International Best Practices and Cooperation Potentials in Connected and Automated Driving - Main Findings of a EU Study*

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*Towards a Single and Innovative European Transport System
Lot 2 – International Assessment and Action Plans
Degree of transport system maturity

Focus Areas
- Automation & Connectivity
- Transformation of Infrastructure
- Smart Mobility Services, Freight & Logistics
- Standardization & Interoperability
- Alternative Fuels

(all modes)

Maturity Degree
- very good
- good
- fair
- poor
- very poor

USA
Europe
Brazil
Japan
South Korea
China
India

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**Action plan**

**Technology development for complex situations**

- Fully integrated system with autonomous (highest automation level) and connected (V2V, V2I, V2X) vehicles implemented including complex situations such as urban contexts.
- Build test beds and demonstration fields that allow for comprehensive research and testing of high-level (SAE levels 4 & 5) automation allowing for an easy transfer to real-life situations.
- Brazil/Korea/USA: Test Beds for Vehicle Automation & Connectivity in Urban Environments.

**Infrastructure Development**

- Infrastructure for an automated and connected traffic system that allows for maximum accessibility, efficiency, and road safety.
- Wide-scale installation of VMS and RWSL that are independent of air traffic control instructions.
- Japan/USA: VMS & RWSL.

**Human Factors**

- Questions regarding Human-Machine-Interaction and human factors are fully resolved.
- Build networks for demand-oriented development of automation and connectivity technology with a special focus on the human factor in order to meet societal needs.
- USA: Nissan’s Anthropology Research.

**Regulatory Framework**

- Regulatory framework for high degree automated and connected driving in place when vehicles are mature for market launch.
- Establish necessary regulatory framework for testing and use that is responsive to novel technology development.
- USA: California’s Regulatory Framework.
- Resolve privacy issues concerning the storage of driving data and set cybersecurity standards.
- Assess energy impact of connected and automated transport.

**Multi-Stakeholder co-operation**

- Stakeholders from demand and supply sides coordinate their investments and actions such that innovation is accelerated.
- Integrate research, testing and implementation in one comprehensive programme to bring together different stakeholders.
- Japan: SIP-ADUS.
- Create environment to encourage high-risk investments.
- USA: Venture Capital Environment.
- Integrate 3 revolutions (electrification, automation, MaaS) in one project.
- Singapore: Electrified Automated Shared Mob.
Action plan

- **Integrate research, testing and implementation in one comprehensive programme to bring together different stakeholders**
  - **Japan: SIP-ADUS**

- **Establish necessary regulatory framework for testing and use that is responsive to novel technology development**
  - **USA: California’s Regulatory Framework**

- **Integrate 3 revolutions ( electrification, automation, MaaS) in one project**
  - **Singapore: Electrified Automated Shared Mob.**
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