

Cycling in Urban Transport and Development

Presentations by:

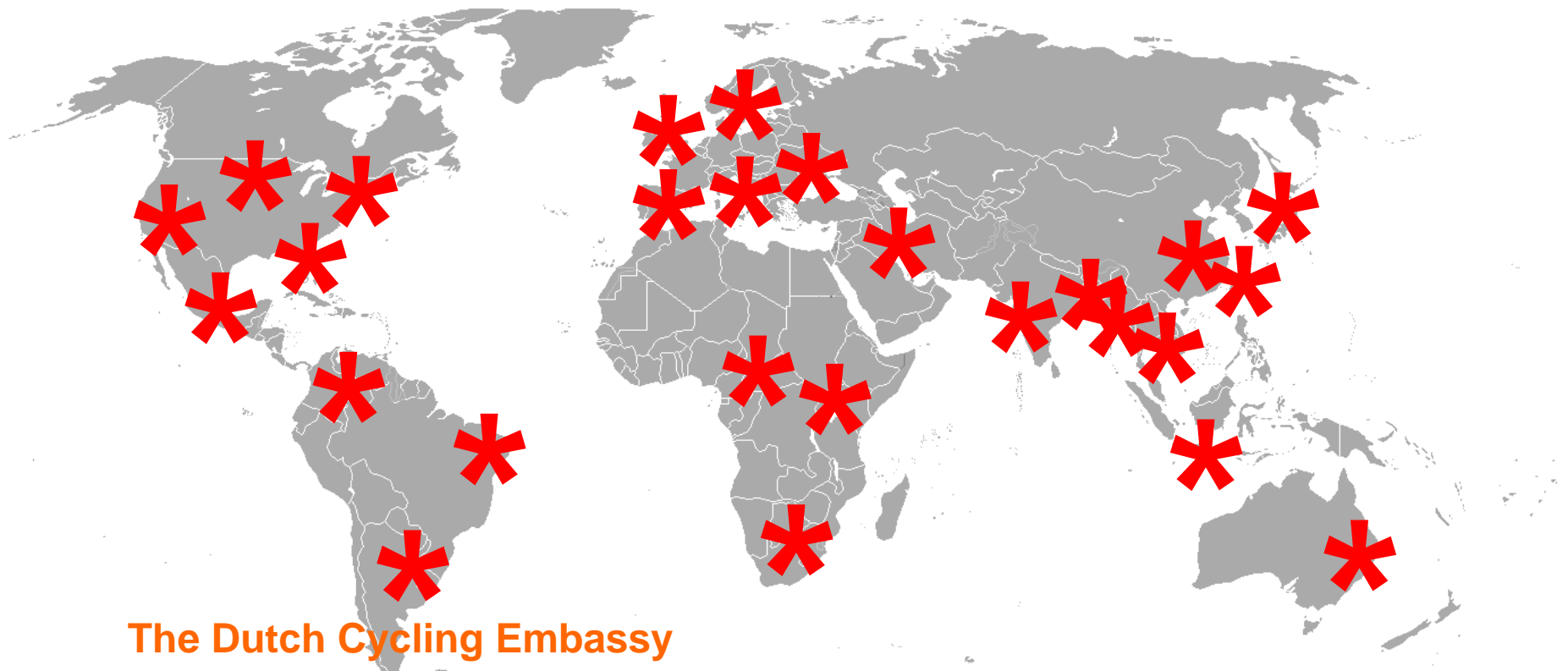
- > Rob van der Bijl
- > Tonny Bosch & Vincent Chuang
- > Erik Tetteroo

Taipei, VELO-CITY GLOBAL, February 27, 2016



Introduction to *Smart Moving Cities*

Dr. Rob A.J. Van der Bijl – DCE & GoDutchCycling



The Dutch Cycling Embassy

- > Ample Dutch knowledge & experience
- > Knowledge of worldwide complexity & success stories

Rob van der Bijl

- > Urban Planner
- > Cycling expert

- > www.lightrail.nl
- > www.favas.net

- > GoDutchCycling
- > www.lightrail.nl/bicycles

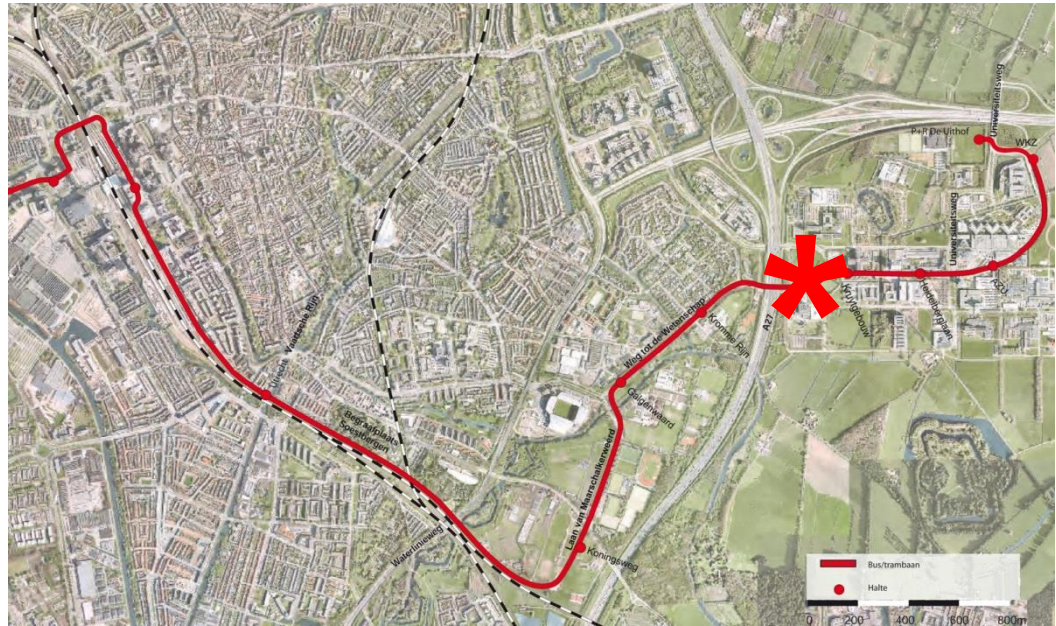
- > Cycling my *Last Mile!!*

- > Dutch Rail Sector
Train-Cycling Pilots



Introduction by example

- > Utrecht NL
- > De Uithof
- > Public transport
- > Urban planning
- > Light rail will boost ...
- > ... urban development
- > ...
- > & cycling!



Two topics



Transition towards multi-modality

by Tonny Bosch & Vincent Chuang



Urban planning for bicycle inclusive mobility

by Erik Tetteroo



Smart moving Taiwan

Velo-city 2016 Taipei

Tonny Bosch & Vincent Chuang



Smart Moving Taiwan

Transition towards multi modality

- Free choice of travelling
- Healthy
- Efficient
- Prosperous
- Sustainable
etc.



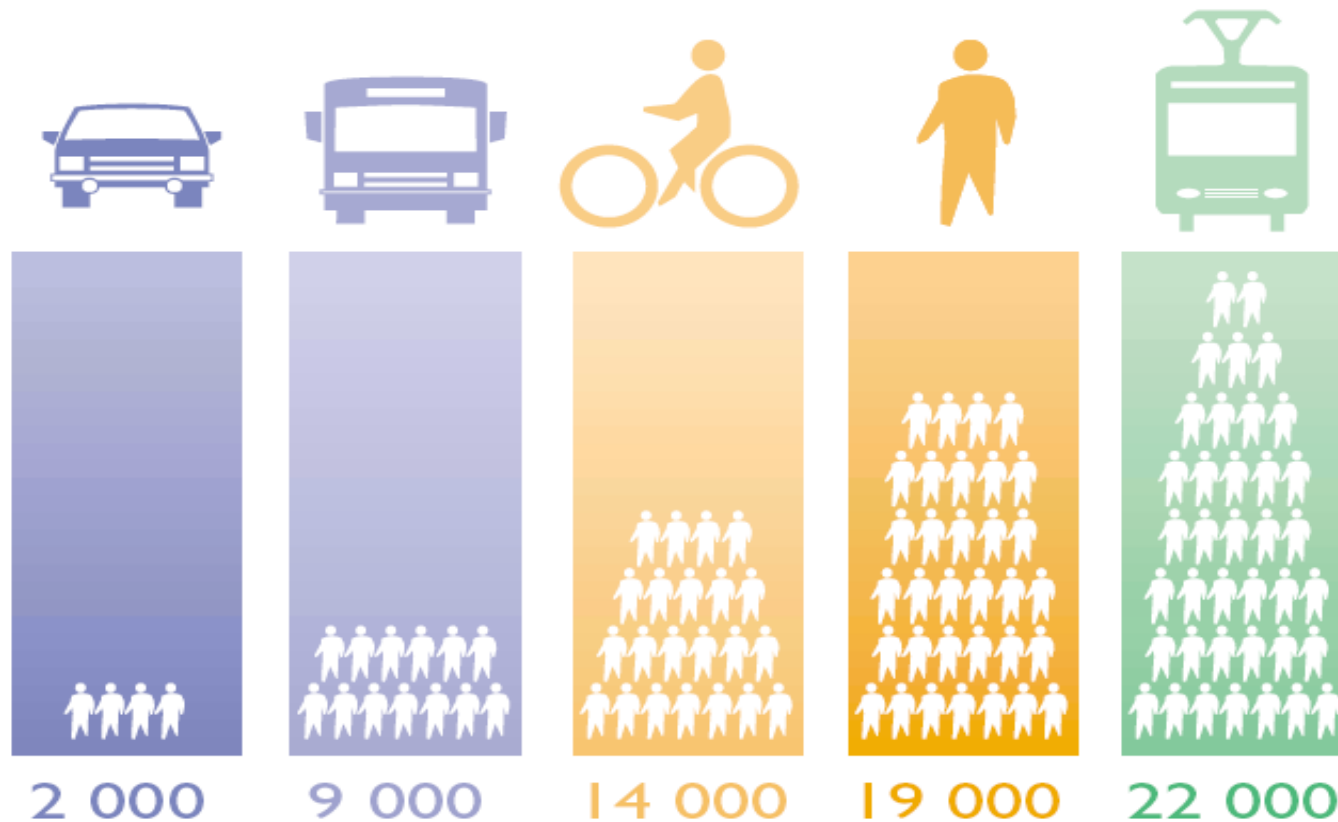
Holland and cycling: synonyms for years

- > Cycling
- > Planning
- > Social responsibility
- > Collective responsibility



- > Multi modality

It's about organizing the limited space

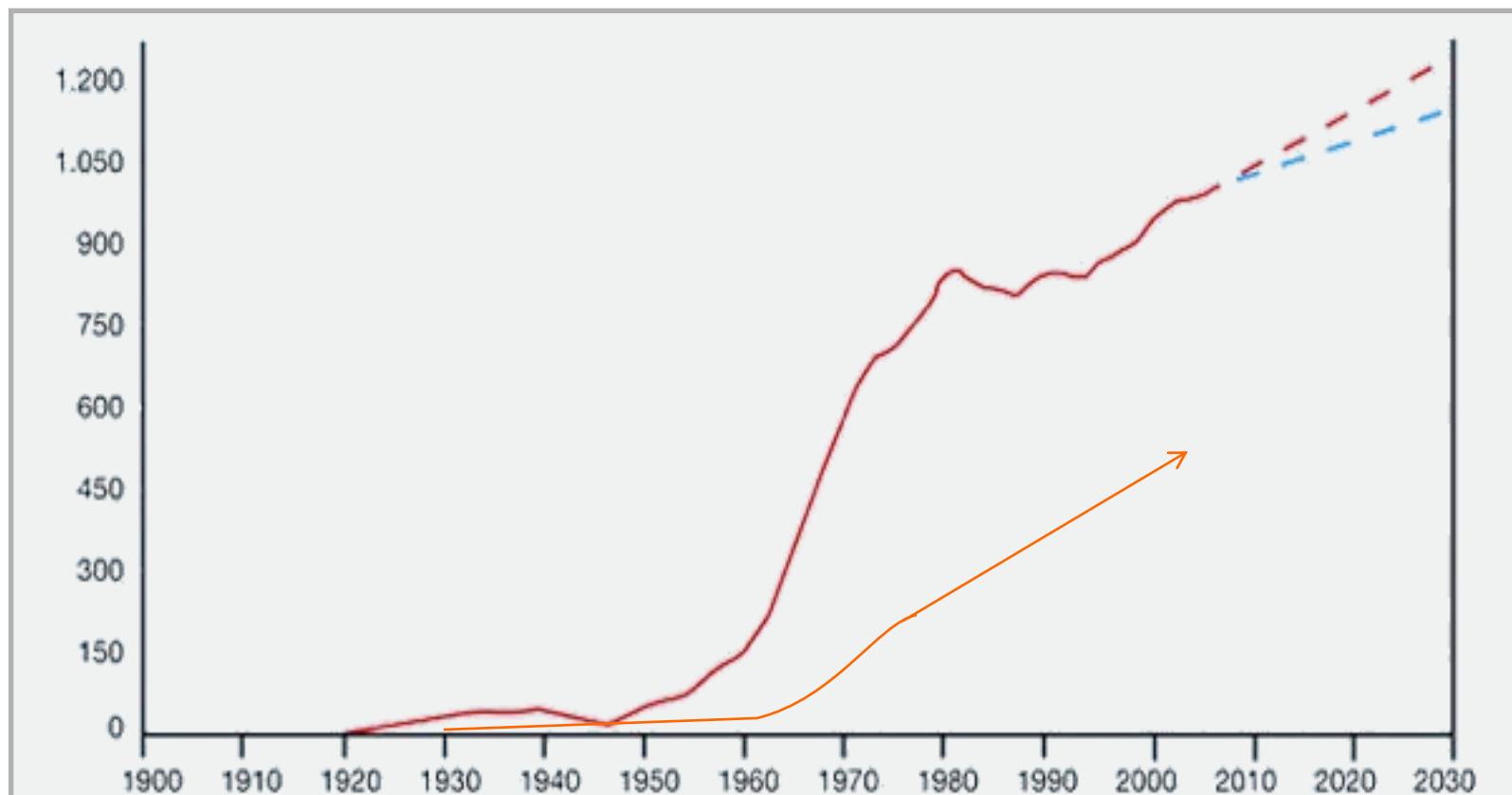


Modal split: every city is different!

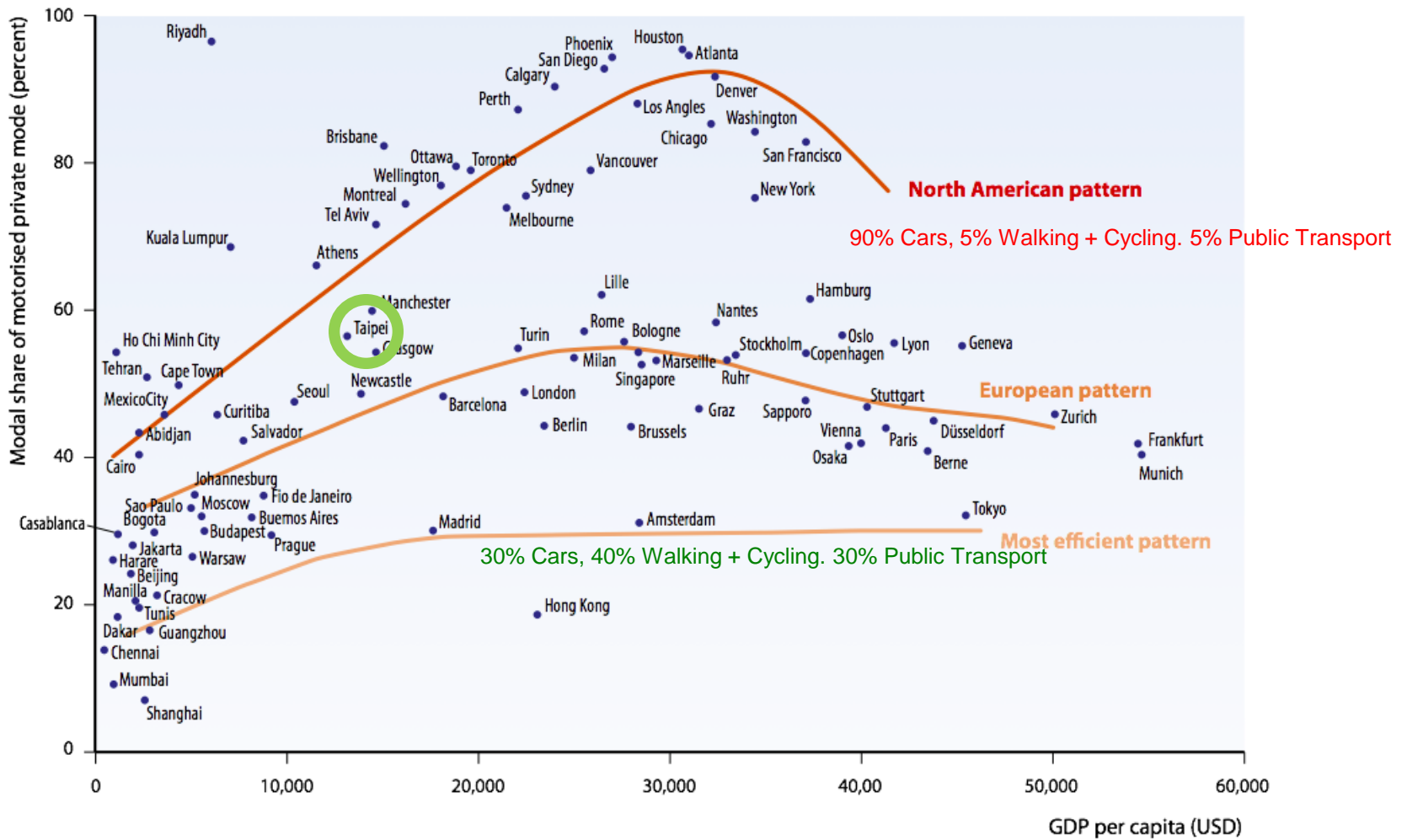
City	Car	Walking/ Cycling	Public transport	Challenge is to:
Amsterdam Netherlands	30%	40%	30%	Keep this balance
Kampala Uganda	10%	60%	30%	Not forgetting the needs of the 60%
Manhattan	10%	30%	60%	Use the potential of cycling
Bogotá Colombia	20%	30%	50%	Invest in walking/ cycling and organize Public Transport
Austin Texas , USA	90%	< 5%	< 5%	Invest in walking/ cycling/ public transport
Taiwan	72%	12%	16%	Invest in walking/ cycling/ public transport
Taichung Taiwan	81%	9%	10%	Invest in walking/ cycling/ public transport
Quito Ecuador	30%	10%	60%	Invest in walking / cycling / public transport

Car ownership

Red line = Netherlands, orange line is Taiwan



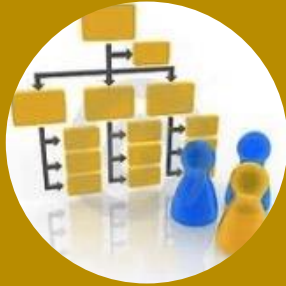
What city do you want?



What city do you want?

If you fail to plan, you plan to fail!

The planning mission for cities



ORGANIZATION

- Cooperation: Civil Society + Government + Market



HARDWARE

- Infrastructure



SOFTWARE

- Culture
- Education
- Capacity Building



Culture and education

Netherlands – all cities



Mama Agatha: Freedom of riding a bicycle

Taiwan



Early stage of cycling manner education

Quality of cycling infrastructure

Netherlands – all cities



When the bike has a better status than a car

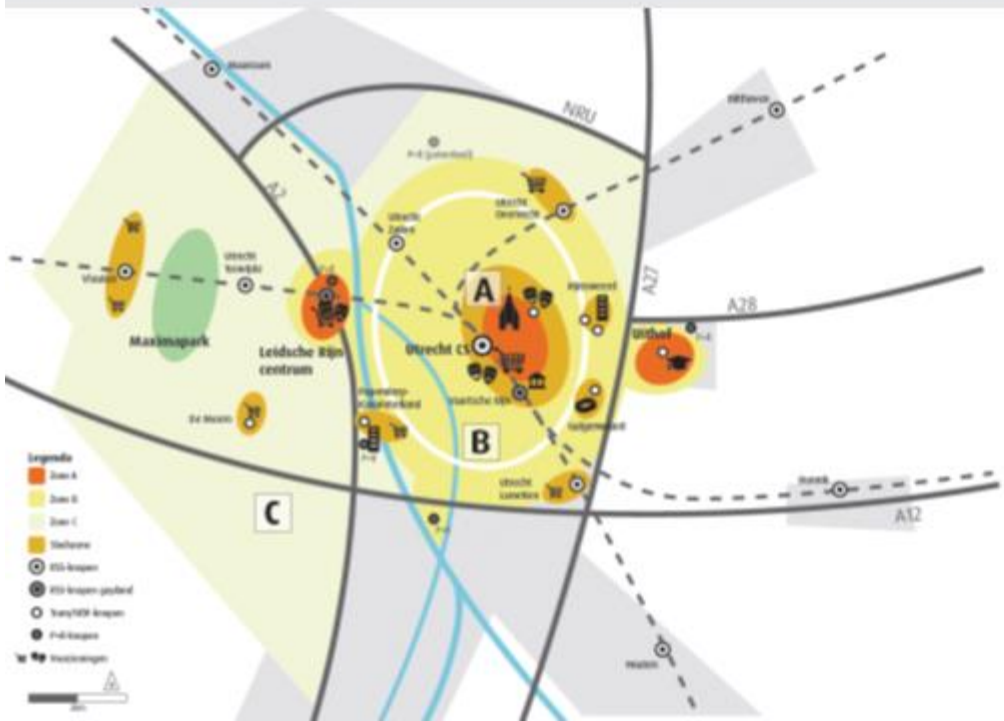
Taiwan



It's not easy to attract people cycling when you don't have good infrastructure

Infrastructure

Netherlands – all cities



Planning for the network and for areas with quality of urban space

Taiwan



Car-oriented network

Categorization Taiwan

A Urban area
with sidewalk



B Urban area
w/out sidewalk



C Non-Urban
area



Categorization Netherlands



The planning mission for cities



ORGANIZATION

- Cooperation: Civil Society + Government + Market



HARDWARE

- Infrastructure
- Vehicles



SOFTWARE

- Culture
- Education
- Capacity Building





Cycling = HOD

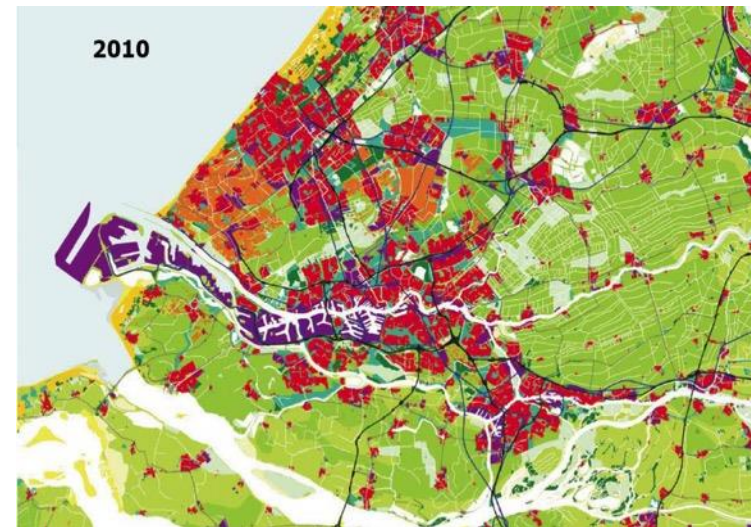
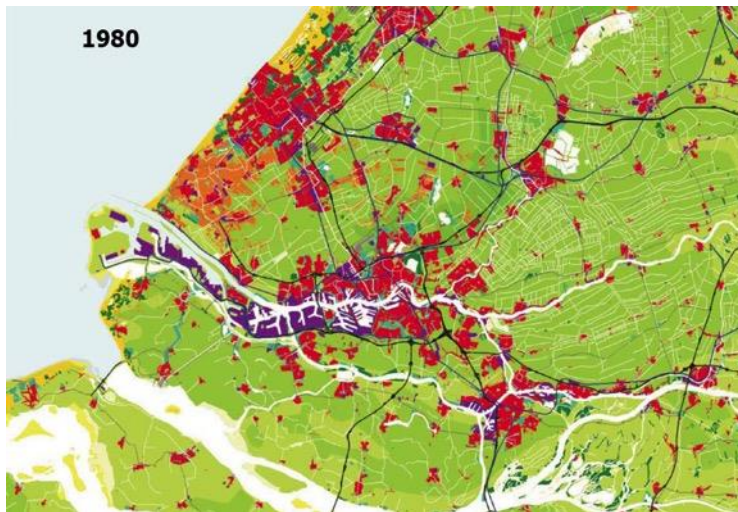
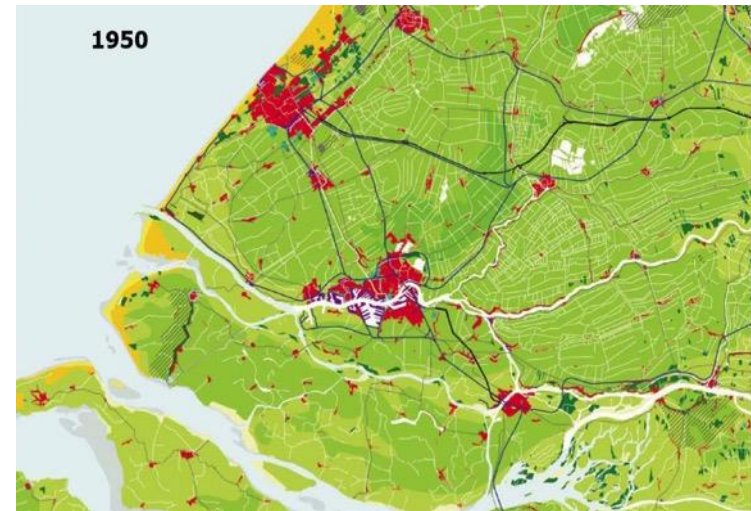
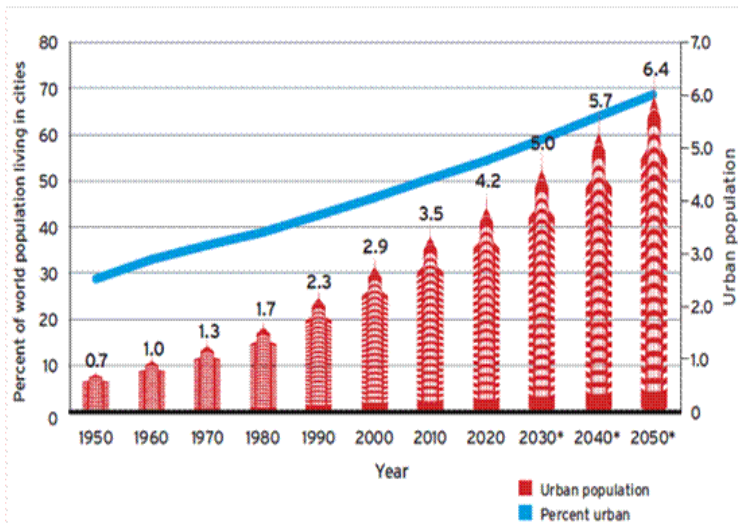
Urban planning for bicycle-inclusive mobility

Erik Tetteroo APPM

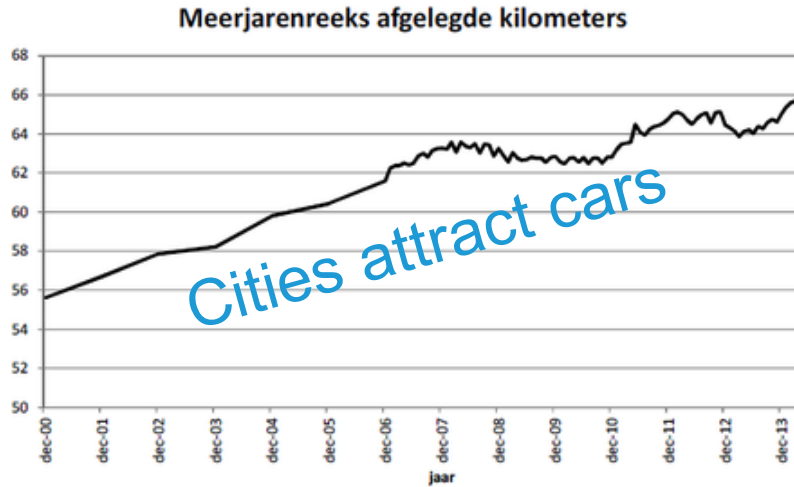
a bike for every day, every opportunity



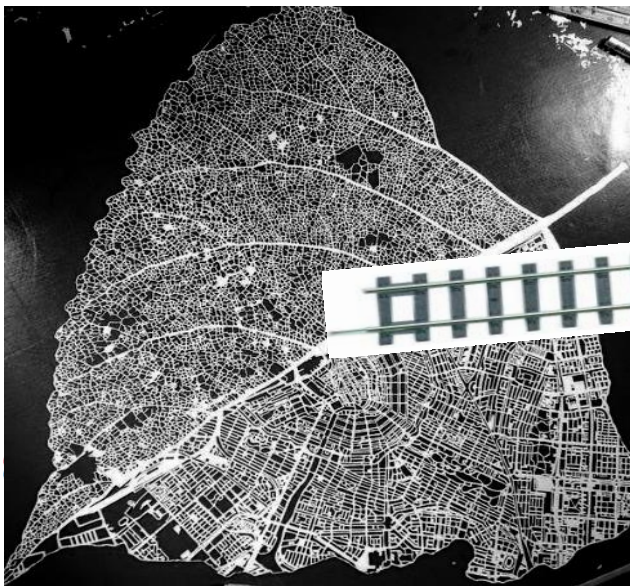
Ongoing urbanisation



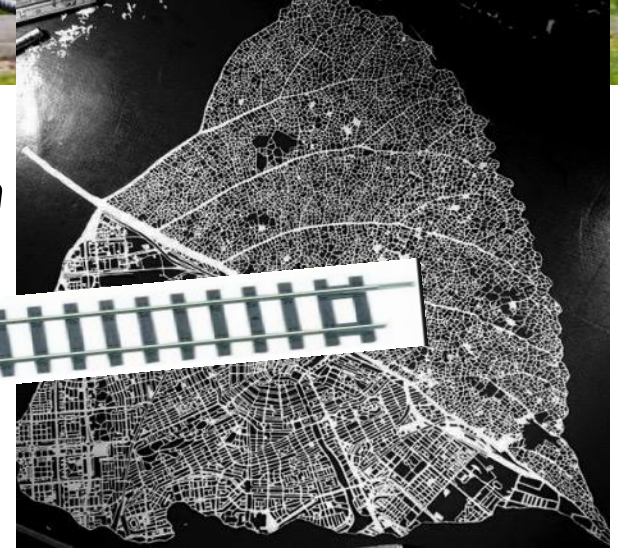
Accessibility? Liveability? Quality of Life?



Bicycle & train, a happy marriage?



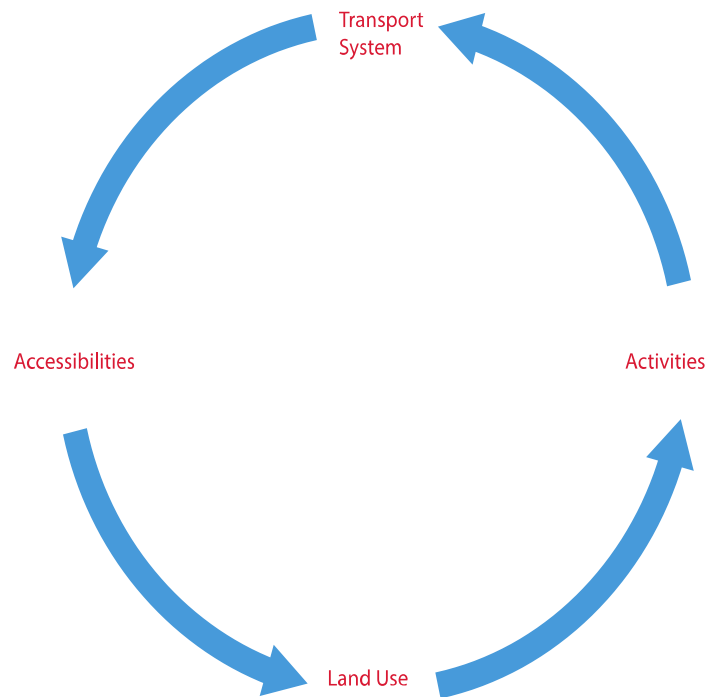
Distance range
Bicycle-train system
10 – 50 km



Reciprocal relationship mobility – urban planning

Land Use Transportation Cycle (Hansen, 1959)

- Modality influences land use



BREVER law (1977)

- Retention of travel time
- Faster means of transport, larger distances





HOD

HOD:
Hybrid cycling-train
Oriented
Development

Catchment areas walking - cycling

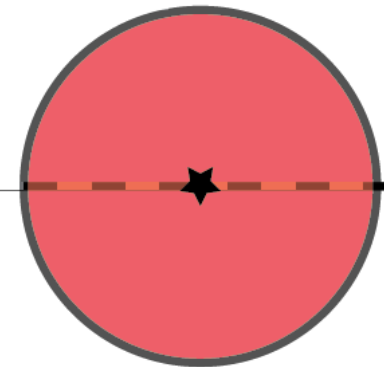
TOD

Walking distance
500 – 700 meter
5 - 10 minutes walking
Catchment area
79 ha.

HOD

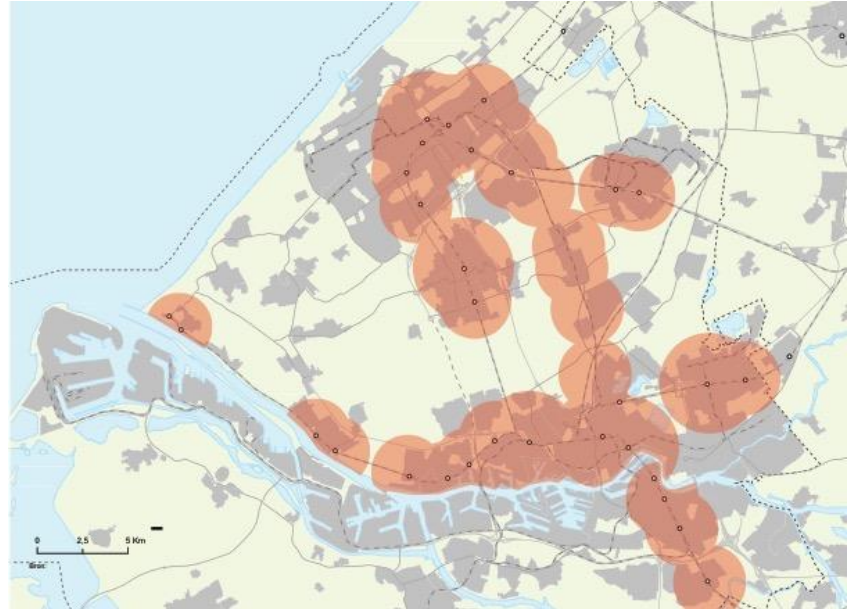
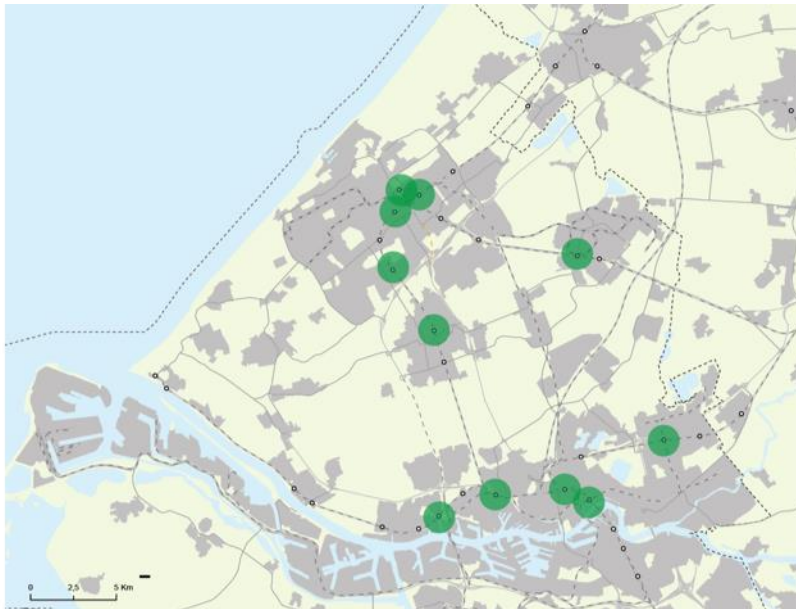
Cycling distance
2 - 3 kilometer
5 -10 minutes cycling
Catchment area
1256 ha.

15 x

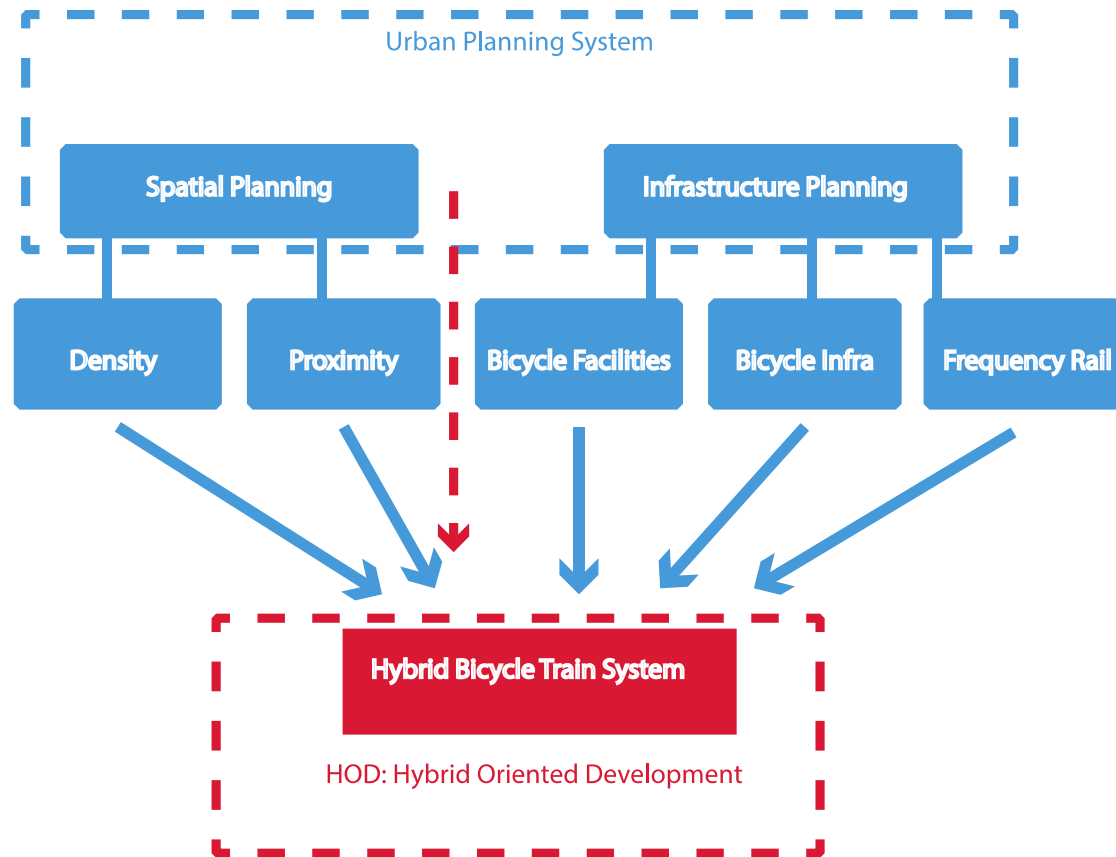


From TOD to HOD?

Hybrid cycling-train Oriented Development



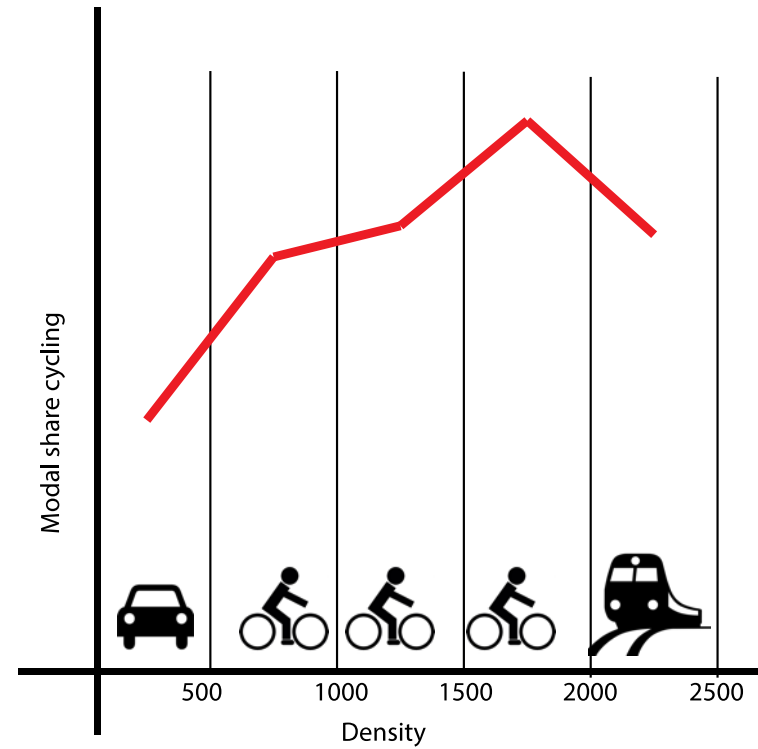
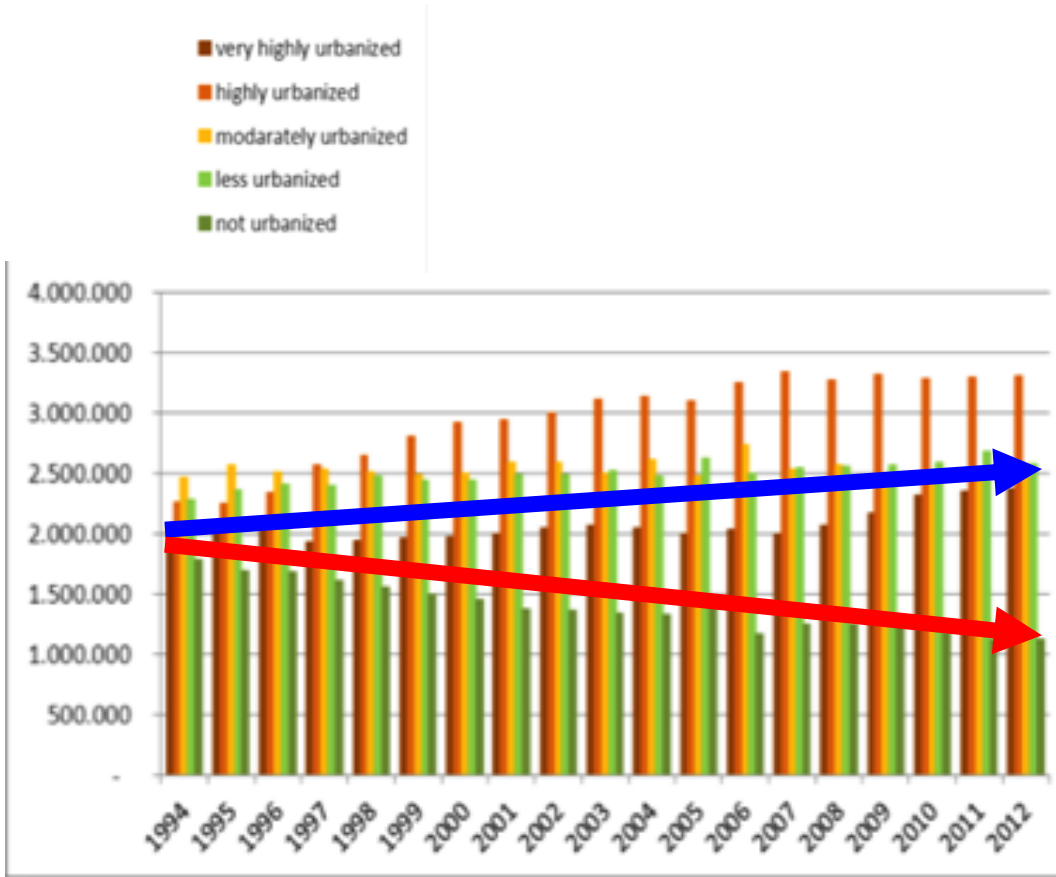
Factors influencing cycling-train system



Infrastructure: design & facilities



Density

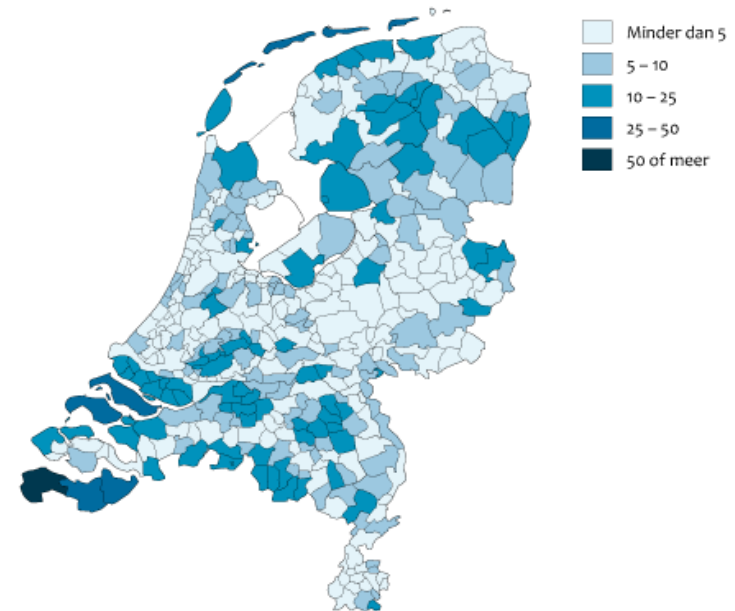


Proximity

80% of all Dutch live within cycling distance of train station



Aantal kilometer tot dichtstbijzijnde station, 2014



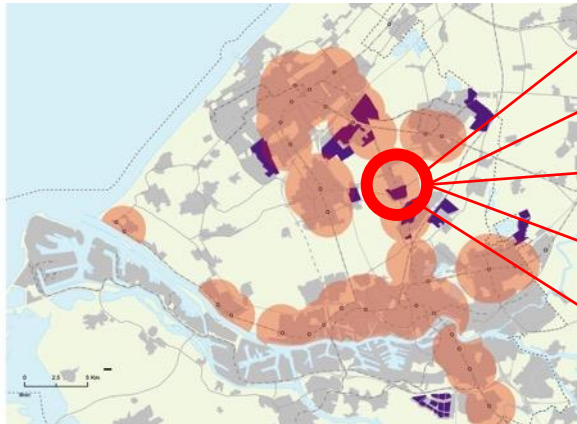
Bron: CBS.

CBS/mrt15
www.clo.nl/nl209206

Tool for sustainable urban planning

the HODspotter

Identify
Check
Evaluate



7.5



7.0



8.5

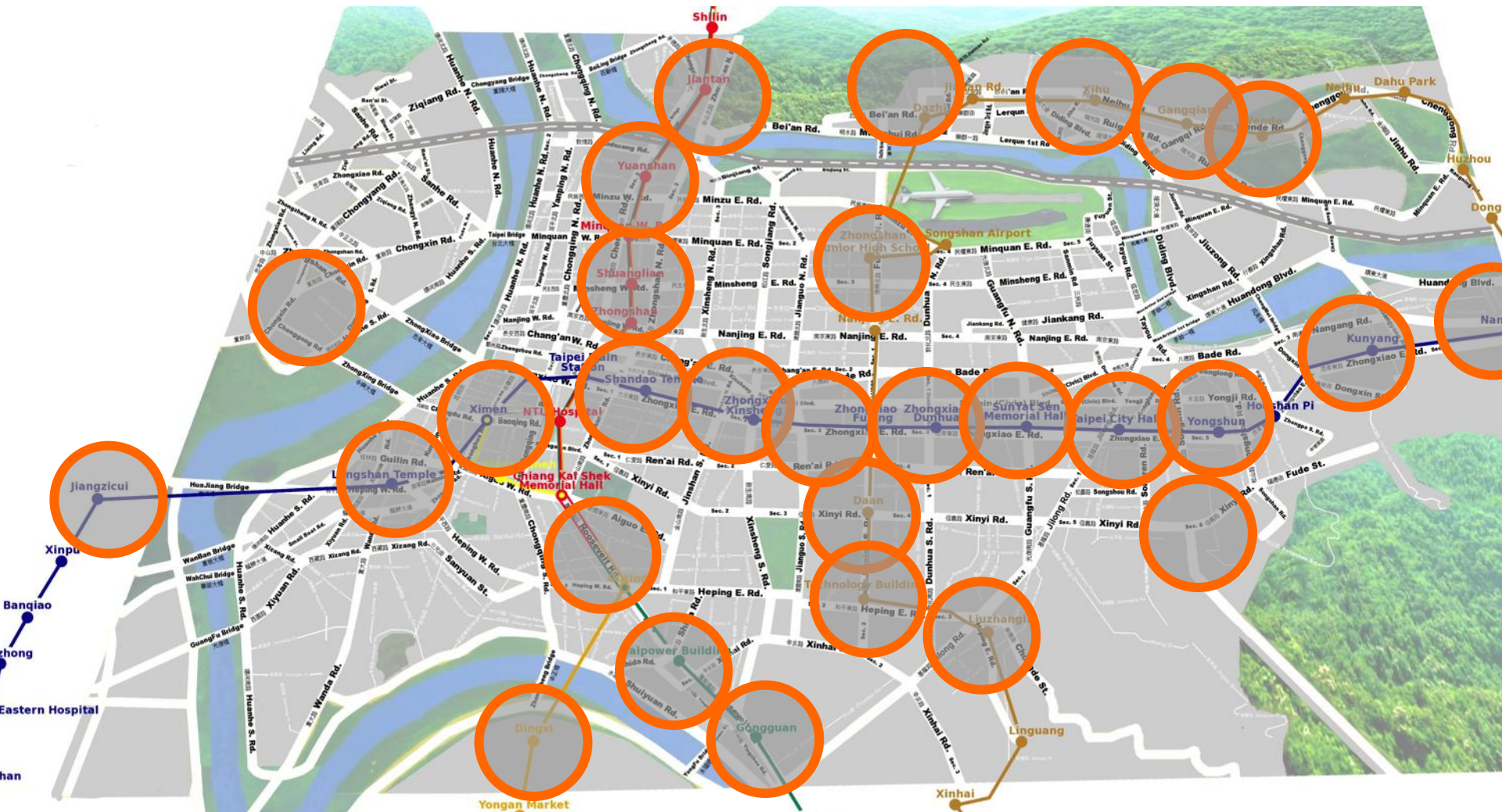


6.0



7.5

HODspots in Taipei is the challenge!



Statements for discussion

- > A *Smart Moving City* is a city with multi-modality in all its veins.
- > The moped will develop towards a 'super e-bike'.
- > Cycling and train are complementary and mutually reinforcing.
- > A *Smart Moving City* requires an integrated approach of transport planning and urban planning.