New mobility for urban developments

How to develop 9.000 houses with a ultra low car use in the city of Utrecht (the Netherlands)?

Bas Govers, Goudappel Coffeng bv

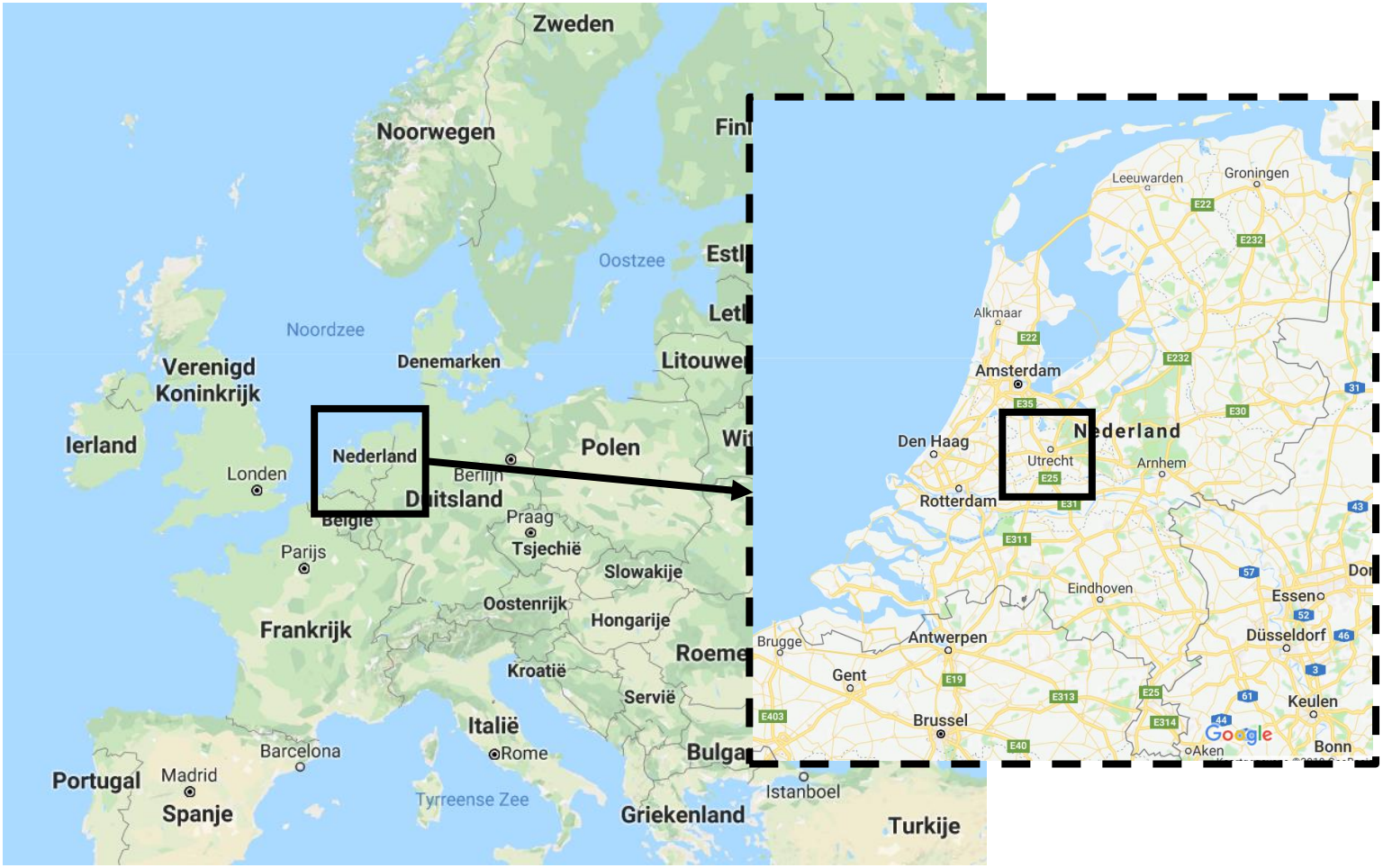
Wouter van Mierlo, city of Utrecht

Gemeente Utrecht

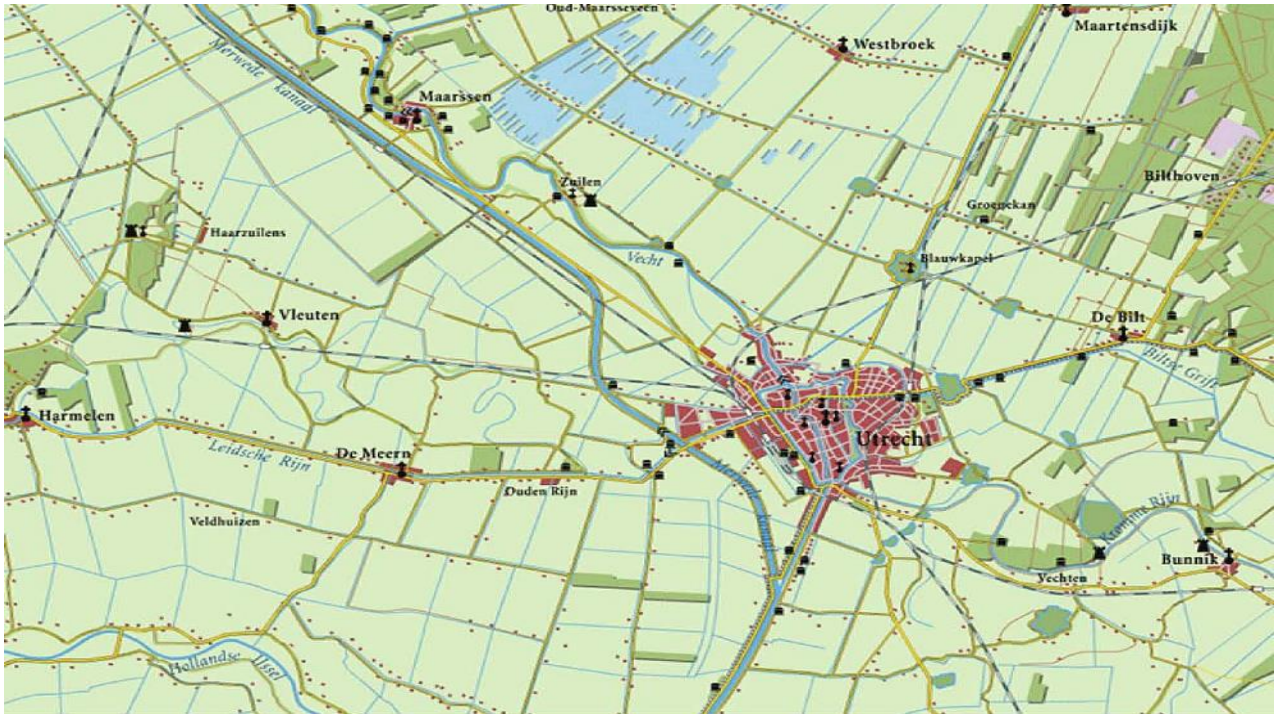
mobility consultants Goudappel Coffeng

EXCELLENT Urban Mobility Experts CITIES

The city of Utrecht



Development 1920 - 2000



1920

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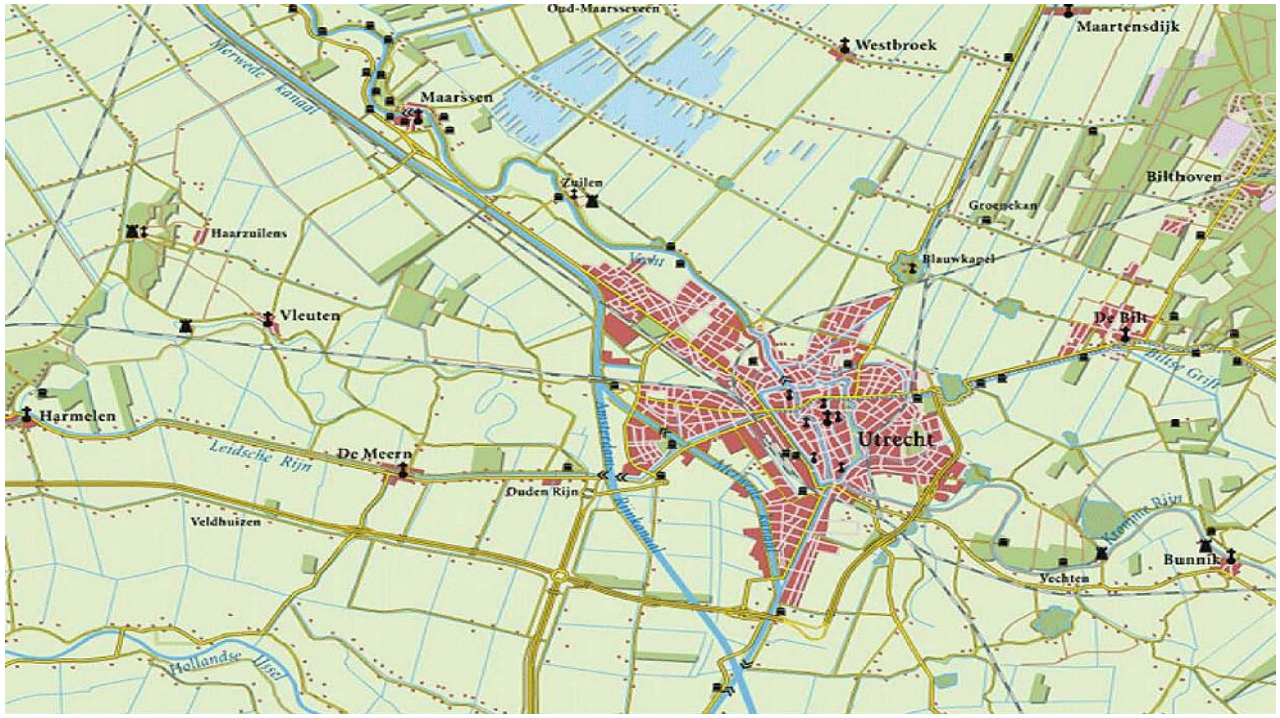
Development 1920 - 2000



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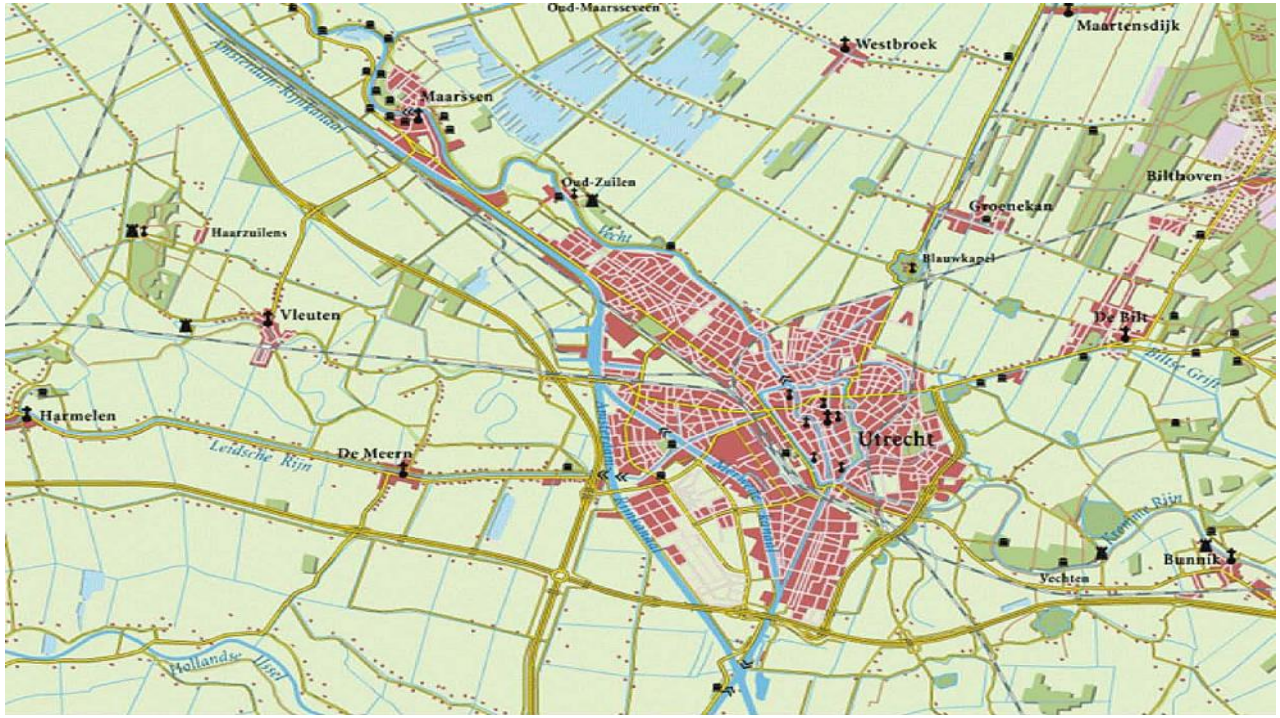

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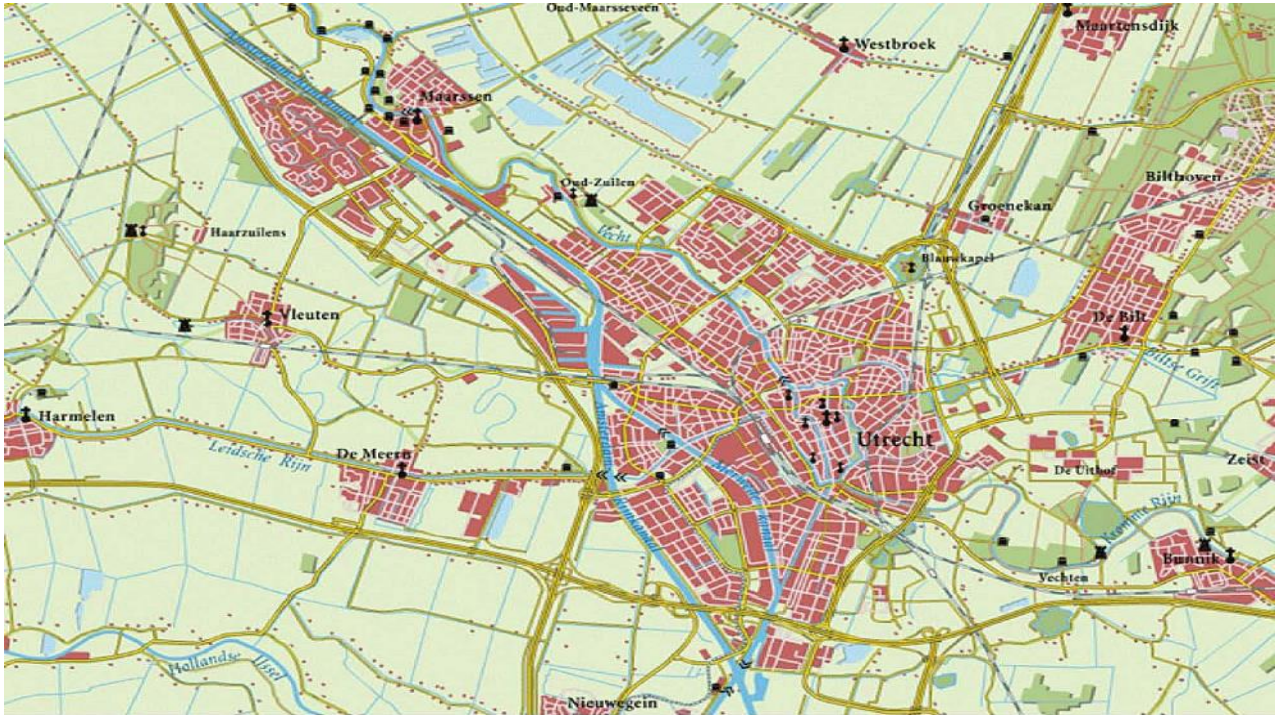

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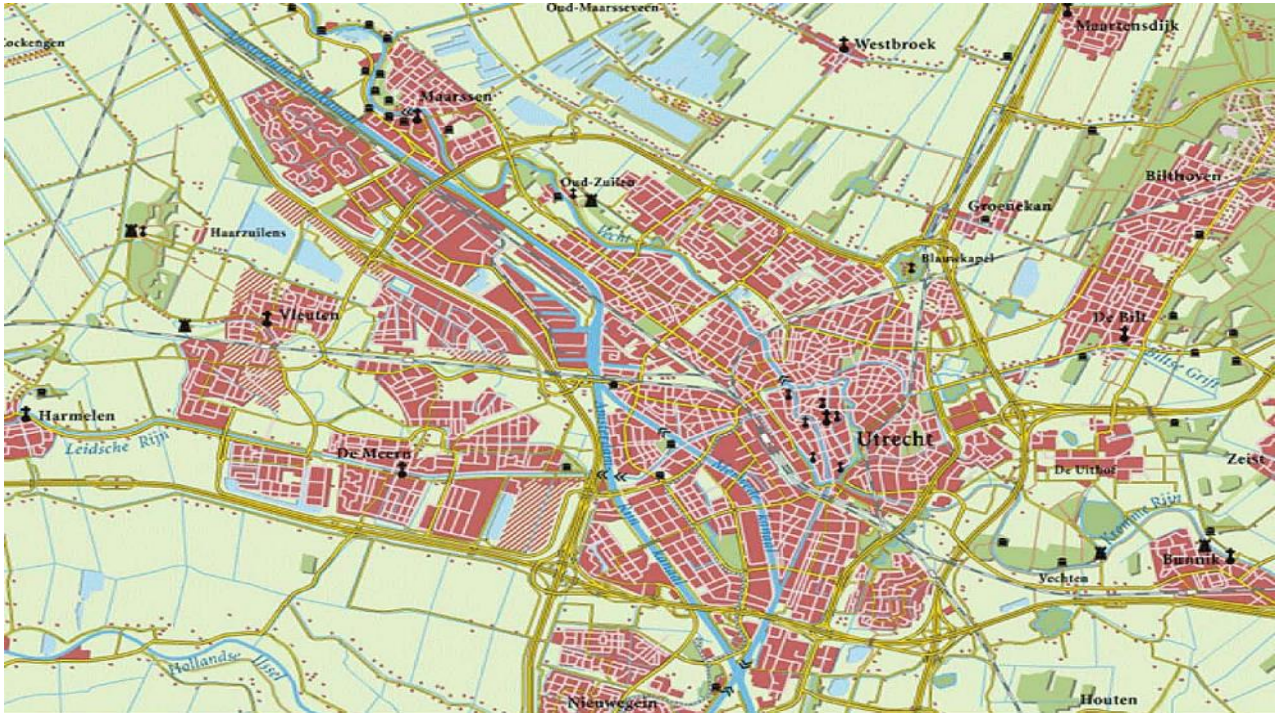

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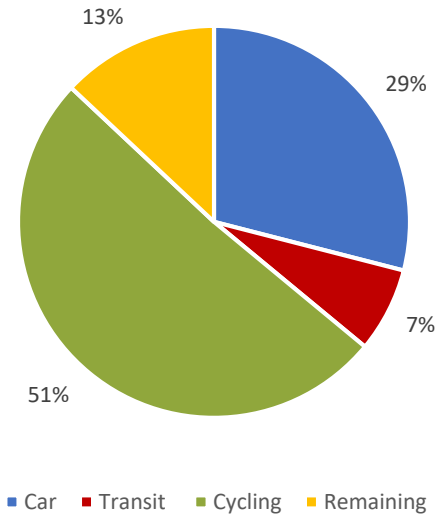
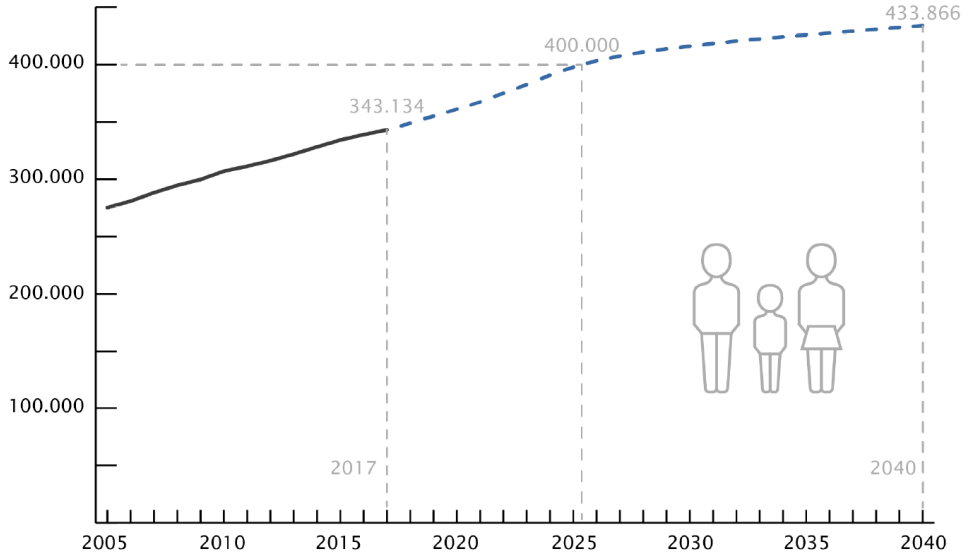
The city of Utrecht

Utrecht: facts & figures

- 340,000 inhabitants → 400.000 in 2025 → 450,000 in 2035
- Hub in Dutch transport system
- High share of cycling in the modal split (>50% on short distances)





Our Challenge

Utrecht: city ambitions

- Ambition sustainable urban mobility plan: change modal split
- Strong urban growth → growth transportation demand car, transit and bicycle
- Usage of space all mobility modes together: +16% untill 2035
- Modal shift --> no extra space needed for mobility

Why focusing on inner city densification?

1977

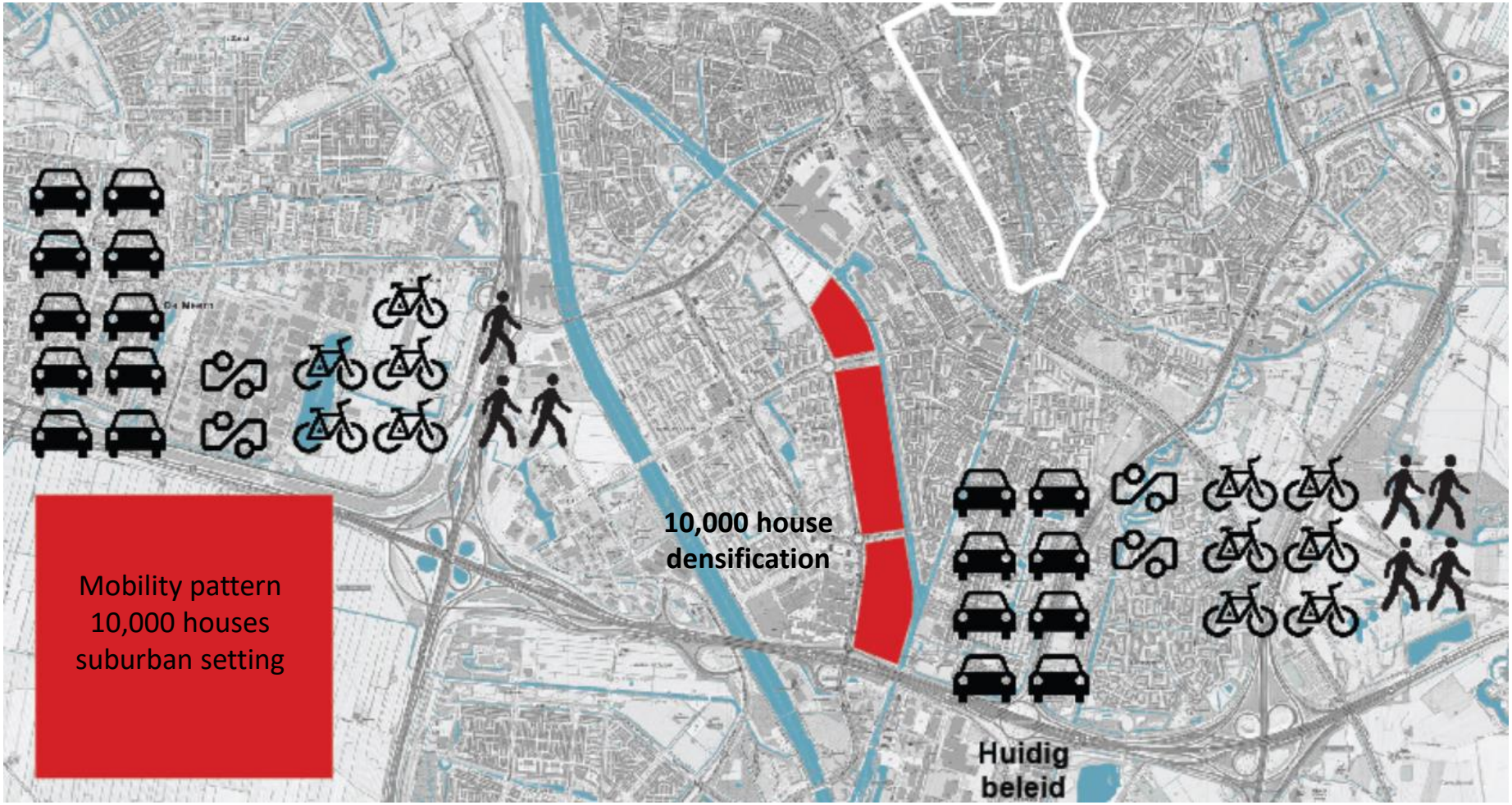
2017

Utrecht: city ambitions

- Urbanization: necessity to build 40,000 new homes in next 15 years:
  - Within current city boundaries;
  - CO^2-neutral;
  - High density;
  - Sustainable mobility pattern of future inhabitants

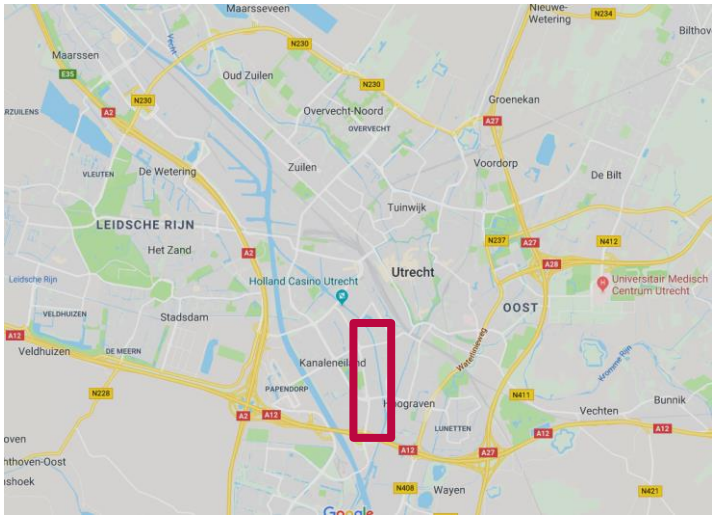
- Neigborhood Merwedekanaalzone (9,000 houses) fits in this ambition

Why focusing on inner city densification?



Unique urban development project

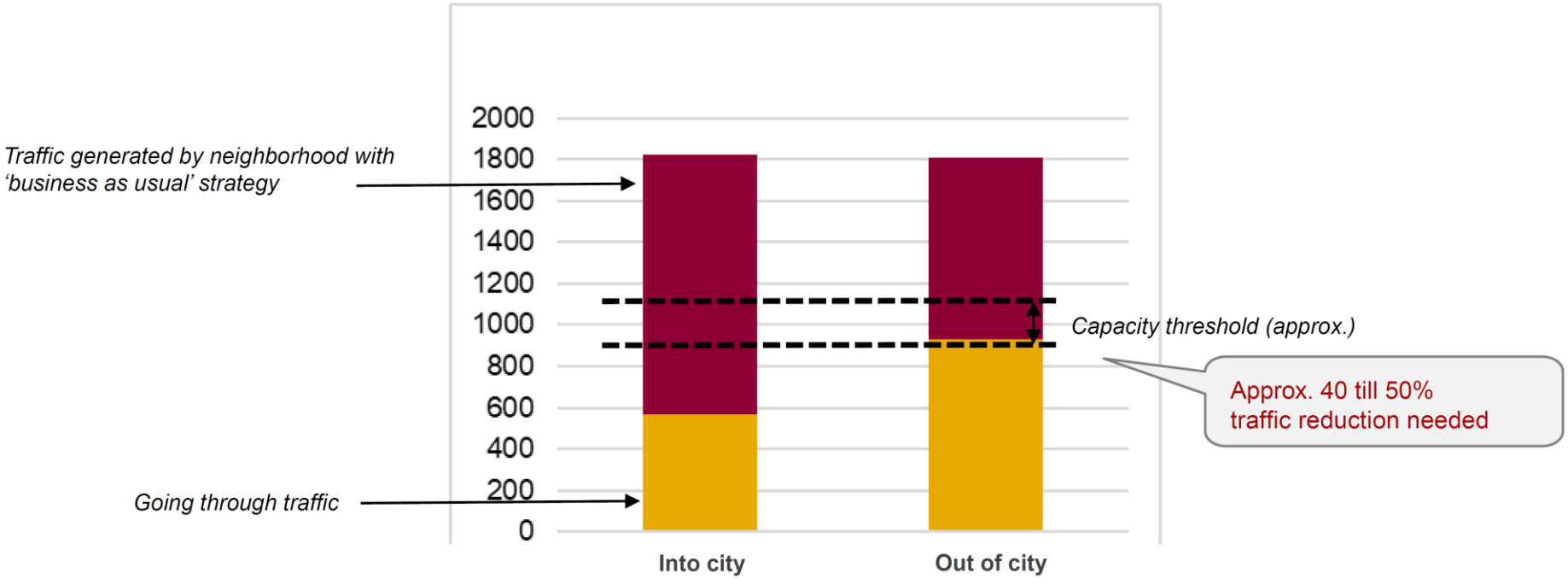
- 9,000 new houses and 80,000 m2 services
- 250+ dwellings/acre (super dense!)
- 2 miles from downtown Utrecht
- Unique collaboration: government-market



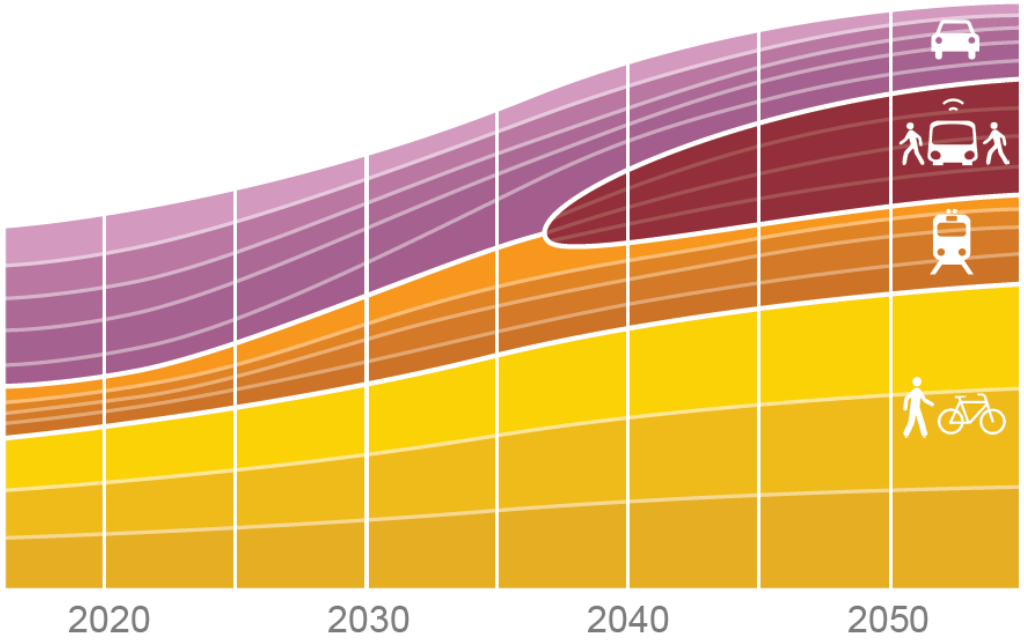
Utrecht Merwedekanaalzone: mobilityconcept

‘Business as usual’ results in too much traffic

business as usual = regular parking norm



Accommodate the rise of new mobility



3 *Embrace sharing and self driving mobility as a new transport mode*

2 *Transform public transport on densified and strong corridors*

1 *Create more space for active modes to vitalize the city*

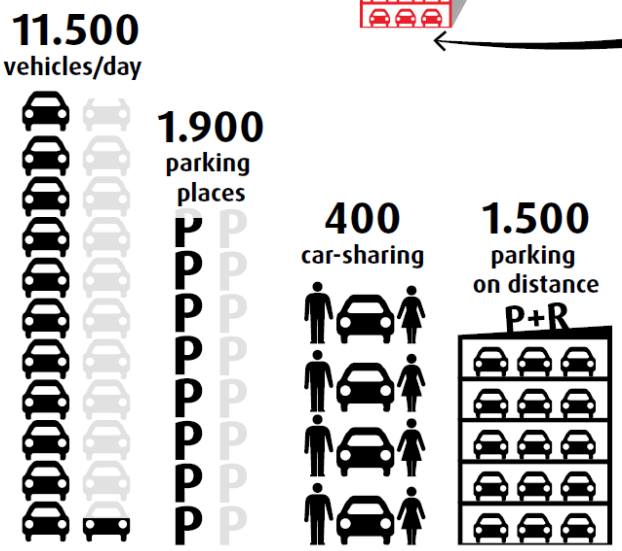
1. Smart Urban Planning

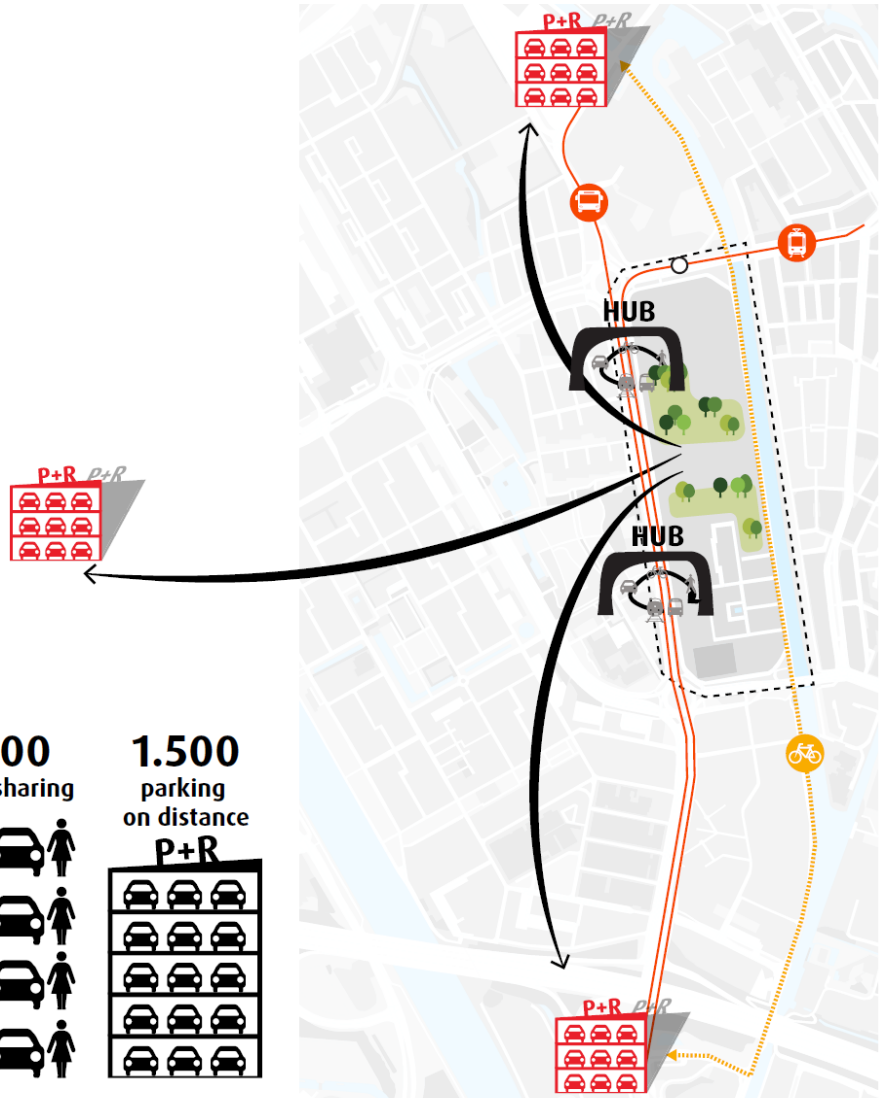
Top-quality spatial design: focus on proximity, walkability and quality urban life

1. Smart Urban Planning

Low parking norm

- Low parking-norm 0.3 per dwelling:
  - In underground parking garages;
  - Car-sharing 0.1 car-sharing
- Parking on distance: 0.2 per dwelling

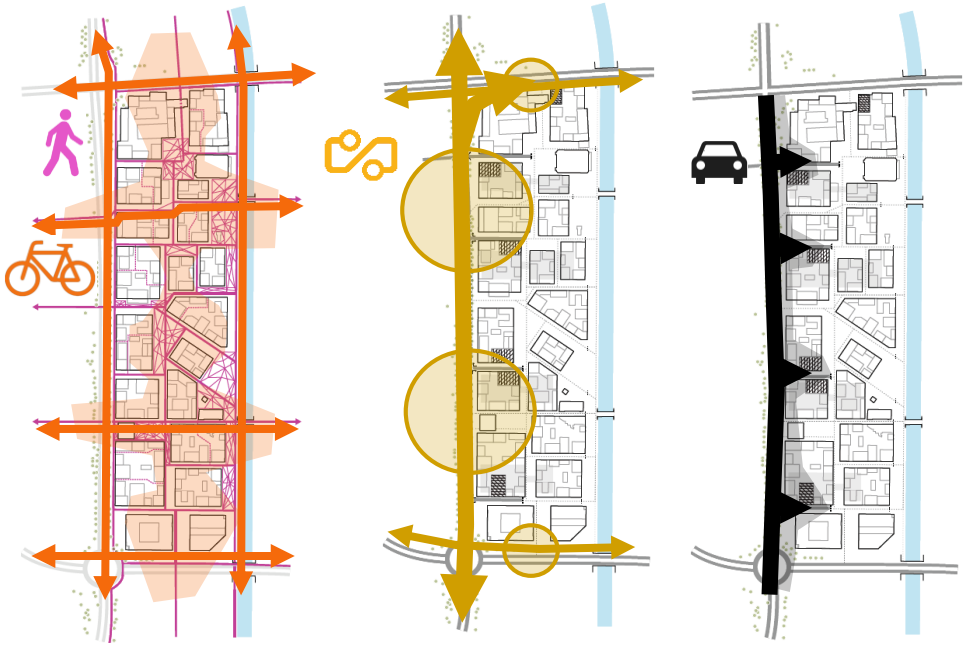


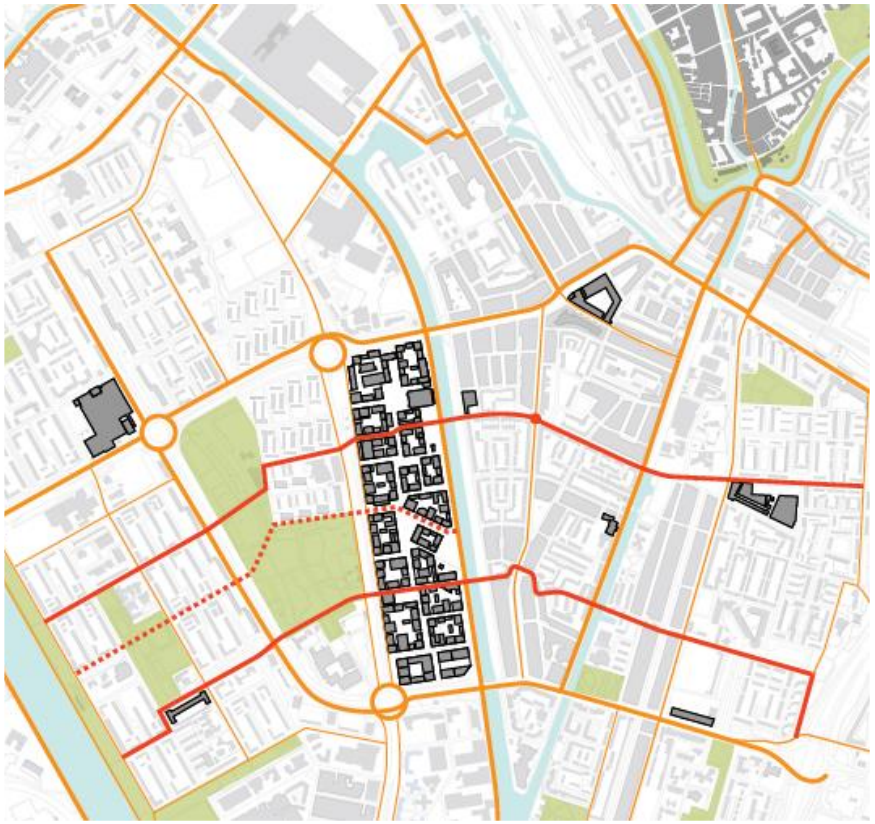


2. Smart Networks

Next generation transportation networks

- Cycling, walking and transit central, cars only allowed at the edges
- Parking garages underground, max. 50 m from main road





2. Smart Networks

Next generation transportation networks

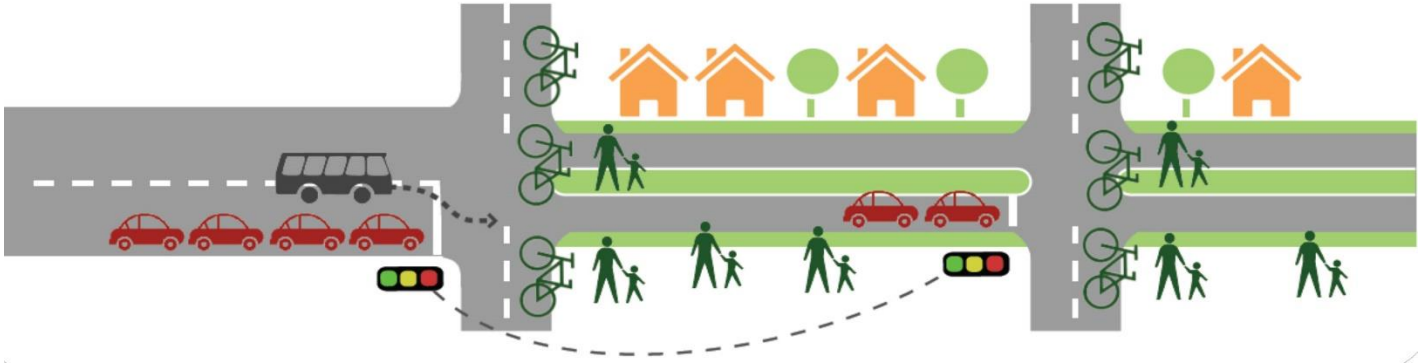
Three public transport scenarios

1. Bus Rapid Transit system
2. Urban System Change by construction urban tram
3. Regional System Change by realization lightrail – regional bus passengers transfer to lightrail system

Smart Traffic Management

Dynamic Traffic Management

- Creating a network in which using the ring by car is quicker than through the city
- Structure flows by influencing traffic lights

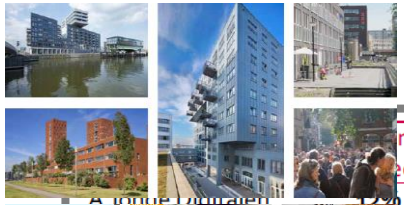


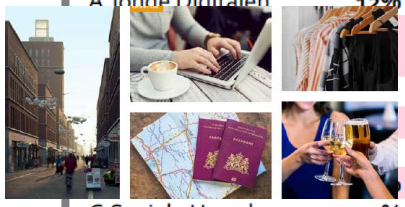
3 Mobility as a Service

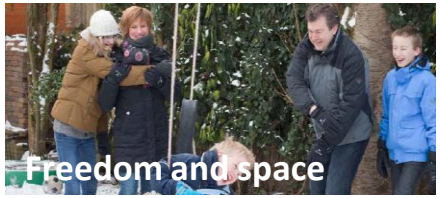
facilitate individual travel through digital platform and physical store and desk

Future inhabitants research

Who would like to live here?







Overweging Matthijs: *"Vandaag komen mijn buitenlandse vrienden langs. Hoe bereiken ze mijn huis? In ieder geval kan ik ze ook de Merwede-app laten installeren, want de app is ook in het Engels en voor mensen die hier niet wonen. Daarmee kunnen we zonder veel gedoe lekker de stad in om te stappen en zelfs 's nachts nog thuiskomen met de nachtbus of deelfiets. Lopen had ook gekund, maar dit is dan toch fijner."*

Interview Matthijs: *"Ik gebruik mijn abonnement vooral voor de deelfiets en het openbaar vervoer. Soms pak ik de deelauto naar mijn ouders die in de Achterhoek wonen of als ik op wintersport ga. Echt top is dat ik daarvoor alleen een abonnement 'pay as you go' heb, ik gebruik die deelauto namelijk bijna nooit."*

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cht	Utrec			
	23%			utobezit
	5%			vt scooter
	5%			autobezit
	20%	+		autobezit
	9%	--	Niet	o's
	11%	+	Grote gezinsapp	to's
	7%	++	Sociale huur	obezit
	1%	--	Niet	1 auto
	0%	+	Niet	1 of 2 auto's
	4%	o	Stadswoning groot/middelgroot, exclusieve appartementen	2 auto's
	4%	o	Stadswoning groot/middelgroot, exclusieve appartementen	2 auto's
	0%	--	Niet	1 of 2 auto's
	4%	o	Niet	1 auto
	6%	-	Niet	Laag/midden autobezit

4. Mobility HUB

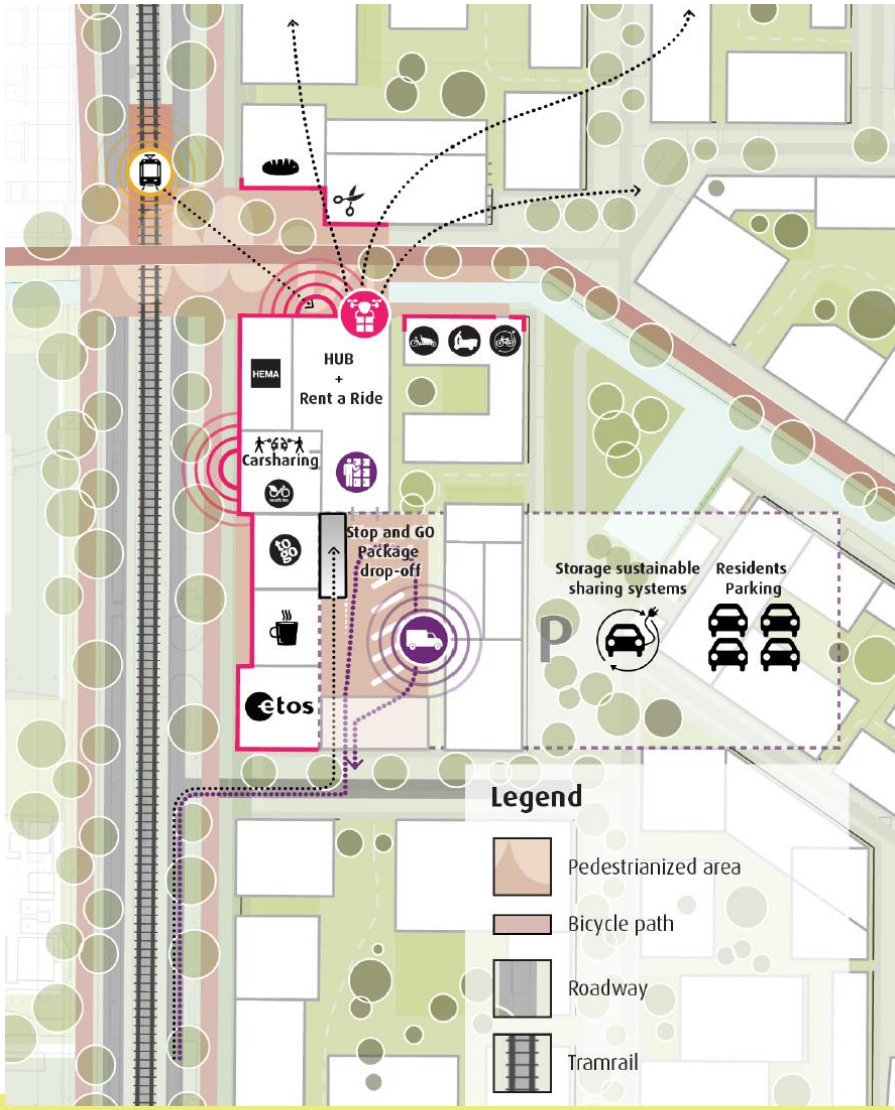
Easy and effective

Human side mobility HUB

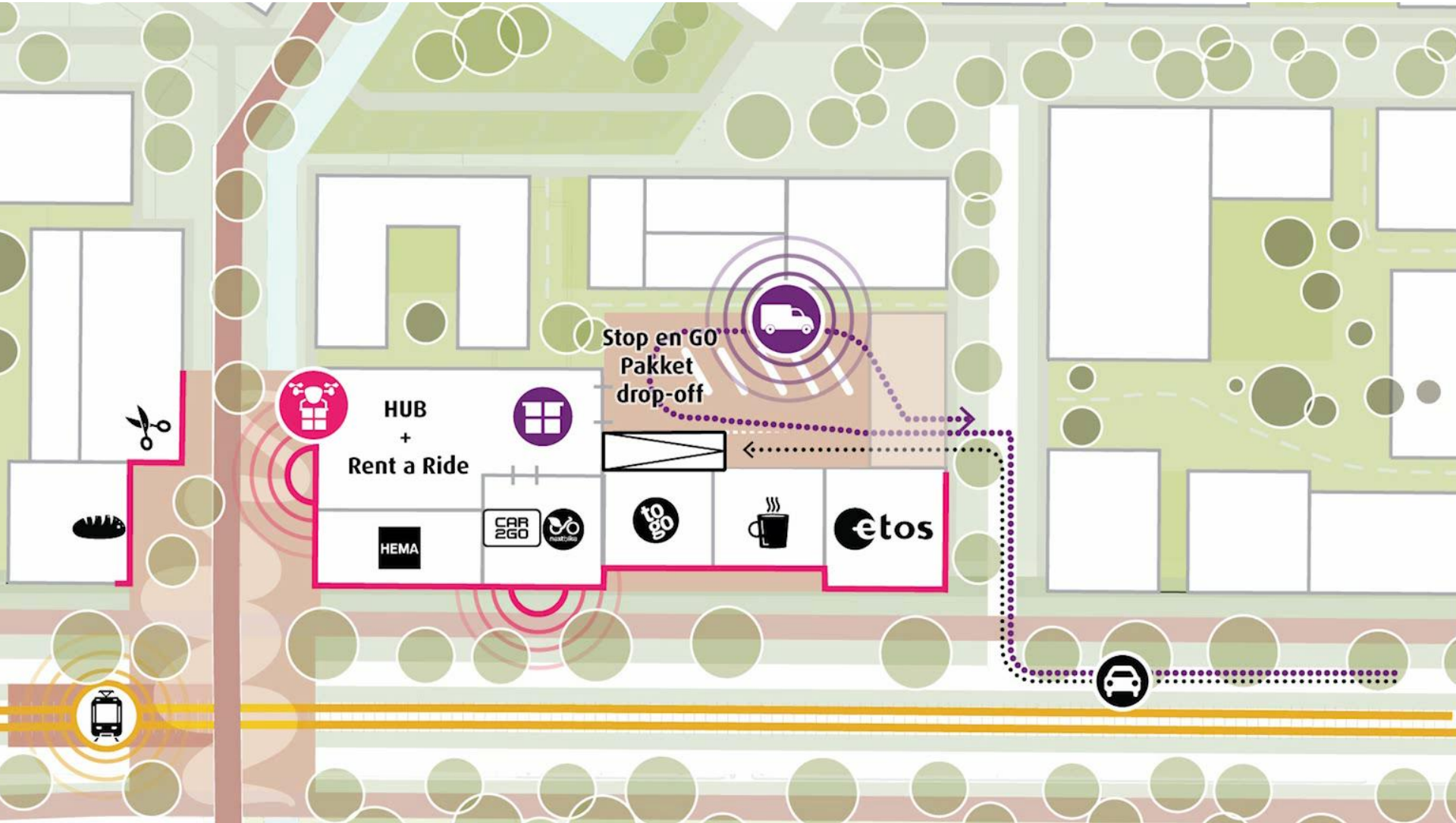
- Physical store/desk which provides services

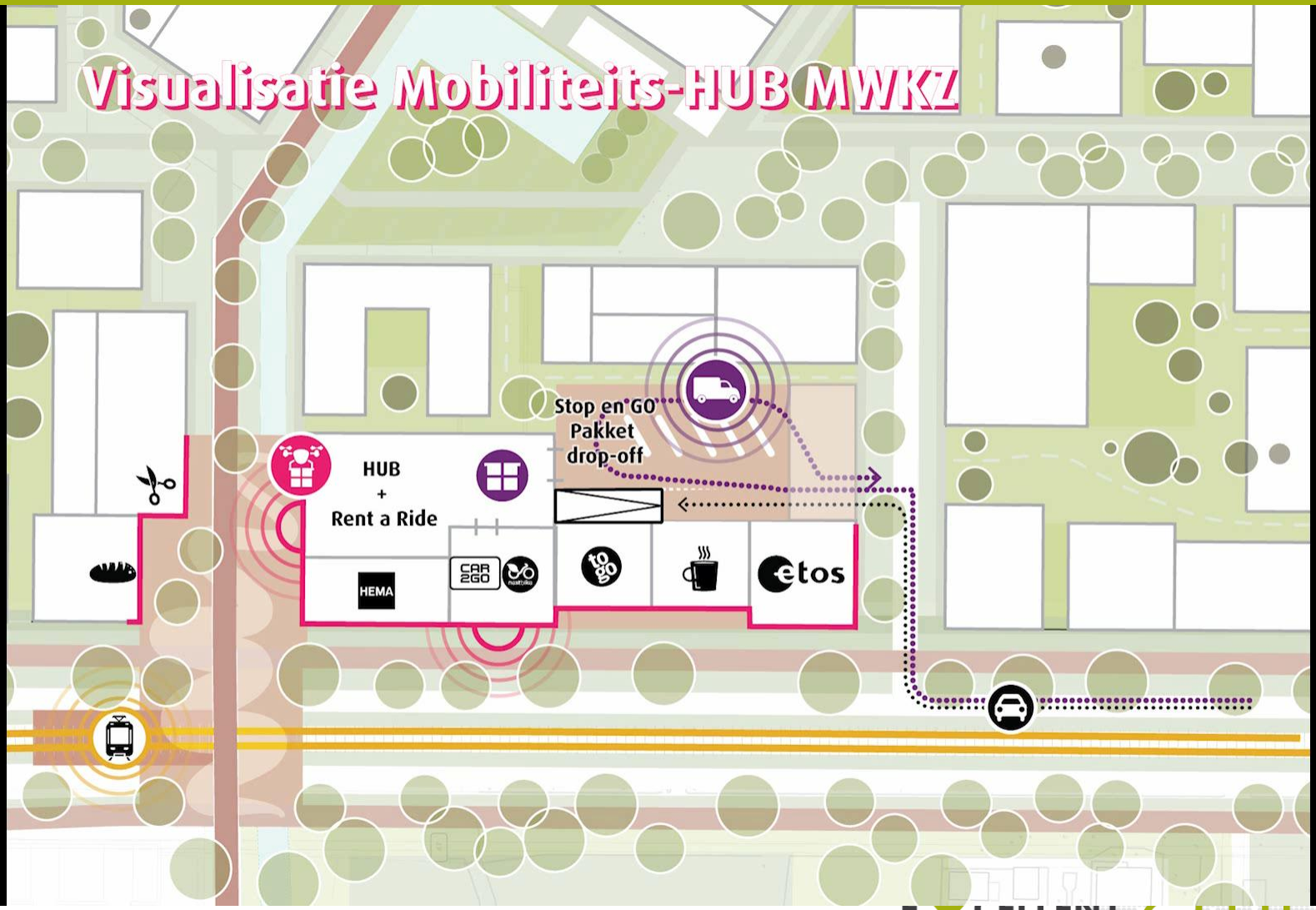
Vehicle side mobility HUB

- Cars and logistics in parking garage
- Car- and bike-share available in whole area
- Parking on distance



Mobility HUB





Urban Mobility Experts

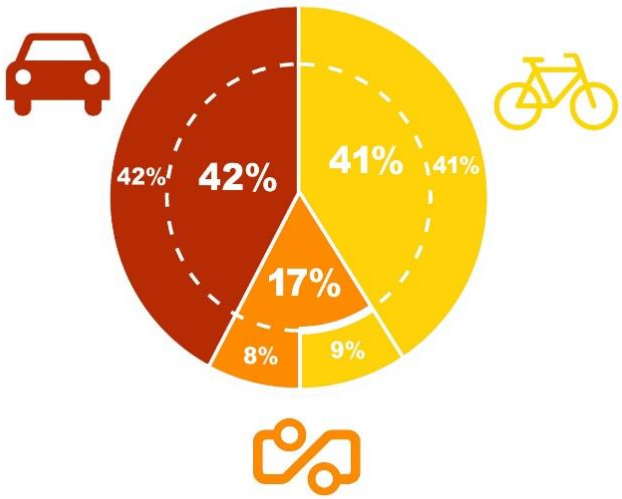
Governance Mobility HUBs

- Separation between ‘one time’ investment (*developers)* and exploitation of mobility HUB (government/public-private partnership/tender to private company)

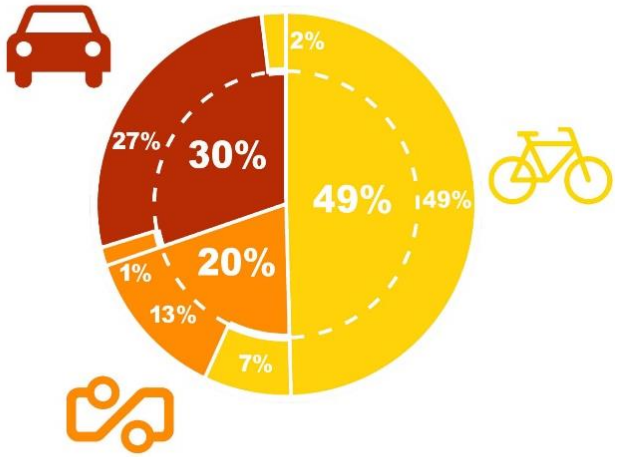
One-time investment mobility HUB → Developers	**Exploitation mobility HUB → MaaS provider**
Constructing access-system	Creating MaaS-system (incl. IT-platform)
Constructing HUB and parking garages	Renting parking garages & HUB
	Operating mobility HUB
	Enforcement and maintenance

What kind of results do we expect?

- Traffic generation decreases by necessary **40%**
- Ambitious mobility strategy results in a better balance of modes of transport



Modal split ‘business as usual’
9.000 dwellings



Ambitious mobility strategy
9.000 dwellings

From the start….

1. Top-quality spatial design with mixed-use development: create quality!
2. Make the first step worthwile.
3. Implement paid parking in surrounding neighborhood (1 mile radius)
4. Functioning mobility HUB with low parking-norm
5. Create a mobilityfund to pay for investments
6. User based offer of options (MaaS).

Further questions?

Contact details

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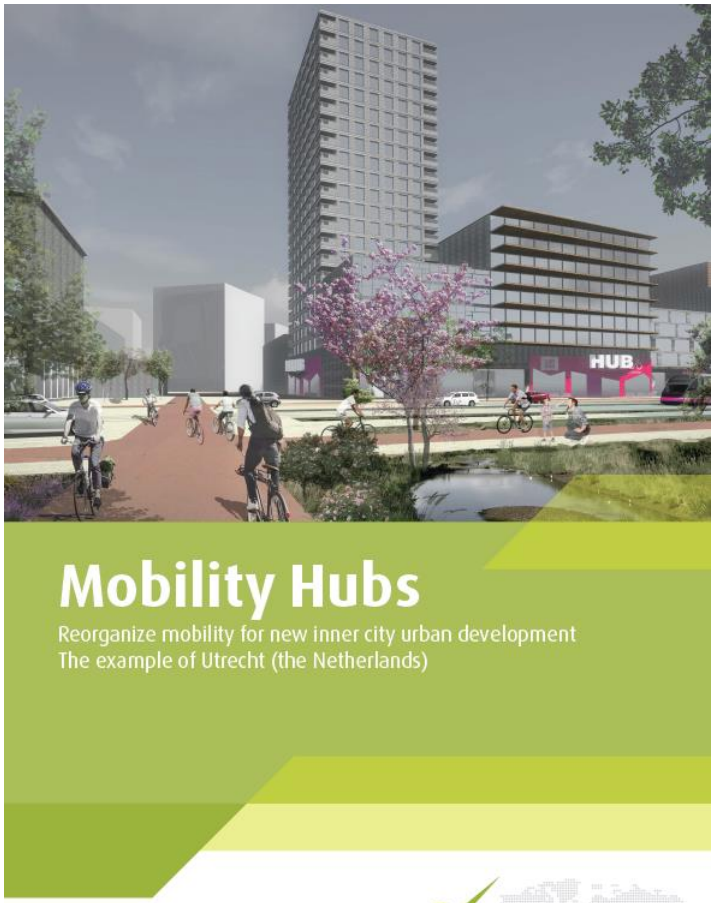

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