

Unfolding the potential of CCAM – a societal rather than a technical question?

Dr. Viktoriya Kolarova, Sophie Nägele, M.Sc.
Institute of Transport Research, German Aerospace Center (DLR)

25.11.2021
JRC Enlargement and Integration Workshop
JRC; Ispra, Italy



Knowledge for Tomorrow



The role of a social dialogue on CCAM

- setting the stage -

The dialogue have various aims.

- Negotiate desirable future transport
- Develop a research agenda
- Include requirements of the society in CCAM development
- Facilitate / Ensure user acceptance
- Create a balance of interests
- Facilitate innovation and learning process



Quelle: EC JRC 2019



Individual acceptance \neq Societal acceptance

- **Individual acceptance** = Technology acceptance of a *single* person from the background of his/her *individual* interests.
- **Societal acceptance** = The results of a negotiation process on acceptance solutions considering *various* interests.



4

Topics and insights from our works – results from stakeholder workshops as well as focus groups and surveys with potential users



1/4

The definition of societal goals should go hand in hand with the technology development of CCAM.



1/4

The definition of societal goals should go hand in hand with the technology development of CCAM.

- Automated and connected driving is more than a technology => **wider impacts in various areas**



- We should not only develop technology solutions, but mobility solutions which meet societal goals

- ***Focus should be: How should an efficient and sustainable transport system look like in the future and how can CCAM contribute to realize this vision?***



2/4

**Users see benefits in comfort, time and flexibility,
but have concerns about the security and
performance of the technology.**



2/4

**Users see benefits in comfort, time and flexibility,
but have concerns about the security and performance of the technology.**

Who expects benefits? Users who are ...

- driving a lot, and / or
- experienced with ADAS

What are the concerns about?

- Users have high demands on costs,
- availability, and
- privacy

relaxation
 time saving
 more privacy
 saving money by shared mobility
 higher safety
 connected vehicles
 higher efficiency
 drink&drive
 higher efficiency



error prone
 lacking trust
 responsibility questions
 loss of flexibility
 higher efficiency
 high costs
 over-trust
 lacking infrastructure



2/4

We should not think in automation levels or vehicles, but in mobility concepts.



2/4

We should not think in automation levels or vehicles, but in mobility concepts.

➤ Potential users express requirements and concerns regarding the overall concept of automated vehicles

➤ Examples:

➤ What is the role of the driver? Which activities are feasible on board?

➤ How expensive will be autonomous vehicles and mobility services?

➤ Where will such mobility services be available?

➤ What happens in case of emergency?

➤ How easy will be to book and pay for shared autonomous vehicles?

➤ Who will control for security and cleanness in shared autonomous vehicles?

➤ Will accessibility be considered in vehicles and at destination?



3/4

We should try to balance between individual requirements, requirements for a sustainable (urban) transport system and challenges in transforming related industries.



3/4

We should try to balance between individual requirements, requirements for a sustainable (urban) transport system and challenges in transforming related industries.

Requirements



- Improved individual mobility and sustainable transport system (incl. avoid increased car use)
- Strengthening the active role of cities in shaping future mobility
- Supporting the transformation process of the (car) industry and simultaneously facilitating innovations in shared mobility and public transport

Potential actions

- Involve cities and municipalities in shaping mobility and enable living labs
- Facilitate tests and implementation of CCAM use cases in public transport, also in areas with small density
- Shape actively transformation/ change processes in industry and create framework conditions for new mobility services
- Facilitate pilot projects (test fields, living labs) by simplifying permission processes; create appropriate physical and digital infrastructure



4/4

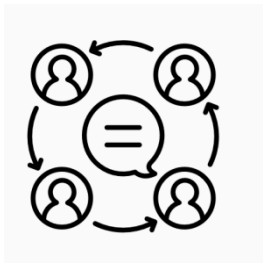
The dialogue with citizens and stakeholder on test field should start at an early stage.



4/4

The dialogue with citizens and stakeholder on test field should start at an early stage.

Ziele



- bedarfsgerechte Umsetzung mitgestalten
- Akzeptanz fördern
- Anschlussfähigkeit der Projekte fördern

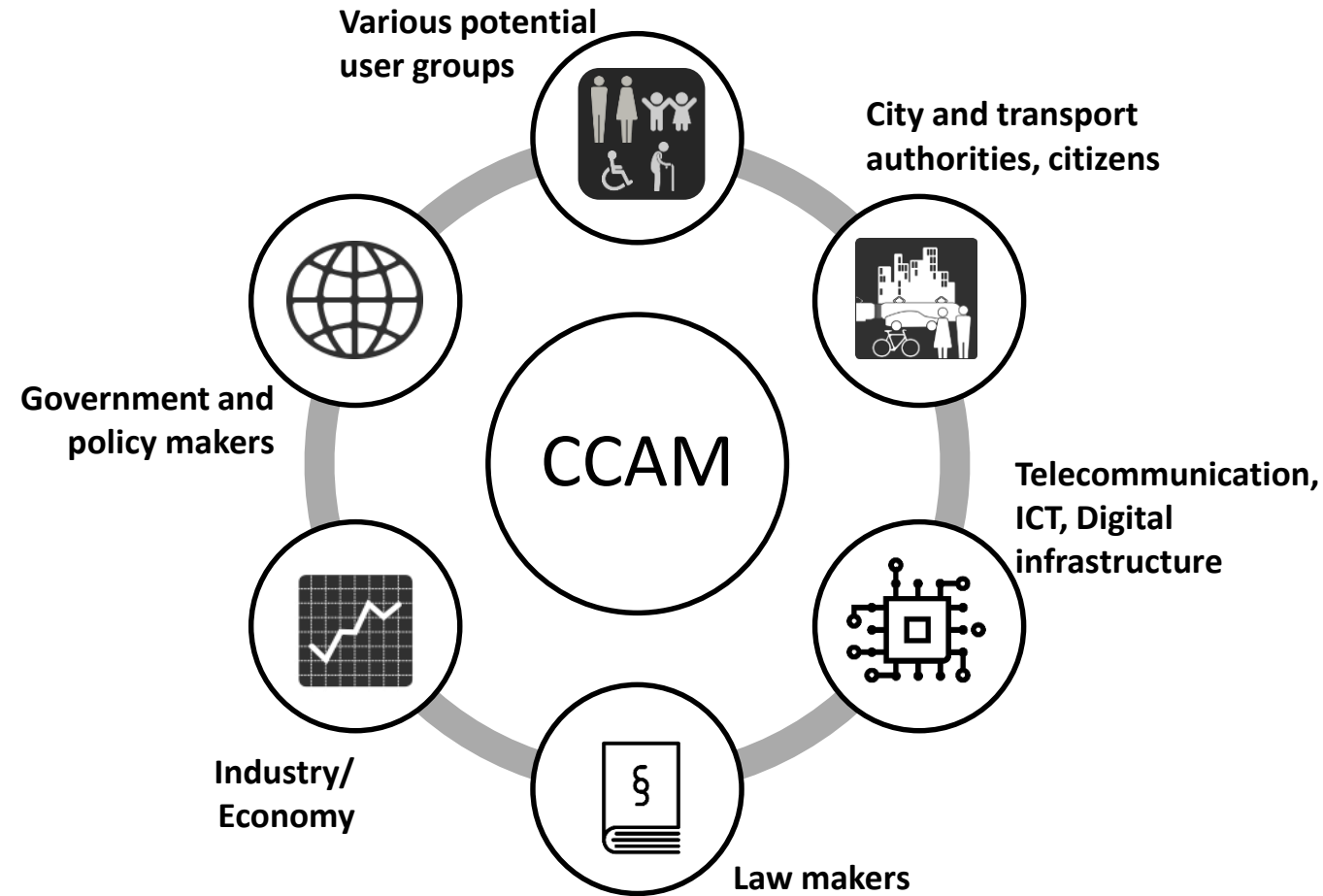
Handlungsbedarfe

- Kommunikation und ein realistisches Erwartungsmanagement als expliziter Teil von Forschungsprojekten berücksichtigen; professionelle Durchführung der Kommunikation
- Schaffung eines Testbetriebs vom größeren alltäglichen Nutzen und Einbettung der Feldtests in einem (räumlichen oder gesellschaftlichen) Gesamtkontext -> Bedarfe und Prioritäten im Vorfeld klären
- Einerseits einheitliche und standardisierte Genehmigungsprozesse in Feldtests, andererseits Förderregimes, die mehr Agilität und Flexibilität in der Forschungsarbeit zulassen



To sum up ...

- Dialogue have **various aims**
- Dialogue **should be parallel** to technology development
- Potential users **evaluate** easier **full concepts**
- We should aim for a **balance between various interests**
- Test fields/ Living labs are a good **platform for a dialogue** and it should **start at an early stage**



Thank you for your attention!



**Institute of Transport Research
German Aerospace Center (DLR)**

Dr. Viktoriya Kolarova
Viktoriya.Kolarova@dlr.de

