

STSM Report

COST Action: C23

COST STSM Reference Number: COST-STSM-C23-3621

STSM Applicant: Ms Cecília Silva, Faculty of Engineering of Oporto University, Oporto (PT),
ccsilva@fe.up.pt

Host: Petter Naess, Aalborg University, Aalborg (DK), petter@plan.aau.dk C23

STSM Topic: Urban structure and mobility patterns

Urban Structure is one of the key elements of the Built Environment influencing carbon levels in our cities. This STSM aims to contribute to the debate of the influence of urban structure on carbon emission.

This STSM served as preparation of the implementation of a methodology of analysis studying the influence of urban structure on travel behaviour, developed by Petter Naess. In addition, a cross analysis of two case studies, Copenhagen and Oporto, exploring the influence of urban structure on travel behaviour was prepared.

The STSM in Aalborg University involved several meetings with Petter Naess and Hans Henrik Johannsen, and a short meeting with Harry Lahrman, a specialist in road travel speed, and Esben Clemens, the responsible for the GIS information base. In addition, I had the opportunity to take part of a staff meeting, in order to briefly present the research objectives of this STSM. These meetings occurred between 29th and the 31st of October.

The meetings with Petter Naess and Hans Henrik Johannsen enabled my familiarization with Petter Naess' methodology of analysis on the influence of urban structure on travel behaviour. It provided a detailed insight into the procedural aspects as well as the implementation specificities. The surveys used for the Copenhagen case study were studied in detail and discussed in preparation of their implementation to the Oporto case study. Each survey was analysed and discussed, identifying questions with higher or lower efficiency for the analysis purpose as well as the higher or lower significance for the Oporto case study. This discussion enabled the development of first guidelines for the adapted version of the surveys for the Oporto case study.

In addition, an exhaustive list of data requirements for the implementation of the methodology to the Oporto case study was developed. This list was based on the list of data collected for the Copenhagen case study and adapted to Oporto case-specific conditions. Data collection methodologies and specificities for the Oporto case study were also discussed.

In preparation of the cross analysis of the two case studies (Oporto and Copenhagen) several aspects had to be discussed and defined such as the exact limits of each study region (in order

to be comparable), the level of disaggregation of statistical data used, the type of data used for the study, etc. As this cross analysis required some additional new data for the Copenhagen study region, part of the meetings were used in search of new data sources and in finding the necessary contacts to acquire the required data.

Data collection also led to meetings with Harry Lahrmann and Esben Clemens. As specialist in road travel speed, the meeting with Harry Lahrmann was essential for the collection of detailed travel speed data in different roads of the Copenhagen region. The meeting with Esben Clemens was essential to make data bases of Oporto and Copenhagen compatible. This meeting also enabled the identification of the new administrative division of Denmark and of the Copenhagen region.

Time between meetings was used for the collection of data, mainly regarding first contacts with public authorities and statistical institutes for data collection, as well as in the study of information from the previous meeting and in the preparation of following meetings.