B2. Incorporating Innovation – How to plan for Cooperative, Connected & Automated Mobility

Road Vehicle Automation in Cities and Regions

Karen Vancluysen, Polis
Road vehicle automation

• Leading discussion topic in transport technology circles
• Significant media coverage
• Global regions competing to be the first
• Some pilots with cities & regions but majority awaiting outcomes from early adopters
• Cities & regions need to play a more prominent role in policy development around AVs
Optimism bias ... yet many uncertainties about when AVs will arrive, in what form and with which impact.
Why do cities need to act and plan?

- Anticipate what is to come
- Build understanding of possible impacts at transportation & societal level
- Identify where automation can deliver positive outcomes, where there are risks and how they can be mitigated
- Define measures - policy, financial, regulatory - to maximise opportunities and minimise disbenefit
Possible outcomes of AVs

• Travel behaviour
  • Reduction in private car ownership in favour of public transport, shared mobility & soft modes
  • More motorised trips to detriment of soft modes and public health

• Spatial
  • More public space created by redundancy of parking which must be put to other functional uses
  • Urban sprawl and longer commuting trips

• Social
  • Enhance transport provision to persons with limited transport access by reducing cost of service provision
  • Increased social division and inequality where mass transit replaced by new mobility services (car/ride-sharing)

Survey indicates that ~55% of all car, public transport and bicycle users prefers a form of SDV in scenario 3

Impact of self-driving vehicles on the city of Amsterdam, Study commissioned by the city of Amsterdam
Possible outcomes of AVs

• Road safety
  • (i) driver distraction reduction; (ii) road rules compliance
  • (i) Interaction with VRUs; (ii) technology infallibility

• Traffic management/efficiency
  • C-ITS approach could enable (i) richer data for traffic and asset management; (ii) improved vehicle control
  • Improved traffic efficiency leads to more vehicles on road
  • “More pain than gain” in short-medium term due to co-existence and higher safety margins

• Infrastructure
  • Investments depend on AV implementation path: autonomous, CCAV or systems-approach
  • If significant investments: new business models
Key issues for cities and regions

Policy, planning & urban development
Holistic approach to AVs
Personal security & safety

Tackling predicted growth in trips/km driven
Managing change
Recommendations

- Premature to talk about integrating automation into SUMPs?
  - Keep discussions grounded in reality
  - Cities should become more AV-aware first
  - Think about policies needed to ensure positive outcome from AVs
  - Determine at what stage cities should start planning for it
- Need for structured dialogue between authorities, industry and service providers
  - Related to AV developments, including data sharing, governance
- Research needed on impact of AVs in urban environment
- Ensure automation developments are not purely industry-driven, but also support transport policy
Thank you!

Karen Vancluysen
kvancluysen@polisnetwork.eu
www.polisnetwork.eu