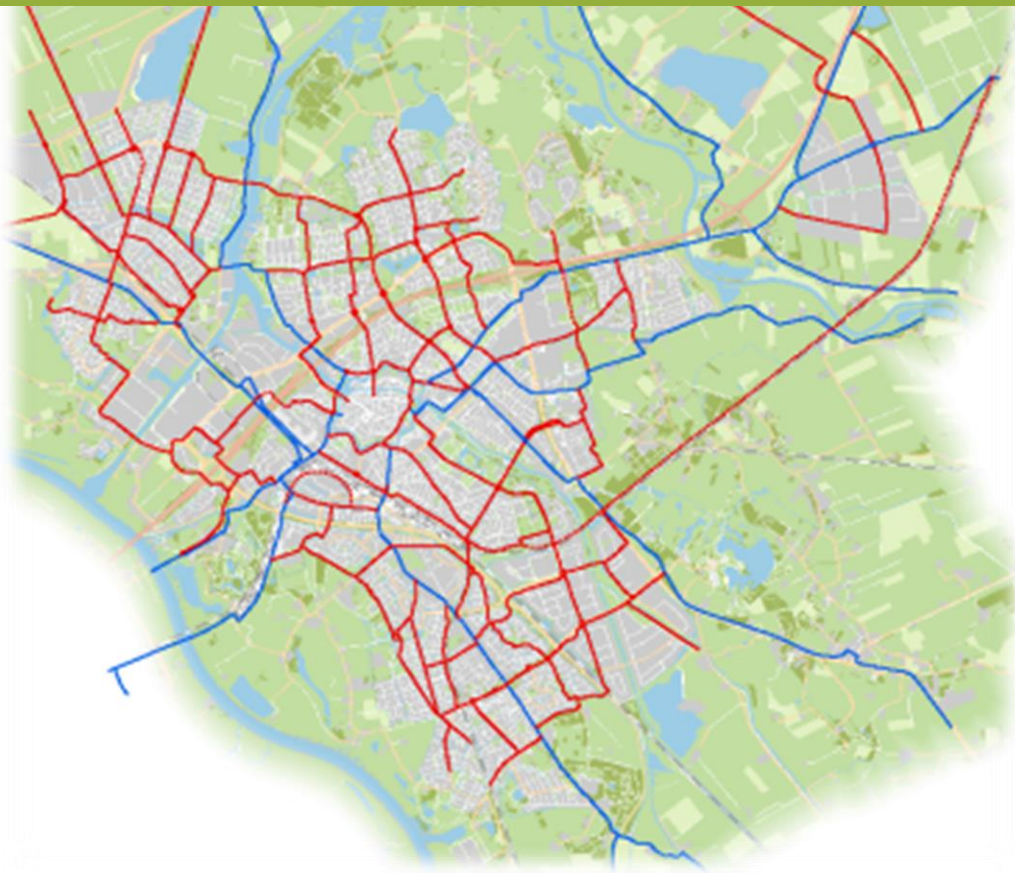


ZWOLLE WORLD CYCLING CITY








CYCLING NETWORK ZWOLLE



CYCLING NETWORK ZWOLLE



 Bewaakte fietsenstalling
 Fietsveer
 Toeristisch Overstap Punt (TOP)

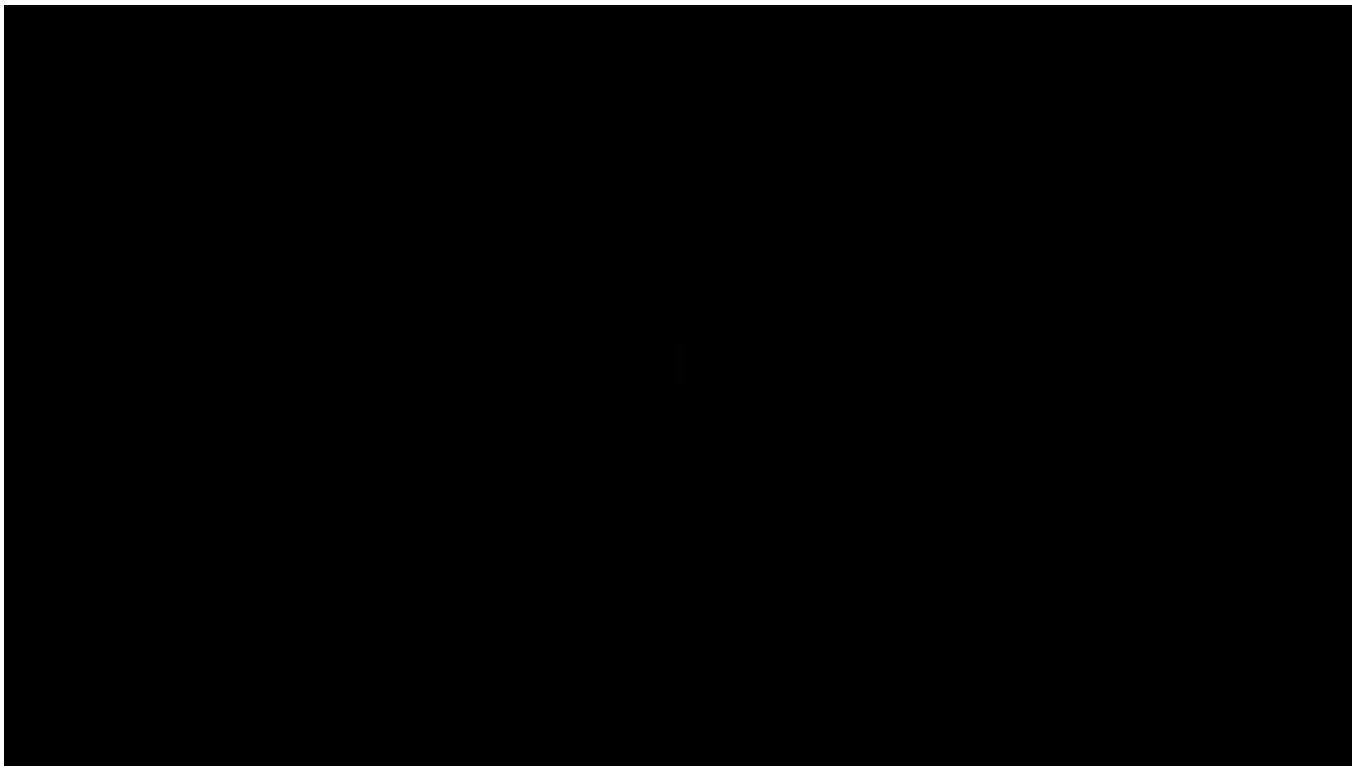
 Stadhuis / Stadskantoor
 Station
 Toilet

 Horeca
 Politie
 Bibliotheek



CYCLING STREETS





HOW TO ACHIEVE THE BENEFITS

- Becoming a cycling city is not that easy.....



The **asphalt-fueled reign of terror** of the motorised upper middle class is over. **Daily human sacrifices** are being made to the newest overlords that the common folk have surrendered to: the **car domination**. The suffocating **carbon-monoxide** is its incense, its image is **ruining thousands of streets** and canals.

The Provo bike-share system **liberates us** from the car-monster. Provo is launching the "White Bicycle", in public ownership. [...]

The white bicycle is never locked, it is the **first free collective mode of transport**. It is a provocation of the capitalist concept of ownership. The white bicycle is **anarchy**. [...]

THE BICYCLE IS SOMETHING, BUT BARELY ANYTHING!

PROVO'S FIETSENPLAN

AMSTERDAMMERS!

DE ASFALTTERREUR VAN DE GEMOTORISEERDE BOURGEOISIE HEEFT LANG GENOEG GEDUURD. DAGELIJKS WORDEN MENSEN-OFFERS GEBRACHT VOOR DE NIEUWSTE AUTORITEIT WAAR-AAN HET KLOOTJESVOLK ZICH HEEFT OVERGELEVERD: DE AUTO-AUTORITEIT. DE VERSTIKKENDE KOOLMONOXIDE IS ZYN WIEROOK, ZYN BEELTENIS VERPEST IN DUIZENDOUD GRACHTEN EN STRATEN.

PROVO'S FIETSENPLAN BRENGT BEVRIDING VAN HET AUTO-MONSTER. **PROVO** LANCEERT DE **WITTE FIETS**, IN OPENBAAR BEZIT.

DE EERSTE **WITTE FIETS** WORDT/IS WOENSDAG 28 JULI OM 3 UUR 'S MIDDAGS AAN PUBLIEK EN PERS AANGEBODEN BY HET AMSTERDAMS LIEVERDIJE OP HET SPIJ, DE VERSLAAFDE CONSUMENT. **Q**

DE **WITTE FIETS** IS NOOIT OP SLOT. DE **WITTE FIETS** IS HET EERSTE GRATIS, GEKOLLEKTIVISEERDE VERVOERMIDDEL. DE **WITTE FIETS** IS EEN PROVOKATIE VAN HET KAPITALISTIES PRIVÉ-BEZIT; WANT **DE WITTE FIETS IS ANARCHISTIES**.

DE **WITTE FIETS** KAN GEBRUIKT WORDEN DOOR WIE HEM NODIG HEEFT EN MOET ONBEHEERD WEER ACHTERGE-LATEN WORDEN. ER ZULLEN MEERDERE **WITTE FIETSEN** KOMEN TOT IEDER VAN HET WITTE VERVOER GEBRUIK KAN. MAKEN EN HET AUTOGEVAAR GEWEKEN IS.

DE **WITTE FIETS** SIMBOLISEERT EENVOUD EN HYGIENE TEGENOVER DE PROTSEERIGHEID EN VUILHEID VAN DE AUTORITAIRE AUTO. IMMER EEN

FIETS IS IETS, MAAR BYNA NIETS!



“Bringing facts to a culture war is like bringing a spoon to a knife fight. You gotta show the stories.”

- Chris Bruntlett from Modacity

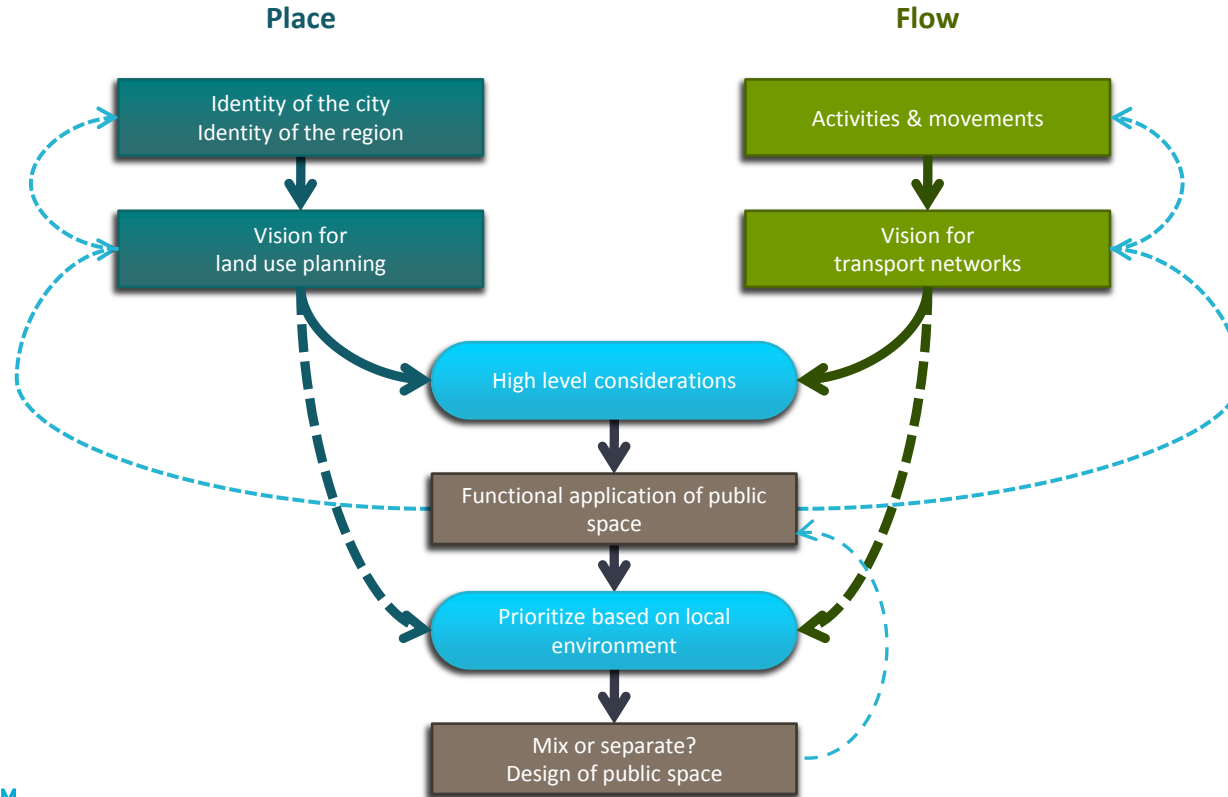
CHANGE IS POSSIBLE



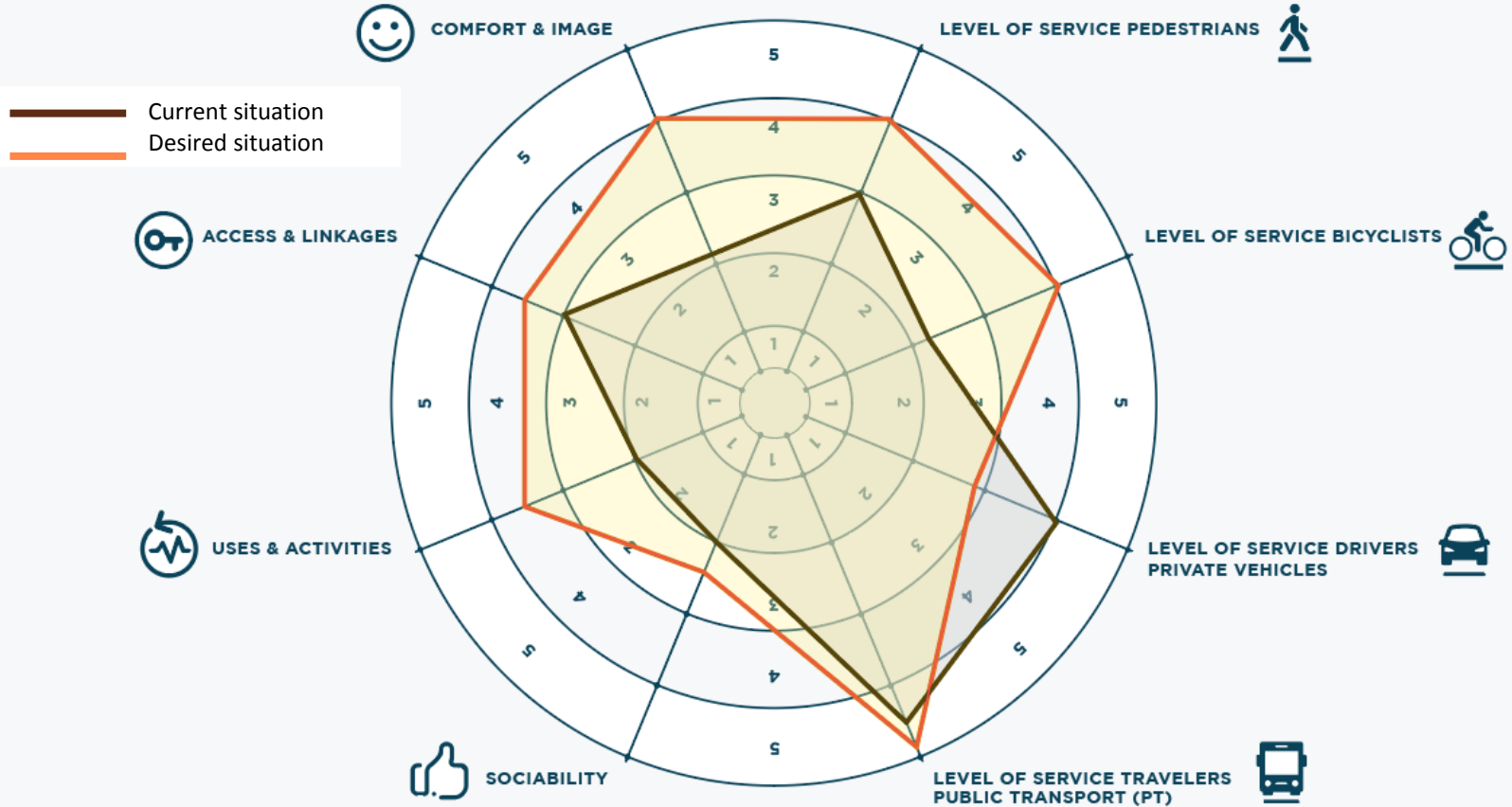


- Stories
 - Groningen, Zwolle, Utrecht, Kopenhagen
 - Arguments
 - Strive for a win-win for multiple stakeholders
 - Take in account other interests and values
 - Waardenkaart Windesheim
-
- → TO BE WORKED OUT

DESIGN METHODOLOGY



Integrated Place Assessment



PUBLIC PARTICIPATION

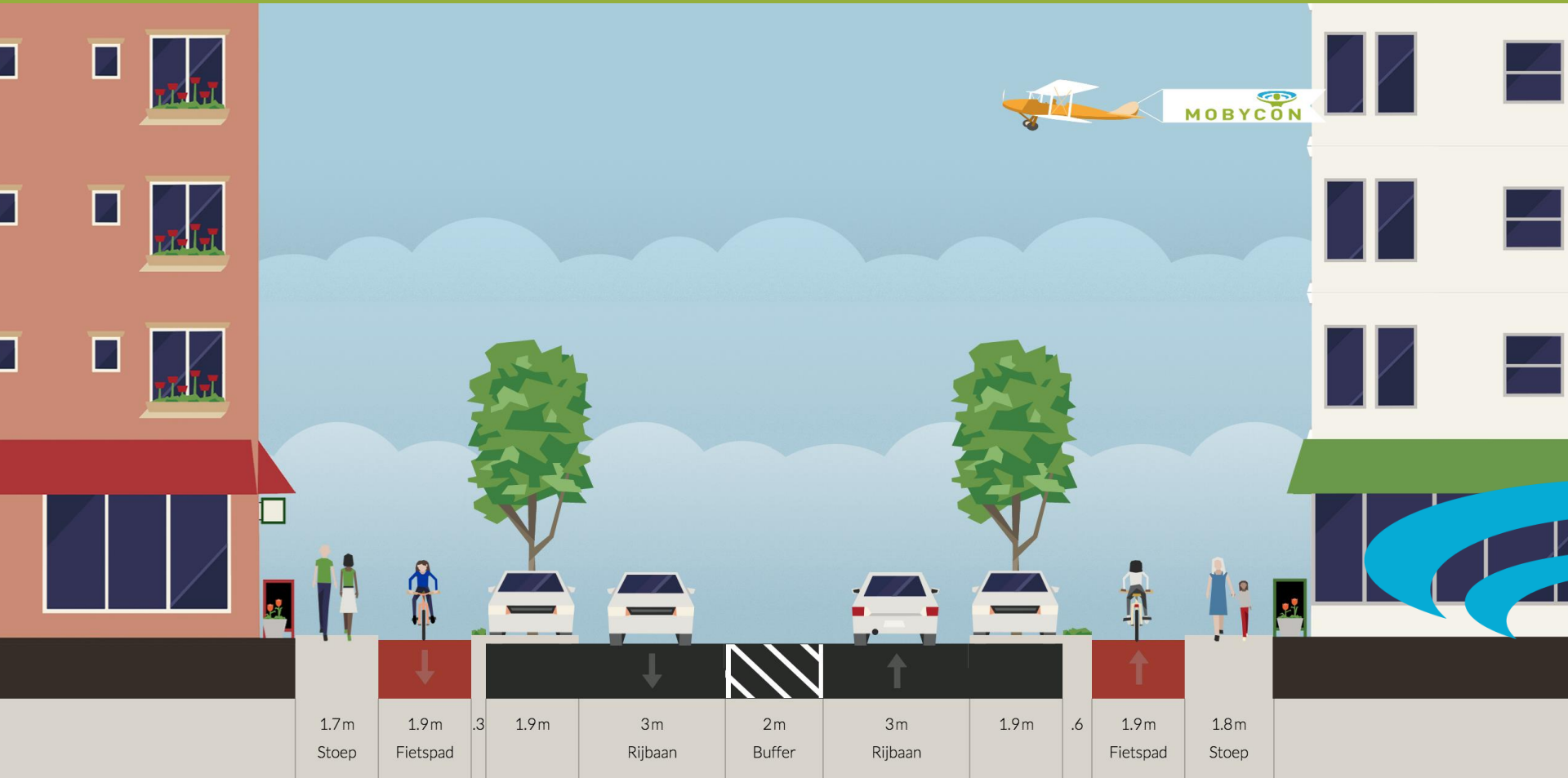




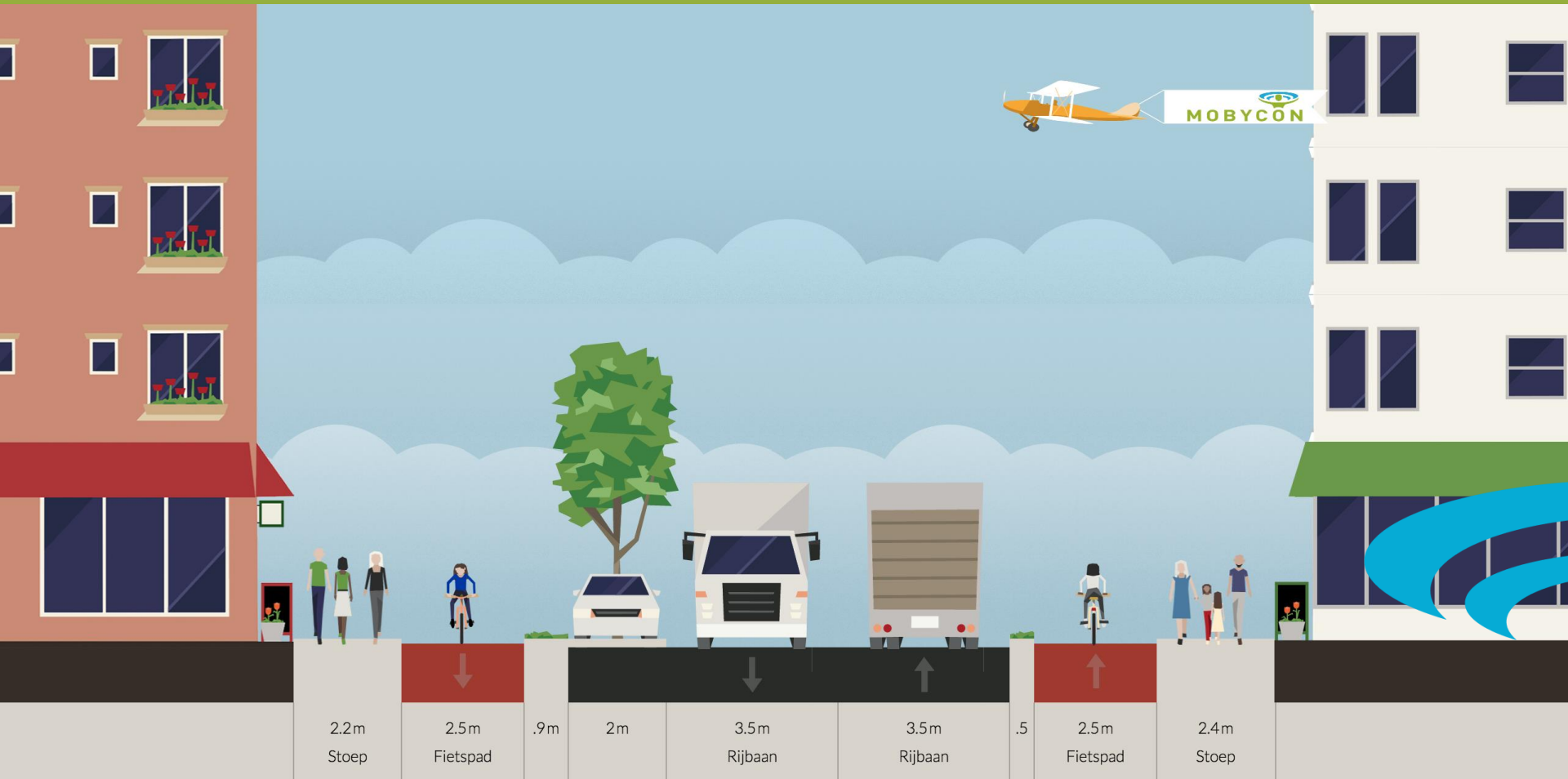
WHAT IS STREETSKETCH?

- Online street design tool
- Based on a tool from the USA called Streetmix
- Enhanced with many extra street design elements
- Drag-and-drop cross section design

BEFORE



AFTER

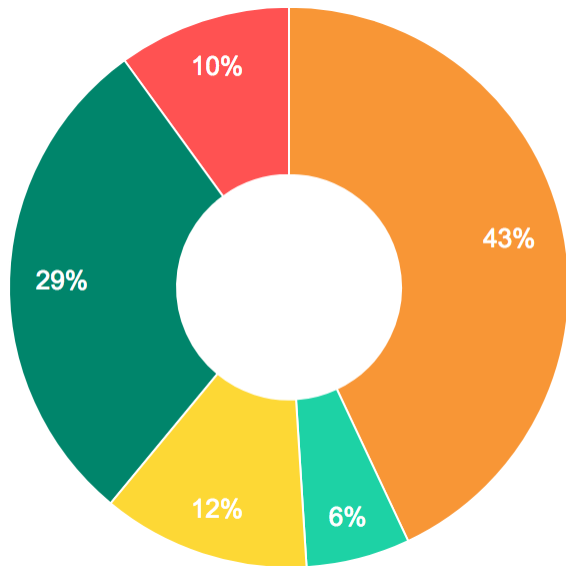


EXAMPLE BICYCLE STREET



6 STEPS TO BECOMING A CYCLING CITY

- **1. GET SERIOUS ABOUT E-BIKES**



ELECTRIC BIKE SALES

- 1 in 3 bikes sold in NL is electric
- People on e-bikes travel further (not much faster)
- Planning for trips up to 15km (instead of 7,5)

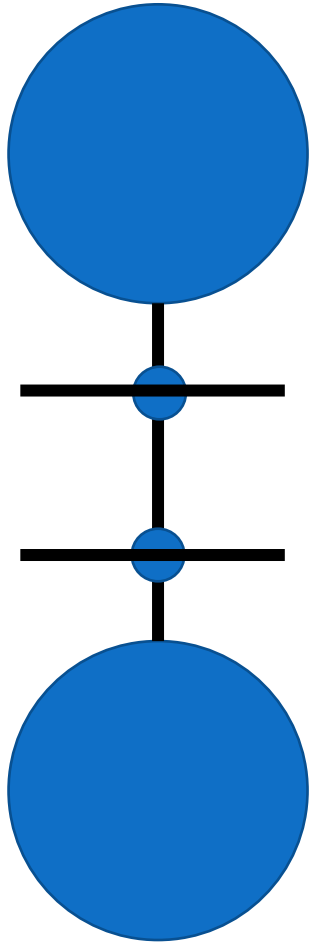


FUTURE-PROOF NETWORKS

- The bicycle is changing
 - Wider
 - Faster
 - Heavier
- More people will ride further
- Speed differences = danger



- 1. GET SERIOUS ABOUT E-BIKES
- **2. THINK IN CIRCLES, AND LINES**

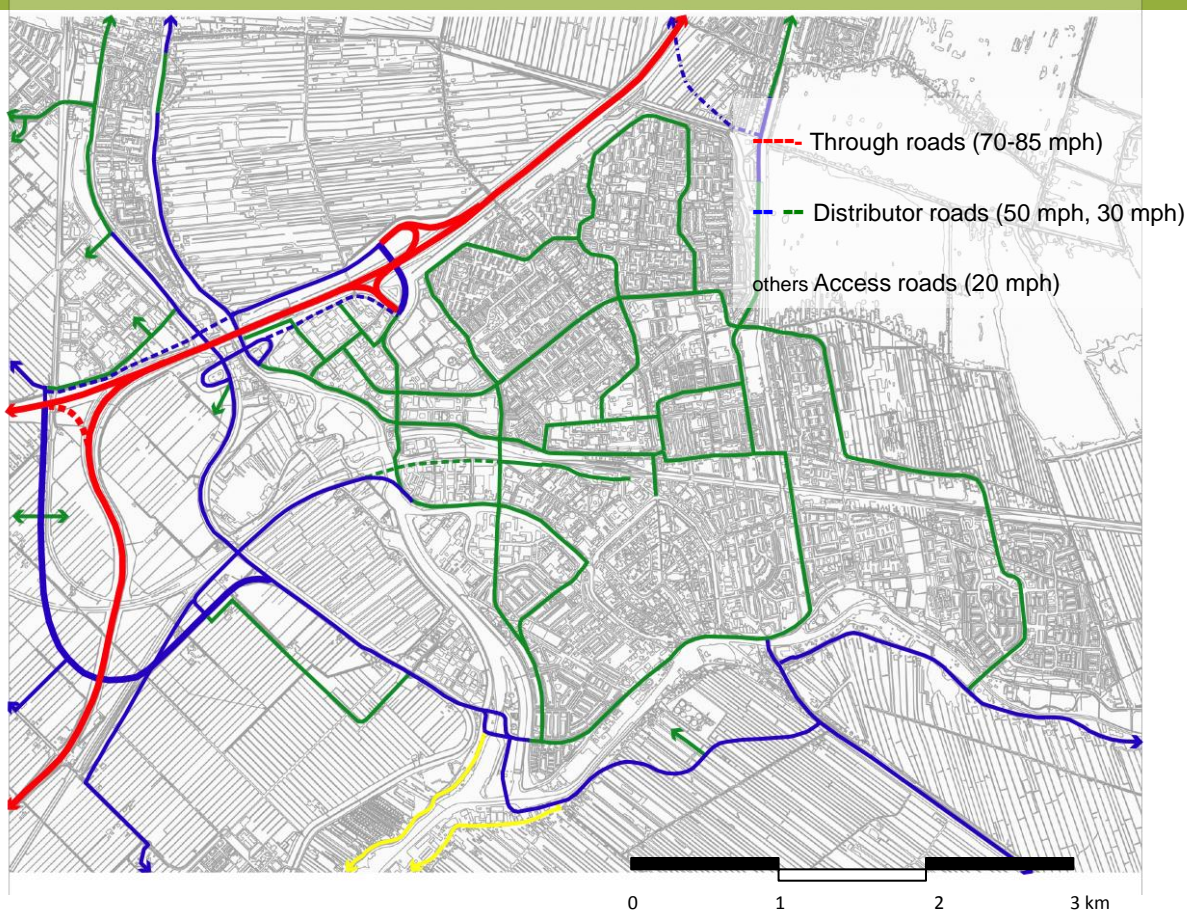


NETWORK PLANNING

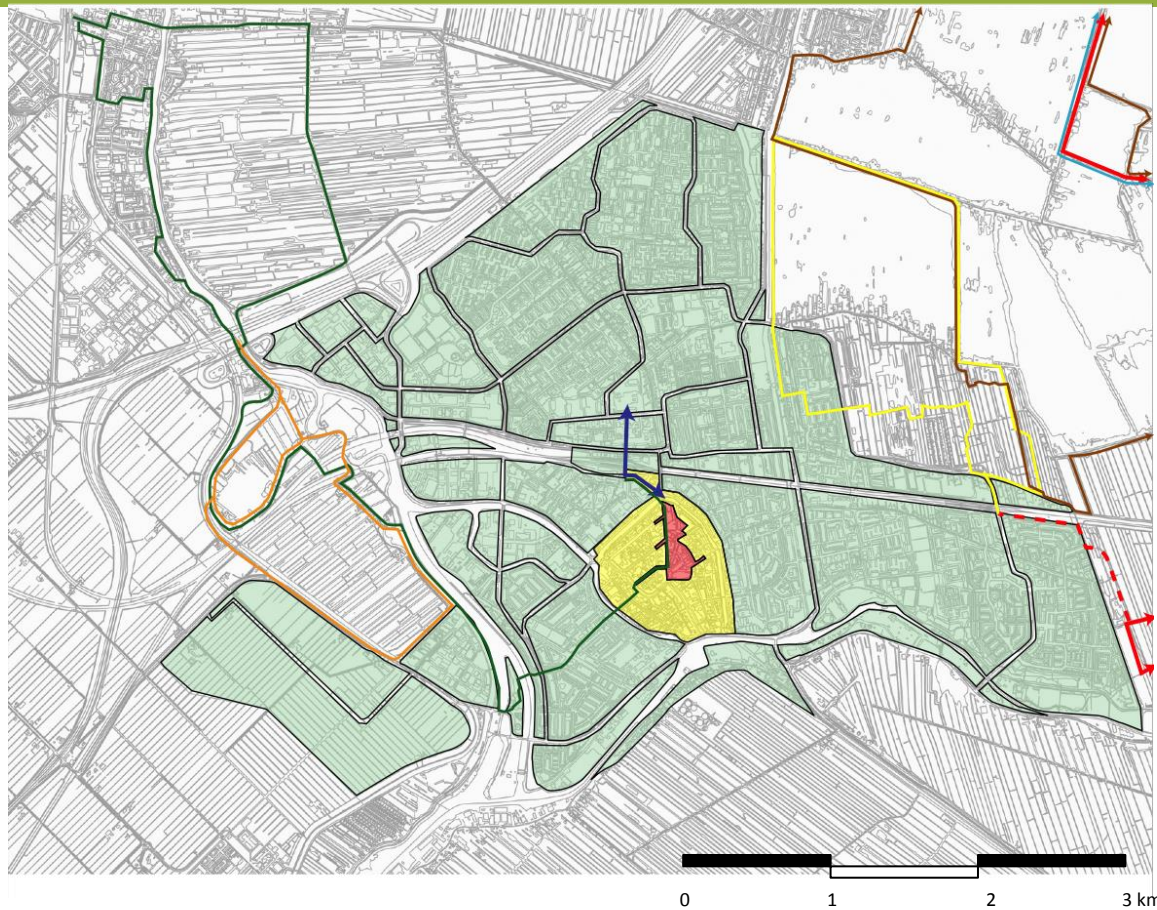
- Aim for the short trips
- Plan for the non-cyclist
- Enhance your transit system



ZONES, NOT ROUTES



ZONES, NOT ROUTES

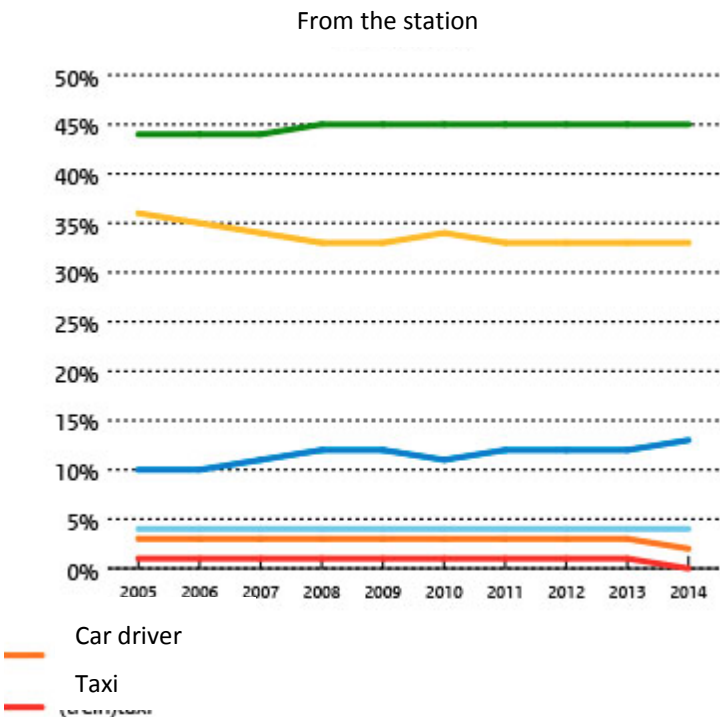
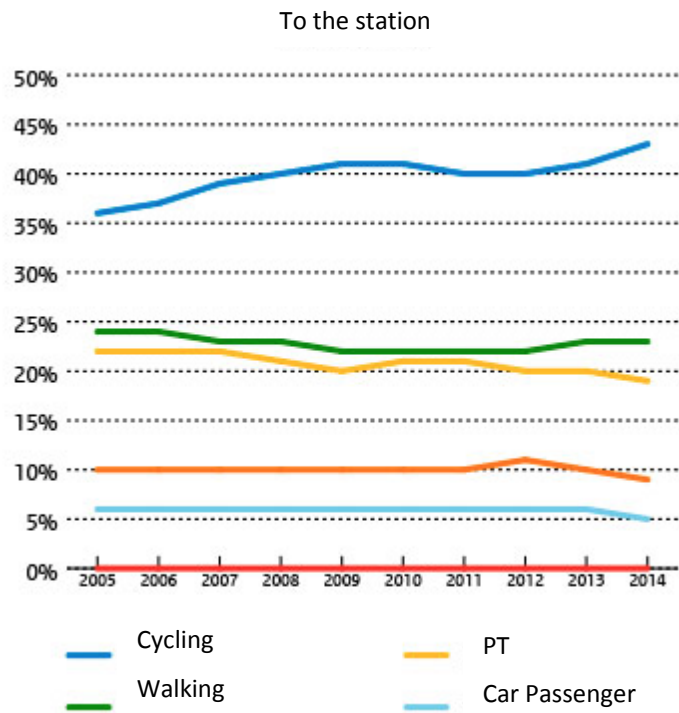


- Pedestrian zone
- 20 mph city center
- 20 mph residential areas

MAIN REQUIREMENTS

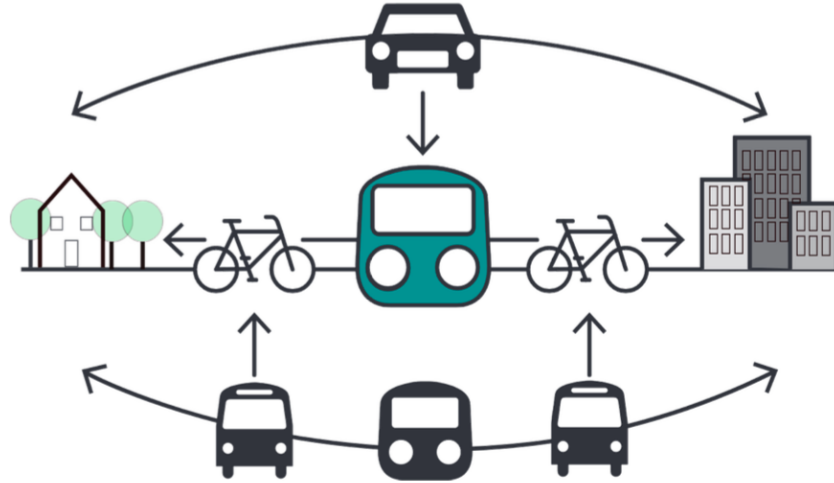
- **Coherence**
 - Connectivity
 - Recognisability
 - Continuity
 - Signposting
- **Directness**
 - Minimise detours
 - Minimise delays
- **Attractiveness**
 - Pleasant surroundings
 - Minimum stress
 - Social security
- **Safety**
 - Minimise conflicts
 - Minimise outcome of conflicts
 - Allow for interaction between road users
 - Provide safety margins
- **Comfort**
 - Minimise energy consumption
 - Make riding easy
 - Avoid uncomfortable manoeuvring

FOCUS ON TRIP CHAINING





Competitiveness

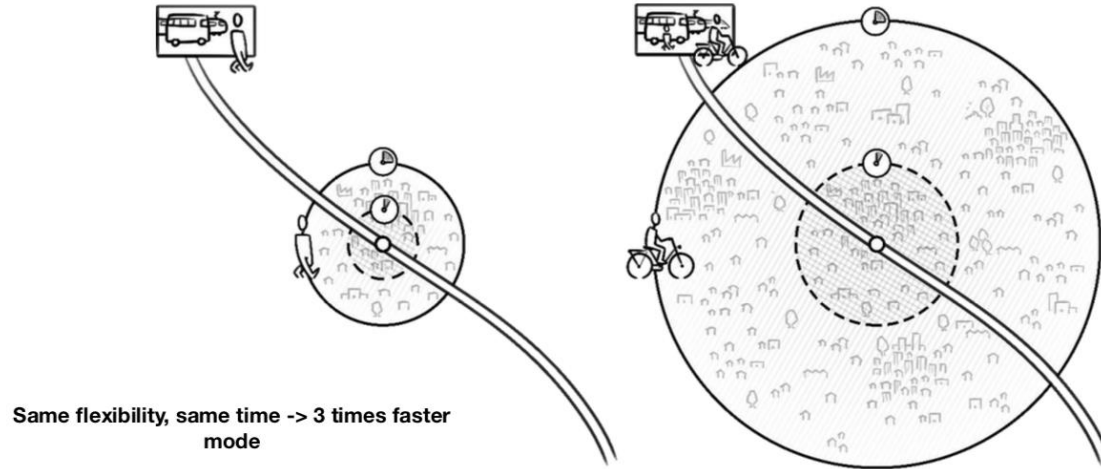


Credit: bitibi.eu

CATCHMENT AREAS

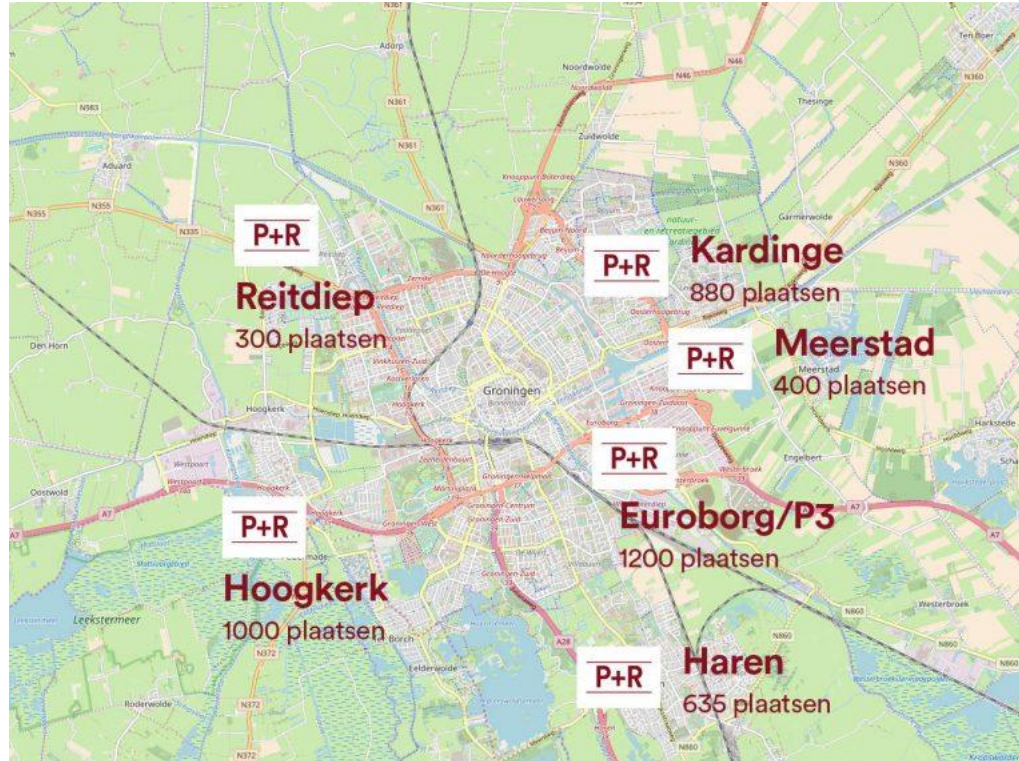


Catchment areas



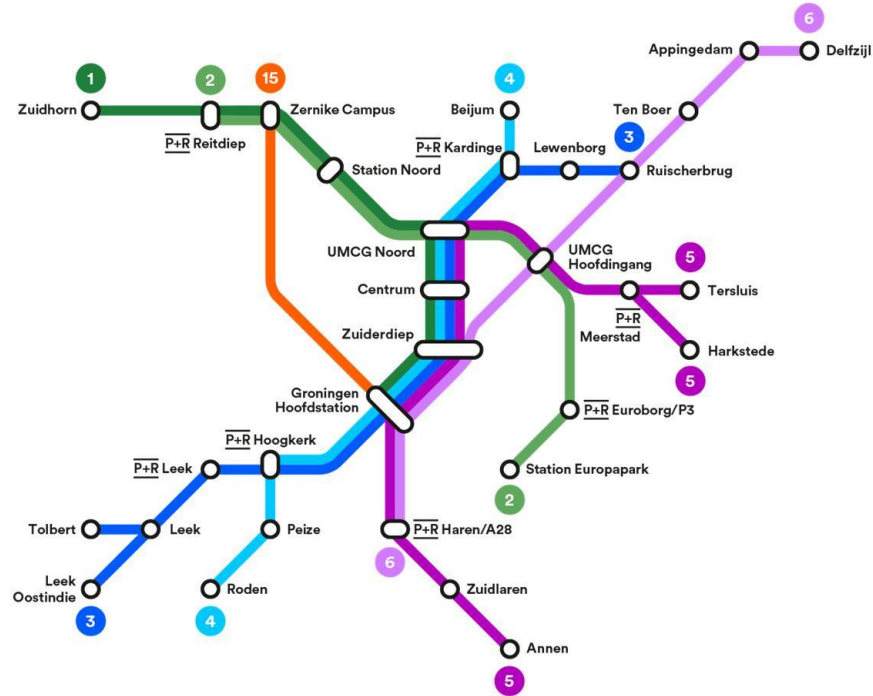
Credit: (Kager, Harms, 2017)

PARK AND RIDE



PARK AND RIDE

Q-link



- 1. GET SERIOUS ABOUT E-BIKES
- 2. THINK IN CIRCLES, AND LINES
- **3. HIRE MORE WOMEN**



DIVERSITY MATTERS

- Design for men, women, children
- Engage the non-cyclist
- Diverse teams perform better
- Devil is in the details





WOMEN TRAVEL MORE

- More trips per day
- Fewer miles
- More opportunity for cycling





- 1. GET SERIOUS ABOUT E-BIKES
- 2. THINK IN CIRCLES, AND LINES
- 3. HIRE MORE WOMEN
- **4. BE OPPORTUNISTIC**



INSTANT BIKE SHARE





TRY STUFF

- Work with the engineering dept
- Make trials truly temporary
- Observe, improve, rebuild



- 1. GET SERIOUS ABOUT E-BIKES
- 2. THINK IN CIRCLES, AND LINES
- 3. HIRE MORE WOMEN
- 4. BE OPPORTUNISTIC
- **5. BE BOLD**







- 1. GET SERIOUS ABOUT E-BIKES
- 2. THINK IN CIRCLES, AND LINES
- 3. HIRE MORE WOMEN
- 4. BE OPPORTUNISTIC
- 5. BE BOLD
- **6. MAKE USE OF SUPERPROMOTORS**

PRIME MINISTER TO WORK



- 1. GET SERIOUS ABOUT E-BIKES
- 2. THINK IN CIRCLES, AND LINES
- 3. HIRE MORE WOMEN
- 4. BE OPPORTUNISTIC
- 5. BE BOLD
- 6. MAKE USE OF SUPERPROMOTORS

Thank you for your attention



Innovative mobility solutions
make us less dependent on
the car