

# Making greater use of more energy-efficient modes

European Commission - DG MOVE

Working towards a more energy-efficient railway sector: the role of European railways  
UIC Energy Efficiency Days – Antwerp June 2014

# Introduction

*How to ensure that we deliver the White Paper  
60% GHG emission reduction target?*

Regulatory Approaches  
(incl. technical standards)

Infrastructure policy and  
investment

Research and Innovation Policies  
to **complement and support** the regulatory approach

# Key challenges of the rail sector

- **Insufficient growth** of rail markets
- **Poor consumer satisfaction**
- Reliance on **public subsidies**
- **Low profitability** due to product customisation, capital-intensity of investments, long product lifecycles, and long and costly authorisation procedures
- **Fragmentation of rail markets** and diversity of national standards
- Increasing **global competition** in the rail industry
- Technical **know-how in decline** with 30% of sector workforce retiring within next 10 years

## EU Policy context

***White paper on transport:  
the 60% GHG emission reduction target***



***Fourth Railway Package***



***Single European Railway Area***

# White Paper – a vision for rail transport 2050

## Freight

Shift 50% of road freight over 300 km to other modes

Double rail freight volumes

Achieve CO2 free city logistics in major urban centres

Connect all seaports to the rail freight system

Rail Freight Corridors

## Passenger

Triple length of high-speed rail network

Majority of medium-distance passenger transport by rail

Connect all core network airports to the rail network

Phase out 'conventionally-fuelled' cars in cities

Deploy ERTMS

## EU Policy context

*White paper on transport*



***Fourth Railway Package***



*Single European Railway Area*

## Fourth Railway Package

- Improve **competitiveness** of rail
- Spend **public money** more efficiently

Remove  
administrative  
and technical  
barriers to  
improve  
interoperability  
and safety

Open domestic  
rail passenger  
transport to  
competition

Better  
governance of  
rail  
infrastructure

**Innovation**  
pillar of the  
Single  
European  
Railway Area



## Framework for EU intervention: H2020

*White paper on transport*



*Fourth Railway Package*



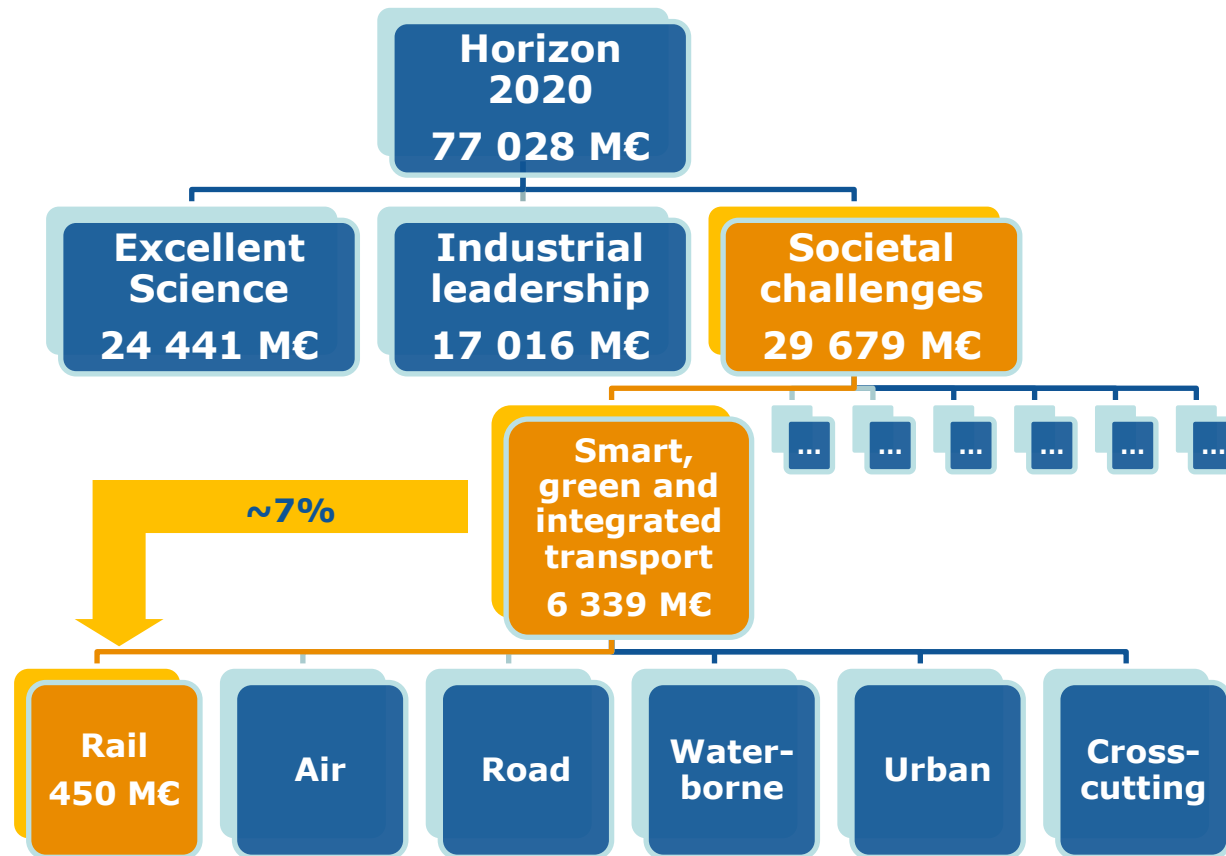
*Single European Railway Area*



**Horizon 2020**



# Horizon 2020 Funding

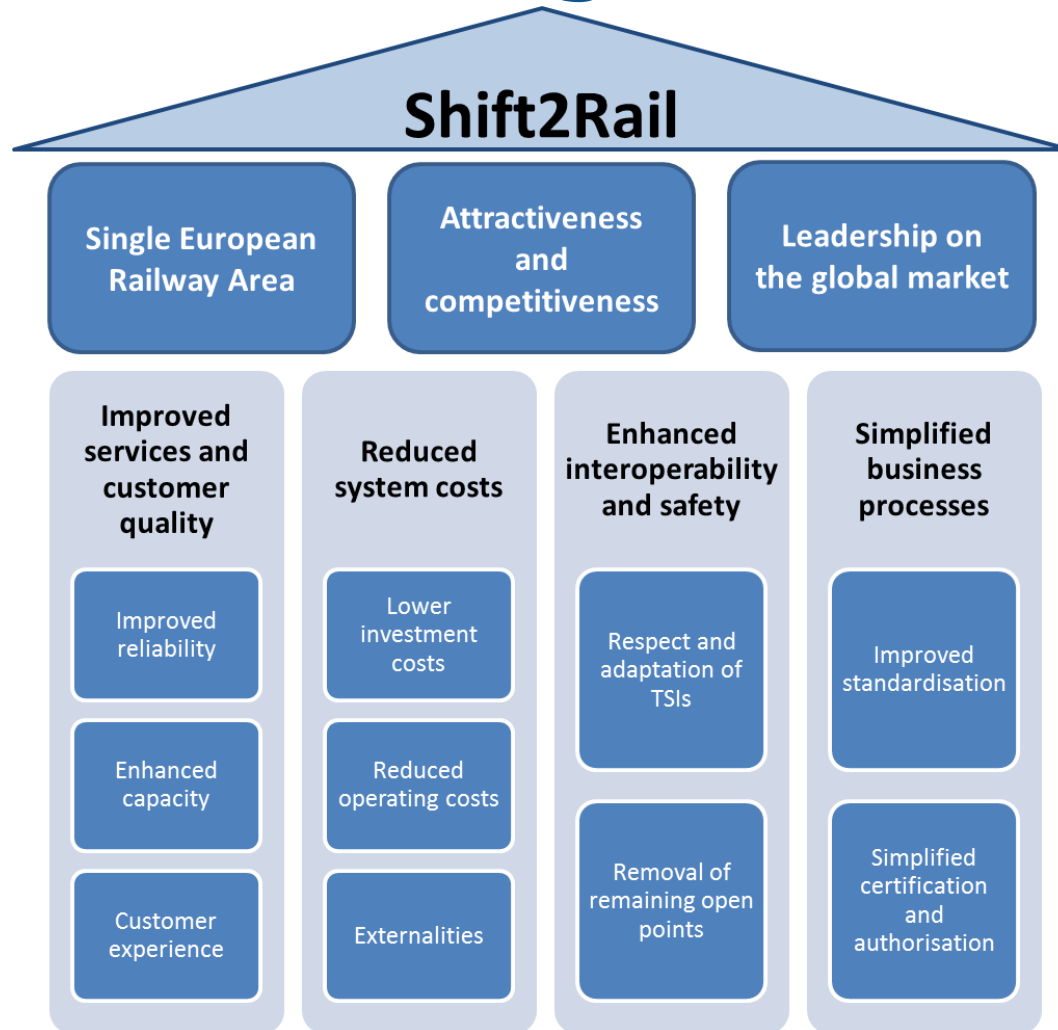


## Why Shift2Rail?

H2020 encourages **partnerships**, namely in the form of **Joint Undertakings** to:

- Foster **focused, coordinated and long-term investment** in EU rail R&I;
- Increase the **leverage** effect of EU rail R&I funding;
- Establish sustained networks and **knowledge exchange** between diverse stakeholders;
- Ensure a **system-wide approach** to innovation;
- Support close-to-market projects that meet **business and end-user needs**;
- Increase the **operational performance** and **cost-effectiveness** of rail R&I.

# Intervention logic of Shift2Rail



## Key priority areas for Shift2Rail

Activities to focus around **five "Innovation Programmes"**



- New generation of high-quality, reliable **rolling stock** that substantially reduces the cost of rail services, drastically improves the quality of rail services and facilitates the use of trains throughout various Member States;



- **Intelligent traffic management and control systems**, beyond signalling, building on current ERTMS, to optimise capacity, reliability and minimise life-cycle cost;

## Key priority areas for Shift2Rail



- New railway **infrastructure** system that will radically improve capacity and performance and reduce costs related to development, maintenance and renewals;

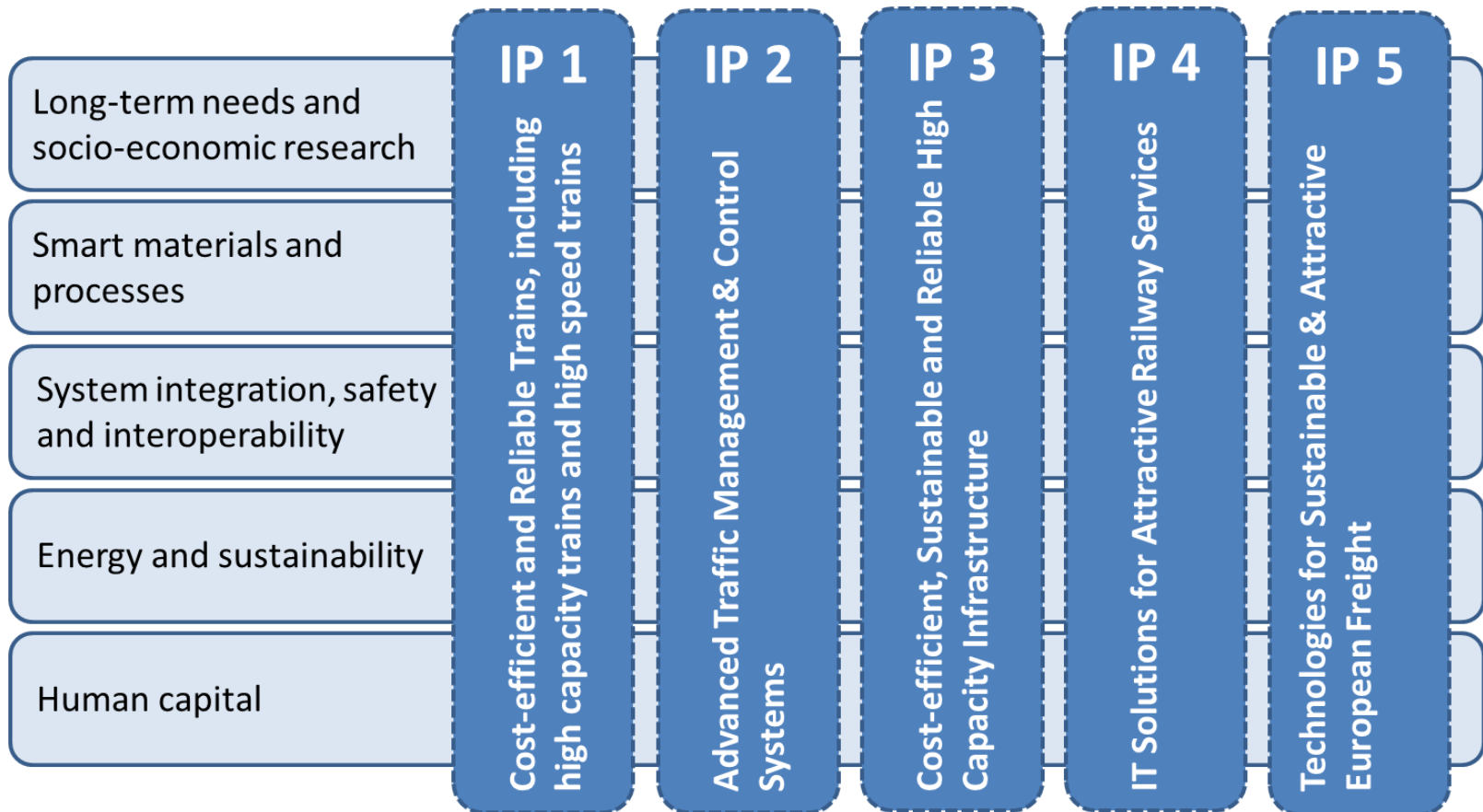


- Innovative **IT solutions** and services to make railway services more attractive;



- Sustainable and attractive **freight solutions**, helping rail to enter into new market segments and become an integrated part of advanced logistic solutions.

# Shift2Rail systems approach and cross-cutting themes



## Key principles of Shift2Rail

- **Joint vision** and holistic approach
- Tailor-made governance model with **strong leverage**
- Openness and **broad stakeholder involvement**
- Strong role for **public authorities**
- **Efficient** implementing framework

# Openness and stakeholder involvement

→ Entities can participate via **4 different mechanisms**:

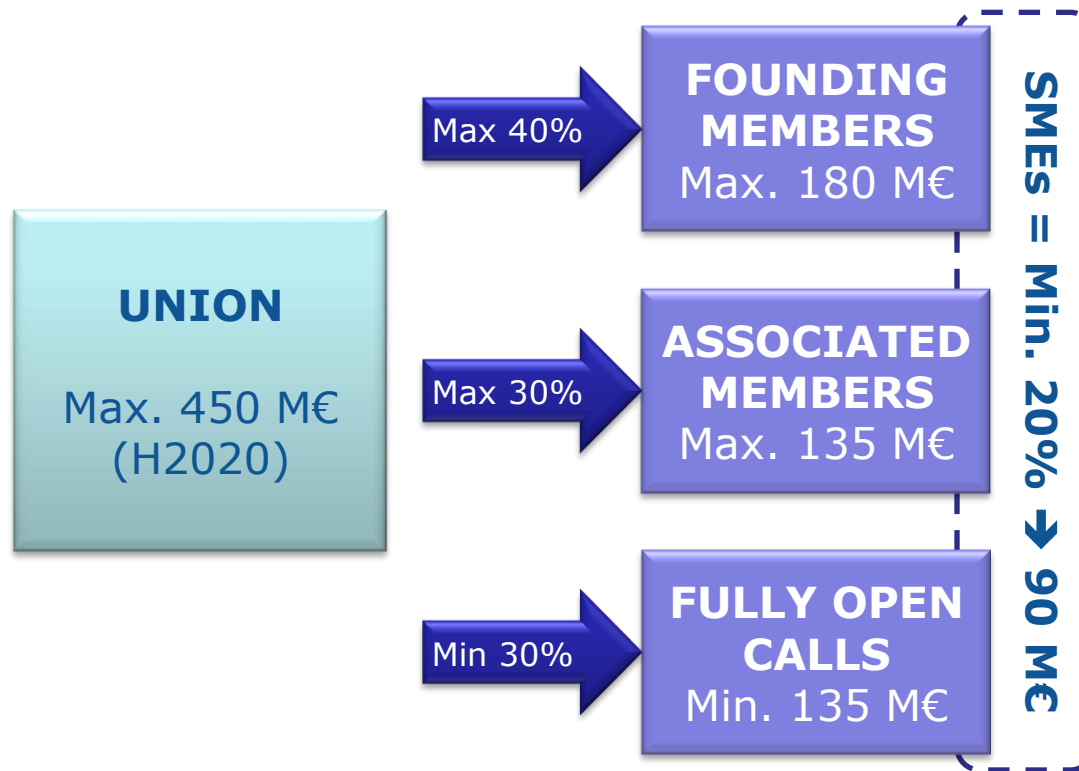
- as an **associated member** (individually or consortium)
- as a **subcontractor**, consultant or other arrangements
- through the **fully open calls**
- through **dedicated working groups**

→ **€90 million for SMEs over 7 years**

- >< In FP7, approx. €22 million for SMEs out of a total of €155 million
- Subject to regular quantitative and qualitative assessments



# Implementation of Union funding



## Next steps

- Preparation of the **Strategic Master Plan of Shift2Rail**:
  - to be adopted by the S2R Governing Board in its full composition after endorsement by the Council
  - long-term vision for rail research and innovation in Europe
  - identify key priorities and the essential operational and technological innovations required from ALL stakeholders
  - Public consultation to be organised on 20 June
- **Call for Associated Members** to be launched in summer 2014
- Shift2Rail **activities** to start in 2015