



EU Road Infrastructure Research & Innovation - current needs, future challenges



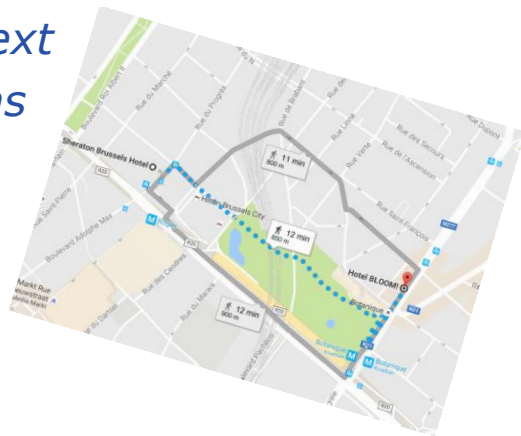
A perspective

HORIZON 2020



Today's roadmap

- *The policy context*
- *H2020 ambitions*
- *LCE4ROADS*
- *STRIA*
- *The future*





Policy drivers for priority setting

Europe 2020 strategy for smart, sustainable & inclusive growth

5 EU objectives to reach by 2020 on employment, the environment, education, R&D and social inclusion.

7 flagship initiatives to pool EU & MS actions on major policies & EU levers for growth

Digital agenda for Europe; Innovation Union; Youth on the move; Resource efficient Europe; An industrial policy for the globalisation era; An agenda for new skills and jobs; European platform against poverty



Transport Policy goals

Resource efficiency vs. climate change and oil dependency

- **Transport accounts for 32% of all energy consumption and depends on oil (94%)**
- **24% of CO₂ and 20% of GHG emissions originate from transport**
- *Curb noxious emissions, improve air quality*
 - **400 000 premature deaths in EU, 20% linked to transport**
- *Boost alternative fuels and infrastructure*
- *Achieve the 2030 energy-climate targets: GHG -40%, 27% renewables, 27% energy savings*
- *Transport ambition: -60% GHG emissions by 2050*





Transport policy goals

- **Network capacity and modal shift vs saturation and congestion**
 - Congestion costs: 1 to 2 % of GDP
 - 30% of road freight > 300 km moving to rail/water by 2030
- **Smart solutions for safety and security**
 - 26000 road fatalities/year
 - **Vision zero**: ½ road fatalities by 2020 (vs 2010), towards none by 2050
 - Security as an integral part of infrastructure design & innovation
- Use potential of **ICT** (traffic management; connected and **automated transport**)
- **Fierce international competition**
 - New / expanding markets but danger of shrinking market shares



EUROPE 2020

Resource Efficient Europe

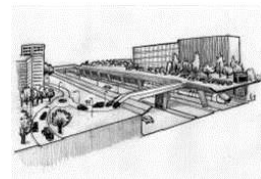
Innovation Union

Industrial Policy

2011 White Paper on transport

H2020 societal challenge transport

Smart, green and integrated transport system



H2020 SMART, GREEN and INTEGRATED TRANSPORT

Objective:

- *"To achieve a European transport system that is resource-efficient, climate-and-environmentally-friendly, safe and seamless for the benefit of all citizens, the economy and society."*



SPECIFIC PROGRAMME PRIORITIES

- **4 broad lines of activities aiming at:**
 - Resource efficient transport that respects the environment
 - Better mobility, less congestion, more safety and security
 - Global leadership for the European transport industry
 - Socio-economic and behavioural research and forward-looking activities for policy-making





"Transport infrastructure is much more than asphalt, concrete or steel; it is the backbone of national economies, providing connections for people and goods, access to jobs and services, and enabling trade and economic growth"

(Declaration from Ministers at 2013 Annual ITF Summit – "Funding Transport")



SST.2013.5-3. Innovative, cost-effective construction and maintenance for safer, greener and climate resilient roads

Determine innovative means for road construction & maintenance with due consideration for environmental impact

The development of:

- *guidelines and standards supporting the objectives of European road network development*
- *tools and techniques of road asset management and renewal, including aspects such as energy consumption and environmental impact.*

Twinning with the US





INFRASTRUCTURE

TOPICS so far:

- Smarter design, construction and maintenance – **MG8.1** - 2014 – RIA: CSA
- Next generation transport infrastructure: resource efficient, smarter and safer – **MG8.2** - 2014 – RIA: 2 stages CSA:
- Facilitating market take-up of innovative transport infrastructure solutions – **MG8.3** - 2015 – **Public procurement of innovative solutions**
- Smart governance, network resilience and streamlined delivery of infrastructure innovation – **MG8.4** - 2015 – RIA: CSA:
- Resilience to extreme (natural and man-made) events **MG-7.1 2017 RIA**
- Optimisation of transport infrastructure including terminals **MG-7.2-2017 RIA**



What's next in H2020?

- *Developing a Work Programme strategy for the 2018/2019/2020 calls*
- *Defining topics in detail*
- *Strategic Transport Research & Innovation Agenda*
- *First thoughts about FP9.....?*





STRIA (Strategic Transport R&I Agenda)

- Promoting **EU technological leadership** in innovative low-carbon and digital transport technologies, services and solutions
- **Aligning** the EU, national and industry **R&I agendas**
- **Maximising** and combining the **impact of key technologies** toward the achievement of the Energy Union, the Digital Single Market and Jobs & Growth (**President Juncker's Priorities**)



STRIA Infrastructure roadmap scope

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 sustainability 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

Thank you for your attention!



Find out more:

www.ec.europa.eu/research/horizon2020