GUIDE
Supporting the Strategic
Deployment Agendas for
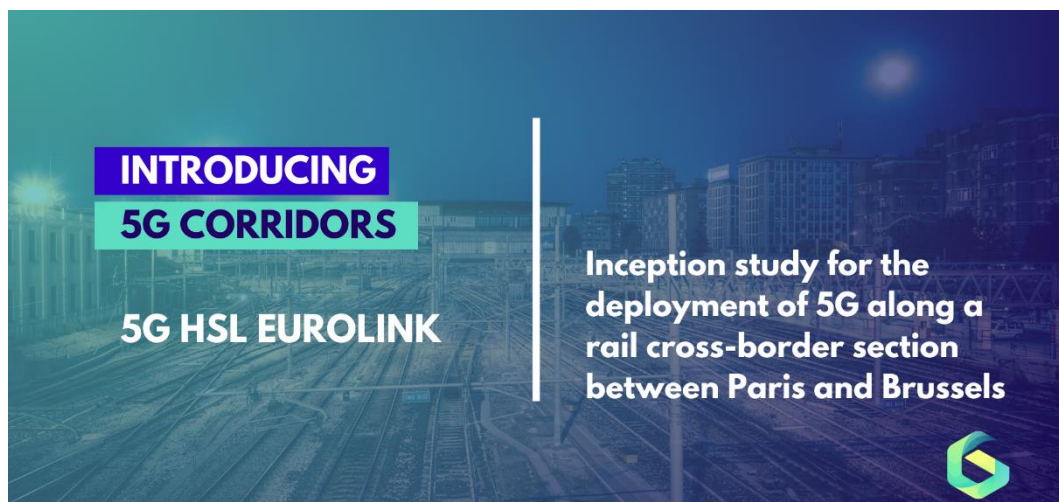The EU Corridors

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5G Corridor project fiche – 5G HSL Eurolink

5G HSL Eurolink: inception study for the deployment of 5G along a rail cross-border section between Paris and Brussels

The project in a nutshell

The 5GHSL Eurolink project aims to deliver an inception study to prepare the implementation of 5G infrastructure along a rail cross-border section between Paris (France) and Brussels (Belgium), for the benefits of train passenger connectivity and digitalization of rail operations.

SNCF Reseau, together with Infrabel SA will conduct the study with a consortium of several members, involving two rail infrastructure managers,2 RC from both countries and MNOs.

Key facts

Length: 468 km

Corridor: Brussels (Belgium) - Paris / Calais via Lille (France)

Total EU grant: €433,145.00

Project duration: 6 months (January 2024 – June 2024)

Transportation mode: Rail

Spectrum bands: 700MHz and 3.5GHz and others (5G for train passengers) 1900 MHz and 900 MHz (railway telecommunication network)

Standards: FRMCS standard and 5G standard

QoS: Provision of high throughput (boosted by public 5G) for passengers and continuous availability of digital rail operations are targeted.

Service / Use cases:

- Train passenger connectivity through public mobile networks
- Digitalization of rail operations through FRMCS for safety -critical use cases and cross-border implementation, includingEuropean Train Control System level 2 ("ETCS")

What will it provide?

The main objectives of this inception study is to support:

- The digitalization of rail operation through the development of the Future Railway Mobile Communication System (FRMCS) interoperable networks by rail Infrastructure Managers ("IM") INFRABEL and SNCF Reseau that will:

    o Support a pioneer cross-border implementation;
    o Replace and improve the current interoperable GSM-R, mainly used for train drivers voice communications and European Train Control System level 2 ("ETCS"), which will be obsolete in the 2030s.

- High-end connectivity for passengers through the development of 5G coverage by Public Mobile Network Operator ("MNOs").

How will the project unfold?

To make the project a success, we need to bring together the players in the future railway mobile communications system (FRMCS) and mobile 5G. A consortium needs to be established, involving the various stakeholders for transparent collaboration. Legally, this consortium is created through a formal agreement that defines the conditions of participation and confidentiality, including regulatory compliance for FRMCS and 5G and competition. Ownership is shared between consortium members, who allocate rights and obligations according to their contributions. Funding is a joint effort, with members contributing according to an agreed model and any European subsidies, ensuring a fair distribution of costs. The role and responsibilities of each member are clearly defined, detailing their expertise, resources and implementation tasks.

During the future deployment phase, the consortium will manage the installation of the FRMCS and 5G infrastructure, using existing masts and building new ones if necessary. The environmental and economic impact of the deployment will be taken into account. Rigorous testing and optimisation will be carried out to ensure the reliability and efficiency of the infrastructure deployed.

How is it financed?

The project is funded by EU/CEF Digital Grant program.

Total EU Contribution: €433,145.00

More information

EU Funding & Tenders Portal | EU Funding & Tenders Portal | EU Funding & Tenders Portal (europa.eu)

5G Corridors Call 2: Selected Project Overviews | Shaping Europe's digital future (europa.eu)

About

The ambition of the GUIDE project is to bring together the relevant stakeholders from the ecosystem of 5G Corridors across the European Union (EU) and to help them get the maximum value from the CEF Digital program, ensuring that future CEF Digital work programs progressively address the actual needs of the stakeholder communities.

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https://guide.5gcorridors.eu/