5G Corridor project– 5G E

The project in a nutshell

The 5G E project focuses on advancing digital connectivity along the Albert Canal, a critical inland waterway linking Liège and Antwerp in Belgium, and on improving coverage at key cross-border waterway points with the Netherlands. By deploying uninterrupted 5G infrastructure, the project aims to enable innovative technologies for waterway transport, enhance operational efficiency, and support the transition to smarter, automated, and sustainable shipping solutions.

The project consortium consists of Orange Belgium, the coordinator, and KPN NL, and is supported by several key stakeholders : Port of Antwerp Bruges, North Sea Port, Agentschap MDK, De Vlaamse Waterweg and the Province of Zeeland.

Key facts

Length: 157 km

Corridor: Albert Canal from Liege (BE) to Antwerp (BE), with additional coverage in ports of Antwerp, Ghent, Zeebrugge and at waterway cross-border points between Belgium and the Netherlands in the Scheldt Estuary área.

Total EU grant: €3,654,116.00

Project duration: 36 months (December 2024 – November 2027)

Transportation mode: Waterway

Spectrum bands: 700, 3500

Service / Use cases:

- Drone inspection flights
- Cameras for own inspection ships
- Pilots and cameras for tugging
- Private network for ICT equipment
- Automated inland shipping : Remote control and fleet automation

What will it provide?

The 5G E project will deliver uninterrupted 5G connectivity along the 157 km stretch of the Albert Canal, connecting Liège and Antwerp in Belgium, and extending coverage to key cross-border waterway points, including Antwerp, Ghent, Zeebrugge, and Zeeland in the Netherlands.

The project will ensure:

1. **Seamless 5G coverage** along the entire canal, enabling continuous, high-quality connectivity for waterborne transport.
2. **Enhanced cross-border coverage** at critical waterway intersections, supporting efficient and reliable operations across Belgian and Dutch territories.
3. **Densified 5G infrastructure** in port areas to address the specific connectivity demands of these critical hubs.

These advancements will facilitate key use cases, including:

- Drone-based inspection flights to monitor waterways and infrastructure.
- Camera systems for ship inspections and enhanced safety.
- Support for pilots and camera systems during tugging operations.
- Deployment of private networks to integrate ICT equipment for smarter operations.
- Enabling automated and remote-controlled inland shipping, paving the way for fleet automation and smarter logistics.

By enhancing digital connectivity along one of Europe’s key waterway corridors, the 5G E project supports the modernization of inland waterway transport, fostering sustainability, innovation, and cross-border collaboration.

How will the project unfold?

Over the course of 36 months, the project will focus on the deployment, configuration, and optimization of the Radio Network across the waterway corridor. The first phase will involve the installation and initial setup of the network infrastructure, ensuring seamless coverage across key areas. Subsequent phases will fine-tune network performance, integrating advanced features to support real-time, uninterrupted communication and to support roaming and enhance cross-border connectivity.

Throughout the project's duration, a series of demonstrations will take place, showcasing the capabilities of 5G in waterway transport use cases. These demonstrations will serve to validate the technology's effectiveness, assess its real-world performance, and gather insights for future scalability.

How is it financed?

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

Total EU Contribution: €3,654,116.00

More information

5G E - Guide 5G Corridor project presentation - 20250120

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 programme, ensuring that future CEF Digital work programmes progressively address the actual needs of the stakeholder communities.

Follow us on LinkedIn for the latest updates on the CEF Digital programmes.

https://guide.5gcorridors.eu/