Setting the scene – cycling in Europe

Katja Kircher

Cycle to move

- get somewhere / move
- not fearing for one's life
- comfortable and enjoyable

System perspective

The traffic system is made for cars, maybe trucks – can we ever reach a good interaction on equal terms if the environment intrinsically favours one group?

Cyclist “type”

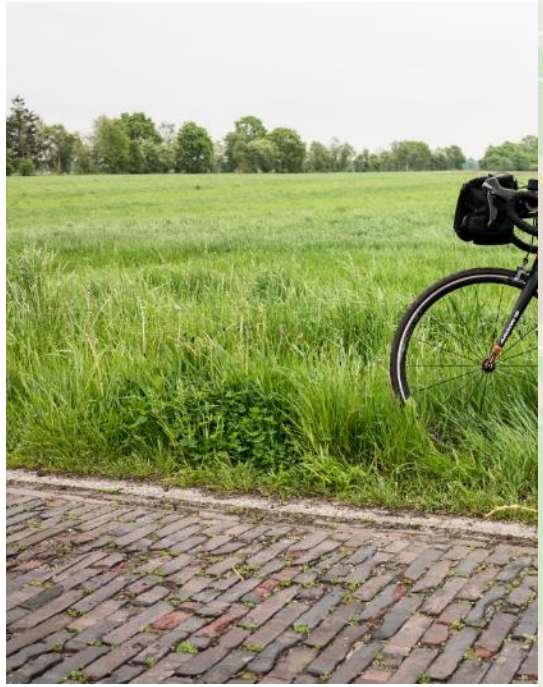
vti

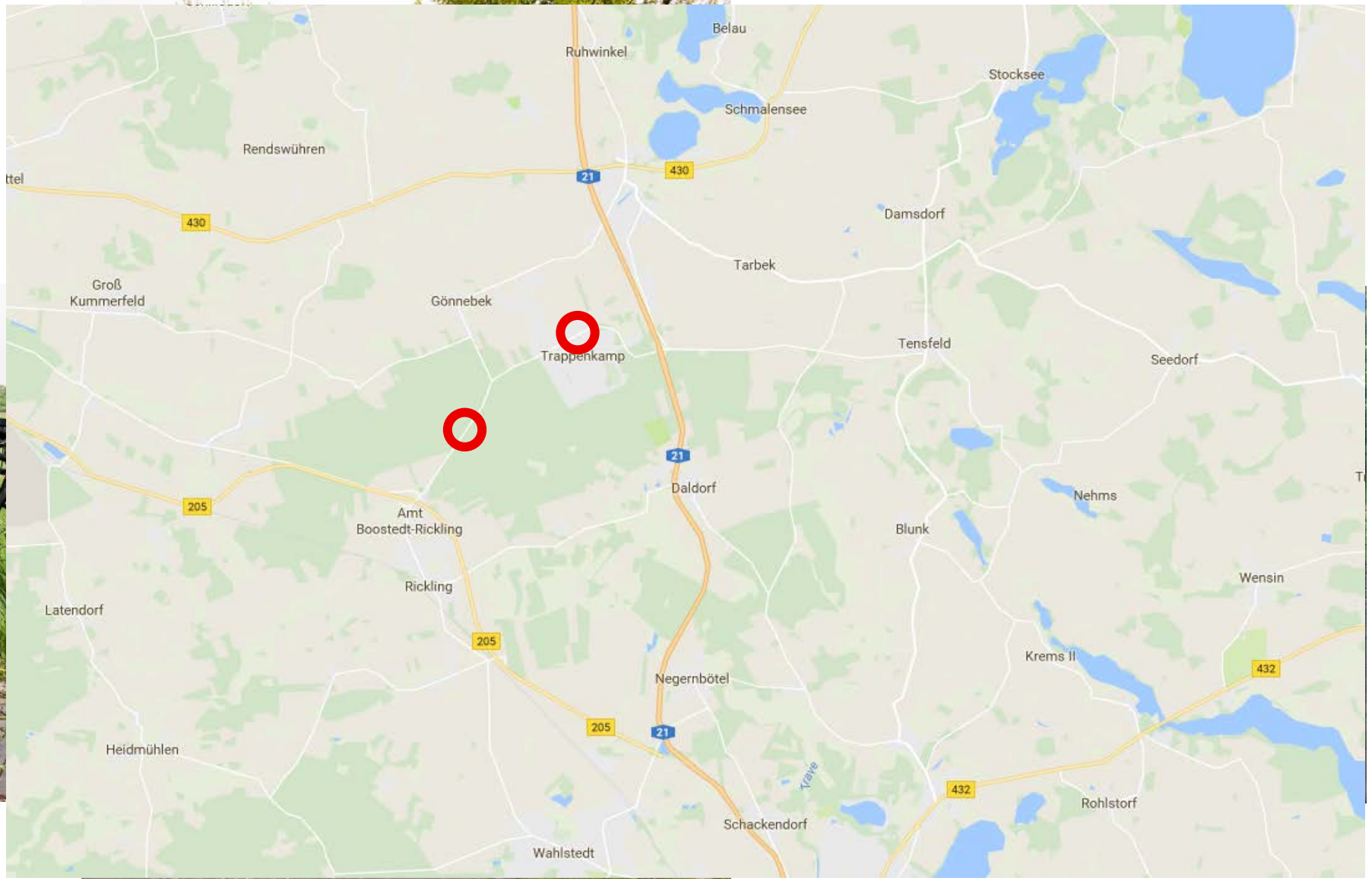
Cyclist type – research

typically through observations

Orientation

- long distance
- through towns
- through intersections

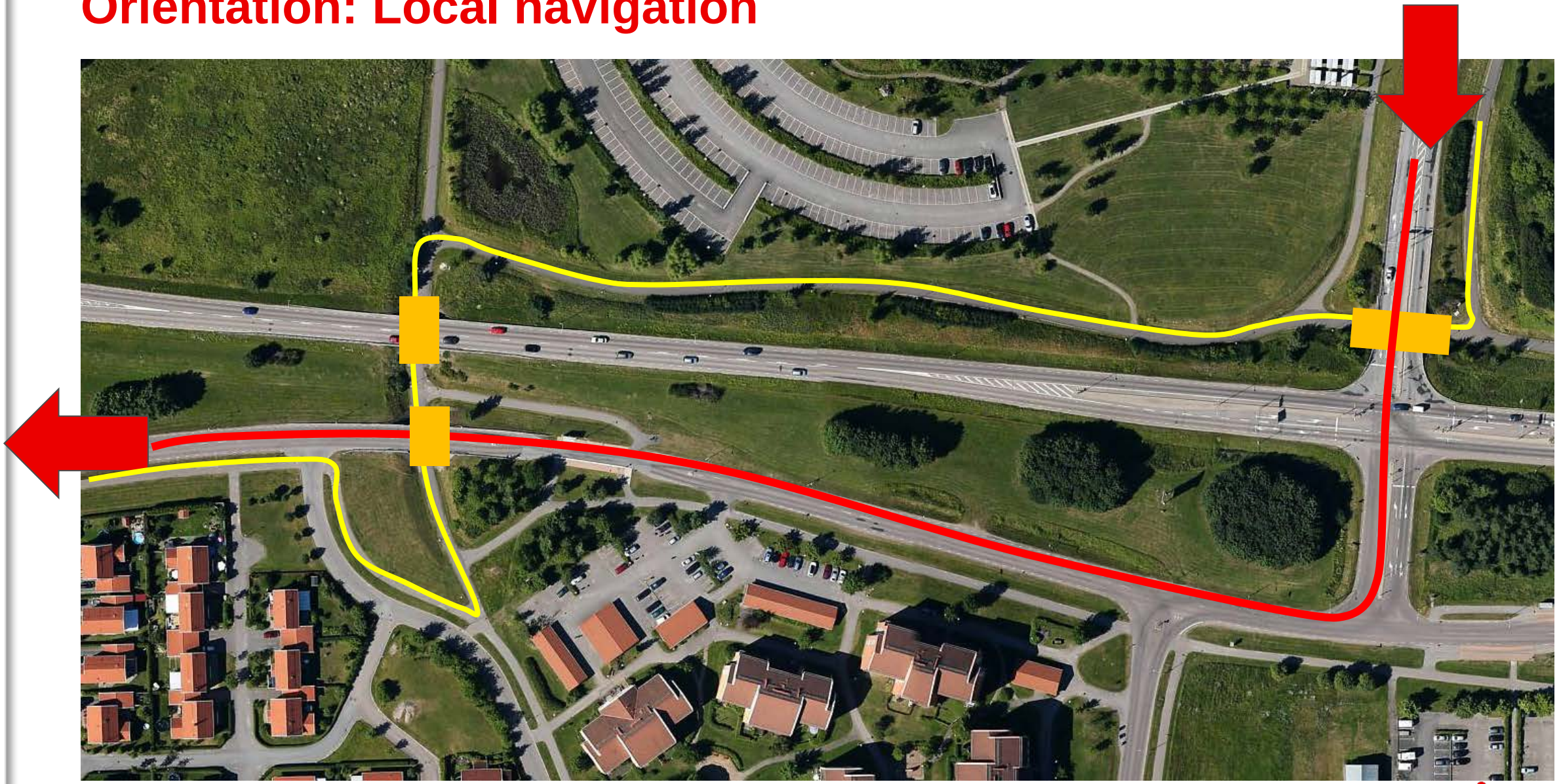




Orientation

several studies identify the need for better signage for bicyclists

Orientation: Local navigation



Interaction with other road users

rural areas

- positive: drafting on truck tailwind
- scary closeness dictated by the overtaking vehicles
- role of the infrastructure

➔ mainly: driver sees cyclist and makes a decision whether and how to overtake

urban areas

- more different types of interactions
- if cycle paths exist: often related to intersections and crossing paths

Rural road, overtaking behaviour – research findings

- “too close” or < 0.5 m in 0.5 % (USA) to 2 % (UK) of the overtakings
- closer gap when cyclist located more to the centre of the road
- buses and heavy-goods vehicles overtake more closely
- closer to men than to women
- oncoming traffic leads to closer overtaking

What does this really mean?

2200 vehicles/day

= 92 vehicles/hour

0.5 - 2 % “too close”

➔ 1-4 too close over-takings per 1 hour

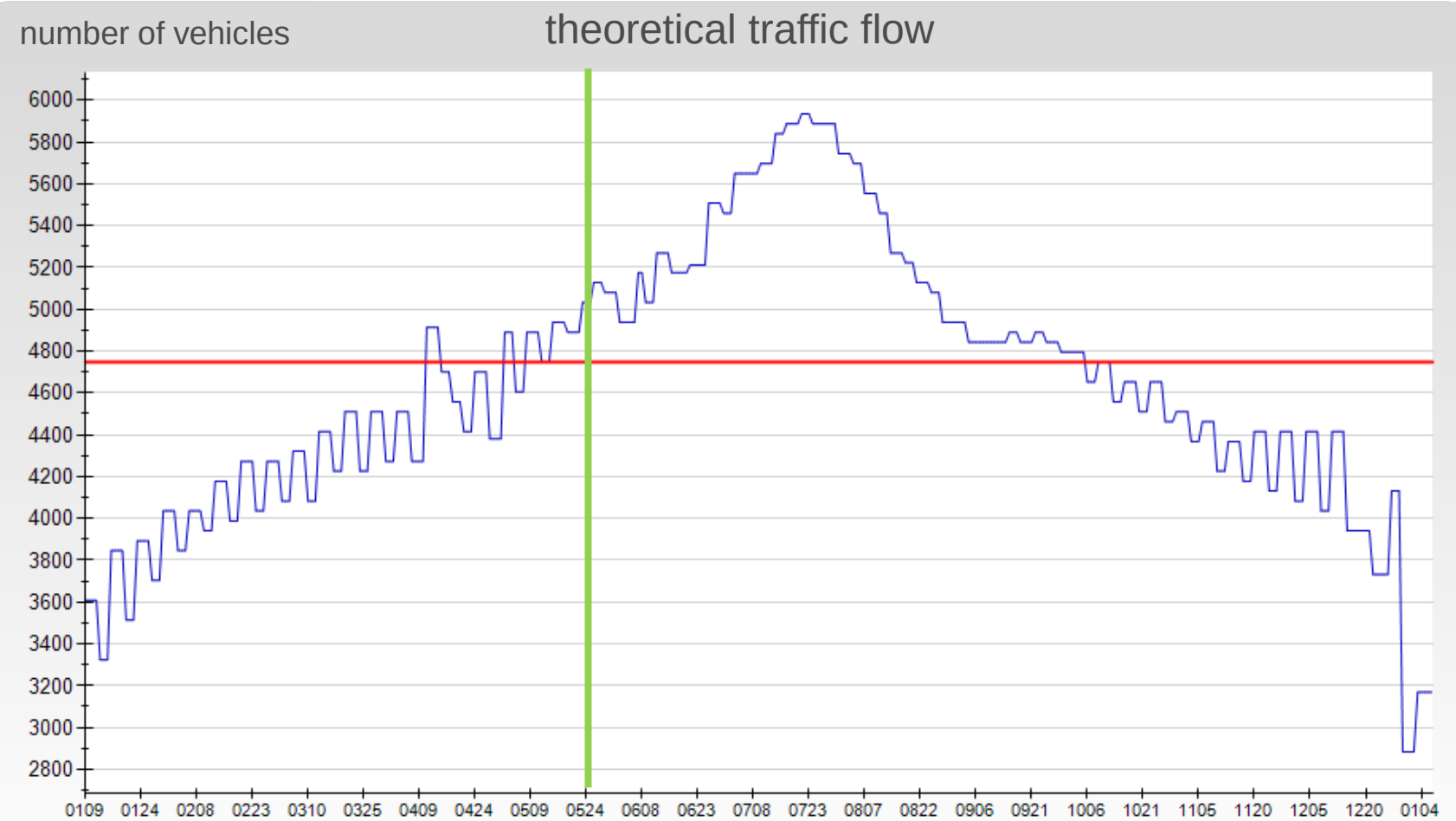
A scarier road:

5200 vehicles/day

= 217 vehicles/hour

0.5 - 2 % “too close”

➔ 3-9 too close over-takings per hour



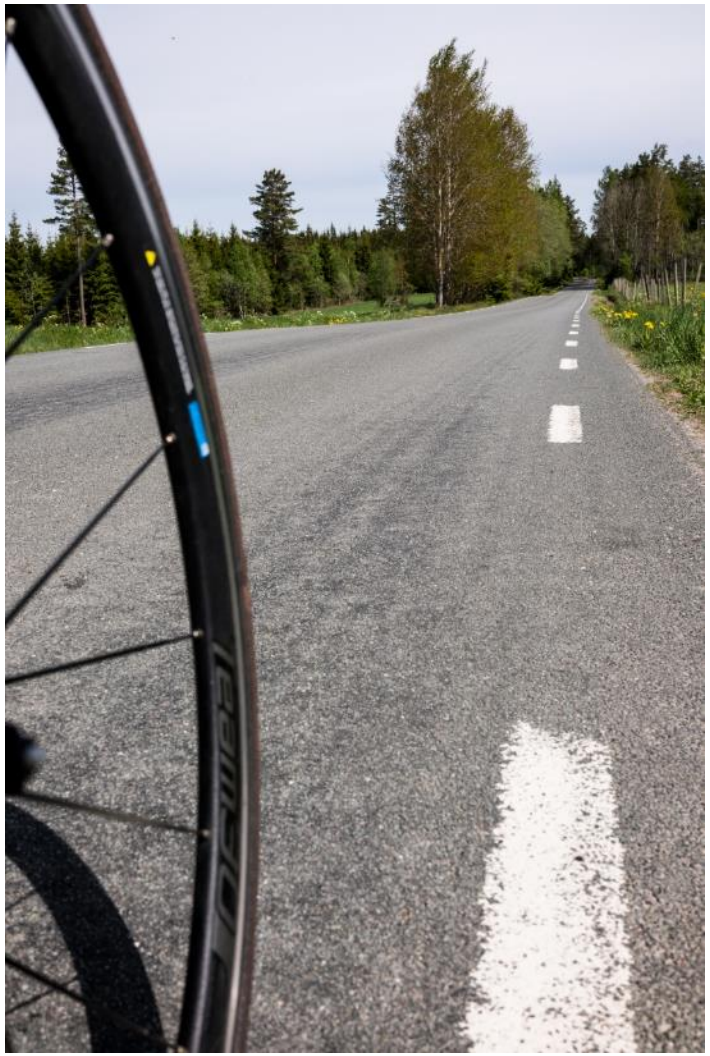
blue line: number of cars daily

red line: yearly average

Overtaking behaviour – unscientific self-studies

self-studies: lane position on this road

unreliable impressions, or dependent on road markings?



Interaction with other road users

Is the infrastructure asking for trouble?

Research shows: Drivers attend to places where they expect cars.

Cyclists, pedestrians etc. are often treated as one big homogeneous disturbing factor.

Interaction with other road users

What if the infrastructure makes drivers expect bikes?

Or should we trust technology?

Research example

- green wave for cyclists
- truck detects cyclists and informs/warns drivers
  - augmented with help from infrastructure
- infrastructure informs turning cars about cyclists
- infrastructure informs cyclists about turning cars

- other EU projects and further research ongoing

Live and let live

Thank you very much for your attention!

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