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Publication date:
2017

Citation for published version (APA):

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"Cycling was never so easy!"
Analyzing e-bike commuters motives, travel behaviour and experiences using GPS-tracking and interviews

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Background: e-bike use, growth and diversification

- Almost 1 in 3 bikes sold in The Netherlands today has some form of electrical assistance.
- E-bikes permit covering longer distances at higher average speeds against reduced physical effort (Fishman & Cherry 2013)
- Despite high use among older people and for recreational purposes, they are increasingly used by younger retirees, working adults and younger people for commuting, shopping and going to school (Peine et al, 2016; KIM, 2016; Plazier et al, 2017)
- E-bikes' contribution to more sustainable transport behavior to date seems limited, but potential is high.
- To what extent can e-bikes substitute motorized commuting?

Main findings

E-bike adoption mostly followed a key event

- The majority of participants adopted an e-bike following change in the home or work environments (e.g. children, retirement)
- Participants mentioned the difference between assisted cycling in and outside the city.
- Increased comfort and efficiency facilitated adoption.

E-biking to work took longer than taking car or public transport

- Most commuters were shorter in distance, but took longer than commuters by car and bus. This suggests that non-economic travel motives did not deter participants from using an e-bike instead of car or bus.
- E-bike use was lower when more activities were combined and in non-work-related journeys, in which car use, conventional cycling and walking were more common.

Main trigger:

Key event

- Changes in home or work environment
- Complement and contrast results permits a “multi-layered understanding” (Meijering & Weitkamp, 2016)

Facilitated by:

- Changes in home or work environment
- Complement and contrast results
- Enjoyment of the day

Conclusions

- E-biking manifest itself as an appealing alternative to motorized commuting for those for which conventional cycling is not a realistic option.
- Direct competition with car use means that efforts to increase e-bike use should be directed at car commuters.
- E-bike commuting might not always be the faster option, but enabling an appealing e-bike ride to work can mitigate the role of increased travel time in commuting.

Data and methods

- N = 24 e-bike commuters (M= 45, SD = 9.3)
- Participants formerly commuted by car or public transport, and had recently adopted an e-bike. They still used e-bike, car and public transport interchangeably.
- Phase 1: 14-day GPS tracking of all outdoor movements. Phase 2: follow-up in-depth interviews
- GPS-data formed the input for follow-up in-depth interviews, transcripts were used to complement and validate GPS-data
- Complementing and contrasting results permits a “multi-layered understanding” (Meijering & Weitkamp, 2016)

Objectives and research questions

- Provide further insight in the potential of e-bikes to substitute motorized commuting
- What were motives for purchasing and starting to use an e-bike?
- E-bike commuting might not always be the faster option, but enabling an appealing e-bike ride to work can mitigate the role of increased travel time in commuting.

Past, current and future research

- The authors of this poster previously studied e-bike use among the younger population, see Plazier et al, 2017, “E-bike use among the younger population, a study among Dutch students” Travel Behaviour and Society 8
- The project presented here is under review with an international academic journal
- Current and future research explores the contribution of e-bikes to mobility in daily life of rural residents. This study is conducted with Provincie Groningen and Gemeente Eemsmoord.
- For more, visit www.researchgate.net/profile/Paul_Plazier