



CulturalRoad

Participatory planning for common European standards for connected and autonomous vehicles

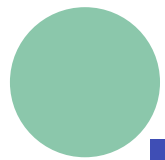
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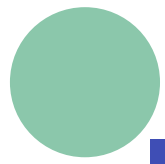


Introduction



- Connected and Cooperative Autonomous Vehicles (CCAMs) are one of the solutions for the mobility problems according to the mobility crisis
- CCAMs are not just autonomous, but most notably connected
- What problem can they solve:
 - Reduce congestion
 - Reduce pollution
 - Increase capacity
 - Reduce costs
 - Capacity of serving fragmented demand





Introduction



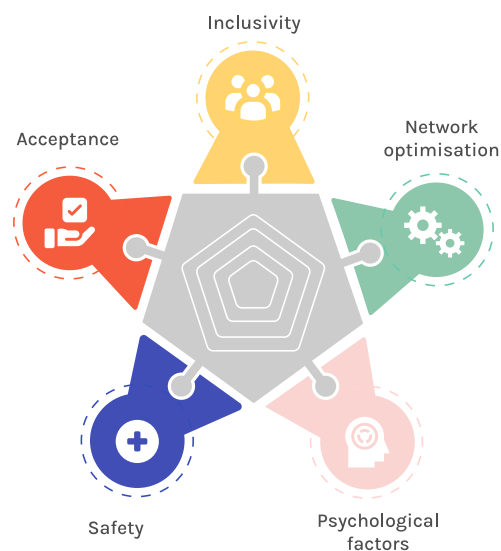
- Infrastructure, policies, and strategies are different across countries
- Acceptance of new technologies is also different across countries
- CCAM deployment needs to meet local goals, while ensuring easy cross-country deployment standards



Introduction



GOAL: Leveraging participative planning to incorporate cultural and geographical diversity into CCAMs deployment strategies and increase societal acceptability across different geographical regions.





Methodology

Two-Step Co-Creation Framework

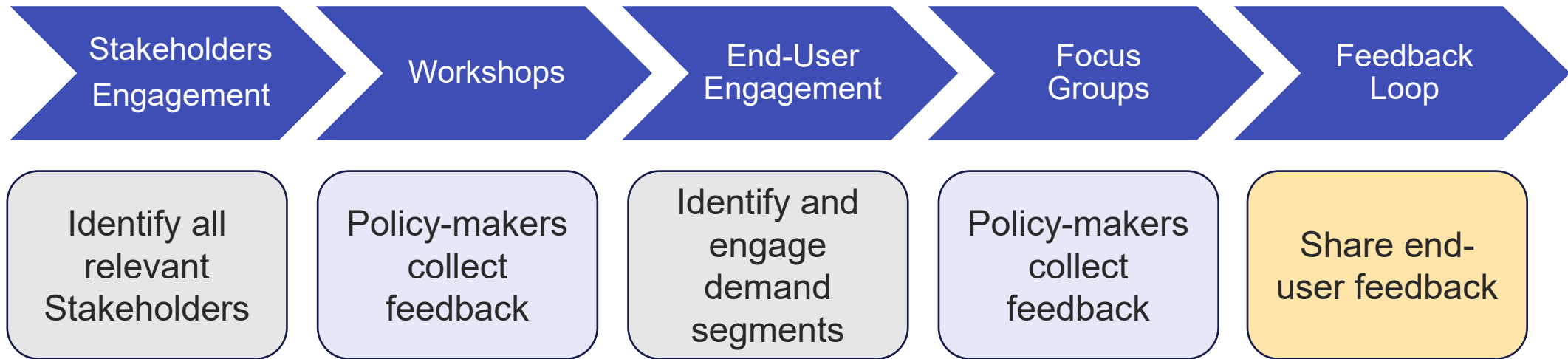
Methodology



A Two Steps Co-Creation Approach:

1. The primary Objective is to involve all stakeholders, from public authorities to industry partners and local communities
2. It Combines Interviews, Workshops, and Focus Groups to ensure active engagement across all stakeholders and population segments





- **Data Collection:** Abbreviated translated transcripts
- **Data Analysis:** Thematic Analysis

Methodology

Target Groups

Disabilities



Rural/Sub-Urban



Low Income



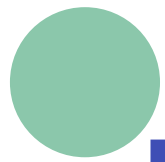
Urban Core



Social

Geographical





Methodology



Methodology

Focus Groups for End Users and Workshops for all other stakeholders

Duration: Around 120 minutes with 10 participants

Notes: Strong focus on vulnerable users and less on commuters.

Key Topics in the Workshops

(Plus Entry and Exit Questions)

Accessibility
& Barriers

Technology

Public
Transport
and CAAM

Key Topics in the Focus Groups (WIP)

Psychological
Factors

Use Cases

Service
Design
Features



Demonstration Sites



Germany (Karlsruhe)

Test user interfaces

Israel (Eilat)

Airport Connection

Slovenia (Ljubljana)

White Paper for CCAMs

Spain (Barcelona)

Roadmap Deployment

UK (Oxfordshire & West Midlands)

Regional and National Plans





Demonstration Sites



Germany (Karlsruhe)

1 online workshop · 5 participants

Israel (Eilat)

8 individual interviews

Slovenia (Ljubljana)

1 online workshop · 5 participants

Spain (Barcelona)

1 in-person workshop · 8 participants

UK (Oxfordshire & West Midlands)

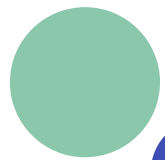
3 workshops + 1 survey · 15 participants

41 Stakeholders





Results



Country Specific Profiles



Israel (Eilat)

Innovation-optimistic, public transport focus

- ▶ Positive overall
- ▶ Safety and regulations
- ▶ Infrastructure Needs

Linked AM to PT modernisation not private use.

Internal contradictions on ethics and infrastructure signal
➤ unresolved uncertainty beneath the surface

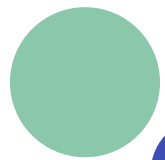
Germany (Karlsruhe)

Pragmatic optimism where CCAM value must be earned

- ▶ Accessibility & Inclusion
- ▶ Governance & Policy Barriers
- ▶ Human Machine Interaction (Interface design)

CCAM should only be deployed where it adds clear value beyond existing services

Federal regulatory fragmentation as barrier to scalability.



Country Specific Profiles



Slovenia (Ljubljana)

Most cautious: views technology ahead of society

- ▶ Strong focus on safety
- ▶ Perceived Impact
- ▶ Equity & Fairness

Most detailed equity arguments of any site:
subscription models, surge pricing, mobility segregation.

Also most optimistic about transport poverty reduction.

Spain (Barcelona)

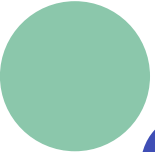
System design, Governance and coordination challenge

- ▶ Pilot/Testing (real world empirical validation needed)
- ▶ Governance & Policy Barriers
- ▶ Connectivity + Mobility Model

Acceptance conditioned on regulatory clarity.

Technology rarely questioned but system around it is the obstacle.

High amount negative sentiments



Country Specific Profiles



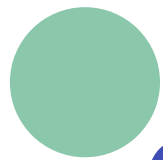
UK (Oxfordshire & West Midlands)

Polarised views

Service provision and public duty and trust as the defining condition

- ▶ Accessibility & Inclusion
- ▶ Trust in Automation
- ▶ Perceived Impact

Research-to-implementation failure as dominant institutional frustration



Cross Country Considerations



Reported aspects:

• Barriers & benefits

- + Safety
- + Inclusivity
- + Efficiency
- Inequality (if high costs)
- Congestion (if not PT)
- Usage barriers (language)
- 5G Infrastructure

• Participation

- + CCAM as a tool, not a magic solution
- + PT oriented

• Accessibility and equity

- + Can help people with disability
- Only accessible to wealthy

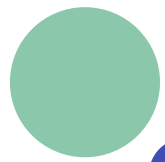
Emerging opportunities:

• Solutions

- Clear and well-defined regulatory framework
- Regulation should incentivize proper efficient and equitable deployment
- Avoid strict regulations that force Europe to stay behind China and US
- Opportunity for Europe:
 - Us focuses on individual transport. China develops cities around technology.
 - Europe needs PT like vehicle able to navigate complex European City.
 - Possible edge for European Manufacturer to test in European Cities
- Support equity-oriented CCAM testing
 - Low-income areas, sub-urban areas
 - Outside the city it is easier to have large scale testing



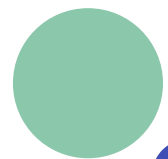
Conclusions



Conclusions



- Unique opportunities for Europe
- Equity-Oriented Deployment
- Focus on use cases
- Different countries, different approaches



Conclusions





THANK YOU!

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