STORIES FROM 1001 PATHS

(OVER DYBBØLSBRO)

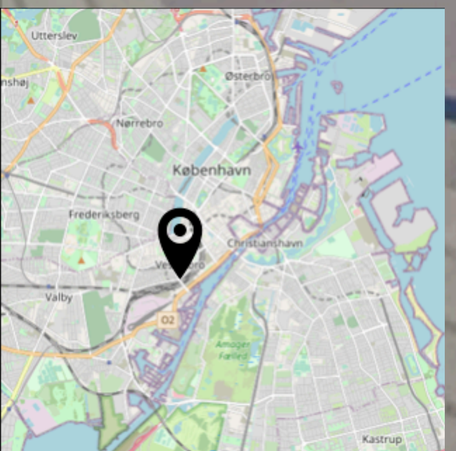
Michael Szell, ITU, 2023-09-20

CPH DATA BEERS

2022. CPH.

2022. CPH. BIKE.

2022. CPH. BIKE. DYBBØLSBRO.

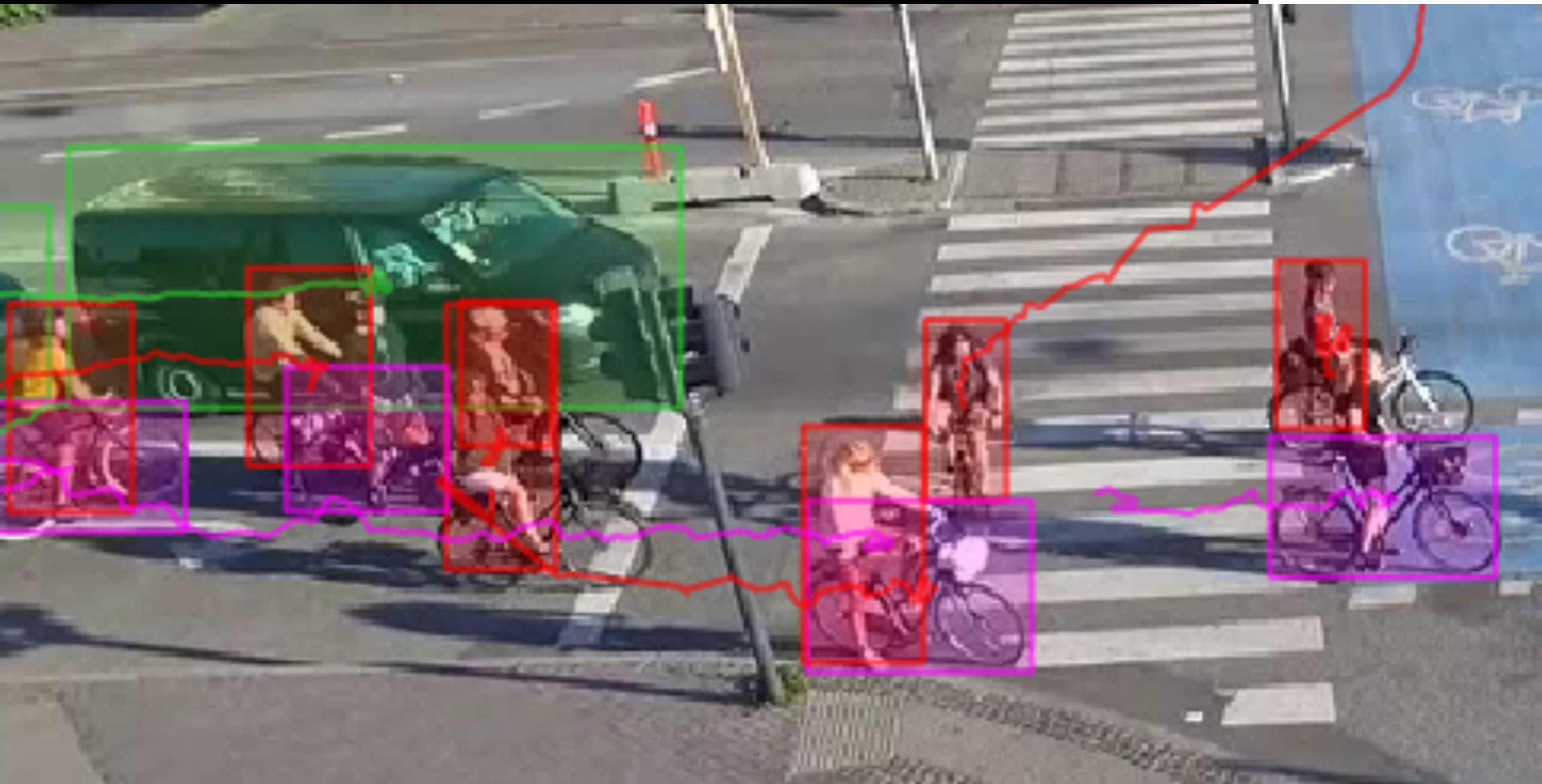


2022. CPH. BIKE. DYBBØLSBRO. GREAT!

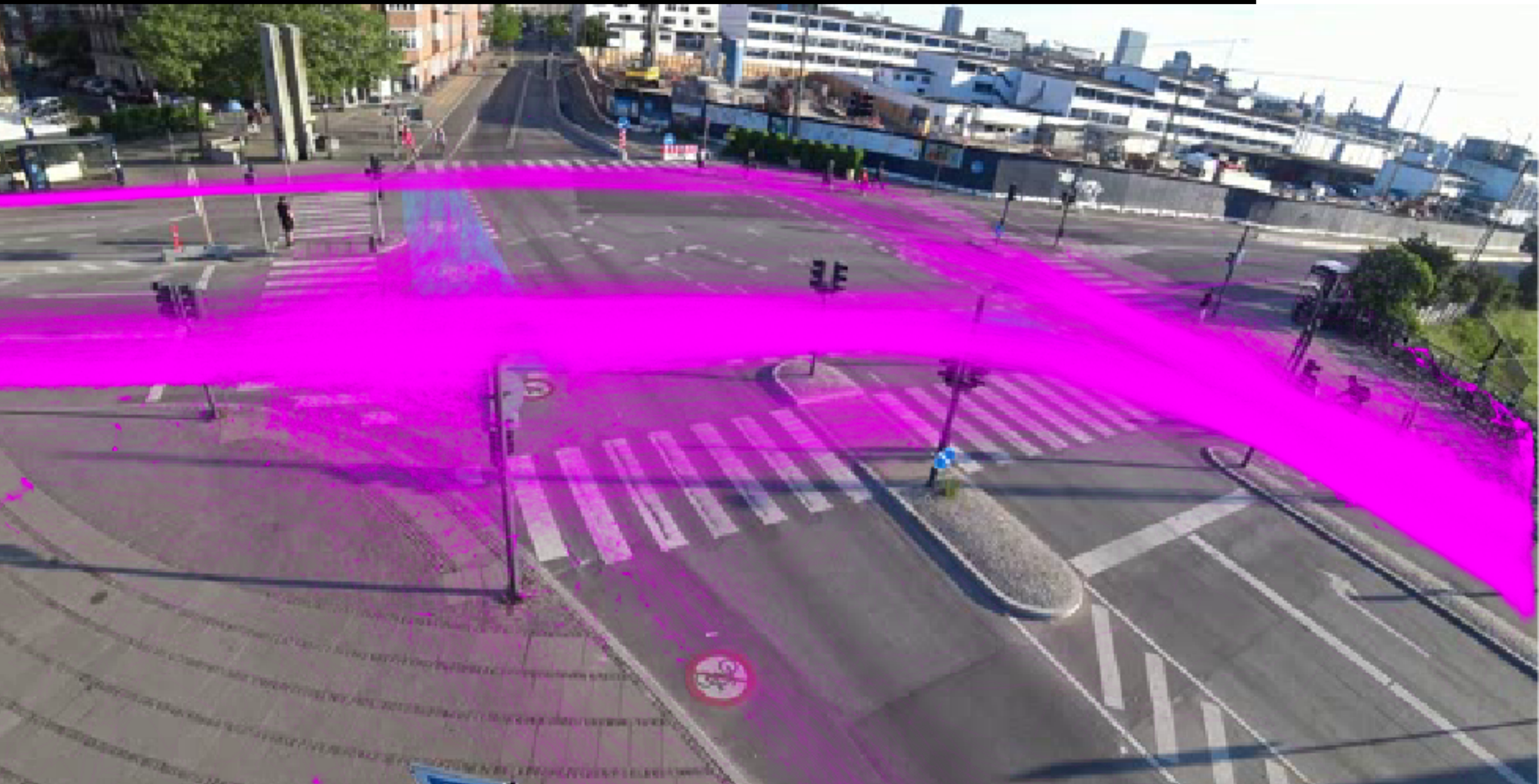
The Dybbølsbro intersection is infamous

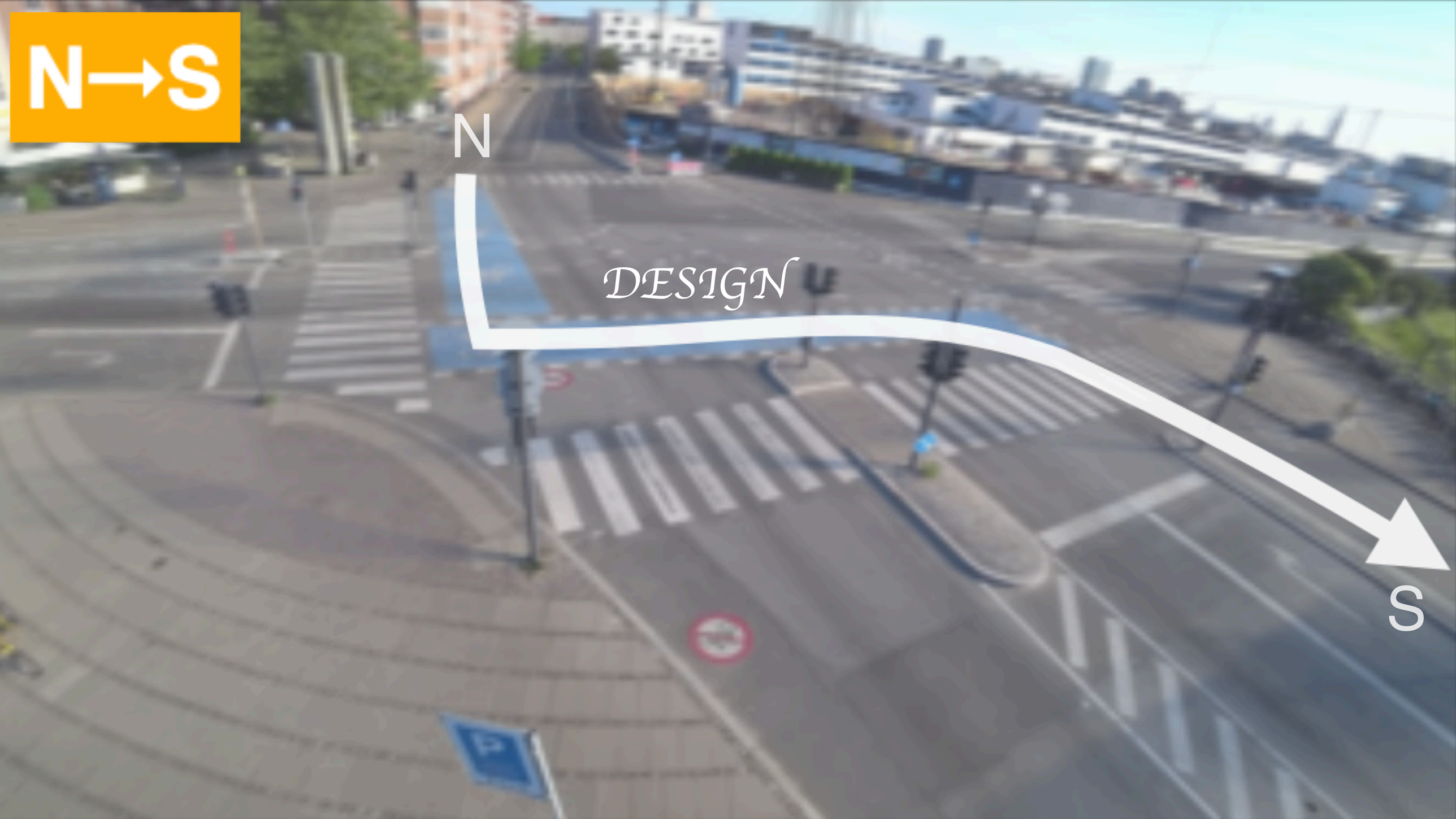
N
S

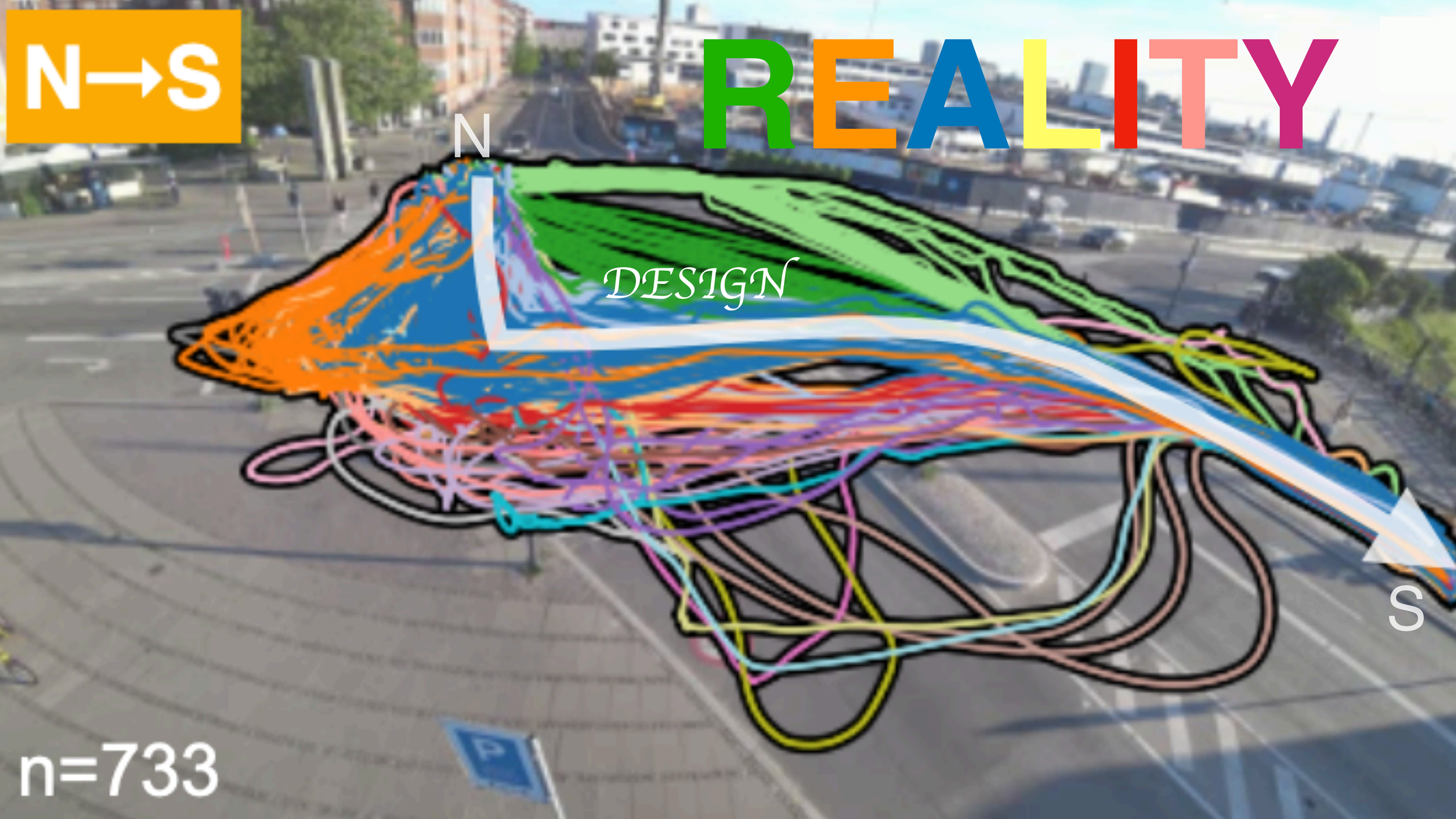
We trained a detection algorithm for cyclists (YOLO)



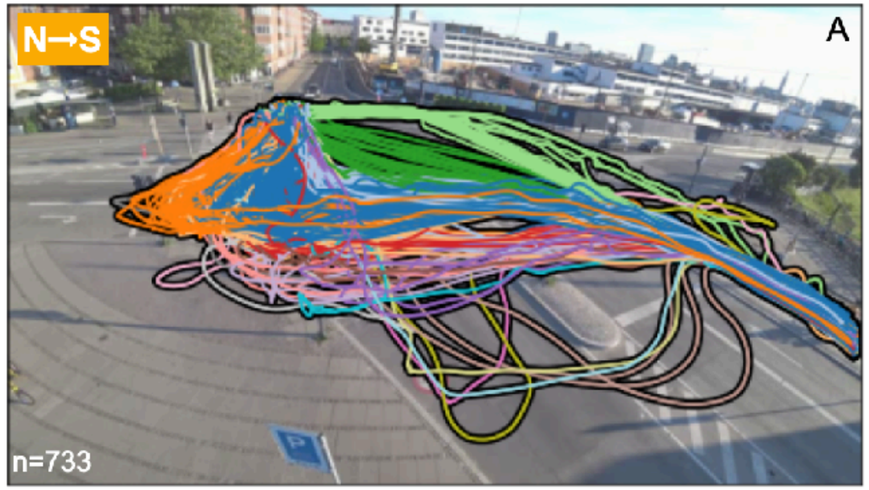
11,553 cyclist trajectories, Wednesday 7:00-8:00

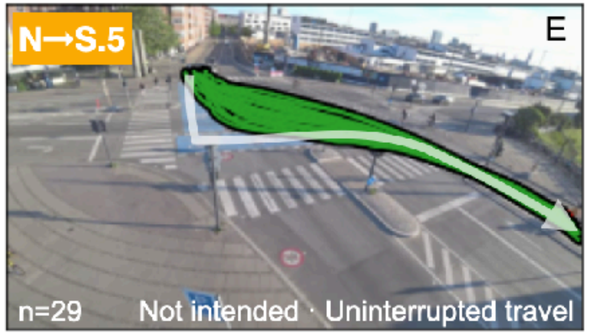


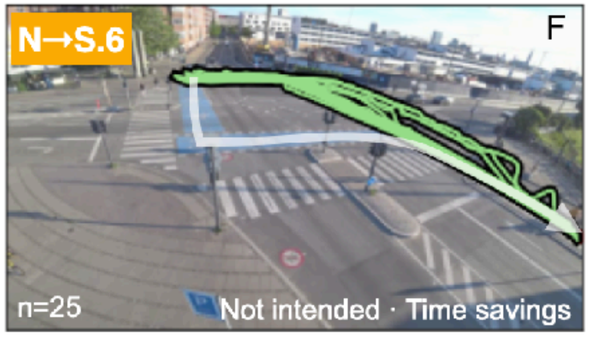

N→S
N
DESIGN
S


N→S
REALITY
N
DESIGN
S
n=733

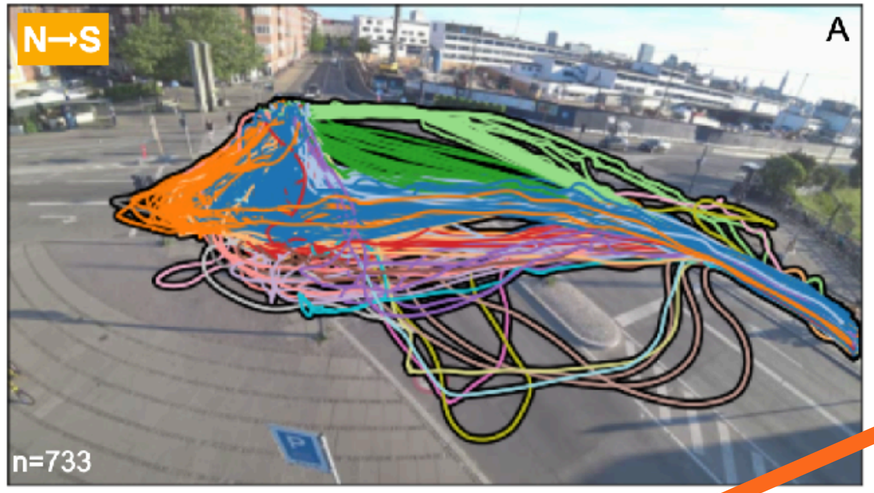
We separated trajectories into path-clusters



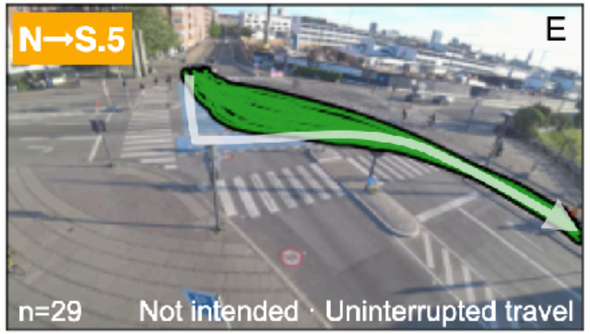


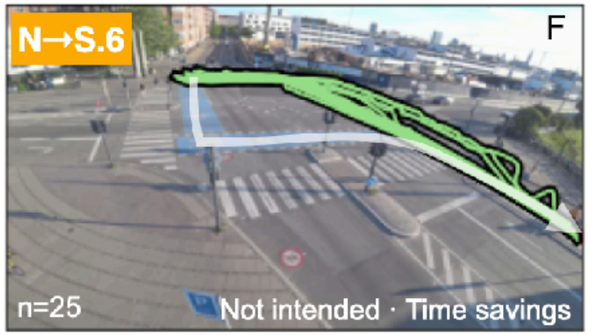


We separated trajectories into path-clusters

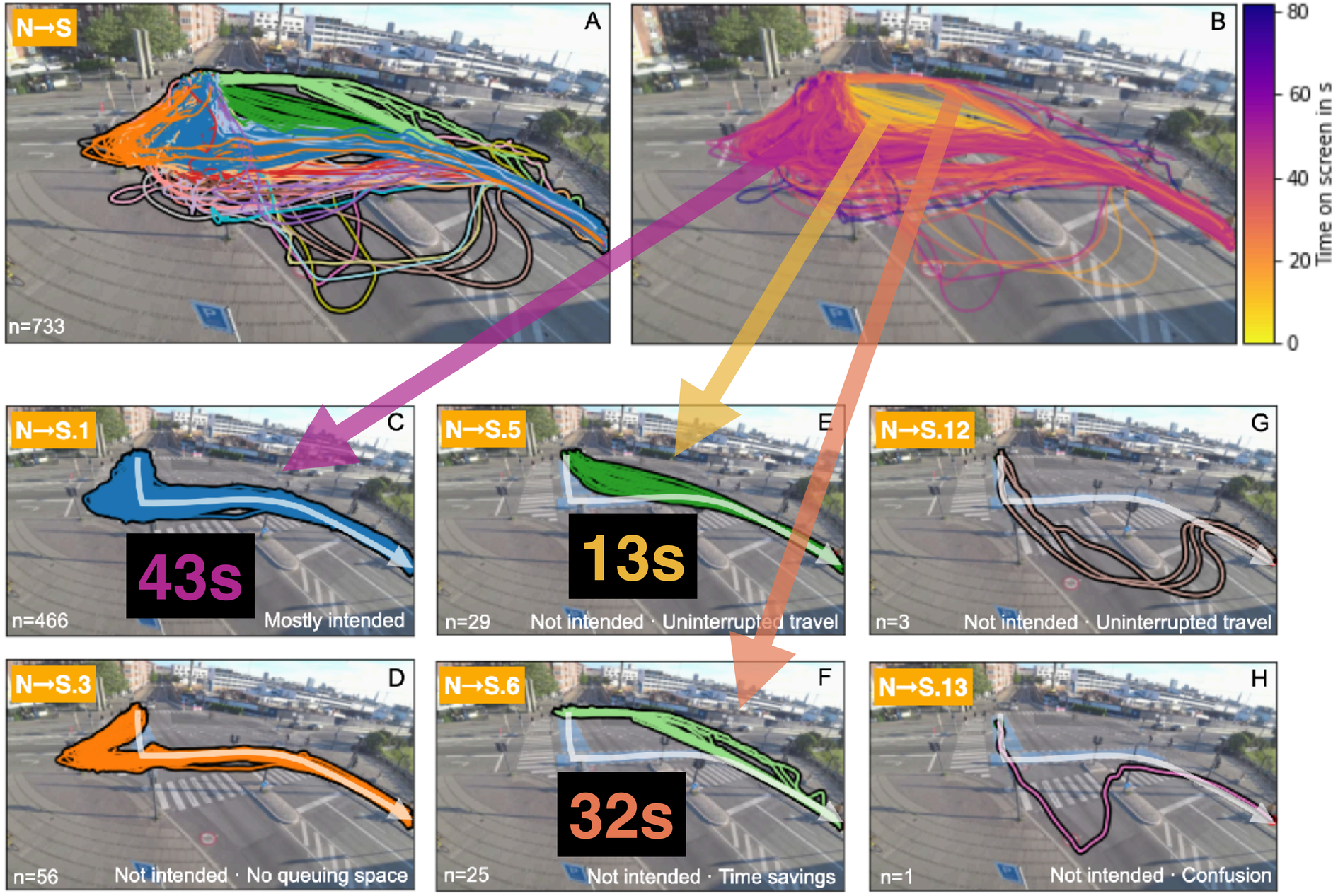


Only 64% are "mostly intended"





Cyclists prefer uninterrupted travel, which the intersection fails to provide



Findings

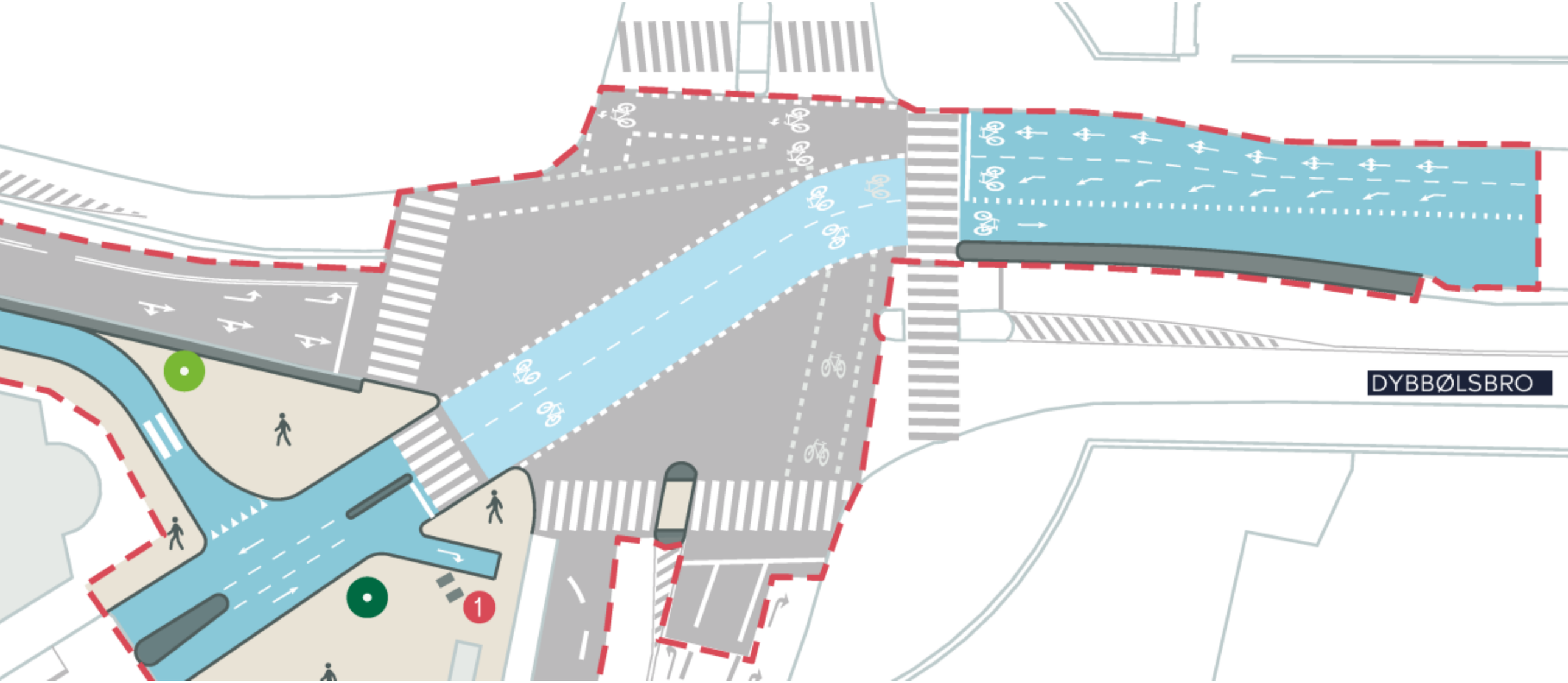
Breum, Simon Martin, Bojan Kostic, and Michael Szell. 2022. "Computational Desire Line Analysis of Cyclists on the Dybbølsbro Intersection in Copenhagen." *Findings*, December.

TRANSPORT FINDINGS

Computational Desire Line Analysis of Cyclists on the Dybbølsbro Intersection in Copenhagen

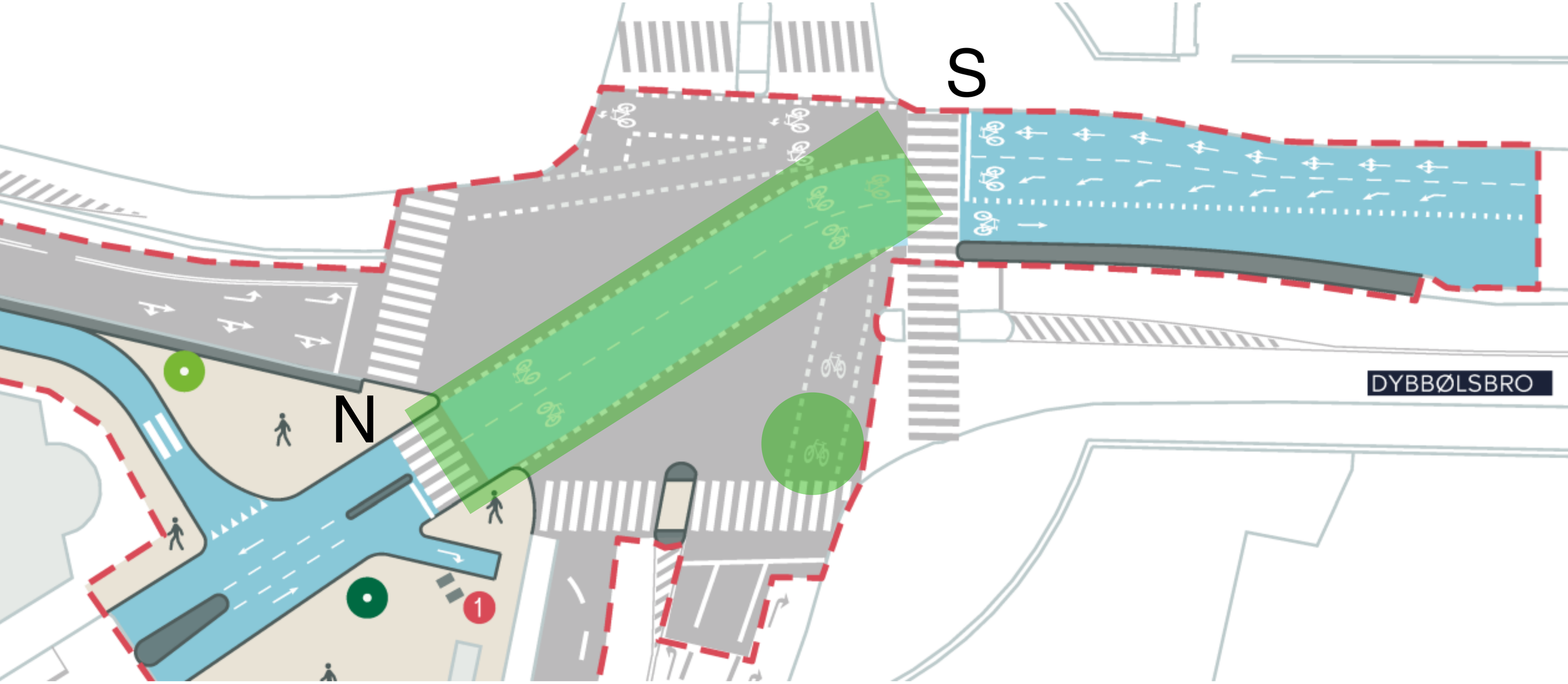
Simon Martin Breum[1], Bojan Kostic[1], Michael Szell[1,2,3] [a]

The 2022 re-design

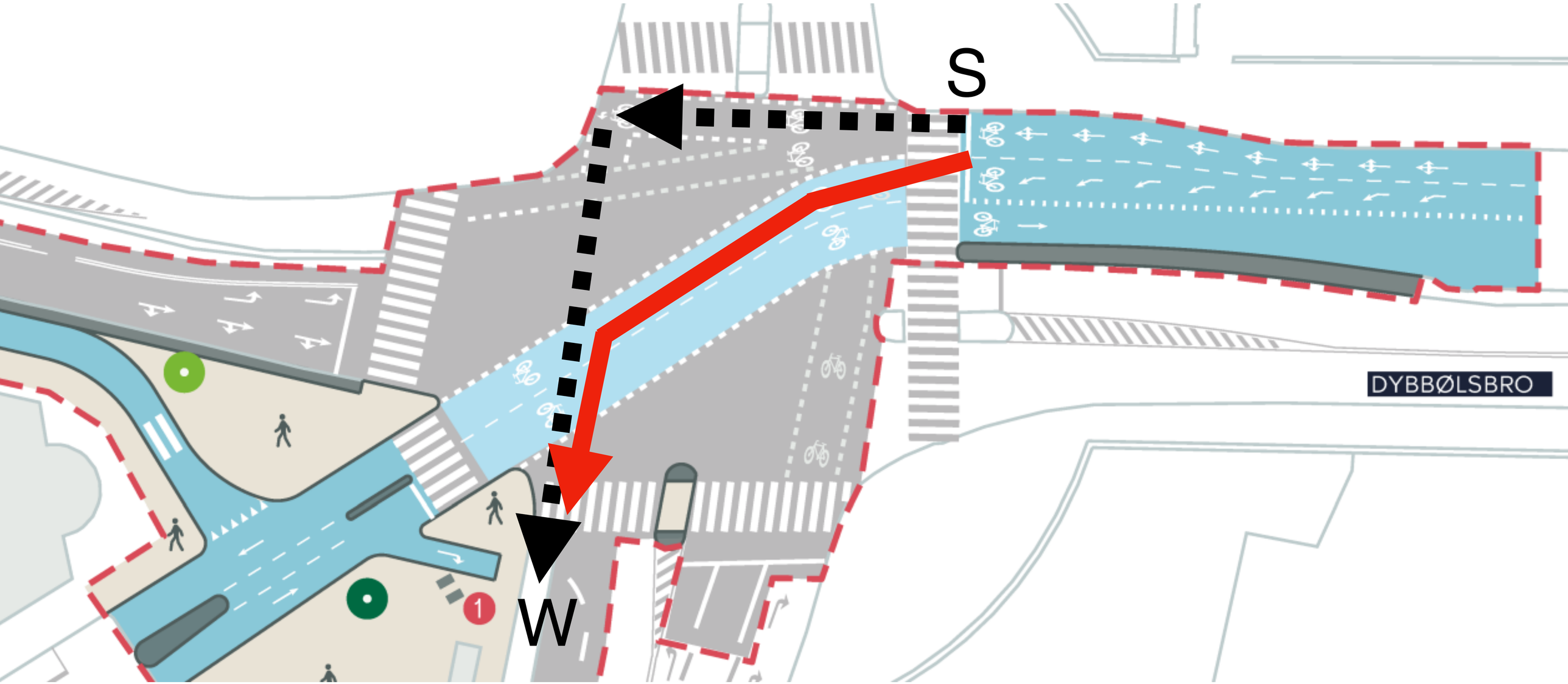


https://www.kk.dk/nyheder/ny-utraditionel-loesning-paa-vej-ved-dybboelsbro

Fixed issue: Diagonal lane provides uninterrupted N→S travel



New issue: S→W travel over diagonal



For pre/post analysis, we should re-run our study now

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The bigger issue..

Cycling: 3bn DKK

New roads: 64bn DKK

DENMARK IS A CYCLING NATION

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Cycling: 3bn DKK

New roads: 64bn DKK

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Cycling: 3bn DKK

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MAKE YOURSELF HEARD!

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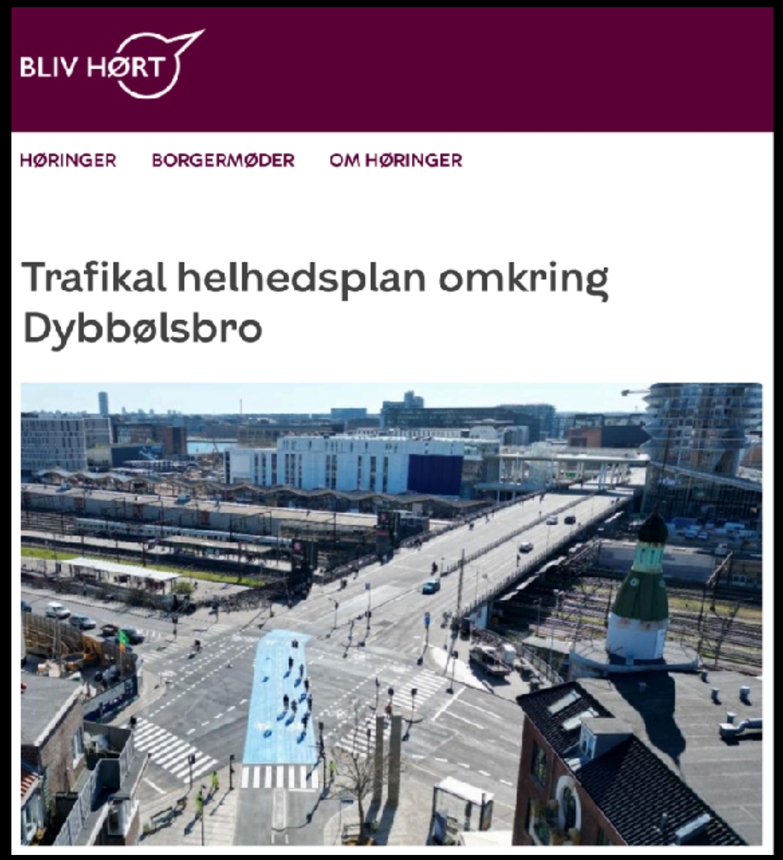
MAKE YOURSELF HEARD!



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Our goal: Data-driven tools to help sustainable urban planning

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Research

Cite this article: Natera Orozco LG, Battiston F,

Data-driven strategies for optimal bicycle network growth

Luis Guillermo Natera Orozco[1], Federico Battiston[1], Gerardo Iñiguez[1,2,3] and Michael Szell[4,5,6]

geographical analysis

Geographical Analysis (2022) 0, 1–29

Automated Detection of Missing Links in Bicycle Networks

Anastassia Vybornova[1], Tiago Cunha[1], Astrid Gühnemann[2], Michael Szell[1,3,4]

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University of Trento, Italy

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IT University of Copenhagen, Denmark

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Michael Szell[1,2,3]✉, Sayat Mimar[1], Tyler Perlman[1], Gourab Ghoshal[4] & Roberta Sinatra[1,2,3,5]

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Ane Rahbek Vierø, Anastassia Vybornova and Michael Szell
IT University of Copenhagen, Copenhagen, Denmark

Findings

TRANSPORT FINDINGS

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NERDS

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