Appendix 1

impActs of actiVE traNsport in Urban Environments (AVENUE) project
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The AVENUE project is commissioned by the Dutch National Institute for Public Health and the Environment as part of the strategic research program. The project started in 2011 and lasted till March 2015.

Aim
AVENUE aims to investigate the feasibility of policy measures and/or interventions aiming to induce a mode shift and to provide in-depth information on the personal and environmental characteristics of short car and active (cycling & walking) transport trips associated with transport choice.

Context
AVENUE has a focus on Dutch national representative data. AVENUE includes four trip purposes:

- Shopping
- Going to public natural spaces
- Going to sports facilities
- Commuting

We chose these particular purposes since it was expected that these purposes are of interest to policy makers and developers of intervention measures since they imply a clear set of stakeholders and partners involved in case an intervention or policy measure in this domain is considered.

Approach
AVENUE uses an integrated approach and includes a combination of qualitative (focus groups, policy analysis) and quantitative methods (systematic literature review, questionnaire and (secondary) data analysis).

Short distance trips
To enhance the feasibility of measures aiming to induce a mode shift from car to active transport modes, car trips that may potentially be replaced by bicycle trips should not exceed a feasible cycling distance. In the AVENUE project we focused on trips with a distance up to 7.5 km.

Qualitative data collection
As part of the AVENUE project focus groups were conducted to gather insight in the motivations for transport choice for the four trip purposes. A policy analysis was conducted to understand
the character and shape of transport policies aiming to induce a mode shift as well as identifying Health in All Policies approaches aiming to induce such a mode shift.

Quantitative data collection
A systematic review was conducted to systematically review the effectiveness of interventions aiming to induce a mode shift as well as to obtain insight in the tools that have been used in these interventions. Secondary data analysis has been performed on data of Mobility Research Netherlands to determine the association between personal and neighbourhood characteristics with short-distance trips and to define target groups for future interventions.

An online questionnaire was designed to investigate transport choice (car, cycling, walking) for the four trip purposes included in the study. For this questionnaire, AVENUE made use of an existing (internet) panel (N≈35,000) representative for the general Dutch population based on age, gender and education level. A random sample of 8,813 persons of 18 years (the minimum age to get a driver’s license in the Netherlands) or older was drawn. A total of 4,444 individuals (50.4% of the sample) started the questionnaire. Data collection was conducted over a period of one calendar year starting July 2012, in which on each consecutive day an average of ten participants filled in the questionnaire.

Figure S1.1 presents a schematic overview of the questionnaire. Preceding the actual questionnaire, two selection questions were asked:

1) To what extent does your health hamper you in (a) walking; (b) cycling; (c) driving a car?
   Possible answers: very much, somewhat, practically not, not at all

2) How many times a week do you normally travel distances up to 7.5 km by (a) car; (b) bicycle; (c) foot?
   Possible answers: never, < once a week, ≥ once a week, don’t know

Only those that indicated that they were not hampered (‘practically not’ or ‘not at all’) to use at least one of the three transport modes and had made at least one short trip a week using at least one of the transport modes (N=4,021; 45.6% of the sample; 90.5% of the respondents) were offered the main questionnaire, which included questions about:

1. Personal characteristics (date of birth, gender, household composition). Information about postal code, marital status, educational level and work situation was readily available from the panel background dataset;
2. Characteristics of the home and living environment and satisfaction with the home and living environment;

3. Trip purposes and accompanying transport mode
   a. Do you ever travel a distance up to 7.5 km directly from home (a) to go shopping, (b) to go to public natural spaces, (c) to go to sports facilities, and/or (d) for commuting purposes?
   b. If yes, for which combination of trip purpose and transport mode?

4. For every combination of trip purpose (max 4) and transport mode (max 3): factors influencing transport mode choice (e.g. weather, safety, noise, smell, living environment, factors related to the route taken and combining this trip with other trip purposes (combined trip purposes)).

5. Perceived general health and perceived psychological wellbeing, height and weight


3,308 participants of the 4,361 who did not start the questionnaire, received another link to a short non-response questionnaire. A total of 382 respondents completed the non-response questionnaire.
Since we had information about the postal codes of the areas of the participants' addresses (four-digit and six-digit postal codes), we were able to merge our dataset with several (objective) environmental characteristics.