SHared automation
Operating models for
Worldwide adoption

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Together with:
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The SHOW project

- **SHOW Partners**
  83 partners from 13 EU-countries

- **Duration of the project**
  48 months
  (January 2020 - January 2024)

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

- 4 years
- 83 partners
- 13 European Countries
- Over 20 cities involved across Europe
Background

- The **arrival of automated vehicles (AVs)** represents a unique opportunity for a **fundamental change** in urban mobility, especially when AVs are integrated into public transport network as well.

- Shared and connected fleets of AVs could **dramatically reduce the number of conventional cars, improve safety** and reach people and places that was too difficult to before, plugging first/last-mile gaps and feeding into public transport trunk lines.

- Therefore, **technical solutions** of sustainable urban transport, **business models and priority scenarios** for impact assessment are needed by deploying shared, connected, electrified fleets of AVs.
SHOW Objectives

- Conduct **real-life urban demonstrations** taking place in 20 cities in Europe for at least 12 months.

- Develop **technical solutions and business models** to enhance travelers' experience in cities.

- Deploy shared, connected, electrified **fleets of autonomous vehicles** for shared mobility.
SHOW Methodology

- The SHOW methodology encompasses several layers starting with the investigation of the expectations of travellers and stakeholders and completing with the final evaluation of the ecosystem.

- The results consist of findings from the user tests (FESTA), impact assessment (M3ICA) and simulations.

- The SHOW methodology includes four main pillars:
  - Use Cases and their actors
  - Research Questions (RQs) and Key Performance Indicators (KPIs)
  - Parametric methods and instruments
  - Scalable data exchange
SHOW Demonstration

- Fourteen **demo sites**
  - 5 Mega demo sites
  - 6 Satellite demo sites
  - 3 Follower demo sites

- Four different **services**
  - Public Transport (PT)
  - Demand Responsive Transport (DRT)
  - Mobility as a Service (MaaS)
  - Logistics as a Service (LaaS)

- Multiple **use cases** within services

- Numerous supportive **simulation tools**
Impact Assessment

The overall SHOW eco-system impact assessment framework includes KPIs as calculated from the in-depth analyses from the different impact areas, and potentially non-processed KPIs collected from demonstration sites and simulations:

- Road safety
- Traffic efficiency, energy, and environmental impact
- Societal, employability and equality
- Urban logistics
- User experience, awareness and acceptance
Scientific and Social Impact

- How shared mobility solutions using connected and cooperative automated vehicles can contribute to a more sustainable, inclusive and safer mobility system.

- Proposed actions for integration of safe, acceptable and efficient mixed transport services for all road users.

- Improvement of market opportunities and new-entrants by addressing and developing innovative cross-sector business models.

- Advanced monitoring and assessment for faster implementation.
Future Challenges

- Establish straight-forward techniques for the **safety and impact assessment** of autonomous vehicles.

- Integrate the KPIs and data analytics to form a **holistic road safety assessment protocol** for all conditions and user groups and validate the protocol on data from the real-world applications.

- Develop well-defined and concrete automation strategies for a **wider social adoption and road safety enhancement**.
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