



**Wuppertal  
Institut**

# Policy measures for the use of e-bikes and their environmental potential

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Scientists for Cycling Workshop

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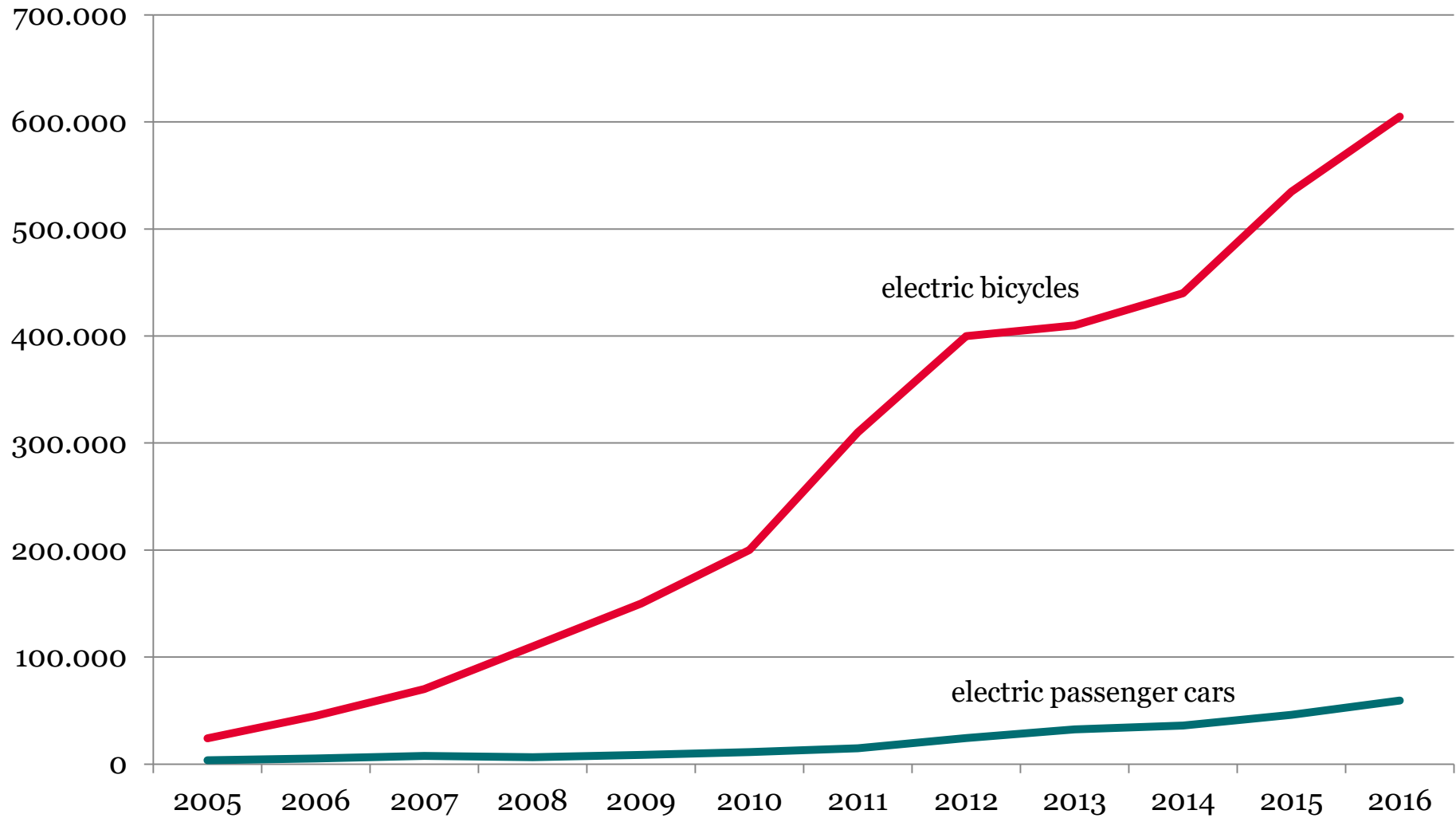
**Different user groups (mobile people) have different preferences with regard to their modal behaviour**

**Policy measures have different mechanisms/different influence on user groups**



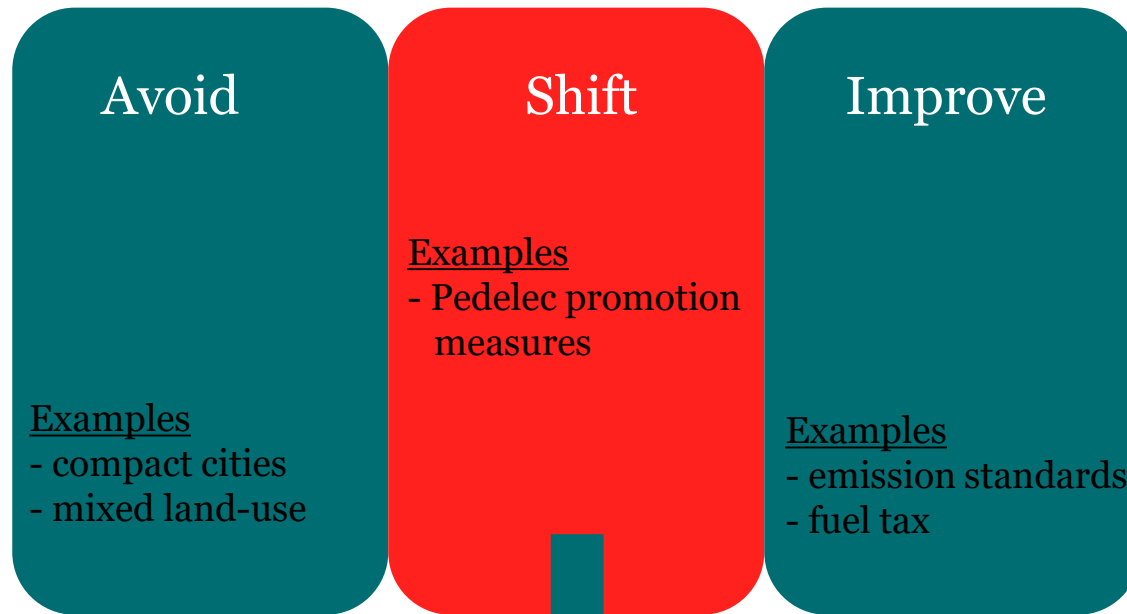
**Decision to use a certain mode (pedelec/others) for a certain trip**

# Market development of electric vehicles in Germany



Source: KBA/ZIV

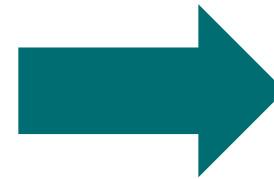
# Strategies for sustainable mobility ...and the role of pedelec promotion



VS.



Müller et al. 1992



## Attitude-based mobility types ...and their pedelec-affinity

Mobility type	Motifs for modal behaviour	Pedelec-affinities
Status oriented motorists	Safety, comfort	leisure time, little usage
Autonomic car enthusiasts	Travel time	Commuting, leisure, long distances
PT fans	Travel time	only for specific situations
Bicycle fans	Travel time, comfort	supplement for traditional bike, e.g. for long distances
Self-determined, multimodal persons	Travel time, comfort, cost, Safety	equal usage for different purposes
Individual transport preferring persons	Travel time, cost	time and money are crucial
Car-dependent persons	Travel time, cost, comfort, safety	to reduce cost as compared to car, but many restrictions

## Pedelec-promoting measures ...and their mode of action

Policy measures	Mechanisms
Infrastructure (cycle ways, junctions)	Travel time, safety
Speed limit at 30 km/h (spatial comprehensive)	Travel time, safety
Parking	Travel time, comfort
Information, campaigns, Promotion, education	(Public) image
Purchase incentives	Cost
Increase of costs of motorised transport	Cost

# Scenarios for the city Wuppertal ... promoting interventions assumed



## BAU

rewarding scheme

## Pedelec promotion

rewarding scheme

main routes  
snow clearance  
campaigning

tax privileges  
rewarding  
abolition motorbikes  
marketing  
speed limit 30 km/h  
mobility education

parking

## External factors

more shopping and leisure trips of the elderly  
peak oil  
climate change  
multimodality

2012

2020

2030

2050



### Mobility type

- Status oriented motorists
- Autonomous car fans
- Public transport fans
- Bicycle fans
- Self-determined, multimodal persons
- Individual transport preferring persons
- Car-dependent persons

### Travel demand model delivers information about

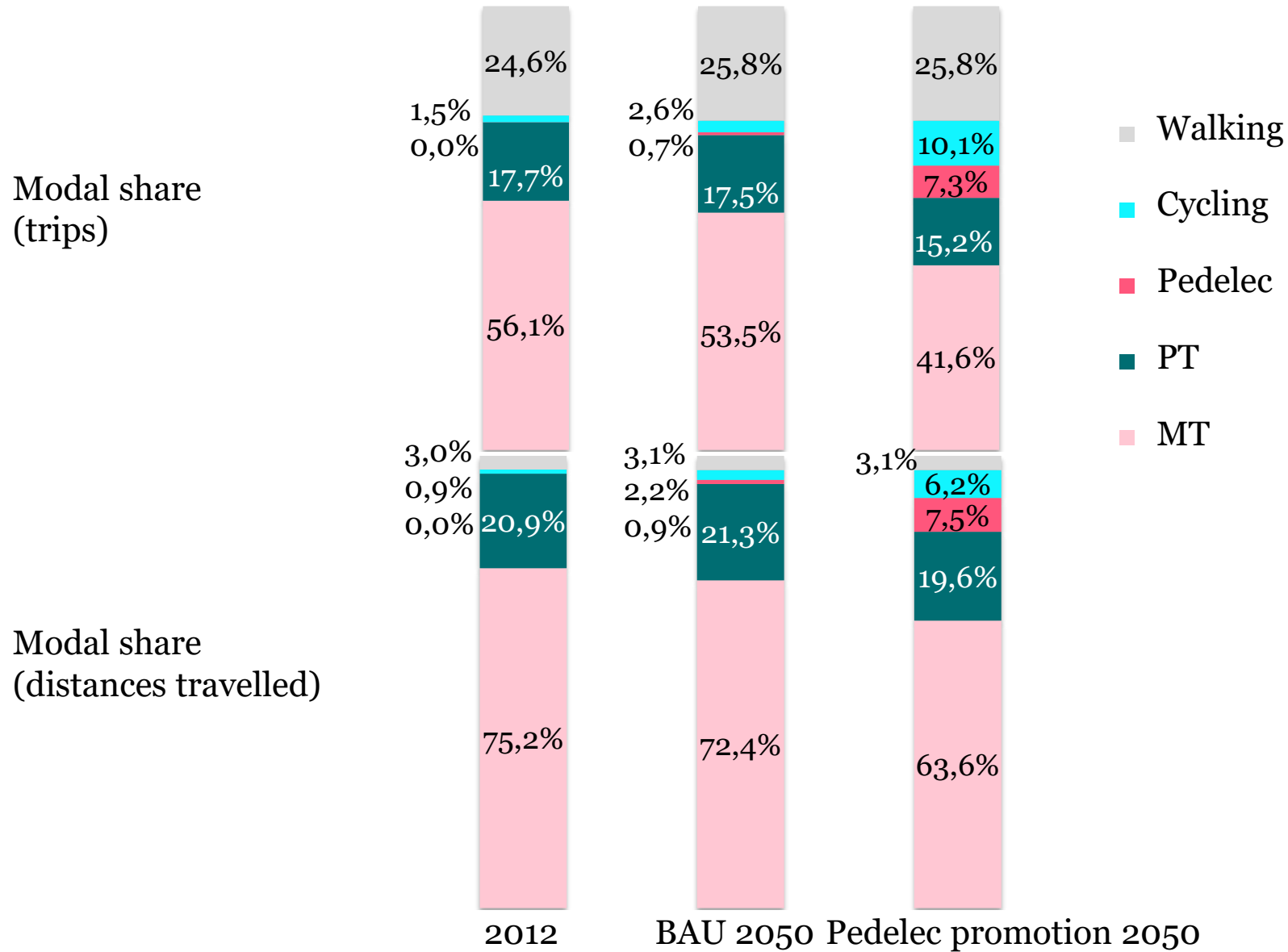
- Trip distances
- Trip purposes (working, education, procurement, shopping, leisure, accompaniment)
- Parking management (prices)
- Parking situation (numbers, distances, other circumstances)
- Slopes

1.5 mio. trips per day

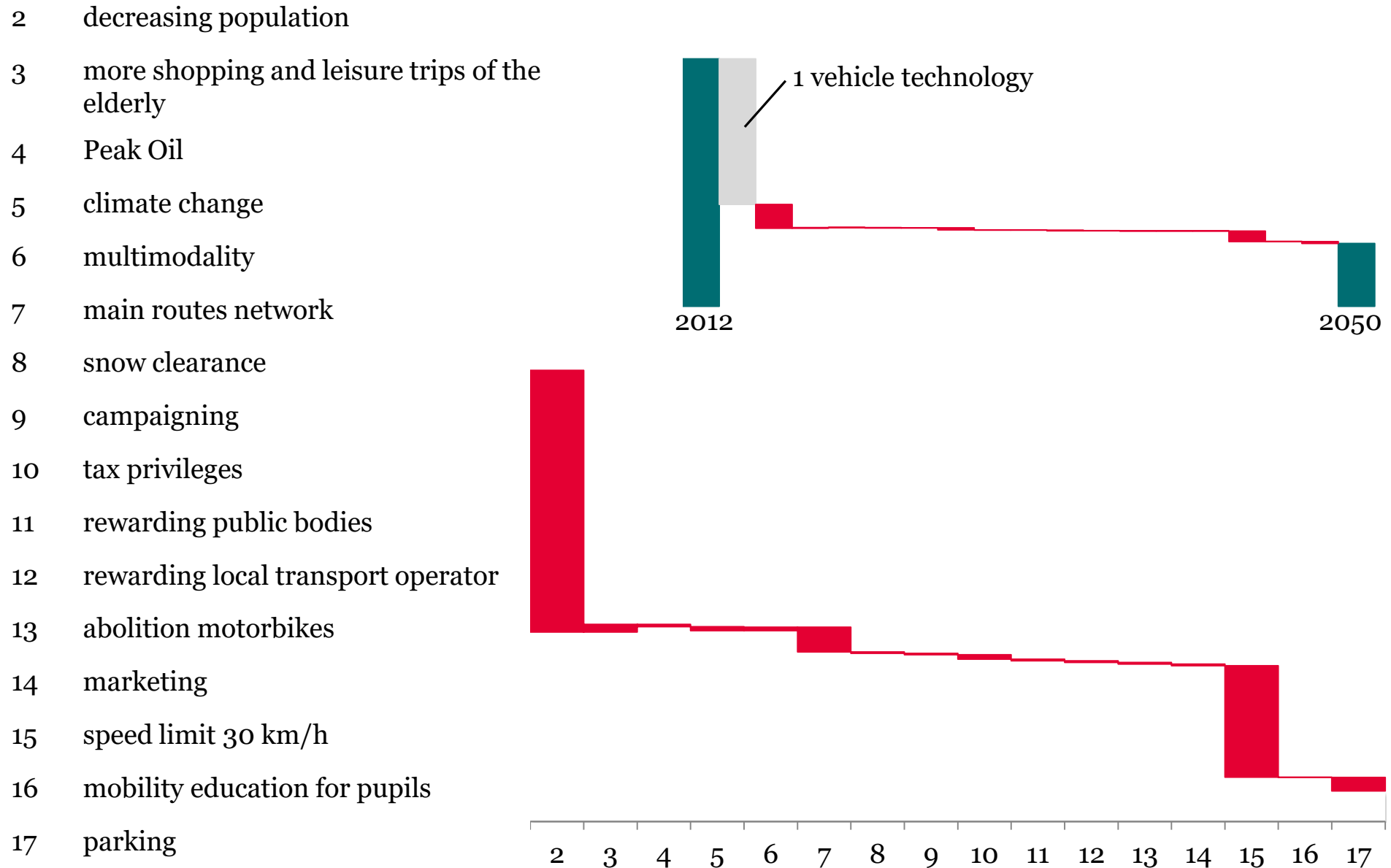


**Decision to use a certain mode (pedelec/others) for a certain trip**  
**(travel time, travel cost, comfort, safety)**

# Scenario results: modal share



# Scenario results: comparison of measures' effects (carbon dioxide emissions)



- Promotion of pedelecs is worth the efforts, but it needs ambition (not a no-brainer)
- most important policy measures are speed limits (spatially comprehensive) and parking
- If policy is ambitious, than purchase incentives can play a role
- traditional cycling benefits significantly, public transport remains stable
- The potential for Wuppertal is high, but policies are important everywhere
- Local decision makers are main actors, the transition towards sustainable/low-carbon mobility can be realised independent from car manufacturer's activities

# Making Utopia possible