



[5G Coverage along Transport Corridors: first wave of projects selected for co-funding 5G corridor infrastructures](#)

Following the first call for proposals of the Connecting Europe Facility Programme â Digital (CEF Digital), 15 projects were awarded EU funding to accelerate the deployment of 5G connectivity infrastructures along the main transport paths throughout Europe.



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5G Corridors

The resulting portfolio of [projects](#) that will receive EU funding will pave the way for **Connected and Automated Mobility** (CAM) including safety and non-safety services, be it for road, rail, inland waterways, or multimodal transport.

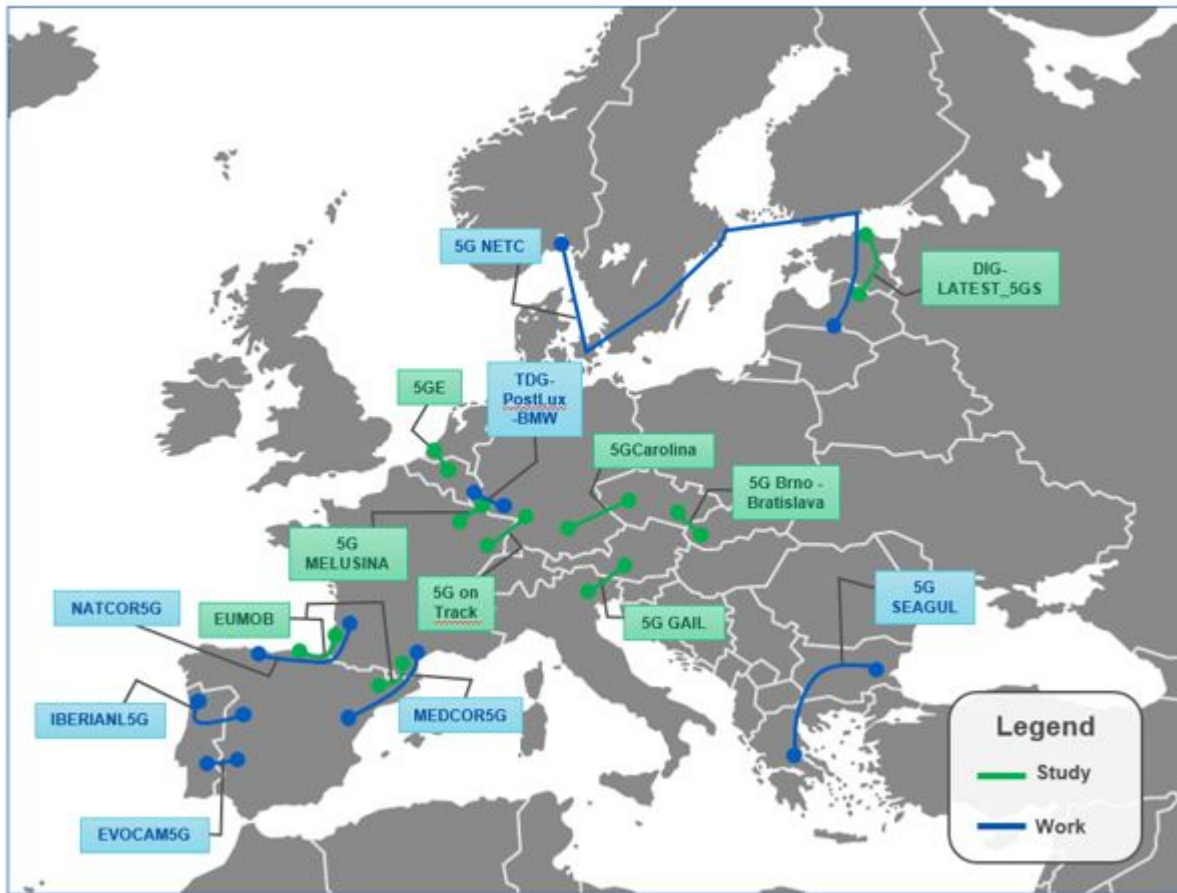
More specifically, the projects will support **5G infrastructure deployment over cross-border sections of 5G corridors** and ensure service continuity when crossing said border, thus contributing to connecting different regions throughout Europe.

Seven of these projects will start deploying the needed infrastructure straightaway, both active and passive, to enable CAM services to develop in the coming years. At the same time, **eight inception studies will prepare the groundwork** for future large-scale 5G infrastructure deployment projects in view of upcoming CEF Digital Calls. More information on these projects and studies can be found below.

A [second 5G Corridors call](#) for deployment works and studies is currently **open until 21 March**. It includes a call for a Coordination Support Action (CSA) aiming at integrating 5G connectivity infrastructure with edge nodes and European Cloud Federation infrastructure.

5G Corridors: Selected Projects Following Call 1

CEF Digital Call 1 Results: 5G Corridors



5G SEAGUL: 5G Seamless Roaming for the Greece-Bulgaria CBC

This project will target the deployment and upgrade of 5G RAN, Core and transport elements along the Greek (GR) and Bulgarian (BG) highways of the Orient/East-Med (OEM) TEN-T corridor with a strong cross-border focus. The main goal is to support Connected and Automated Mobility (CAM) services along the Greece-Bulgaria section of this corridor.

Wings ICT Solutions together with Cosmote and A1 Bulgaria EAD will focus activities on achieving an optimum network interconnection and roaming/handover configuration, while measuring the smooth handover experienced by connected vehicles and validating via real-life cross-border trials.

The project plans to use the Connecting Europe Facility Digital (CEF Digital) co-funding to speed up the deployment and upgrade of 5G connectivity along the GR and BG highways by 2025 in challenging areas for 5G deployment, thus enabling more efficient, smart, sustainable and environmentally friendly mobility along one of the major EU transport paths.

Total EU Contribution: € 5 748 000.00

5G DeLux: Seamless 5G cross-border mobility between Germany and Luxembourg

This project will aim for high-performing network coverage and a seamless handover of connected devices (without call drops or the loss of data connections) from one mobile network operator (MNO) to another when crossing intra-European country borders. The handover must improve user

experience and seamless digital connectivity across Europe.

Both mobile operators Deutsche Telekom and POST Luxembourg will build and improve the 4G and 5G infrastructure for CAM, while the BMW Group will contribute to the project with specific demands from an automotive perspective and will test use cases once the seamless handover solutions are in place.

The project will cover the motorway section from Frisange (Luxembourg) to Saarbrücken (Germany) at the border crossing near Schengen and will develop a new network feature including new interfaces between operators. The feature will comply with legal provisions regarding lawful interception or the ubiquitous availability of emergency call. 5G DeLux will define a blueprint for a harmonized European solution.

Total EU Contribution: €6 338 325.50

5G NETC: 5G Northern European Transport Corridor

This project will aim at improving cross-border network service continuity for already established services, while adopting 5G infrastructure in public environments along the Northern European part of the Scandinavian- Mediterranean Trans-European Transport Network (TEN-T) and North Sea-Baltic corridors to support new 5G services and applications.

Telia Sweden and Telia Finland, together with Latvia Mobilais Telefons will aim via this project at enabling applications and services for CAM and for Future Railway Mobile Communication Systems (FRMCS) use case solutions and its introduction. The project will ensure dedicated capacity through High Value Connectivity for CAM and FRMCS services and other industrial or public services with special quality requirements. It will also drive 5G service and application development as an enabler of CAM and FRMCS Services to close the gap between the two layers.

Total EU Contribution: €15 535 000

IBERIANL5G: Iberian Corridor - 5G and v2x network for future CAM and FRMCS services in cross-border section between Portugal and Spain

This project will be deployed in market failure areas in order to ensure uninterrupted and continuous 5G coverage along the cross-border sections of the networks of Castilla-Leon, Galicia, and Central Portugal, thus forming part of the Central Iberian Corridor (Porto - Aveiro - Salamanca), which is connected to the Iberian and European networks of the Atlantic Corridor.

Tradia Telecom together with Towerlink Portugal will ensure the needed conditions for the MNOs to deploy 5G infrastructure along 310 km of roadway in Portugal and 289 km in Spain, thus ensuring coverage continuity and sufficient quality of service to support Traffic Incident Management (TIM) services.

The action will equally build new radio sites and will benefit different stakeholders, such as MNOs, road/rail infrastructure operators, and original equipment manufacturers (OEMs).

Total EU Contribution: €2 556 165

NATCOR5G: North Atlantic Corridor 5G and v2x network for future CAM and

FRMCS services in cross-border section between France and Spain

This project aims at ensuring uninterrupted and continuous 5G coverage along the cross-border sections of the Atlantic corridor, by deploying infrastructure in areas where the market has failed to invest in the deployment of valuable passive/active infrastructure.

Tradia Telecom and Cellnex France will ensure the necessary conditions for the MNOs to deploy 5G infrastructure along 328km of roadway in France and 184km in Spain, thus securing coverage continuity and sufficient quality of service to support TIM services.

This action will build new radio sites in areas without or with poor 5G coverage levels and will benefit different stakeholders including MNOs, road/rail infrastructure operators, and OEMs.

Total EU Contribution: €2 681 942.50

MEDCOR5G: Mediterranean Corridor 5G and v2x network for future CAM and FRMCS services in cross-border section between France and Spain

This project will aim at ensuring uninterrupted and continuous 5G coverage along the cross-border sections of the Mediterranean corridor, by deploying infrastructure in areas where the market has failed to invest in the deployment of valuable passive/active infrastructure.

Tradia Telecom together with Cellnex France will deliver the necessary conditions to deploy 5G infrastructure along 328km of roadway in France and 220km in Spain, thus ensuring coverage continuity and sufficient quality of service to support Traffic Incident Management (TIM) services.

This action will build new radio sites in areas without or with poor 5G coverage levels and will benefit different stakeholders including MNOs, road/rail infrastructure operators, and OEMs.

Total EU Contribution: €5 204 747.96

EVOCAM5G: Evora connected autonomous Merida corridor 5G and v2x network for future CAM and in cross-border section between Portugal and Spain

This project will ensure uninterrupted and continuous 5G coverage along the cross-border sections of the networks of Castilla-Leon and Central Portugal, forming part of the Central Iberian Corridor (Evora-Merida), connected to the Iberian and European networks of the Atlantic Corridor.

Tradia Telecom together with Towerlink Portugal will deploy infrastructure in areas where the market has failed to invest in the deployment of valuable passive/ active infrastructure and will ensure the needed conditions for MNOs to deploy a 5G Infrastructure along 81km of roadway in Portugal and 71km in Spain. Coverage continuity and sufficient quality of service will be secured in order to support TIM services.

The action will build new radio sites and will benefit different stakeholders including MNOs, road/rail infrastructure operators, and OEMs.

Total EU Contribution: €1 362 070

5G Corridors: Selected Studies

5G GAIL: Inception study for the deployment of 5G in the cross-border section of the Carnic and Gailtal Alps between Italy and Austria

This study will assess the effort needed to deploy the transport corridor between Italy and Austria across the Tarvis border, with a neutral and agnostic, passive and active infrastructure dedicated to the development of digital services, and in particular, the deployment of safe, secure, and sustainable high-performance infrastructure, including Gigabit and 5G networks.Â

The corridor identified for the study encompasses highway A23 from Udine to the border with Austria on Italian territory, as well as the SÃ¼d Autobahn in Austria. These areas are part of the so-called Baltic-Adriatic Corridor.

Cellnex Italia together with OnTower Austria, Autostrade per lâ€™Italia, and the regional Public Authority on the Italian side (Regione Friuli-Venezia Giulia â€” RFVG) proposed a modular study that covers the main typologies of areas as the most efficient approach to generate results to be used as building blocks for subsequent deployment works along the corridor. The study will aim at identifying different clusters of specific coverage as an innovative approach with an efficient cost management.

Total EU Contribution: â‚¬139 750Â

5GE: 5G Estuary

This study will define a cross-border digital corridor for mobility applications and low altitude aviation that will make important nodes in the global supply chain more efficient, safer and sustainable. This includes the ports and the hinterland waterways.

The study will deliver the target solution for deploying an uninterrupted cross-border 5G coverage and core network integration. The high speed-low latency 5G network will guarantee a secure and ultra-reliable connectivity with network slicing capabilities from the North Sea, along the â€”Westerscheldeâ€” and the inland waterways, an area of strategic importance for the economy and the global supply chain in the EU.

KPN Netherlands and Orange Belgium see the importance of bringing this seamless 5G connectivity to the defined corridor, due to cross-border economic dynamics that will follow the integration of the different ports: Zeebrugge and Antwerp with the â€”Westerscheldeâ€” in between, and Gent-Terneuzen-Vlissingen as the cross-border port.

The study will outline the exact location of the corridor, considering geographical use case distribution, service requirements and associated investment plan and business case.Â

In addition, the study will deliver a detailed list of service requirements to deploy the 5G digital corridor. The study will define the spectrum bands used and the inter-radio site distance of both KPN and Orange Belgium to power the current and future use cases on the corridor. Â It will quantify the required financial investment for future infrastructure deployment, and assess its economic benefits.

Total EU Contribution: â‚¬300 000Â Â

5GS: 5G Corridor Study for Latvia, Estonia and Lithuania

This study will provide technical solutions and financial model(s) needed to deploy 5G infrastructure

along the Via Baltica and Rail Baltica corridors capable of cross-border 5G services in the Baltic States. Services include, among others, safety-related road and rail operations. For example, Intelligent Transport Systems-ITS, FRMCS, and multiservice/multi-application 5G services. For ITS 5G services, the 700 MHz and 3.5 GHz frequency bands will be studied.Â

Tallinna TehnikaÃ¼likool together with Eesti Lairiba Arenduse Sihtasutus, Valsts Akciju Sabiedriba Elektroniskie Sakari, Telia Eesti, and Elisa Eesti will carry out this inception study. The latter will serve as a basis for further 5G deployment preceding further CEF Works calls for the respective corridors, fostering infrastructural, economical, and societal growth, as well as inclusiveness and competitiveness.

The study will include network planning and stakeholder needs analyses, as well as information on the use of existing infrastructure, fostering the respective region's recovery from the Covid-19 pandemicâs consequences, by offering the most resourceful scenarios for deploying 5G coverage along the respective corridors.Â Â

It will also contribute to reducing the digital divide gap, as the 5G-coverage deployment would ensure high-speed, reliable, secure internet connections for citizens, businesses, and public services.

Total EU Contribution: â¬249 302Â

5G on Track: Karlsruhe â Mulhouse

This inception study will aim at developing a concept for 5G deployment along the Karlsruhe â Mulhouse cross-border rail corridor that exploits maximum synergies between rail operation needs (FRMCS) and significantly increasing passenger broadband needs (5G). The overall objective is to contribute to the timely future deployment of 5G digital infrastructure along transport paths in challenging areas and to leverage private investment.Â

Deutsche Bahn together with Telekom Deutschland, Vodafone, Telefonica Germany, 1&1 Mobilfunk, Vantage Towers, ATC Germany Holdings, DFMG Deutsche Funkturm, and SNCF RÃ©seau will be conducting this study, which will deliver a plan for cost-efficient, interoperable, high-performing digital infrastructure deployment that would allow for seamless cross-border connectivity on high-speed trains.

Advanced 5G communication services will significantly contribute to a digitized European railway system and would encourage a modal shift from road towards rail transportation and support the decarbonisation of the transport sector.

Total EU Contribution: â¬517 150 Â

5G MELUSINA: 5G Metz - Luxembourg Sillon International

This inception study will prepare the deployment of 5G infrastructure along the rail cross-border section of the North Sea Mediterranean TEN-T corridor between Metz (France) and Luxembourg City (Luxembourg), to the benefit of train passenger connectivity and digitalisation of rail operations.Â

SNCF Réseau together with Societe Nationale des Chemins de Fer Luxembourgeois will carry out this study as part of a consortium of six members involving two rail infrastructure managers and four MNOs from Luxembourg.Â

The action will identify target communication service requirements for railway undertakings and passengers, and design implementation of 5G technology along the corridor, with a focus on

MNO/Railway infrastructure sharing model and service continuity at the border crossing. It will define a cooperation model between Railways and MNOs that maximizes synergies for deployment and for long-term cooperation and sustainability.

In addition, the study will prepare an implementation plan using existing infrastructure assets, defining works and estimating cost for building a 5G network that will deliver expected service capabilities.

Finally, it will evaluate business viability on the considered track section to assess potential market failure and develop a long-term perspective for a large-scale deployment.

Total EU Contribution: €255 377

5G Carolina: Cross-border Highway 5G Corridor Munich-Prague

The study will aim at designing and implementing CAM services, which would enable Connected and Automated Mobility along the "Via Carolina" corridor between Munich and Prague, thus facilitating environmentally friendly passenger and freight transport.

T-Mobile CZ, together with CETIN and Vantage Towers AG as part of a consortium of 12 partners will join forces in defining and creating a 5G corridor that meets the expectations of individual and professional users in modern, automated transport.

Representing OEMs, MNOs, as well as communication and information infrastructure/technology providers (TowerCos), and further stakeholders (e.g. highway operators), they will work together to fulfil this vision as part of a pan-European initiative to connect the European business and cultural space while respecting national specificities.

The inception study will define and categorize OEM use cases and requirements for CAM services. It will design the 5G technology MNO architecture to provide stable, high-performing, and secure CCAM services. Furthermore, it will prepare the implementation of passive infrastructure for installation, support, and operation of MNO services and validate compliance of 5G CAM services with EU/national laws and regulatory conditions.

An evaluation of best practices in synergistic projects will be undertaken to accelerate the rollout of 5G corridors to the West-East, as well as North-South (e.g. corridors to Bologna and Carlsbad).

Total EU Contribution: €238 000

EUMOB: Digitisation of European corridors for intelligent mobility

This study will undertake a comprehensive feasibility study for the digitalisation of European road infrastructure to support the harmonized deployment of C-ITS services and the subsequent development of service-driven business ecosystems in Transport and Mobility.

The feasibility study will focus on the French and Spanish sections of the cross-border Atlantic and Mediterranean corridors, which are part European TEN-T network.

Abertis Autopistas Espana, together with Cellnex France, SANEF, and Tradia Telecom will join forces and assess customisation and adaptation requirements for infrastructure digitalisation along these corridors, analyse costs, estimate expected socioeconomic and environmental impact, and engage local stakeholders and enlist their support.

The expected outcomes of EUMOB include a solution model that describes the technical implementation of the infrastructure digitalisation, a return-on-investment model, and a business plan that determines how the components of the digitalized infrastructure are sustained and exploited. This will provide the necessary plans and background for a follow-up works project, which will deploy the solution model in the designated corridors.

Total EU Contribution: €146 800

5G Brno - Bratislava: 5G/FRMCS implementation on the railway corridor

This study will address the implementation of 5G and FRMCS communication systems and prepare for CAM taking into account the existing communication environment and requirements implemented on the transport path.

When proposing the implementation of the study results, Správa železnic together with Železnice Slovenskej republiky, Správa železnic will assess the current state of 5G coverage and its quality outside the railway corridors and will focus on the cross section of the Brno line - Lanškrounsko - state KÖty.

Total EU Contribution: €300 000

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