



DENKEN, DOEN en LATEN



Rush hour avoidance

9 maart 2011

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 - Characteristics of participants
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 - Successful projects: over 10.000 participants



Concept

- Target audience: car commuters on a specific corridor
- Reward volunteers with a small fee for each morning not travelled during rush hour
- People will find optimal alternatives
- Scientific experiment with practical consequences
- Later: measure to mitigate road works









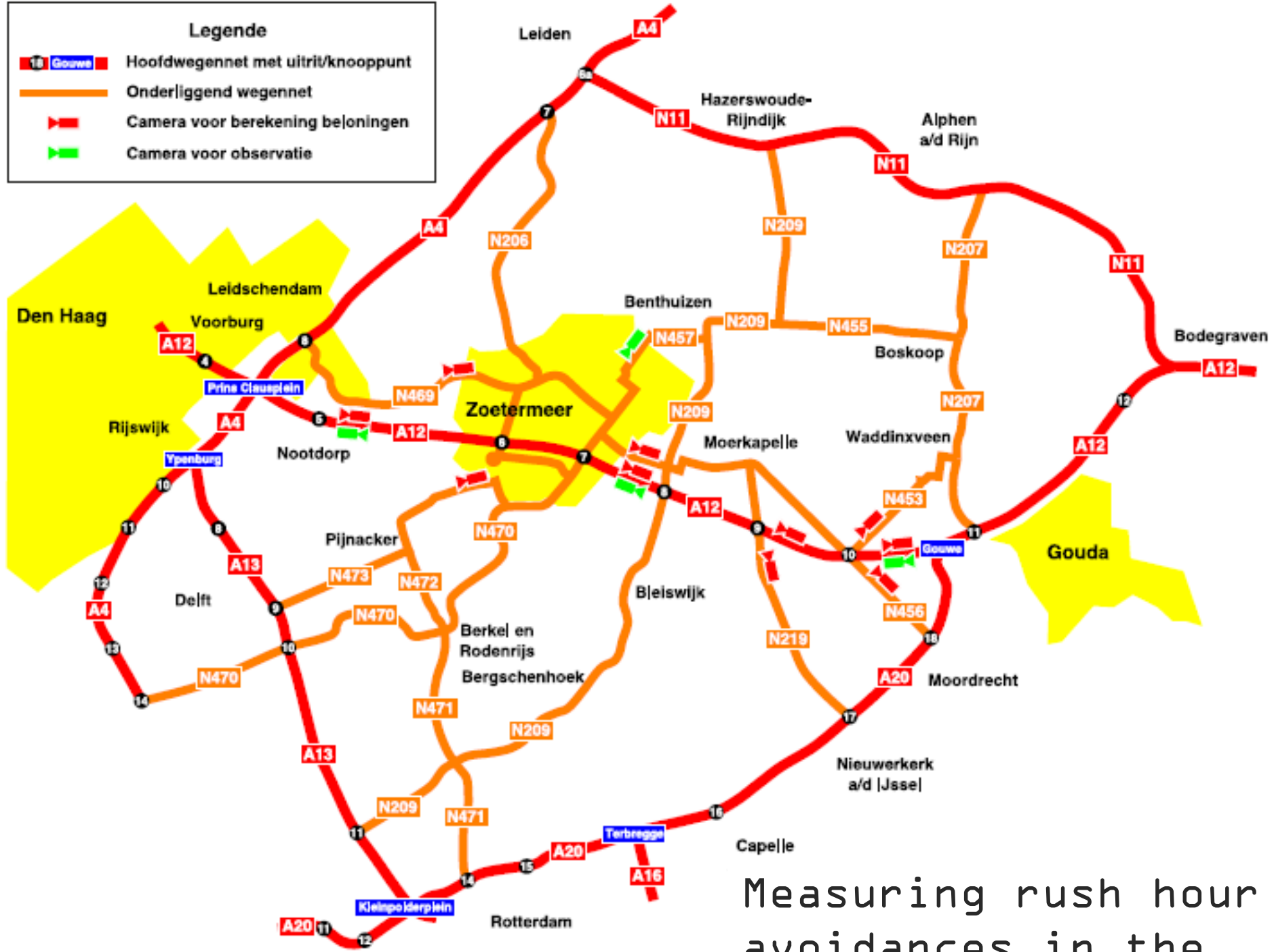
General Approach

- Number plate recognition
- Invite frequent commuters (>4 times a week)
- Install On Board Units
- Hand out smart phones and PT discount cards
- Measure rush hour avoidances and monitor behaviour



Legende

-  Hoofdwegenet met uitrit/knooppunt
-  Onderliggend wegennet
-  Camera voor berekening beloningen
-  Camera voor observatie



Measuring rush hour avoidances in the

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Finished and ongoing projects

2006: Zoetermeer - the Hague experiment

2008: Gouda-Zoetermeer-the Hague extended experiment

2009: Public Transport Utrecht-the Hague

2007: Bridge Hollandse brug, road works

2008: Bridge Moerdijk, road works

2009: Bridge river Waal, road works

2011: Region Arnhem-Nijmegen, road works

2011: City centres of Den Bosch,

Eindhoven

2011: Employees of companies in the

Hague



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Practical: Selection of volunteers

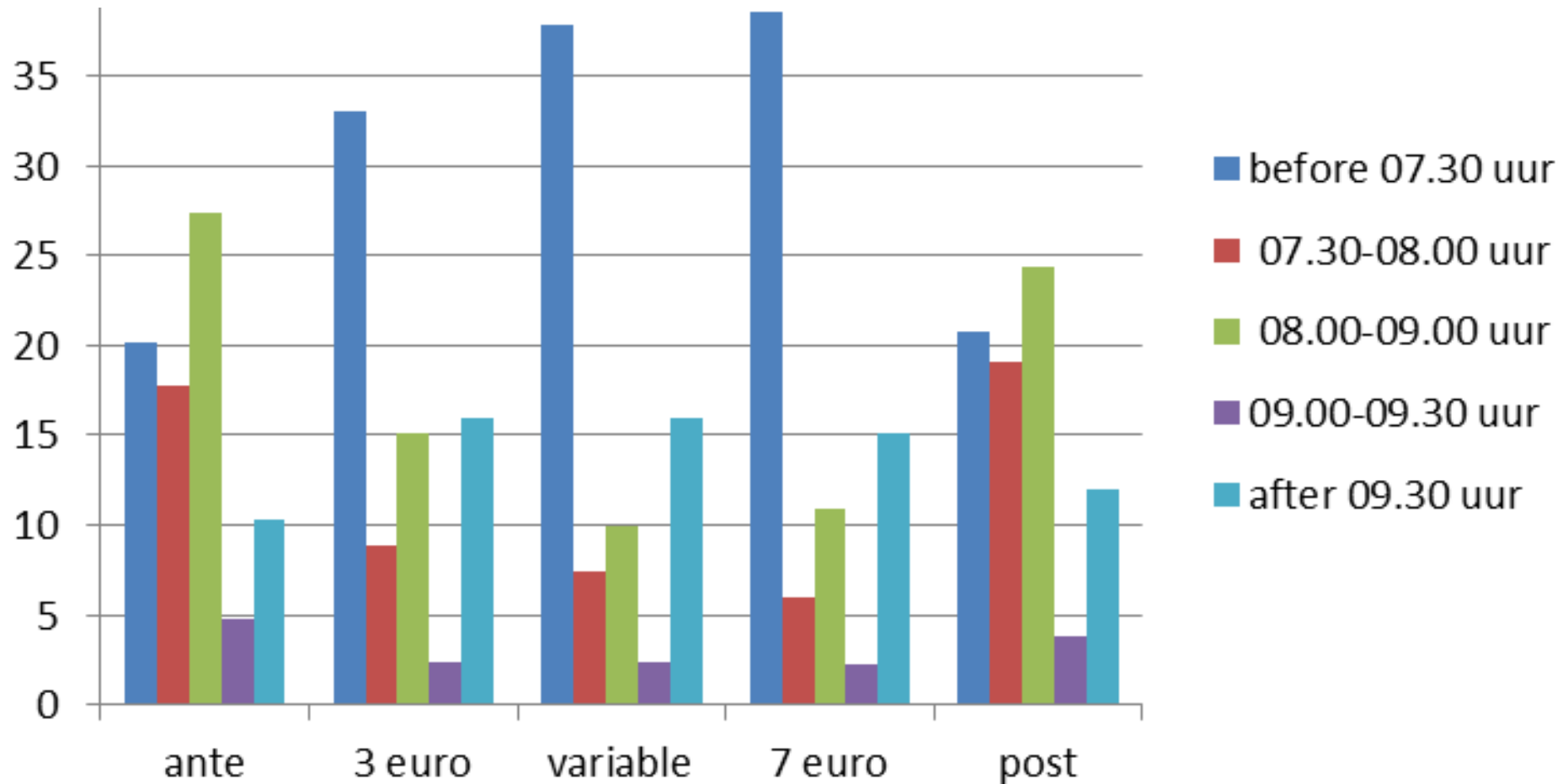
- Camera's combined with publicity
- Number plates → address; privacy
- Max. 1 participant per address
- Record all number plates per address



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Practical: Effects of Reward

4 euro seems to be optimal



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Practical: Front- and backoffice

- Customer relations important
- Keep it simple: technical innovation as pay by mobile had to be cancelled
- Participants appreciate a helpdesk by phone
- First trial, 340 participants: 0.5-0.75 fte
- Backoffice complex due to multiple project partners



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Practical: Press and Politics

- Handing out money: sensitive subject
- Monetizing mobility: very sensitive
- Present as scientific experiment
- Shout out good results



Practical: Fraud

- Fraud is possible
- Back-up monitoring
- Measurement of entire network
- Scan for abnormalities in data



Results: Participants

Participants are:

- Flexible in working hours
- High education
- Family

Non-Participants:

- Can't change their working hours (40%)
- Forgot to register (25%)
- Don't want to change (20%)



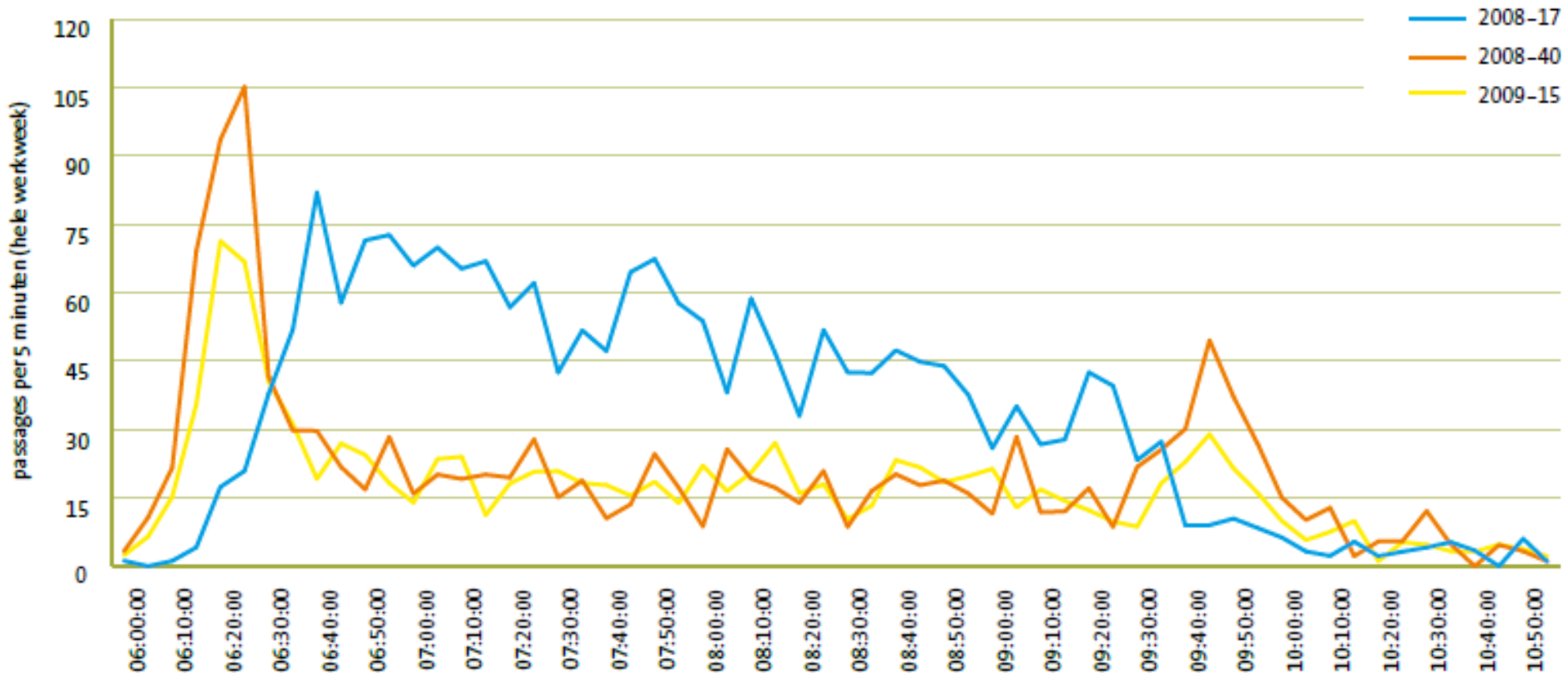
Results: Numbers

	Spitsmijden 1 2006	Spitsmijden 2 2008	Spitsmijden 2 (PT) 2009	FileMijden A6 2008	Slim Prijzen 2009
Route	A12 Zoetermeer - The Hague	A12 Gouda - The Hague	train route Utrecht - The Hague	Hollandse Brug during road works	Waalbrug during road works
Reward	€3-€7	€4-€8	20% discount	€4-€6	€4
Invited	3500	3600	2500	7500	
Participants	340	771	124	2900	6600
Avoidance/ day	70	160	123	500-800	1300

Results: Alternatives used; time

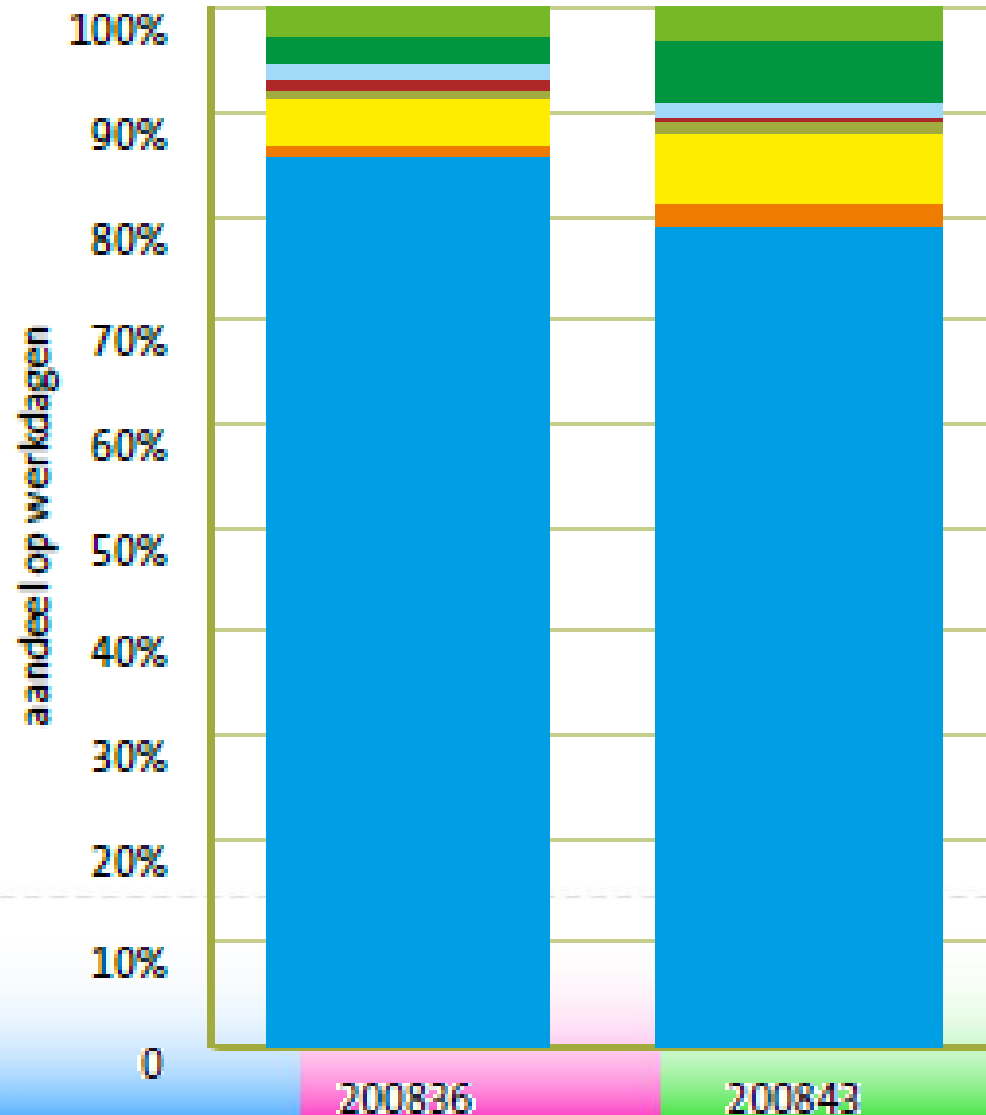
FIGUUR 3.7 PASSAGES ZOETERMEER

Richting Den Haag



Results: Alternatives used; mode

- Location
- Work at
- home
- Other
- Bicycle
- Bus
- Train
- Carpool
- Car



Lessons

- Price incentive is an effective instrument
- Change in time easier than change in mode
- Incentive required to sustain change
- Involve employers to empower employees
- Offer many alternatives; they will all be used

Current and future projects

- Scientific experiments were successful
- Current projects focus on mitigating road works
- Largest so far: SlimPrijzen over 10.000 participants
- Road pricing cancelled; alternative price incentives important



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Spin-off to the future: Mobility leasing

- Number plate recognition found high share of lease cars in rush hour
- Offer mobility budget to employees
- Offer cheaper alternatives to employees
- This creates a financial incentive to adopt behaviour
- A new way to introduce time-dependent cost of mobility



Questions...

