

Challenges in analysing data from a field operational test of ADAS technologies: the euroFOT experience

- Abstract -

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Main Topic: Socio economic impact assessment

The European Commission-funded euroFOT project intends to analyze the impact of advanced driver assistance systems (ADAS) on driver performance, safety and the environment - in real environments with normal drivers for a period of time that enables the collection and processing of data in a statistically robust way. Almost all of Europe's major vehicle manufacturers are involved in the field operational test (FOT) across Europe to assess the chosen ADAS by using 1500 test vehicles. The results of the evaluation will offer valuable information about the short- and long-term impact of ADAS.

This paper describes the data analysis approach developed within the euroFOT sub-project "Evaluation, impact assessment, and socio-economic cost-benefit-analysis". The approach is documented in a "data analysis plan" developed within this sub-project, the structure of which is shown in the figure below.

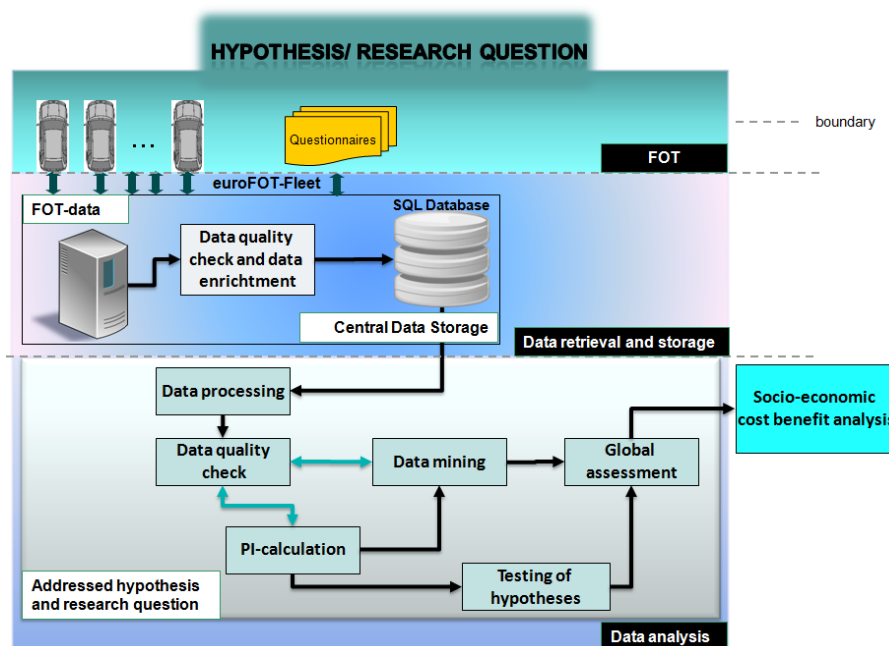


Fig. 1: Data analysis plan structure of euroFOT

The data analysis plan for euroFOT describes the procedural steps involved in analyzing, in a harmonized way, the massive amount of data to be derived from the FOT - in order to answer the pre-defined hypotheses and research questions of interest. Adherence to the data analysis plan will ensure that each partner has a clear understanding of how to analyze the available data, taking into account all the common and idiosyncratic requirements of euroFOT.

The structure of the data analysis plan derives in large part from recommendations made in the EC-funded FESTA project; but for each step of the data analysis process (performance indicator calculation etc.), choices have to be made to tailor the FESTA method to the needs of euroFOT. This paper will discuss these choices and presents the data analysis plan, which focuses on user acceptance, driver behavior and impact assessment, covering the impacts on safety, traffic efficiency and the environment. For “scaling up” locally determined effects micro-simulation as well as further models will be applied to estimate direct and indirect traffic and environmental impacts.