

Usefulness and necessity of arrow marking in exit lanes, splits and weaving sections



Problem description

On Dutch motorways, pre-sorting arrows are present in exit lanes, splits and weaving sections (diverging discontinuities). Several neighbouring countries do not apply these markings, and it has become clear that the production and installation of these markings has a relative high negative environmental impact. Furthermore, in car navigation systems might reduce the need for pre sorting markings. Therefore, we are reconsidering the use of pre-sorting arrows on our motorways. However, since these arrows have always been present on our motorways, we assume drivers expect these arrows and anticipate a lane-change using these arrows. The aim of this research is to investigate possible differences in driving behaviour when arrows are not present.

Assignment

- Review the application of pre sorting arrows in an international context (literature, design guidelines, legislation), and the Human Factors related to these arrows;
- Designing a driving simulator experiment in which different scenarios are developed, in terms of application of pre sorting arrows, type of discontinuity, type of route signage, number of lanes, etc.;
- Executing the experiment;
- Analyze the lane change behavior, surrogate safety measures, speed behavior, and possibly looking behavior;
- Writing a thesis report.

Research group

Transport & Planning

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Information

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