LIFE E-VIA

Electric **V**ehicle no**I**se control by **A**ssessment and optimisation of tyre/road interaction

LIFE18 ENV/IT/000201

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Introduction

In order to assess the benefits of repaving a stretch of road with optimised asphalt in the pilot case of the LIFE E-VIA project (via Paisiello-Florence) from the point of view of subjective perception and to involve the population, soundwalks and interviews on an electric taxi were organised in the area. In particular, the experiences included (i) soundwalks with 5 listening points, with the aim of assessing the participants' perception of environmental noise and (ii) binaural headphone listening of 4 audio recordings to assess the perceived soundscape inside a vehicle; specifically, 1) inside an ICEV (internal combustion engine vehicle) while crossing a section of road with optimised asphalt of the project, 2) inside an EV (electric vehicle) - optimised asphalt, 3) inside an EV - new but standard asphalt, 4) inside an ICEV - new but standard asphalt. In order to collect data on the perception of the soundscape, an ad hoc questionnaire was developed for the participants to fill in during the experiences.

Soundwalk itinerary and audio recordings

The 5 locations selected for the Soundwalk itinerary

Audio recordings

Interviews on an electric taxi

Moreover, interviews on an electric taxi (a Nissan Leaf rent to carry out the experience) were organized to assess participants perception of the soundscape while passing, as taxi passengers, through the following sections of the pilot roas/area: 1) section with LIFE E-VIA optimized asphalt, 2) with new but standard asphalt, 3) with worn asphalt.

The itinerary of the trip in the electric taxi

Leaflet for dissemination

Website: https://life-evia.eu/