**FINAL CONFERENCE**

Madrid, 21$^{st}$ – 22$^{nd}$ September 2017

# *The transport challenge of 2030/2050*

## C4R Context

- In 2011, the White Paper on European Transport assigned ambitious challenges to the transport system, in terms of development, durability and competitiveness.

- In this context, the railway system has a major role to play in this transport system of tomorrow.

- But, the railway sector has to take a leap forward. Efforts must therefore be focused on increasing the attractiveness of rail system.

*How to obtain an affordable, adaptable, automated, resilient and high capacity railway for 2030 and 2050?*
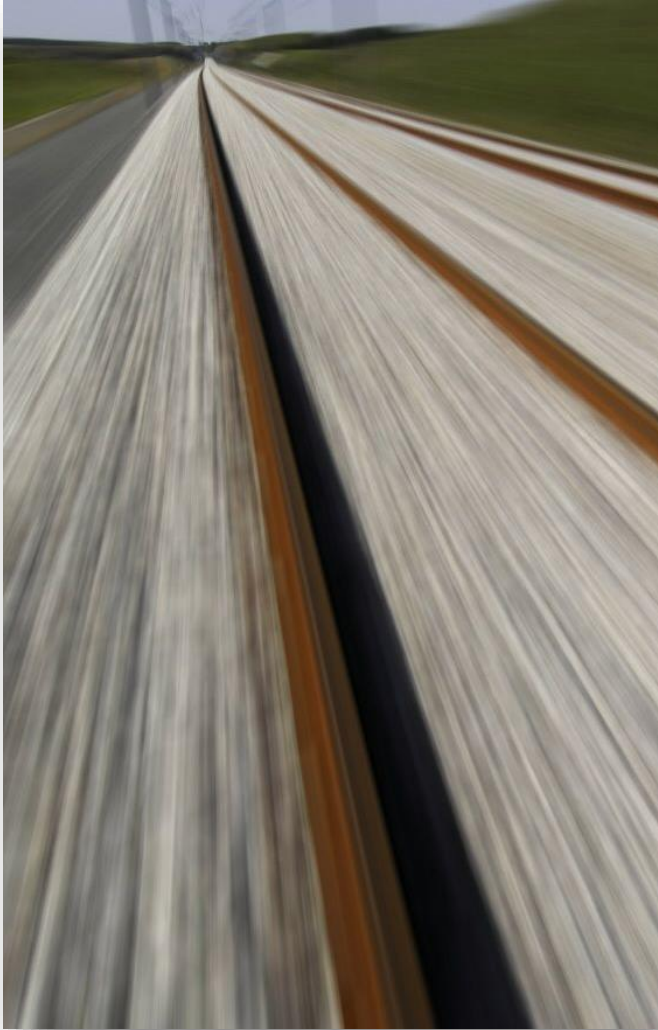
# C4R- consortium

SP1 Infrastructure

# SP1-Infrastructure

To increase **capacity, availability** and **performance** of the railway system through step changes in the infrastructure design, including advanced monitoring.
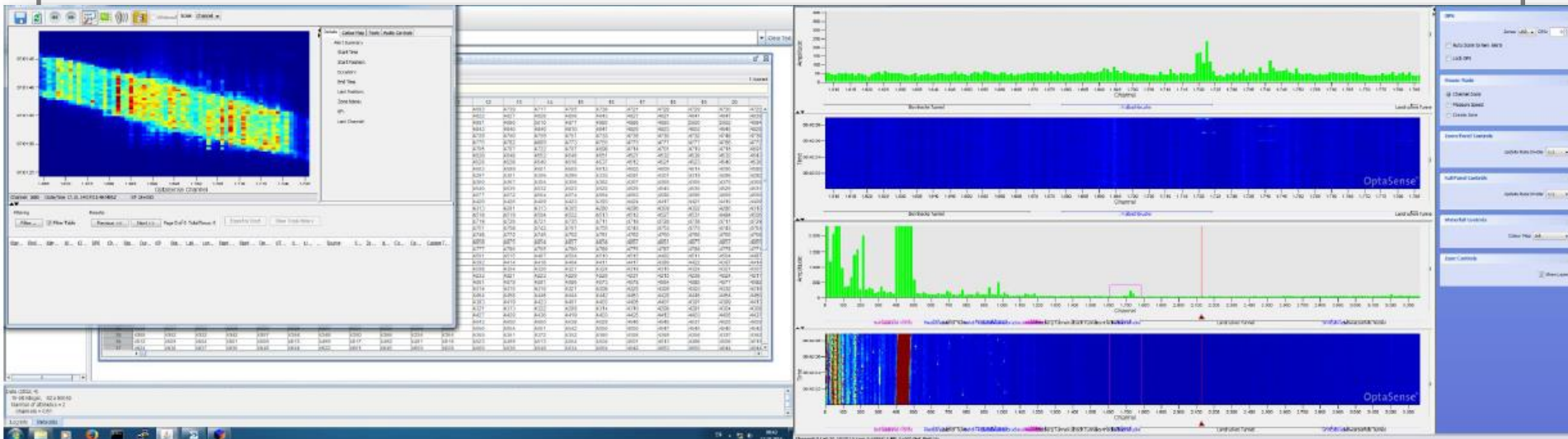
# SP4 Advanced monitoring

# SP4- Advanced monitoring

To develop new concepts for railway structural and operational monitoring, in order **to enhance the availability** of the track, combined with **automated maintenance** forecasts and a prediction of the structural lifetime.

# SP2 New concepts for efficient freight systems

# SP2- Freight

To promote the designing of a modern, automated, intelligent, fully integrated system for **efficient, reliable** and **profitable** freight operations.

# SP3 Operations for enhanced capacity

# SP3- Operations for enhanced capacity

To develop tools and algorithms for supporting decisions during planning and operations of railway networks in order to increase **capacity** while providing **resilience, affordability** and **adaptability** by introducing different levels of **automation.**

Development and assessment of scenarios to **migrate from current to future situation.**

- ✓ Assessing of scenarios and technologies developed under the different SPs
- ✓ Performing demonstrations

*Thank you for your kind attention*