

Workshop Urbanism Next Europe 2021

(Shared) bicycles and Public Transport

dr. ir. N. van Oort

*Co-Director Smart Public Transport Lab
Delft University of technology*



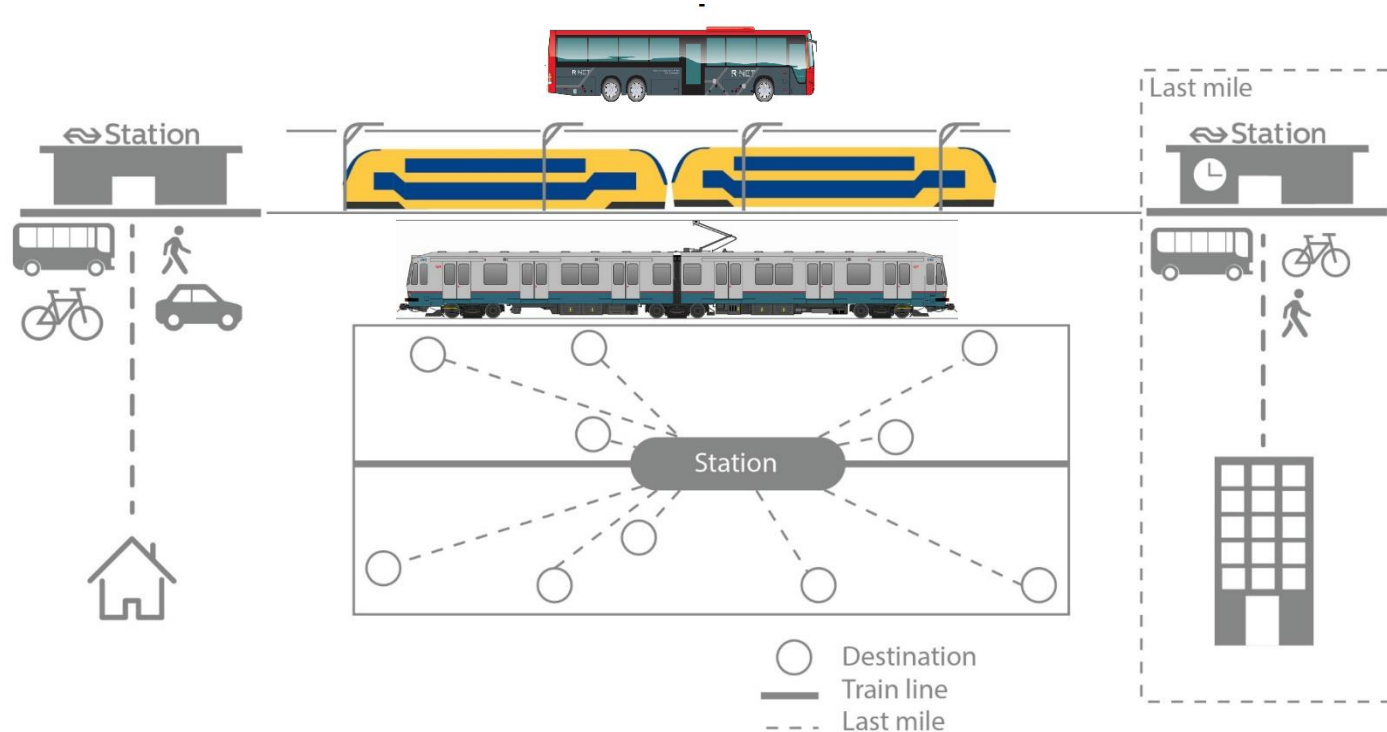
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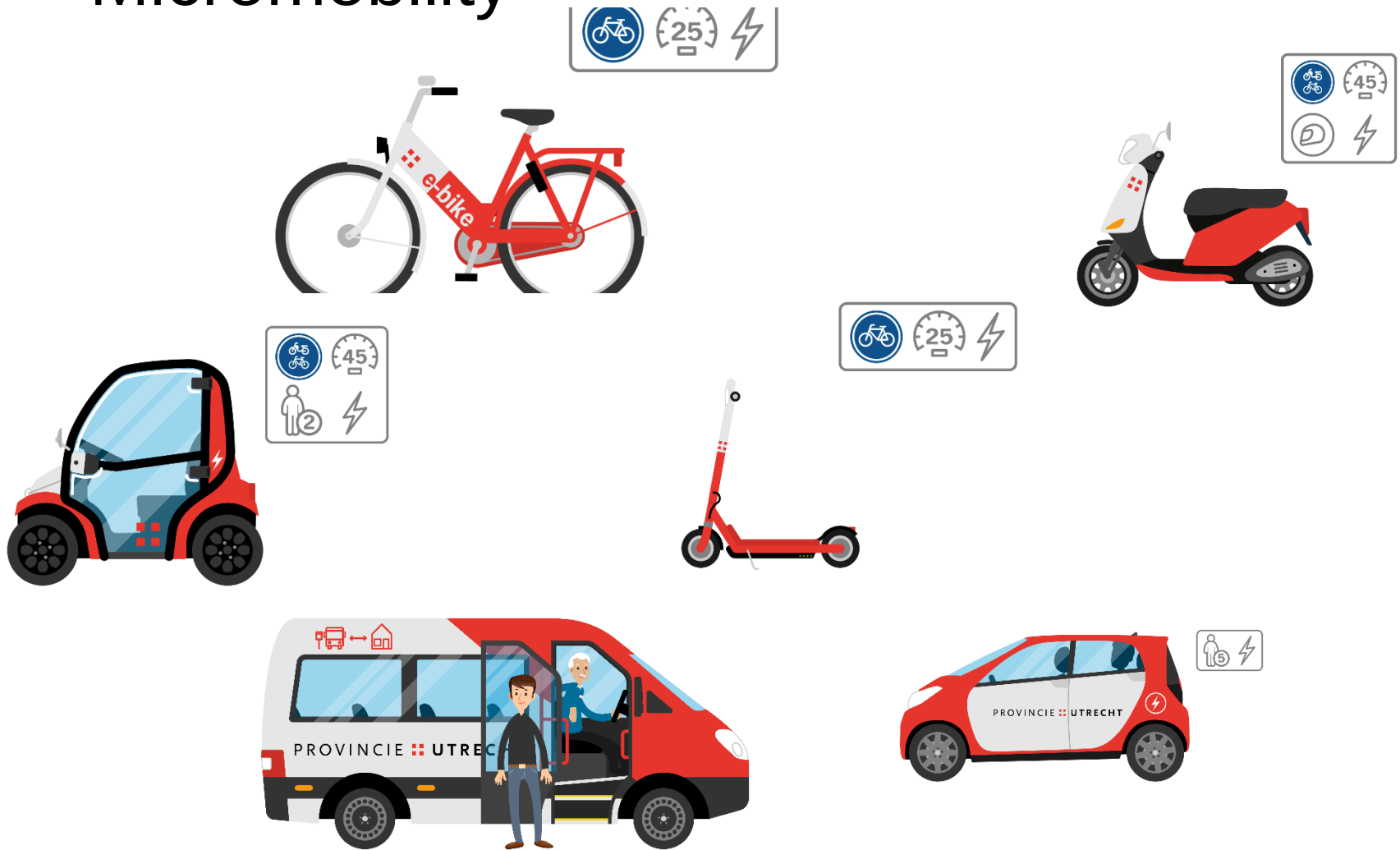
#UNextEU

Access and egress / first and last mile



Scheltes (2018)

Micromobility

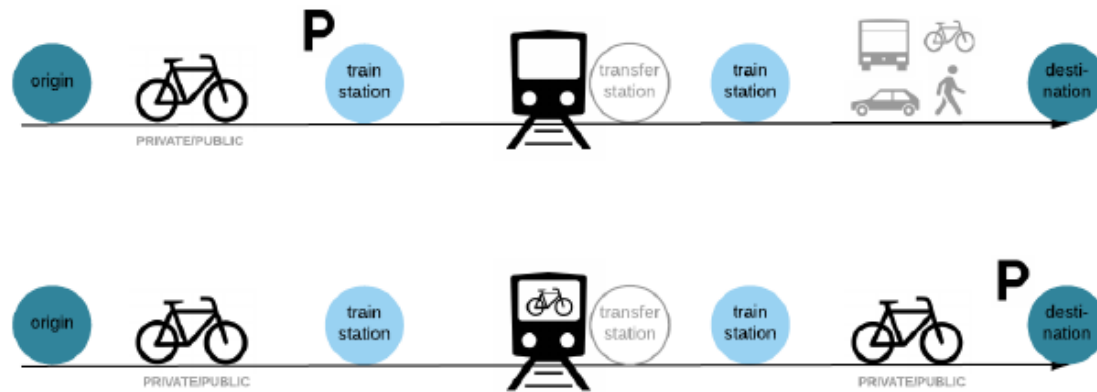


Van Kuijk (2019)



Dutch Minister Van Veldhoven:
“We need more bicycles, public transport and brains”

Bicycle parking conference 2019



Strength of Bicycle and Transit combination

- Improving access and egress
- Improving door to door mobility
- Enhanced Public transport design



CONGESTION



CLIMATE



AIR QUALITY



HEALTH



SAFETY

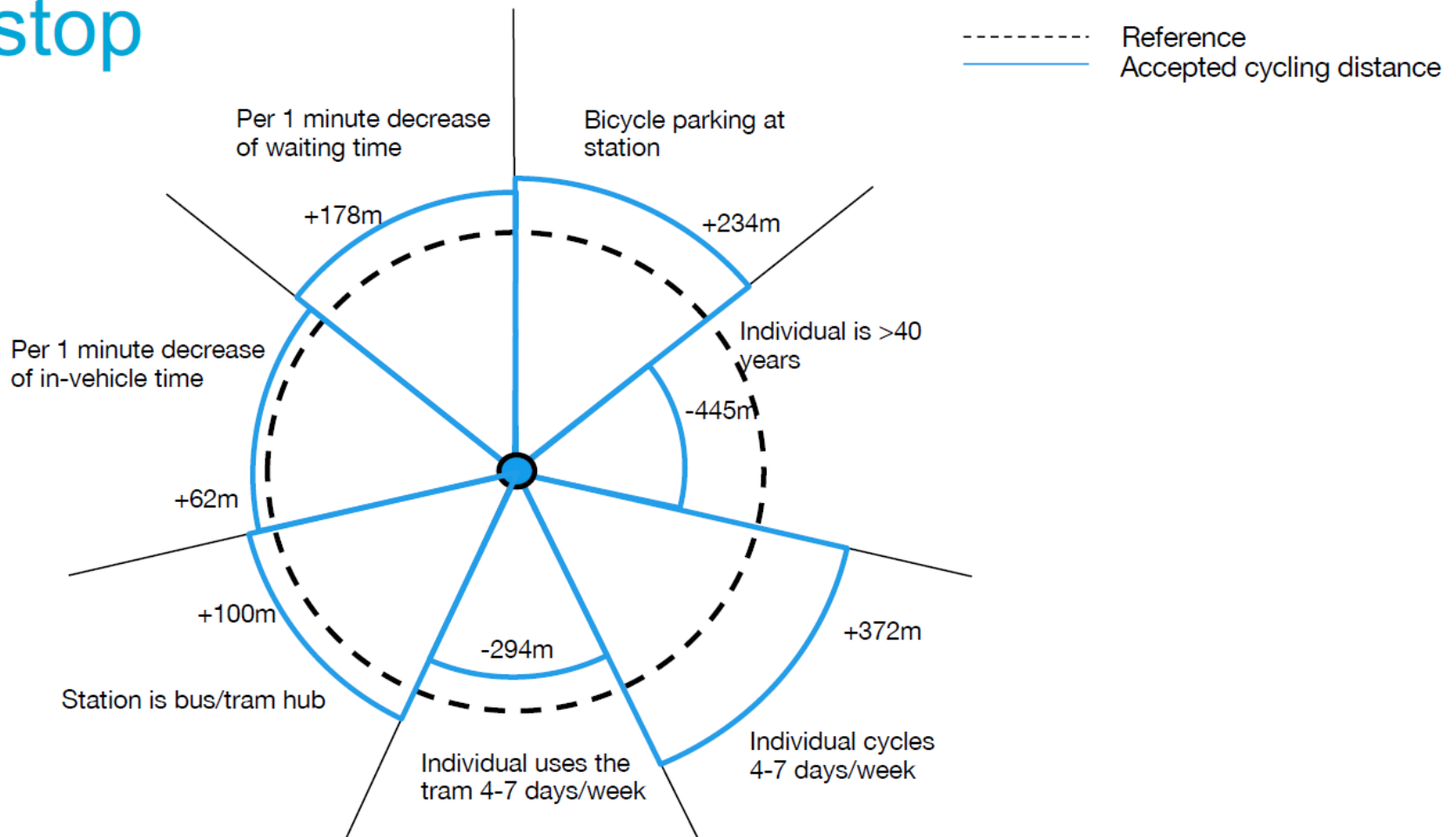


SUBSIDIES

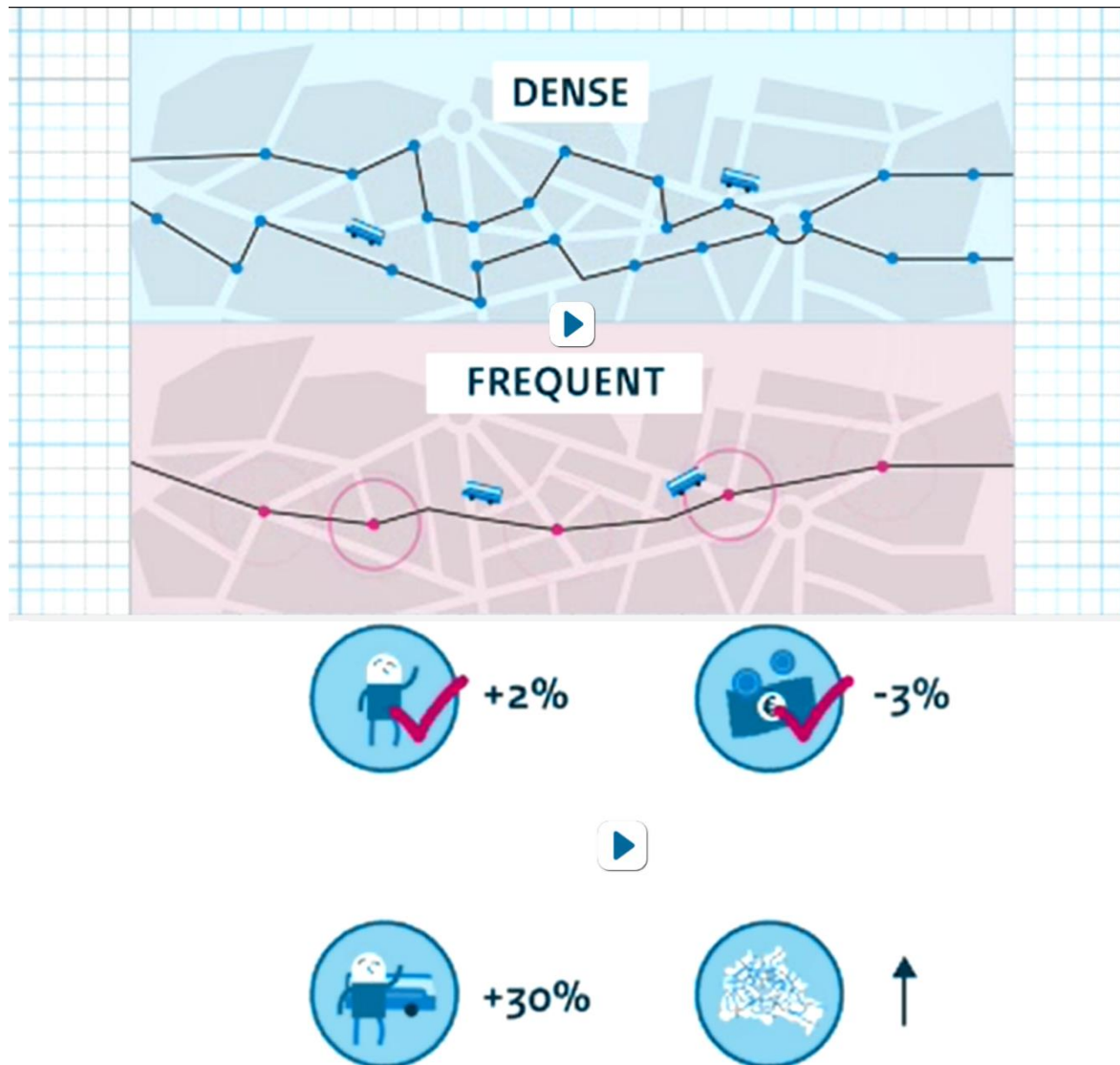


Van Oort et al. (2017)

Willingness to cycle to a further tram stop



Ton et al. (2020)



<https://english.kimnet.nl/publications/videos/2016/06/09/the-choice-of-the-passenger>

Shared bikes: History



1965



Wittefietsenplan,
Amsterdam

1998



First citywide
introduction, France

2014



Ofo founded,
China

2018



Mobike pilot
Delft, Netherlands

1991



experiment with
magnetic card
Denmark

2003



OVfiets founded
(PT-bike), Netherlands

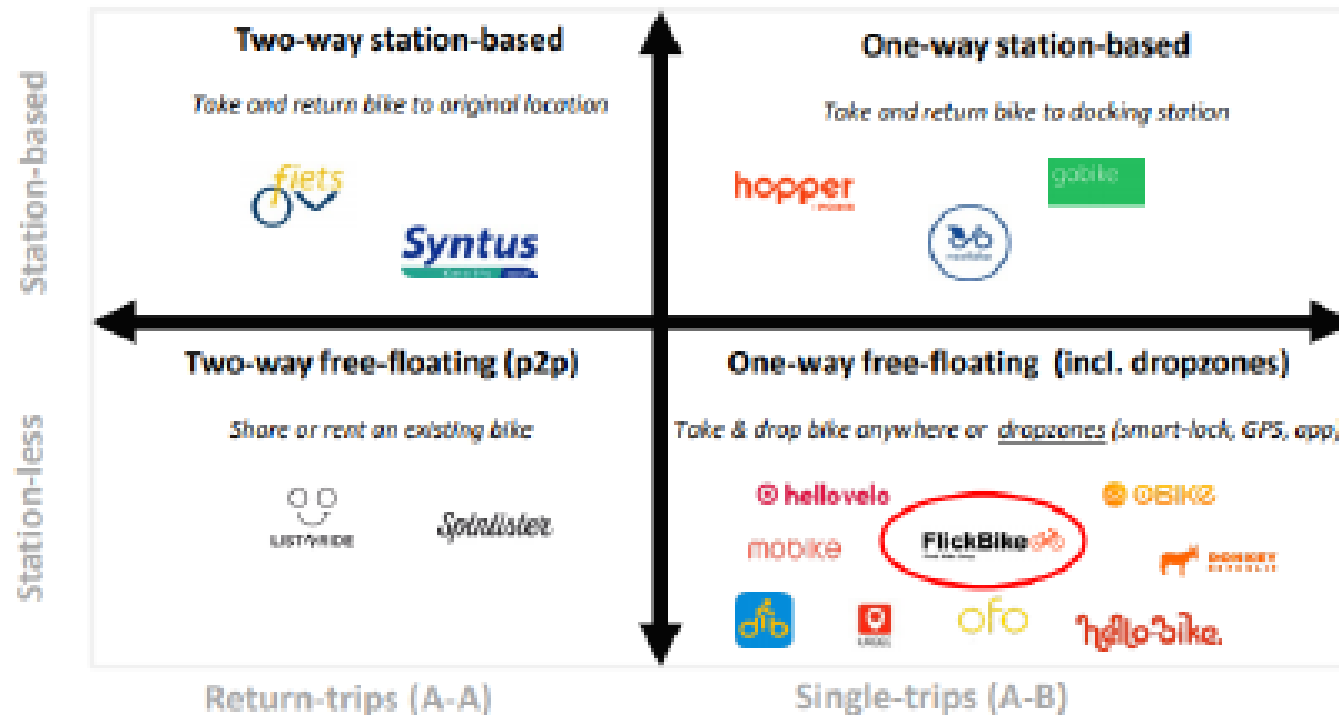
2016



MoBiKe founded,
China

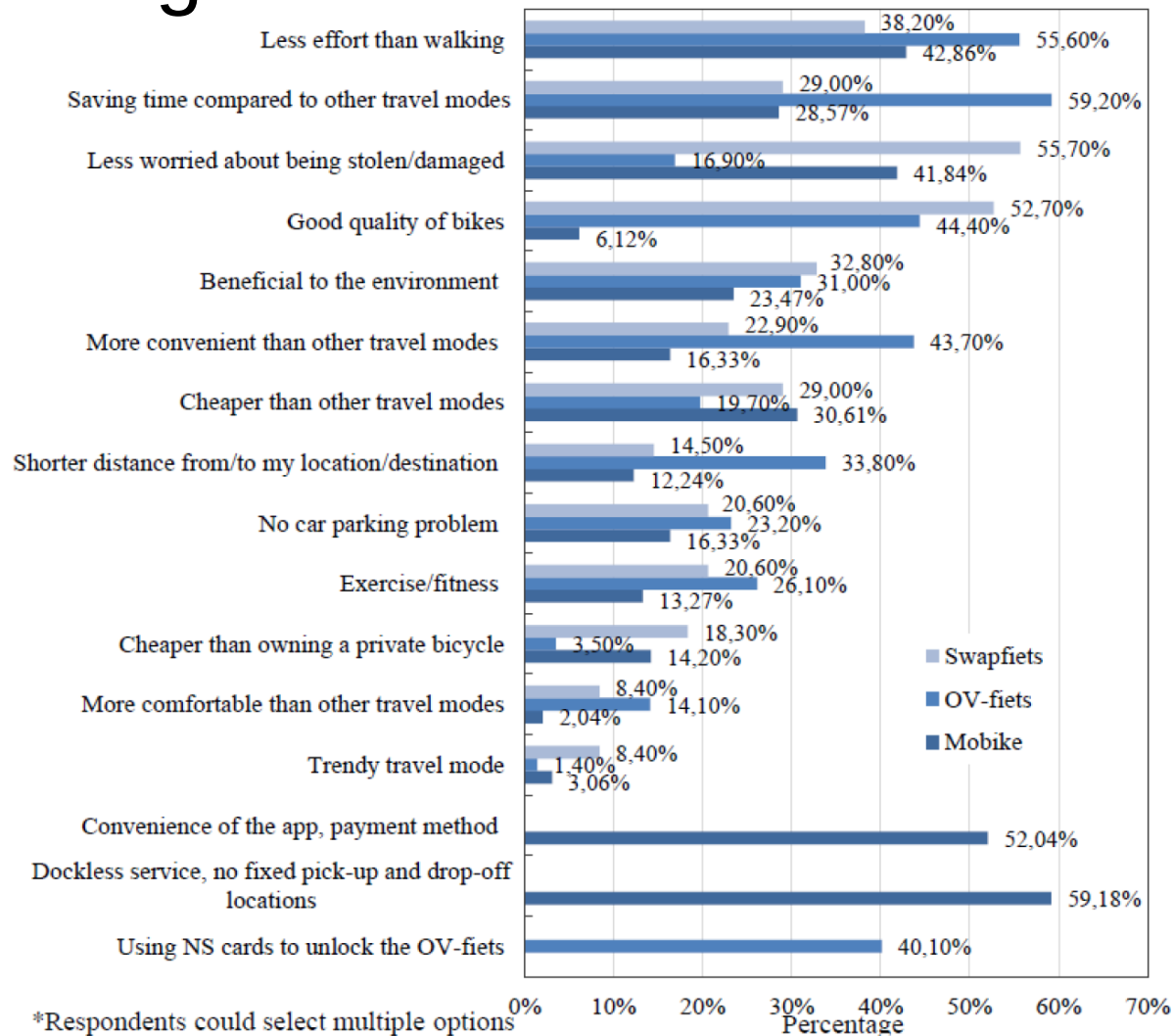
Boor et al. (2019)

Shared bikes: Types



Van Waes (2018)

Why using?



Ma et al. (2020)

Balance supply and demand

	Main city	Country	Brand name	Operator	Number of stations	Number of bicycles	Trips/day/bike estimate
1	Barcelona	Spain	Bicing	BSM	420	4852	8.4
2	Ljubljana	Slovenia	Bicike (LJ)	JCDecaux	33	252	8.2
3	Dublin	Ireland	dublinbikes	JCDecaux	49	584	8.0
4	Turin	Italy	[TO]BIKE	Comunicare	138	495	7.9
5	Zaragoza	Spain	Bizi	Clear Channel	130	1211	7.3
6	Valencia	Spain	Valenbisi	JCDecaux	278	2403	6.6
70	San Antonio	US	San Antonio B-cycle	B-cycle	32	388	0.42
71	Brisbane	Australia	CityCycle	JCDecaux	151	1858	0.32
72	Bari	Italy	BariinBici	Comunicare	32	44	0.29
73	Fort Worth	US	Fort Worth B-cycle	FW B-cycle	34	267	0.28
74	Vannes	France	Vélocéa	Veolia Transdev	25	153	0.28
75	Perpignan	France	BIP!	Clear Channel	15	123	0.22

Boor et al. (2019)

Modal shift?

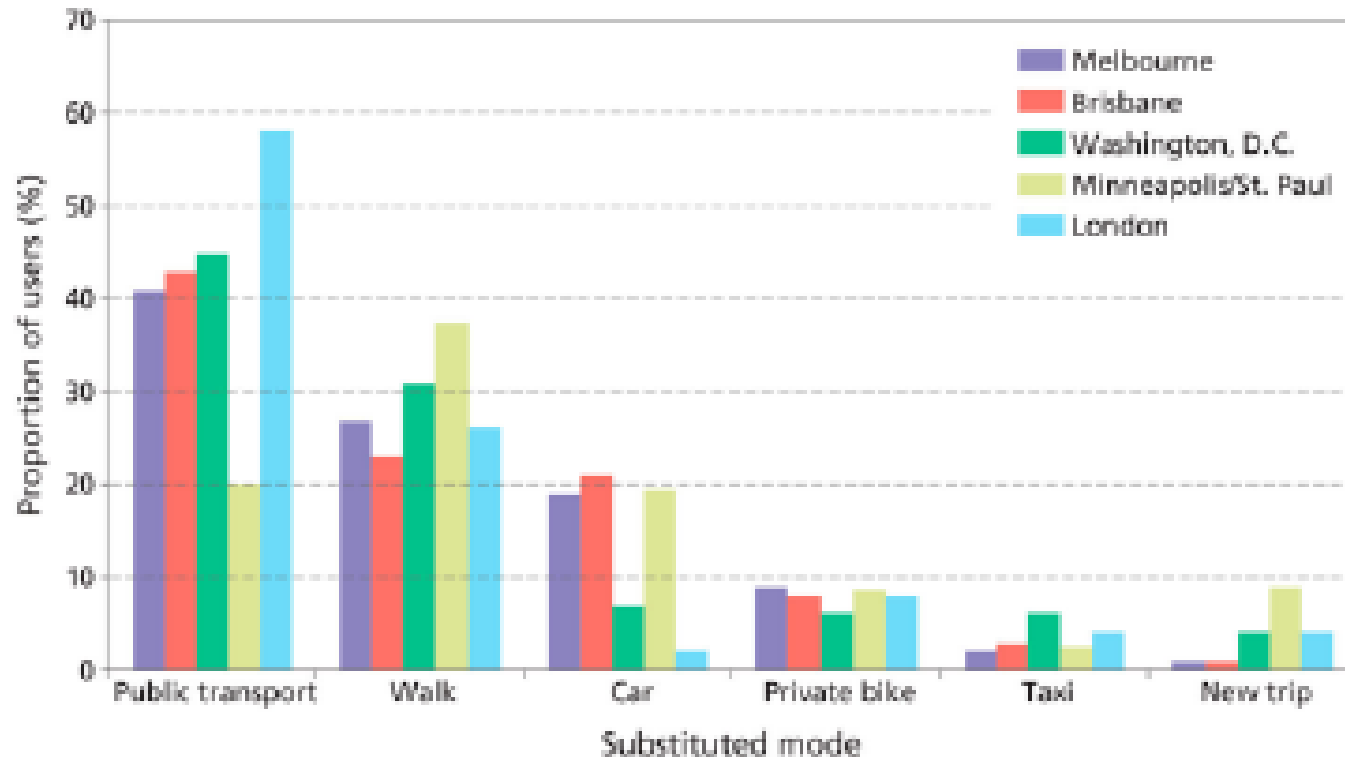
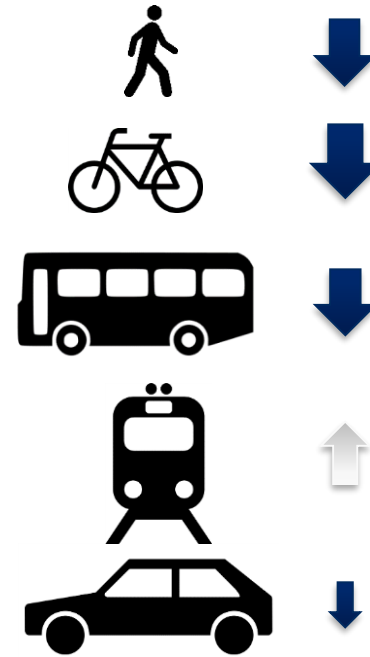


Figure 3.6: Shared bicycle replacements; image from: Fishman (2016)

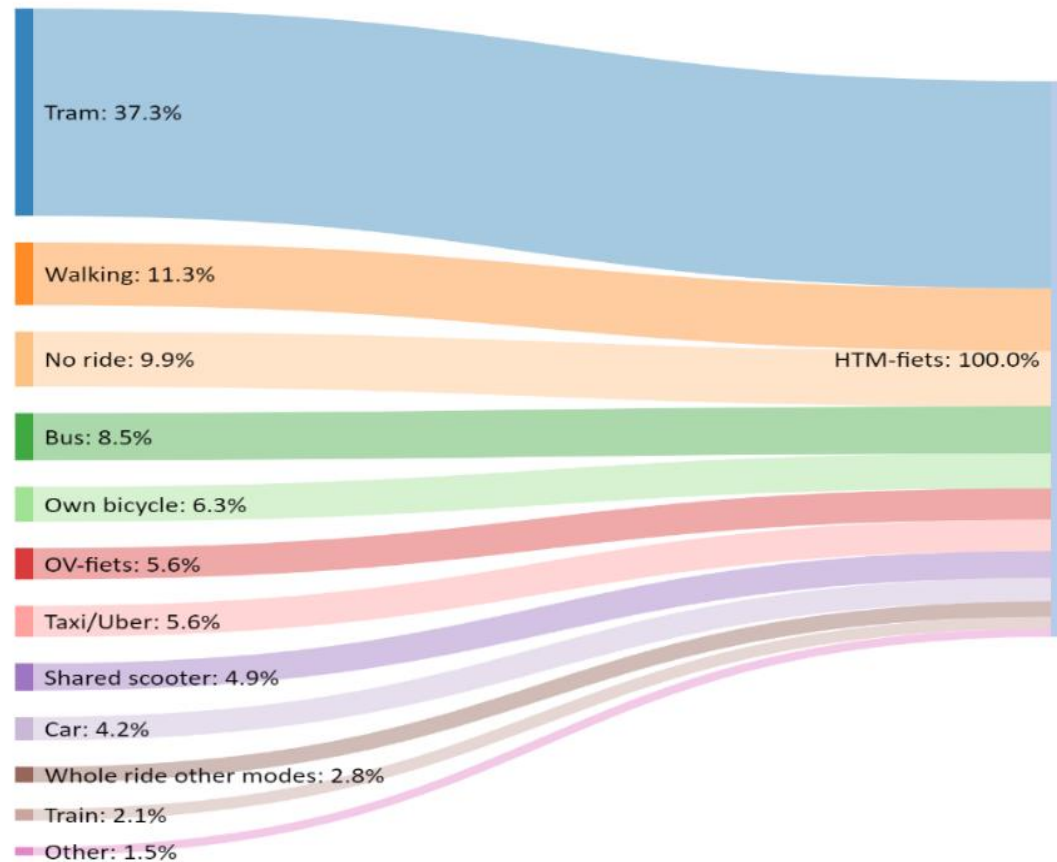
Fishman (2016)

Mobike, Delft



Ma et al. (2020)

HTM Shared bicycle, The Hague



Van Marsbergen et al.
(2020)



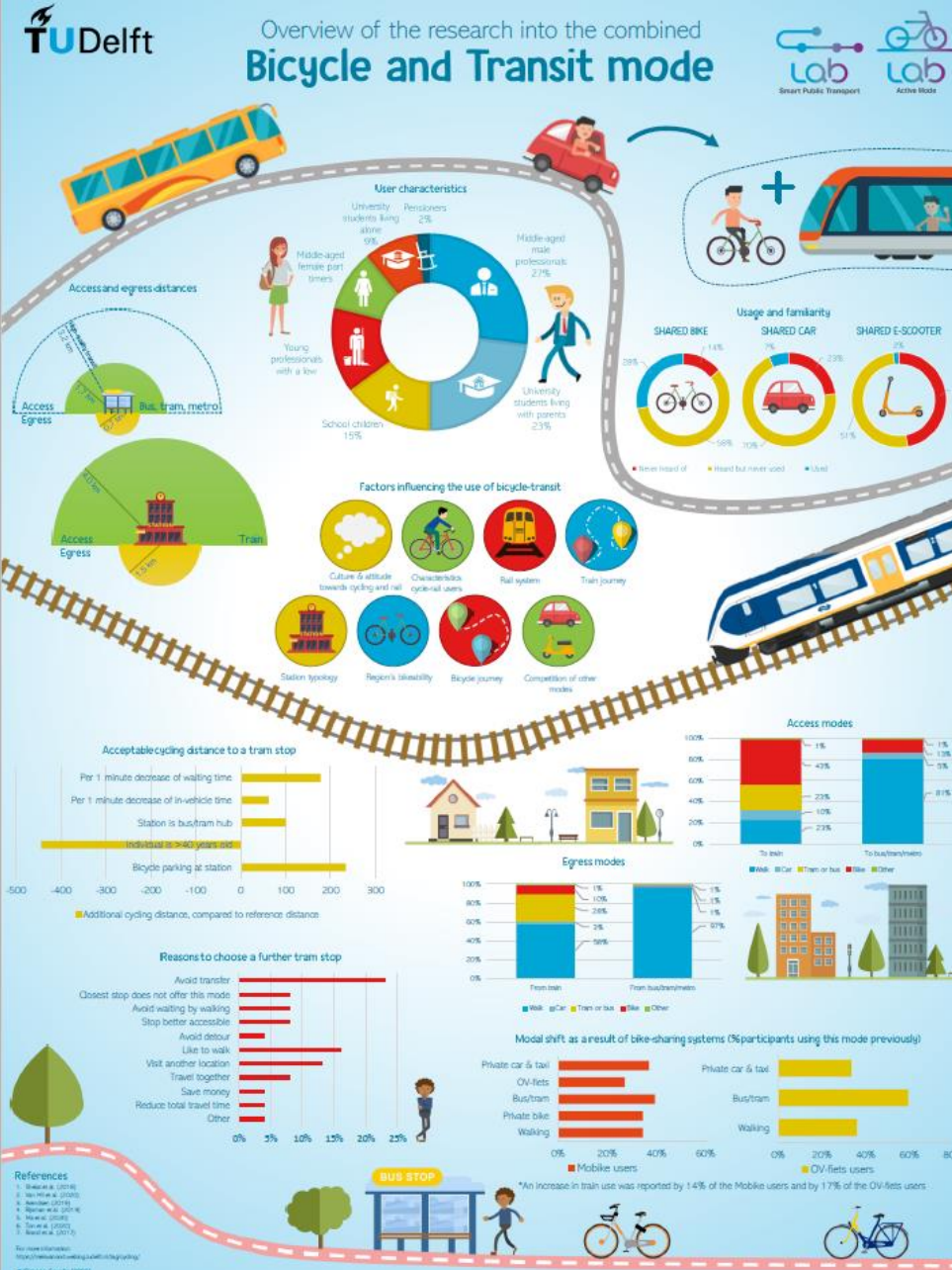
Take aways

- Low-tech opportunities to stimulate green and healthy mobility
- Shared bicycles can complement public transport
 - In a trip
 - In a travel portfolio
- Public transport network efficiency could be increased by focusing on the combined mode
- New research domain

Research agenda

- Supporting design and policy by analytics and modelling
- Bicycle+transit: first and last mile
- Shared bicycles: competition or complement to public transport

<https://nielsvanoort.weblog.tudelft.nl/overview-bicycletransit-research/>



Learning more

Podcast

<https://nielsvanoort.weblog.tudelft.nl/podcast-bicycletransit-mode/>

Factsheet

<https://nielsvanoort.weblog.tudelft.nl/overview-bicycletransit-research/>

Papers:

van Mil, J.F.P., Leferink, T.S., Annema, J.A. *et al.* Insights into factors affecting the combined bicycle-transit mode. *Public Transp* (2020).

Shelat, S., R. Huisman, N. van Oort (2018), [Analysing the trip and user characteristics of the combined bicycle and transit mode](#), *Research in Transportation Economics*, Vol. 69, pp. 68-76

Ma, X., Yuan, Y., Van Oort, N., Hoogendoorn, S., (2020). Bike-sharing Systems: Impact on Modal Shift: A Case Study in Delft, the Netherlands. *J. Clean. Prod.* 120846.

Van Oort, N., R.A.J. vd Bijl, F.C.A. Verhoof (2017), The wider benefits of high quality public transport for cities, European Transport Conference, Barcelona.

More information & contact



Dr.ir. Niels van Oort
Smart Public Transport Lab (CiTG)
n.vanoort@tudelft.nl
smartptlab.tudelft.nl/
<http://nielsvanoort.weblog.tudelft.nl/>

@Niels_van_Oort
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