Your response

Question	Your response
Question 1: Hybrid sharing could mean that the upper 6 GHz band will be used for mobile outdoors and Wi-Fi indoors. What are your views on the priorities for each of these two services, assuming that suitable coexistence mechanisms are developed?	*Is this response confidential? – N* The Scottish Futures Trust (SFT) supports the current Ofcom position for WRC-23 regarding the upper 6 GHz band, as published by Ofcom on 6th December 2022, namely that "an 'IMT identification' could impact the development of a licence exempt device ecosystem and significantly weaken the licence exempt Wi-Fi option". This position is based on our assertion that the additional spectrum requirements of future "mobile telephony" versus Wi-Fi are not yet clear, beyond the current supposed position that approximately 75% of all data is carried by Wi-Fi and 25% via mobile telephony. Indeed, some commentators argue that total mobile data usage is already showing signs of a flattening that will become more pronounced over the coming years owing to device count saturation and inherent limits to personal mobile data usage. If this is true, then 5G already has sufficient spectrum to support its data requirements for the foreseeable future. If the outcome of WRC-23 is the "IMT identification" of the upper 6GHz band, then hybrid sharing is, in principle, a sensible alternative approach to spectrum management given the acknowledged care that will need to be taken to ensure that it does not require bespoke/non-standard versions of low-power wireless technologies which may compromise their low-cost or availability in the UK or beyond. The ideal position would be that hybrid sharing would have zero or minimal impact on the low-power device ecosystem or at least preserve its low-cost nature, as it is certainly conceivable that the latest Wi-Fi generations could be a competitive, affordable alternative means of providing both indoor and outdoor high-speed, low-latency coverage. We believe there could be additional reasons to support the exploration of hybrid sharing mechanisms. Continuing convergence is undoubtedly taking place in the advanced wireless arena, with the successive 3GPP and RLAN standards reducing the differentiation between the capabilities of the two technology strands in the ultra-high-speed cases. It could transpire that hybrid sharing triggers resolution of the last remaining significant differences between them (such as, use of licensed vs. unlicensed spectrum and associated spectrum management) thus freeing the two ecosystems to converge and/or coexist more seamlessly. The spectrum management concepts of hybrid sharing systems might in fact be useful in maximising RLAN performance improvements,

	regardless of the existence of mobile telephony systems in the same spectrum band. To specifically answer the question that was posed, we would argue that since Wi-Fi transports significantly higher proportion of residential and business users' data at the current time, Wi-Fi ought to be afforded priority in the default case unless it is shown categorically that there would be tangible advantages to the public by adopting different priorities in specific locations or circumstances. We would further suggest that as the two technologies continue to converge in the technical and capability senses, it seems logical that Wi-Fi 6E, 7 and beyond might become far more prominent solutions in outdoor scenarios, in addition to their dominance indoors.
Question 2(a): Hybrid sharing could mean that the upper 6 GHz ban will be used for mobile in some locations, and Wi-Fi in others. We would like feedback on the priorities for each of these two services, assuming that suitable coexistence mechanisms are developed. From the point of view of mobile, is the upper 6 GHz band most useful to provide outdoor coverage, or indoor coverage? Is it most useful in urban areas, or in those base stations that are currently carrying more traffic, or some other split?	No submission
Question 2(b): Similarly, what are the priorities from the point of view of Wi-Fi deployments?	No submission
Question 3: What are your views on a modified AFC or SAS-type approach to enable hybrid sharing? What additional work do you think would be required?	No submission
Question 4: How could existing access protocols and sensing mechanisms be leveraged (i.e., those in Wi-Fi	No submission

or 5G NR-U) to enable hybrid sharing?	
Question 5: What mechanisms could potentially enable device-to-device connectivity?	No submission
Question 6: If hybrid sharing is eventually adopted, and requires licensed mobile to operate at medium power, in what way would mobile networks use the upper 6 GHz band?	No submission
Question 7: How would you suggest that the mechanisms presented here can be used, enhanced, or combined to enable hybrid sharing or are there any other mechanisms that would be suitable that we have not addressed?	No submission
Question 8(a): Assuming the future of the band includes indoor use for Wi-Fi and outdoors use for mobile: How could this be achieved without creating or suffering interference?	No submission
Question 8(b): Could there be a combination of technical adjustments such as power limits and other mechanisms (including databases or sensing mechanisms)?	No submission
Question 9(a): We are interested in input about the importance of the upper 6 GHz band for its incumbent users, and on the potential impact of hybrid sharing of the band. What evidence do you have on whether incumbents are likely to coexist with hybrid sharing of the band with	No submission

mobile and Wi-Fi? Are there unique advantages of the upper 6 GHz band for these uses?	
Question 9(b): What are your views on the initial analysis we have conducted around hybrid sharing and coexistence with incumbents?	No submission
Question 9(c): For any incumbent uses that you view as unlikely to be able to coexist, what alternatives are there? What are the barriers that might prevent those alternatives?	No submission
Question 10: Do you have any other thoughts that you would like to share about hybrid sharing in the upper 6 GHz band, or about hybrid sharing more generally and its potential for applications in other bands?	No submission
Question 11: Do you have any other comments to make on these proposals or on the future use of the upper 6 GHz band?	*Is this response confidential? – N* *Note that this response reiterates parts of the response provided to Question 1:* The Scottish Futures Trust (SFT) supports the current Ofcom position for WRC-23 regarding the upper 6 GHz band, as published by Ofcom on 6th December 2022, namely that "an 'IMT identification' could impact the development of a licence exempt device ecosystem and significantly weaken the licence exempt Wi-Fi option". This position is based on our assertion that the additional spectrum requirements of future "mobile telephony" versus Wi-Fi are not yet clear, beyond the current supposed position that approximately 75% of all data is carried by Wi-Fi and 25% via mobile telephony. Indeed, some commentators argue that total mobile data usage is already showing signs of a flattening that will become more pronounced over the coming years owing to device count saturation and inherent limits to personal mobile data usage. If this is true, then 5G already has sufficient spectrum to support its data requirements for the foreseeable future. If the outcome of WRC-23 is the "IMT identification" of the upper 6GHz band, then hybrid sharing is, in principle, a sensible

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