

Intelligent Transport Systems and the International Transport Forum

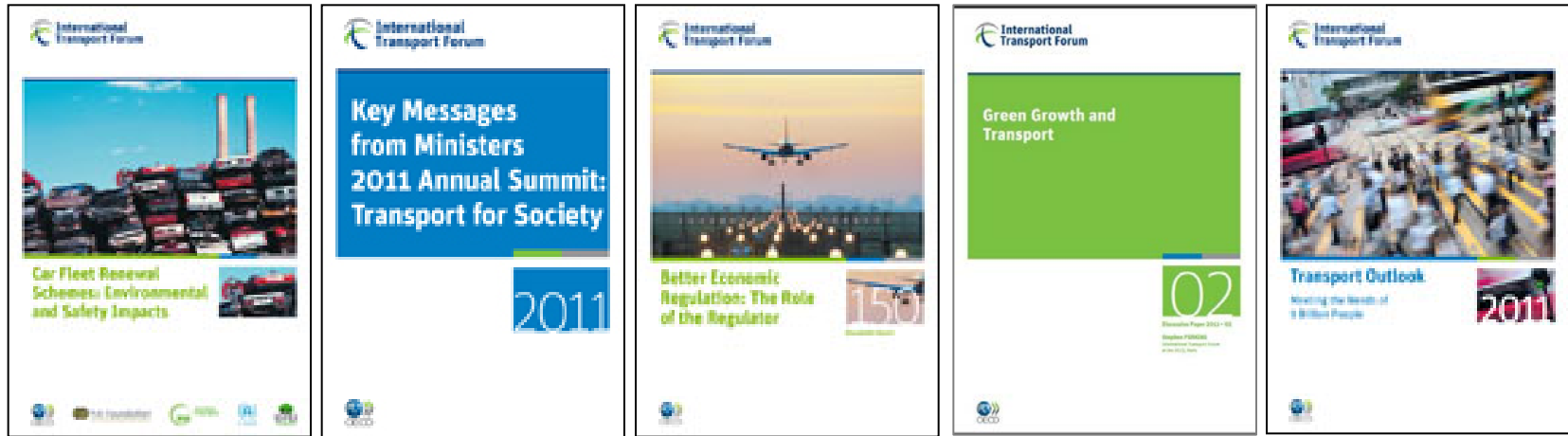
Tom Voege, Transport Analyst
International Transport Forum

TRB ITS Committee (AHB15) Meeting, TRB 2016



Intergovernmental Organisation

- 57 member countries (23 non-OECD)
- Administratively integrated with OECD
- Only transport body with a mandate for all modes



Think Tank

- Policy research and analysis, statistics and data
- Collaborative projects with renowned experts on wide range of issues
- Some outputs: Publications, Policy Briefs, Statistics Briefs, background documents for annual summits




The Annual Summit


- Held every May in Leipzig, Germany, on a strategic theme
- Ministers are joined by business leaders, civil society, international organisations, research community
- Outputs help advance and guide transport policy for 21st Century

Recent ITF Studies on ITS Topics


 International Transport Forum |  CPB
Corporate Partnership Board






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




Corporate Partnership Board Report

 OECD


 International Transport Forum |  CPB
Corporate Partnership Board






Automated and Autonomous Driving
Regulation under uncertainty




Corporate Partnership Board Report

 OECD


 International Transport Forum |  CPB
Corporate Partnership Board



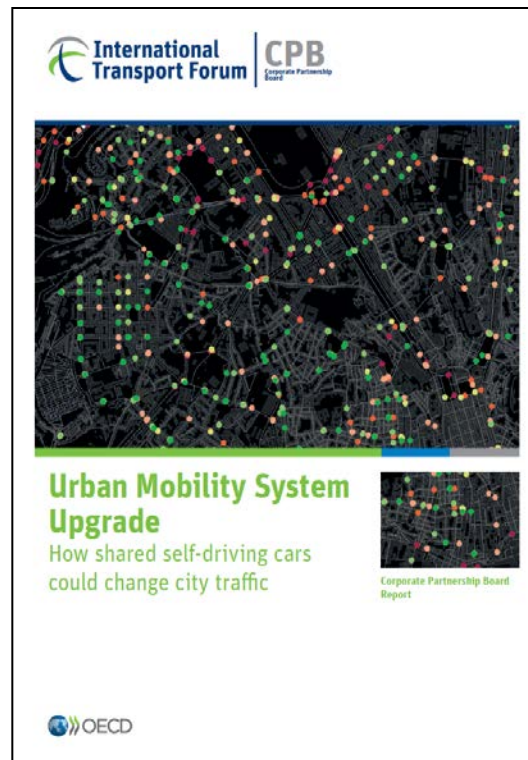
Big Data and Transport
Understanding and assessing options



Corporate Partnership Board Report

 OECD

Urban Impacts of Vehicle Automation



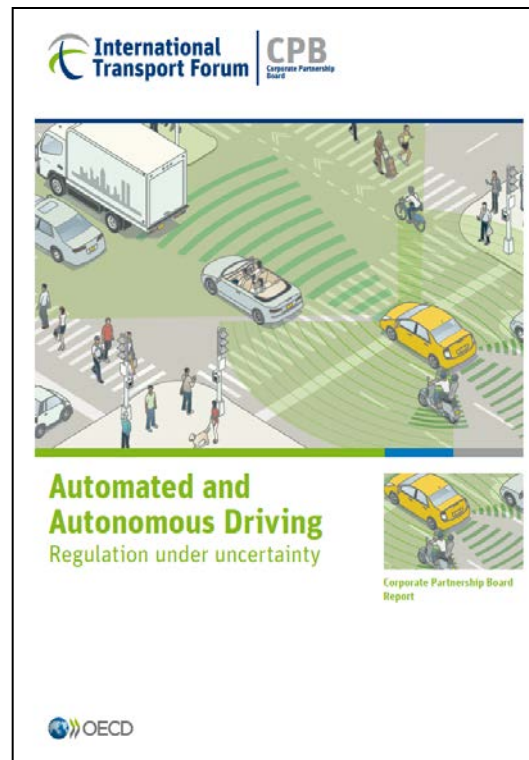
Key Findings

- Nearly the same mobility can be delivered with 10% of the cars
- Impacts on congestion depend on system configuration
- Reduced parking needs will free up significant public & private space
- Ride sharing replaces more vehicles than car sharing
- Size of the fleet influenced by the availability of public transport
- Managing the transition will be challenging

Policy Insights

- Self-driving vehicles could change current public transport, but active management is needed to lock in the benefits of freed space
- The potential impact of self-driving shared fleets on urban mobility is significant, shaped by policy choices and deployment options
- Improvements in road safety are almost certain, the environmental benefits will depend on vehicle technology
- New vehicle types and business models will be required and public transport, taxi and urban transport governance have to adapt
- Mixing fleets of shared self-driving vehicles and privately-owned cars will not deliver the same benefits but it still remains attractive

Regulatory Issues for Vehicle Automation



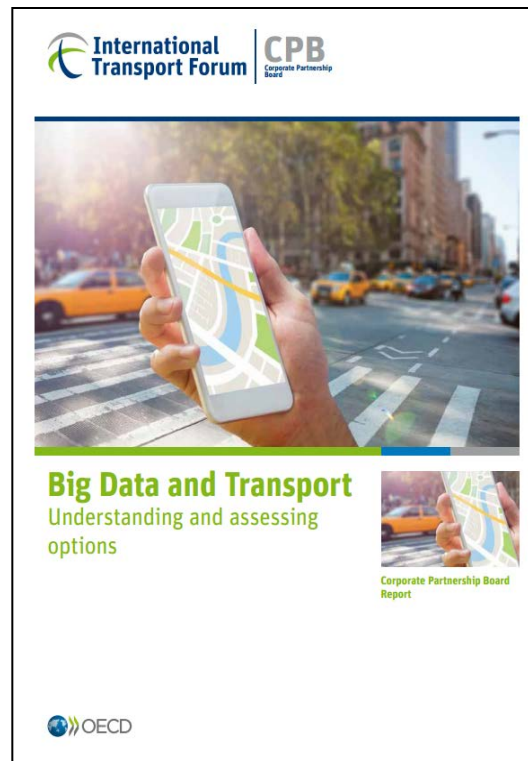
Key Findings

- Automated driving technologies are mostly mature and some autonomous driving is here already
- Self-driving cars seem a near-term possibility, but their range of capabilities is unclear
- Many possible technological configurations for autonomous driving, use and business cases are closely linked to automation pathways
- Some regulatory frameworks are being developed for prototype testing, but not yet for future use cases

Policy Insights

- Automated driving comprises a diverse set of emerging concepts that must be understood individually and as part of broader trends toward automation and connectivity
- Uncertainty on market deployment strategies and pathways to automation complicates the regulatory task
- Incrementally shifting the driving task from humans to machines will require changes in insurance
- The shift from human to machine may have an impact on what product information developers and manufacturers of autonomous vehicles share and with whom

Big Data and Transport



Key Findings

- The volume and speeds at which data today is generated, processed and stored is unprecedented and will fundamentally alter the transport sector
- Embarked sensors and data storage/ transmission capacity in vehicles provide new opportunities for enhanced safety for both conventional and increasingly automated vehicles
- Multi-platform sensing technologies are able to precisely locate and track people, vehicles and objects in a way that has never before been possible, but it also creates unique privacy risks
- The fusion of purposely-sensed, opportunistically-sensed and crowd-sourced data generates new knowledge regarding transport activity and flows, but data protection policies are lagging behind

Policy Insights

- Road safety improvements can be accelerated through the specification and harmonisation of a limited set of safety-related vehicle data elements
- Transport authorities will need to audit the data they use to understand what it says/ does not say and how it can best be used
- More effective protection of location data will have to be designed upfront into technologies, algorithms and processes
- New models of public-private partnership involving data-sharing may be necessary to leverage both public and private benefits
- Data visualisation increasingly important in policy dialogue

Future ITF Activities on ITS Topics

- Roundtable on Cooperative Systems and Automated Driving
- Roundtable on Heavy Vehicle Safety (including HGV automation)
- Working Group on HCT (intelligent access and enforcement)
- Working Group on Big Data and Open Data in Transport
- Working Group on Smart use of roads and optimising urban spaces
- Working Group on measures against ageing of road structures
- Planned work on shared mobility concepts and truck automation

Contact Information

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