



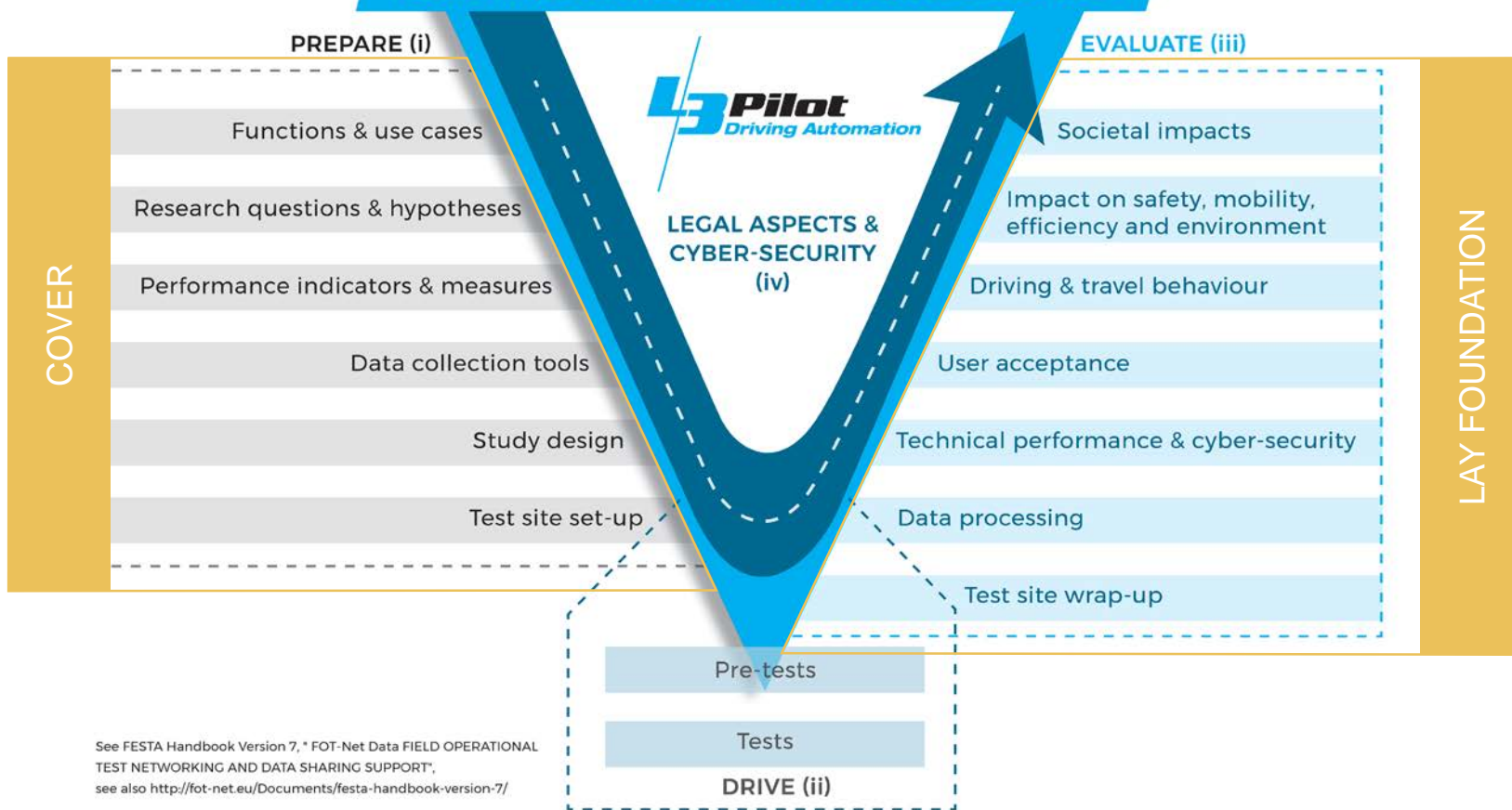
Methodology for evaluating automated driving in Europe

SIS23, ITS World Conference, Singapore,
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FESTA Implementation Plan adapted to L3PILOT



See FESTA Handbook Version 7, "FOT-Net Data FIELD OPERATIONAL TEST NETWORKING AND DATA SHARING SUPPORT", see also <http://fot-net.eu/Documents/festa-handbook-version-7/>

Research question selection



Theories of impact areas



Descriptions of AD functions



RESEARCH QUESTIONS
(3 levels) for all evaluation and impact areas:

- **Technical & traffic evaluation:** System performance, Driving behaviour
- **User & acceptance evaluation**
- **Impact evaluation:** Mobility, Safety, Efficiency, Environment
- **Socio-economic evaluation**



Feasibility in terms of

- study design
- data logging
- evaluation methods



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**

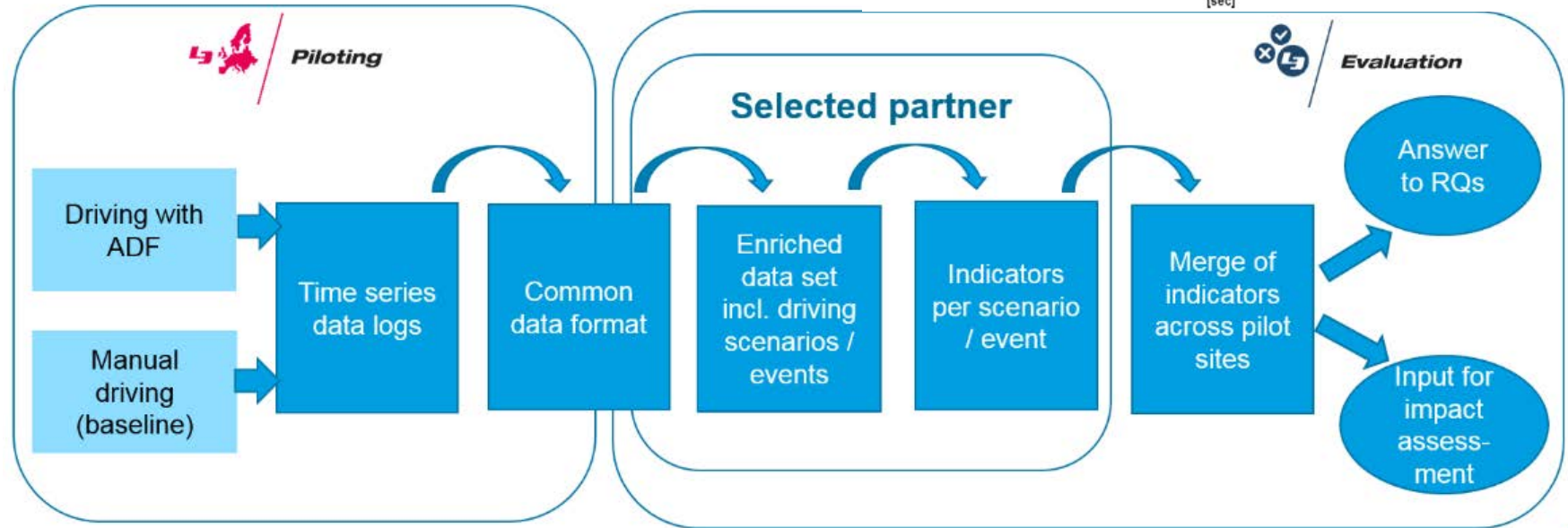
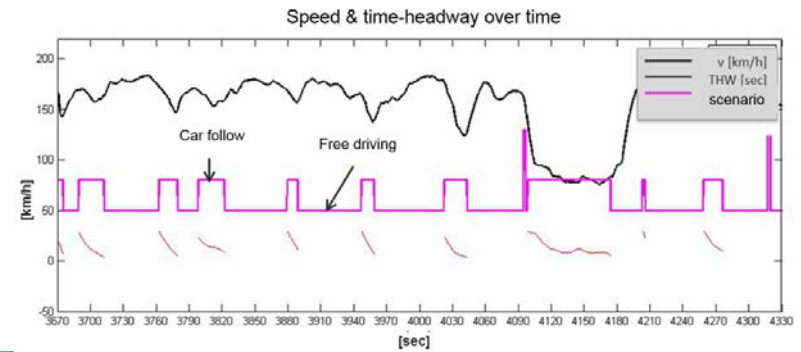


Step 2: Pilot site consultation

- **Support** on how to implement the methodology into practice
- Awareness of optimal solution vs. **Best practical solution** for a pilot study



Method for technical and traffic evaluation

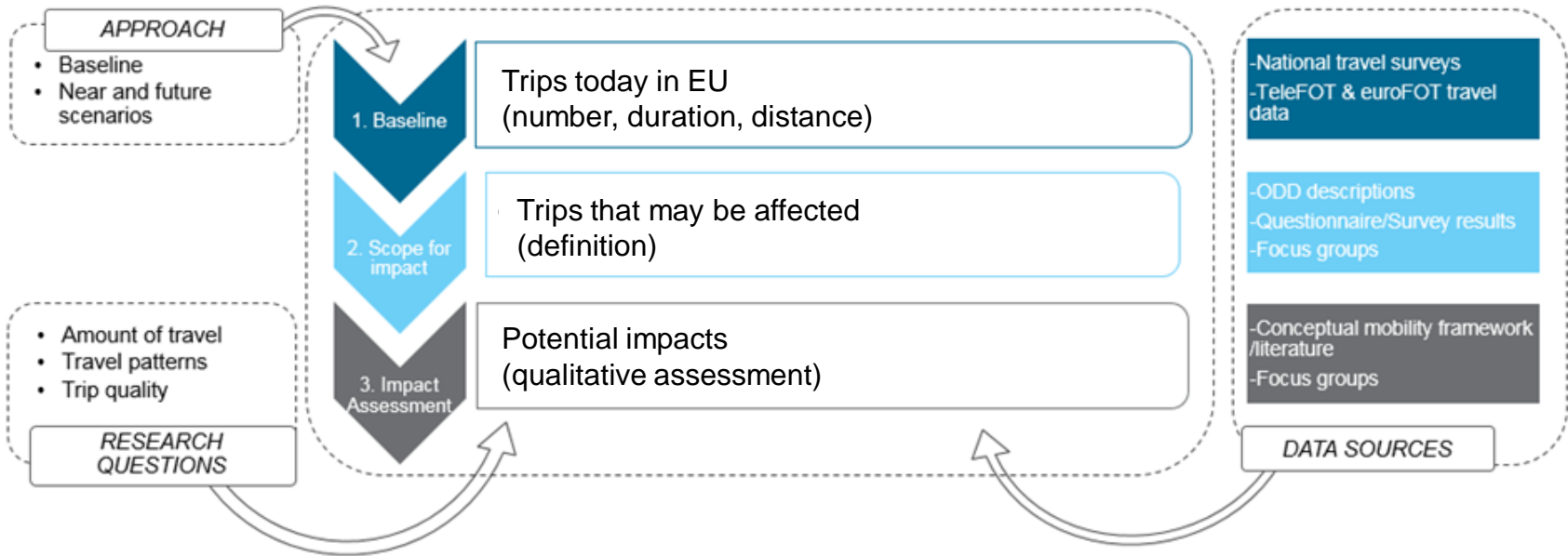


Method for user & acceptance evaluation

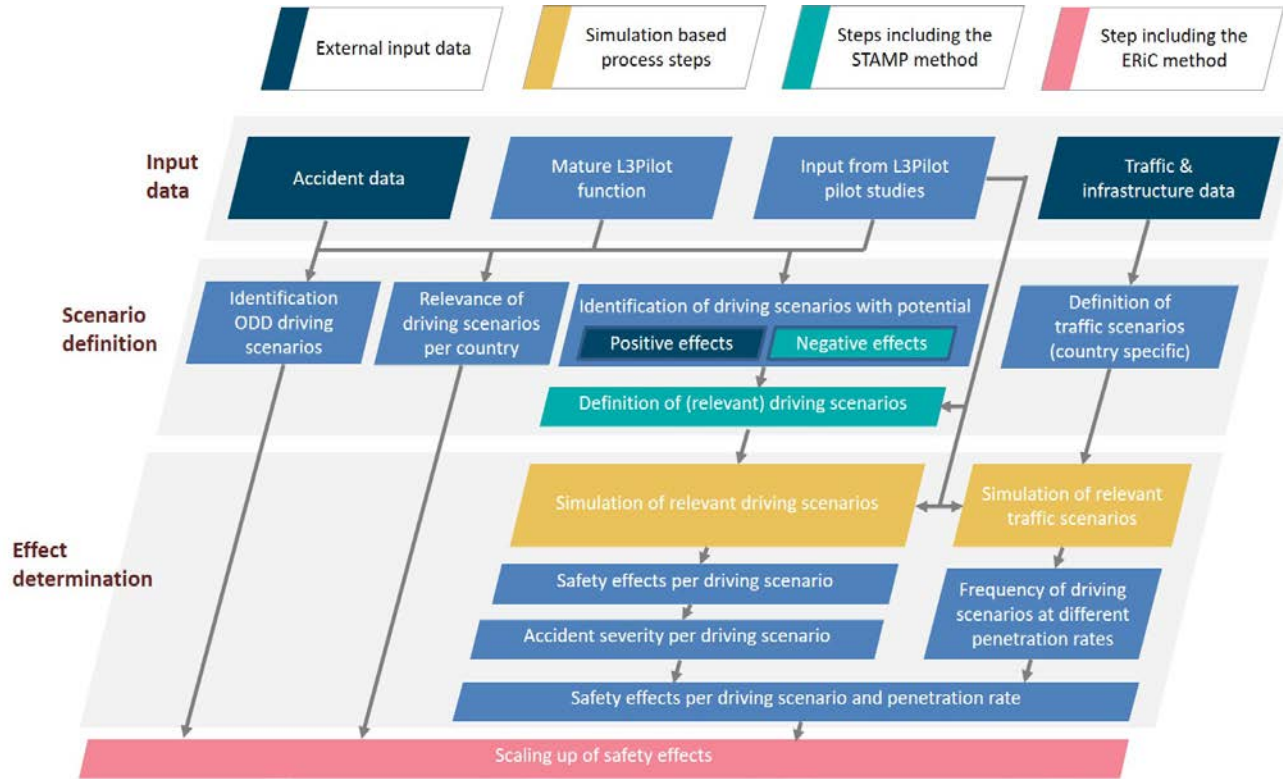
- **Pilot site questionnaires**, completed by participants testing the ADFs
 - Users impressions on e.g. acceptance, safety and comfort
- **Annual survey**, large-scale international study
 - Acceptance of ADFs and monitor changes over time
- **Video- and vehicle-based data**
 - Frequency of interactions with the ADF, drivers' posture, their engagement with non-driving related tasks, and their resumption of control from automation
- **Interviews** and **focus groups** to assess drivers' views of ADFs
 - Situations that cannot be observed or explained by the other methods employed



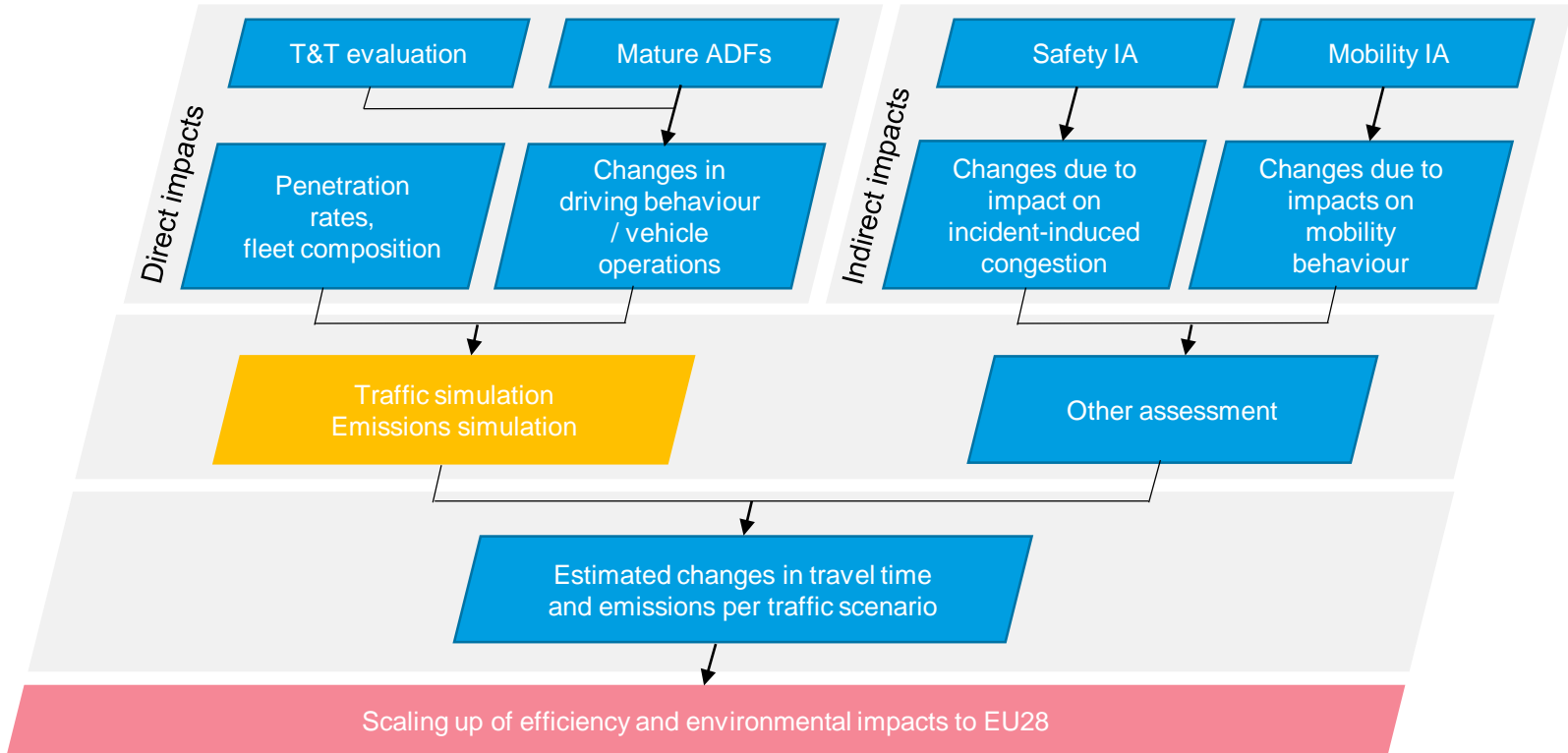
Method for mobility impact assessment



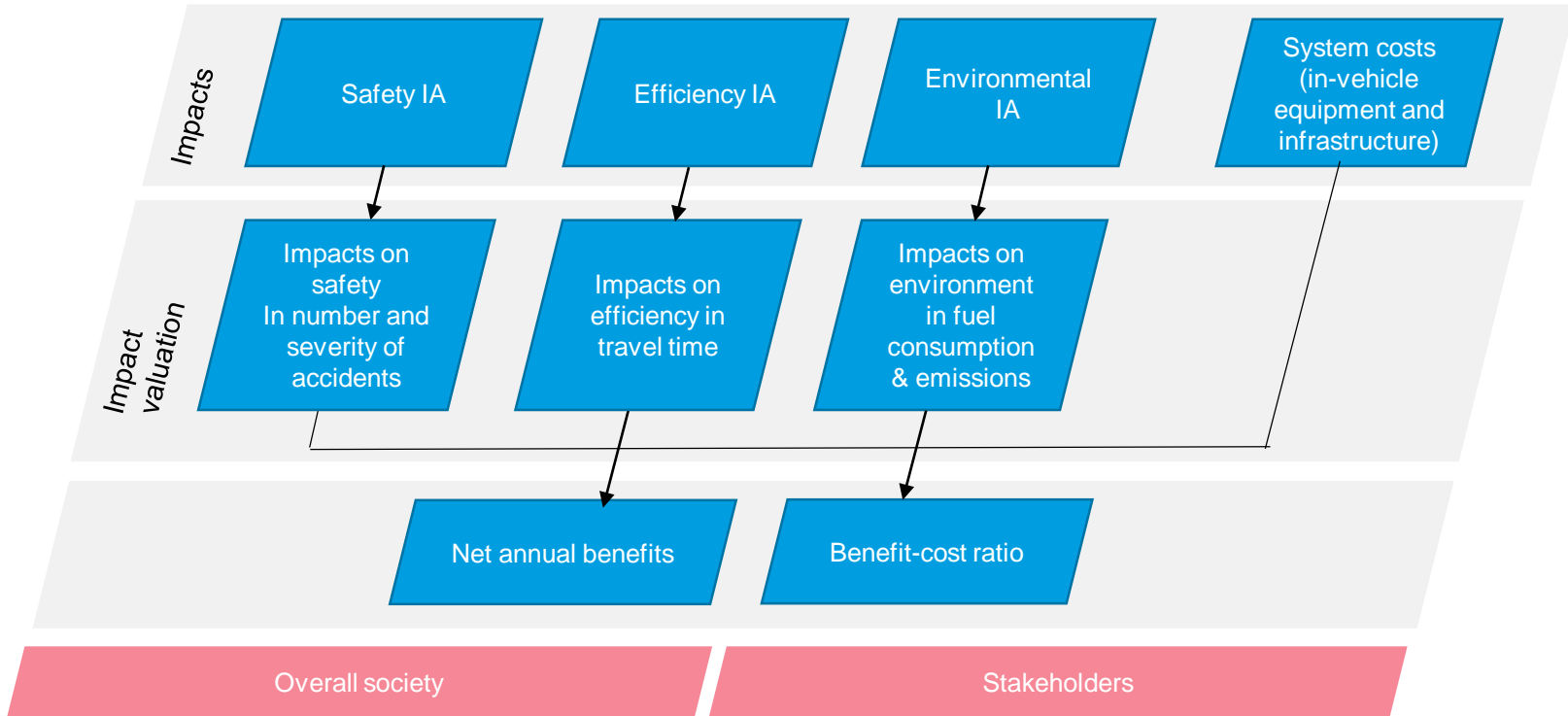
Method for safety impact assessment



Method for efficiency & environmental impact assessment



Method for socio-economic impact assessment



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



More information on L3Pilot methodology

Deliverables

- D3.1 From research questions to logging needs (2018)
- D3.2 Experimental procedures (2019)
- D3.3 Evaluation methods (2019)
- *D3.4 Evaluation plan (expected 2020)*

Available for download at <https://l3pilot.eu/download/>



Thank you for your kind attention.

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