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C02 monitoringsdashboard

Cycle Highway effect monitoring

Thursday 24 May 2018

Joost de Kruijf

Interreg North-West Europe CHIPS
European Regional Development Fund

POWERED BY NHTV

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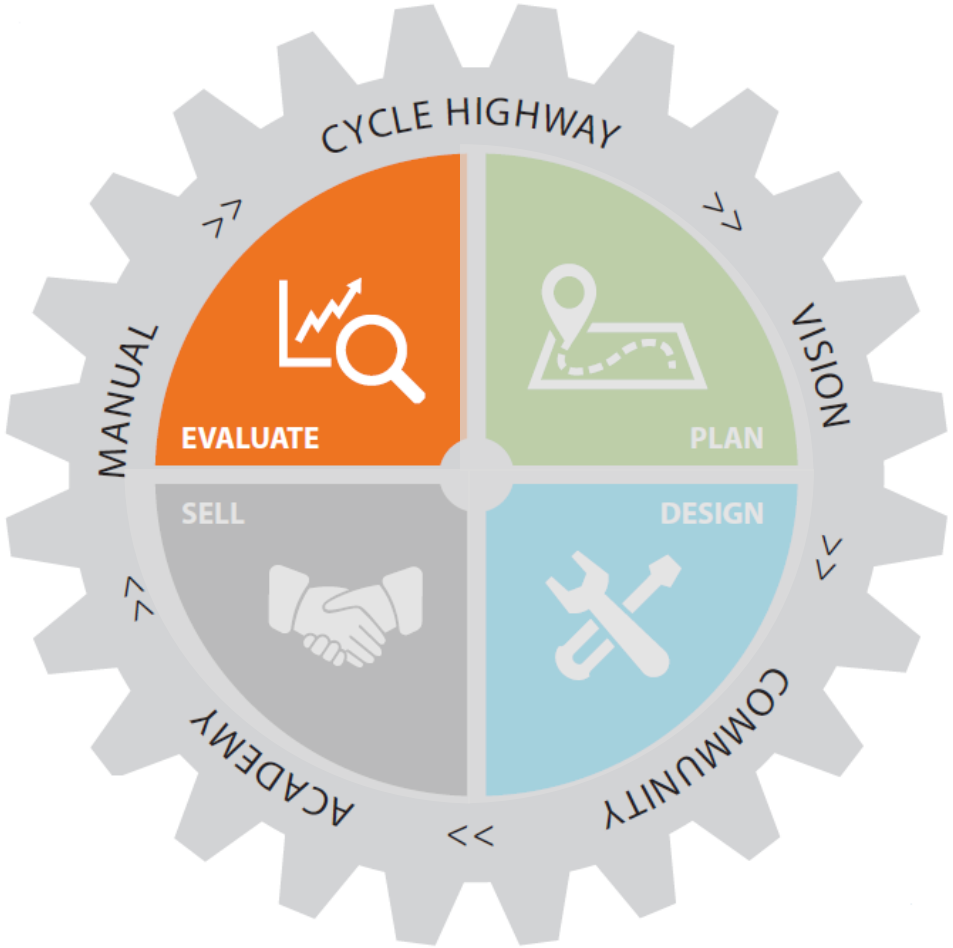

Cycle (super)Highway Life Cycle

Regarding the cycle highway as a product and not only as infrastructure

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CO2 calculation

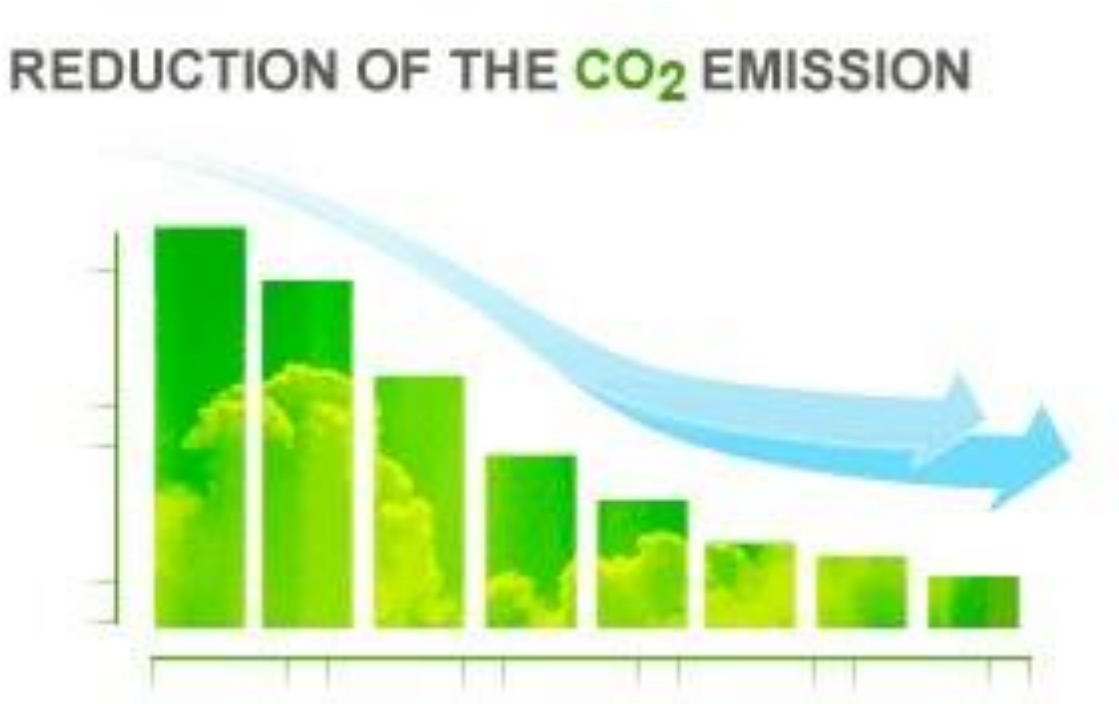
Partner agreement:
CHIPS is more than CO2 emission

1. Cycle highway development
2. Modal shift car to bicycle
3. Less cars

> less CO2

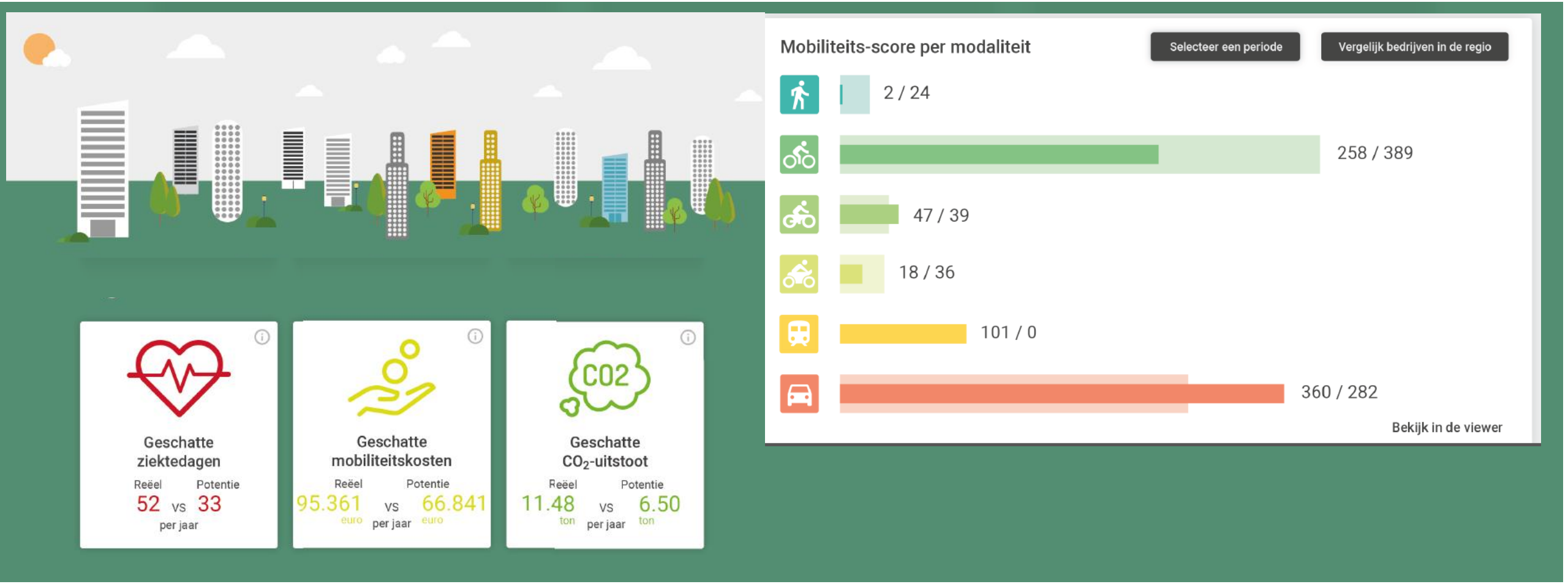
> better health

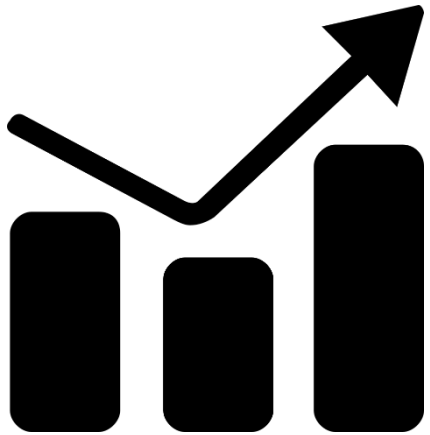
> less costs



Cycled kilometers = avoided car kilometers
Cycled kilometers x parameter = CO2 saving

CO2 calculation dashboard





VOLUME
(user)

SPEED
(infra)

ATTRACTIVENESS
(route)

The Province of Flemish Brabant's Monitoring Program

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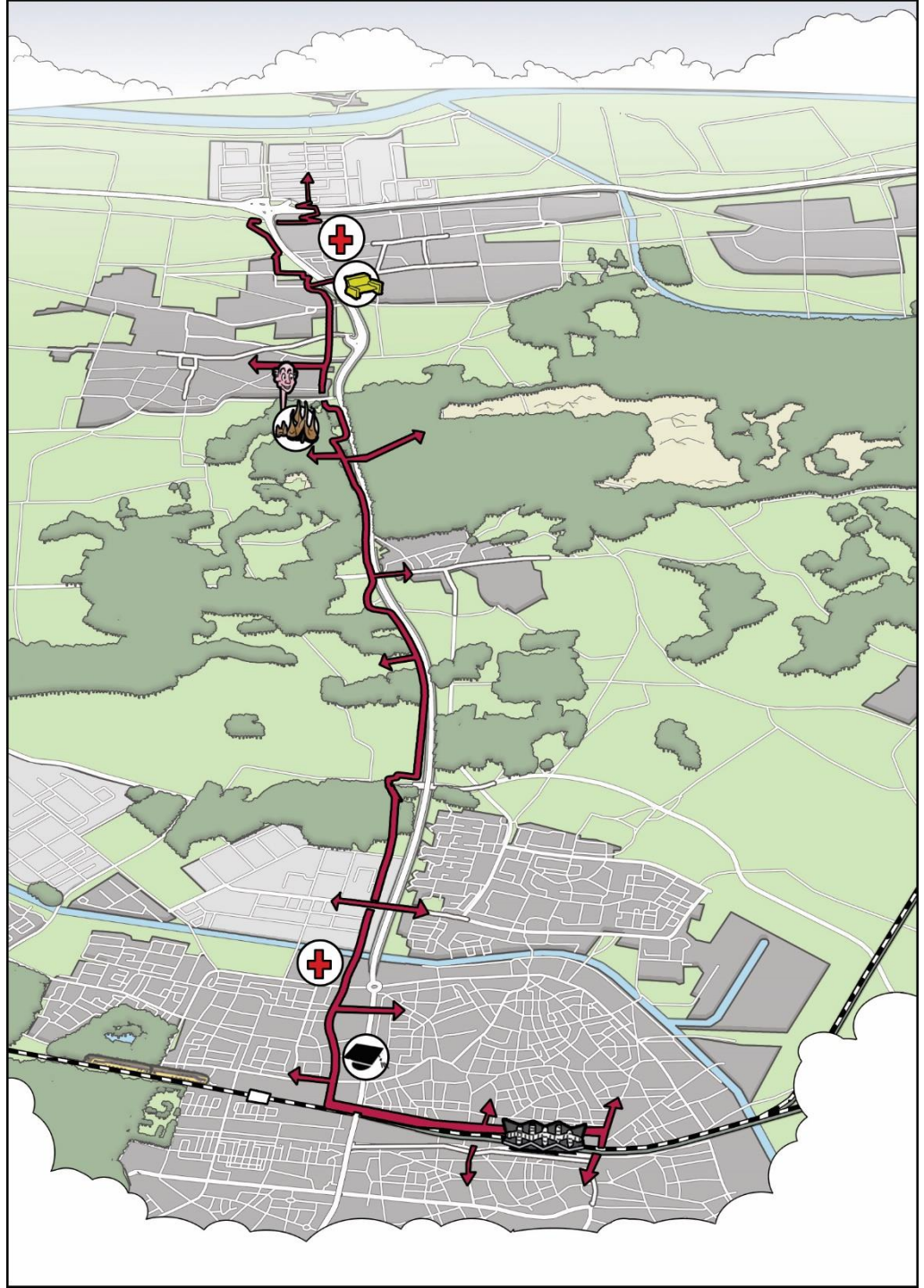
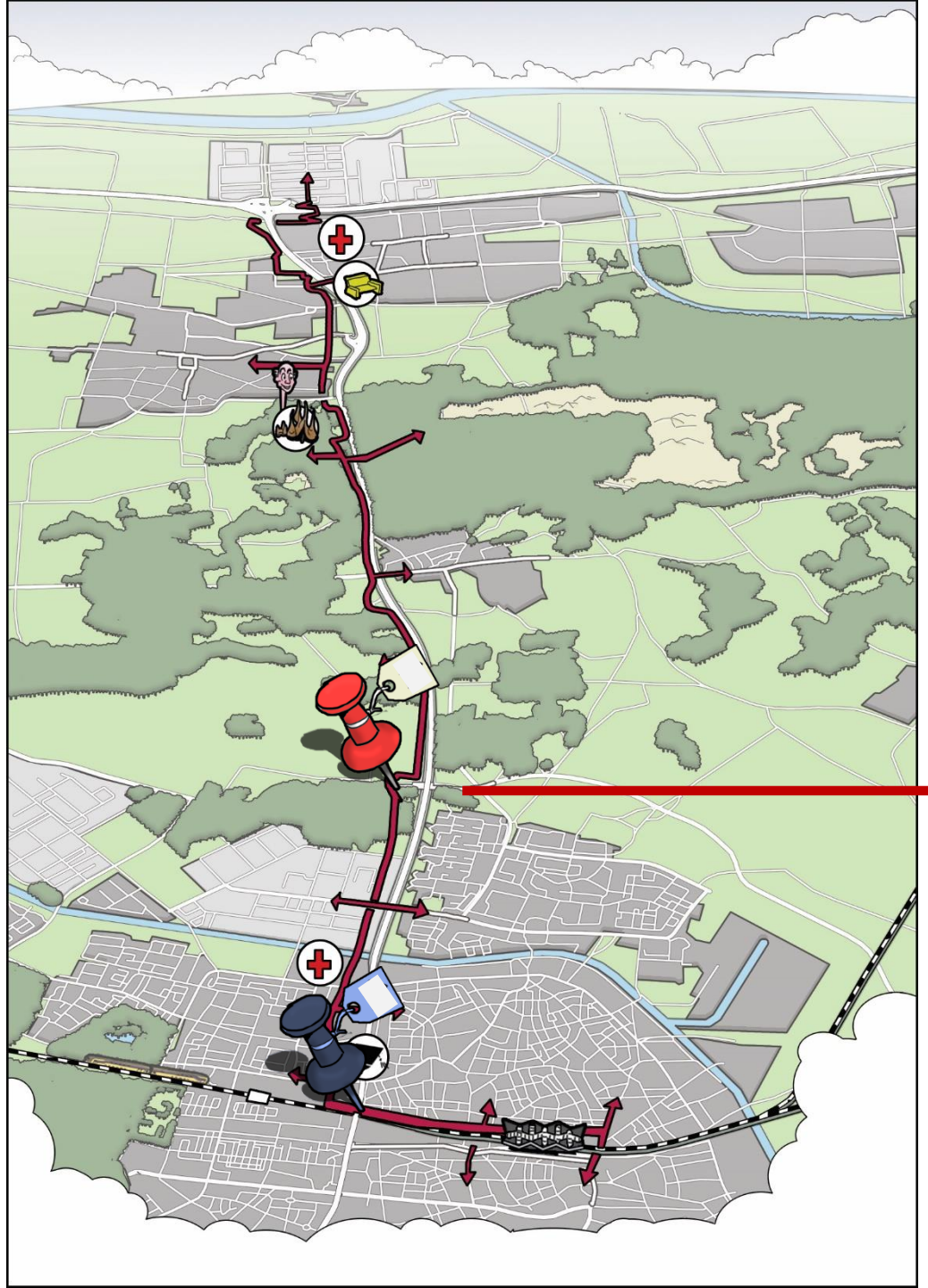


Cycle Highway Hart van Brabant

The life cycle is almost fully completed
for <u>conventional cycling infrastructure</u>

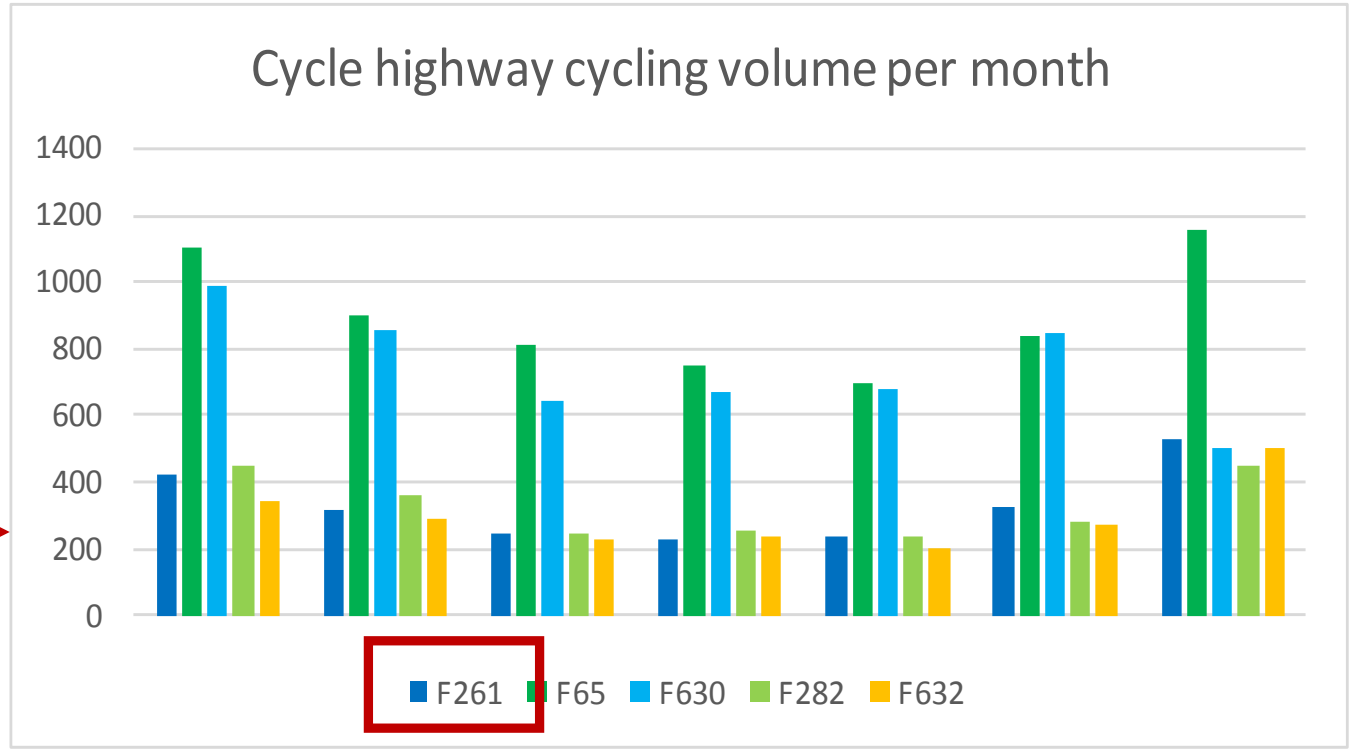
- Traffic forecast model
- Cyclescan calculations
- Cycling infrastructure available
- Incentive programs (GPS), campaigns and setup communities
- Regional and local counting program

NHTV perspective:
Every partner should be able to monitor CO2
Dependent on available data we can make it rather complex (and decrease CO2 saving)



Cycle Highway Hart van Brabant

Traffic counts installed



Volume period October 2017 – April 2018

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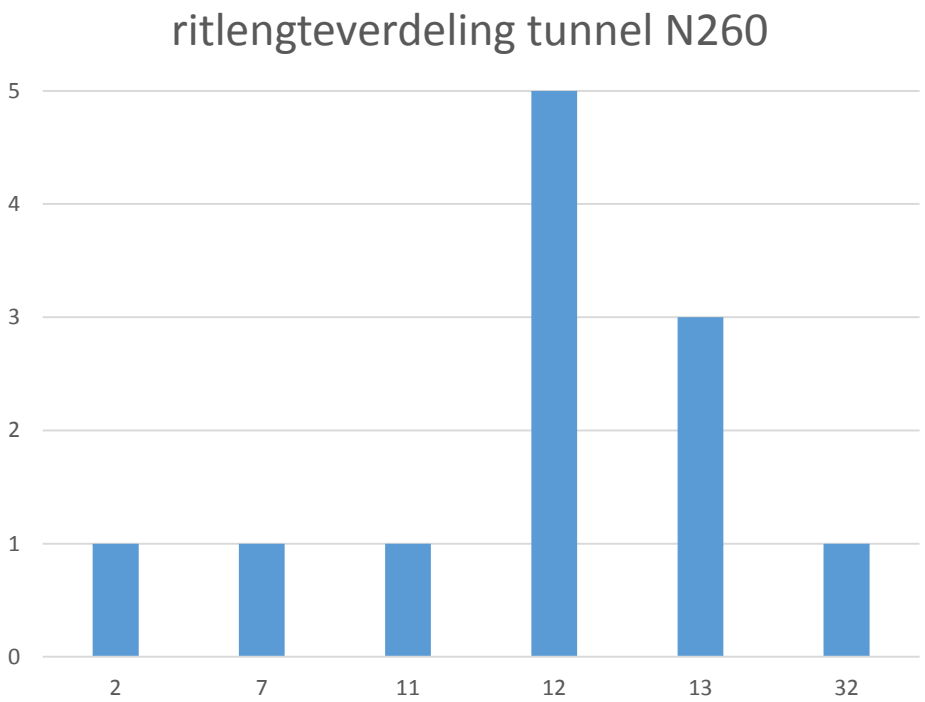
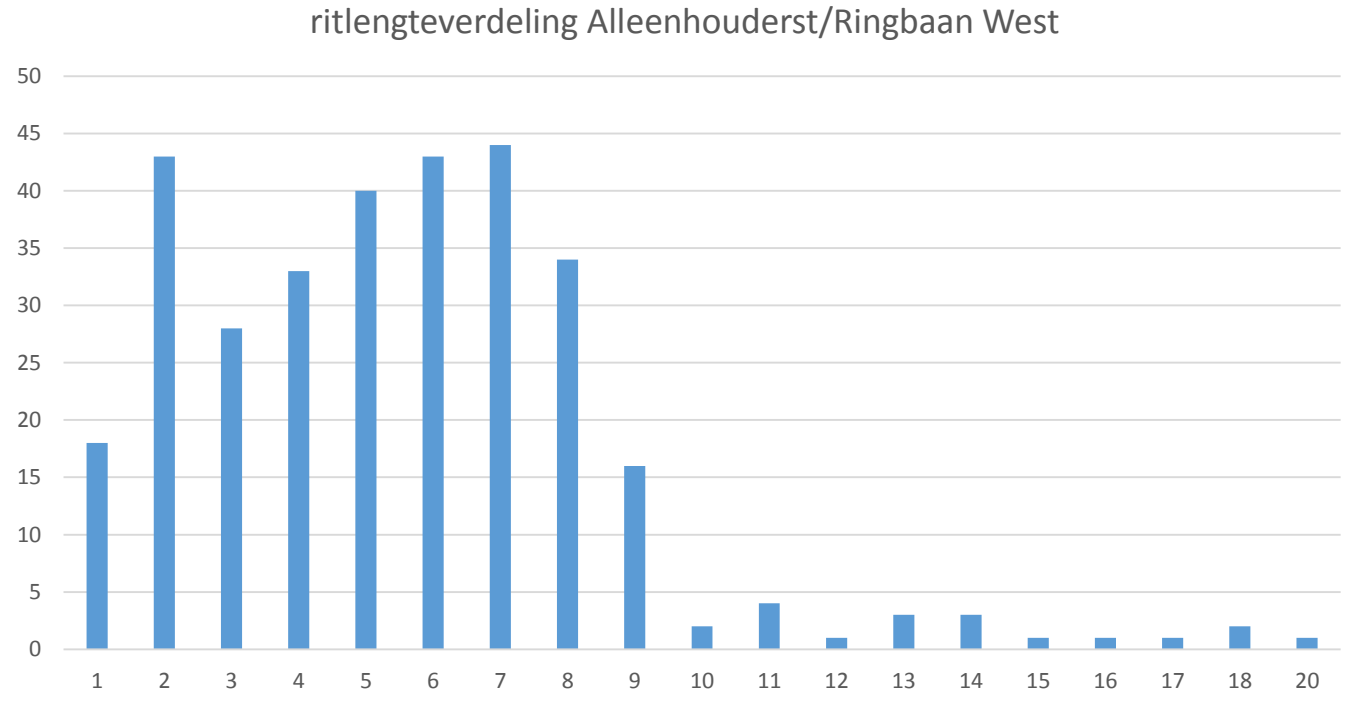
DISTANCE
(infra)

TUNNEL N260



AV: 12.6 km/h

ALLEENHOUDERSTRAAT



AV: 5.5 km

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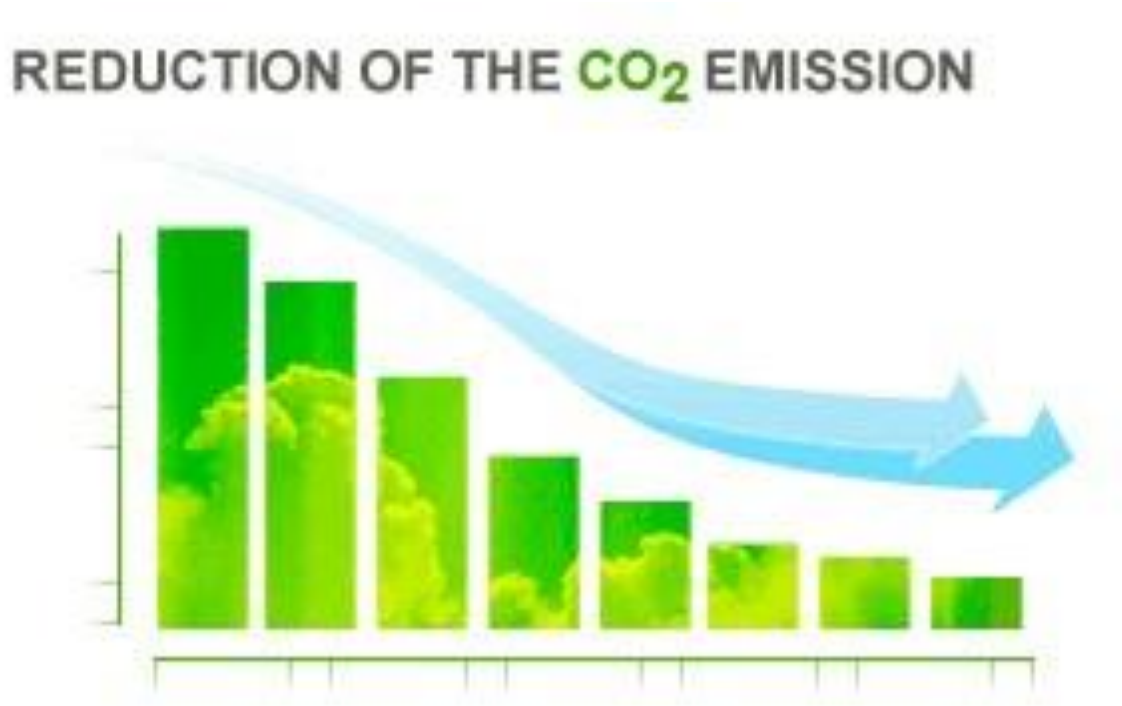
Example

1.000 cyclists counted

Option 1 (AV 12.6 km)
= 12.600 km cycle each day

Option 2 (AV 5.5 km)
=5.500 km cycled each day




BELFAST intercept survey

Results

Snelfietsroute Waalwijk-Tilburg		kg	Euro/km	Euro/km	Euro/km	Euro/km	Euro/km		
Routevarianten FAKE !		0,15	0,03	0,01	0,3	0,05	0,025		
	Less car km / day	CO2	All emissions (CO2, NOx,SO2, PM10…)	Noise	Less car congestion	More work productivity	Health effects	Total Benefit Euro / day	Total Benefit Euro / year
Variant 1 Loon op Zand - Forest	4895	734	147	49	1469	245	122	2.031	650.056
Variant 2 Loon op Zand - Kaatsheuvel	8756	1313	263	88	2627	438	219	3.634	1.162.797
~~Variant 3 N261~~	~~3598~~	~~540~~	~~108~~	~~36~~	~~1079~~	~~180~~	~~90~~	~~1.493~~	~~477.814~~
Variant 4 Tilburg West - Kaatsheuvel	12598	1890	378	126	3779	630	315	5.228	1.673.014

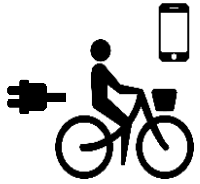
Influential factors

New route (magnitude of the CH)

Weather

Modal shift (car or PT)

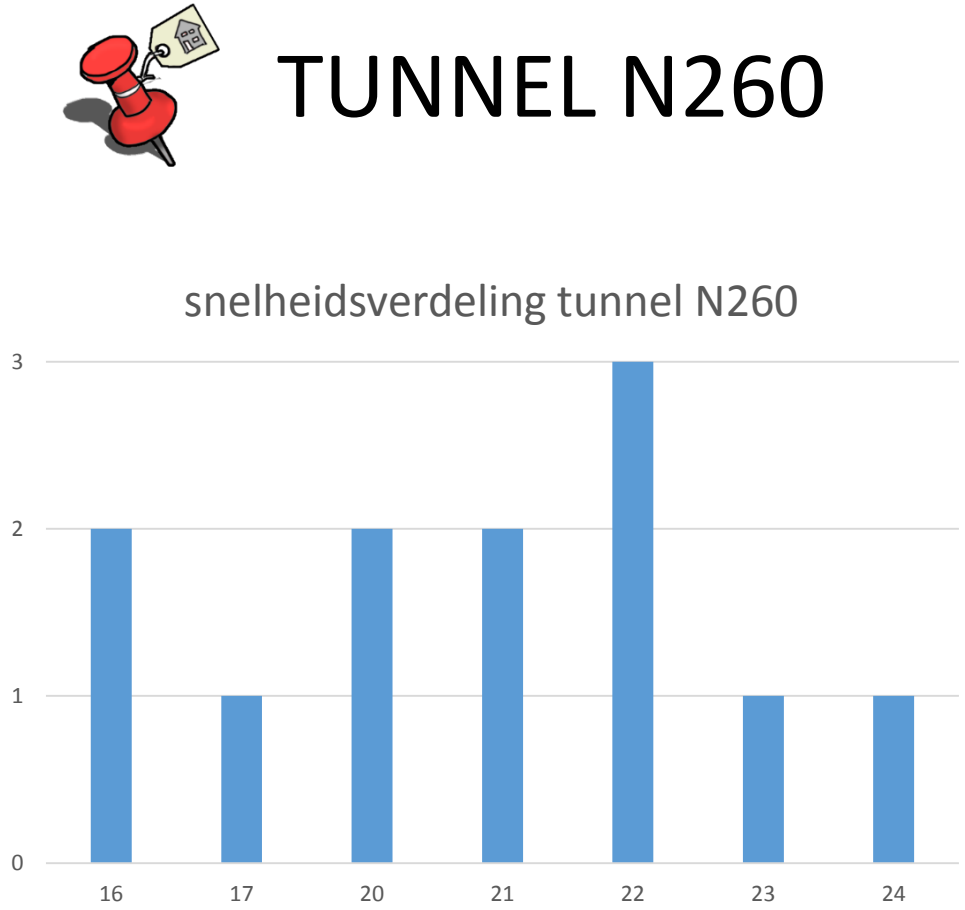
Purposes



Bike types

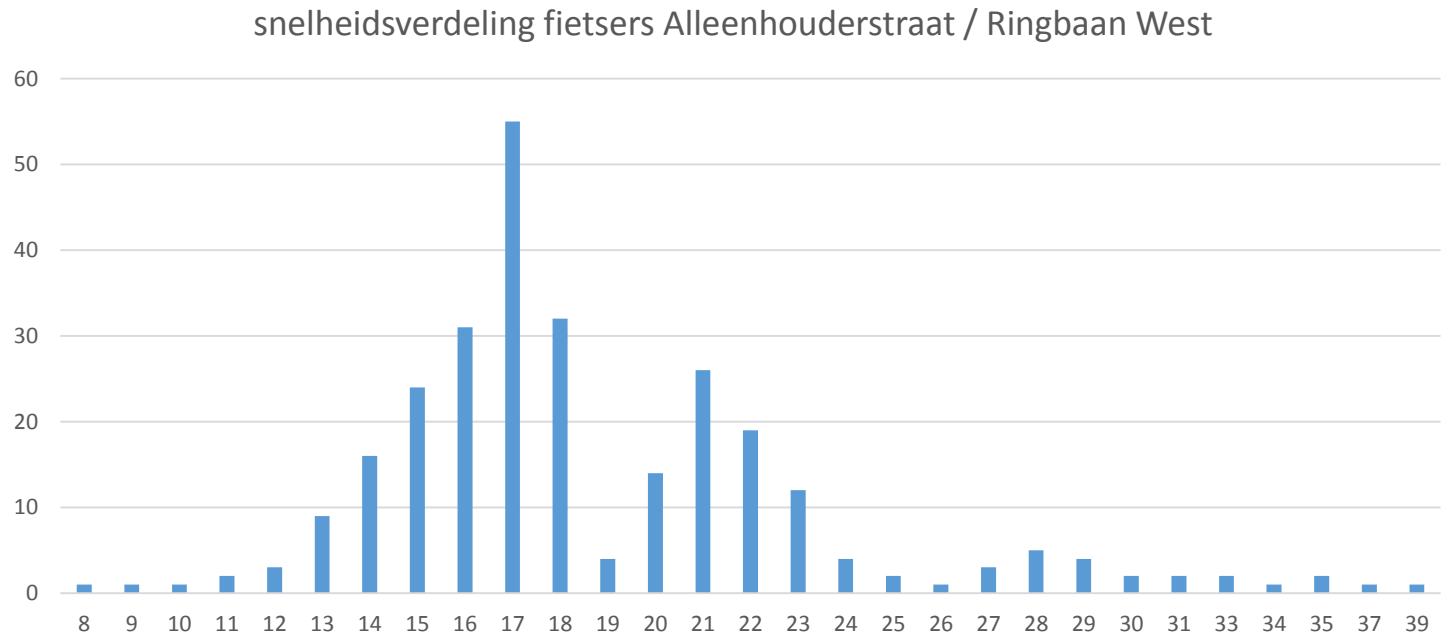
SPEED
(infra)

TUNNEL N260



AV: 20.3 km/h

ALLEENHOUDERSTRAAT



AV: 18.8 km/h

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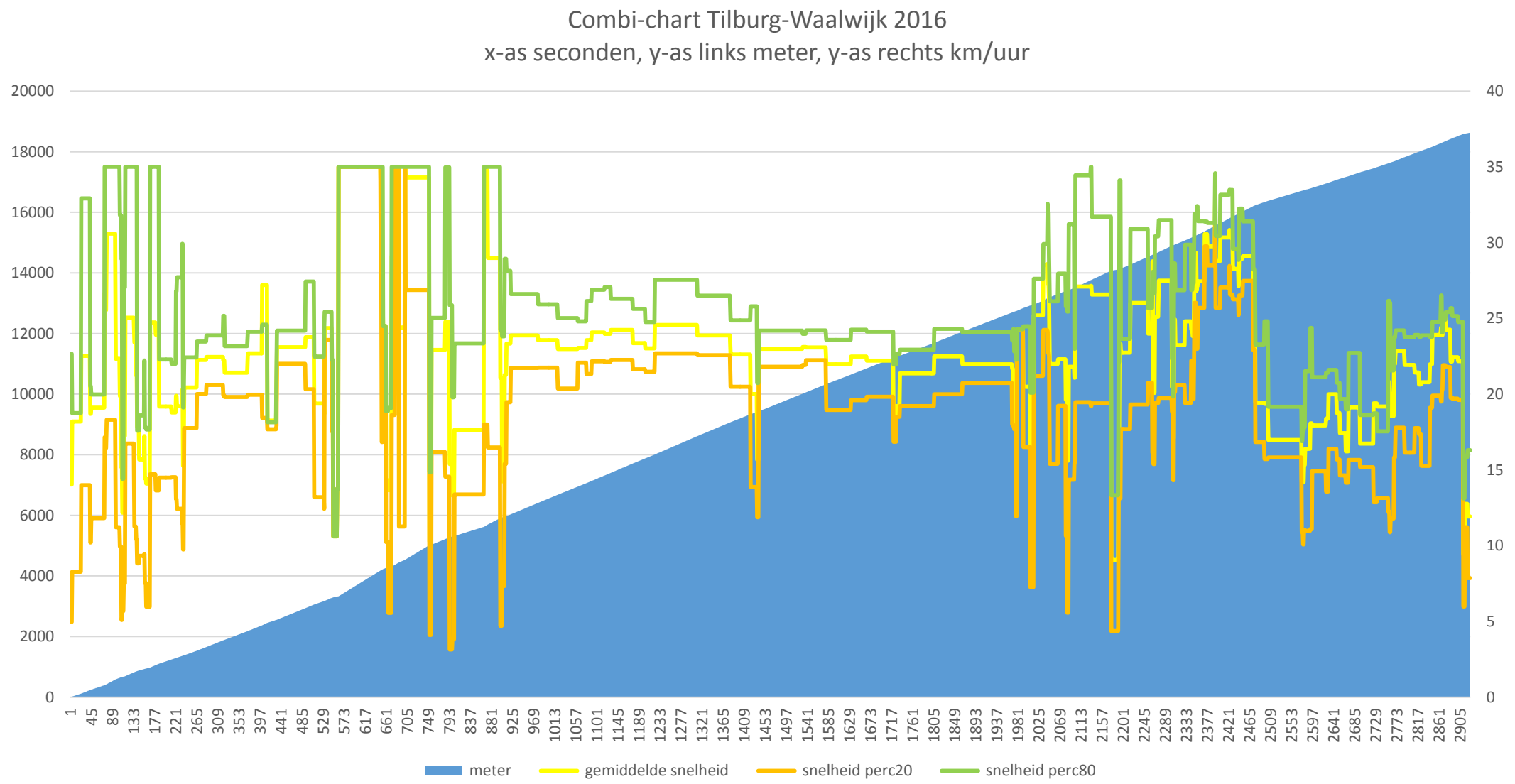
Distance & speed complete route



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Fietstelweek 2016

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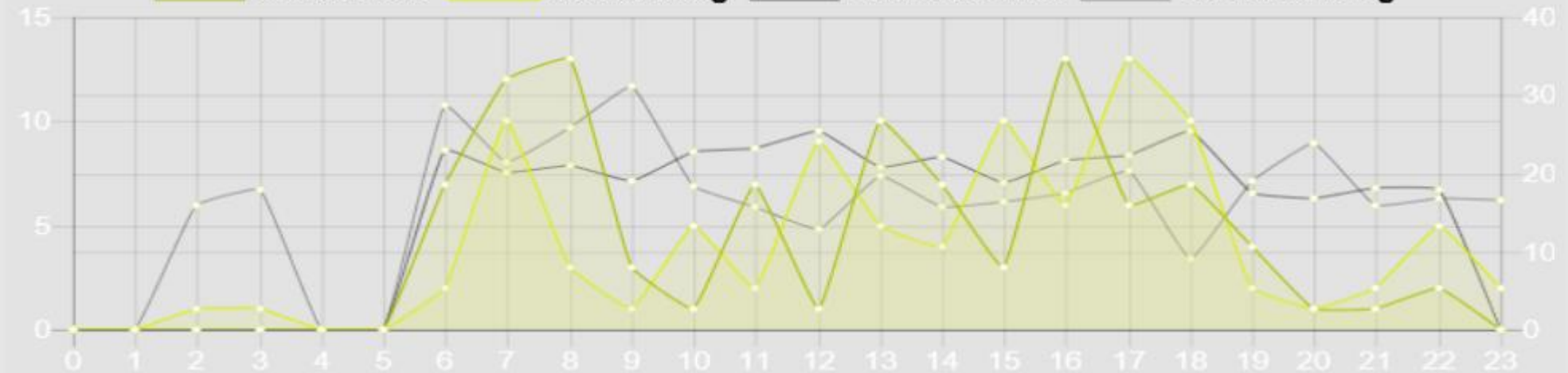
Fietstelweek 2016

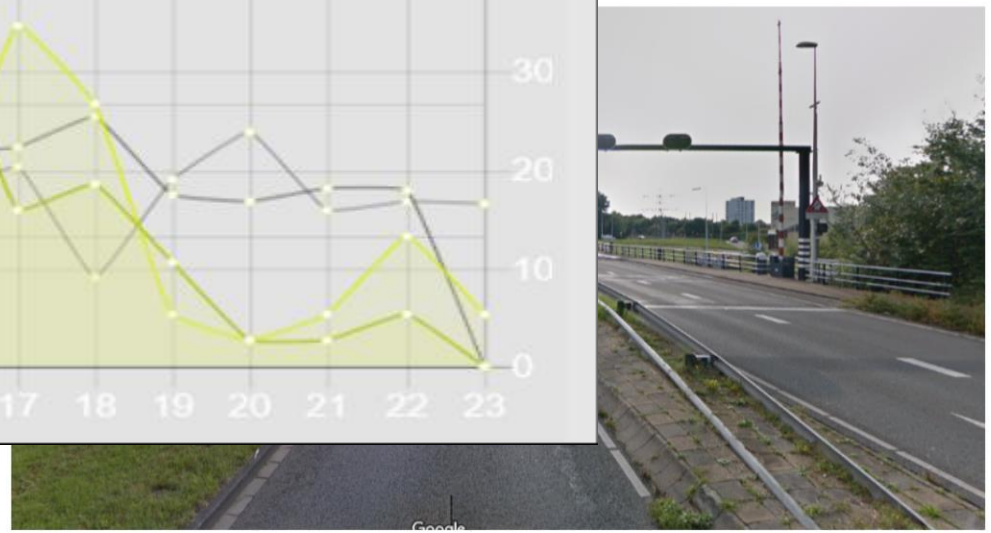
21 km/uur 16 km/uur 98 94

Per uur

beide richtingen

aantal heen aantal terug snelheid heen snelheid terug





18 km/uur 192

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NHTV cycle Intelligence

Enhance a global shift towards active modes of transportation by supporting cities and professionals in built environment to get a grip on their cycling ambitions through applied science

www.nhtv.nl
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