



5G Infotainment Services for Transport Environments - UK/South Korea 5G Funding Competition

Technical Frequently Asked Questions (FAQ)

1. Q. What is the configuration of the network that I will be integrating with in Korea?
 - A. There will be a single train carriage fitted with a high bandwidth (approx. 1Gbps@Downlink, 140Mbps@Uplink) link between infrastructure and train. The train will have a WiFi AP installed (variant of .11 can be specified by you). An IP gateway will be provided for connection of a media or application server which will enable SGi(IP) interface (between PDN and IP networks) as specified by 3GPP (TS 29.061). The next slide shows the details of protocol architecture.

2. Will there be access to the internet from the trial network?
 - A. In its current configuration the network is not expected to have an open internet connection. It is a local private network with the possibility to host a media content server trackside.

3. Will test equipment be supplied?
 - A. No, you will need to provide test equipment that is appropriate for your application

4. Does the network have any QoS guarantees?
 - A. The network is presented as a standardised LTE networking stack. There are no QoS guarantees to the application layers – this system uses a default best effort bearer for backhauling from the train to trackside. The networking layer end to end latency (PDCP ingress to egress) is in the order of 10msecs.

5. Will I need to demonstrate commercial viability?
 - A. The desired technology readiness is TRL6 to TRL7, allowing readiness to demonstrate the concept. A fully qualified product or service proposition is not needed. However; it is expected that a commercial proposition will be no more than 2 years from market by the end of the proof of concept activity of this project.

6. How many users should the application we provide cater for?
 - A. It would be desirable during the proof of concept activities to demonstrate scalability of the application. Discovering the tolerance of the application to scaling

of the number of users to illustrate experience as a passenger in a car, advancing to a number of passengers in a train carriage or coach/bus.

7. Our application requires a media server to be present on the vehicle, can this be accommodated?
 - A. Yes, there is a standard IP network on the train which can be used to host a local media / content server. However, part of the objective is to explore the benefits of having a high bandwidth vehicle to infrastructure link thus this component of the network should be utilised by your application.

8. Our application requires a connection to a mobile network (roaming SIMs) – can this be catered for?
 - A. The coverage of Korea's mobile networks to this trial's location cannot be guaranteed. Assume only local WiFi connectivity is available.

9. Our application requires the use of specialist AR (or VR) user equipment, can this be catered for?
 - A. Yes, there is a standard WiFi connection available on the train to which you can connect your devices.

10. Our application requires User or locally generated video content, can cameras be used on the trials site?
 - A. We are working to accommodate this need. Please specify requirements in your project proposal.

11. We have our own application media content, how can this be accommodated?
 - A. You should provide a media server that can be located in a data centre that is trackside at the trials environment. If you need content that must be hosted on the train you should also plan to supply your own media content and server for that purpose.

12. Do we have to have an application that is only suitable for a train environment?
 - A. No, the purpose of the trial environment is to explore immersive/ infotainment-like services that could be experienced in moving vehicles. The speed and numbers of occupants of the vehicle can vary from single occupancy to multiple, and low to high speed. However, the mobility performance of the network is principally the role of the Korean partners.