ITF Work on Cooperative Mobility Systems and Automated Driving

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Moving Freight with Better Trucks

Research Report
Background and Introduction

• Vehicle automation a clear trend
• But varying experts opinions on:
  ▪ Projected time scales
  ▪ Technology options
  ▪ Use cases/ services
• Necessary for policy makers to prepare their responses to this development
• Positive and negative are scenarios possible
Positive View on Vehicle Automation

• Many potential benefits of vehicle automation are being quoted:
  ▪ Improved road safety levels
  ▪ Decreased emissions
  ▪ Increased network capacity

• Emergence of related mobility services also holds the promise for even larger benefits:
  ▪ For society as a whole
  ▪ On the city level
Negative View on Vehicle Automation

• But at the same time some negative effects could also be envisaged:

  ▪ Network capacity gains leading to induced traffic
  ▪ Ability of using travel time more productively leading to longer trips as people move further away from centres
  ▪ This in turn then leads to further urban sprawl
  ▪ Potentially huge fleets of empty vehicles running errands and generating much larger congestion levels
  ▪ Wider labour market effects
The Perspectives of Government vs. Industry

• Governments investing in R&D & demonstration of near market-ready systems, showcasing their ambitions for leadership in this space

• Emerging companies with much stronger IT focus in technical background and leadership mentality aggressively pushing into the market

• Vehicle automation thus part of the concepts of:
  ▪ Sharing economy
  ▪ Disrupting technologies
The Question of Government Intervention

• Policy makers to manage the transition period
• Lock-in benefits while avoiding potential risks
• Key tools are legal and regulatory frameworks
• Often seen as a barrier to wider implementation
• Technology-led discussion overly optimistic
• Technology mature for many types of use cases
• Leadership from policy makers is essential
Regulatory Frameworks for Automated Vehicles

• Discussion about regulation in the context of AV typically centres on the vehicles

• Work is on-going on many levels here nationally and internationally:
  
  ▪ Updates to the texts of the agreements under UNECE WP.29
  ▪ Concepts of “driving tests” for automated vehicles
  ▪ Test tracks simulating various real-life scenarios
  ▪ Governments amending their legal frameworks in order to allow testing on public roads
Regulatory Frameworks for Transport Services

- Regulating the automotive aspect of automated vehicles of course is key
- But likely implementation of this technology as enabler for shared mobility concepts
- Therefore regulation of mobility services needs to be considered in parallel
- Direct competition with legacy transport services, which are often heavily regulated and protected
Current Issues surrounding AV Regulation

• Disrupting effects of technologies and services are already very visible
  ▪ In the case of Transportation Network Companies (TNCs) such as Uber, Lyft, Didi, BlaBlaCar, etc.
  ▪ But also with functionalities of automated vehicles on public roads, e.g. the Tesla Autopilot

• This is because of increasing time gap between innovation and the related regulatory responses
Big Data in Transport - A Way Forward?

• Policy makers under increasing pressure to strike a balance between administrative oversights and enabling innovation

• The advent of big data and its application to the transport sector can solve this dilemma through flexible data-led regulatory approaches

• Key policy objectives to cover here include:
  ▪ Vehicle/ traffic safety
  ▪ Personal security (driver)
  ▪ Minimum mobility levels
Related ITF Work on AVs and Big Data

• The ITF has carried out and is continuing to a large body of work in these areas through its Corporate Partnership Board, including
  ▪ Scoping study on “Automated and Autonomous Driving - Regulation under uncertainty” in 2015
  ▪ On-going work stream on modelling the impacts of shared mobility concepts in urban areas
  ▪ Recent publications on “Data-Driven Transport Policy” and “App-Based Ride and Taxi Services: Principles for Regulation”

• Also ITF-OECD Working Group on Big Data and Open Data in Transport
ITF Reports on Vehicle Automation

**Urban Mobility System Upgrade**
How shared self-driving cars could change city traffic

**Automated and Autonomous Driving**
Regulation under uncertainty
ITF Reports on Big Data for Transport
Thank you for your attention!

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