Your response

Question	Your response
Question 1: What is the market opportunity for D2D services? What is the nature of the benefits that could be delivered to people and business in the UK and what do you estimate the magnitude of the benefits to be?	
Question 2: Are there any wider citizen or societal benefits that D2D services could deliver that the market might not deliver? What is the nature of these benefits and why might the market fail to deliver them? For example, what role could D2D have in improving the availability of 999 services in the UK?	
Question 3: Subject to suitable regulatory frameworks being in place, do you have an interest in offering D2D services or expanding an existing service, in the UK? Which customer segments, devices and use cases would be served? Would your D2D service complement or compete with services delivered over existing mobile?	
If you have considered launching or expanding a D2D service in the UK: **Question 4:** What technology and network architecture do you consider appropriate to use to deliver D2D services? For example, what altitude and how many HAPS, LAPS or satellites would be required to deliver an initial service? **We're aware that different technologies and network architectures will have different costs, performance, and spectrum efficiency trade-offs**.	

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Question 5: What capacity (e.g., Mbps/Km$_2$/MHz) and quality of service (e.g., latency) could be delivered with the D2D service you are proposing? What percentage of the UK landmass could be covered, and would coverage be provided indoors?	
Question 6: To inform our future policy development, which spectrum band would you like to deploy the service in? How much bandwidth would be required to provide the service at launch?	
Question 7: What take-up profile do you assume in your planning? For example, the number of active devices, monthly calls made, and data transferred per device. What is the roadmap for enhancing your network to meet anticipated future growth? What additional infrastructure and/or spectrum would be required? When?	
Question 8: What are the use cases and the benefits these services would deliver? What technology, network infrastructure and frequencies would be required to deliver the service? What are the advantages of using this MSS spectrum compared to other bands?	
Question 9: What current, or future, technology developments will offer the opportunity for more efficient use of MSS spectrum? E.g., more spectrally efficient, or greater ability to share spectrum.	
Question 10: Could your existing, or proposed, service coexist with other users of the same frequencies within	

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the MSS spectrum bands? If so, how is coexistence achieved? If not, please explain why sharing is not possible.	
Question 11; Do you expect D2D services to be available prior to WRC-27? What services and benefits do you think an authorisation prior to WRC-27 might bring to UK consumers and businesses?	
Question 12: Are there any mobile bands that should be prioritised for satellite based D2D?	
Question 13: Are there existing systems that you consider could be subject to an increased risk of harmful interference from the introduction of satellite based D2D using mobile bands? If yes, are there specific mobile bands that you consider should be avoided to reduce this risk?	
Question 14: Do you have any views on how spectrum for D2D services should be authorised? Does this vary by band, or type of NTN? Please explain the reasoning behind your preference.	
Question 15: Are there any other points that you think would be useful in our considerations? In providing your response, please provide as much evidence as possible.	Viasat has been providing live service in the 1980 – 1995 MHz and 2170 – 2185 MHz band segments in the UK, and Europe more broadly, since 2019. Viasat uses these band segments, which are harmonised across Europe, to provide connectivity to aircraft through the European Aviation Network (EAN). As the EAN's architecture combines an MSS GEO satellite with integrated Complementary Ground Components (CGCs) to serve aircraft, the EAN is an early implementation of Non-Terrestrial Network (NTN) technologies. Based on its long history of successfully operating the EAN, Viasat is confident that it can effectively manage the potential for interference between terrestrial and satellite components of any given service offering that it utilizes in the future as parts of its own network—including where those

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	components dynamically share the same band segments. Among other things, this positions Viasat very well to introduce additional D2D/D2X use cases alongside its existing EAN service.

The EAN provides highly valued pan-European connectivity to a growing number of aircraft, and by extension their passengers and crew by the end of 2026 the EAN will serve more than 600 aircraft across seven airlines and in total, EAN service will be available to an estimated 150 million passengers each year.

To date, Viasat/Inmarsat, Deutsche Telekom and airline customers have invested and committed €430 million in the EAN. Well over €170 million has been invested and committed to installing EAN equipment on European aircraft and even more will be invested in the hundreds of additional aircraft fittings expected in the coming years.

The usage of the EAN is driven by product innovation by the airlines and strong inter-airline competition. This competition drives EAN enabled airlines to provide more data to more passengers on more aircraft, which substantially enhances passenger benefits.

When comparing H1 2023 to H1 2024, the EU-wide number of sessions increased by more than 53%, while the EU-wide data used across all airlines increased by 32%. For the UK specifically, data usage grew by 74% between H1 2023 and H1 2024. This is, to a substantial degree, attributable to the introduction of free messaging on British Airways. This followed the introduction of free messaging on Iberia, another airline of the International Airlines Group. By Q1 2025, most airline customers that are EAN-equipped will feature free messaging at least for certain customer categories, with many airlines differentiating themselves through additional free offers which are more data intensive, e.g. streaming. With the onboarding of the Lufthansa Group EAN equipped flights into UK – based on current flights schedules – will increase by at least 20% per week.

In addition, EAN supports environmental sustainability in aviation. EAN terminal equipment, which is optimised to take advantage of the properties of MSS 2 GHz spectrum, is 75% lighter and smaller than IFC products used in higher frequency bands. This reduces weight and drag, along with the carbon footprint of the connectivity solution. The properties of the antenna are specifically designed to be equipped on short-haul, narrowbody aircraft, which are commonly used in intra-European air traffic. Several of our airline customers are also starting to use the EAN for optimising the flight profile, predictive route scheduling and maintenance as well as electronic flight bags. This enables airlines, *for example*, to |

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	avoid fuel consuming head winds or storms and enables swift repair action for aircraft where necessary.

Taking into account the current satellite technology and constraints, our ability to provide capacity to additional customers and passengers is managed optimising the ground segment. This is more flexible than implementing major technology changes to an existing satellite.

The EAN supports a comprehensively European value chain. The involvement of more than 80 European companies with footprints in all 27 EU countries enables the provision of the EAN. In the UK, the satellite is complemented by 22 CGC ground stations which are provided by 3 partners – DT GBS UK, the subsidiary of our partner on the ground segment, Deutsche Telekom, Cellnex and WIG, the tower companies and BT as the backhaul provider. In particular, British Airways contracts with numerous companies in connection with its use of the EAN for connectivity (e.g., for equipment installation).

For further information we refer you to the attached presentation, which includes additional material by our ground segment partner, Deutsche Telekom and our latest customer, the Lufthansa Group.

Viasat urges Ofcom to ensure the EAN's continued access to the spectrum such that passengers that use the service in and over the UK, and our UK partners that provide it, can continue to do so. |

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