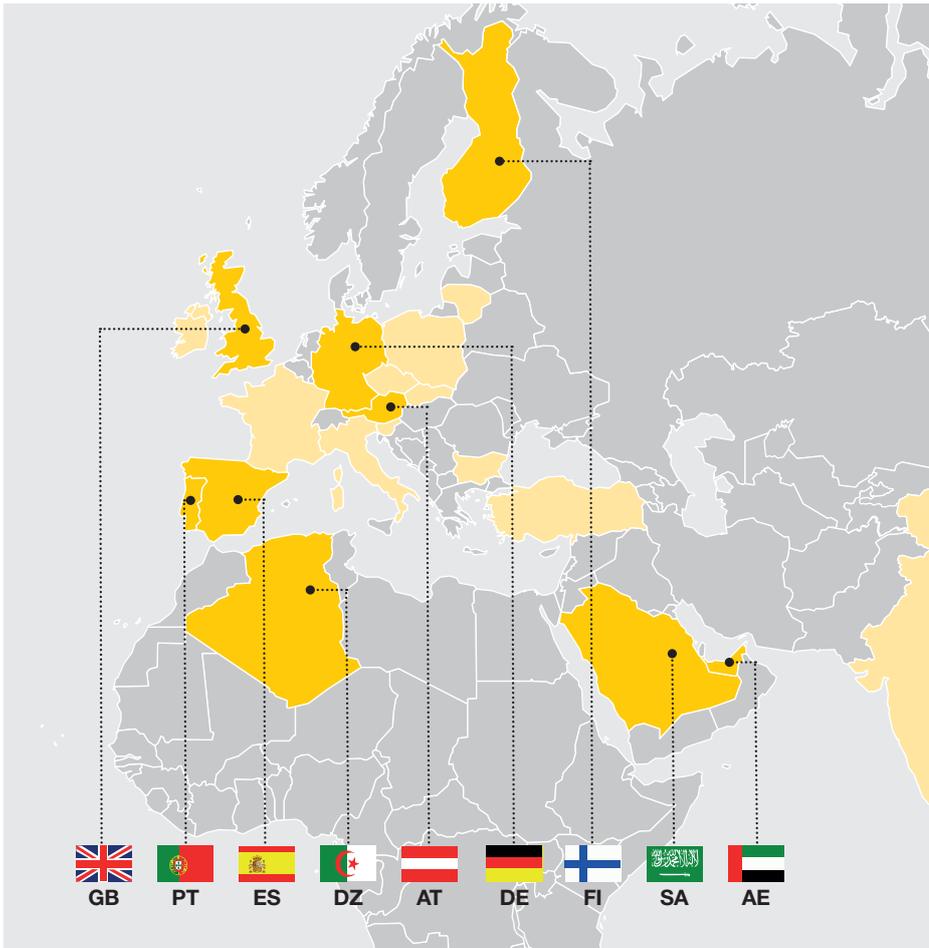


# Our GSM-R solutions in action.



## A selection of Kapsch CarrierCom's GSM-R references.

### ■ ADIF, Spain

In a continuous effort to support ADIF in building its High Speed Line railway network, Kapsch CarrierCom deployed the GSM-R radio access network on the High Speed Line between Orense and Santiago. Travel time was reduced from 90 to 38 minutes.

### ■ ANESRIF and SNTF, Algeria

Kapsch CarrierCom is deploying a next-generation all-IP core network for SNTF in Algeria on 2,000 km of track.

The network is able to withstand tough geographical conditions, and increase efficiency and safety based on ETCS Level 2. The new GSM-R network is deployed from end-to-end by Kapsch CarrierCom teams as a turnkey solution.

### ■ Iarnród Éireann, Ireland

Kapsch CarrierCom is deploying GSM-R network infrastructure for the Irish railways on the DART network. This pilot project includes the installation, testing and commissioning of

the infrastructure with a 3GPP Release 4 Core Network.

### ■ Lithuanian Railways, Lithuania

Kapsch CarrierCom won a national contract to deploy a next-generation all-IP (R4) GSM-R network for LG in Lithuania. This project was the first R4 greenfield implementation worldwide, LG was awarded the "Product of the Year Award" for their GSM-R system installed by Kapsch.

■ **Network Rail, United Kingdom and Deutsche Bahn, Germany**

Kapsch CarrierCom is deploying next-generation R4 core network infrastructure for Network Rail in the UK and Deutsche Bahn in Germany to support mission-critical communications on conventional and high-speed lines. Kapsch technology supports ETCS Level 2 signalling applications, which improve awareness of train location, increase traffic density on major routes, and enhance passenger safety.

■ **ÖBB, Austria**

Kapsch CarrierCom won a national contract to deploy a next-generation all-IP (R4) GSM-R network for ÖBB in Austria. The network, which will support 3,500 kilometres of track, offers full redundancy, with mission-critical network equipment distributed across two geographically separate sites. The next-generation R4 technology will support an optimal mix of capacity, scalability and reliability, comply with all relevant industry standards, and support for high-speed lines. In addition, ÖBB will be able to support ETCS Level 2 for traffic optimisation and improved train and passenger safety.

■ **PKP/PLK, Poland**

Kapsch CarrierCom partnered with PKP/PLK for the first GSM-R pilot project and installed a redundant next-generation all-IP (R4) GSM-R network in Warsaw and Poznan. Since then Kapsch won two contracts for the implementation on the ERMTS corridors E30 and E20.

■ **RFF and Synerail, France**

Kapsch CarrierCom is France's exclusive GSM-R supplier. Kapsch technology handles the entire voice and data communication for the operation of trains on 14,000 km of tracks.

■ **Saudi Railway Organization, Saudi Arabia**

Kapsch CarrierCom is deploying GSM-R infrastructure with 'fourfold' redundancy to support mission-critical communications on the 450 km high-speed line between Mecca and Medina in Saudi Arabia. Kapsch technology will play a key role in ensuring train and passenger safety on the line.

■ **Slovenian Railways, Slovenia**

Kapsch CarrierCom won a contract to deploy GSM-R technology on track totaling 1,200km, and will also be responsible for maintenance and servicing. The contract includes the deployment of a next-generation all-IP next-generation R4 Core Network.

■ **SŽDC, Czech Republic**

Kapsch CarrierCom deployed GSM-R technology on the entirety of Czech Republics' railway network. Two project highlights are the implementation of the next-generation 3GPP Release 4 Core Network and the successful construction of GSM-R Smart Houses that significantly reduce OPEX of site infrastructure.

■ **VR Finland, Electro Motive, UAE, Refer Telecom and CP Passengers in Portugal, RENFE in Spain and SAR in Saudi Arabia**

Kapsch CarrierCom has won contracts to provide state-of-the-art cab radio infrastructure to major railway operators, locomotive manufacturers and rolling stock owners. Our customers include VR in Finland, Electro Motive in the United Arab Emirates, Refer Telecom and CP Passengers in Portugal, RENFE in Spain and SAR in Saudi Arabia.



For more information about Kapsch CarrierCom solutions for railway operators and how they can benefit your business, please contact the GSM-R team at [kcc.railways@kapsch.net](mailto:kcc.railways@kapsch.net)

**Kapsch Group.**

Kapsch is one of Austria's most successful technology corporations, specialized in the future-oriented market segments of Intelligent Transportation Systems (ITS), Railway and Public Operator Telecommunications as well as Information and Communications Technology (ICT). Kapsch. Always one step ahead.