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# Psychology and energy conservation

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# How to promote energy savings?

- › Information: change knowledge, perceptions, motivations, norms, preferences
- › Change context in which decisions are made
  - Make energy savings relatively more attractive or feasible
  - Pricing strategies
  - Legal strategies
  - Energy efficiency (technology)



# Tailored information

- › Tailored information via interactive webpage
  - Based on possession and use of appliances
- › Individual feedback on energy savings
  - Differences before and after intervention
- › Assess energy use related to possession and use of goods and appliances



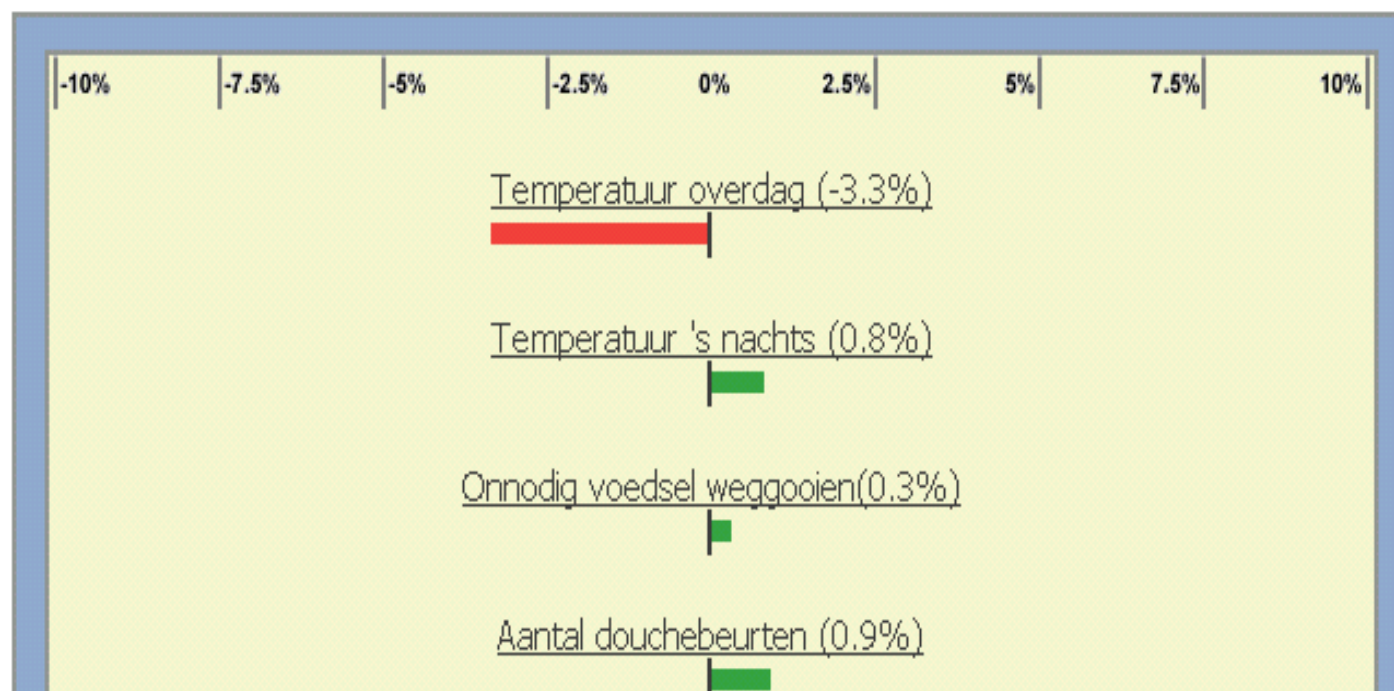
## [Wat heeft u bespaard ?]

In de onderstaande figuur is weergegeven hoe uw energiegebruik is veranderd ten opzichte van het begin van dit experiment.

De **groene** balken geven weer op welke terreinen u energie heeft bespaard.

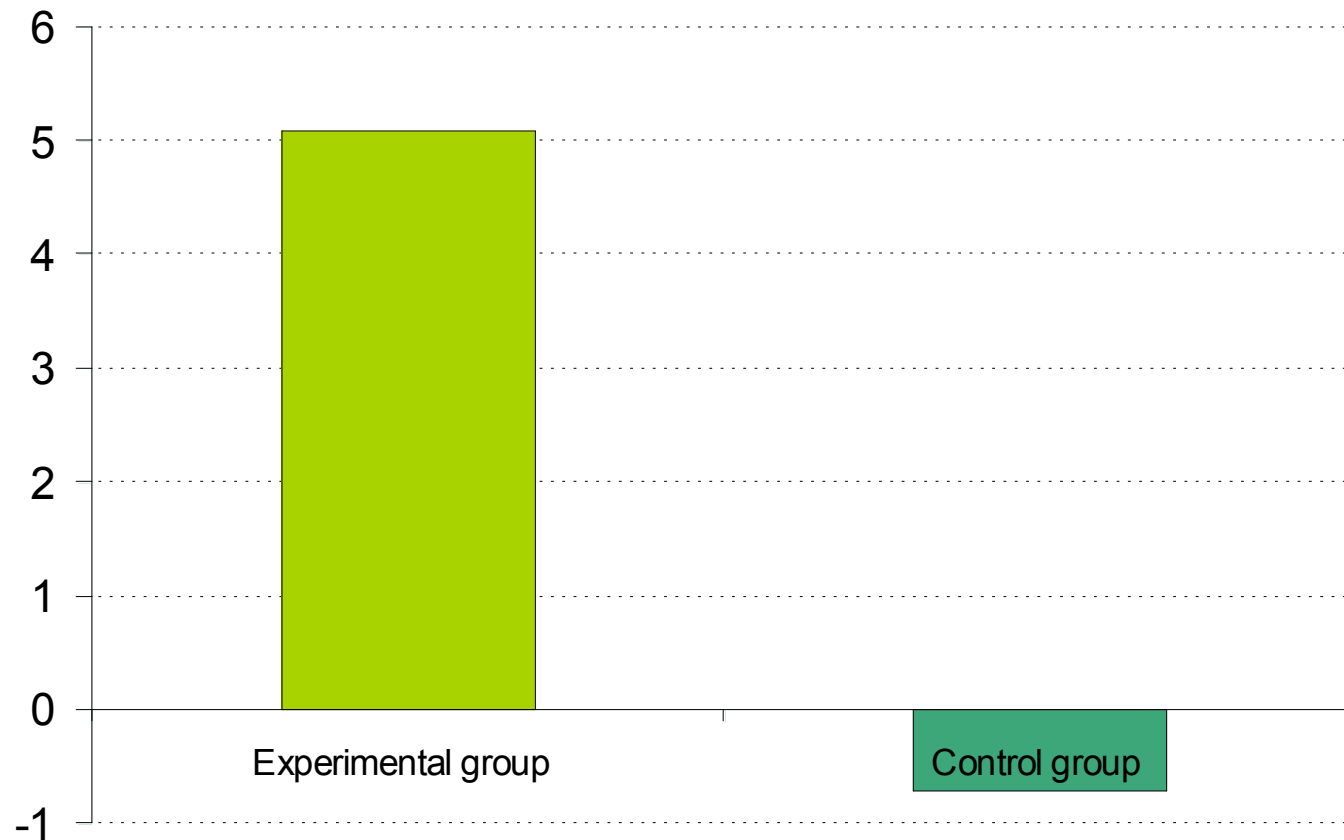
De **rode** balken geven weer op welke terreinen u meer energie bent gaan gebruiken.

Hoe langer de balken, hoe groter de verandering in uw energiegebruik.





# Results





# Motivations

- › Energy savings often associated with higher costs and effort
- › Strengthen normative goals
  - Values: environmental ethic
  - Social norms
- › Make gain and hedonic goals compatible with normative goals by changing context
  - Pricing policies
  - Make energy saving fun



# Social norms

- › Descriptive and injunctive norms
- › Copy norm violations of others
- › Cross norm inhibition effect?



# Study 1



No graffiti (N= 77) **33%**

Graffiti (N=77): **69%**





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## Study 4



No firework (N= 50)

**52%**

Firework (N=46)

**80%**



## Study 5/6



No graffiti or litter (N=71)	<b>13%</b>
Graffiti (N=60)	<b>27%</b>
Litter (N=72)	<b>25%</b>



# Cross norm inhibition effect

- › People are more likely to violate norms when they see that other norms are being violated
- › Normative goals are pushed to the background in disordered settings (goal framing theory)

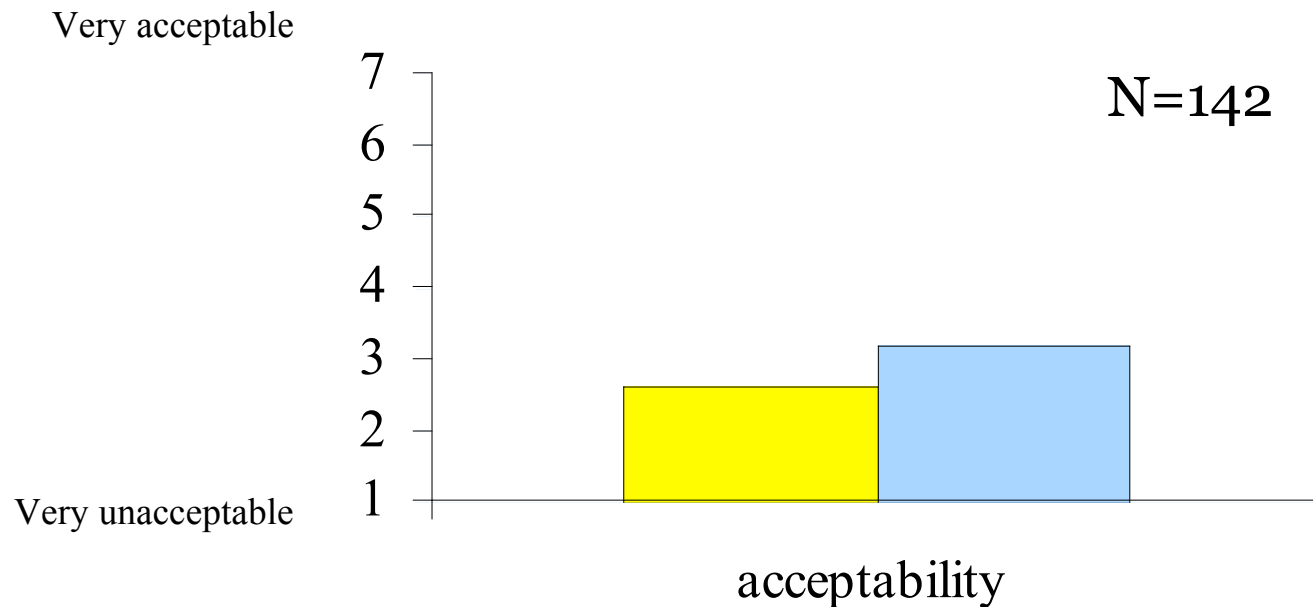


# Pricing policies

- › Effective in reducing car use
  - London, Singapore, Stockholm
- › However, lack of public support
  - Kilometre charge NL
- › Which factors influence policy acceptability?
  - Expected and perceived effects
  - Fairness

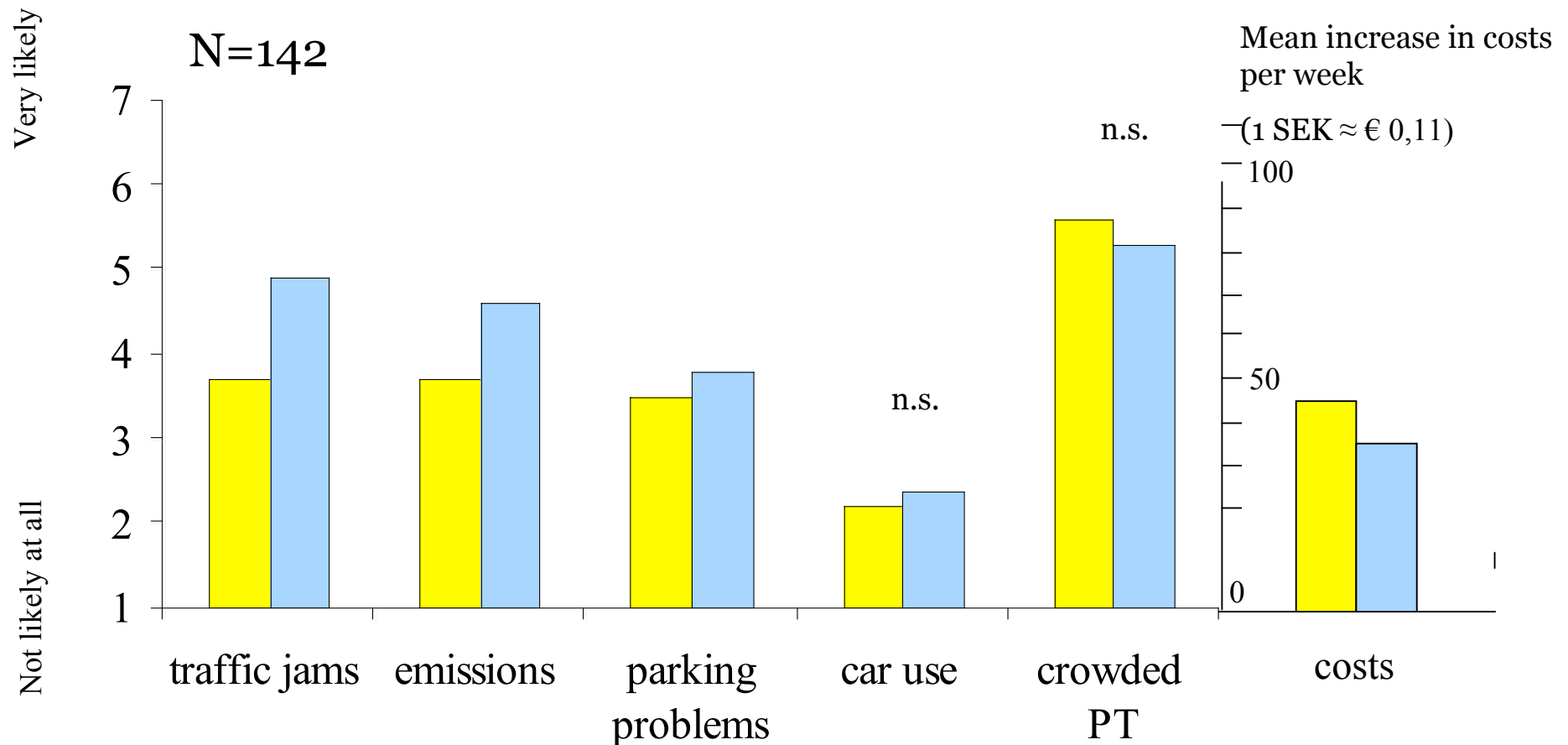


# Acceptability Stockholm trial





# Effects Stockholm trial





# Conclusion Stockholm trial

- › More positive about effects on congestion, environmental problems, parking problems
- › Additional costs lower than expected
- › Acceptability higher after trial
- › Acceptability increases because effects more positive than expected?



# Acceptability and effects

- › Pricing policies more effective when people expect environmental problems and congestion to reduce
- › Effects on individual car use or costs less influential





# Acceptability and fairness

- > High correlation acceptability - fairness
- > Fairness principles:
  - Everybody pays the same
  - I am not worse off the others
  - I am not worse off than before
  - The polluter pays
  - Low income groups can still afford to drive
  - Nature, the environment and future generations are protected



# Acceptability and fairness

- › Policies more acceptable and fair when:
  - Nature, the environment, and future generations are protected
  - Equality: everybody pays the same
  - Worse of than before or others less important



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