Ambivalence in stakeholders' views on connected and autonomous vehicles

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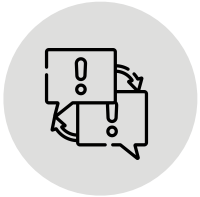
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 815098.

Stakeholders

Academics



Mobility Consultants

OEMs

Public administration

Insurers

Mobility service

Vulnerable populations

Other users

Stakeholders

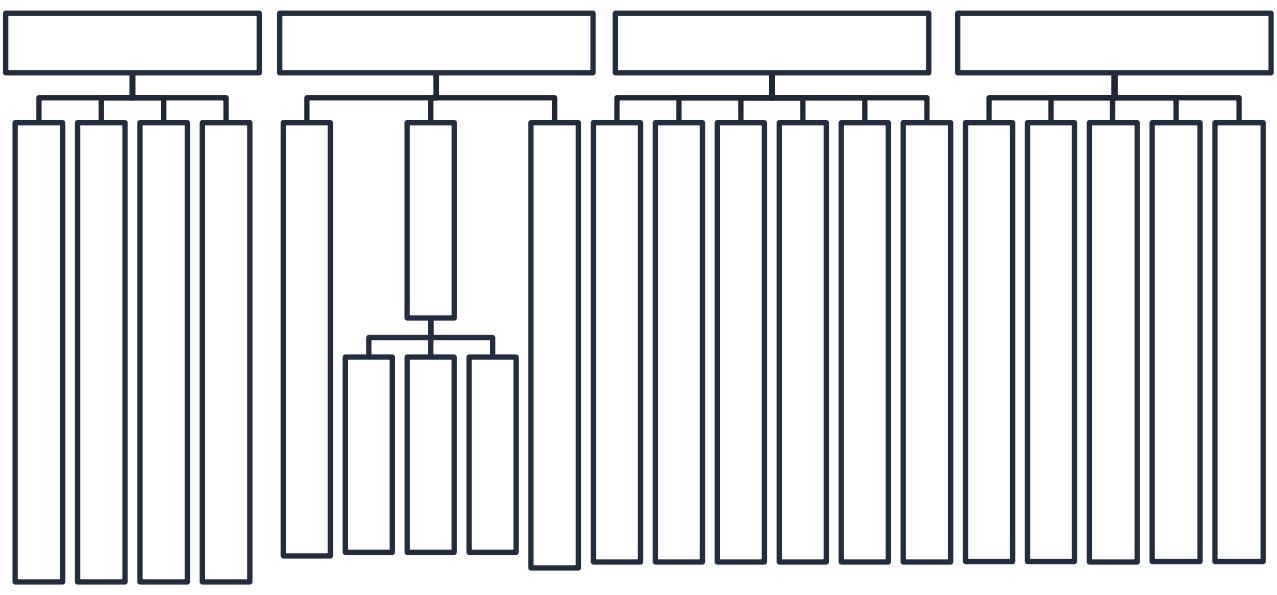
Interviews with…

- 17 participants (3 women)
- from 6 European countries
- 2-28 years of experience

Semi-structured interviews

1. Vision scenario
2. User description, needs, motivators, barriers to usage
3. Organizations and acceptance, context, issues

Semi-structured interviews



Results: Vision scenarios

CAVs as mobility as a service	CAVs as a proprietary item
First: “as shuttles for short journeys in demarcated areas such as airports, replacing today’s vehicles”	First: “only some functions will be automated, or the car is automated only in certain conditions, specific tracks on highways”
Later: “CAVs as part of a whole and holistic mobility solution ”	Later: CAVs within the traditional confines, as a sprawling network of privately-owned cars
“the fleet operator will take care of it more than there will be private driving, and you can use it when you need it only”	“it will arrive with all the issues going along with it, such as climate issues, urban sprawl issues and traffic jams”
complement public transport, which “will not be replaced completely, there will be a mix of CAVs and public autonomous transport”	“as another way of giving priority to private motorized transport”, taking away from other mobility forms and public transport

Results: Consequences

		Positive consequences	Negative consequences
1	Comfort	Infotainment time, parking assist, less driving stress	Reliability anxiety, lower speed, travel duration
2	Safety	Fewer accidents	Cyber attacks, terror, neo-luddism
3	Social inclusiveness	Vulnerable populations (blind, seniors), underage driving	Accessibility issues, discrimination, harassment
4	Labor market	Reduces driver shortage in public transport	Reduces attractive driver jobs, shift to high-skilled IT jobs
5	Structural	Better and more frequent service, more public space	Urban sprawl, reduced city income
6	Ecological sustainability	Efficiency gains, greenification of public space	Higher resource usage, shorter obsolescence

Passengers and their barriers

1. Capability
   - Lack of knowledge, lack of willingness to learn, lack of confidence to use (esp. for vulnerable populations)
2. Opportunity
   - Lack of money for lower SES, lack of accessibility due to need for connectivity
3. Motivation
   - Loss of driving fun due to regulated driving speed, loss of control, loss of freedom, loss of convenience due to ride sharing

Barriers of other relevant groups

1. Non-passengers
   - Road co-users (cyclists/pedestrians) due to further promotion of automotive industry
2. Bus operators, family businesses
   - Replacement due to automation
3. Politics
   - Sluggishness of regulators in the face of complexity of pros/cons
   - Loss of public support due to loss of status symbology of cars and job losses
   - Potential high investment costs in municipalities due to infrastructure needs and job losses

Discussion

- Ambivalence is in line with findings from previous literature
- Scope of loss of personal freedom and privacy deserves attention
- Discussions underrepresent vulnerable user groups, such as road co-users, people of low SES, and people with disabilities

→ **Political debates should focus on the form of introduction and its implications for sustainable and inclusive mobility future**

THANKS FOR YOUR ATTENTION!

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