

Press release

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Showcasing cross-border teleoperation breakthroughs and tracing the way ahead: highlights from the 5G-Blueprint project Final Event

The <u>5G-Blueprint project</u>'s consortium held its <u>final event</u> today at the Industrial Museum Zeeland, in Sas van Gent (The Netherlands): a showcase during which partners shared the project's exciting outcome, featuring demos revolving around its teleoperation use cases.

The project's multidisciplinary consortium of 26 public-private partners gathered together with around 140 participants from the industry and research communities, and representatives of the Dutch Ministry of Infrastructure and Water Management and the Flemish Ministry of Mobility and Public Works, to share with them the harvest of 40 months of explorations in the use of 5G communication technology to remotely control vehicles and ships for transport and logistics. After a round of introductory sessions featuring speeches from Jan Noelmans, Counselor logistics, regional airports and rail Cabinet of the Flemish Minister for Mobility and Public Works, and Kees van der Burg, Director General for Mobility and Transport of the Dutch Ministry of Infrastructure and Water Management, the participants were treated to live demonstrations of 5G-Blueprint's use cases - based on the testing conducted, in three different real-life locations, in the final leg of the project's run (Vlissingen, Antwerp and at the Belgian-Dutch border crossing between Sas van Gent and Zelzate). The aim: showing how the results of the 5G-Blueprint, when combined with other technologies and functionalities, can be seen as an important 'missing technical piece' of the puzzle for the possible future deployment of more and more autonomous driving and shipping. This was clearly highlighted by Noelmans' speech:

"Today the 5G-Blueprint project demonstrates the power of collaborative innovation, with public and private entities, and research institutions, joining forces for shaping the future of remote operations in transport and logistics and its role vis-à-vis automated mobility."

Selected pictures of the event are available here

The results that 5G-Blueprint brings to the table

The project has demonstrated that through 5G it becomes possible to teleoperate cars, trucks, barges and skid steers. This means that it is possible to directly control such vehicles and vessels from a remote location using a steering wheel, pedals or joysticks, while looking at different camera feeds

sent from the vehicle or vessel to the remote operator station. When running such tasks though, the mobile network connection between the operator station and remote vehicle or vessel needs to support stringent requirements: teleoperation requires low latency, high uplink throughput, and high reliability. The project has validated in real-life environments that 5G technology supports this challenging set of requirements. Furthermore, it also created and validated novel solutions that allow a 5G connection to keep performing in this manner when crossing a country border. Where in a typical 4G network an end user gets disconnected for a minute or longer when crossing the border, the 5G-Blueprint project managed to reduce this disconnection time to less than 200 milliseconds. This opens the path for international teleoperation of vessels and vehicles throughout Europe. And since business and governance related analysis performed in the project has identified that teleoperation can be a valuable or even essential companion technology for autonomous driving solutions, these project achievements also contribute to bringing autonomous driving solutions one step closer to EU-wide deployments.

As stated by van der Burg during the event's opening, in support of the project's efforts:

"Everything new takes time. We need to accept that introducing these types of technologies requires a gradual process of testing and scaling up. Gaining more practical experience is essential if we're to ensure things develop in the right direction."

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