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Foster Rail – Capacity, performance and competitiveness Roadmap

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Introduction: why the area is important and present situation

To meet the ambition that the railway in Europe should make a (much) bigger contribution to the economy and society

By improving:

- the utilisation of the current network,
- the performance and quality of the services provided
- the overall competitiveness

By:

- radical improvement in capacity management,
- reducing the need to plan, invest in and deliver major new infrastructure schemes

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Key issues and objectives referring to the SRRIA

- Arrangements maximising capacity on busy corridors and improved system utilization;
- More reliable system components, leading to a highly reliable system;
- Improved system utilisation, yield management and organizational arrangements;
- Optimised real-time traffic management, conserving energy and minimising inconvenience;
- Highly automated railway operation and technical support, including vehicle and infrastructure,
- Life Cycle Cost efficiency, system resilience, reliability;
- Continued improvement of every aspect of the passenger's trip, such as obtaining information, purchasing tickets, enjoying station services and travelling in local, regional, intercity and high speed trains;
- Continued improvement of the freight shipper's experience along the supply chain.

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State of the Art and ongoing research and innovation within and outside rail

- EC White Paper 2011, New EC Infrastructure Policy
- European Railway Traffic Management Systems
- European Neighbourhood Policy
- Horizon 2020
- Rail Route 2050, Challenge 2050
- Sustrail, Spectrum, Capacity4Rail
- ECTP Roadmap
- Moving towards sustainable mobility: A strategy for 2030 and beyond
- EU transport demands: trends and drivers
- Energy trends to 2030

- NATIONAL STRATEGIES

- Shift2Rail

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The Roadmap – per each priortity area: challenge, - needs and recommendations

- Infrastructure Availability
- Infrastructure Capacity and Capability
- Infrastructure Exploitation
- Passenger trains and Freight Wagons
- Freight Terminals

- Value!

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The Roadmap – per each priortity area: challenge, - needs and recommendations

- **Infrastructure Availability**
- **Infrastructure Capacity and Capability**
- **Infrastructure Exploitation**
- **Passenger trains and Freight Wagons**
- **Freight Terminals**
- **Value!**

Intelligent infrastructure
Intelligent and interactive planning support
Positioning technologies,
Train to train and to track communication
Real time traffic management
Convoying and dynamic coupling
Fully autonomous operation and freight handling
Operational capability of freight wagons
Behavioural analysis/HMMI

Implementation Plan

The implementation planning must take into account on-going and planned projects. For the major European level it is in Shift2Rail.

In some cases there are thinking's on follow-ups to Shift2Rail, however yet unspecified. This roadmap can facilitate the discussion about these.

- The implementation plan, to be developed, could be split into three work streams;
- 1. Shift2Rail,
- 2. A potential future large program
- 3. Separated projects

- In the S2R, several of the project ideas shown in the RM are described and elaborated much more in detail and aims.
- The updates of Shift2Rail should consider the thinking of this RM.

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Visual Roadmap, milestones and deliverables overview

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Thank you for your attention!

See for the full Roadmaps at

http://www.errac.org/foster-rail/deliverables/