

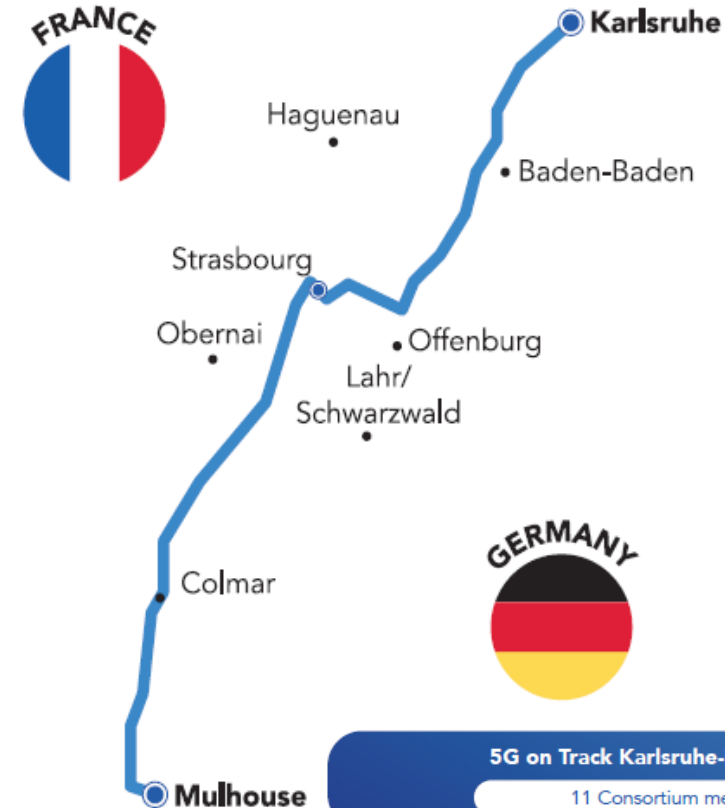
# 5G on Track

## Karlsruhe – Mulhouse

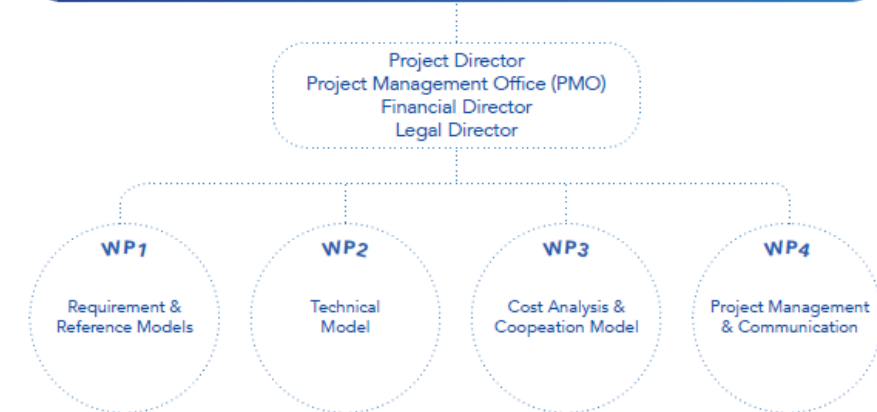
Important impetus for the future of mobile communications on the track

- We have developed one **possible solution** for **5G connectivity along the tracks** that can be **integrated into existing networks**
- A **modular mast structure** has been developed that meets the **requirements of all stakeholders** and is suitable for railway use within a **distance of 4-6 meters** from the track.
- The study illustrates the **complexity of a potential deployment** and provides valuable insights

5G Corridor 201 km total corridor length



5G on Track Karlsruhe-Mulhouse Steering Committee  
11 Consortium members incl. FRA and LUX

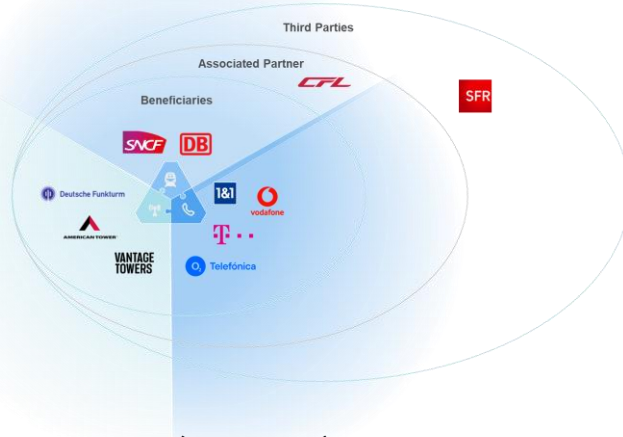


Funded by the European Union

# Challenges and recommendations

## Main challenges

- Consortium size



- Assumptions of the study (extract):

- Shared use of infrastructures shall be made technically possible while FRMCS operations needs to be ensured at all times
- Reuse of existing infrastructures (redensification) to achieve a 3.5 GHz coverage along the tracks
- Sharing of site and passive antennas (public cellular only) if possible and economically viable among the MNOs with RAN equipment being operated separately

## Recommendations

- Future considerations of infrastructure along the tracks requires a solution for **funding of infrastructure** and **radio technology**
- The industry is able to **develop innovative technological solutions** to supply complex infrastructures
- Facilitating the **collaborative use of FRMCS infrastructure** by mobile network operators is a crucial element

