LEVITATE

How will autonomous vehicles impact safety, congestion and the environment?

What are the key policy decisions to maximise the benefits and minimise adverse outcomes?

levitate-project.eu

About LEVITATE

LEVITATE is building tools to help European cities, regions and national governments prepare for a future with increasing levels of automated vehicles in passenger cars, urban transport services and urban logistics.

LEVITATE stands for 'Societal Level Impacts of Connected and Automated Vehicles'. The €6,4 million EU funded (Horizon 2020) project led by Loughborough University brings together 12 partners from 10 countries including renowned research institutes, local authorities and global partners.

The 3-year project started in December 2018.

Why LEVITATE?

Connected and automated transport systems (CATS) are expected to be introduced in increasing numbers over the next decade. Automated vehicles have attracted the public imagination and there are high expectations in terms of safety, mobility, environment and economic growth.
With such systems not yet in widespread use, there is a lack of data and knowledge about impacts. Furthermore, the potentially disruptive nature of highly automated vehicles makes it very difficult to determine future impacts from historic patterns.

Estimates of future impacts of automated and connected mobility systems may be based on forecasting approaches, yet there is no agreement over the methodologies nor the baselines to be used. The need to measure the impact of existing systems as well as forecasting the impact of future systems represents a major challenge.

Finally, the dimensions for assessment are themselves very wide including safety, mobility and environment but with many sub-divisions adding to the complexity of future mobility forecasts.

The aim of the LEVITATE project is to develop a new impact assessment framework to enable policymakers to manage the introduction of connected and automated transport systems, maximise the benefits and generally harness the technology to achieve societal objectives.
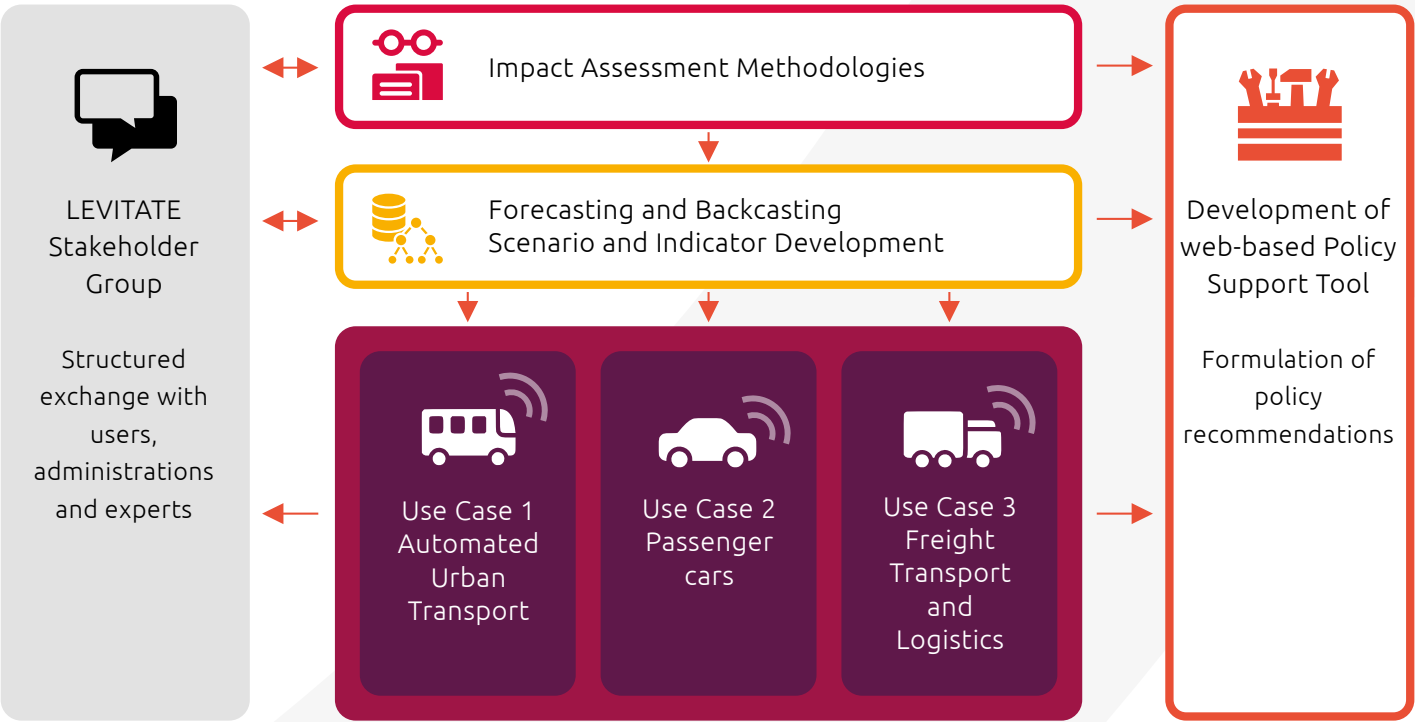
LEVITATE activities and outputs

1. Establish a method for assessing the short, medium and long-term impacts of automated vehicles on mobility, safety, environment, society and other areas (multi-disciplinary methodology)
2. Apply the method to forecast the impact of driverless vehicles in a variety of city environments.
3. Create a back-casting tool to enable authorities to determine which policies and measures to implement to achieve a desired long-term vision
3. Develop a web-based Policy Support Tool that will make the LEVITATE impact assessment framework user friendly for public authorities and transport planners
4. Formulate policy recommendations building on the learnings of the impact assessments
5. Structured exchange with stakeholders to have a wider basis for bringing in user requirements and to enable a continuous dialogue on impact assessment of CATs

LEVITATE stakeholder engagement

LEVITATE will reach out to a variety of stakeholders to ensure a continuous and purposeful dialogue with the most relevant experts and future users outside the project consortium.

Stakeholders, in particular public authorities, road users, researchers and industry players, will be invited to bring in their views and requirements and to provide feedback on project tasks and activities.

LEVITATE Stakeholder Group

Structured exchange with users, administrations and experts

Impact Assessment Methodologies

Forecasting and Backcasting Scenario and Indicator Development

Use Case 1 Automated Urban Transport

Use Case 2 Passenger cars

Use Case 3 Freight Transport and Logistics

Development of web-based Policy Support Tool

Formulation of policy recommendations

Components of LEVITATE showing how they interrelate

Project partners

Loughborough University

tøi — Institute of Transport Economics
Norwegian Centre for Transport Research

Tongji University

POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION

National Technical University of Athens

Transport for Greater Manchester

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

SWOV INSTITUTE FOR ROAD SAFETY RESEARCH

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