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Assessing mobility impacts of automated driving in L3Pilot

L3Pilot Driving Automation

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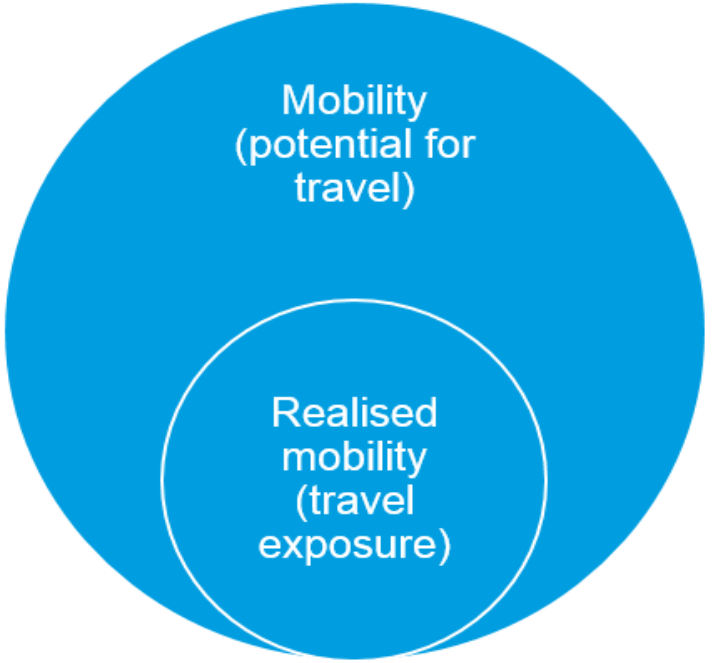
L3Pilot
Driving Automation
1,000
drivers
100
cars
10
countries

Mobility concept



- *Human mobility*: the ability to move, the ease of movement, or the potential for movement
  - Peoples' preferences and experiences of travel and their decisions over time, mode and route
    → Quality of travel
- *Individual's mobility* is dictated by the "mobility tools" they have available to them
- In L3Pilot, *mobility* is defined as the potential for [spatial] movement of people
  - Means of travel and networks one has access to, knows about and is willing to use
  - Encompasses peoples' and intentions, opinions and choices in their daily travel

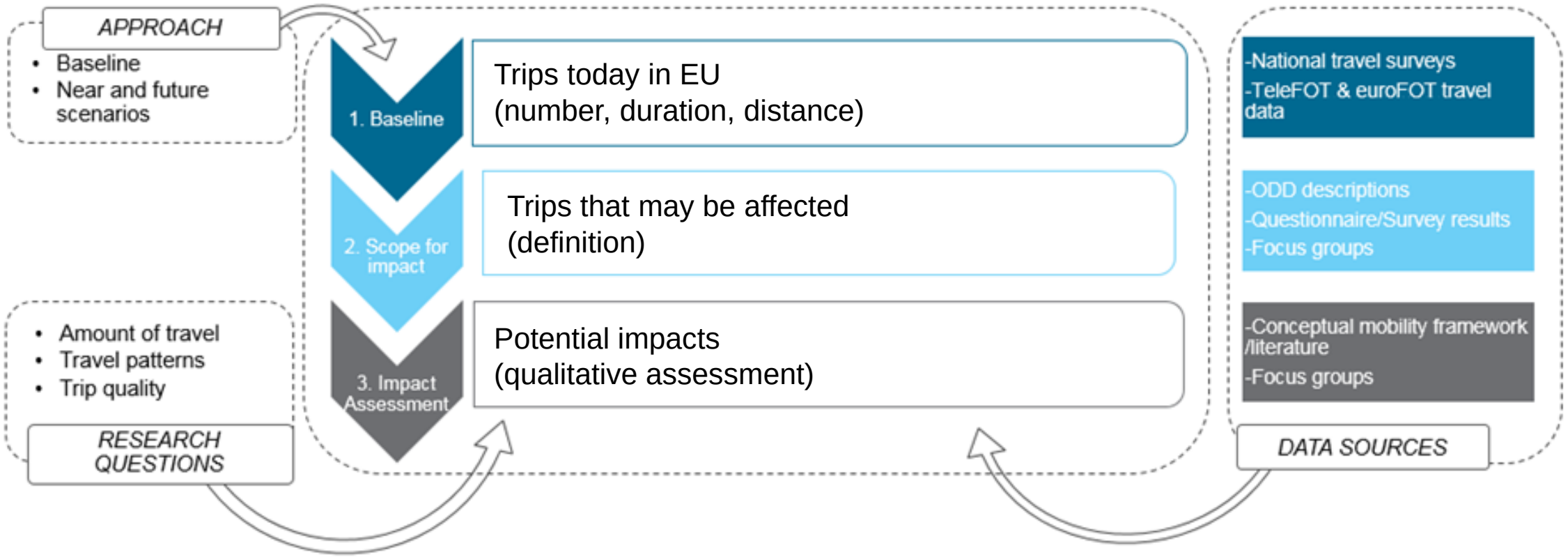
Importance of the mobility impacts

- Introduction of automated driving may impact travel exposure, with respect to
  - the amount of travel
  - travel patterns
  - trip quality
- Impacts can vary to different types of trips and for different user groups
- Impacts on exposure affect indirectly all the other impact areas

Challenges of the mobility impact assessment in AD pilots

- Traditional travel research methods are not sufficient
  - Models and predictions of future travel that are based on data about past trips fit well to circumstances where the mobility ecosystem follows a predictable or stable pattern of development
  - If the future is uncertain or major changes like automation occur, models based on the current situation and behaviour will not be very usable
  - Identification of the ways in which automation affects travel is crucial in this situation
- AD pilot
  - Controlled tests with prototype vehicle and safety driver on board
  - Not possible to measure the impacts of the availability of such car in personal daily life (not an FOT)
- Other assessment methods needed!

Method for mobility impact assessment in L3Pilot



Methodology

Research questions

- What are the probable impact mechanisms in which the studied ADFs would affect mobility?
- In which direction (increase, decrease) is the change in mobility likely to occur for each mobility key performance indicator (e.g. regarding amount of travel, travel patterns and travel quality)?
- What would the magnitude of the expected impacts on mobility be?
- What are the mobility impacts of the ADFs on different user groups?
- What are the mobility impacts of the ADFs for different types of trips?

Results expected in 2021!

Follow l3pilot.eu website

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