From research questions and study design to common data format

ITS European Congress
6 June 2019, Eindhoven

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VTT
From theories and AD function descriptions to research questions

Theories of impact areas

Early descriptions of AD functions

Research questions (3 levels) for all evaluation and impact areas:

- **Technical & traffic evaluation**: System performance, Driving behaviour (28 level-3 RQs)
- **User & acceptance evaluation**: User experience (21 level-3 RQs)
- **Impact evaluation**: Mobility, Safety, Efficiency, Environment (21 level-3 RQs)
- **Socio-economic evaluation**: Socio-economics (5 level-3 RQs)
Examples of research questions

Level 1
• What is the impact on the own driving behaviour?

Level 2
• What is the impact of ADF on the driving dynamics?

Level 3
• What is the impact of ADF on longitudinal acceleration in defined driving situations?

Level 1
• What is the user experience?

Level 2
• What is drivers’ secondary task engagement during AD function use?

Level 3
• What is the frequency and duration of drivers’ secondary task engagement during AD function use?
From research questions to signal list

Research questions → Performance indicators → Derived measures → Signals → Signal list
From signal list to common data format
Experimental procedure set-up

Experimental procedures: Approaches, participants, study design (incl. baseline)

- **Aim**: Sufficient commonalities to be able to make harmonised evaluation

**Step 1: Description of alternatives**
- Alternatives
- Pros & cons
- Minimum requirements

**Step 2: Pilot site consultation**
- **Support** on how to implement the methodology into practice
- Awareness of optimal solution vs. **Best practical solution** for a pilot study
Development of toolbox of evaluation methods: From analysis of direct field measurements to high-level socio-economic impact assessment

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<th>Socio-Economic Impact Evaluation</th>
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<th>Europe</th>
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Foundation for successful evaluation

- Harmonised approaches across pilot sites, established partnerships between evaluation and pilots
- Smooth data flow from pilots via tools to all evaluation methods
- Multidisciplinary evaluation methodology
- Well-defined and tested evaluation plan for all research questions
Thank you for your kind attention.

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This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 723051.