



**DUTCH
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POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION

**ANNUAL
CONFERENCE
2022**

From Pop-Up to Permanent Cycling Streets: Lessons from the Netherlands

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Dutch Cycling Embassy • November 30th, 2022

Dutch Cycling: For a Bicycle-Friendly World

The Dutch Cycling Embassy is a vast network of public and private organizations from the Netherlands who wish to share their knowledge and expertise to help cities experience the many advantages of cycling.



Experience the Dutch cycling culture first-hand



Think about best possible solutions and achievable results



Act by applying these solutions to your local context



Learn more about effective policies and best practices

www.dutchcycling.nl



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4wieler

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Meer dan routes!

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sensors

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ARUP

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Beccan Davila
Puentes
Architects and Planners



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USER

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Bike
minded

BOUGH & BIKES
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University
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ColorFall®
Solutions
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DONKEY
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Fietsdiensten.nl

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Fietsersbond

FIETSHANGAR
4 tot 7 fietsen veilig en droog voor de deur

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ROUTING EN SIGN

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Kloppenburg

Gemeente Amsterdam

Den Haag

Gemeente Rotterdam

Gemeente Utrecht

Zwolle

Goudappel

HOD
WORKS

horizons
sustainable future

humankind.

i&o
research

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ASPHALT

Ministerie van Infrastructuur
en Waterstaat

Loendersloot
groep
verkeer & meer

LUMIGUIDE
SMART MOBILITY SOLUTIONS FOR SMART CITIES

GROENE
METROPOOL
ARNHEM
NIJMEGEN

Ministerie van Infrastructuur
en Waterstaat

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Movares
consultants & engineers

move
mobility
smart moving cities

new
urban
mobility

nieuw
verbeterd



Panteia
Research to Progress

WILLEX

POSSEHL

ProRail

provincie
Gelderland

provincie
 groningen

PROVINCIE :: UTRECHT

Provincie Noord-Brabant

Rijkswaterstaat
Ministry of Infrastructure
and Water Management

Ring
ring

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GoDutchCycling
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SIEMENS

LANDELIJK
fiets
PLATFORM

STREET
STUFF!

STUDIO BEREIKBAAR

Swapfiets

theurbanfuture
usual mighties boosting cities

TILER

Tour de
Force

TRACIFY
KEEP YOUR BIKE CLOSE

triple
Joy

TU Delft

vconsyst

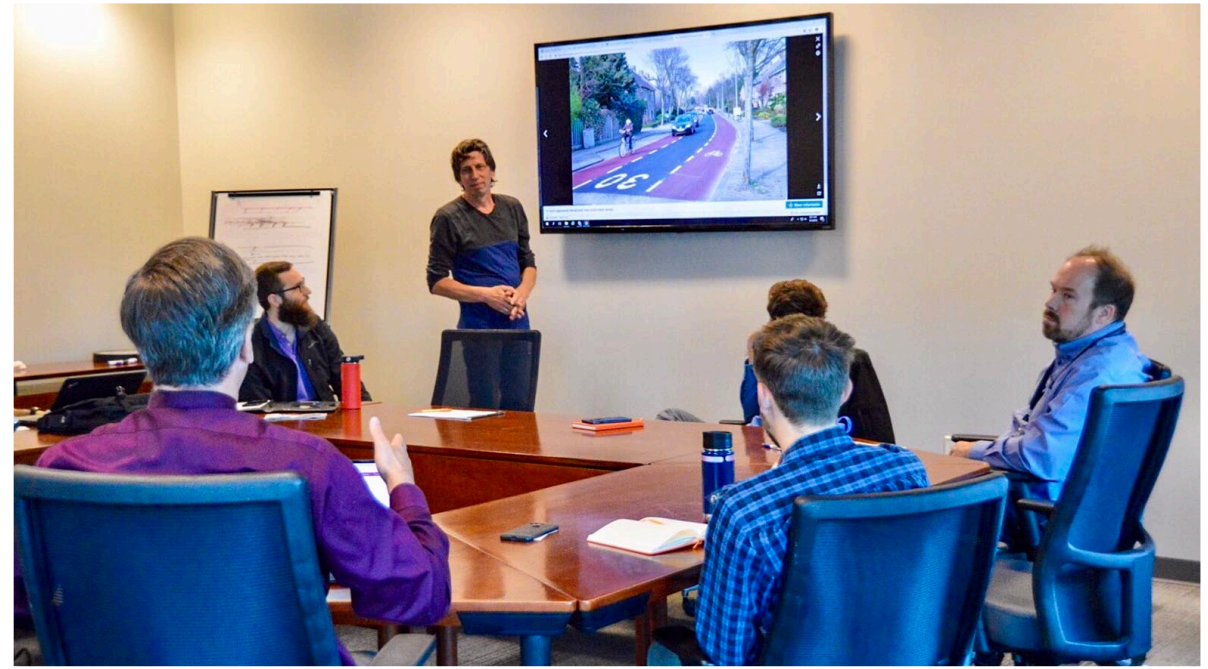
VelopA
LET'S GO OUTSIDE

WHEELYLIFT

hogeschool
Windesheim
Dichter bij jou

wobs
WARM ON BIKES

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don't trip

better tv is
in the air.

ROARK

RAVEN

NETFLIX



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Phase One: “Slow Streets”

- o>o To promote physical/mental health and social activity, many cities—including Austin, Oakland, S.F., and Vancouver—quickly built miles of “Slow Streets”
- o>o Oakland used signage and barriers to prohibit motor vehicle through traffic and reduce speeds to 30 km/h along 120 km (over 10%) of its road network
- o>o These corridors were open to walking, cycling, scooting, jogging, skateboarding, playing; and proved to be hugely popular



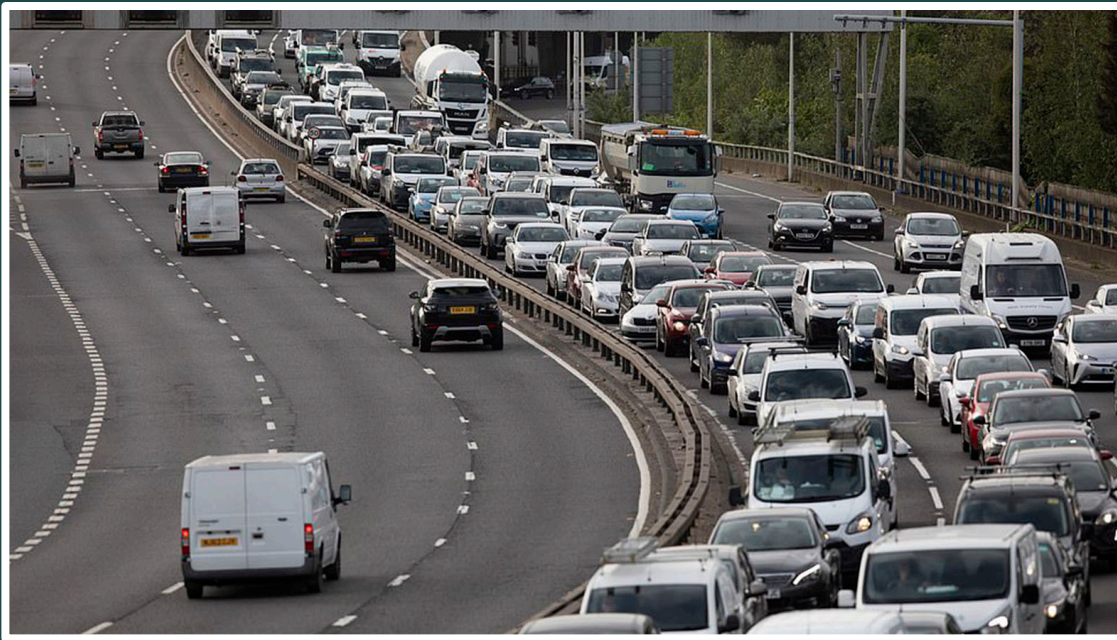
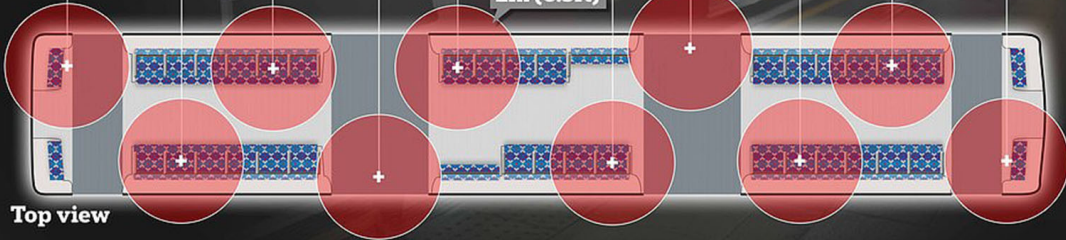
HOW MANY PASSENGERS CAN FIT ON A TUBE TRAIN CARRIAGE WHILE MAINTAINING SOCIAL DISTANCING?

Side view



2m (6.5ft)

Top view



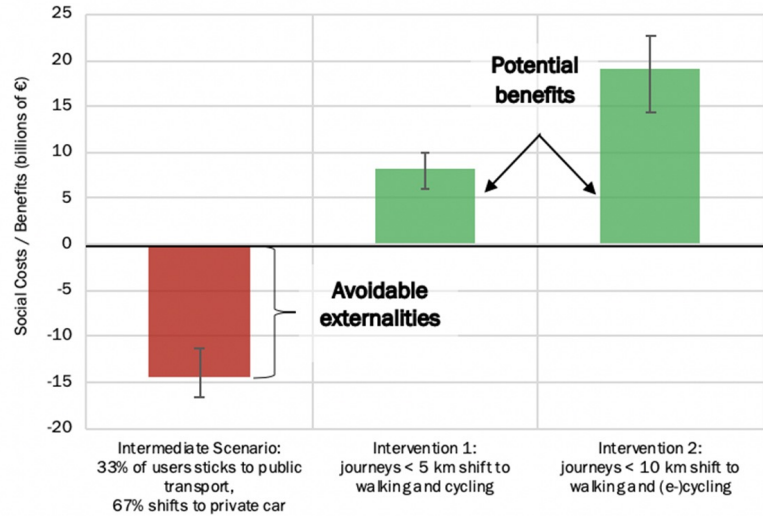
Testing Transport Resiliency



- > London's public transport system was operating at just one-fifth of its regular capacity during the coronavirus crisis
- > Eight million journeys each day absorbed by other modes of transport: equal to ten-fold increase in kilometres cycled and five-fold increase in kilometres walked
- > Just a fractional increase in car journeys, on top of existing traffic, would be disastrous to the city (congestion, public health, pollution, freight, safety, etc.)



Social costs and benefits of post COVID-19 lockdown
mobility scenarios in Italy:
Intervention scenarios (billions of €)



From Opportunity to Necessity

- o>o Cost-benefit analysis by the Italian government: rise in car use caused by lack of action would cost society €10 to €20 billion each year; rise in active travel caused by on-street interventions would save them €9 to €20 billion each year
- o>o The massive cost of doing nothing far outweighed the cost of intervening
- o>o The question was no longer “Can we afford to invest in more walking and cycling?”. It was “Can we afford not to?”

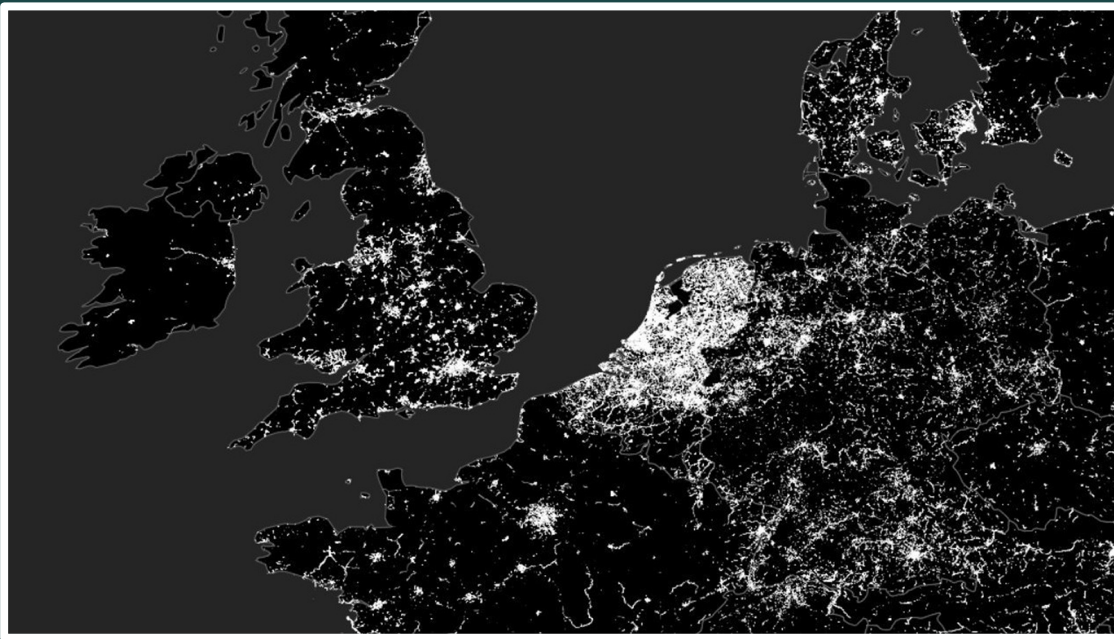


Phase Two: Pop-Up Networks



- >○ Since the start of the corona crisis, 2,600 km and €1.7 billion of cycling measures have been announced across Europe
- >○ Many cities around the world—including Bogota, Berlin, Kampala, Lisbon, London, Melbourne, and Paris—built networks of “pop-up” cycling infrastructure to keep their streets moving post-lockdown
- >○ Lisbon example: 55 km of cycleways, 7,750 secure parking spaces, €3 million in (e-)bike subsidies, 30 km/h speed limit

The View from “Fietsparadijs”



- In the Netherlands, cohesive bicycle network meant cities were equipped to absorb losses from buses, trams, trains
- 37,000 km of separated lanes; 80% of urban streets slowed to 30 km/h or less
- During corona crisis, average bicycle trip length increased from 3.4 km to 4.4 km
- Enabling journeys up to 20 km by electric bike part of the national strategy to keep traffic moving; simply required minor tweaks to intersections and traffic lights



Crisis as a Turning Point



- o>o In the Netherlands, a pair of converging crises in the 1970s created a systematic approach to safer, more sustainable, equitable, and efficient street design
- o>o In 1972, Stop de Kindermoord ("Stop Child Murder") formed in reaction to a road safety crisis that was killing 3,000 people per year, including 450 children
- o>o For six weeks in 1973, the OPEC oil embargo resulted in an abrupt gasoline shortage and 'Car Free Sundays' policy, doubling the sales of bicycles



Teaching Cities to “Go Dutch”



- o>o Five decades of ‘trial and error’ put the Netherlands in a leadership position to teach the rest of the world best practice
- o>o High profile errors in Tilburg and The Hague led to creation of five network design principles: cohesion, directness, safety, comfort, and attractiveness
- o>o ‘Sustainable Safety’ approach created the safest streets for walking and cycling
- o>o Traffic circulation and calming practices now emulated in cities around the world

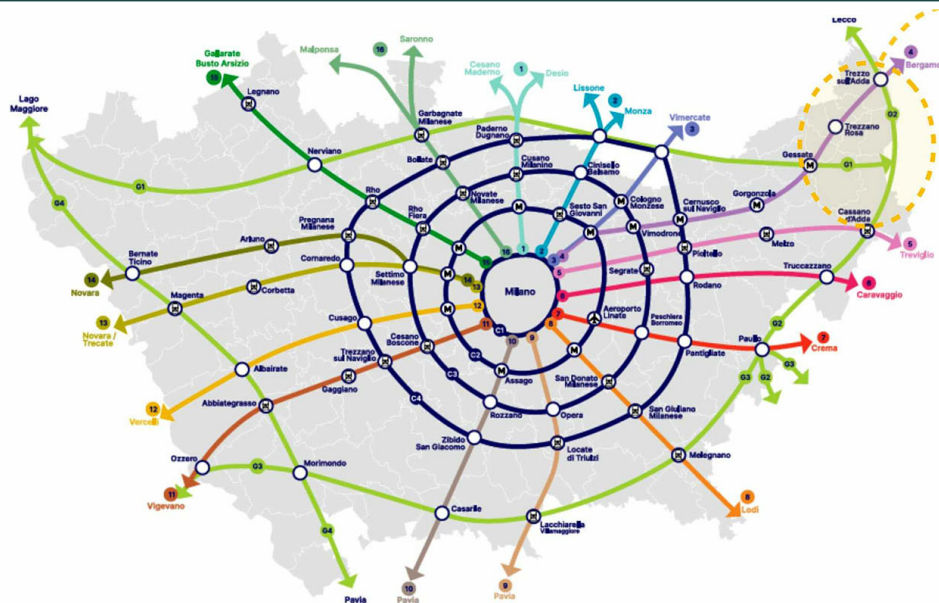




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Opening the Streets of Milan

- >○ Pandemic led to Strade Aperte (“Open Streets”) plan: 35 km. new cycle routes, (e-)bike subsidy for up to €500, 30 km/h citywide speed limit, 4.5 km. of widened sidewalks, and ‘pedestrian priority’ zones featuring 10 to 15 km/h speed limit
- >○ Developed by a team including Decisio, “Cambio” is a €225 million, 750 kilometer biciplan, which will consist of 24 “lines” that connect the residential, commercial and educational hubs; providing €1.1 billion in social-economic benefits





Pop-Up to Permanent in the Philippines

- o>o In September 2020, the Philippine national government allocated \$22 million for active mobility infrastructure; the largest bike lane program in the country's history: 500 kilometers across Manila, Cebu, and Davao over a nine-month period
- o>o Designing, adapting and building hundreds of kilometers of infrastructure in less than a year is no easy task; to ensure long-term success, it was informed by a DCE training program on infrastructure principles funded by the World Bank



Ecological Resilience is defined as “the amount of change a system can undergo before it crosses a threshold and flips to an alternate stability regime of that system.”





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