



National Technical University of Athens
Road Safety Observatory

www.nrso.ntua.gr



Workshop:

**Digitalisation
and Road Safety
Research**

Friday
17
May
2019
at 14:00

**FIFTH UNITED NATIONS GLOBAL ROAD
SAFETY WEEK**

6-12 May 2019



Save Lives

SpeakUp

Societal Level Impacts of Connected and Automated Vehicles



levitate

Julia Roussou

Transportation Engineer, Research Assistant

Together with:

Tassos Dragomanovits, George Yannis

The LEVITATE project

➤ Project partners:

- LOUGH (UK), AIT (AT), AIMSUN (ES), **NTUA (EL)**, POLIS (BE), SWOV (NL), TOI (NO), TfGM (UK), City of Vienna (AT), QUT (AU), TJU (CN), UMTRI (US)

➤ Duration of the project:

- 36 months (December 2018 – December 2021)

➤ Framework Program:

- Horizon 2020 - The EU Union Framework Programme for Research and Innovation – Mobility for Growth



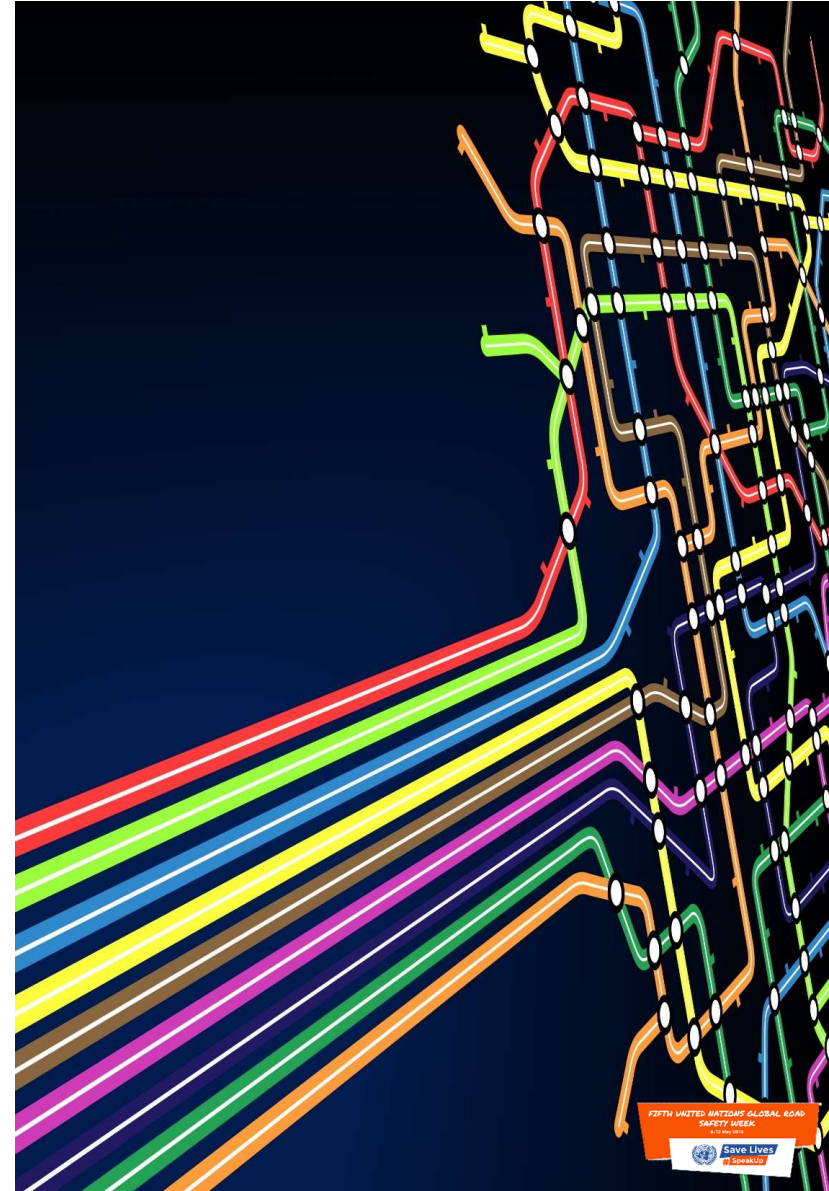
Scope

- LEVITATE focuses on the development of a new impact assessment framework, in order to enable policymakers to manage the introduction of connected and automated transport systems, **maximise the benefits and utilise the technologies to achieve societal objectives**
- Development of an open access web-based **Policy Support Tool** targeting Decision makers at all levels: Municipalities, Regional Authorities and National Governments

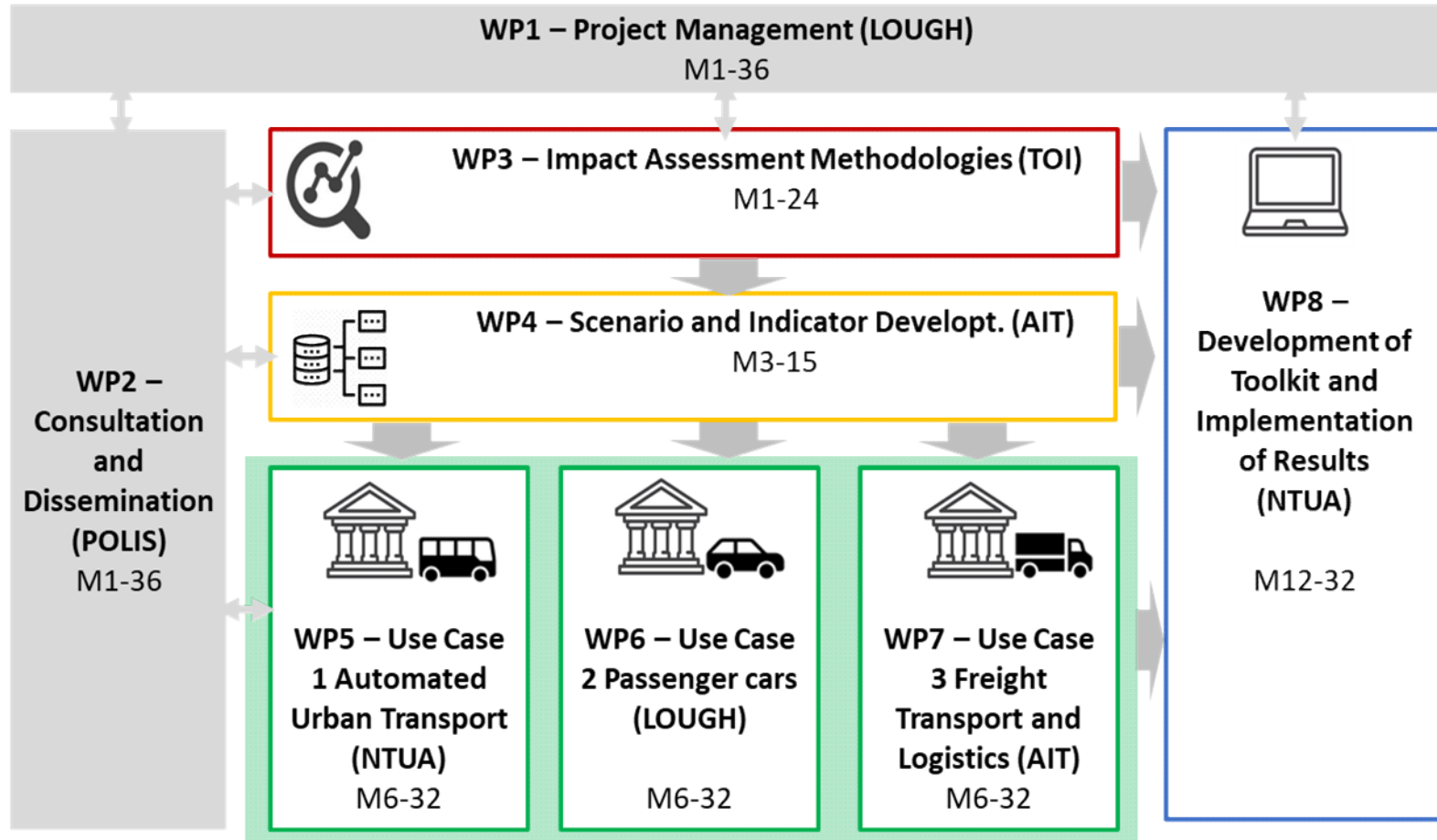


Objectives

- New web-based **Policy Support Tool** – Decision Support System
- Range of **forecasting and backcasting** scenarios: automated urban transport, passenger cars, freight services
- Multi-disciplinary methodology to assess short, medium and long term **impacts**
- **Case studies**: mobility, environment, safety, economic and societal indicators

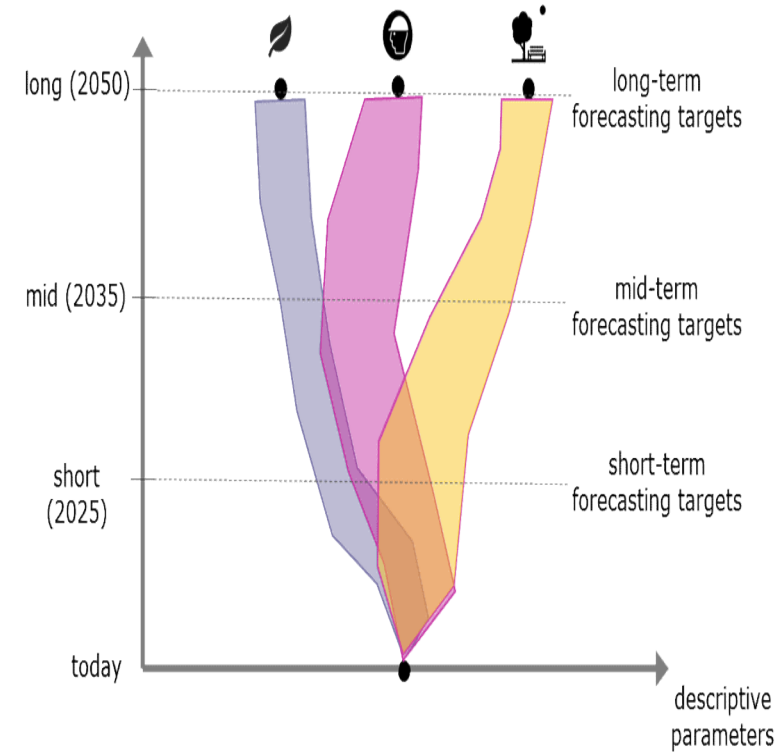


Structure

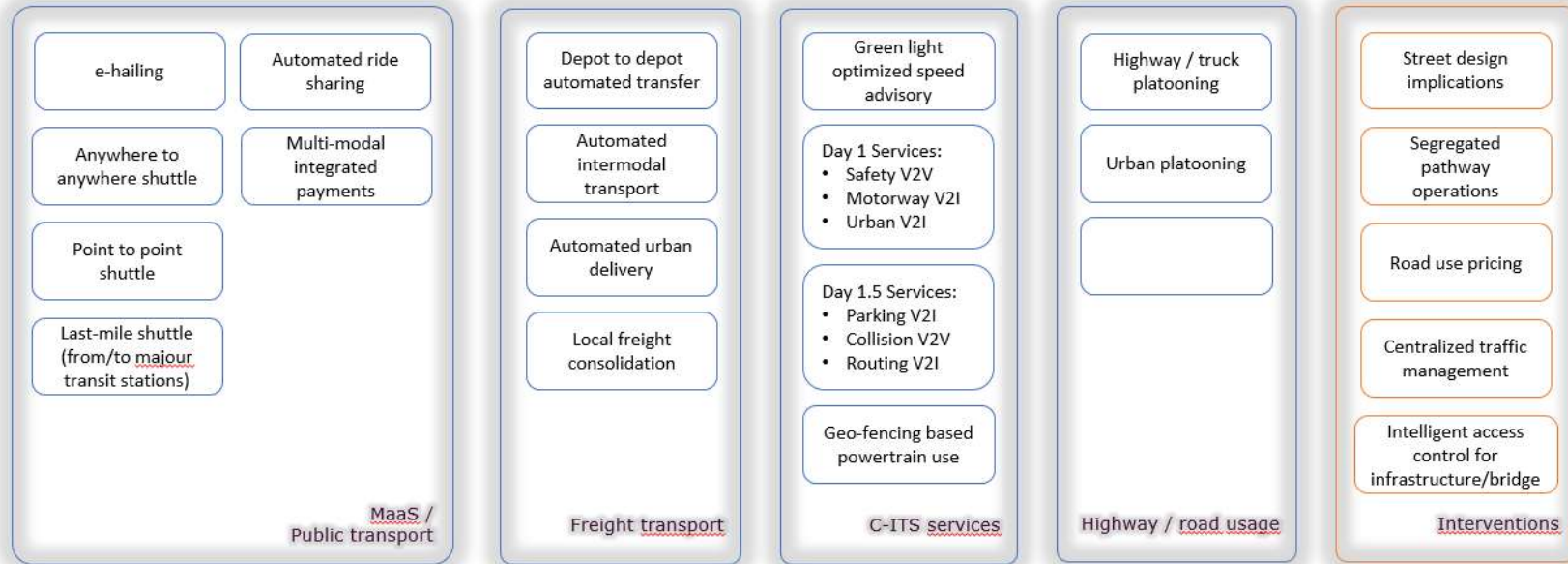


Impacts and Scenarios

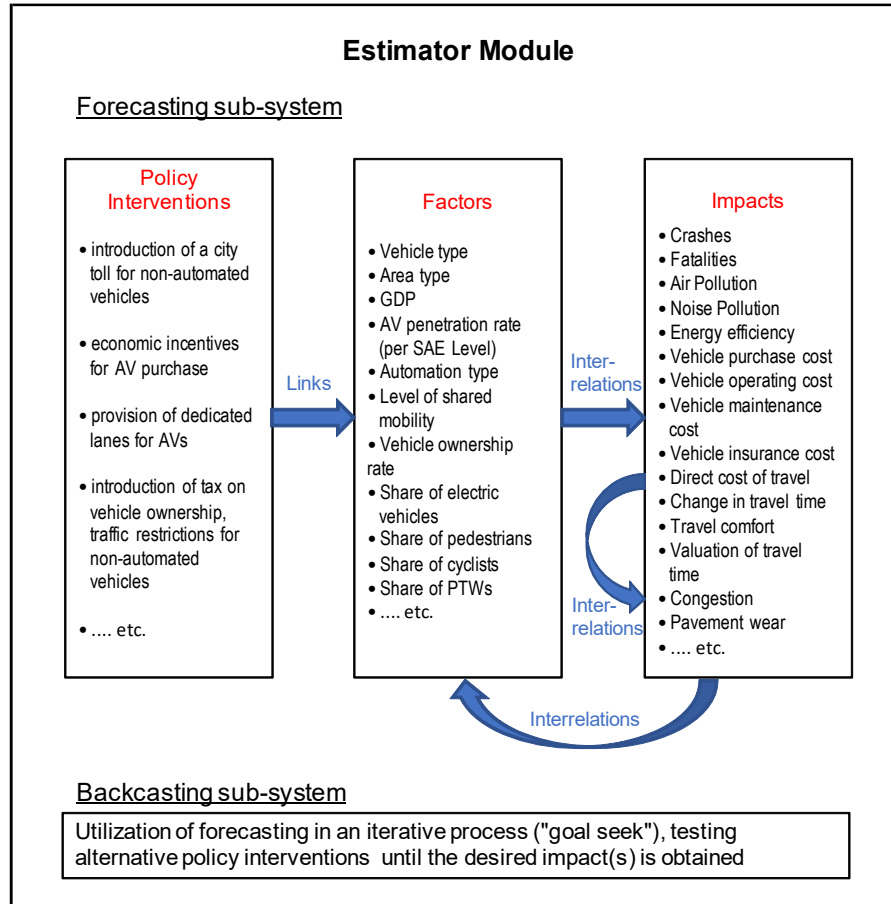
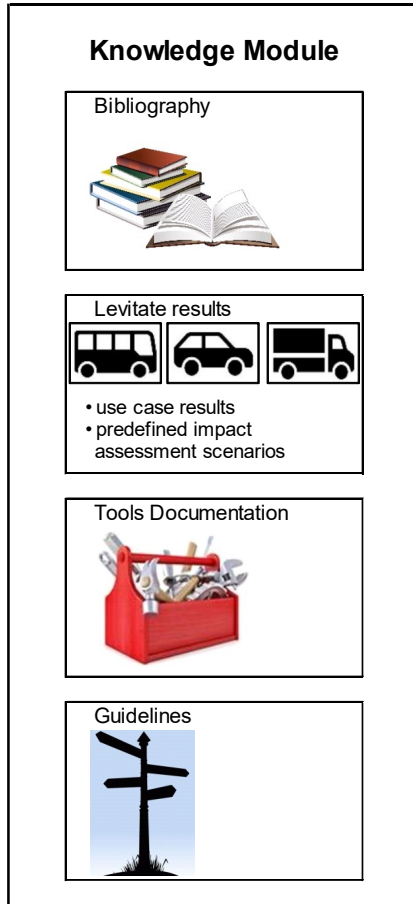
- Identification of potential **impact areas**:
 - Safety, Environment, Society, Economy
- **Measuring** and predicting impacts
- Data collection and **backcasting**
- Converting impacts to **monetary terms**
- Quantitative and qualitative **indicators**
- **Scenario** specification
- Specification of potential **policy objectives**
- **Simulation modelling** and classical statistical models
- Produce **guidelines** and **recommendations**



Use Cases



Policy Support Tool



Project Impact

- **Flexible tool** for diverse decision makers needs
- **Backcasting system** providing insight on measures to reach cities objectives
- Provide a **multidisciplinary** impact assessment methodology
- Identify **significant impacts** of CATS on safety, environment, mobility and society.
- **Bridge the gap** between technology and policy objectives
- Support cities with **CATS implementation** without the unwanted and unforeseen consequences and rebound effects



Future Challenges

- Accurate **quantification** of impacts
- Identification of **multi-modal impact**
- Measure **combined effect** of automation impacts
- Simulation of different **automation levels**
- Definition of **links and interrelations** between policy interventions, factors and impacts





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