



Innovation and Digitalisation in Transport

Keir Fitch

Head of Unit – Research and Innovative Transport Systems
European Commission – Directorate General for Mobility and Transport

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How does digitalisation affect transport and the competition between transport modes?

- Innovation & Digitalisation: "inevitable opportunity" for Single European Transport Area
 - Applied "vertically" in all 4 transport modes and "horizontally" on cross-modal aspects
 - Future markets structured around mobility services (MaaS)
 - Increased multi-modality and user focus (passenger / cargo)
 - New / value-added services and applications emerging fast
 - Global competition on business models heating up by 2020
 - Changing profile of existing (modal) business models, data access/availability, (cyber-) security, etc.
 - Logistics, Physical Internet, Big Data, Internet of Things, Factories of the Future and Robotics are all contributing to changes in transport
 - Smart Infrastructure / self-maintenance expanding across modes
- Innovation & Digitalisation are key vectors in market developments, which influence cooperation / competition across stakeholders and transport modes**

Automation is transforming the different transport modes at a different pace: how does this affect the level playing field?

- Innovation, including Automation is a key driver for change
- Automation impacts: capacity, environment, predictability, etc. – but also demand shifts, security, human factors, etc.
- What is / should be a "level playing field" across transport modes?
- Each mode has specific characteristics, challenges, stakeholders, appetite / ability to innovate and adopt technological advancements such as Automation
- "Incumbent" and "alternative" operators need to be smart, innovative, efficient, competitive – the barriers across transport modes are collapsing fast
- Modal shifts / substitution effects are increasingly possible, raising "competition" across modes and moving towards mobility as a service
- Performance requirements, user needs, travel behaviours are driving change
- Each transport mode needs to adapt to a rapidly changing socio-economic context
- Legislation and regulation should support (not obstruct) higher levels of Automation
- **Automation: an enabler for change & integration of the entire transport sector**

What is the potential of new Business Models in transport? How will they affect intermodal competition?

- Innovative / new business models are developing fast to cater user needs
- Low-cost travel, Uber, "Call a Bike", Automated / autonomous vehicles, MaaS, etc.
- Significant progress underway on Automation, need to ensure an open approach
- Open access and sharing of interoperable data and information is key
- Public transport / traditional operators faced with increasing competition from third-party developers of travel solutions / applications, leveraging the increasing availability of open data
- Business model credibility, market-suitability, bankability and execution is key
- **Innovative business models: accelerating change in the transport sector**

Effectively support innovation without distorting competition: which role for regulation? which role for the EU?

- Why Innovate? Instigate transformation, raise the performance level of today's transport system and tackle a number of challenges / bottlenecks:
 - capacity constraints (e.g. airports), high cost (e.g. journey fares), environmental effects (e.g. CO2 emissions), safety aspects (e.g. road fatalities), limitations in transport accessibility (e.g. rural / disabled), etc.
- Where to Innovate? Everywhere – entire TEN-T network, Corridors, Urban nodes, ports / hubs, Core and Comprehensive network, rural areas included, even at the local level of Cities and individual companies / SMEs
- The European Commission has a role to play in a range of issues, such as:
 - competition / monopoly issues arising as a result of Digitalisation
 - network / spectrum utilisation and coverage problems in the EU
 - establishing specifications and standards on ticketing and information, etc.
- EU focus on "Better Regulation", to facilitate transport / system transformation
- **Effective support for Innovation requires cooperation b/w EU/Member States, research actors/investors, public/private sectors and funds**

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EU Funding Support – key examples

Connected & Automated Driving

H2020 (2014-2017): >€650m
CEF (2014-2016): >€190m

Shift 2 Rail (Digital only)

H2020 (2014-2020): >€140m

SESAR

H2020 (2014-2020): €585m

Others (2014-2020)

H2020: Additional funding for Waterborne
and Road Automation, Logistics, ICT, etc.
EFSI: EU 8B€ (will guarantee 16B€) + EIB 5B€
ESIF: 450B€

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Thank you for your attention

