

Strategic Transport Research and Innovation Agenda - STRIA

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Cristina Marolda

DG Mobility & Transport
European Commission

Mobility
&
Transport

Why do we need a new transport R&I Agenda?

- ❑ Energy Union communication in 2015 defines the strategy to attain the **2030 Climate & Energy targets**:
 - at least 40% GHG emission reduction, 27% of renewable energy, 27% improvements in energy efficiency.
- ❑ The strategy is based on **five dimensions**:
 1. Energy security, solidarity and trust
 2. A fully integrated European energy market
 3. Energy efficiency
 4. Decarbonising the economy
 5. **Research, Innovation and Competitiveness and the development of a Strategic transport R&I Agenda (STRIA)**



What are we aiming for?

- The **Research, Innovation and Competitiveness dimension** aims at:
 - Promoting **EU technological leadership** in innovative low-carbon technologies
 - **Aligning the EU, national and industry R&I agendas** in energy, transport and competitiveness
 - Maximising and combining the **impact of key technologies** toward the achievement of the Energy Union goals
 - **Cross-sectorial approach** on electricity & alternative fuels production, storage and use!
- **Avoid new** (clean transport) **silos**; We need clean, smart, safe and secure transport with **new mobility and business models!**



How are we doing it?

- A broad **public consultation now online** until end of May
- Engagement of main **transport and other societal stakeholders**
- Identification and discussion of **R&I policy options** to boost the development and deployment of innovative technologies and solutions



Expected results

- A comprehensive **transport R&I Agenda based on seven innovation roadmaps**
- Contribution to a **Communication on the Energy Union R&I and competitiveness Strategy** (November 2016)
- Input for **future priority setting**



General approach to STRIA

- Assessment of policies creating a **favourable framework for R&I** in mobility and transport
- Identification of the **public and private roles** in relation to transport R&I investments
- Value Creation**: commercial business cases, business models etc.
- User and public **acceptance**
- Socio-economic** impacts
- Including **multimodal transport system** approach **and** all **specific transport modes**



STRIA objectives

- To identify **priority actions** leading to low carbon transport and mobility and create **awareness** among MSs, stakeholders and the civil society
 - To support short- and medium term R&I policy programming
- **7 technical areas** have been identified **that will impact** on the transformation of the EU transport system:
 1. **Electromobility**
 2. **Alternative fuels**
 3. **Vehicle design & manufacturing**
 4. **Connected and automated transport**
 5. **Transport infrastructure**
 6. **Network and traffic management systems**
 7. **Smart transport and mobility services (incl. urban)**



STRIA – roadmaps

Common objectives

- Identification of the potential contribution of each of the identified technologies to the achievement of the **EU climate and energy, competitiveness** goals
- Identification & prioritisation of **policy options** supporting research, innovation and wide market uptake for each thematic area
- Contribution to the creation of an **integrated long term transport R&I strategy** linked to relevant sectors such as energy or ICT.



STRIA – roadmaps: scope

Infrastructure

- ❑ Adapt infrastructure to new vehicle technology requirements to allow a swift deployment of sustainable vehicles
- ❑ Accommodate and enable the transformation of the transport system (automation)
- ❑ Reduce environmental footprint of construction and maintenance operations
- ❑ New demand management and new business models
- ❑ Optimisation of multimodality and new concepts of hubs
- ❑ Increase durability and safety, avoid congestion, support interconnectivity and modal-shift
- ❑ Innovative governance and funding schemes to speed up deployment of innovation
- ❑ Identify actions to create a more risk-friendly attitude



Roadmaps - Outcomes

- ❖ Need to develop an **integrated** transport research, innovation and competitiveness strategy
- ❖ Future R&I activities need to be brought together under a coherent, cross-modal and long term strategy

Main game changer:

- ICT (including Industry 4.0)
 - Digitalisation (automation and connectivity)
 - Big Data
 - Cyber vulnerability



Roadmaps - Outcomes

Key **Technological** aspects for R&I:

- Large scale real world **demonstrators**
- Methodologies to gather, process, share **data**
- Impact of **automation** and connectivity on energy consumption and transport system efficiency
- **Safety** issues (including those related to automation)

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Roadmaps - Outcomes

Key **Social** aspects for R&I:

- Innovative user-centric mobility concepts
- More efficient use of existing infrastructure combined with innovative ones
- Impact of user behaviours and social acceptance
- Role of cities

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Infrastructure – Medium-term priorities

Infrastructure in itself only responsible for 5% of total GHG emissions, but need to reduce the **operational carbon emissions**.

Infrastructure must be able to **adapt its performances** to continuous advances and to uncertain future demand

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Infrastructure – Main recommendations

- **Interdependence** between infrastructure and vehicles that use it
- Equal **charging** of different modal infrastructure + Social **acceptance** of charging
- **Flexibility** and **adaptability** to changing demand (efficient use for routine operations + **redundance** to provide resilience)
- **Design** and **maintenance** closer to **operation** of traffic
- Changes in **energy mix**, people's **modal choice** and **external costs** payment.

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