

5G Corridors project fiche – 5GE

5GE: 5G Estuary



The project in a nutshell

5GE is a study conducted by KPN Netherlands and Orange Belgium to define a cross-border 5G digital corridor for mobility applications and low-altitude aviation that will make essential nodes in the global supply chain more efficient, safer and sustainable.

Key facts

Length: 259.5 km

Corridor: Netherlands - Belgium, from the North Sea, along the west section of the river Scheldt and associated inland waterways.

Total EU grant: €300,000

Project duration: 9 months (October 2022 - June 2023)

Transportation mode: Waterways

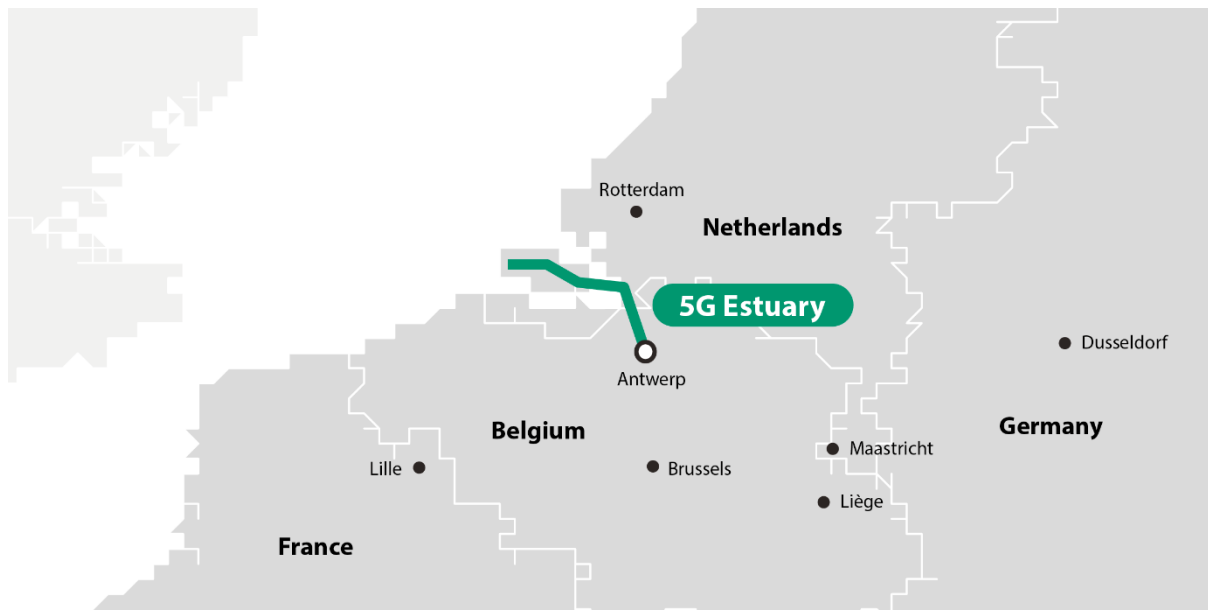
Spectrum bands: 700MHz and 3.6 GHz (5GE is a study, there was no deployment)

Standards: 5G

QoS: impact of required QoS investigated in the study for uninterrupted coverage, cross-border connectivity, guaranteed QoS for specific service parameters (e.g., in uplink)

Service / Use cases:

Security/safety management, traffic and environmental efficiency, operations on waterways, remote controlled and autonomous shipping, low altitude aviation use cases (drones)



What will it provide?

The study sought to deliver the target solution for deploying uninterrupted cross-border 5G coverage and core network integration. The high speed-low latency 5G network will guarantee secure and ultra-reliable connectivity with network slicing capabilities from the North Sea, along the Westerschelde section of the Scheldt River and associated inland waterways.

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

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. It will quantify the required financial investment for future infrastructure deployment and assess its economic benefits.

How will the project unfold?

The study was finalized at the end of June 2023. The study concluded that there needs to be a market failure to implement the required 5G connectivity for the studied use cases with their associated QoS parameters. The main problem was the contrast between the limited revenues generated by the waterway and low-altitude use cases listed by the stakeholders in the Scheldt Estuary area and the high deployment costs of the required coverage for the requested QoS. An additional barrier was that a big part of the extra required coverage didn't overlap with the capacity needs of the operators in the area. The study proved that for specific deployment scenarios, a subsidy program could improve the business case but that any decision for deployment activities of operators would remain uncertain and certainly not only driven by a financial case.

How is it financed?

The project is funded by EU/CEF Digital programme.

Total EU Contribution: €300,000 - at the end of the project the EU contribution was 22,790.63 €

More information

[Funding and tenders project page](#)

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.

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