



INTERNATIONAL UNION
OF RAILWAYS

unity, solidarity, universality

Research & Innovation in Europe: A vision by the Rail Operating Community

Transport Research Arena 2014

Paris - 16/04/2014

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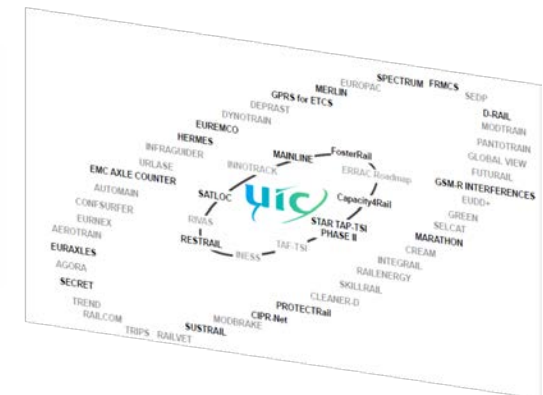


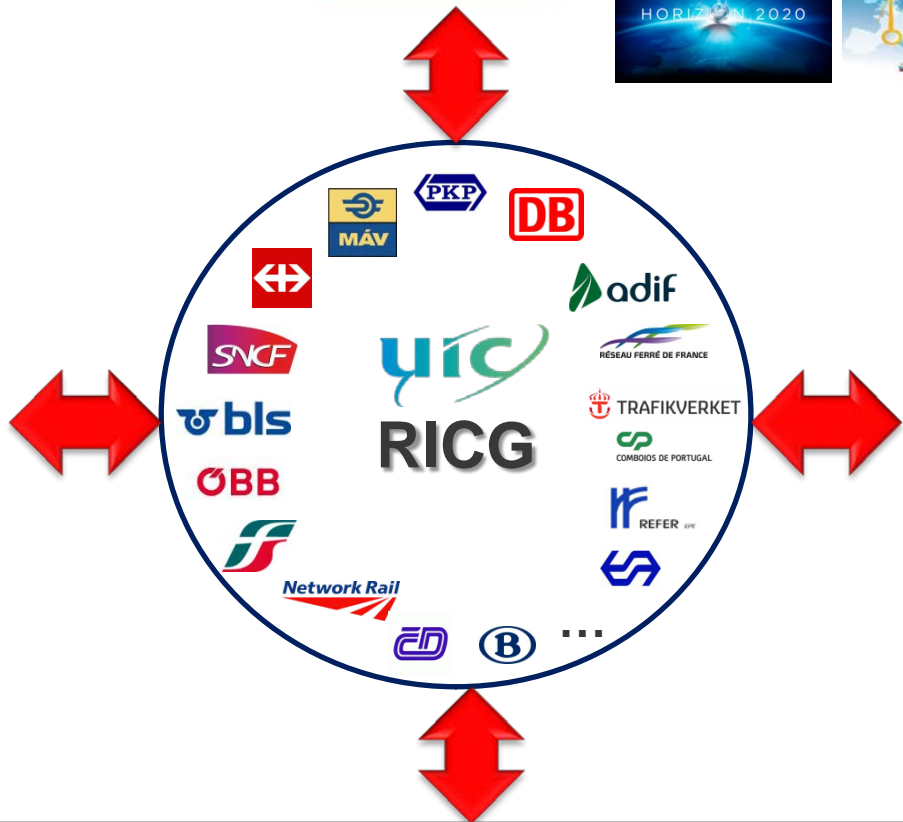
The Research & Innovation Coordination Group (RICG)

- 196 members
- Coordinate Research & Innovation activities
- Identify priorities for the preparation of projects' proposals to be developed as:
 - EU funded projects (FP7, Horizon 2020, CEF...)
 - UIC projects
- Develop the European work programme in collaboration with the UIC departments:

- Passenger department
- Freight department
- Rail System department
- Fundamental Values department

- Promote harmonised technical requirements for rail technology (International Rail Standards)





Member States / Public Transport Authorities

CHALLENGE 2050



- ✓ A shared vision of the European rail sector
- ✓ States the sector's own expectations and objectives with an horizon of 2050
- ✓ Supported by all the main associations and European rail stakeholders
- ✓ Built around a series of objectives to support the sector's vision

CHALLENGE 2050
THE RAIL SECTOR VISION

A business led vision



ATTRACTIVE

Passengers and freight users receive a consistently high-quality service

SUSTAINABLE

Rail provides a resource-efficient solution for sustainable mobility and transport and a significant contribution to reductions in GHG emissions

SECURE

Railway comprehensive protection

SAFE

Rail is the safest mode of transport

PERFORMANT

Trains are on time and promised facilities for freight and passengers are available

CONNECTED

Rail is the backbone in an interconnected and seamless co-modal transport system

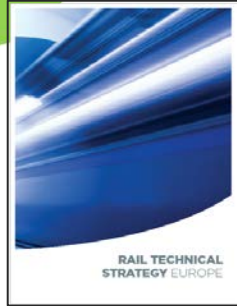
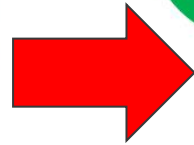
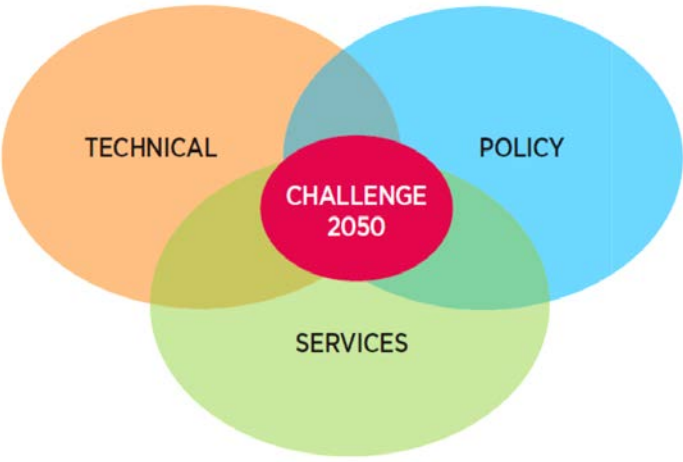
INTEROPERABLE

Rail Technology is adaptable to various demand volumes, market or product requirements, and operating areas

COMPETITIVE

Rail is a competitive and viable 1st choice of transport mode in terms of cost and quality of service

From Challenge 2050 to the RTSE



Rail Technical Strategy Europe

⇒ The system and its Operation



Control, Command and Communication



Infrastructure



Rolling Stock



Energy Supply and Consumption



Railway People



Information Management



Security



Safety

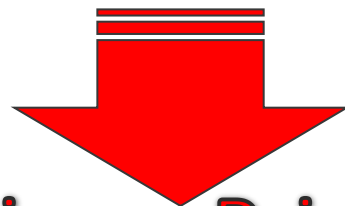
Vision



Objectives



Enablers



Delivering Innovation – Principles and practices

Towards tomorrow's rail system

Objectives:

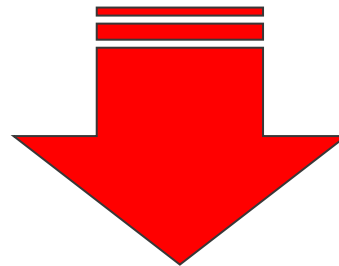


- ⇒ **Describe the core elements** to developing the future rail system
- ⇒ Help the sector to prepare for the **challenges related to the way the system is designed, constructed, operated and maintained**
- ⇒ A solid orientation - enable the ROC to exploit opportunities & **move towards satisfying customer requirements**
- ⇒ **Inspire future innovation** through the EU Framework Programme “Horizon 2020” (including the Shift²Rail initiative)

The Rail Operating Community



Railway Undertakings & Infrastructure Managers



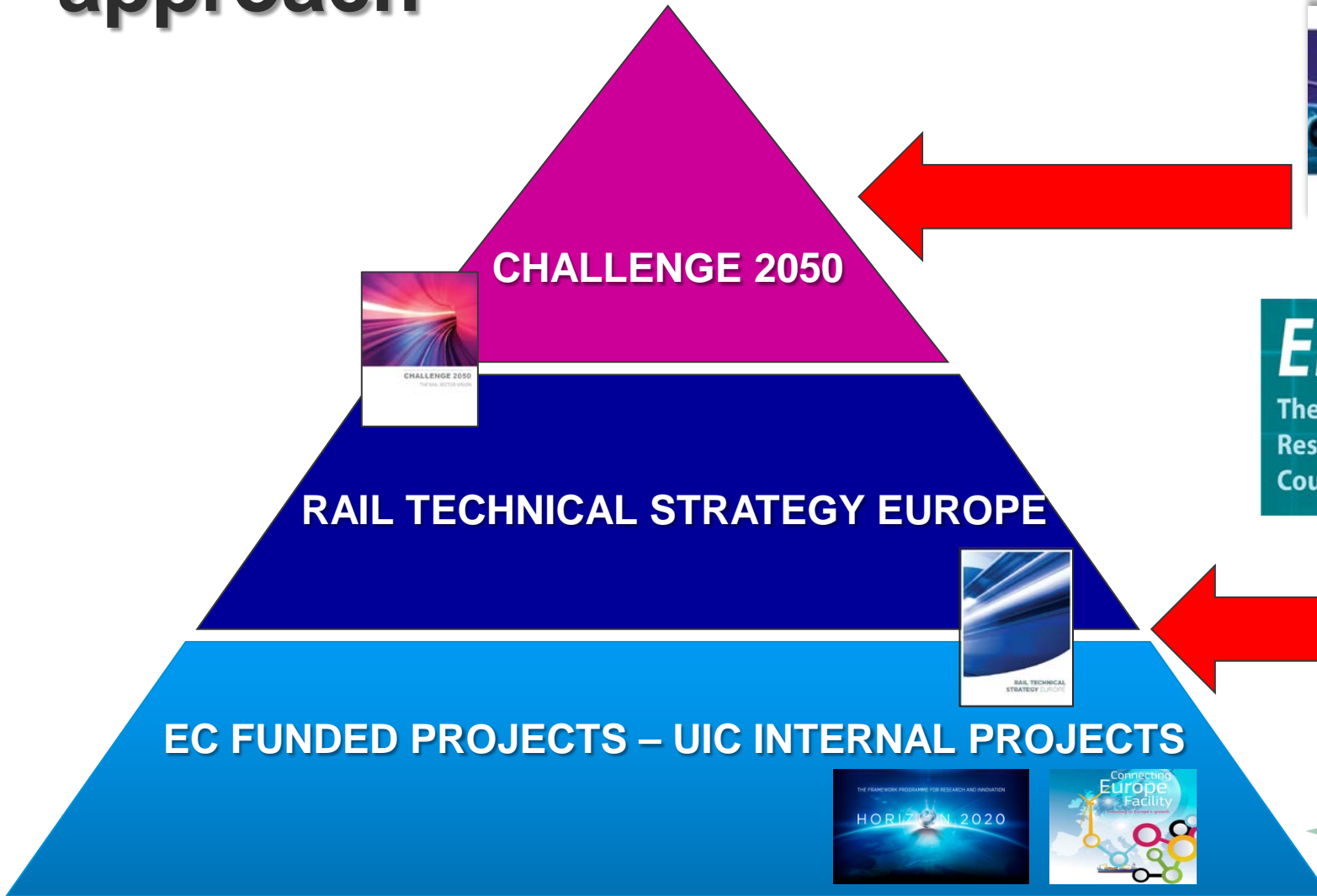
The crucial interface for rail attractiveness

A leading role

- ✓ Ensure the **development of a new generation of railway products and processes** suitable for the operation of the **system**
- ✓ **Motivate the end customers** to make a true shift to rail and to become **customers by conviction**
- ✓ **Harmonise processes**
- ✓ **Develop new business models**



Ensuring the necessary system approach



The background of the slide is a collage of four images related to transport. The top-left image shows a woman in a white lab coat sitting at a desk with multiple computer monitors displaying data and charts. The top-right image shows a construction worker in a red high-visibility jacket standing on a construction site with heavy machinery. The bottom-left image shows a woman in a dark jacket talking to a man in a red cap and white shirt, possibly a train conductor, in a control room. The bottom-right image shows a man in a blue shirt operating a control panel with a joystick and a monitor.

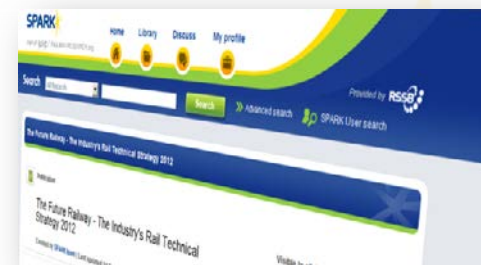
**IMPROVING PRODUCTS,
SERVICES & OPERATION OF THE
TRANSPORT SYSTEM IS KEY TO
ENSURE A SUSTAINABLE
MOBILITY AND INCREASE OUR
SOCIETIES' FREEDOM**

Inspiring creativity

- ✓ An interactive workspace tailored to the needs of advanced rail research
- ✓ A network of multi disciplinary researchers, engineers, and resources
- ✓ Find and share technical information



More information: www.sparkrail.org



www.uic-innovation-awards.org

■ ■ ■ **Thank you for your attention**

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