



LIFE18 ENV/IT/000201
With the contribution of the LIFE programme of the European Union

LIFE E-VIA

Electric Vehicle noise control by Assessment and optimisation of tyre/road interaction



Introduction

Soundwalks and interviews on an electric taxi have been carried out in the project pilot road (Paisiello street in Florence), aiming to evaluate the benefits of LIFE E-VIA optimized asphalt on soundscape perception.

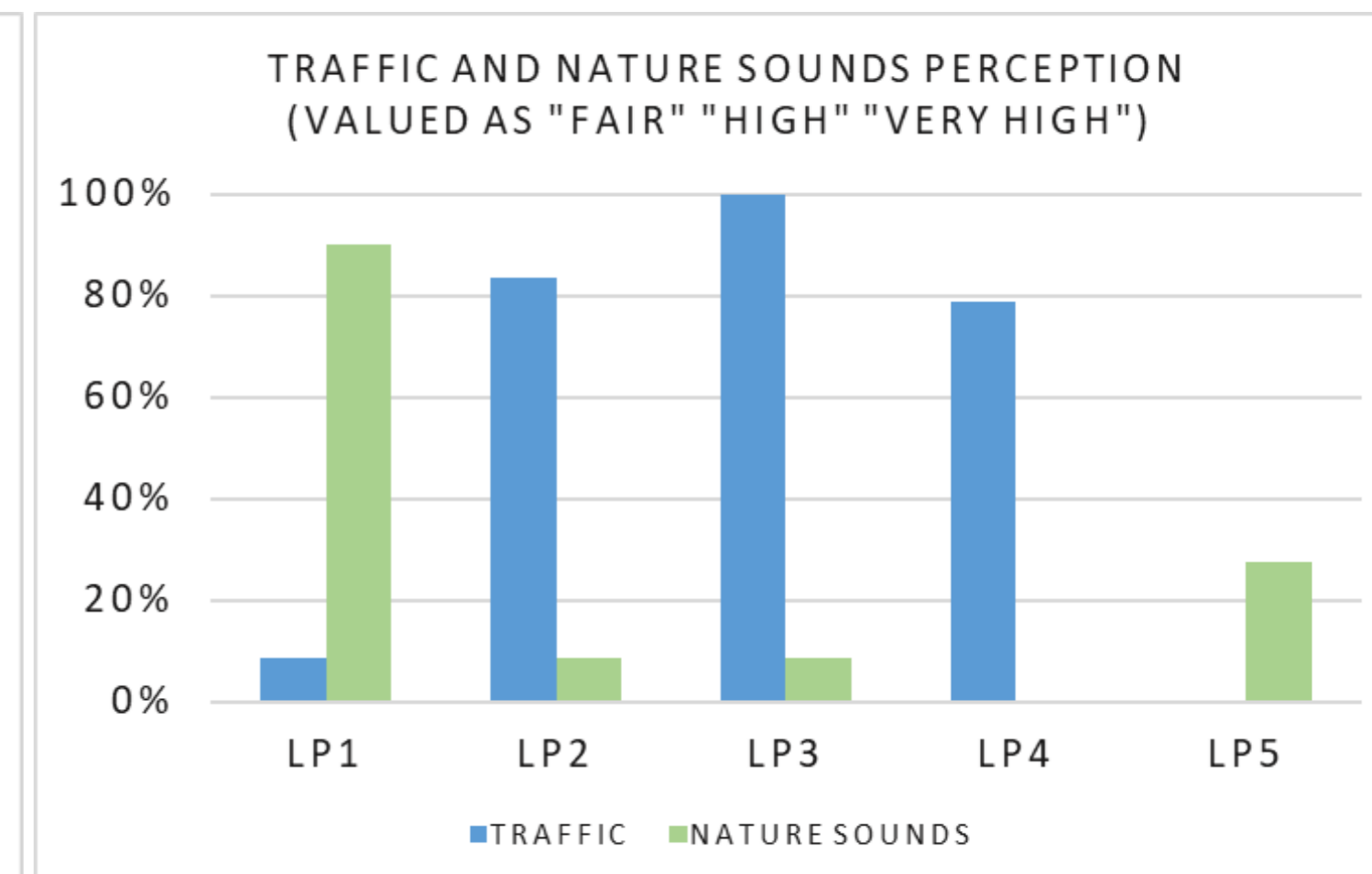
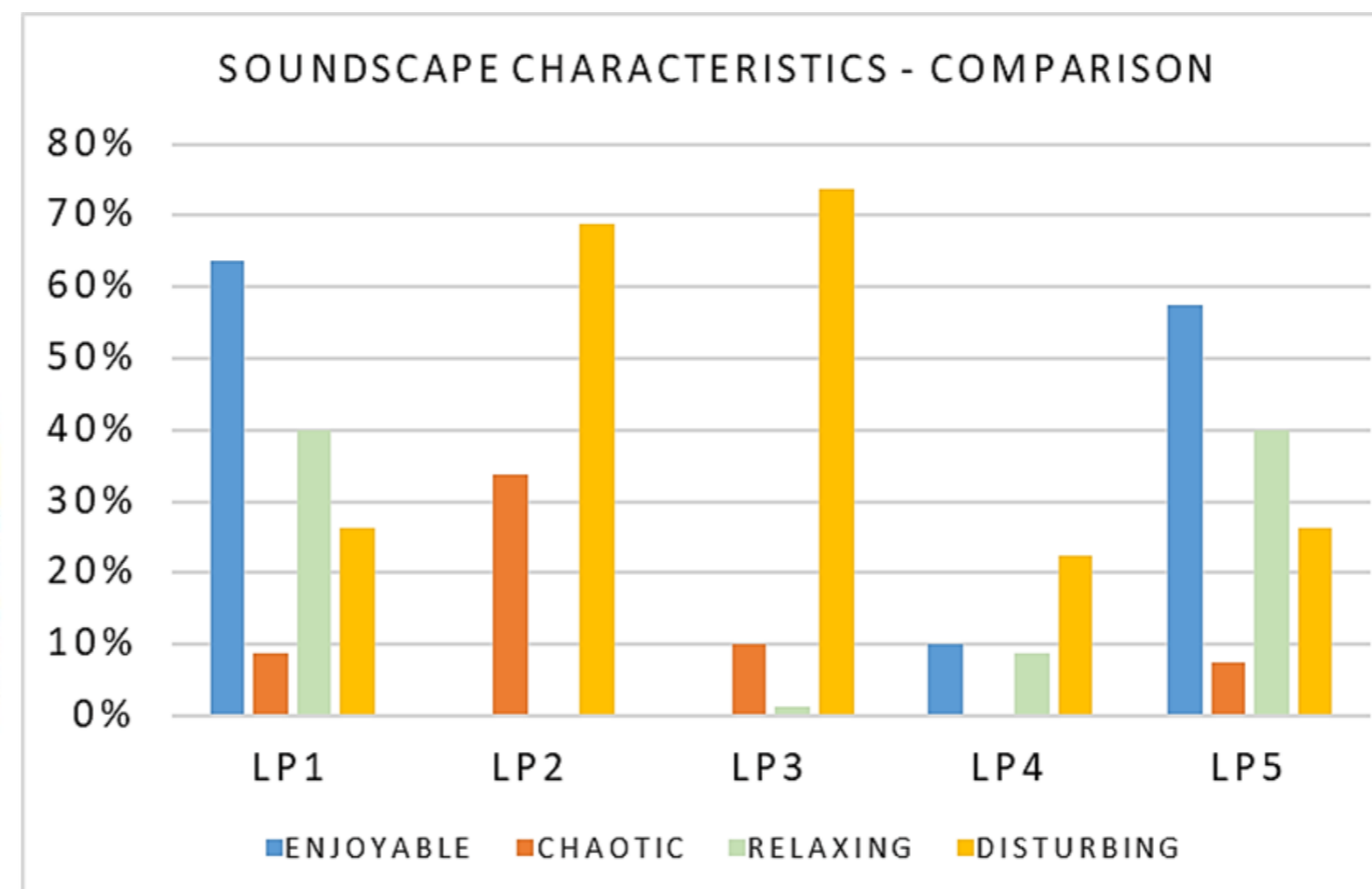
From April to November 2022, 7 soundwalks were carried for a total of 80 participants who were also asked to listen to 4 audio recordings to assess the soundscape perceived inside an ICEV and an EV passing through two different road pavements: (i) LIFE E-VIA optimized asphalt, (ii) new but standard asphalt.

As regards the soundwalks, data analysis shows that LP3 is perceived as the most disturbing location; instead, LP1 and LP5 are the most enjoyable and relaxing sites in terms of soundscape. Concerning sound sources' perception in the three locations close to a street (the pilot road and a parallel one), traffic noise is perceived with a slightly less intensity in LP2 (with optimized asphalt) and LP4 than in LP3. As regards participants' assessment of audio recordings, 30% of the subjects evaluate the soundscape inside an EV passing through the optimized asphalt as "good".

Soundwalks and audio recordings results



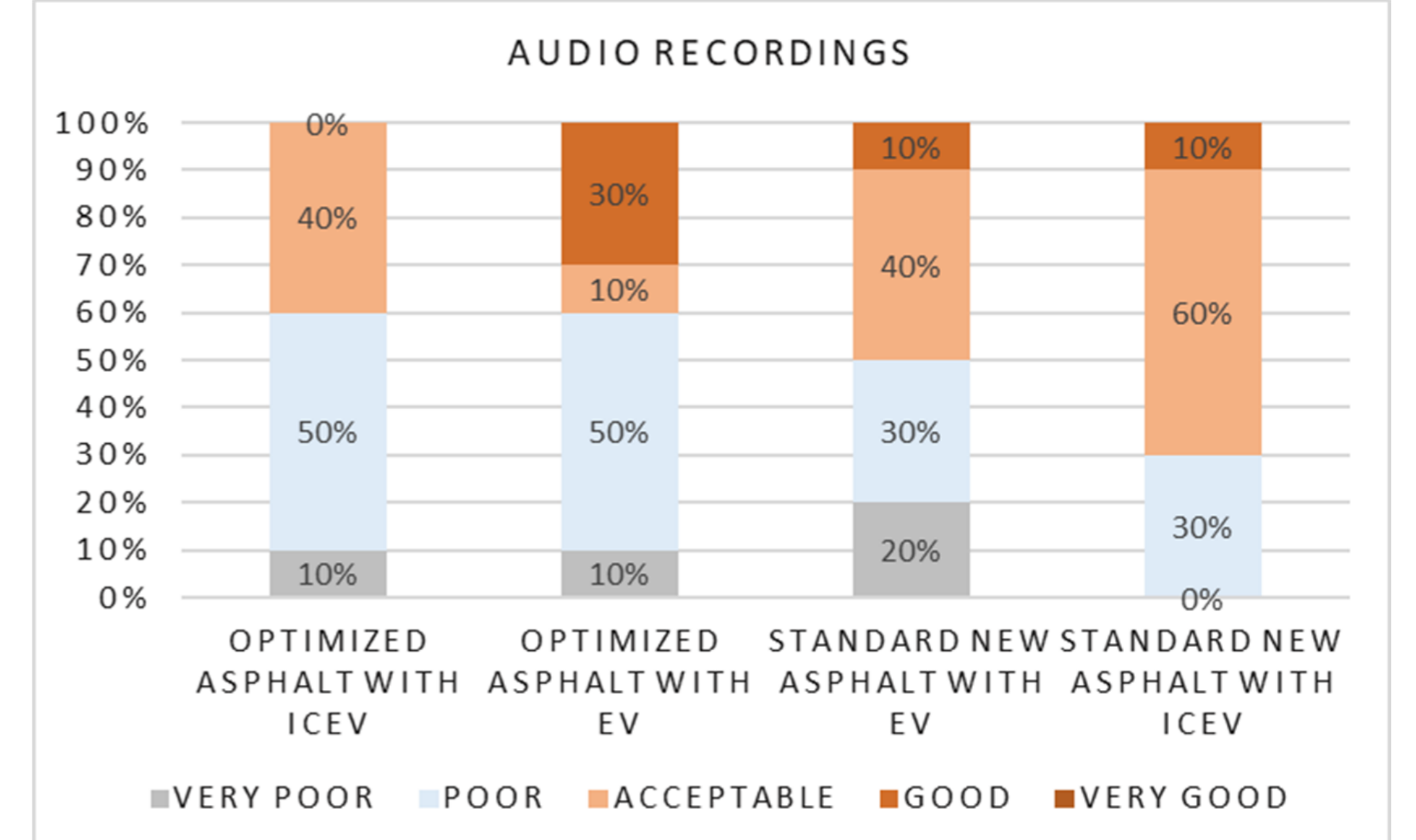
Soundwalks' itinerary



Soundwalks' results



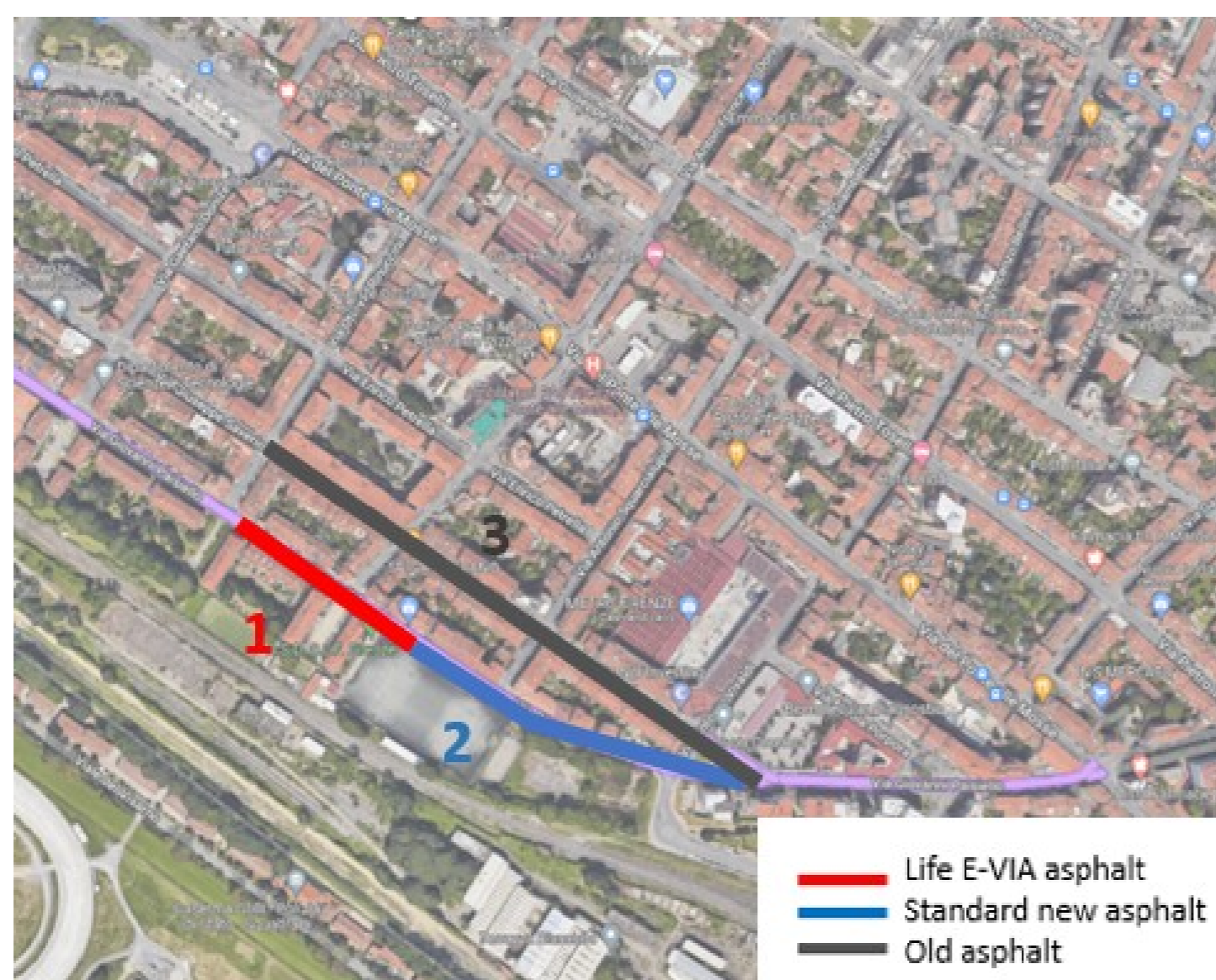
Participants listening of audio recordings



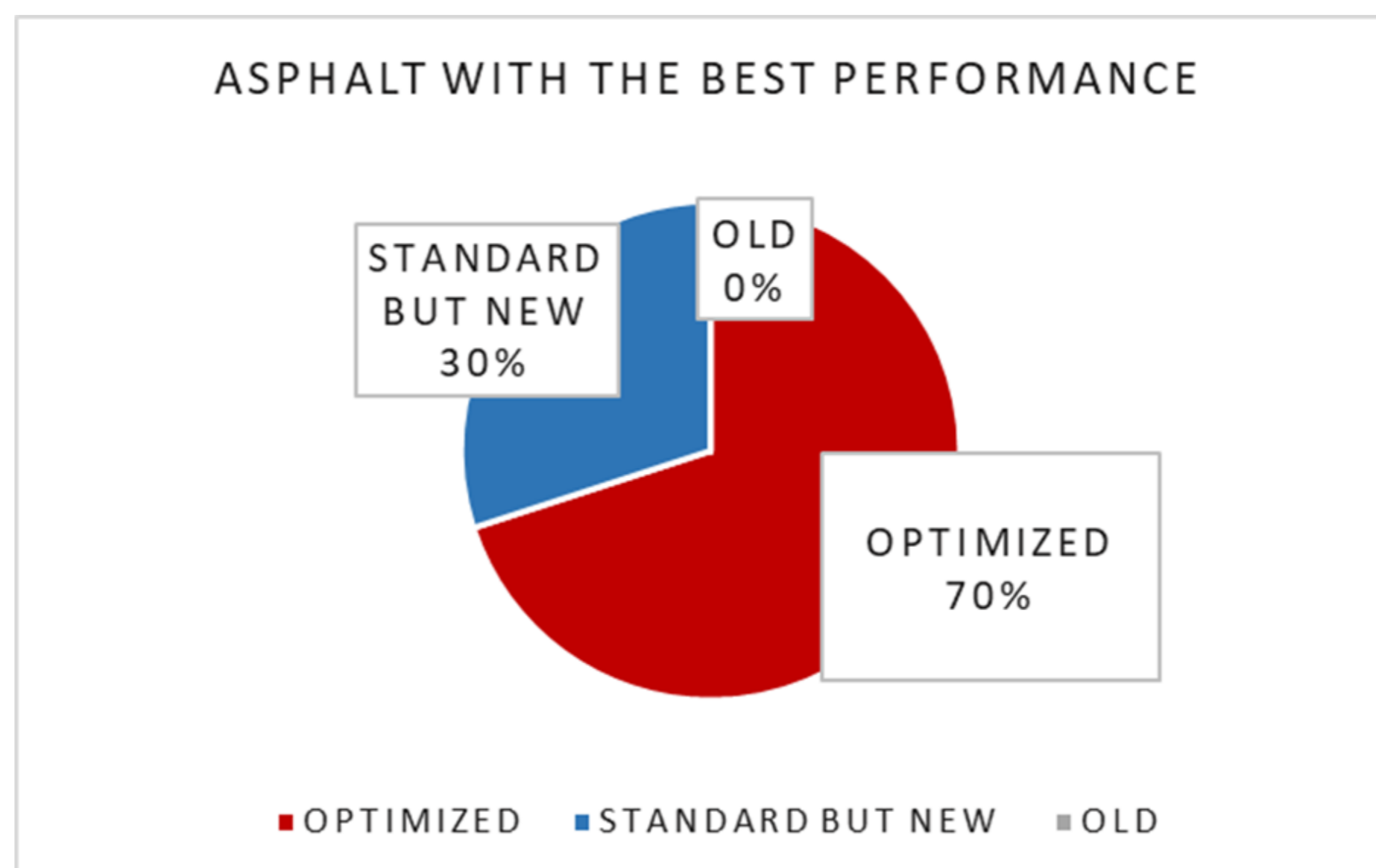
Audio recordings' results

Interviews on an electric taxi - results

As regards the interviews conducted inside the electric taxi, 70% of the sample indicates the LIFE – EVIA optimized asphalt as the one with the best performance in terms of the perceived soundscape quality inside the EV, compared to the old asphalt and the new but standard asphalt.



Electric taxi's route



Results of interviews



The taxi

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

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