PAsCAL

Enhance driver behaviour & Public Acceptance
of Connected & Autonomous vehicLes

Work Package 3: Comprehensive Assessment of Public Acceptance

OBJECTIVES

1. Develop **acceptance map** of **who** accepts **what**, **where** and **why**
2. Contribute to experiments addressing **barriers of non-drivers** with solution bundles
3. 4 Inform simulations with assessment of **known and futures issues**
6. Develop **CAV instrument** to predict customer acceptance (of connected and autonomous vehicles)

CONTRIBUTIONS

Stakeholder Interviews
Mobility experts, academics, policy makers

Exploratory Surveys > 1000
Panel participants, individuals with visual impairments, car-sharing users, professional drivers

Experimental Validation

Europe-wide Surveys > 5000
10 European countries, panel participants, individuals with visual impairments,

STAKEHOLDER INTERVIEWS

- *Academics*
- *Mobility Consultants*
- *OEMs*
- *Public Administration*
- *Insurers*
- *Mobility Service*
- *Vulnerable Populations*
- *Other Users*

Semi-structured Interviews with 17 interview partners (3 women) from 6 European countries, with between 2 and 28 years of experience.

RESULTS

Ambiguity regarding CAV introduction; for each area of potential impact, there are **positive and negative consequences** that need to be considered.

	Positive consequences	Negative consequences
COMFORT	Infotainment time, parking assist, less driving stress	Reliability anxiety, lower speed, travel duration
SAFETY	Fewer accidents	Cyber attacks, terror, neo-luddism
SOCIAL INCLUSIVENESS	Vulnerable populations (blind, seniors), underage driving	Accessibility issues, discrimination harassment
LABOR MARKET	Reduces driver shortage in public transport	Reduces attractive driver jobs, shifted to high-skilled IT jobs
STRUCTURAL	Better and more frequent service, more public space	Urban sprawl, reduced city income
ECOLOGICAL SUSTAINABILITY	Efficiency gains, greenification of public space	Higher resource usage, shorter obsolescence

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Exploratory Surveys of CAV Acceptance

- *Panel Users*
- *Car-Sharing Users*
- *Professional Drivers*
- *Visually Impaired Persons*

- Germany
- France
- United Kingdom
- Italy

Survey content

STATUS QUO
Mobility habits
Satisfaction with current mobility
Employment
Visual impairment
Demographics

ATTITUDE
Overall attitude
Willingness to use
Willingness to pay
Perceived ease of use
Opposition
Preference status quo vs. CAV

PERSONAL CONSEQUENCES
Job security
Job performance
Data privacy surveillance
Independence
Enjoyment
Efficiency

SOCIETY CONSEQUENCES
Job security
Environment
Congestion
Civic liberty
Road safety
Efficiency

Final Data Collection

800 panel participants, 200 per country (DE, FR, UK, IT)
212 car-sharing customers
48 professional drivers
persons with visual impairments

RESULTS *Most important factors:*

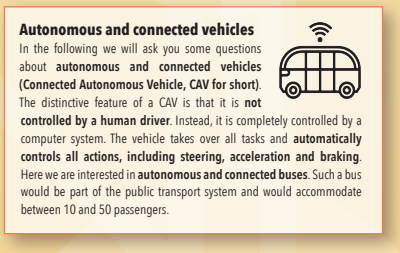
Sustainability
(emissions, pollution, environmental degradation & cost)

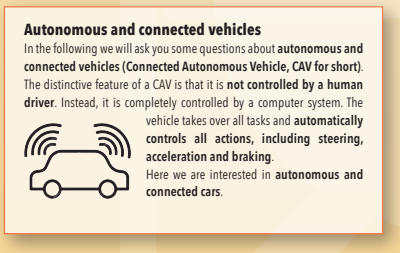
Privacy
(data abuse, data safety, surveillance)

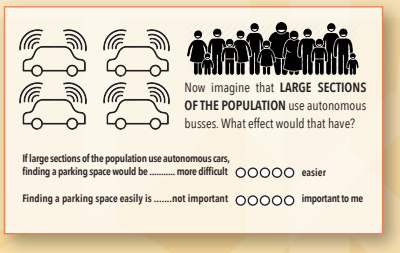
Safety
(accident number and risk, travel danger and road safety)

Efficiency
(speed of travel and vehicles, travel time, trip duration)

Survey vignette and item examples







RESULTS

Participants had **higher intentions to use autonomous busses** than cars; this choice was mediated by their **concerns about privacy violations** and impacts of autonomous vehicles on **the environment**.

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www.pascal-project.eu
info@pascal-project.eu