Amsterdam bicycle infra

- Handshake immersive symposium
- Bruges, january 2020

City of Amsterdam

- Capital of the Netherlands
- 865.000 inhabitants
- 2.3 million inhabitants in Metropolitan Region Amsterdam
- Increasing numbers of inhabitants, jobs and visitors

Amsterdam was built for pedestrians

Large (central) area built before WW-II

Amsterdam, the cycling capital …

- The bicycle is a daily means of transport: work, school, shopping, leisure, etc.
- **Cyclists men – women: 50/50%**

- 36% of all trips are made by bike (24% walking, 20% public transport, 20% car)
- 2.2 million kms by bike in Amsterdam daily
- 650.000 trips every day by bike
- 900.000 bicycles in Amsterdam
- 735 kms separated bicycle paths, protected from motorized traffic

- **Over 90% of the roads/streets are 'bicycle-friendly' routes (max. 30 km/hr)**

This presentation

- Bicycle policy? ➔ Bicycle projects!
  - Person – Vehicle – infrastructure ➔ **Engineering**
- Integrated approach
  - Not 'bicycle projects' but ➔ 'design/engineering of public space'
- Hovenring? ➔ Cycling in 'normal' streets
  - Lots to gain in design and construction of 'normal' infrastructure
- Streets
- Intersections
- Examples

Taras Grescoe @grescoe · 6 jan.

"Cities are meant to stop traffic. That is their point. That is why they are there. That is why traders put outposts there, merchants put shops there, hoteliers erect inns there. Rationally one wants to have traffic *stop* there, not go *through*."
—Kirkpatrick Sale
#Pontevedra

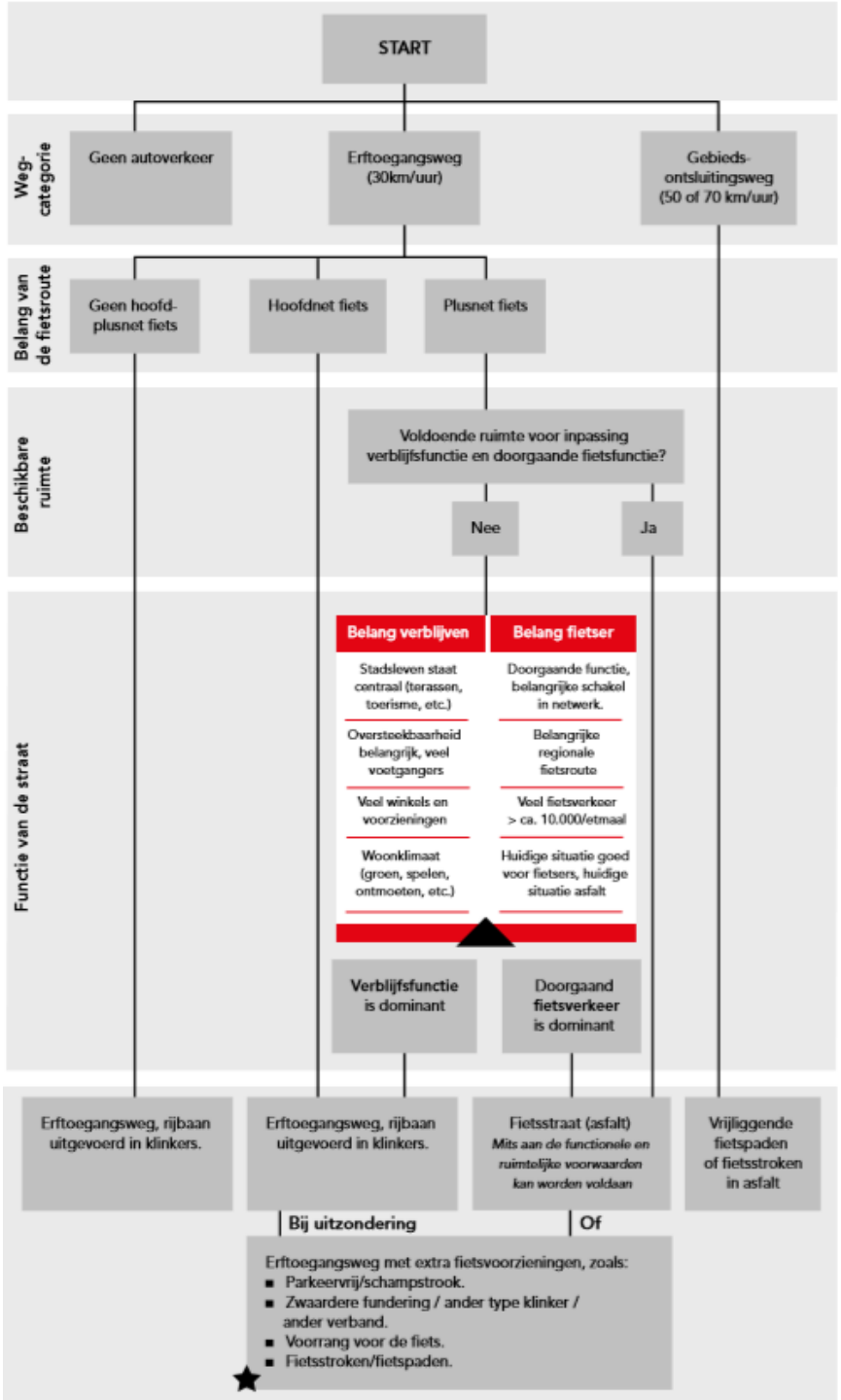
"Less speed, more city"

Streets

- What are the options per location?
  - Decision tree as part of ‘Agenda Autoluw’
  - Bicycle streets, bicycle lanes, (separated) bicycle paths, mixed traffic
  - Width, pavement, traffic intensity (car + bike), function for public transport and pedestrians

- Examples
  - Sarphatistraat
  - Weesperzijde
  - Anthoniesbreestraat vs. Geldersekade
  - Amstel

Decision Tree



Only for non-standard 30km-streets

Evaluation based on functionality for traffic and public space

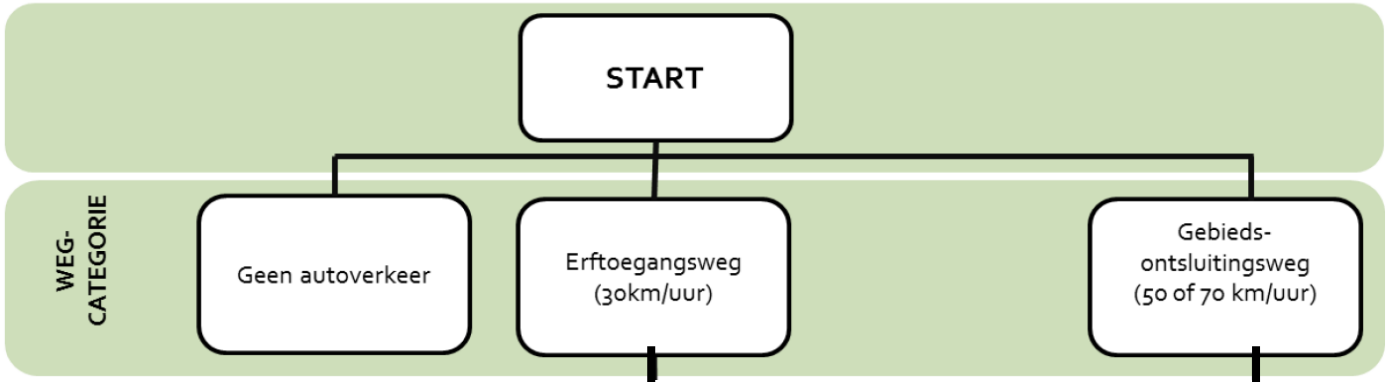
How to decide?

Hoe weeg je een straat?

Het 'wegen' van de verblijfsfunctie en de verkeersfunctie is geen exacte wetenschap. Om tot een juiste weging te komen zetten we bijvoorbeeld de volgende middelen in:

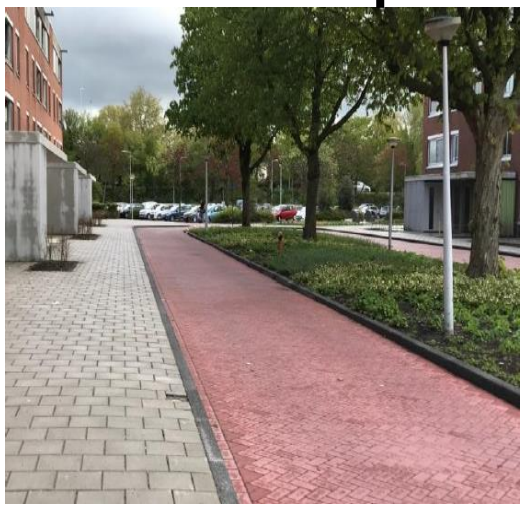
- Metingen van de verkeersintensiteiten (aantallen voetgangers, fietsers, autobewegingen, OV-bewegingen).
- Analyse van de verhouding doorgaand- vs. bestemmingsverkeer.
- Gesprekken met bewoners, ondernemers en andere gebruikers van de straat.
- Analyse van het netwerk en de toekomstige ontwikkelingen op het netwerk.

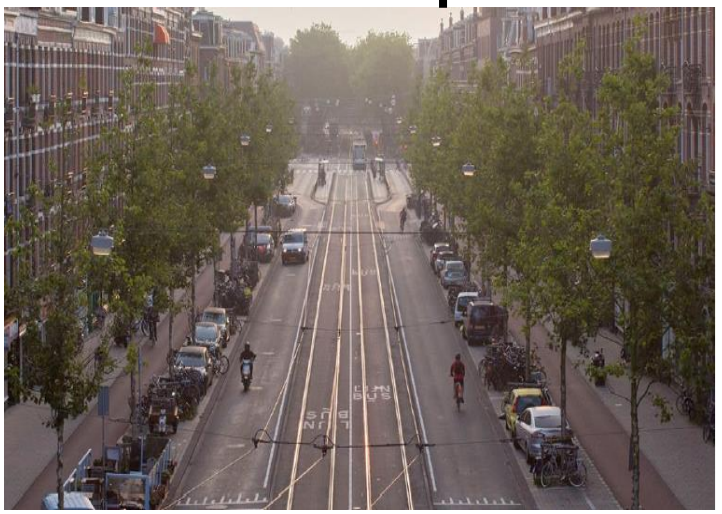
Belang verblijven	Belang fietser
Stadsleven staat centraal (terassen, toerisme, etc.)	Doorgaande functie, belangrijke schakel in netwerk.
Oversteekbaarheid belangrijk, veel voetgangers	Belangrijke regionale fietsroute
Veel winkels en voorzieningen	Veel fietsverkeer > ca. 10.000/etmaal
Woonklimaat (groen, spelen, ontmoeten, etc.)	Huidige situatie goed voor fietsers, huidige situatie asfalt



Most streets are normal streets

Sustainable Safety Principles





Type	Residential street	Connection road
Max. Speed	30	50
Standard	Mix	Separate
Pavement	Bricks	Asphalt

Possibilities 'in between'

Bricks with possible extras:

- More width
- Less/no car parking
- Priority
- Better pavement/foundation
- Bicycle lanes
- …

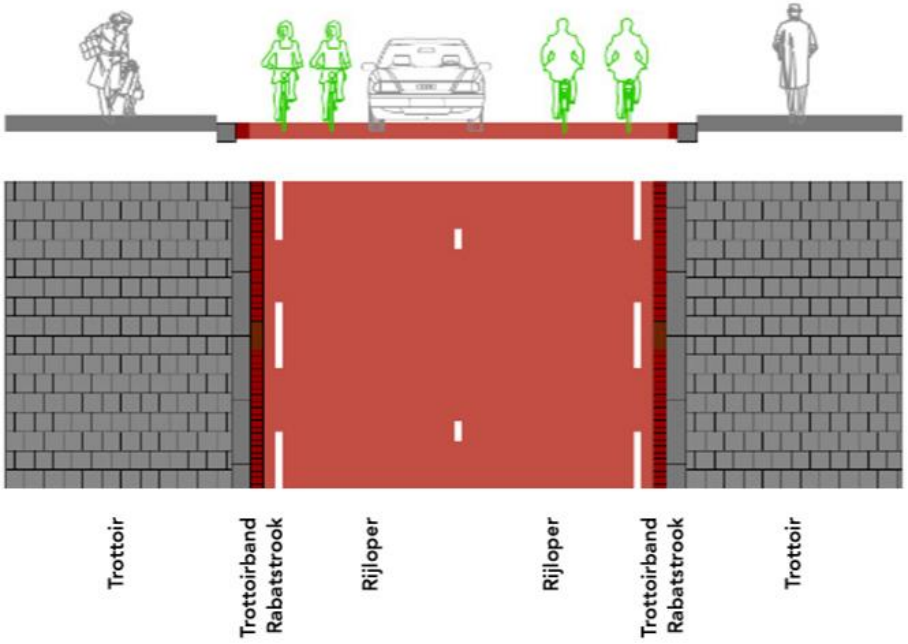
Asphalt ➔ Bicycle street if and only if:

- main cycle route
- bikes dominant over cars
- enough width available

Example street – 1 – Weesperzijde

- Bicycle street avant la lettre
- Bicycle infra? Less cars, more space + perfect crossing
- ~20.000 bikes/24hr

- Google streetview : https://www.google.nl/maps/@52.3588594,4.9060311,3a,75y,351.72h,76.88t/data=!3m6!1e1!3m4!1soLt-YDjxlQYIrpxR8rI2XA!2e0!7i13312!8i6656



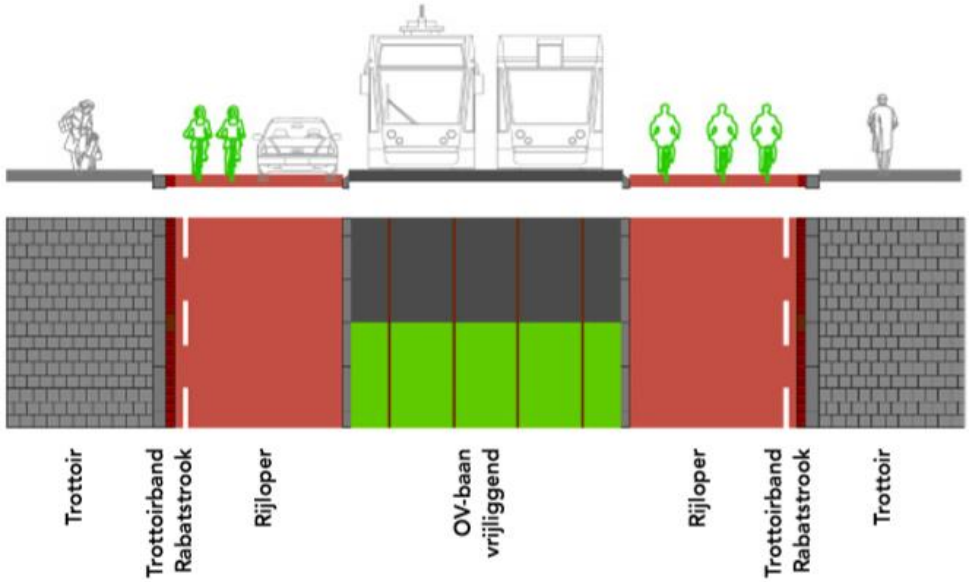

Weesperzijde


Weesperzijde

Example street – 2 – Sarphatistraat

- From 50km/h to 30km/h (except tram) to gain space for cyclists

- Google streetview : https://www.google.nl/maps/@52.359607,4.8998282,3a,75y,78.67h,99.25t/data=!3m6!1e1!3m4!1sCsZWNiYJ7RmNo4O5rmmrcQ!2e0!7i13312!8i6656




fietsstraat
auto te gast

Example street – 3a/3b – Geldersekade/Anthoniesbreestraat

- Separate infra vs. fix the mix
- One route, two solutions. Preference?
- What could be 'best of both worlds'?

- Google streetview : https://www.google.nl/maps/@52.3760264,4.9025914,3a,75y,232.38h,86.6t/data=!3m6!1e1!3m4!1sVonRB_hoIiTsqbbkOdZUjA!2e0!7i16384!8i8192

➔ Next slide: Amstel old + new Too busy? Bad in any design; see: https://twitter.com/schlijper/status/1211612486585192449 *from 2:00 – 1:30*


LEKKER
NA HET
SPORTEN!

Example street – 4 – Residential Street

- *If possible:*
  Keep it simple!

https://twitter.com/BicycleMayor020/status/1216371713124028416

- Circulation
- 1-way street
- Traffic calming

Intersections

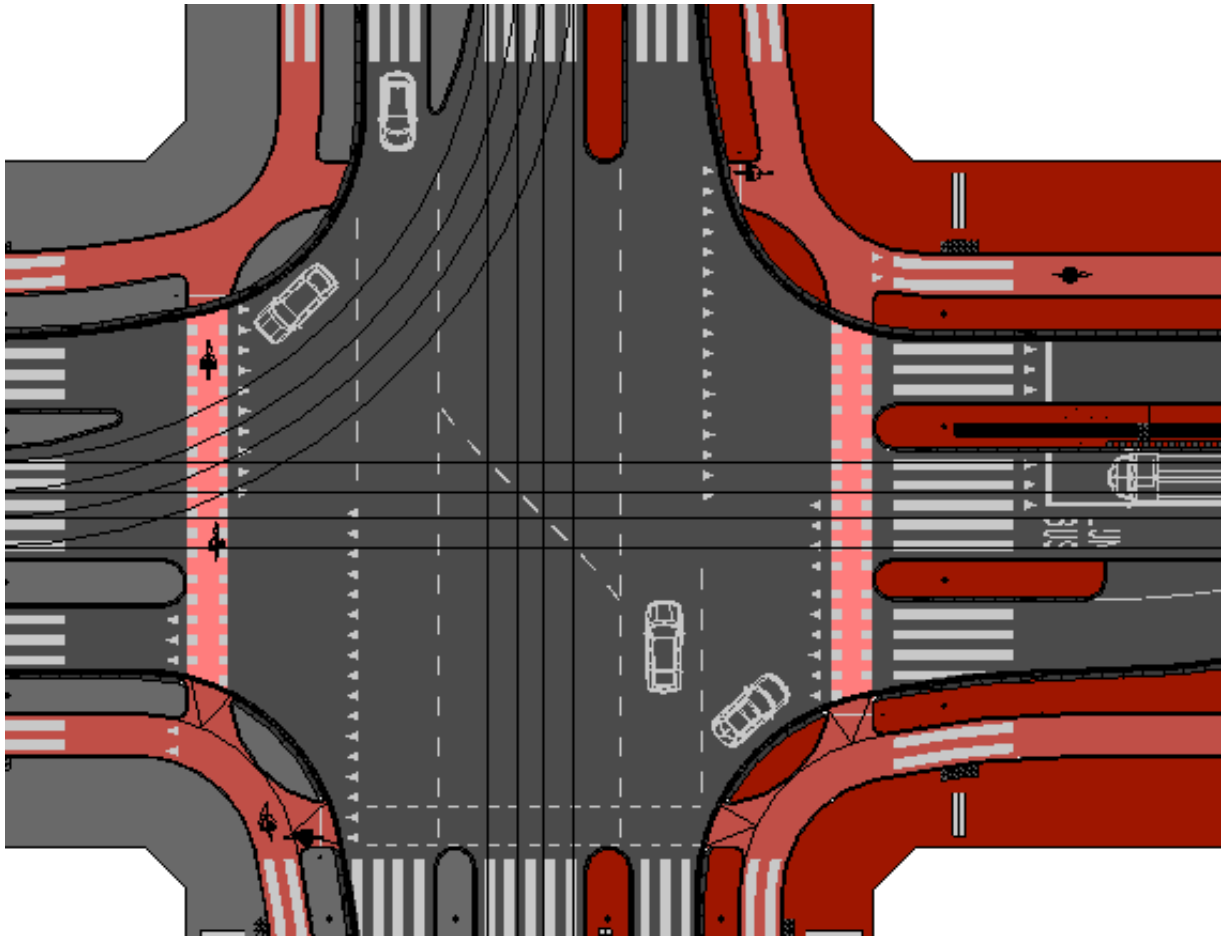
Gemeente Amsterdam

Ontwerpen naar gebruik

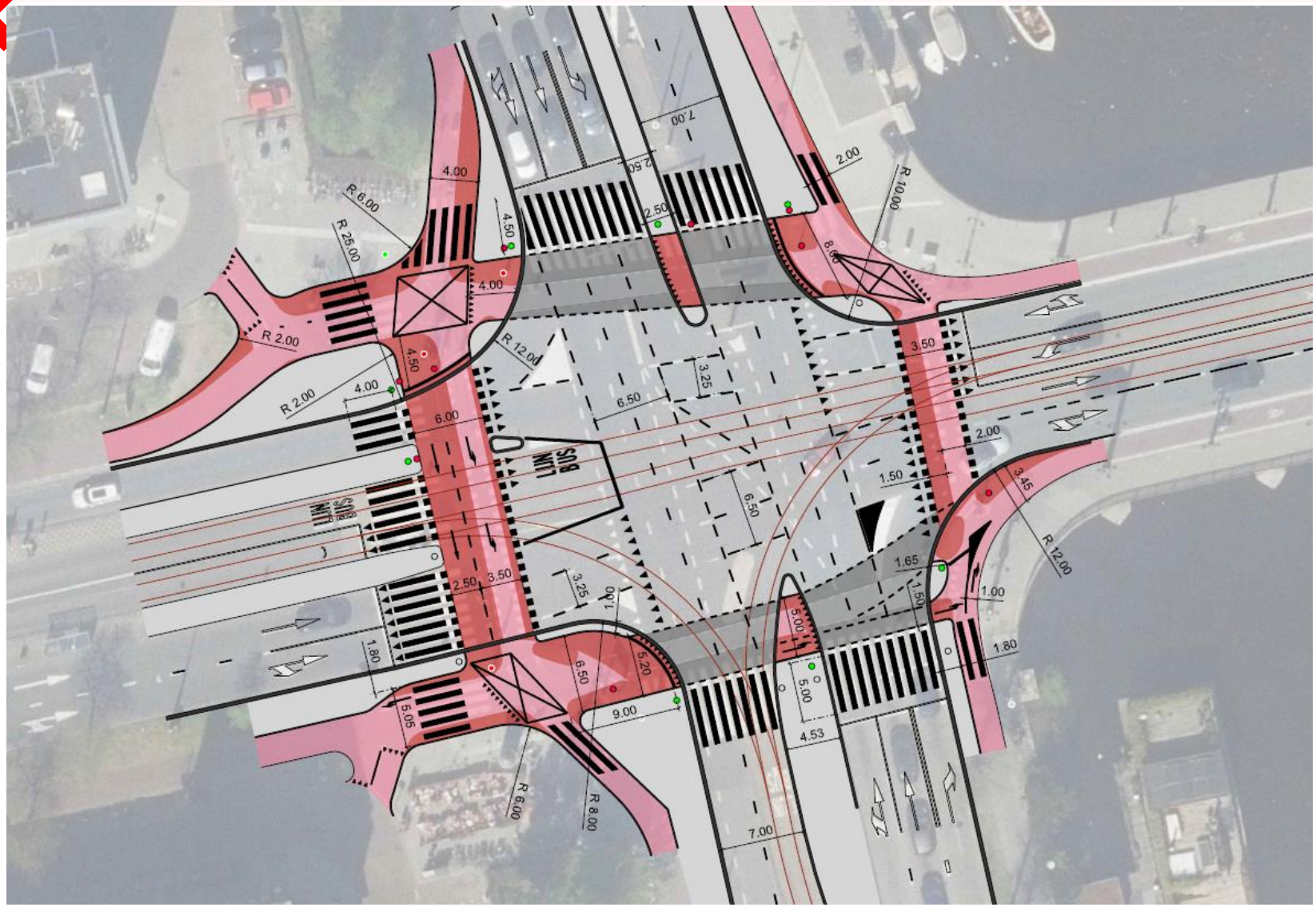
Sjoerd Linders
Kees Vernooij
Ruimte & Duurzaamheid

Standard intersection design

see also: https://www.youtube.com/watch?v=FlApbxLz6pA (bicycledutch)



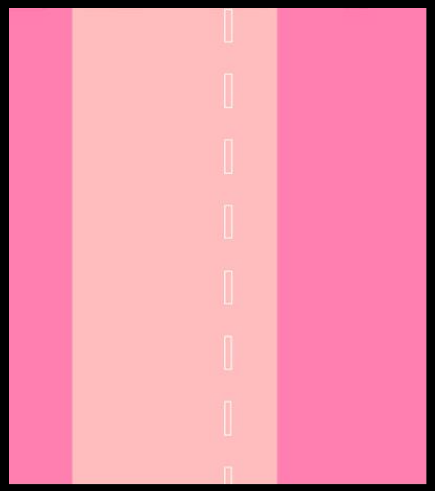
Improved design (Vrijheidslaan – Amsteldijk)

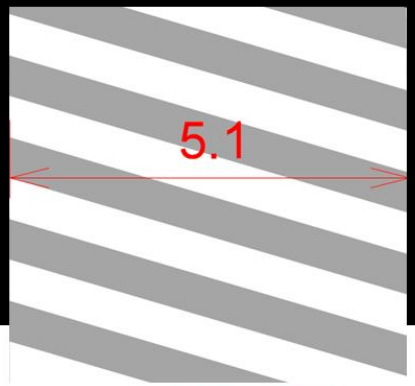


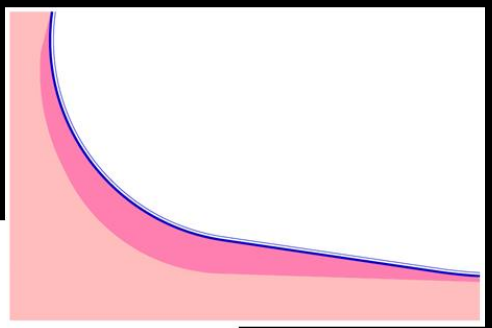
Why improve? More space needed

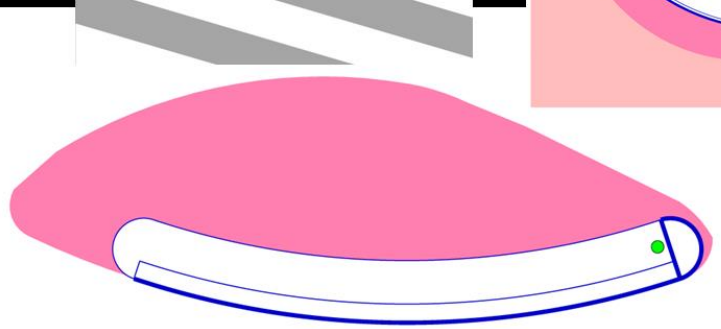
(Relatively) small design ideas

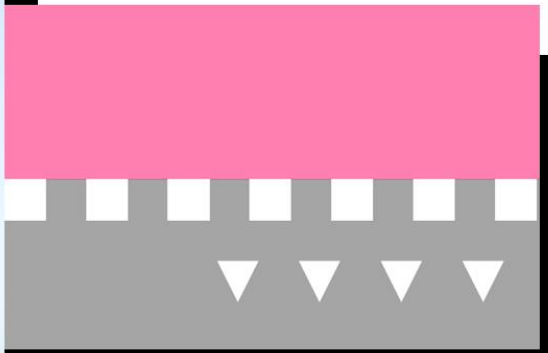
Traffic light adjustments

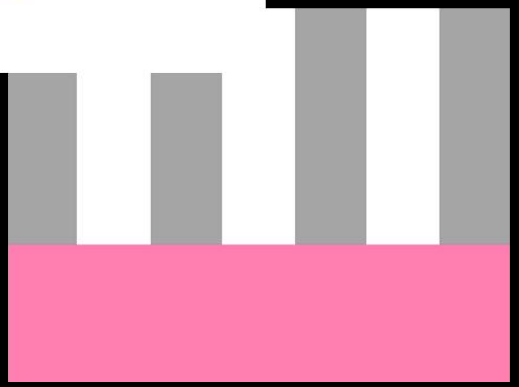




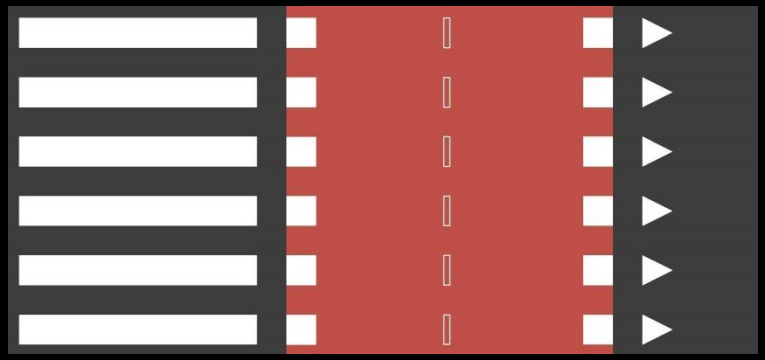


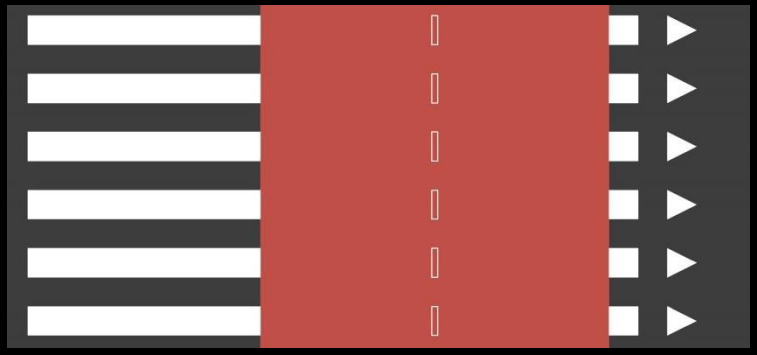




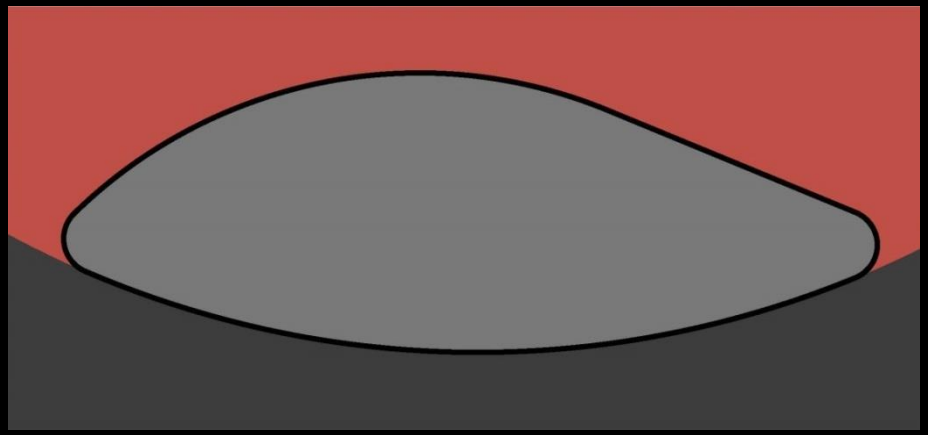


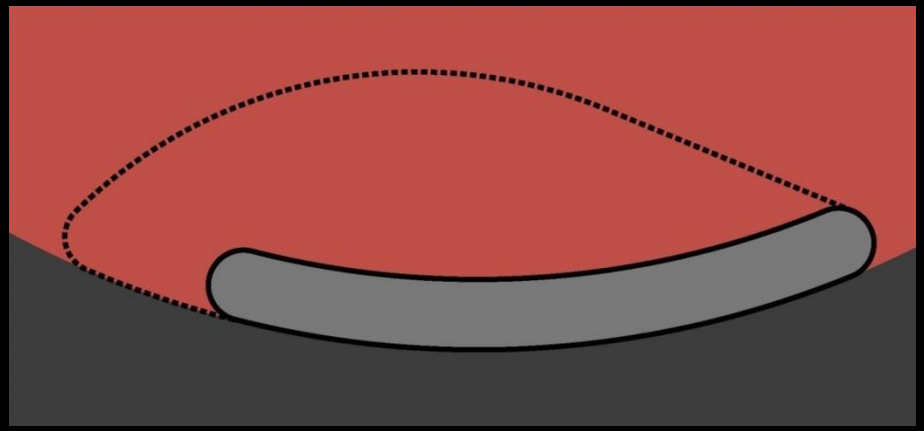
Simplify markings





- Keep it readable

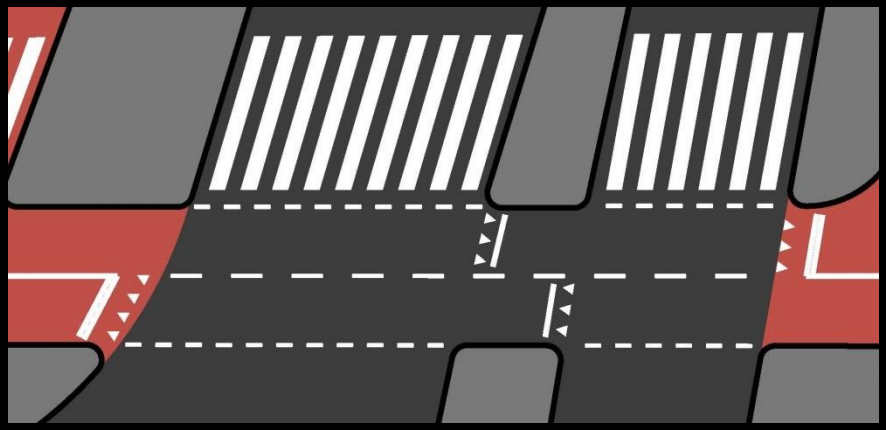


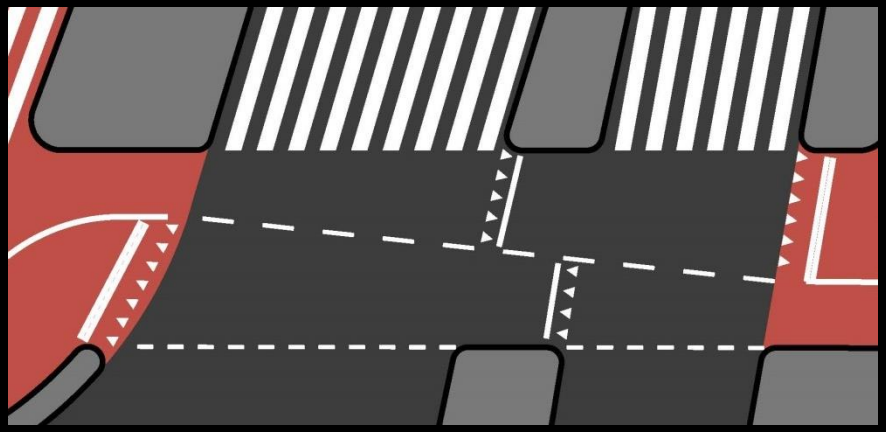


‘Banana’

Shrink, lower, or remove curbs

- Waste of space
- No-mans-land => space for bikes
- Still space available for traffic lights





‘Frietzak’

(belgian fries cone)

Diagonal central axis on cycle crossing

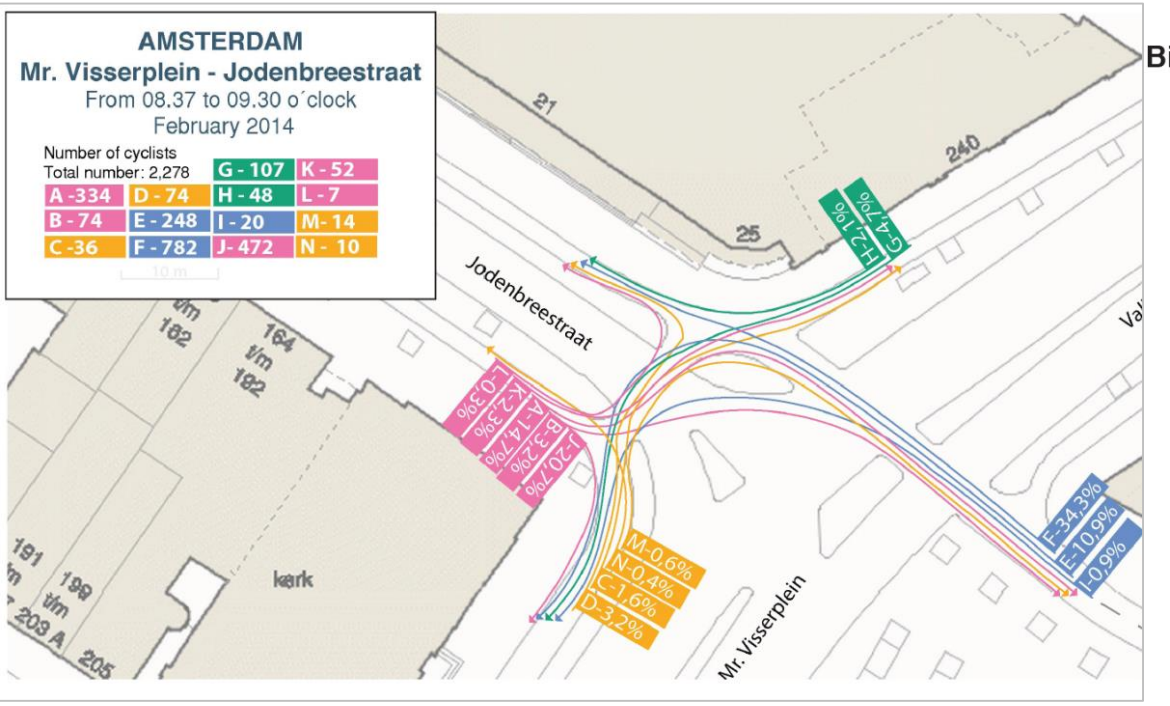
- Enlarge waiting space
- Form follows use
- Improves capacity by guiding the cyclists

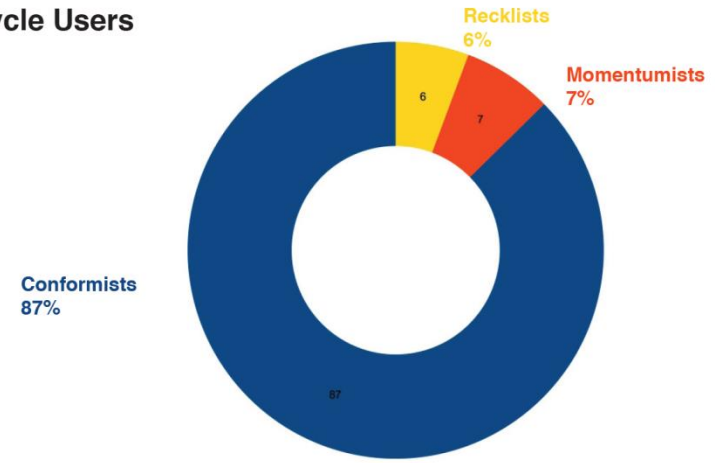
Toolbox

- Checklist
- Can (and should) continually be improved
- Every intersection is different, needs different tools

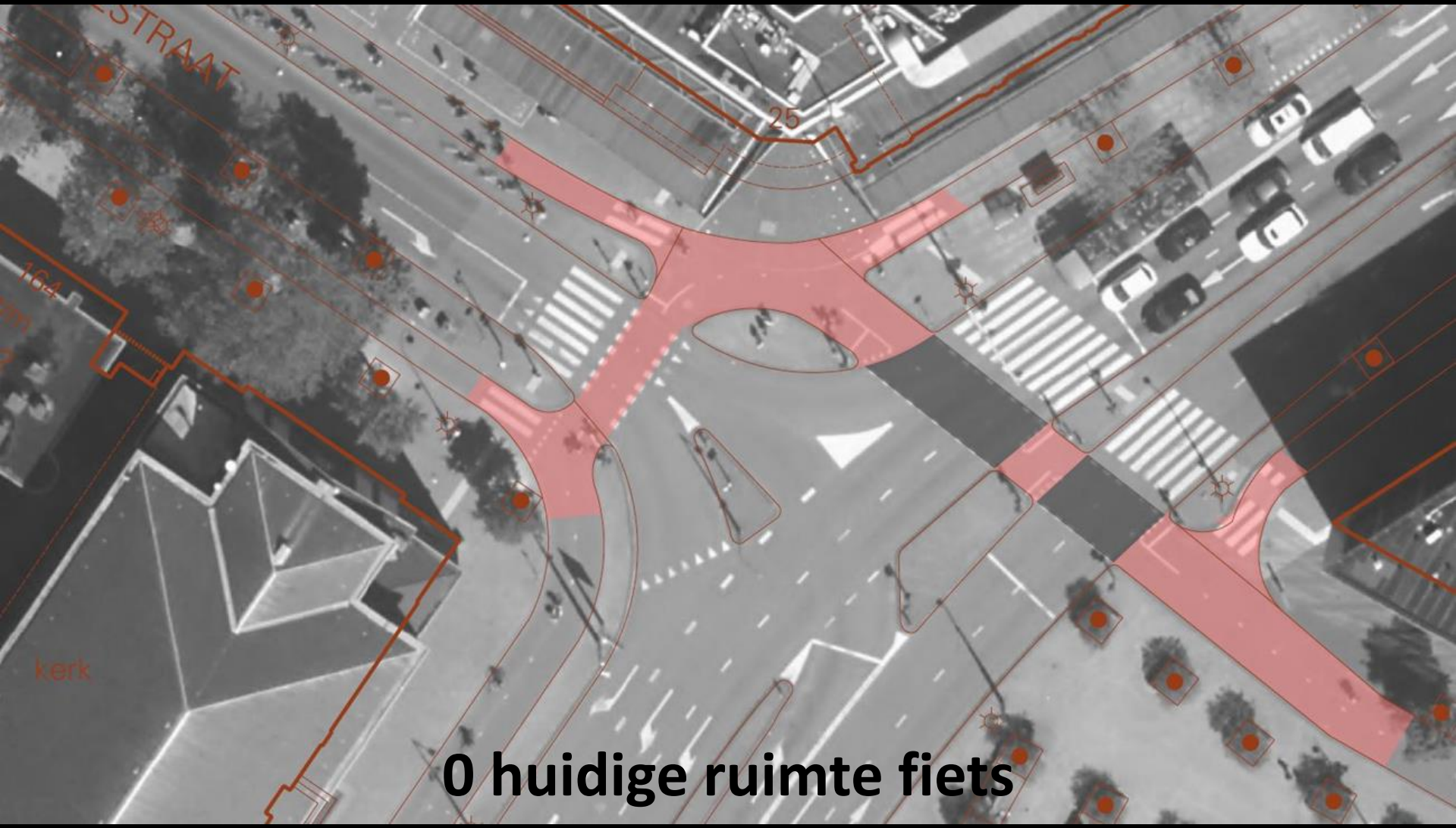
Actual use (Mr. Visserplein)

desire lines 2014

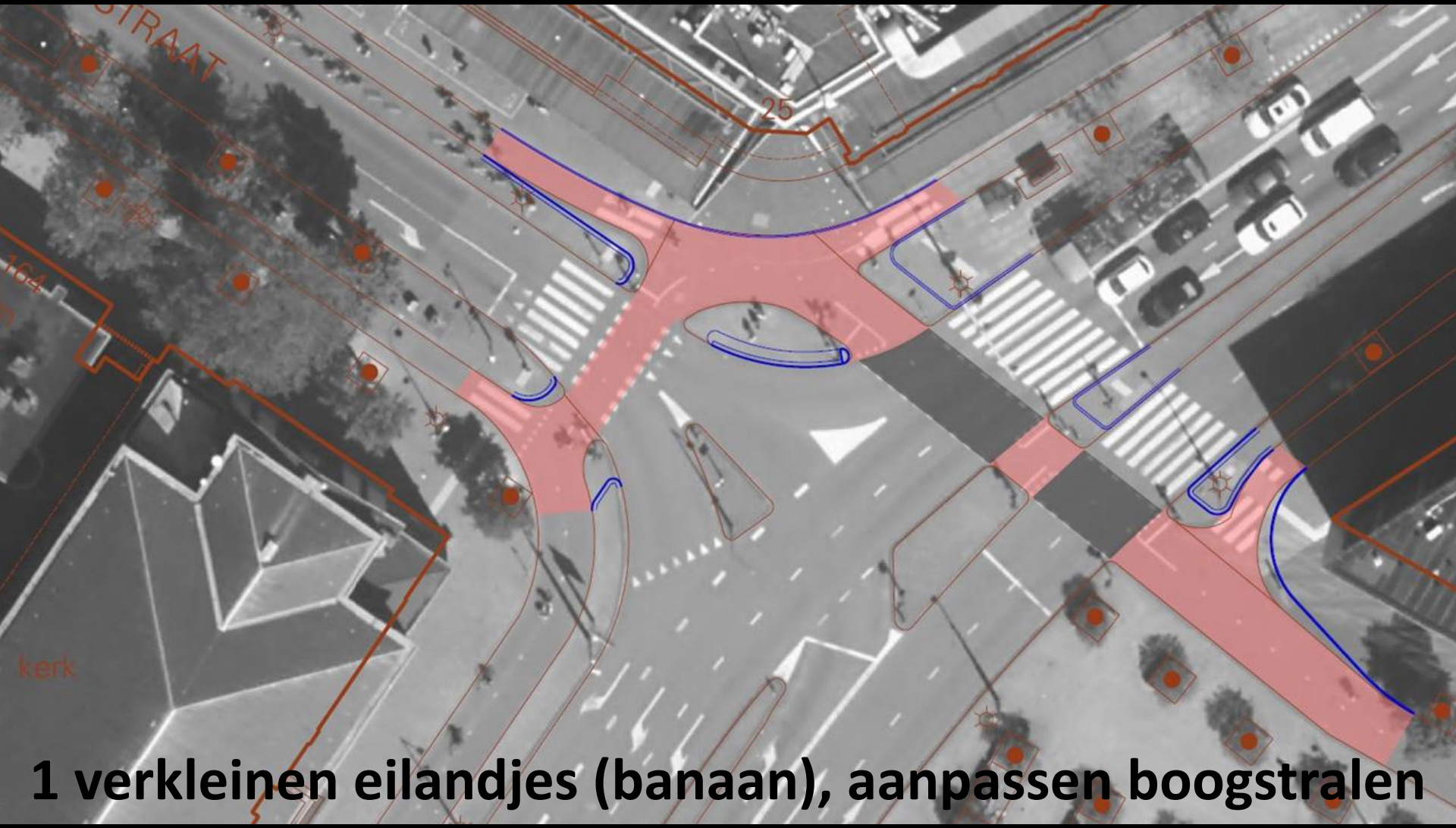




Mr. Visserplein

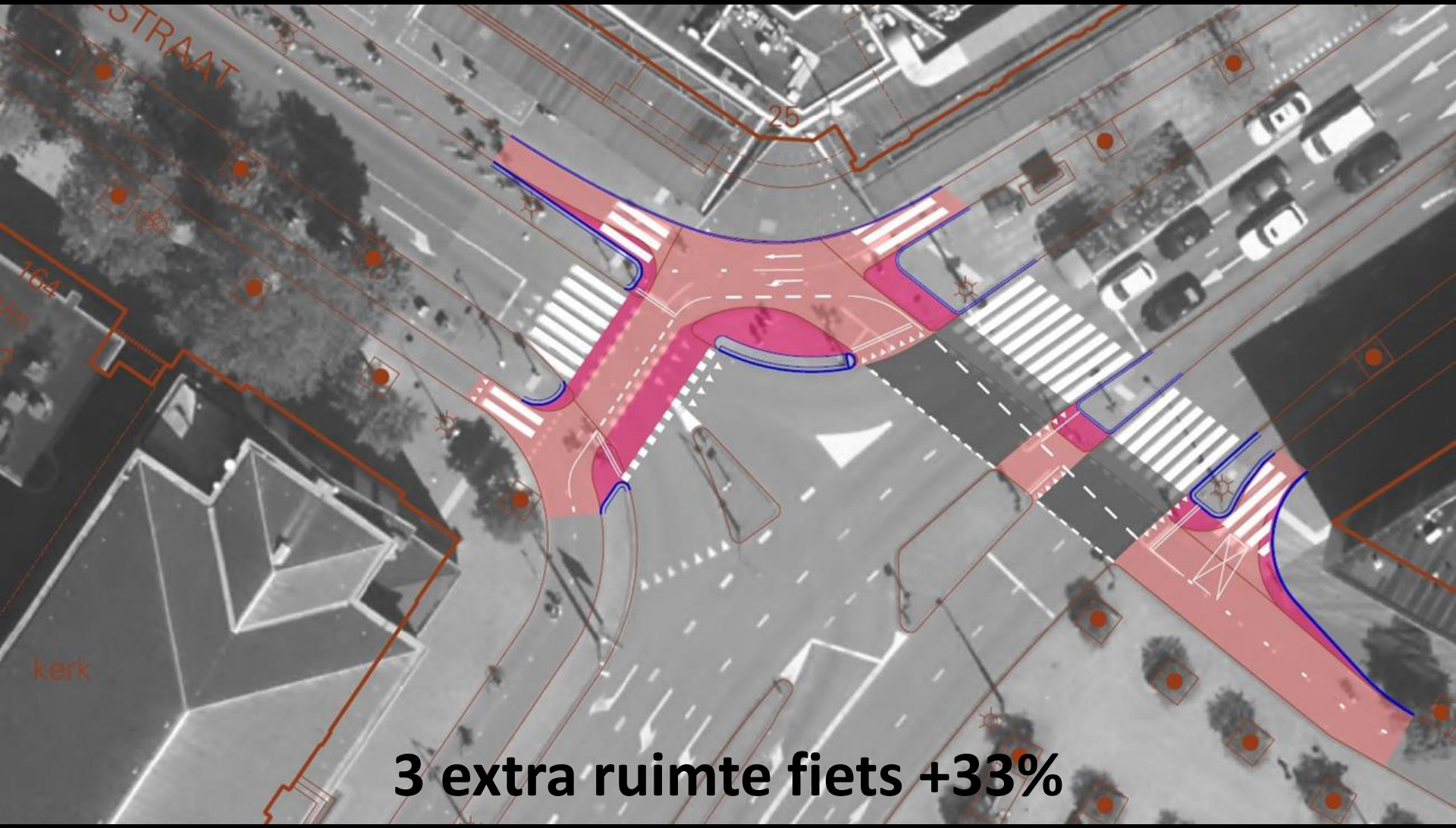


0 huidige ruimte fiets



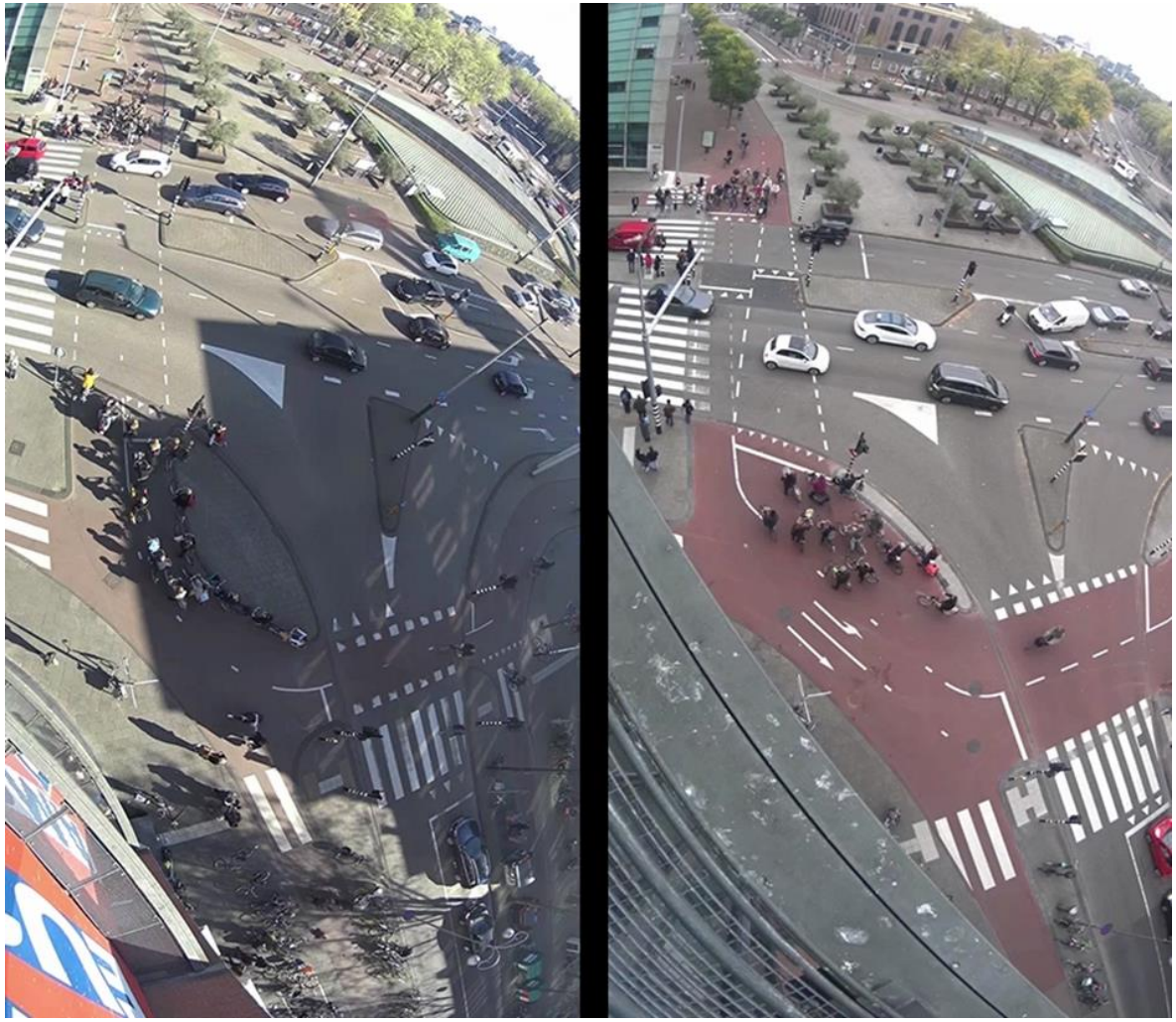
1 verkleinen eilandjes (banaan), aanpassen boogstralen

2 verbreding oversteek, markering zebra, frietzak



3 extra ruimte fiets +33%

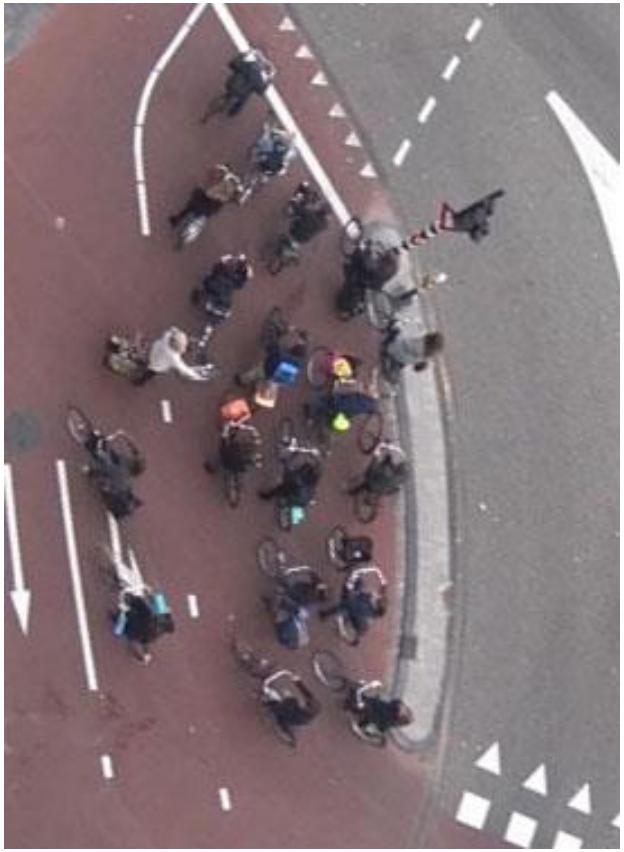
Gemeente
Amsterdam



internet storymap

vimeo

…more bananas!?



Final thoughts

Never stop thinking

- Pragmatism, flexibility, fix the mix (with cars or with pedestrians)
- Not only to improve, but also facilitate what's already happening
- If it can't be done as it should, it should be done as it can