Consultation response form

Please complete this form in full and return to mobilestrategy@ofcom.org.uk.

Consultation title	Ofcom's future approach to mobile markets
Full name	[✂]
Contact phone number	[✂]
Representing (delete as appropriate)	Organisation
Organisation name	[✂]
Email address	[✂]

Confidentiality

We ask for your contact details along with your response so that we can engage with you on this consultation. For further information about how Ofcom handles your personal information and your corresponding rights, see Ofcom's General Privacy Statement.

Your details: We will keep your contact number and email address confidential. Is there anything else you want to keep confidential? Delete as appropriate.	Organisation name / Whole response
Your response: Please indicate how much of your response you want to keep confidential. Delete as appropriate.	None
For confidential responses, can Ofcom publish a reference to the contents of your response?	Yes

Your response

Question	Your response
Do you agree that the key potential market developments over the next five to ten years are those set out in Section 5? Are there any other key developments we should consider?	We agree that fixed wireless access (FWA) solutions will become more important over the next ten years. This is because in comparison with other solutions for hard-to-reach premises such as fibre and satellite, FWA is lower cost, provides fibre-like speeds, causes less disruption for local communities, and ultimately is needed to foster stronger regional economic growth.

We also agree with Ofcom's expected use cases and, at [✂], we are working at Millbrook Proving Ground in Bedfordshire on the AutoAir connected vehicles project - a project which is mentioned in the Discussion Paper.

For these use cases, more innovative, robust, secure and data-intensive networks will be needed - this is where Open RAN, a technology that fosters competition and incentivises innovation, can become an important part of the UK's telecoms infrastructure.

We think that the Discussion Paper does well in describing new use cases for businesses. Private networks will become increasingly important to provide flexibility and high-speed networks to complex industrial processes.

In terms of how mobile networks are provided, we agree with the five expectations mentioned in the paper. We think that Open RAN and private networks in particular will become major elements of future networks. Open RAN is important because it strengthens the security of the UK's critical national infrastructure, increases competition by creating space for new market entrants, reduces operating costs, and accelerates innovation to meet future network capacity needs.

We disagree with the Paper's argument that Open RAN needs to further mature to provide an alternative to traditional RAN; it has already been proven through live deployments in countries such as Japan (Rakuten). With other markets already deploying Open RAN networks, for example Germany with 1&1 Drillisch, the UK risks falling behind on network deployment.

To accelerate Open RAN deployment, we believe that the Government's ambition for 35% of the UK's mobile network traffic to be carried over Open RAN by 2030 should be solidified into a binding requirement.

Furthermore, these targets should be underpinned by a pro-innovation regulatory environment, for example by incentivising

	MNOs to invest in Open RAN through targeted R&D reliefs. More widely, we think that it is crucial that the spectrum environment supports network development. This can be done by: first allowing outdoor use of the 6GHz band as done by other countries; second, simplifying spectrum disaggregation to form continuous blocks of spectrum; and, third, increasing the EIRP for non-rural outdoor in the Sub-6GHz Shared Access licences to allow outdoor deployments for FWA and Private Networks. Additionally, the mmWave spectrum could be a solution for the UK market to expand its private networks, but the current spectrum is not supported by the ecosystem - industry is currently prioritising frequencies higher than 26.5GHz.
Do you agree that competition among MNOs is likely to continue to play a key role in the delivery of good outcomes, as outlined in Section 6?	-
Do you consider that there are likely to be significant wider external benefits (externalities) from a quicker or more widespread rollout of high-quality networks than that which the market is likely to deliver, as discussed in Section 6? If so, please provide clear examples to help explain your answer.	-
Do you agree with our views on how competition across the value chain may evolve over the next ten years, and the potential implications for the delivery of good outcomes, as outlined in Section 6?	5G provides more competition across all aspects of the network. Open RAN widens this competition, by offering SMEs an opportunity to be part of the network, both on the hardware and the software side. Furthermore, this virtualization of the network brings new players to expand the market - this includes hyperscalers (AWS, Google, Microsoft), virtual infrastructure providers (Dell, Cisco, HPE, VMWare, RedHat, Qualcomm, etc) and System Integrators. A 5G network's quality of service will depend on the partnerships between these players and, while MNOs will be pivotal in connecting public and private infrastructure, ultimately these networks will be able to provide

	services/applications beyond MNOs' current capabilities. Ofcom plays an important role here regulating how shared-access spectrum can interact with MNO-licensed spectrum.
As set out in Section 6, do you agree that quality of experience will become more important in the future? Do you agree that developing better information on quality of experience for customers will help further the delivery of good outcomes?	-
Do you think there is more that could be done to reduce barriers to customers receiving good indoor coverage (see Section 6)? If so, please outline what steps could be taken and what impact those steps would be likely to have.	MNOs have two options with regards to sharing RAN infrastructure to make the economics of indoor deployment more appealing: MOCN (Multi Operator Core Network) and MORAN (Multi Operator Radio Access Network). MOCN is a simpler, cheaper and faster option to provide coverage for multiple operators, since it uses one frequency provided by one MNO, where all operators are connected. With MORAN, a radio needs to support all frequencies of all MNOs simultaneously, making the radio too expensive and bulky to make it an attractive use case. Ofcom should accelerate overall 5G coverage by allowing MOCN deployment in specific areas like indoor and rural areas. Another option is using a neutral host solution. This is similar to MOCN, but instead of using a MNO licensed frequency, a shared access licence is used. Here, the cost of deployment and management lies with the System Integrator or the venue. They deploy a small-scale private network to provide indoor coverage, with the option for MNOs to connect to it and offer their services. This accelerates indoor and rural coverage by passing the economic burden of deployment to a System Integrator, with MNOs connecting to these networks by paying a monthly fee.
Do you agree that clarifying our future regulatory approach will help encourage investment, as outlined in Section 7?	We agree that clarification over future regulation will drive inward investment. For example, in order to ensure that the Government meets its ambition for 35% of mobile network traffic to be carried over Open RAN by 2030, a telecoms diversification roadmap is crucial to bring confidence to vendors that this goal can be met.

	We appreciate that MNOs have said that the regulatory climate is not supportive of investment in mobile networks in the UK. However, despite their concerns over network security requirements, we think that security should continue to be prioritised. A cost-efficient way of ensuring secure networks for the UK's national infrastructure would be through diversified network supply chains which would reduce dependency on a single vendor. Support for the adoption of Open RAN technology is the best way to do this, and should be pursued by Ofcom in conjunction with DCMS.
Are there any other potential barriers to the delivery of good outcomes over the next five to ten years that we have not considered? If so, please outline what these are likely to be, with supporting examples/evidence where possible, and any suggestions for how they might be reduced.	-