



Transport policy, Horizon 2020 and rail research

European Commission

Kick-off meeting of the IT2Rail, In2Rail and Roll2Rail projects, 7 May 2015



EU Policy context

White paper on transport



Single European Railway Area



Regulatory Approaches (incl. technical standards)

Fourth Railway Package



Infrastructure policy and investment

Connecting Europe Facility



Research and Innovation Policies to complement and support the regulatory and policy approaches

Horizon 2020



Rail R&I under FP7

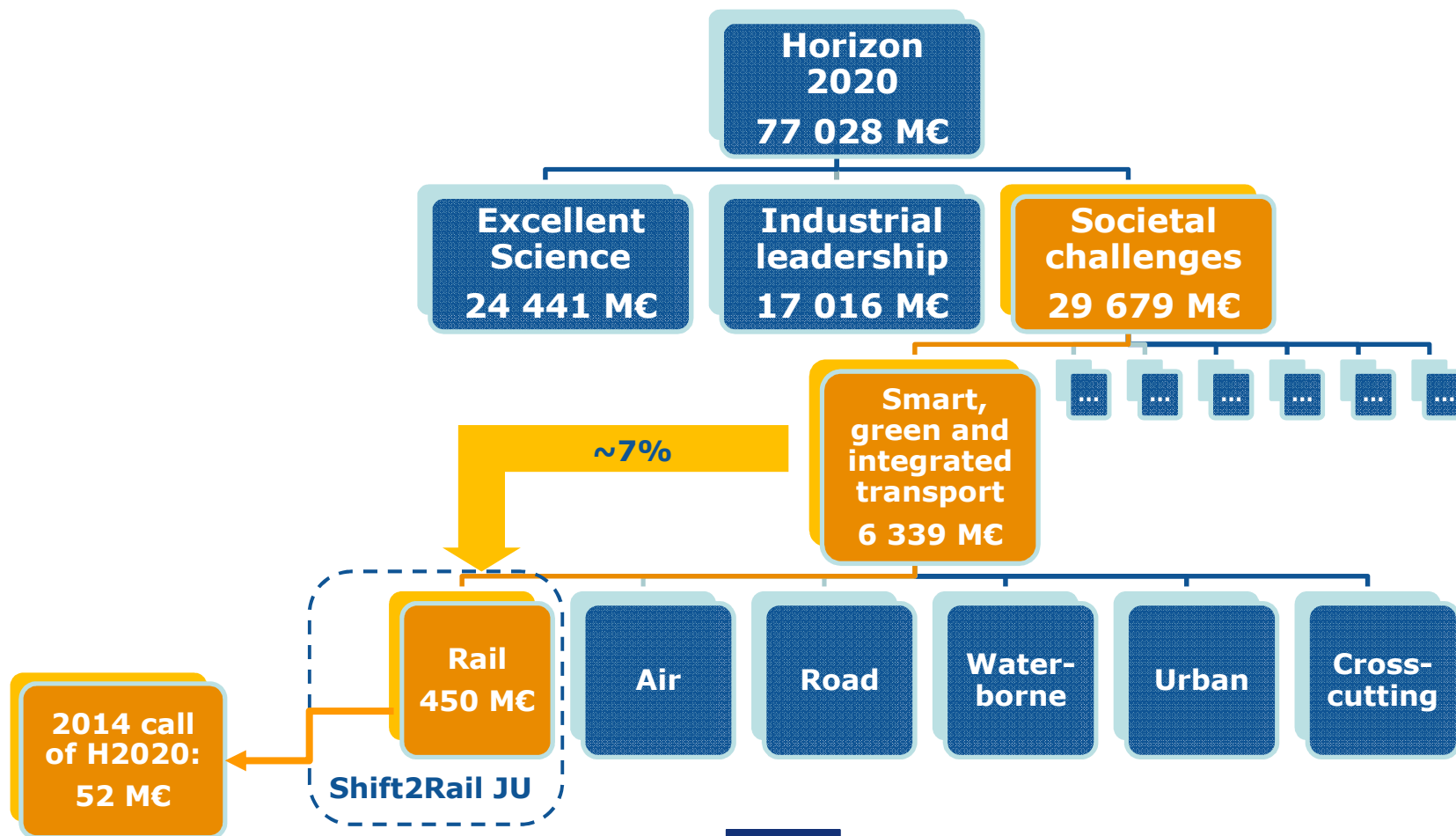
- **€155 Million** for rail research from 2007 to 2013 = **3.7%** of total budget for Transport Research
- Around **50 rail projects** (excluding cross-cutting projects)
- **Insufficient project coordination** → risk of overlaps and/or of generating uncoordinated or redundant technologies
- **Insufficient alignment with policy objectives** → limited impact
- **Lack of system-wide approach** with limited or uncoordinated participation of actors from the full rail value chain
- **Limited market uptake of innovations** with EU funding focused on pre-competitive innovation at low Technology Readiness Levels and "estranged" from market needs
- **Limited leverage effect** (30% of private funding on average)
- **SMEs** = 16% of funding



Horizon 2020 – New approach to R&I

- **Single programme** bringing together all EU funded R&I, with **simplified access** for businesses, research institutes and academia
- Linking research to innovation by providing **seamless and coherent funding from idea to market**
- **Challenge-based approach**, allowing applicants to have considerable freedom to propose innovative solution
- **Partnership approach** (e.g. Shift2Rail Joint Undertaking) to:
 - Provide the opportunity to a **wide range of stakeholders** to develop a **coordinated and long-term vision for rail innovation**, aligned with **business & end-user needs**;
 - Increase the **leverage** effect of EU rail R&I funding by ensuring a **balanced contribution from all partners**,
 - Guarantee an **open, transparent, effective and efficient governance** and day-to-day management.

Rail R&I under Horizon 2020





The Commission expectations from the 'lighthouse' projects

- All rail-related projects selected under the 2014 call of Horizon 2020 are considered as **'lighthouse' projects** since they are expected to contribute to the objectives of the JU via regular exchange of information, organisation of common workshops and dissemination of results
- In addition and in order to ease the integration of these projects in the S2R activities, the S2R Regulation foresees that the **management of a maximum amount of 52 M€** earmarked under the Horizon 2020 Transport Work Programme 2014-2015 may be taken over by the S2R Joint Undertaking **once it achieves the operational capacity to implement its own budget.**
- For the moment **INEA or the Commission remains in charge of the management** of these projects until the JU autonomy (foreseen in the first half of 2016).
- Four projects have been identified as candidate for a transfer to the JU, and for these projects, **the JU staff is also supporting the Commission** on the management issues.



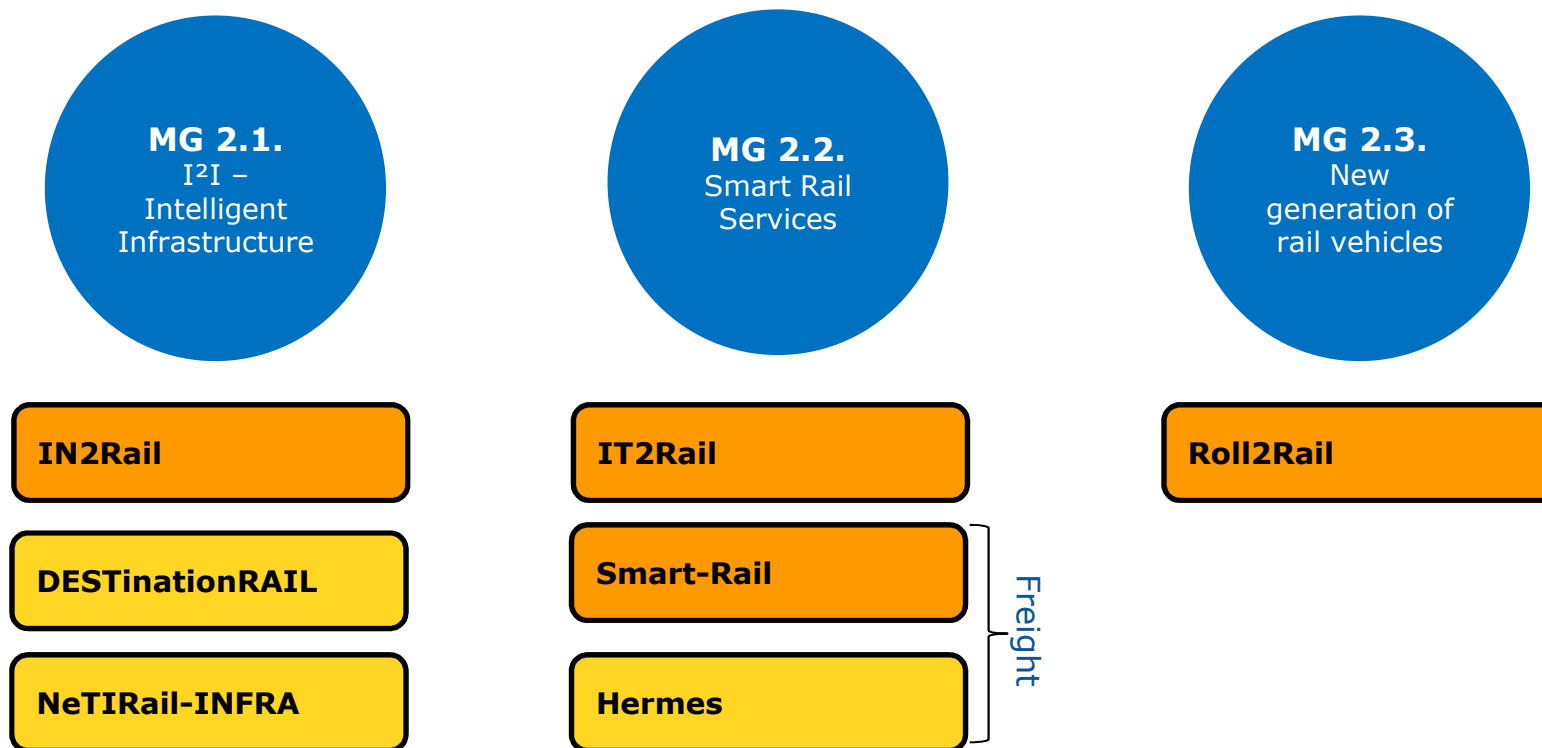
The Commission expectations from the 'lighthouse' projects

The key outcomes we are interested in are:

1. Adequate **delivery of the expected impacts** described in the proposals
2. Contribution to the objectives of Shift2Rail Joint Undertaking and the **preparation of a swift transfer to the JU.**



The 'lighthouse' projects in the H2020



Cooperation among all the rail projects funded under the 2014 H2020 call (esp. the other lighthouse projects) will be essential to ensure the delivery of the best results possible and a swift transfer of the projects to the Shift2Rail Joint Undertaking

MG 2.1.
I²I –
Intelligent
Infrastructure



IP3

IN2Rail: The project is to set the foundations for a resilient, consistent, cost efficient, high capacity European network by delivering important building blocks that unlock the innovation potential that exists in SHIFT2RAIL: innovative technologies will be explored and resulting concepts embedded in a systems framework where infrastructure, information management, maintenance techniques, energy, and engineering are integrated, optimised, shared and exploited.

DESTinationRAIL: The project provides solutions for common infrastructure problems encountered in diverse regions of Europe, e.g. deterioration and scour damage to bridges, slope instability, damage to switches and crossings and track performance. The project will develop management tools based on scientific principles for risk assessment using real performance measurements and other vital data stored in an Information Management System.

NeTIRail-INFRA: The project focuses on infrastructure challenges will address growing demand for already busy services, and future growth of under-utilised lines, with technical solutions for track, power supply and support of new smart services. Technical developments will focus on modular infrastructure, i.e. standard designs with multiple application in different locations, thereby reducing planning cycles, enabling a lean design process for new installation and retro-fit.

MG 2.2.
Smart Rail
Services



IP4

IP5

IT2Rail: The project aims at providing a new seamless travel experience, giving access to a complete multimodal travel offer which connects the first and last mile to long distance journeys. This is achieved through the introduction of an open published framework providing full interoperability whilst limiting impacts on existing systems, without prerequisites for centralized standardization. The traveller is placed at the heart of innovative solutions, accessing all multimodal travel services (shopping, ticketing, and tracking) through its travel-companion.

Smart-Rail: The project aims at introducing a wide set of innovative measures aiming to improve the freight rail services offered to the shippers, focusing on five key topics: reliability, lead time, costs, flexibility and visibility. It will develop working business models for cooperation of different stakeholders and a methodology and architecture for exchange of data/information required for the optimisation process, between stakeholders. The innovative measures will be tested and improved in real life situations in Living Labs.

Hermes: This project aims to achieve optimization of rail freight transportation by combining industrial expertise on the freight wagon design and construction, advanced materials for lightweight construction and logistics with the research capabilities to incorporate innovation solutions and optimize material performance.

MG 2.3.
New
generation of
rail vehicles



IP1

Roll2Rail: The project aims to develop key technologies and to remove already identified blocking points for radical innovation in the field of railway vehicles, as part of a longer term strategy to revolutionise the rolling stock for the future. The high level objectives of the work are to pave the way to increase the capacity of the railway system and bring flexibility to adapt capacity to demand, increase availability, operational reliability and punctuality of the vehicles, reduce the life cycle costs of the vehicle and the track, increase the energy efficiency of the system and improve passenger comfort and the attractiveness of rail transport



Conclusions

- In order to ease the transfer of management of the projects to the S2R JU, the JU staff is already involved as 'back-up' of the Commission staff on the management issues:
 - **Roll2Rail: William Bird (DR RTD) and Alexandra Gurau (S2R JU)**
 - **In2Rail: Rachel Smit (DG MOVE) and Georgios Patris (S2R JU)**
 - **It2Rail: Antoine Kedzierski (DG MOVE) and Dorota Szeligowska (S2R JU)**
- This staff will be your primary contact points on the contractual administrative issues and on matters related to the reporting or the participation in meetings, etc.
- We look forward to a fruitful cooperation on these projects and we hope that they will pave the way for a successful start of the Shift2Rail Joint Undertaking!

Thank you for your attention!