5GAA Workshop, Berlin, 23.05.2019

Using mobile networks for providing C-ITS information

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Bundesanstalt für Straßenwesen

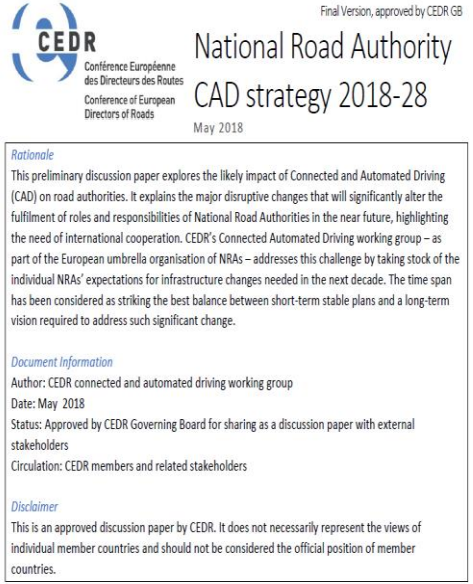
BASt role and facilities

- BASt operates in the domain of the Federal Ministry of Transport and Digital Infrastructure
- Main activity fields: Research, (Policy) Advise, Testing and certification, Standardisation
- Participates in almost 875 national and international committees
- Monitoring the implementation of national, European and international legislation and harmonisation procedures

Located in Bergisch Gladbach (close to Cologne), Germany
Number of employees: 400
Annual budget: about 47 MEUR
More than 300 internal research projects and more than 300 research projects conducted by external scientists

Key challenges for road authorities and operators

- Cooperative ITS implementation has started and Level 3/4 automated vehicles are expected to be introduced
- Mixed fleet (automated and non-automated) for decades to come
- NRAs can and should take a leading role to ensure that the potential benefits of Connected Cooperative and Automated Mobility (CCAM) can be harvested
- Current infrastructure – physical as well as digital – is not necessarily well prepared to facilitate change of role and tasks
- NRAs face an investment bump to be managed



Final Version, approved by CEDR GB

CEDR
Conférence Européenne des Directeurs des Routes
Conference of European Directors of Roads

National Road Authority
CAD strategy 2018-28

May 2018

Rationale

This preliminary discussion paper explores the likely impact of Connected and Automated Driving (CAD) on road authorities. It explains the major disruptive changes that will significantly alter the fulfilment of roles and responsibilities of National Road Authorities in the near future, highlighting the need of international cooperation. CEDR's Connected Automated Driving working group – as part of the European umbrella organisation of NRAs – addresses this challenge by taking stock of the individual NRAs' expectations for infrastructure changes needed in the next decade. The time span has been considered as striking the best balance between short-term stable plans and a long-term vision required to address such significant change.

Document Information

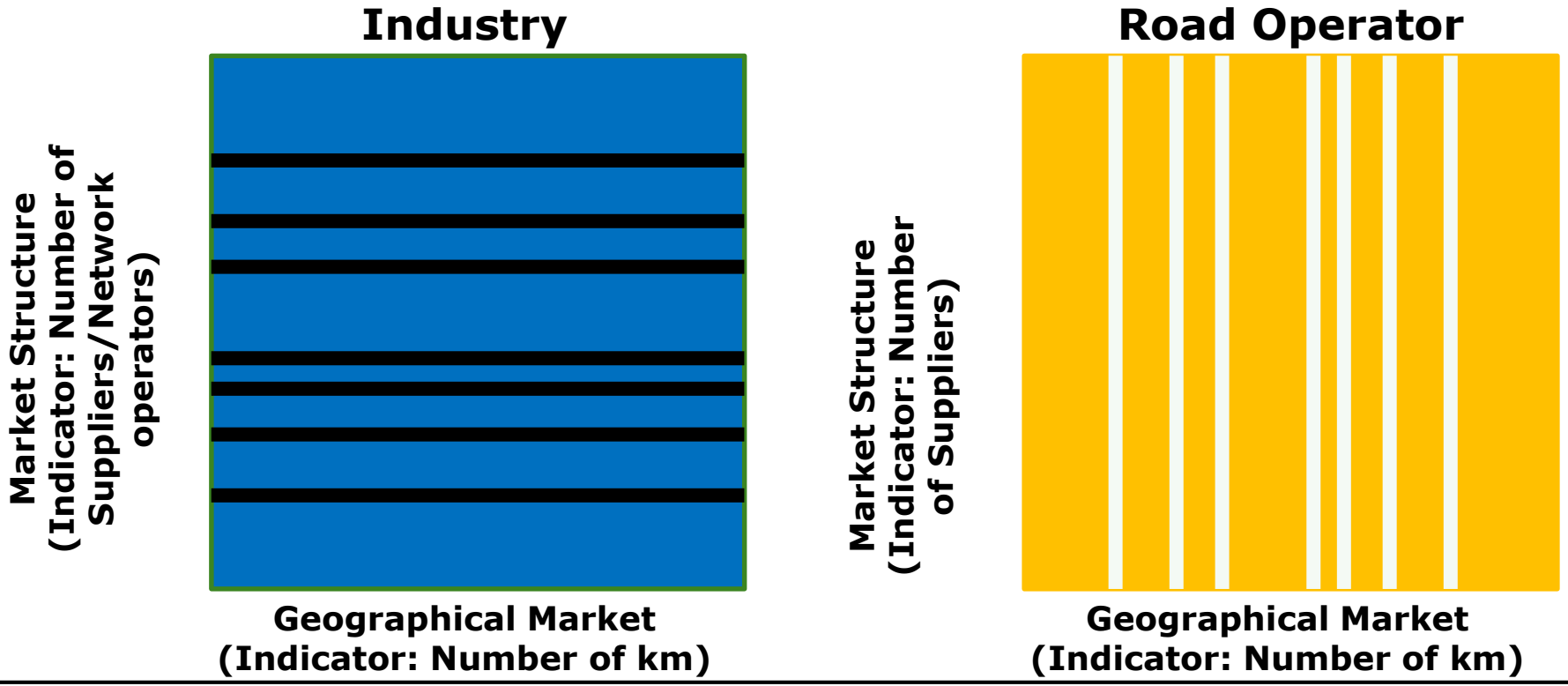
Author: CEDR connected and automated driving working group
Date: May 2018
Status: Approved by CEDR Governing Board for sharing as a discussion paper with external stakeholders
Circulation: CEDR members and related stakeholders

Disclaimer

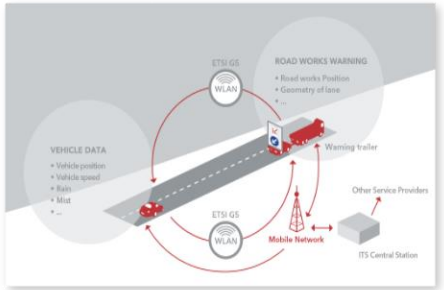
This is an approved discussion paper by CEDR. It does not necessarily represent the views of individual member countries and should not be considered the official position of member countries.

http://www.cedr.eu/home/publications/

Challenge of cross-sector cooperation



Cooperative ITS Corridor – Road Works Warning



- Roadworks Safety Trailer are a.o. connected via Mobile Network to the Traffic Management Center
- Information is a.o. provided to service providers via National Access Point, i.e. Mobility Data Marketplace
- Phased nationwide rollout of trailer equipment on motorways) is underway
- Harmonisation of further services incl. aspects of hybrid communication via C-Roads

Cooperative ITS Corridor
Joint deployment

http://www.c-its-corridor.de/

C-ROADS

https://www.c-roads.eu

Mobility Data Marketplace

https://www.mdm-portal.de/

5G Connected Mobility

http://www.5g-connectedmobility.com

https://www.bmvi.de/EN/Topics/Digital-Matters/Digital-Test-Beds/digital-test-beds.html

Data Sourcing from Industry

- Exchanging safety related traffic information (→ Delegated Regulation 886/2013) in a sustainable way
- Fulfilling public interest, making use of technological capabilities of industry, work towards a sustainable and healthy ecosystem
- Data Task Force of the High Level Meeting(s) for Connected and Automated Driving
- Data Task Force Proof of Concept as multi-sector effort, including several OEMs, Data Aggregators and (six) Member States
- Important role of mobile networks in the uplink (data) & (one of several) communication channels for SRTI

Demo and MoU signature at ITS European Congress, Eindhoven, 03.06.2019

Towards requirements

- Implementation report (2017) on Federal Govt strategy on Automated and Connected Driving
- Several actions fields for implementation, a.o. infrastructure, innovation, IT security and data protection
- Use case specific requirem. → coverage, bandwidth, latency
- Upgrade of telco infrastructure (cellular communication, fibre optics) to ensure continuous connectivity (a.o. supported by service requirements – coverage along motorways – towards MNOs linked to frequency allocations)
- Research and its promotion on combining communication techs in hybrid networks, use of digital test fields for pilots
- In-depth study on co-use of existing road infrastructure for CAD required communication
- Closer cooperation between MNOs and authorities/operators

Thank you for your attention

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