

Making buildings fit for sustainable mobility
Launch of the ECF parking report
20 March 2019 – Hanse Office – Brussels



The impact of parking policies on our daily mobility choices

Prof. Dirk Lauwers

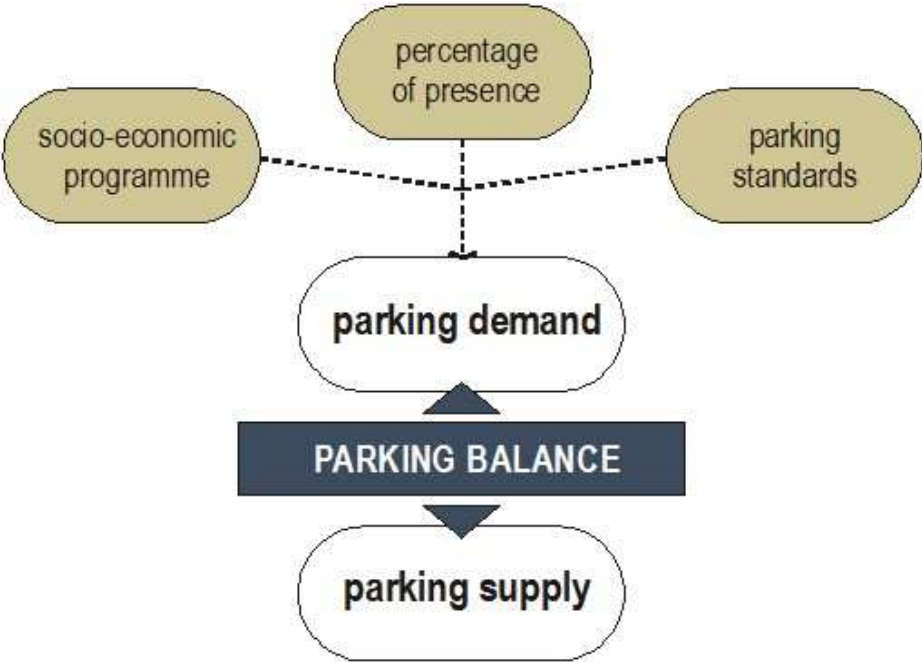
Research Group for Urban Development
Faculty of Design Sciences
University of Antwerp

Universiteit Antwerpen



Definition of the parking (behaviour) problem?

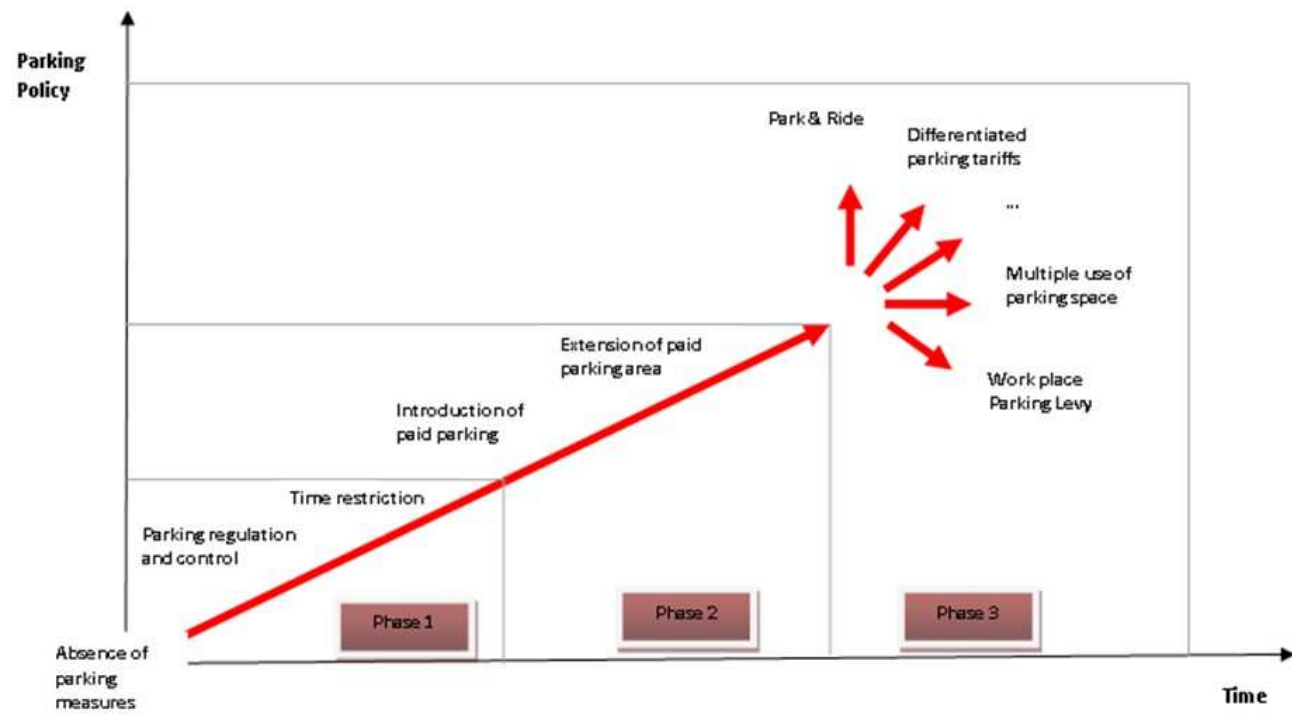
- user – provider issue (demand and supply)



Source: UGent City Parking in Europe 2005

Evolution of parking policies

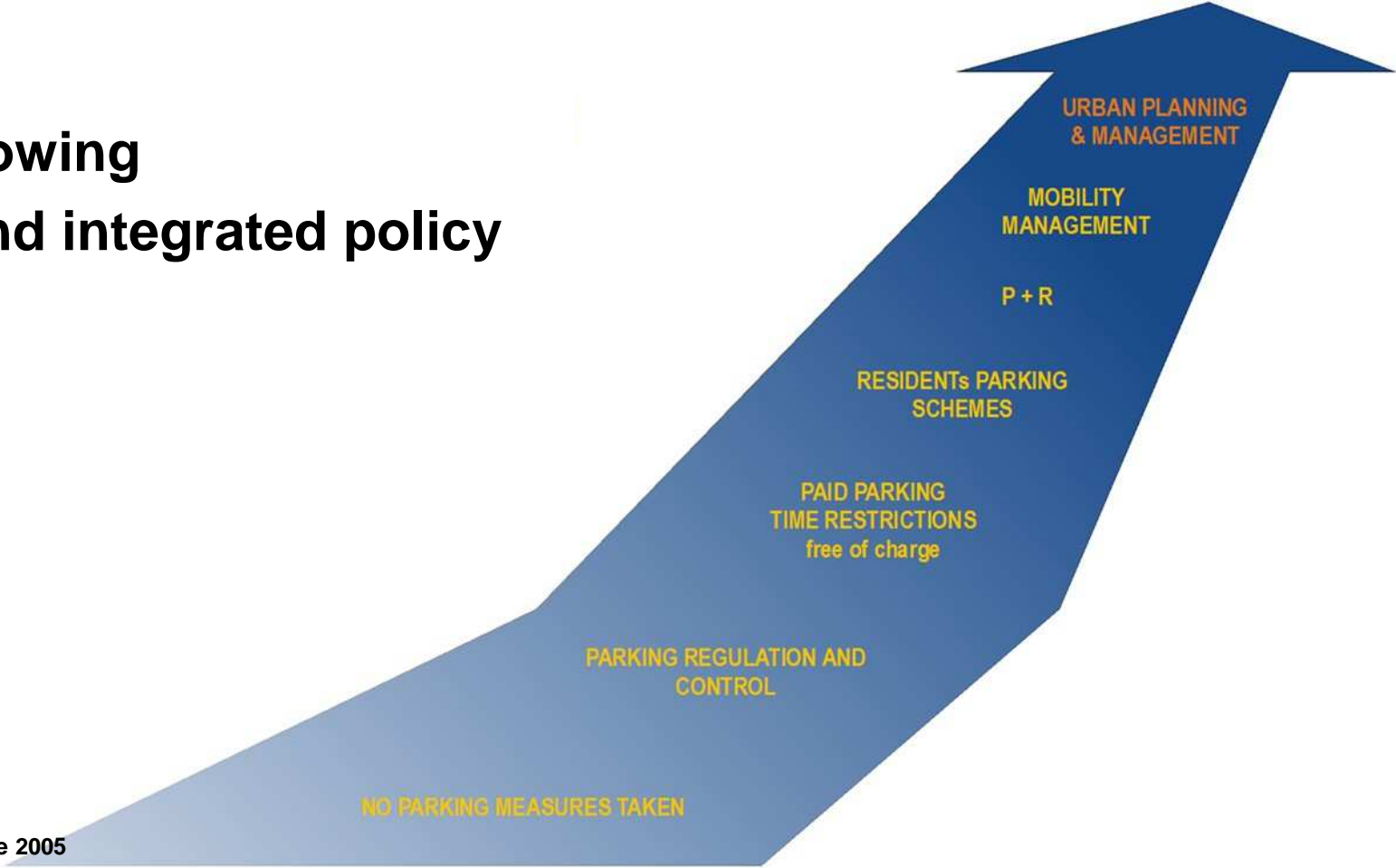
- From car following to steering



Despite their unique character, most cities follow the same pattern when it comes to parking policy” (Mingardo, van Wee and Rye, 2015)

Evolution of parking policies

- From car following to steering and integrated policy



Source: UGent City Parking in Europe 2005

Re-definition of the parking (behaviour) problem?

- **user – provider issue (demand and supply)**
- **other stakeholders: inhabitant – city policy maker**

Re-definition of the ‘parking problem’

What is the ‘parking problem’ for the user ?

- Having a place to park his/her car
- But also he/she is looking for qualities:
 - Finding the way to a free place – i.e. to the most convenient place (distance to destination – parking time regulation – price...)
 - Comfort of the parking maneuver
 - Comfort of walking out of the parking infrastructure
 - Distance and quality of walking to destination
 - Safety for the person and car

Parking ‘product’ that is offered should be considered as a (full) service to a client

Re-definition of the parking (behaviour) problem?

- user – provider issue (demand and supply)
- other stakeholders: inhabitant – city policy maker

Re-definition of the ‘parking problem’

What is the ‘parking problem’ for the inhabitant ?

- Having a place to park his/her car (if he/she has one)
- Also he/she is looking for the qualities users are looking for
- But also he/she is looking for other qualities :
 - Accessibility for other modes he/she is using (bike, P1,...)
 - Space for other activities (parks, playgrounds...)
 - Livability of streets and traffic safety
 - Social safety
 -

Inhabitants should be involved in parking policies as citizens with different concerns, not only as clients of a parking system

Re-definition of the ‘parking problem’

What is the ‘parking problem’ for the city policy maker ?

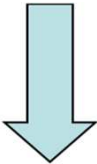
- Offering space for parking demand
- But policy should also consider :
 - Accessibility of the city for the ‘user’ of the city (visitor, inhabitant..)
 - Quality of life for inhabitants and visitors
 - Economic development
 - Short term and long term developments
 -

Parking ‘policy’ should consider sustainability of the city or the 3 P’s : People – Planet – Profit

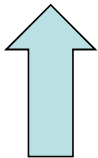
Mobility choices – a mobility systems approach

Demand (of parking)

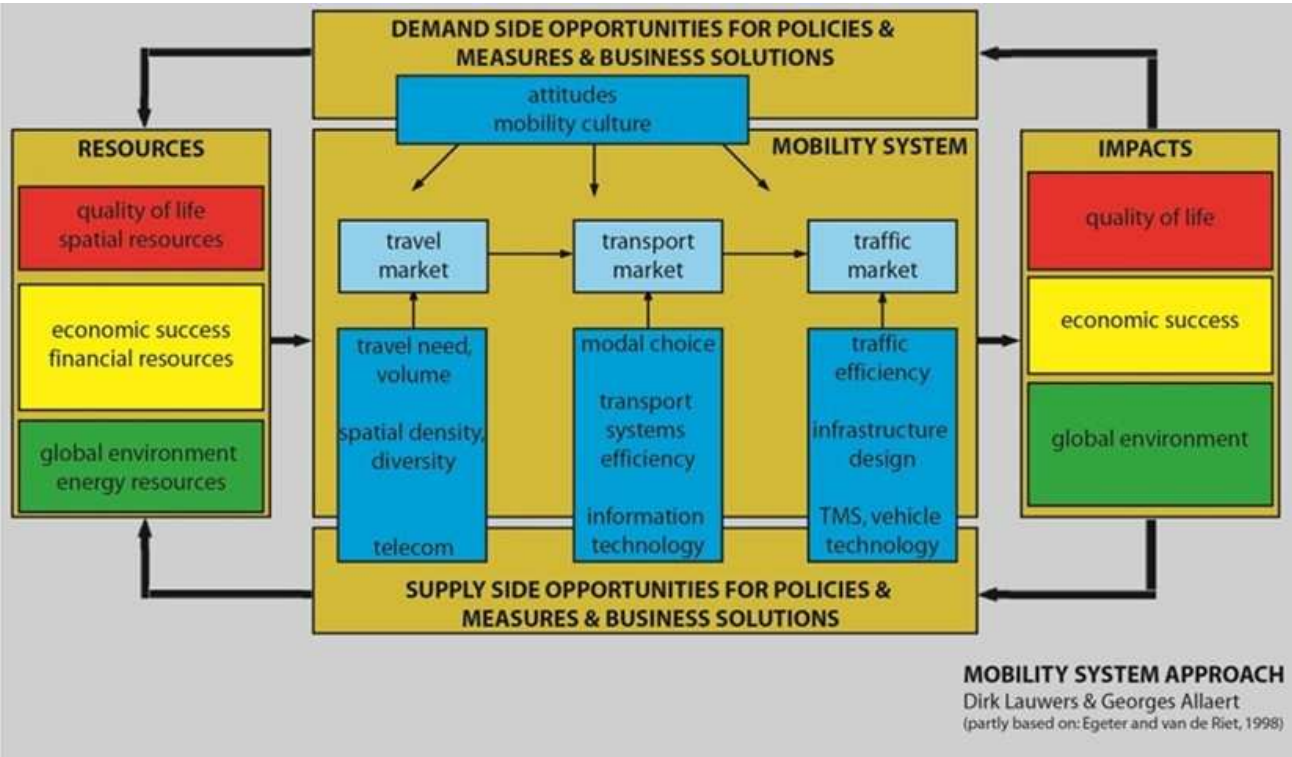
- **Mobility culture**
(car ownership,
shared car systems)



- **Travel volume**
- **Modal choice**
- **Route choice**



Supply (of parking)



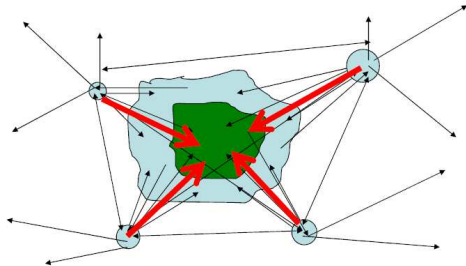
Content of current of parking policies

Within parking policy you usually deal with:

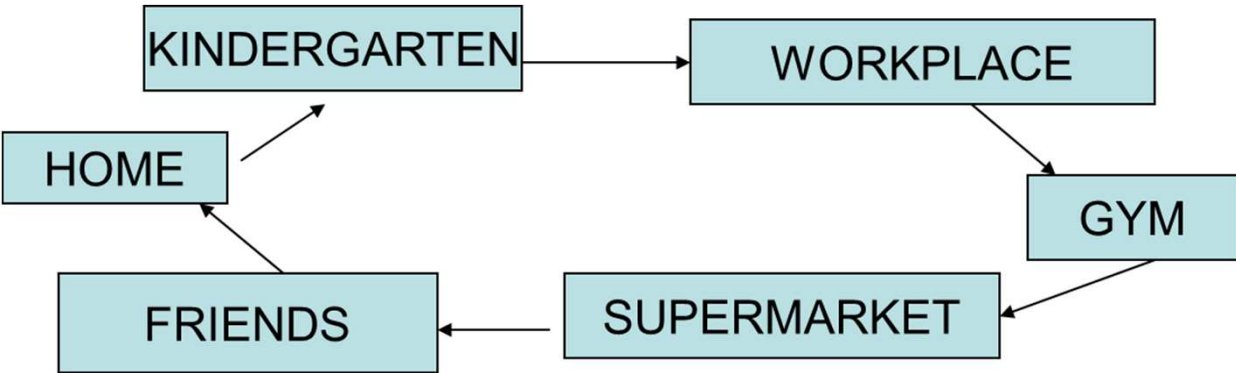
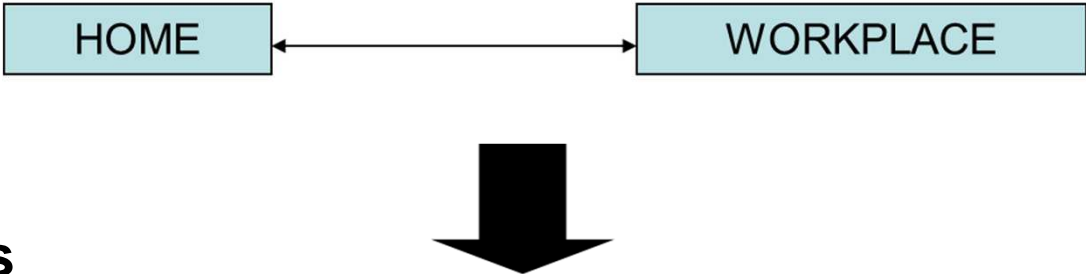
- **The supply of parking:**
 - **The number, type and location of parking spaces**
 - **Parking requirements (standards)**
 - **Parking regulations**
 - **Marketing**
 - **Information and communication**

- **The demand for parking:**
 - **Residents**
 - **Commuters**
 - **Visitors**
 - **Special events**
 - **...**

Type of parking places

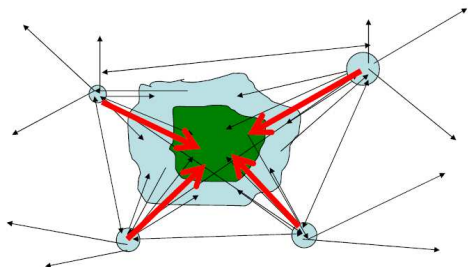


- origin – destination of car trips

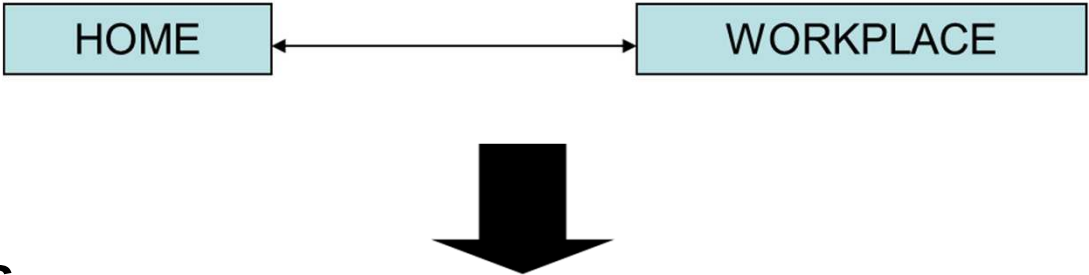


- but: mobility patterns = more complex
- chain of destinations

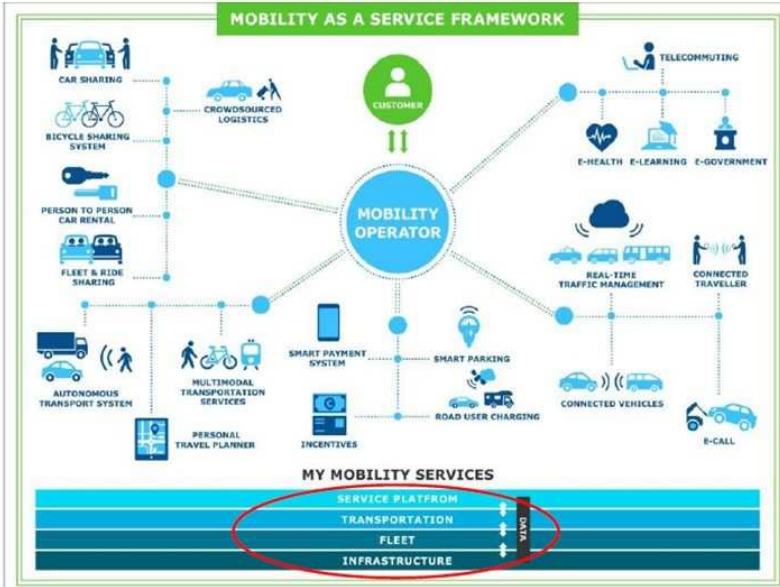
Type of parking places



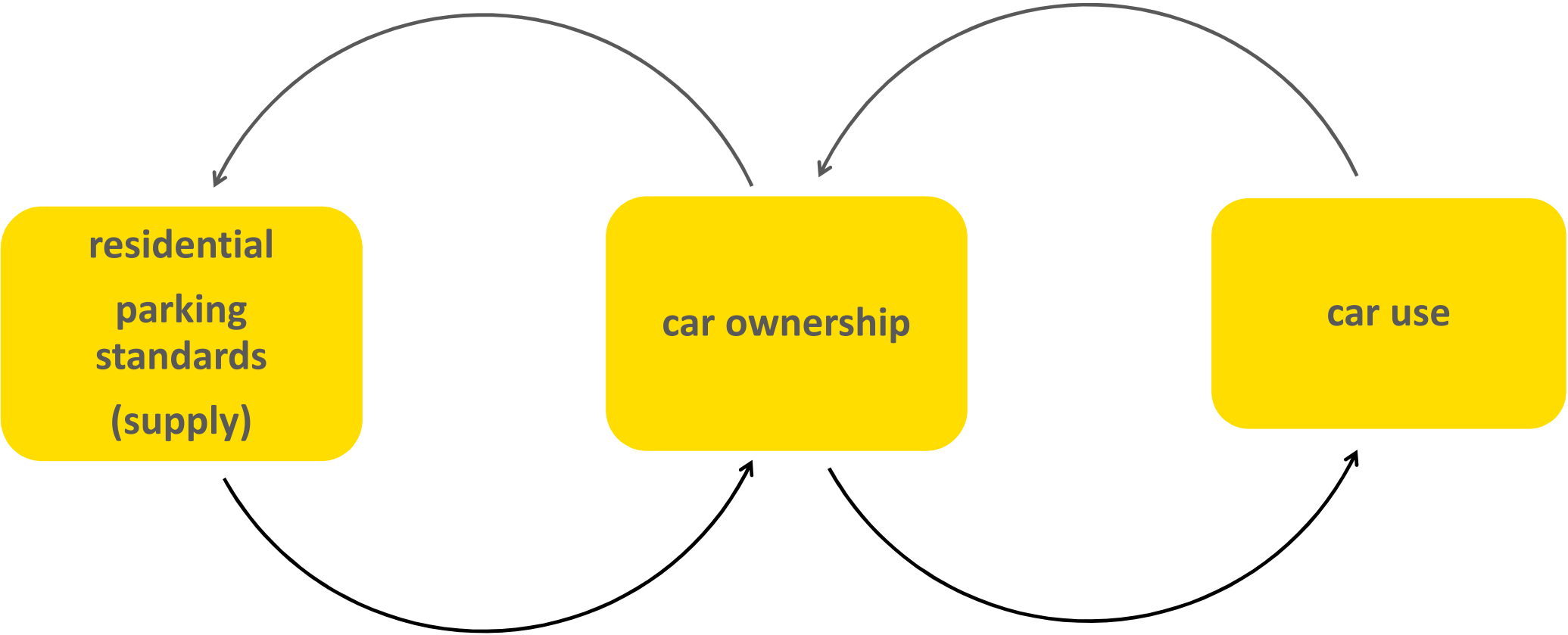
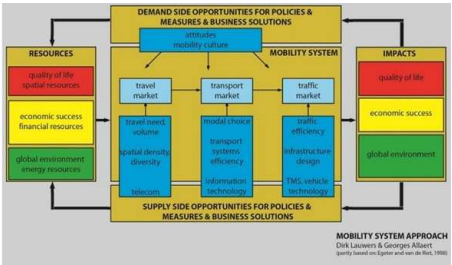
- origin – destination of car trips



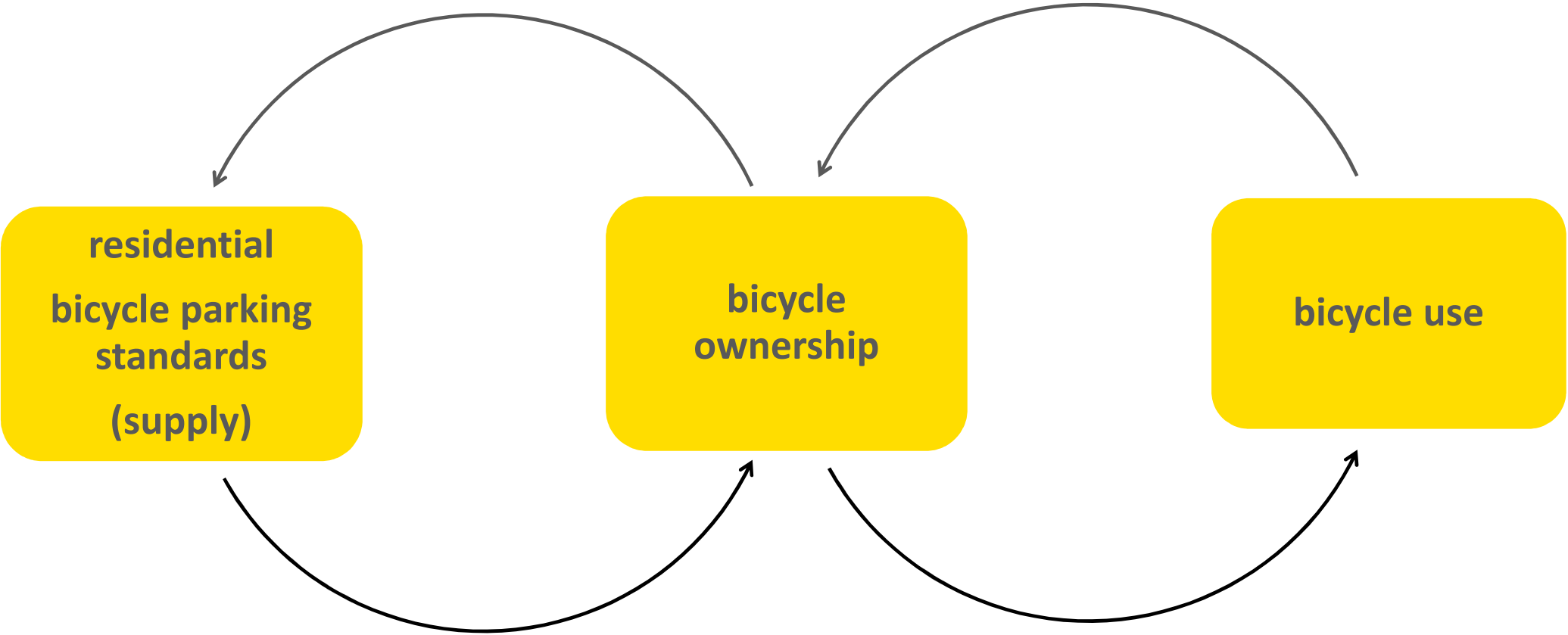
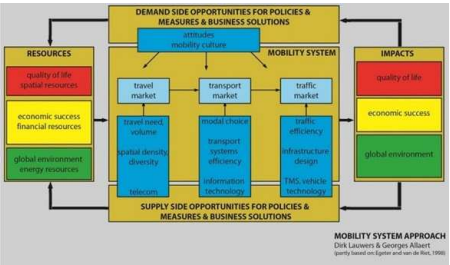
- but: mobility patterns = more complex
- chain of mobility modes (P+R, P+B, shared)



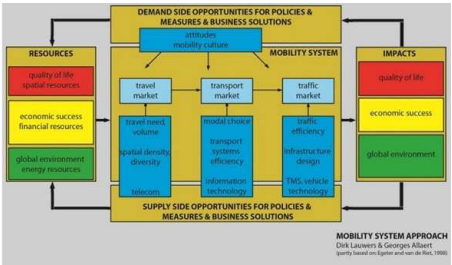
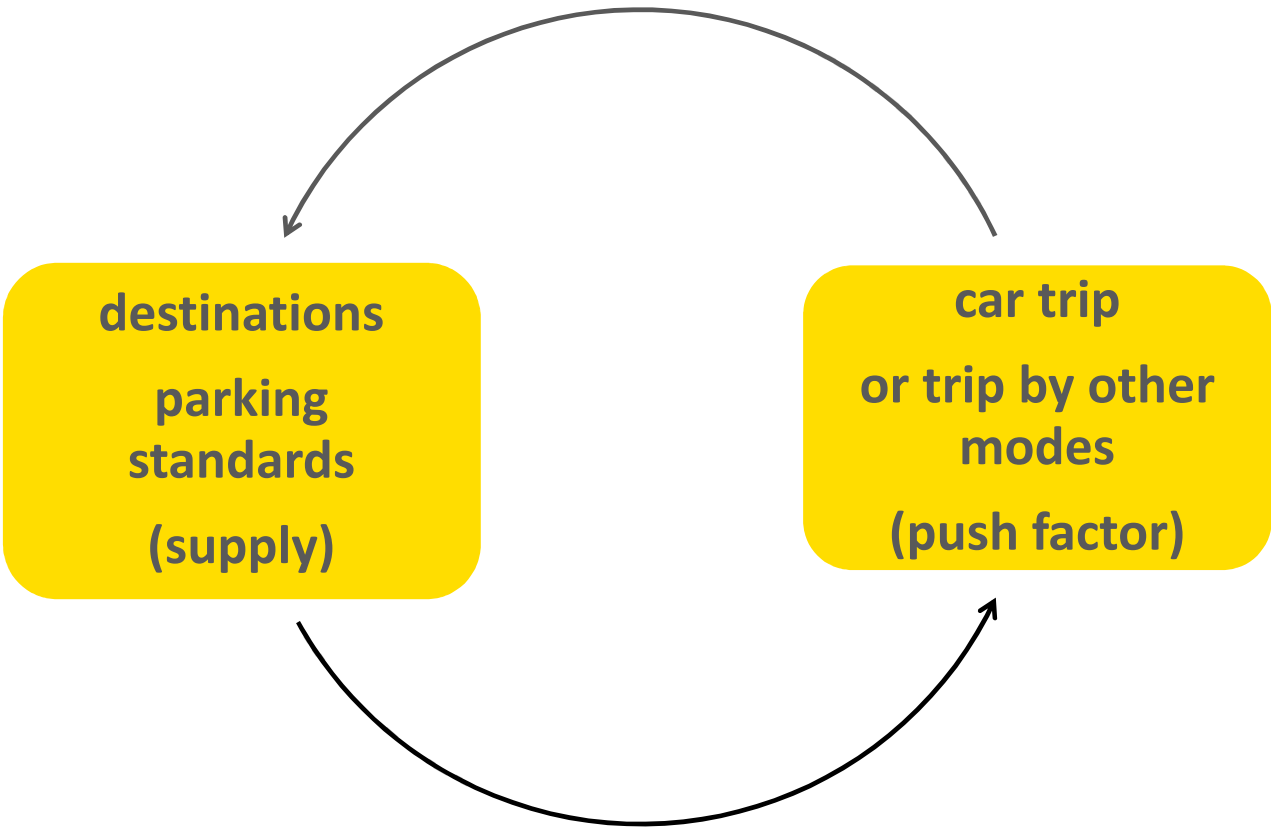
Travel market = travel volume



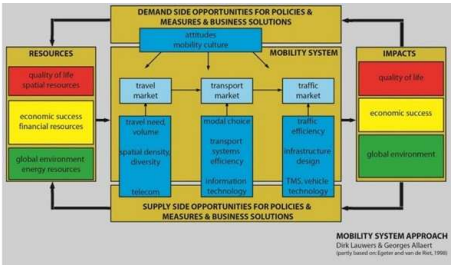
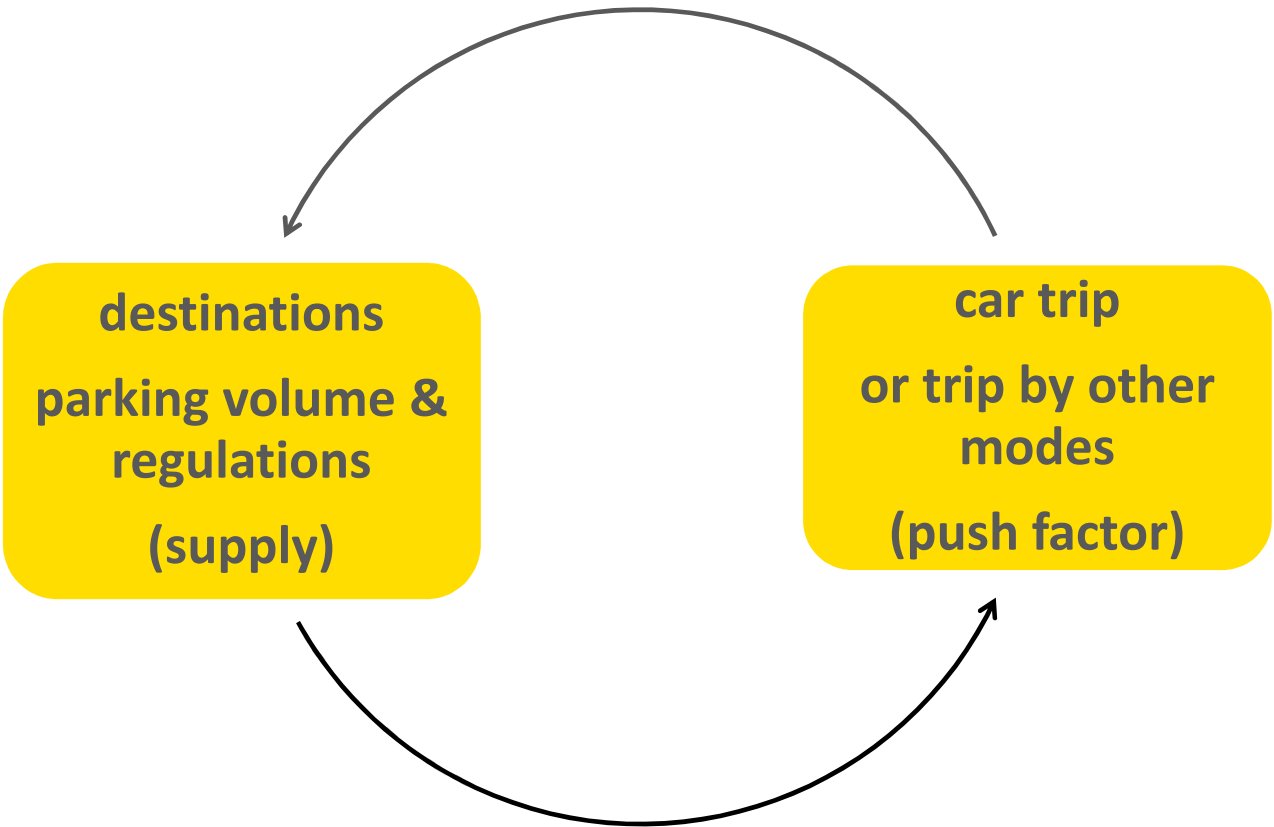
Travel market = travel volume



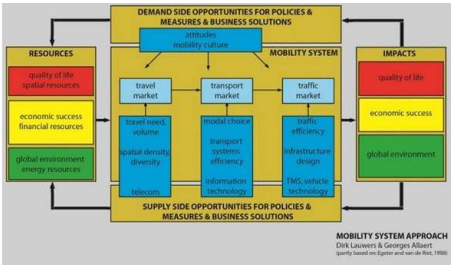
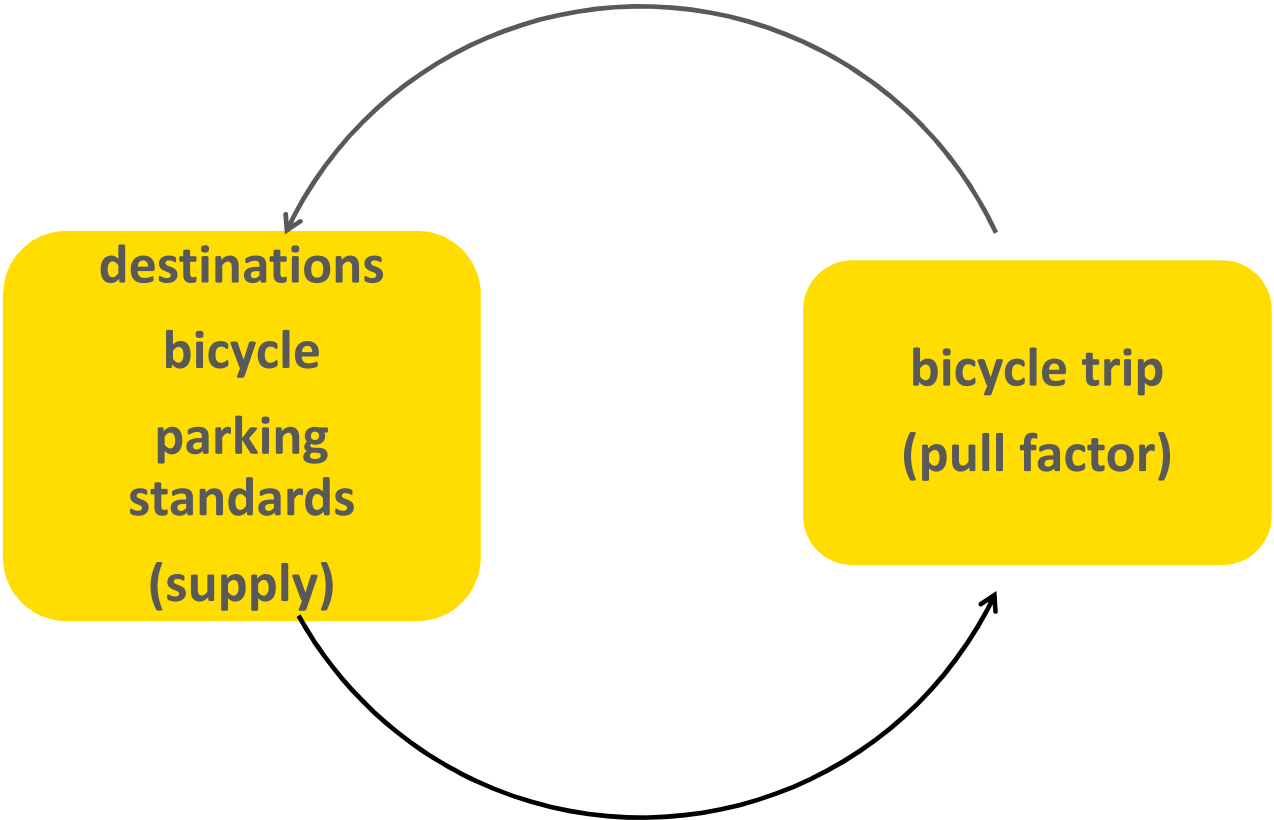
Transport market = modal choice



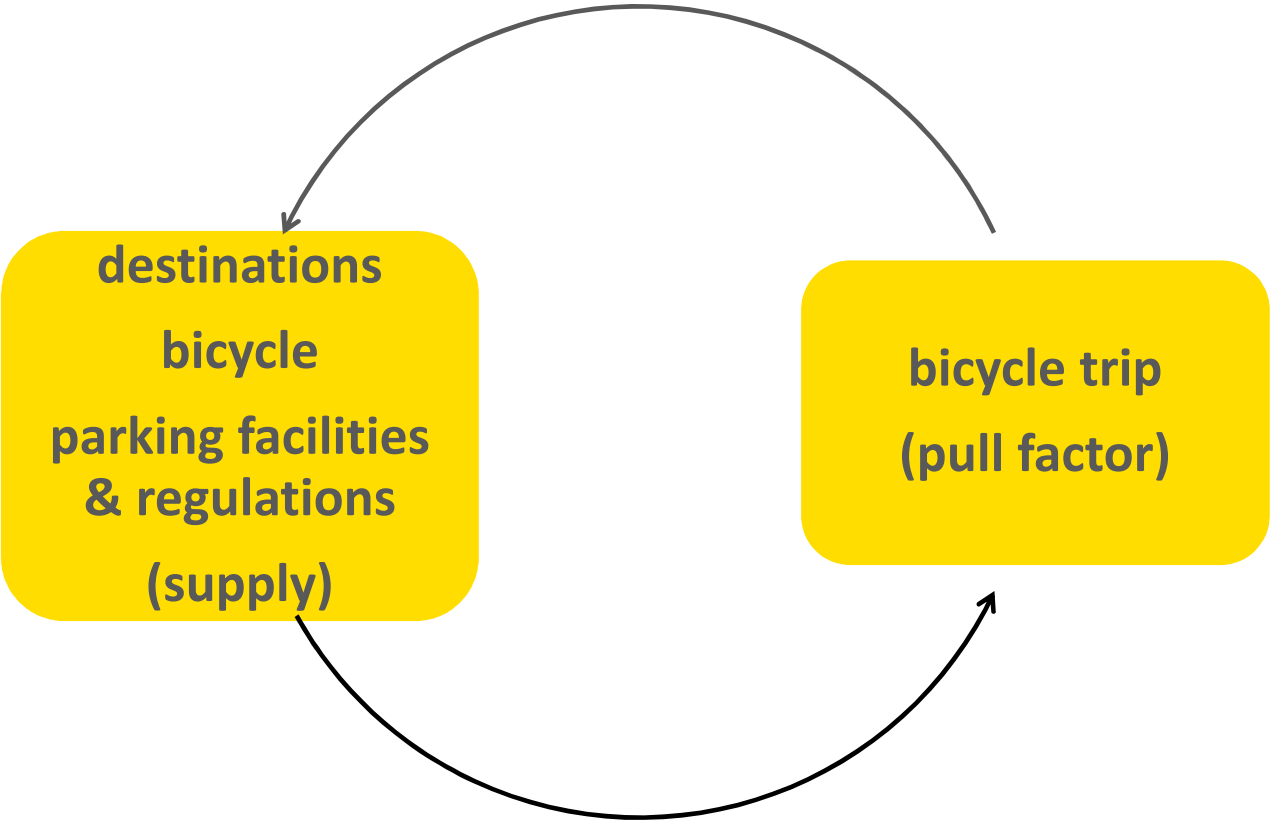
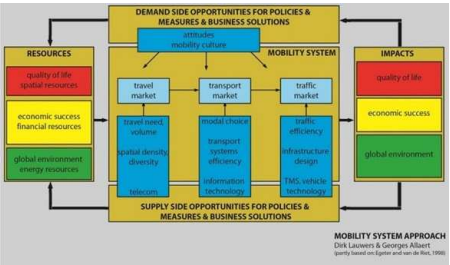
Transport market = modal choice



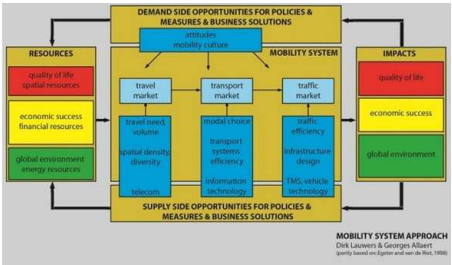
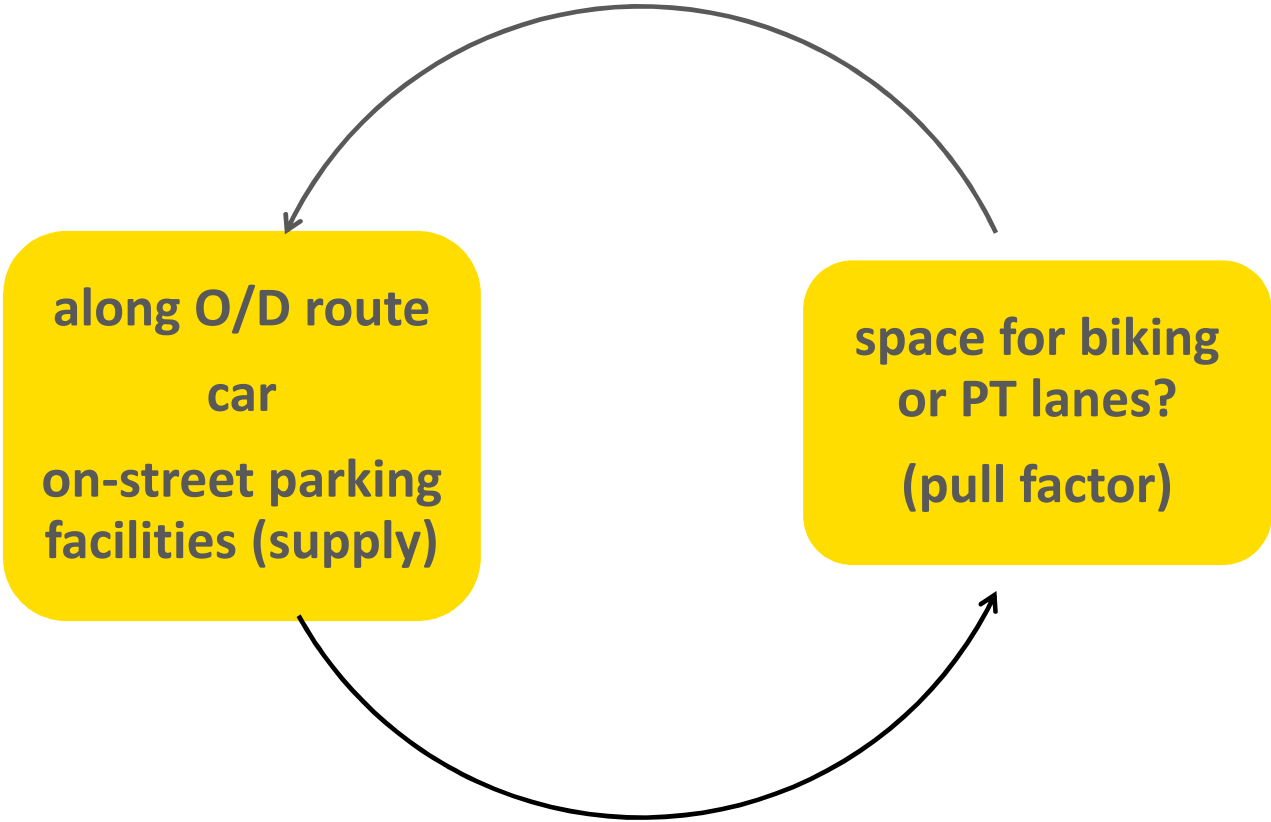
Transport market = modal choice



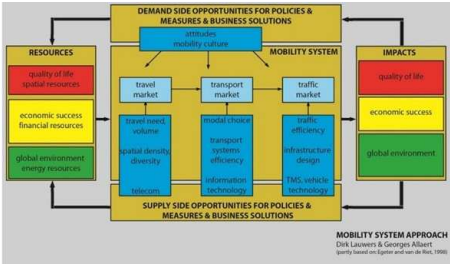
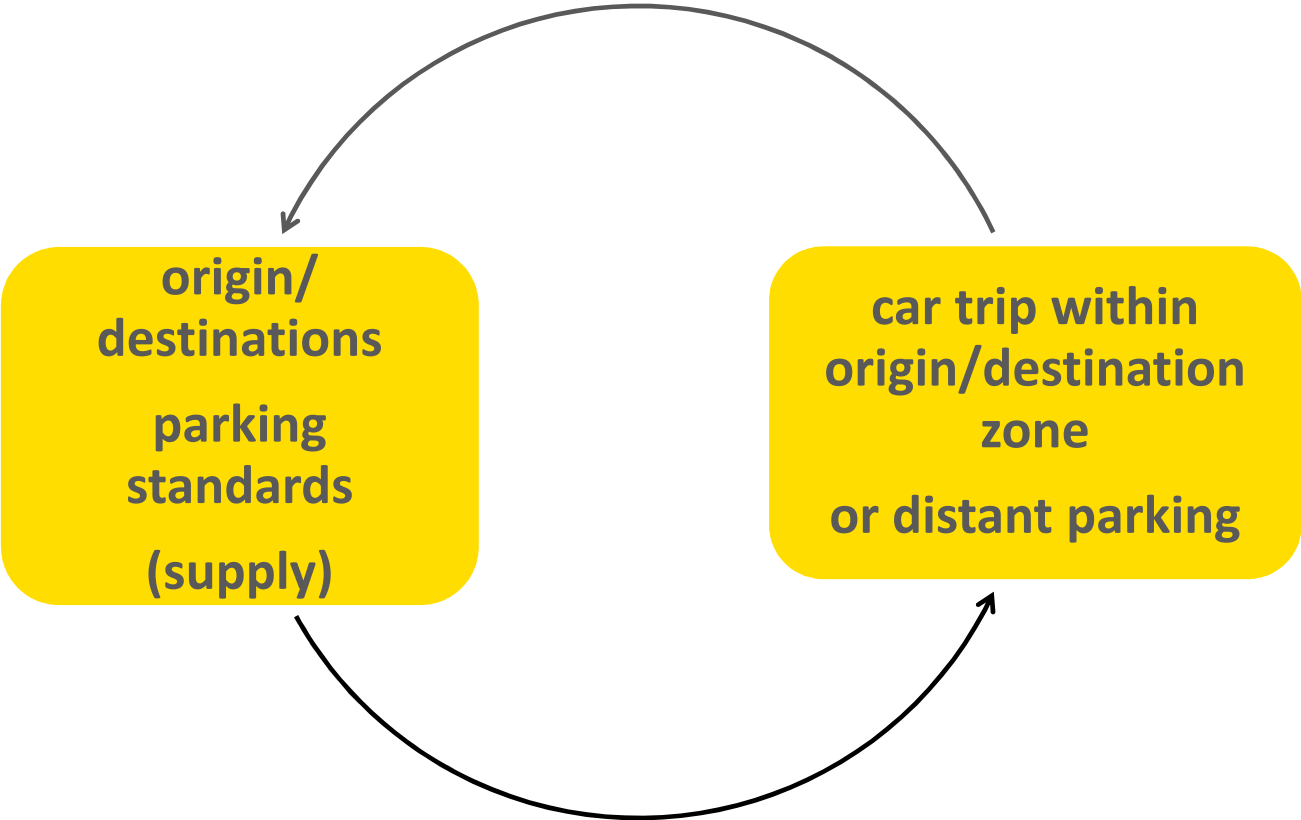
Transport market = modal choice



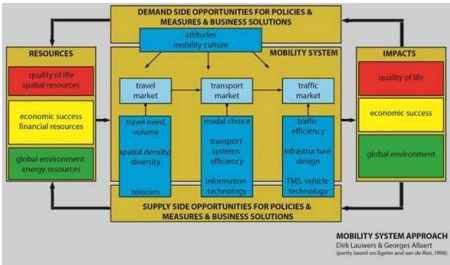
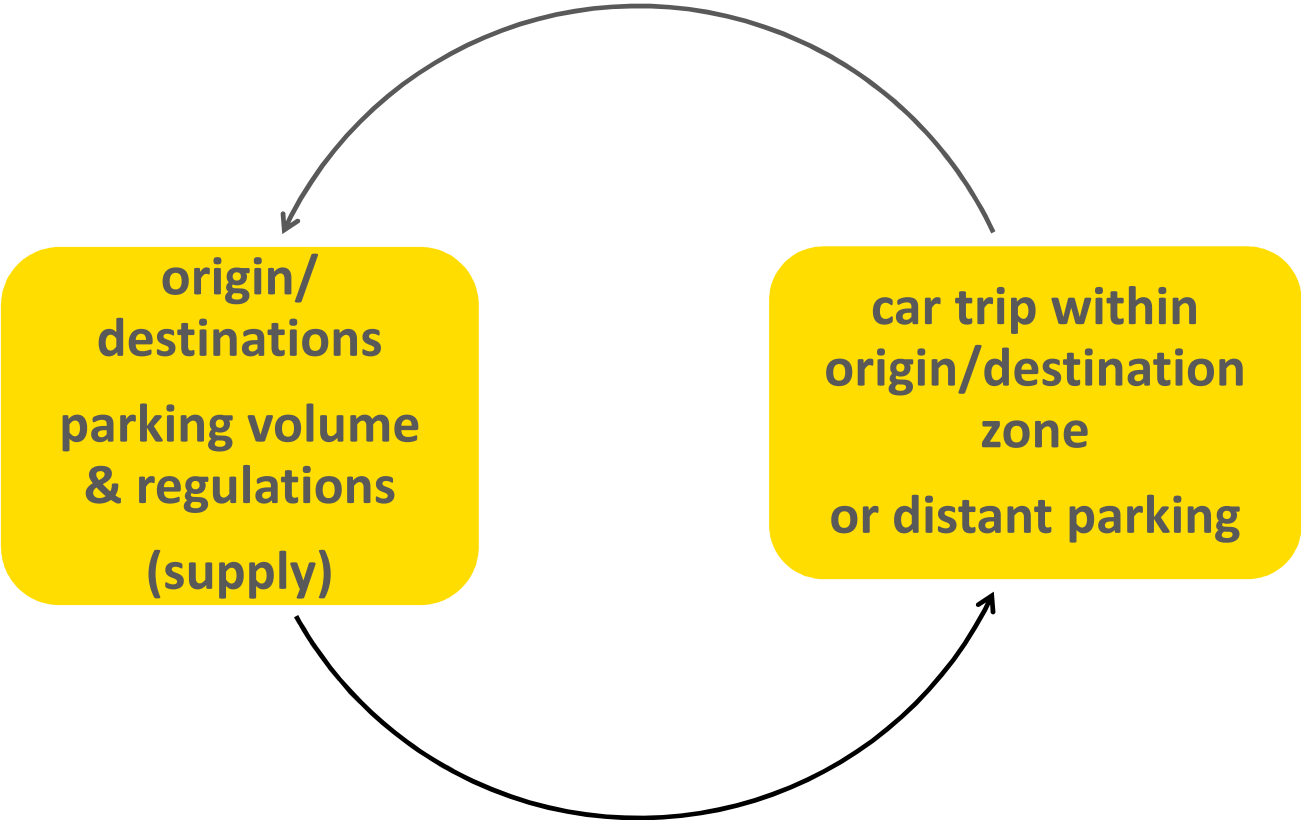
Transport market = modal choice



Traffic market = route choice



Traffic market = route choice



Evidence based?

Research question:

**(how) are mobility choices influenced by parking policies?
car ownership versus car sharing and other modes**

Barcelona



Den Haag

In Den Haag after introduction of a payed permit regulation in city centre in 2012 more the 800 families sold their second/third car within 6 months

Evidence based?

Research question:

(how) are mobility choices influenced by parking policies?

modal choice

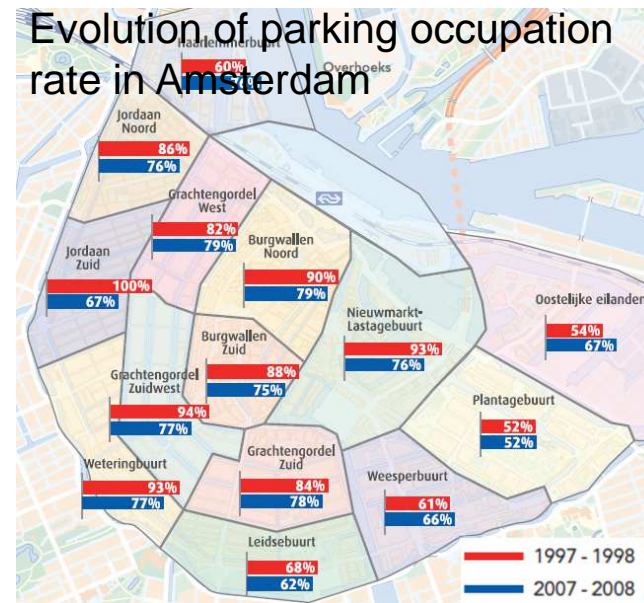
Copenhagen



Munich

In 2000—when parking management was just beginning—42% of all trips were made by car, 32% by public transit, 8% by bicycle, and 18% by foot. In 2008, when parking was managed across the whole inner city, 36% of all trips were made by car, 21% by public transit, 14% by bicycle, and 29% by foot. That amounts to a 14% reduction in car use, a 75% increase in bicycle use and a 61% increase in walking. From 2000 to 2008, every year there were 1,700 fewer automobiles owned by residents in the inner city.

Research question:
(how) are mobility choices influenced by parking policies?
route choices <- choice parking zone



Let's talk

prof. Dirk Lauwers
Research Group for Urban Development
University of Antwerp
Faculty of Design Sciences
Mutsaardstraat 31
2000 Antwerpen
Belgium

<https://www.uantwerpen.be/en/research-groups/center-for-urban-development/>

mailto: dirk.lauwers@uantwerpen.be
twitter: [@Dirk_Lauwers](https://twitter.com/Dirk_Lauwers)
www.linkedin.com/in/dirk-lauwers-b759404

T +32 475 65 65 20

