

An International Perspective of Truck Automation & Platooning

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1. Challenges and Objectives

- Autonomous trucks are likely to be the first use case of AV technology
- Long distance road freight make extensive use of motorways, less complex environment
- AV may achieve safe commercial operation on motorways earlier than on other roads
- Negative labour impacts of higher levels of automation should not be understated
- Opportunities for carriers and consumers to benefit from substantially lower costs



2. State-of-the-Art











3. Recent Results - Regulation

- Harmonised regulation is more important for autonomous trucks than other AVs
- Existing regulatory frameworks can accommodate AV technologies up to a point
- Existing regulations can be stretched further to accommodate higher level AVs
- There are some advantages to stretching existing regulatory frameworks
- But stretching existing regulatory frameworks also has its disadvantages and limits



3. Recent Results – Labour Market

- Substantial labour impacts likely to arise from advanced AV, particularly in road freight sector
- Substantial job losses, within a decade, around 1 million people in Europe and North America
- Unlike other examples, drivers displaced by automation may struggle to find alternatives
- Need for Government interventions affecting speed of introduction/ support to displaced drivers
- E.g. temporary transition advisory board, permits, economy-wide and industry specific support



3. Recent Results - Enforcement

- Increasing gap between policy goals and the regulation actually implemented
- The effects range from undesired outcomes not originally foreseen to enforcement challenges
- Clear potential of data-driven approaches for enforcing road freight transport compliance
- Data handling and processing requires crosssectoral approaches
- Wider and more unstructured big data sets might be less applicable (big data)



4. Barriers and Research Needs

- Development of regulatory frameworks
- Realistic view of changes to road safety levels
- Discussion of infrastructure requirements
- Interaction with other forms of traffic
- Implications of demand matching platforms
- Management of the transition period
- Addressing the labour market challenge
- Making use of big data for road freight
- Automated trucks and the multi-modal system



Related recent ITF work

Roundtable Commercial Vehicle On-Board Safety Systems <u>www.itf-oecd.org/commercial-vehicle-safety-systems-roundtable</u>

CPB Project Data-led Governance of Road Freight Transport www.itf-oecd.org/data-led-governance-road-freight-transport

Managing the Transition to Driverless Road Freight Transport <u>www.itf-oecd.org/managing-transition-driverless-road-freight-transport</u>



Thank you for your attention!

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