

5G Radar - BEREC public consultation

Input from: Project Darwin/ University of Glasgow (project partner)

Project Darwin is a collaboration between telecommunications services providers Telefonica and O2 and the European Space Agency. The four-year trial, launched in June 2019, is pioneering next-generation connectivity solutions for connected and autonomous vehicles (CAVs). Project Darwin will involve testing of new technology and end-to-end connectivity solutions such as 5G and satellite communications with an objective to create a new CAV industry vertical.

The University of Glasgow is a partner in the Darwin project covering aspects related to strategy, business case and regulation.

BEREC's questions

1. *Does the guide to the radar correctly reflect the issues – please give supporting reasons?*

5G Radar covers 5G-related regulatory matters in a comprehensive manner. The analysis correctly mapped all key regulatory areas affected by or affecting 5G deployment and 5G based services.

Successful implementation of CAVs requires a high level of network coverage. It goes without saying that connected vehicles must seamlessly commute between networks. This applies to transits not only within one country but EU-wide. Therefore, matters like harmonisation of radio spectrum, exposure to EMF and trust building in the society, roaming (national and international) as well as interoperability are of extreme importance for the project (and others alike). Obviously, cyber security is a paramount theme that affects all aspects of CAVs development and implementation: network security, vehicle security, data transfer.

Importantly, the earlier these matters are harmonised and clarified, the higher chances of finalising use cases and business models which make the roll out of 5G valid and practical.

From our perspective, not all priorities set in the radar reflect the current regulatory needs in the project.

Apart from cyber security, we have great concerns about data protection. In our view, the two matters go hand in hand. Therefore, data protection should be prioritised higher and dealt with earlier than anticipated by Berec. The project Darwin will be collecting data from CAVs and the importance of data privacy and data protection has been recognised in the early stages of the project.

Close collaboration and joint efforts of BEREC, EDPB and DPAs would be welcome. An example of a matter requiring an urgent clarification is the classification of data from the CAV. Foremost, which types of data are considered as personal identifiable information. This is

essential not only for establishing data protection policies but also for tailoring cyber security measures to the system.

Additionally, it would be beneficial to enlist all EU legal acts that are involved in the radar: enacted ones or in plan.

2. *What are views on indicated priorities in particular for small cells at this point – please give supporting reasons?*

We agree with indicated priorities. All initiatives facilitating network planning (expansion) and permits to place small cells, are beneficial for CAVs.

Network densification is a crucial point in this use case. We would like to emphasise the need of 5G coverage mapping, including volumetric 3D maps. The information about access to the 5G network will ultimately lead to better quality and stability of the signal.

Without the high-quality infrastructure, not only CAVs but other anticipated uses cases for 5G cannot be executed.

3. *Is there anything omitted from the radar, and why is it important that it should be included now?*

In our view, the satellite communication should be included in the radar. The expansion of the broadband coverage will be realised not only via terrestrial network. The satcom is the focal point in the project and has been regarded as a crucial component in 5G deployment to reach previously inaccessible areas.

3GPP Release 16 covers satellite communication for 5G. The seamless integration of Terrestrial Networks and Non-Terrestrial-Networks using 5G NR has been included in the list of features for 3GPP Release 17, expected to reach 'Functional Freeze' and 'End Date' milestones by September 2021 and December 2021, respectively. (See: <https://www.3gpp.org/specifications/67-releases>)

These efforts were supported by the European Space Agency and the European Commission.

The incorporation of the satcom in the radar would bring several new legal matters, for example, satellite licensing, access to satellite communication, collaborations between MNOs and sat operators.

At this point, we would like to address another matter which is highly important at the time, namely, the Brexit negotiations. We absolutely understand that BEREC is not responsible for the outcomes. However, we would like to express that in our view, it is desirable for Ofcom to continue being closely involved in the cooperation with European operators.

