

# Greener Trondheim (Miljøpakken)

## Urban mobility in Trondheim

### Vision - strategy - projects



Richard Liodden Sanders

WINSPIRE workshop 27<sup>th</sup> February 2019



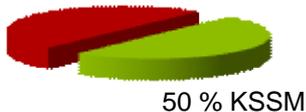
**Miljøpakken**

- åpner nye muligheter

# Greener Trondheim

1. CO<sub>2</sub> utslipp fra transport reduseres med minst 20 %
2. Andelen reiser med privatbil reduseres fra 58- til 50 %
3. Et helhetlig gang- og sykkelvegnett skal på plass (800 mill kr)
4. Framkommelighet for kollektivtransport bedres med 25 % (2010)
5. Alle nasjonale forskrifter for lokale bymiljø ivaretas
6. Antall personer som plages av trafikkstøy reduseres med 15 %
7. 80 % av nye boliger innenfor eksisterende tettstedsstruktur, 60 % av nye arbeidsintensive arbeidsplasser innenfor Kollektivbuen
8. Klimautslipp fra transport i egen virksomhet reduseres med 40 %
9. Arbeide for at andre private og offentlige aktører gjennomfører tilsvarende tiltak
10. Antall trafikkulykker reduseres med minst 20 % med Nullvisjonen som rettesnor

50 % Main roads



## 10 goals

- Zero growth in car traffic, despite population growth (3 % yearly)
- 20 % reduction in emissions
- Ambitious but achievable goals

## Balanced resources

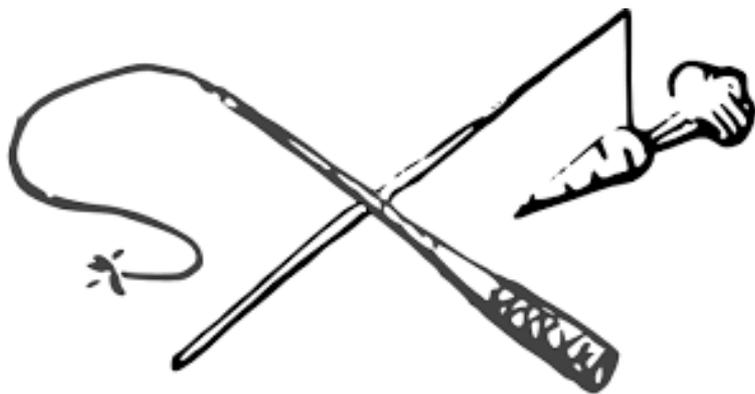
- 50 % new roads
- 50 % to non-car (public transport, cycling, walking, safety, noise, info)

## Strong political engagement

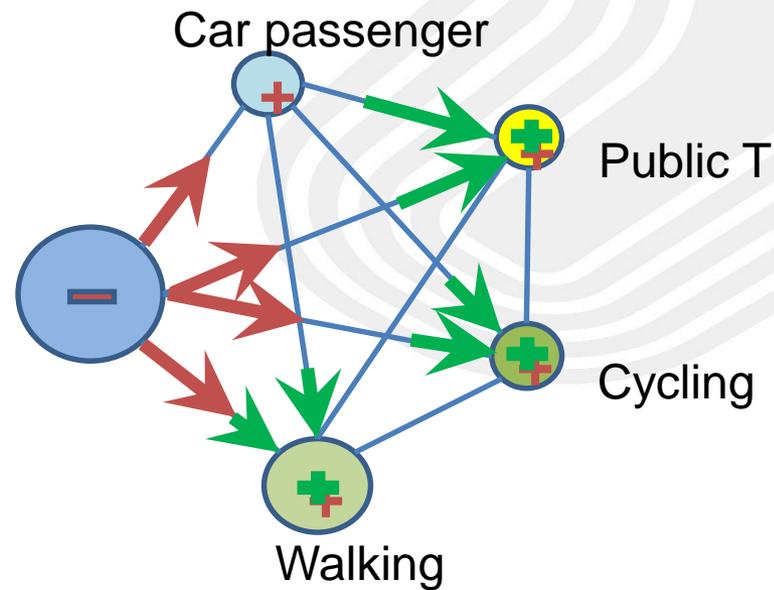


**Miljøpakken**  
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# Whip and carrot



Car driver



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# Tolling system

21 collection points

Annual revenues:

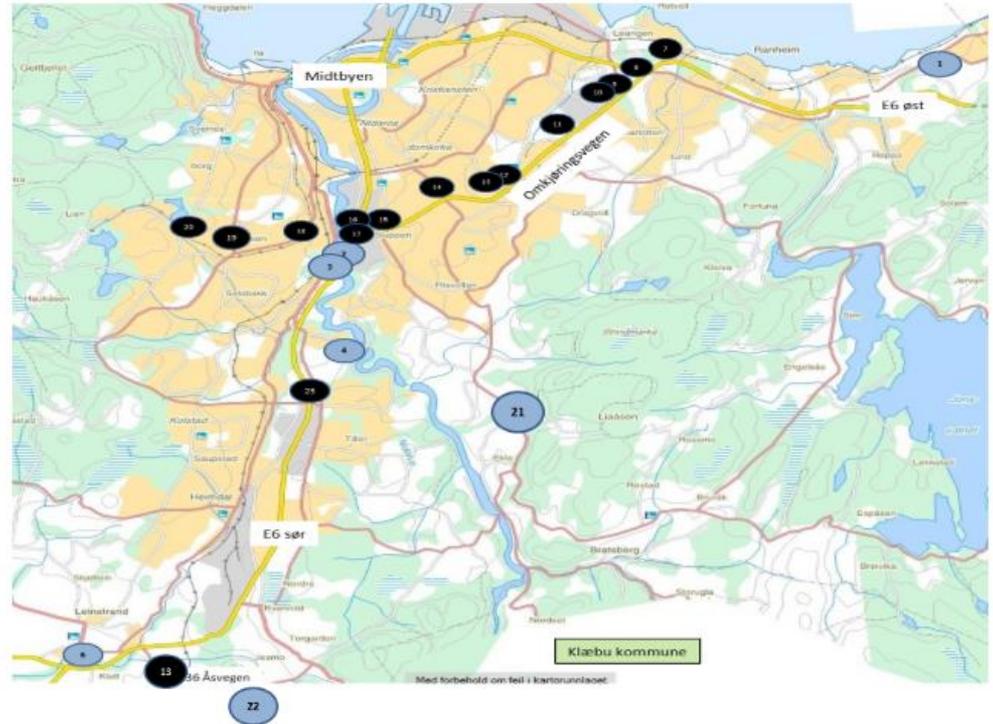
2010 – 2014: NOK 230 Million

After 2014: NOK 500 Million

Secures project funding

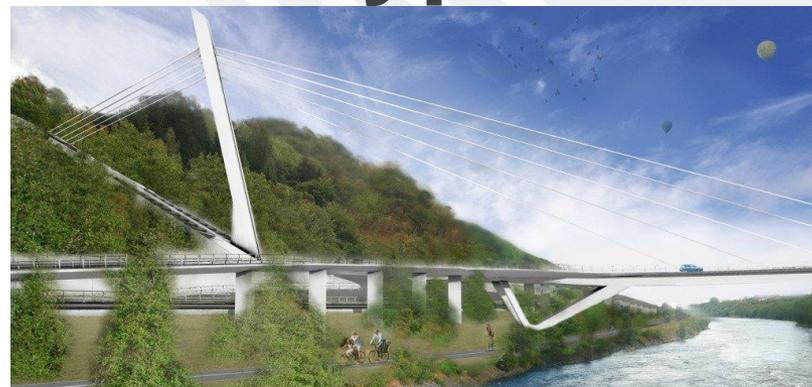
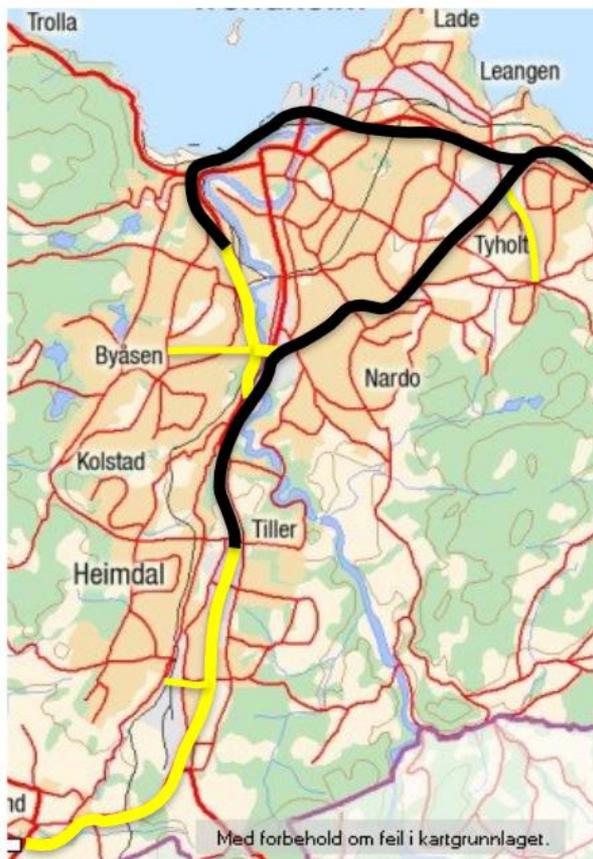
Reduces car use

14 % reduction of traffic  
through the toll barriers 2009-  
2017.



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# Main road projects and bypasses



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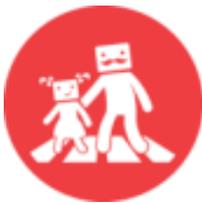


# Public transport

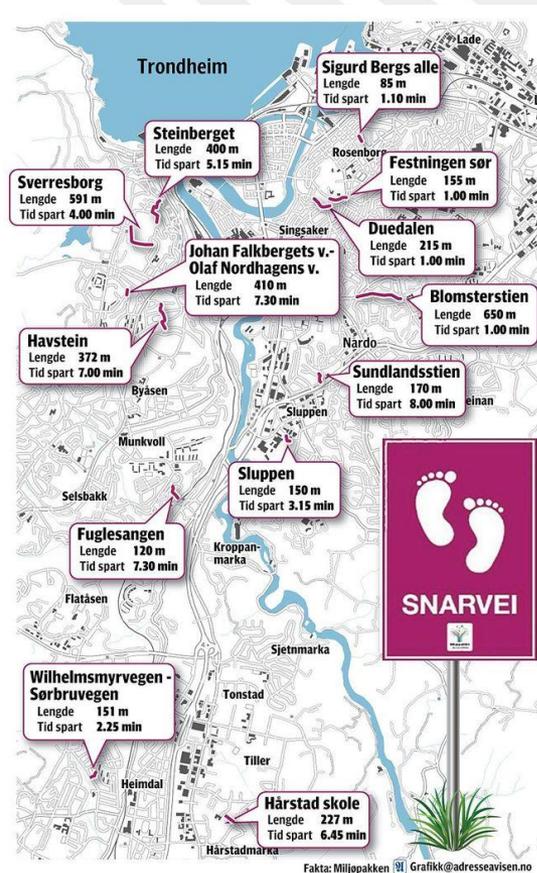
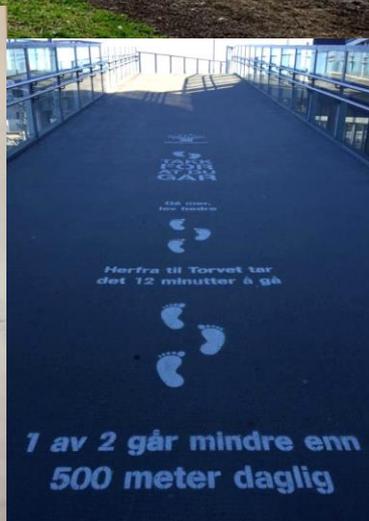
- More environment-friendly buses (natural and biogas)
- More frequent departures
- Modest pricing – larger Trondheim
- Growth: 60 % past years
- Since 2016: park and ride systems outside town



**Miljøpakken**  
– åpner nye muligheter



# Walking



**Miljøpakken**  
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# "Reiserådgeving" – Mobility advice



**NTNU innfører avgiftsparkering**  
Innføres fra 1. januar 2014

<b>P</b> 500 kr per mnd.	<b>P</b> 250 kr per mnd.	<b>Avgift på 2351 p-plasser</b>
<b>Kalvskinnet</b> 68 p-plasser	<b>Tyholt</b> 215 p-plasser	
<b>P</b> 500 kr per mnd.	<b>Gløshaugen</b> 1217 p-plasser	<b>P</b> 250 kr per mnd.
		<b>Dragvoll</b> 851 p-plasser

Av det totale antallet utgjør 34 elbilplasser og 84 plasser handikap. Totalt 1906 leieplasser.

**Tiltak ny parkeringspolitikk**

- Sykkelparkering
- Garderober for syklister
- Bilpool med 10 elbiler
- 46 nye MC-plasser, to nye elbilplasser
- Ladepunkter for elbiler
- Samarbeid med ATB for å tilrette rutetilbud m.v.
- Prioriterte grupper for parkering nær arbeidsplass

Kilde: NTNU Grafikk@adresseavisen.no



- Advice to work places (nudging)
- Counting driving of school kids to schools
- Bike service
- Cycling friendly work place



Miljøpakken gjør det bedre og tryggere å sykle i Trondheim. Er du glad i sykkelene dine? Vi passer på den mens du er på festival, husk å hente den når du skal hjem! Sykkeldu!

**GRATIS** Åpent under FESTIVALINNGANGEN  
**SYKKELHOTELL**  
Ytre Kongsgård - ved festivalinngangen

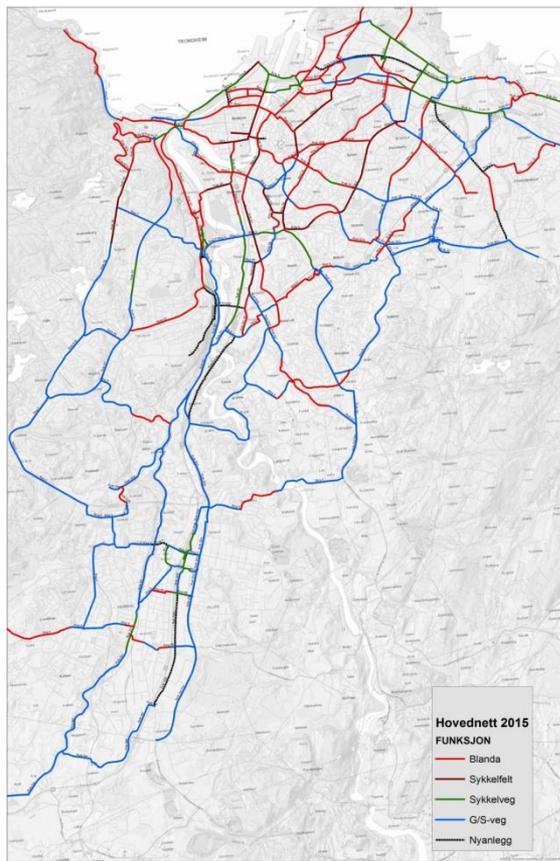
Miljøpakken  
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From Urban Cycling with love



# Cycling infrastructure

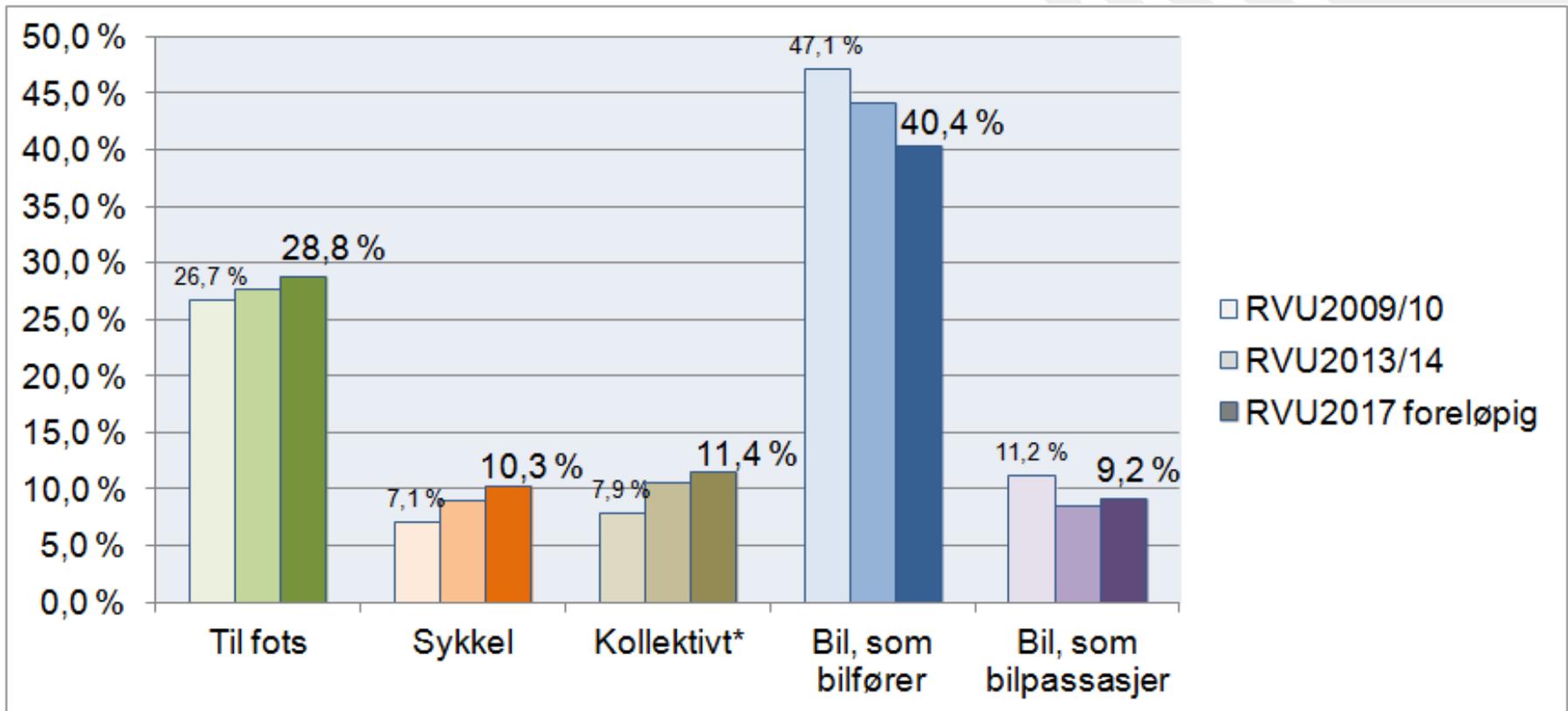
Goal: Safe and attractive



**miljøparken**  
– åpner nye muligheter

# Significant changes in transport modes

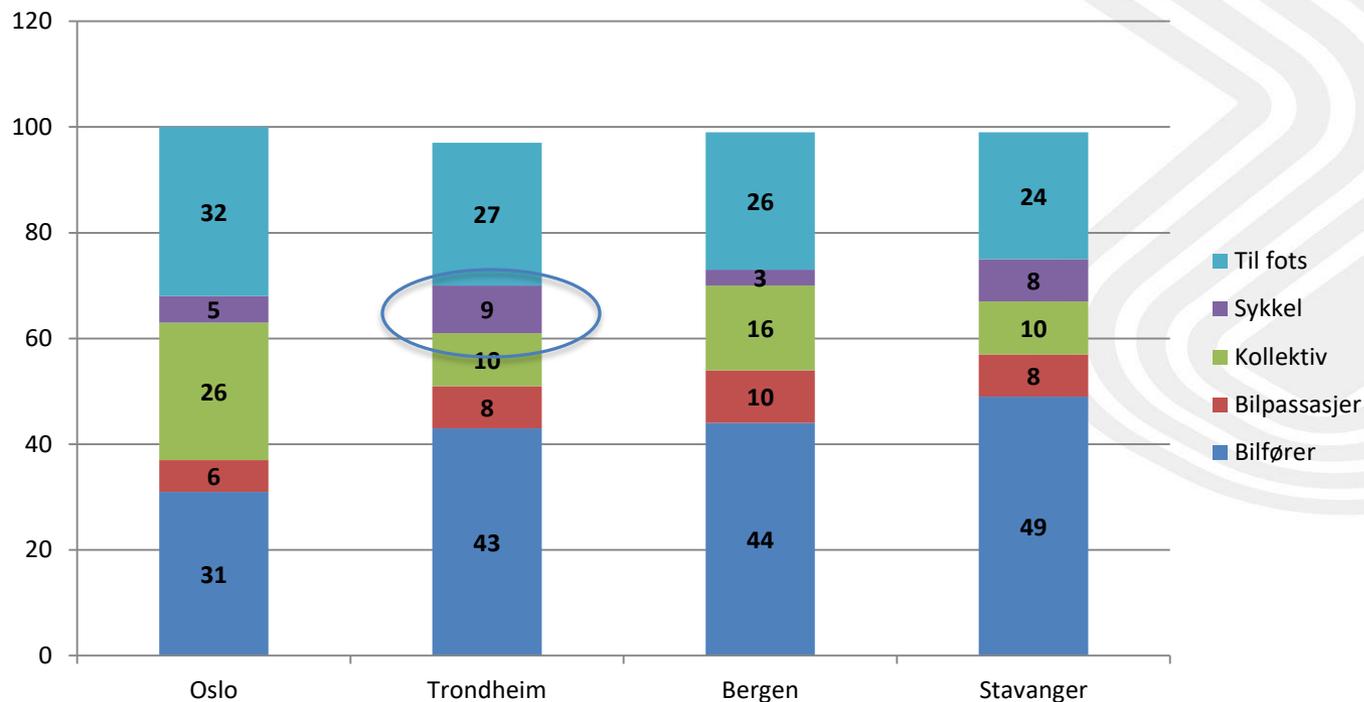
Trondheim 2009/2010 to 2017



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– åpner nye muligheter

# National travel survey 2013/14



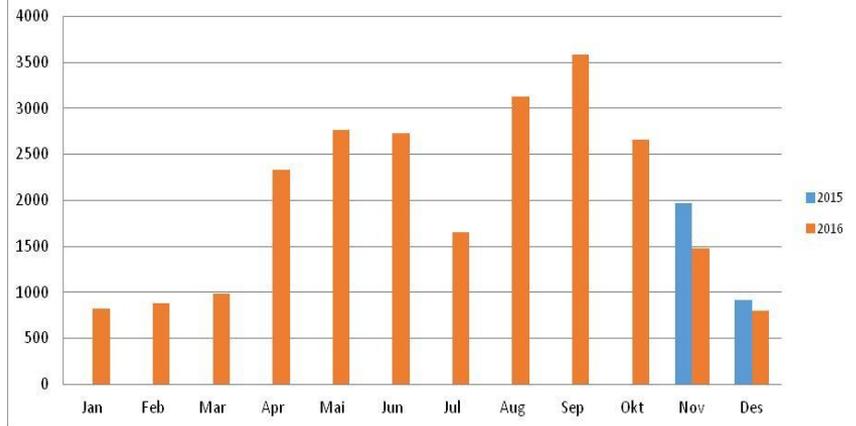
Source: TØI 2014 Den nasjonale reisevaneundersøkelsen 2013/14 - nøkkelrapport



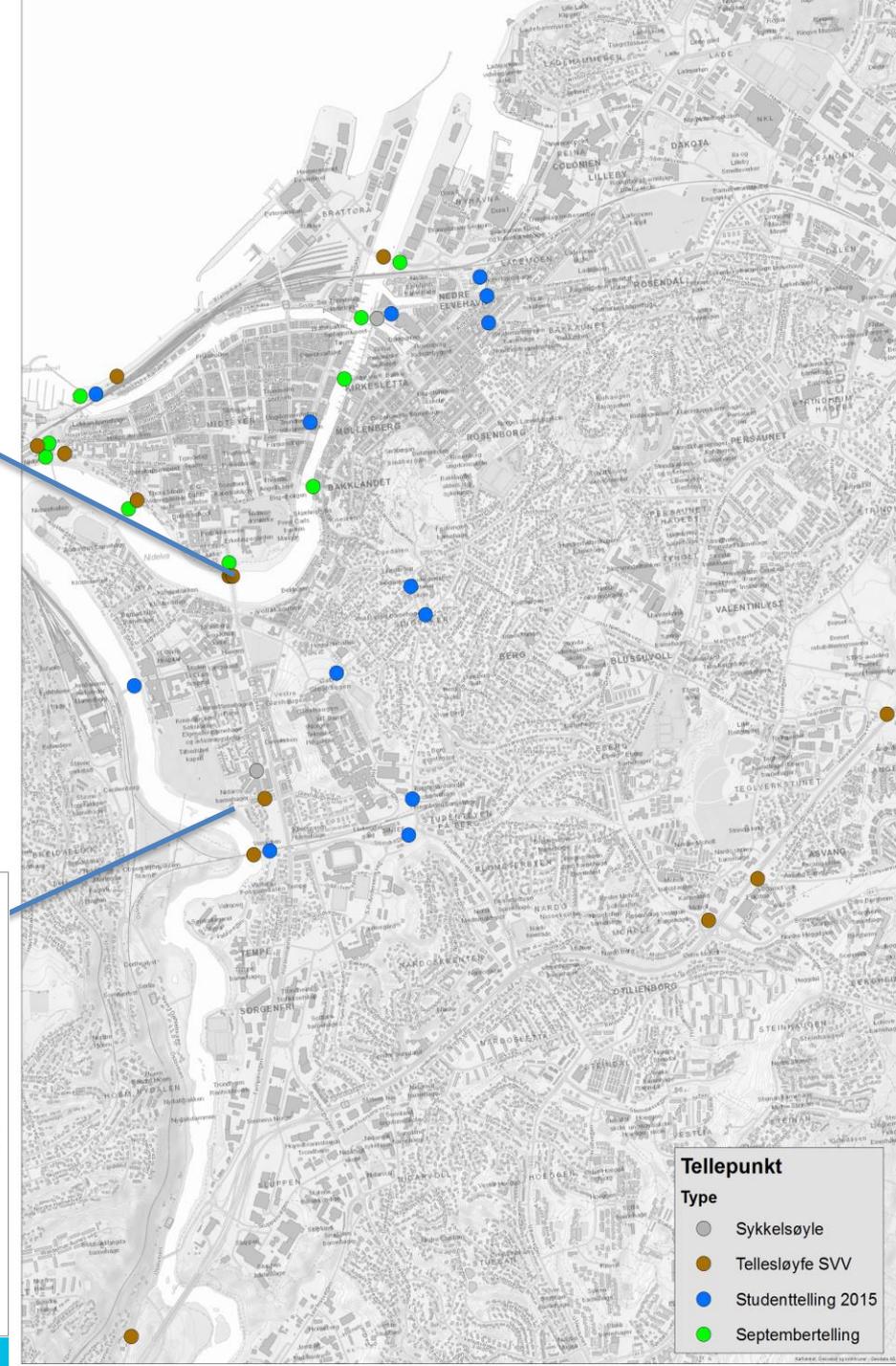
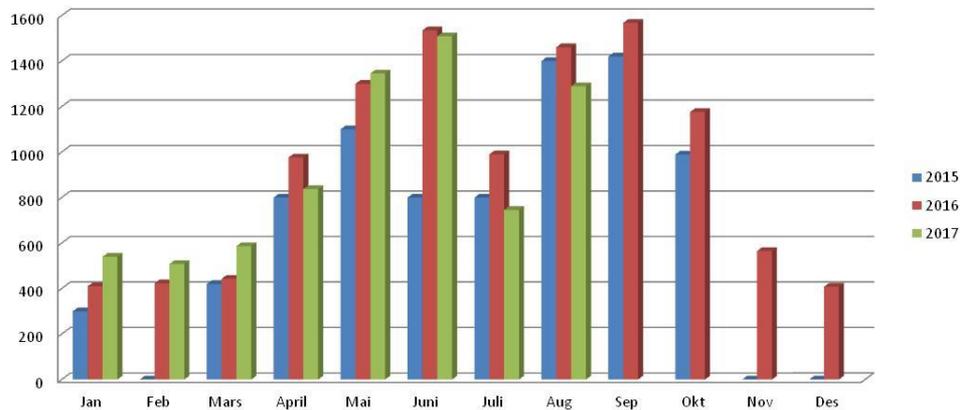
**Miljøpakken**  
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# Counting cyclists

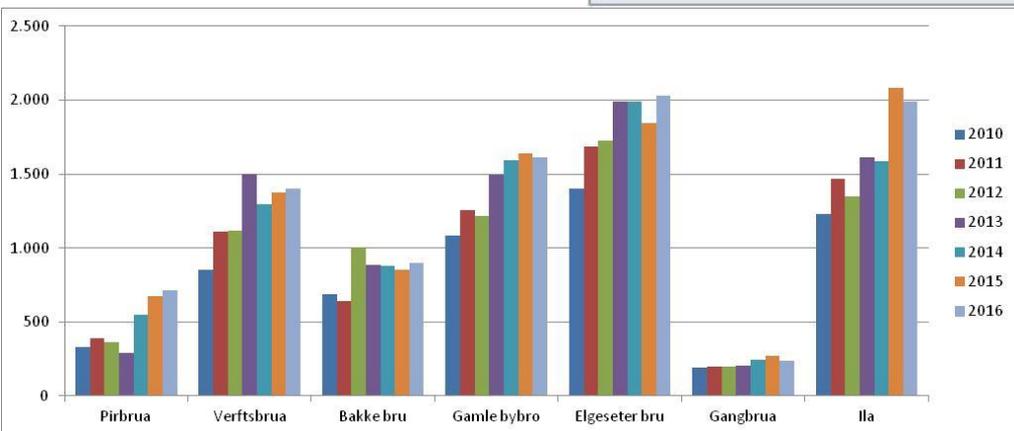
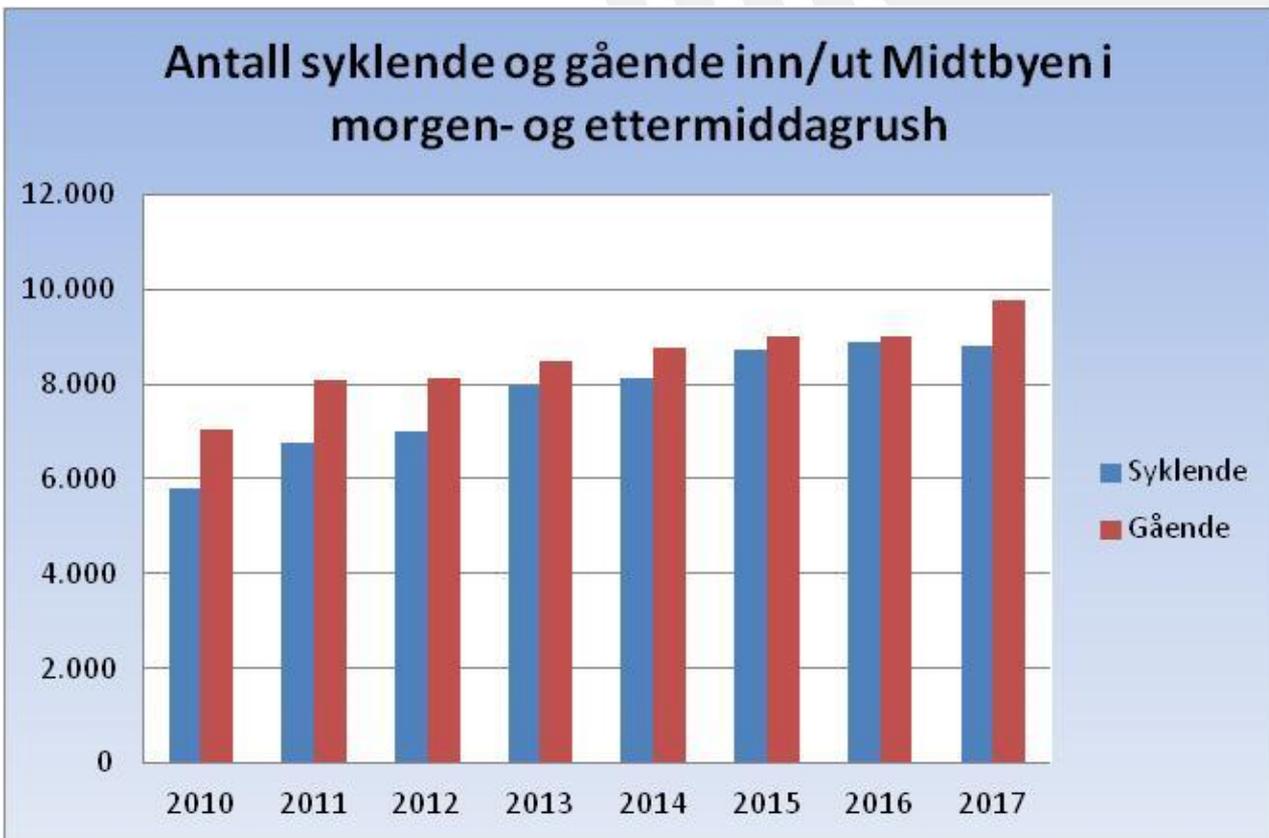
## Døgntrafikk Elgeseter bru sum begge sider



## Månedstrafikk sykkel 2016 -2017



# Increased walking and cycling 2010-2017



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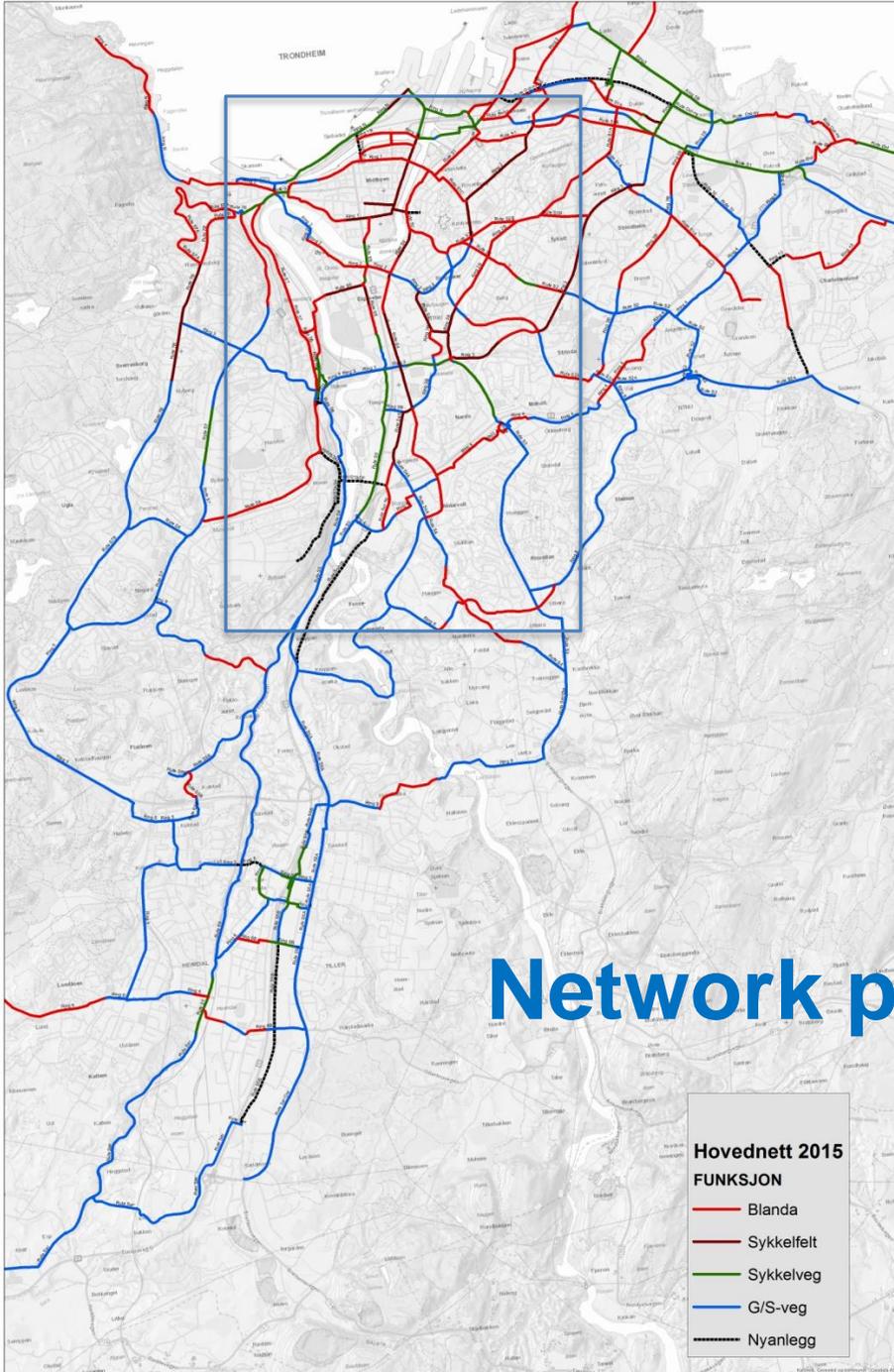
# Unravelling - separating from main roads



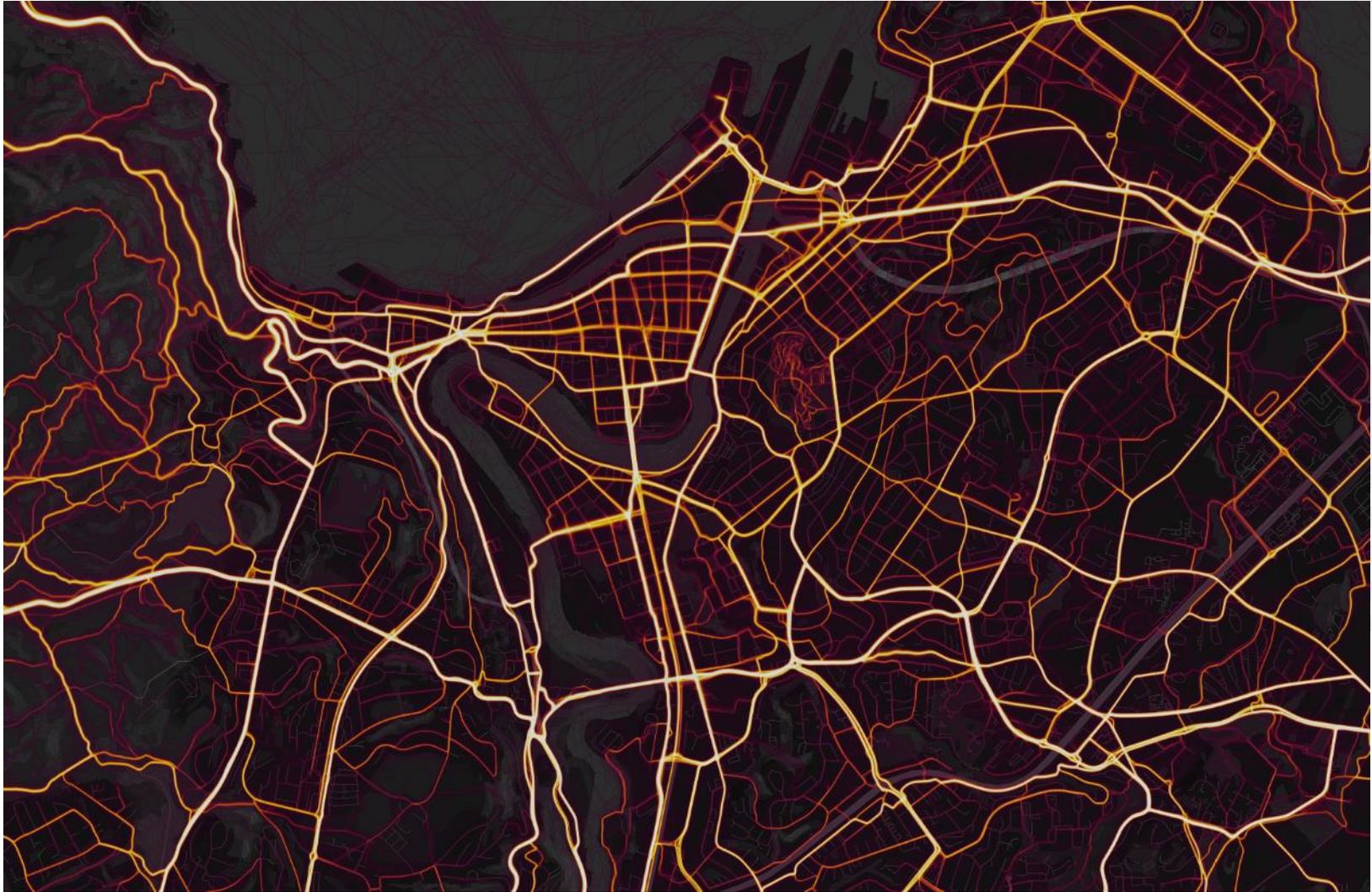
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# Network planning



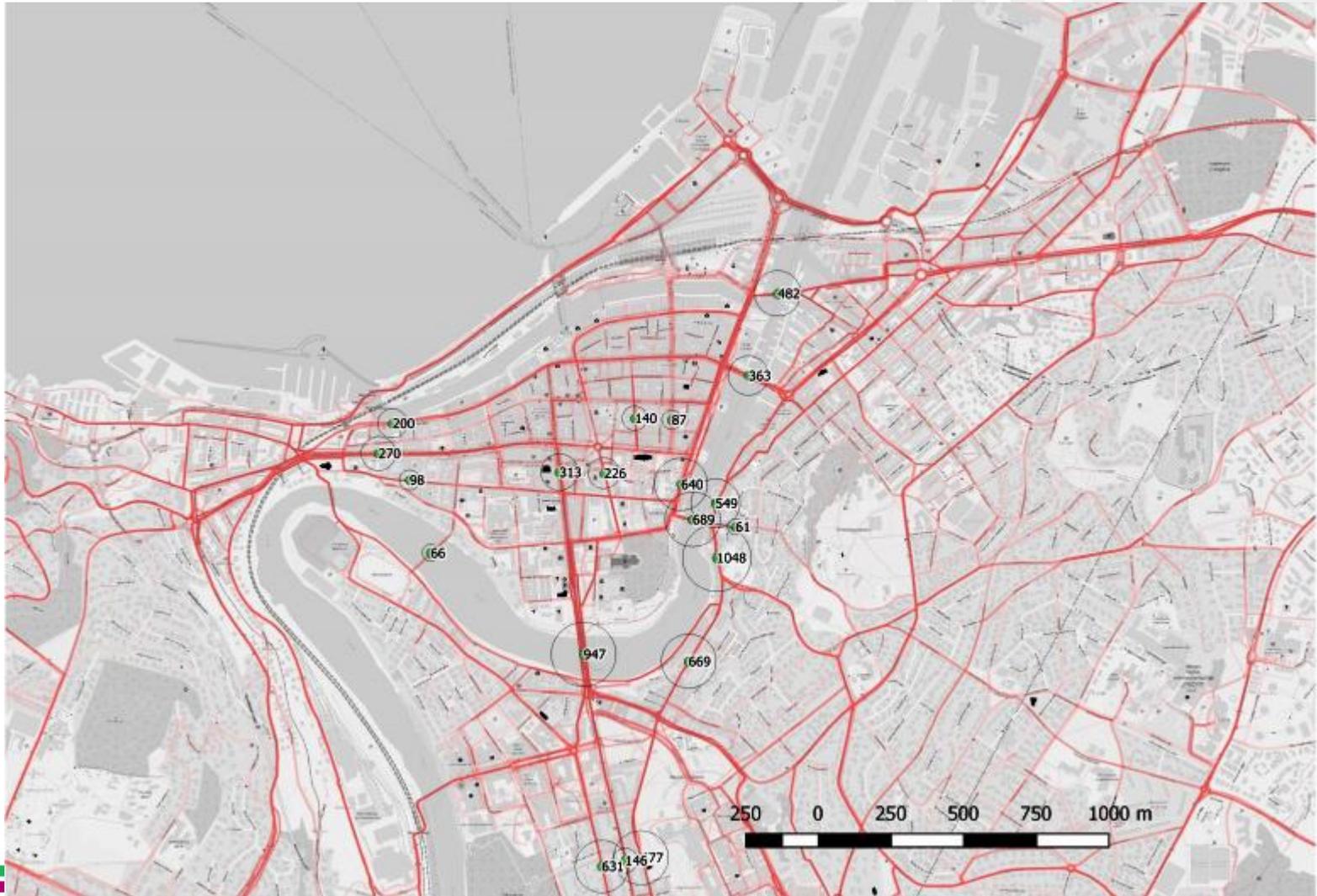
# Strava heatmap ("cycling as a sport")



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# Balanced view: Cyclist with Sense.DAT app - Sykkeltelledugnaden 2017



# Example: Harbour area



# Example: visualizing cycling routes



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# Example: Cycling "highway"



# Example: cycle lanes in town centre



# Example: Attention to context

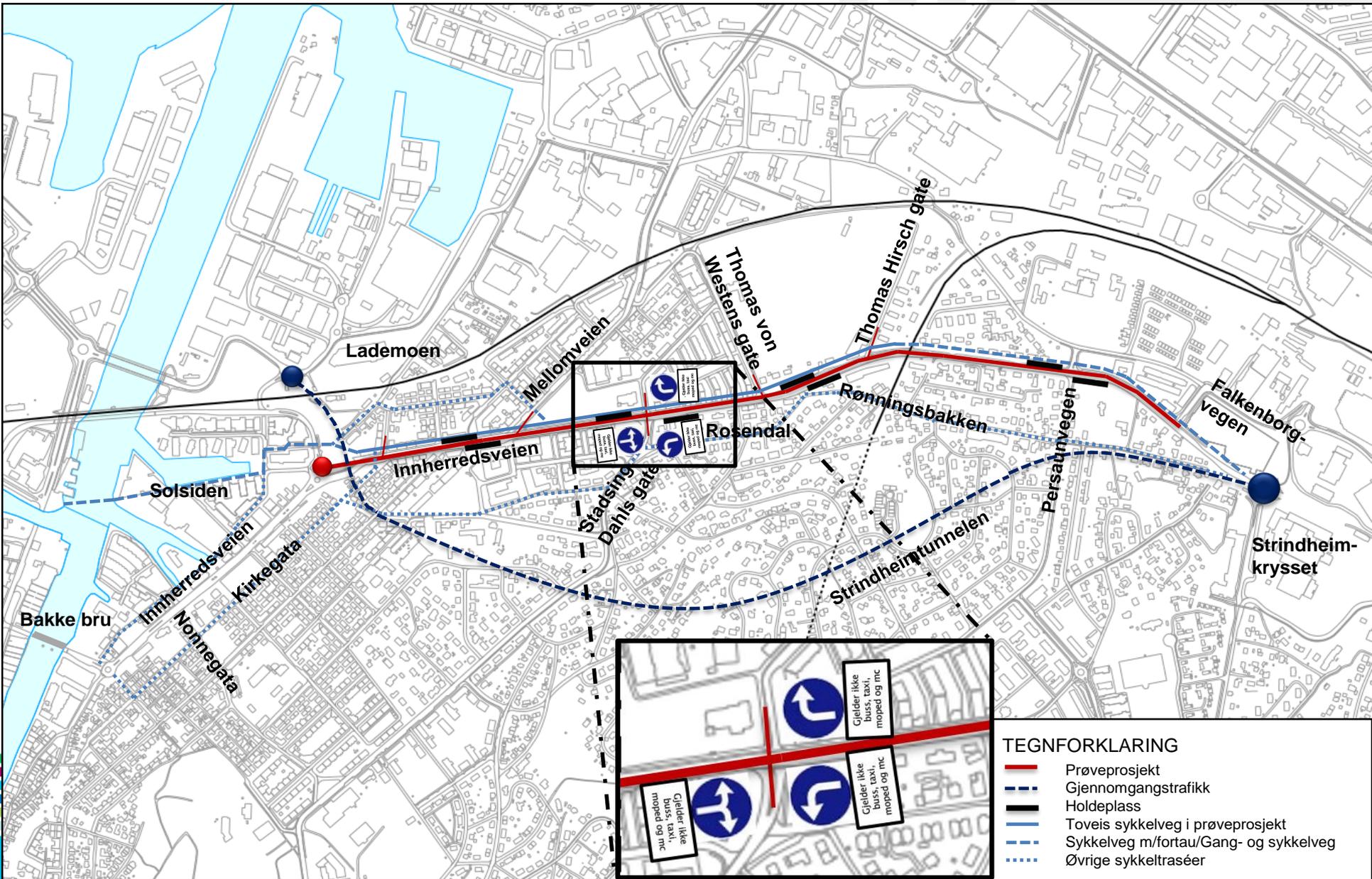
## - Cycling road



Rebuilding: less room for cars, more for people



# Example: Experiment in Innherredsveien



- TEGNFORKLARING**
- Prøveprosjekt
  - - - Gjennomgangstrafikk
  - - - Holdeplass
  - Toveis sykkelveg i prøveprosjekt
  - - - Sykkelveg m/fortau/Gang- og sykkelveg
  - ... Øvrige sykkeltraséer

# Rebuilding: less room for cars, more for people



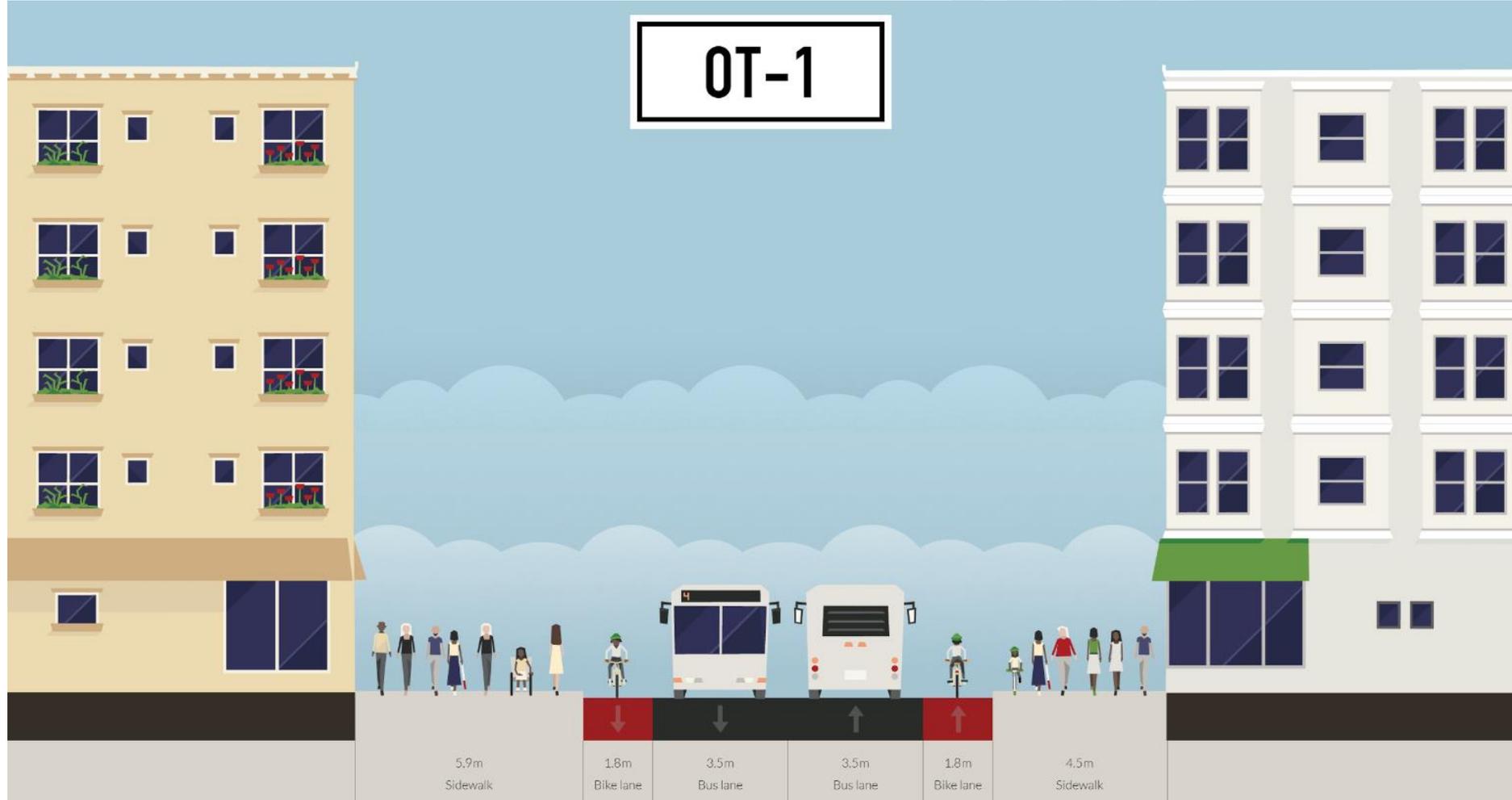
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# Experiments: Olav Tryggvasons gt.

OT-1



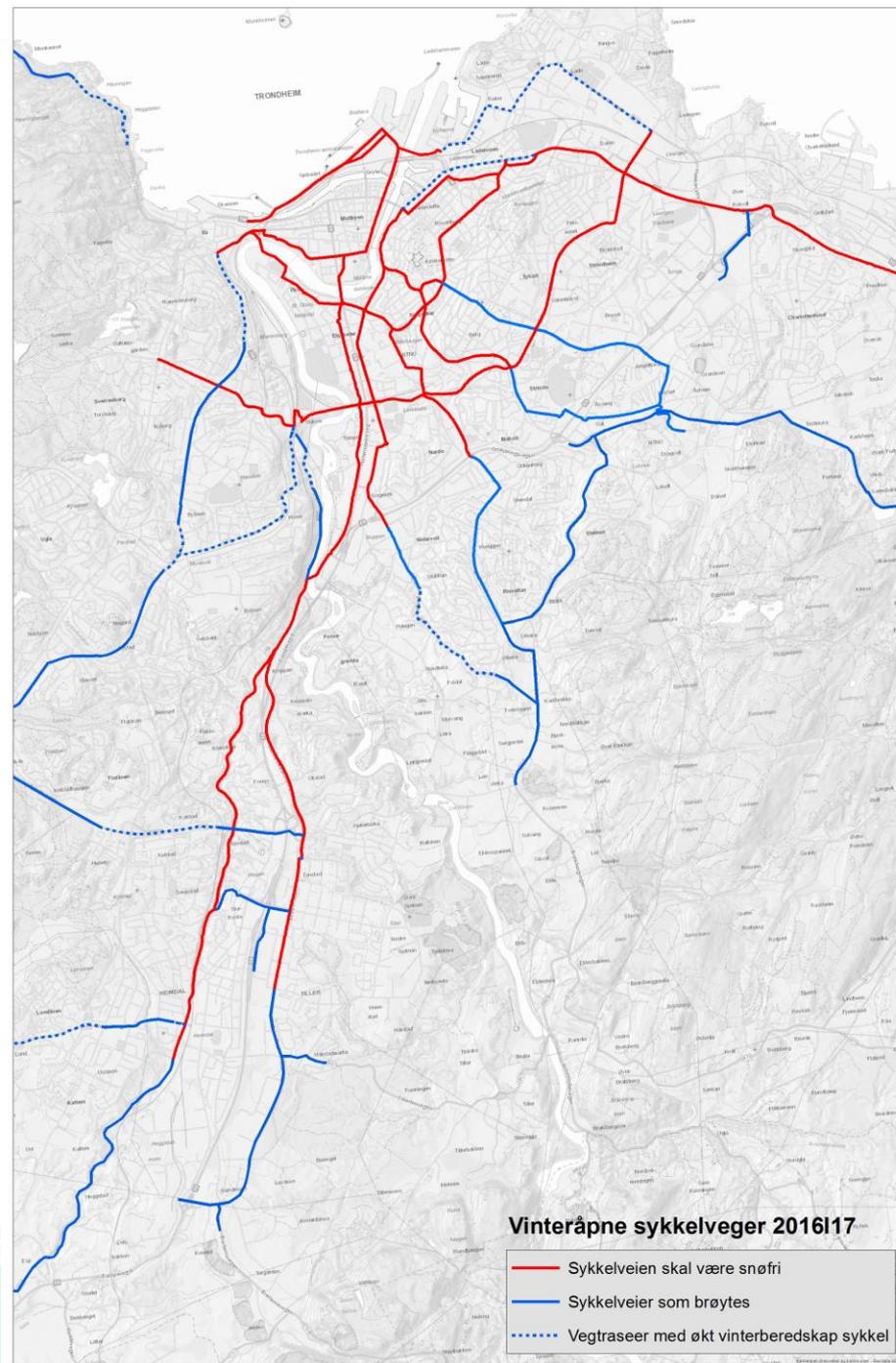
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# Enhanced winter maintenance



<http://www.nrk.no>





Thank you!