Your response

Question	Your response
Questions for stakeholders that are interested in using 2 GHz MSS	
Question 1: Which service(s) do you wish to provide using 2 GHz MSS spectrum? When do you expect that you could provide these services, and what UK geography would these services cover? Where applicable, please provide evidence to support your response (including but not limited to): business plans, internal market forecasts, board papers, analyst reports, etc.	Confidential? – N Pursuant to a transaction announced 8 September 2025, EchoStar has entered into an agreement with SpaceX under which EchoStar will transfer its United States and international S-band 2 GHz MSS rights to SpaceX, all subject to required regulatory approvals and the satisfaction of other closing conditions. As announced, SpaceX intends to develop and deploy its next generation Starlink Direct to Cell constellation which will be capable of providing broadband service to cell phones globally. EchoStar will maintain a long-term commercial partnership with SpaceX to utilise this 2 GHz spectrum and SpaceX services for the benefit of EchoStar customers. EchoStar also has existing narrowband MSS services available in the UK and Europe over the EchoStar-21 satellite network, for applications such as 'Internet of Things' (IoT) sensor communications and other low-data-rate applications. EchoStar will defer to SpaceX to report to Ofcom its timing and plans for service to the UK. In general, pan-UK service is of particular importance to serve remote and other underserved regions of the UK, which are likely to lack reliable terrestrial options for broadband connectivity and/or for sensor communications.
Question 2: Please explain any barriers to your deployment of a service and your plans to address them.	Confidential? – N In general, there are large costs and barriers to deploying new satellite services, and EchoStar and its intended successor as user of this spectrum (SpaceX) have been leaders in overcoming these. Such investment should be encouraged by providing continuity of licensing for the UK/EU 2 GHz spectrum that has been licensed to EchoStar since the European Commission Decision in 2009 (2009/449/EC) ('EU 2 GHz Decision').

Question	Your response
Question 3: What benefits might be realised by enabling the service(s) you wish to provide through to 2032 (the short term)? Similarly, through to 2045 (the long term).	Confidential? – N There are three central use cases for 2 GHz MSS services in the UK: • **Consumer**: The most significant and popular use case for 2 GHz MSS band is wideband, D2D services. Consumers will come to expect and value ubiquitous coverage in remote and isolated areas where traditional terrestrial networks are impractical or economically unviable (including rural regions, oceans, and airspaces). D2D satellite services offer several compelling benefits, especially as they continue to evolve and integrate with mobile and IoT technologies. • **Enterprise**: Similar considerations apply to 2 GHz MSS services to enterprise, where larger form factors are inherently more acceptable – so that both D2D and purpose-specific devices have significant markets. In addition, the 2 GHz MSS band is also standardized for 5G narrowband IoT capabilities, based on the completion of 3GPP release 17 and successor standards. This greatly facilitates growth of MSS IoT services, for applications in industries such as agriculture, logistics, utilities, and environmental monitoring. • **Public Safety and Security:** Satellite communications are vital when terrestrial communications are not available due to natural disasters, outages and other unanticipated events. MSS services are also increasingly crucial in conflicts around the world. Whilst we assume that this is highly unlikely to be relevant in the UK, harmonised 2 GHz MSS service across the UK and Europe is much more likely to serve this market (e.g. in Ukraine).
Question 4: Please explain what you consider would be the appropriate licence period for the service(s) you wish to provide? Please explain why, including providing evidence, such as asset use life, where applicable.	Confidential? – N A lengthy licence period is required to promote investment in 2 GHz MSS services.
Question 5: What is the minimum amount of spectrum you would need to provide your service(s) to deliver a	Confidential? – N

<table>
<tr><th>Question</th><th>Your response</th></tr>
<tr><td>basic service to customers? What additional service features and/or customer numbers could you meet with a larger allocation (please specify the amount of spectrum)? Please include details of any guard bands that you would consider necessary within this spectrum for coexistence purposes.</td><td>The UK should give strong weight to scenarios that deliver advancements in satellite technology compared today's capabilities. The current framework of 2x15 MHz per operator adopted in the EU 2 GHz Decision remains a sound framework to ensure effective and efficient use of the 2 GHz MSS band.

A 2x15 MHz allocation is necessary to promote efficiency and support anticipated customer volumes.

With respect to efficiency, a 2x15 MHz allocation is more efficient than a smaller allocation because of both (a) reduced guard band requirements and (b) spectral efficiency for wideband services:

• Guard Bands: 5G New Radio requires use of ~500 kHz guard bands at the beginning and end of a spectrum block to manage interference to and from adjacent spectrum users. The following chart illustrates the impact of guard bands on spectrum usage with different allocations:

<table><tr><th>Spectrum Assigned (MHz)</th><th>Total (MHz)</th><th>Total Guard Band Spectrum Required (MHz)</th><th>% Spectrum Used for Traffic</th><th>% Spectrum Used for Guard Band</th></tr><tr><td>2x5, 2x5, 2x5</td><td>2x15</td><td>~3</td><td>80%</td><td>20%</td></tr><tr><td>2x5, 2x10</td><td>2x15</td><td>~2</td><td>87%</td><td>13%</td></tr><tr><td>2x15</td><td>2x15</td><td>~1</td><td>94%</td><td>6%</td></tr></table>
• Spectral Efficiency: Size of channel bandwidth has a significant impact on the ability to offer wideband services with optimal user experience.

As the foregoing discussion of efficiency demonstrates, the challenge of supporting expected large customer volumes would be compounded by the reduced efficiency of smaller and more fragmented spectrum allocations.</td></tr>
<tr><td>Question 6: For each service, please explain why you wish to use 2 GHz MSS. Please explain why this is a more</td><td>Confidential? – N

The advantages of the 2 GHz band for MSS services are well-known. The band was selected for MSS services because it provides excellent propagation characteristics</td></tr>
</table>

Question	Your response
suitable frequency compared to alternatives.	for mobile satellite terminals. Specifically, the frequency range is low enough to significantly reduce the rain fade associated with higher frequency bands like the Ku- and Ka-bands. This makes the 2 GHz band reliable for communications in various weather conditions for D2D, IoT and other services. Furthermore, the 2 GHz band is globally harmonized for MSS services, and a very large amount of work has been done on harmonization of spectrum and standards (including 3GPP standards) for the band. These factors support efficient provision of global MSS networks in the 2 GHz band.
Question 7: To what extent are there economies of scale across the UK and the EU for each service you wish to provide? What is the minimum number of users/devices you would need for each service to be economically viable?	Confidential? – N There are major economies of scale to deploying a global MSS network, associated with sharing of across a global customer base the huge costs of building, launching, licensing and operating the network across users in multiple jurisdictions. This clearly indicates a combined frequency licensing approach across UK and EU, as well as globally.
Question 8: For the service(s) you wish to provide in the UK, what is the extent and nature of potential technical coexistence issues with other jurisdictions, particularly the EU? What are minimum satellite beam footprint sizes that you consider feasible, and what cross-border sharing conditions do these facilitate?	Confidential? – N As noted in Question 7, there would be huge financial and technical challenges to deploying different MSS networks for the UK and EU. Indeed, a decision by the UK to adopt a different approach to MSS allocation and licensing from the EU and the rest of the world would greatly increase the cost of providing MSS services in the UK and therefore substantially impair the availability of these services in the UK.
Questions for stakeholders not interested in using 2 GHz MSS	
Question 9: What service(s) do you think could use 2 GHz MSS in the UK? What benefits do you think these services could provide, and how much spectrum do you consider these ser-	Confidential? – N Not applicable.

Question	Your response
vices require to (i) deliver basic services, and (ii) to deliver more advanced services?	
Questions for all stakeholders	
Question 10: Overall, to what extent does demand for 2 GHz MSS spectrum to provide services in the UK relate to demand for spectrum to provide 2 GHz MSS services in the EU (and vice versa)?	Confidential? – N The demand characteristics across UK and EU are fairly similar, with local variations due to urbanization, population density, geography and other factors. As reflected in our response to Questions 7 and 8, demand in UK and EU (and especially UK, because it is much smaller) would be enhanced by a harmonised approach to 2 GHz services across UK, EU and globally.
Question 11: Do you consider there would be any benefits or risks from aligning with the EU regarding the types of 2 GHz MSS services being authorised, as well as the specific operators licensed to operate?	Confidential? – N There would be major benefits from aligning with the EU on spectrum allocations and licensed operators, as explained above.
Question 12: Do you have any other points that we should consider for our consultation on future proposals?	Confidential? – N None.