

praktische kennis **direct toepasbaar**



# WHY DO WE DISCUSS PARKING AND BEHAVIOUR?

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# STARTING POINT

- Knowledge about travellers and their behaviour is key to influencing mobility
- Parking policy is one of the most effective forms of influencing mobility behaviour
- Parking policies combined with MM can play an important role in sustainable urban mobility
- However, exact knowledge about parking and mobility behaviour is lacking





# COMPLEXITY OF MEASURING PARKING POLICY

1. There is little research on the effects of parking
2. Effects of parking policy are difficult to calculate
3. Effects are multifaceted and success is dependent on the exact goals
4. Existing research is not always well translated into usable knowledge for practitioners

Financially  
sound

Social &  
Healthy

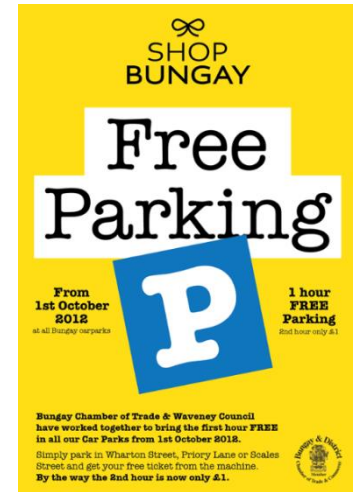
Congestion &  
Economy

Sustainable

Spatial quality

# CONSEQUENCE

- Parking policies are often (partly) based on emotions and misconceptions.
- Discussions not always supported by facts.
- Suboptimal, or outright wrong, solutions may be taken:
  - ☐ in the management of existing parking places,
  - ☐ the construction of new parking supply,
  - ☐ the integration of parking in the wider strategic planning context.



# WHY IS THIS IMPORTANT?

1. Parking uses much public space
  2. Parking spaces are very costly
  3. Availability of parking at locations has a significant relationship with car possession and car use
- Mingardo 2016: *“This bring us to the paradox that we spend a lot of money for cars that pass most of their time parked (= not used) and even more money to build parking capacity that is most of the time not used”*



# PROJECT PARKING AND BEHAVIOUR

## Parkeren en gedrag

Een totaaloverzicht van alle relevante kennis op het gebied van parkeren en gedrag

### Primary objectives:

- Collect, structure and analyse existing knowledge
- Complement with best practices

### Secondary objectives:

- Provide an action agenda for more research
- Provide necessary information for parking model



# PROJECT APPROACH

- Working group
- ☐ Municipalities: Rotterdam, The Hague, Utrecht, Arnhem, Elburg
- ☐ University: VU Amsterdam, TU Eindhoven, EU Rotterdam
- ☐ Vexpan (Parking platform, EPA member)
- ☐ Contractor: Muconsult, Empaction

## Parkeren en gedrag

Een totaaloverzicht van alle relevante kennis op het gebied van parkeren en gedrag



# TARGET GROUP

- Municipalities
- Employers
- Property developers
- Example of municipality X:
  - ☐ builds a new apartment complex for 500 first home owners
  - ☐ converts part of the parking capacity in a business district into a boulevard
  - ☐ introduces parking tariffs in a leisure area

## Parkeren en gedrag

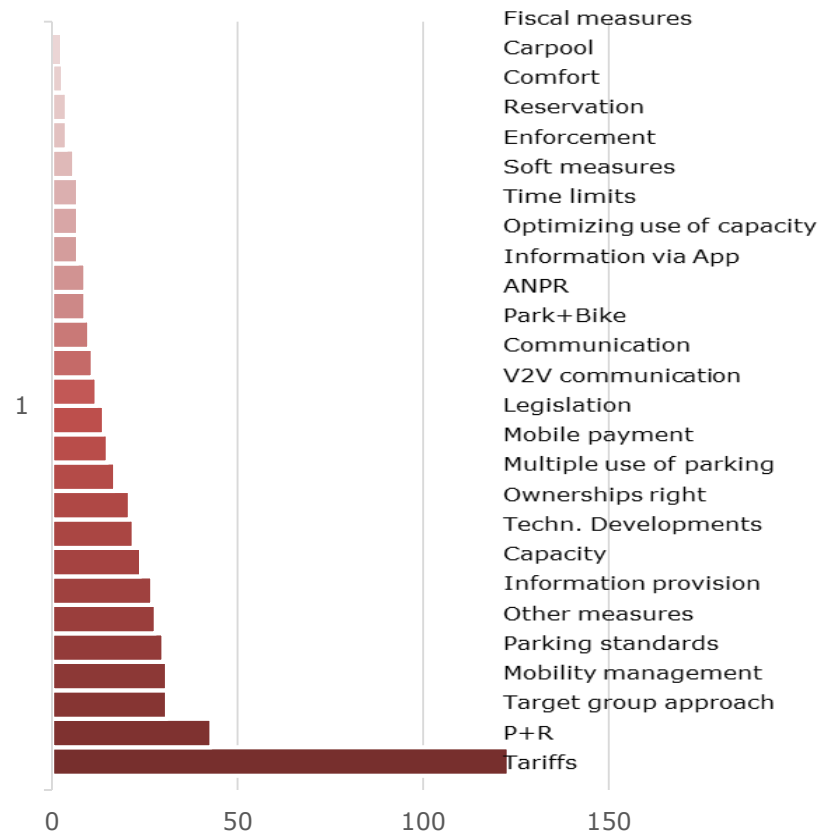
Een totaaloverzicht van alle relevante kennis op het gebied van parkeren en gedrag





# AVAILABLE LITERATURE

- Analysis of 500+ publications shows:
  - ☐ Knowledge is scarce, incomplete and diffused
  - ☐ Most knowledge is about tariff structures
  - ☐ Little direct information about cause-effect relationships



## Structure of E-book: selection menu

Parking destination	{	Residential area	Shopping	Leisure industry	Companies	Events
		Parking problem	Accessibility	Liveability	Public space	Economy
Policy goal	{	Capacity measures	Park & Ride	Multiple use of parking space	Car sharing	Valet Parking
		PRIS	ANPR	Mobile parking	Reservation system	Pre- en ontrip info
		Tariffs	Legislation	Time limits	Parking norms	Long parking regulation
		Shopping street regimes	Enforcement	Target group approach	Stimulate alternatives	Discourage ownership of 2nd car
		Employers approach	Hospitality	Communication	Participation	Tradeable permits
Measures	{					

# CLUSTERING OF MEASURES INTO 5 GROUPS



## OUTPUT 1: GENERIC ESTIMATE OF EFFECTS ON POLICY GOALS

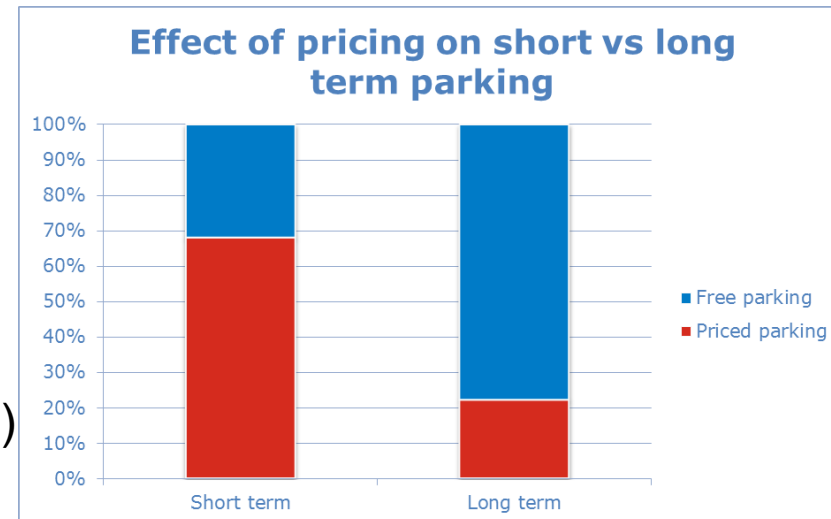
Instrument	Effect estimate	(car) congestion	Liveability	Spatial quality	Economy	Social	Financial	Key indicator effected
Reduce capacity	If occupancy rate is 83%-95%: -1.0 parked cars per reduced place	--	+	++	0/-	+/-	0/-	Occupancy rate
P+R	10 car users on a P+R is 5 cars less in de city centre	+	+	0/+	+	0	-	Tariff, travel time, comfort
Parking tariffs	Price elasticity on average is -0,3	+ / ++	0 / +	0 / +	0 / -	0 / -	+ / ++	Parking duration, income, available alternatives, target group



## **OUTPUT 2: FACTSHEETS OF > 20 MEASURES**

## **OUTPUT 3: 40 PAGES OF CASE STUDIES**

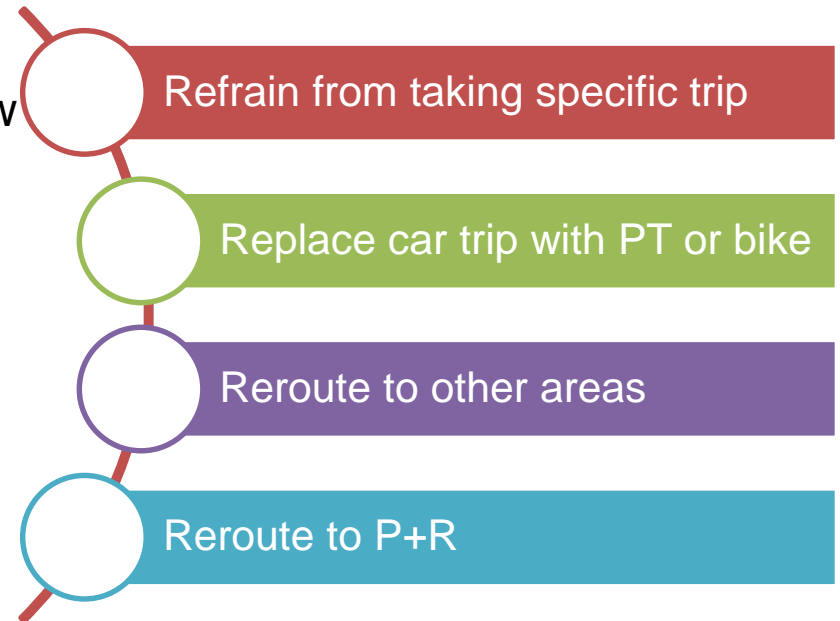
- Description of the measure
- Effects on parking behaviour
- Effects on policy goals
- Factors influencing success or failure
- Description of relevant case study
- Quantitative rule of thumbs (if available)
- Links to external references



source: Homan, 2009

# IMPORTANCE OF MONITORING AND EVALUATION

- This E-Book and tool provides overview of existing knowledge
- More research is necessary to know exact behavioural effects
- What happens exactly to car users when “affected” by parking policies



# IMPORTANCE OF MONITORING AND EVALUATION

1. Adjustments during the project
2. Learn about behavioural effects and goal realisation
3. Increase enthusiasm of parking policy measures
4. Increase efficacy of policies



## **WRAP UP**

- Using better knowledge in parking policy helps us to:
  - ☐ prevent oversupply of parking space
  - ☐ reduce (societal) costs of parking
  - ☐ contributes to more liveable cities



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# CLUSTERING OF MEASURES INTO 5 GROUPS

