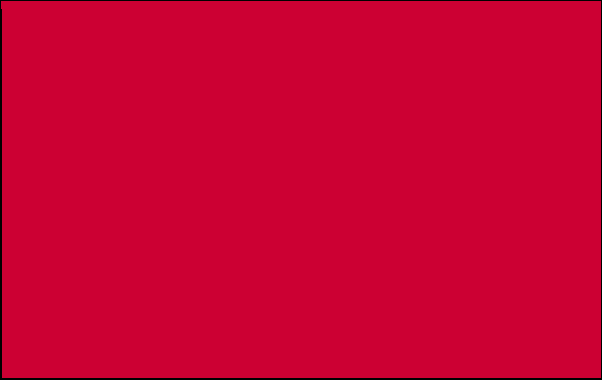


Your response

Question	Your response
<p>Question 1. How do you think demand for Shared Access is likely to change in future and why; Which use cases do you think are likely to emerge or grow, and which decline? Please provide a view on the bandwidth you would consider the minimum and optimal requirement for growth use cases, and timelines you would expect for their development</p>	<p><i>Is this response confidential?</i> –N As demand for private local wireless networks will increase in the future driven by use cases, such as Programme Making & Special Events (PMSE), wireless industrial automation, Public Protection & Disaster Relief (PPDR), e-health, drone control, or Intelligent Transport Systems (ITS), the demand for shared access will also increase and sharing solutions are needed that support the special needs of the local private networks.</p>
<p>Question 2. Are there elements of the current framework that complicate the use of Shared Access licences for specific use cases? If so, please provide specific examples and indicate the changes that would be required to facilitate this and how this might co-exist with other use cases.</p>	<p><i>Is this response confidential?</i> – N Yes, for ad-hoc or spontaneous deployment the process for applying a license needs a much higher degree of automation and much shorter response times. Typical use cases are audio PMSE in case of an ENG (Electronic News Gathering) team, PPDR, or drone control.</p>
<p>Question 3. Do you have any comments on the power restrictions currently in place, particularly in urban/high density areas, under the Shared Access licence? Please explain what benefits could be delivered using a higher operating power (e.g. medium power in urban areas), or any concerns you sharing with such operations).</p>	<p><i>Is this response confidential?</i> – N No.</p>
<p>Question 4. Do you have any comments on the exceptions process, and how some of its benefits could be maintained within more standardised and automated assessments?</p>	<p><i>Is this response confidential?</i> –N No.</p>
<p>Question 5. Do you have any views whether and how the coordination approach should be modified? If yes, please provide comments in light of the issues set out above.</p>	<p><i>Is this response confidential?</i> –N Important for the PMSE use case are the following points:</p> <ul style="list-style-type: none"> • during operation the spectrum cannot be shared in the same geographical vicinity, • no frame structure synchronization, • spectrum resources once assigned need to be guaranteed for the user during usage, and • ad-hoc usage shall be supported.

	<p>Coordination needs a high dynamic, e.g., with a time granularity of, e.g., one hour.</p>
<p>Question 6. Do you have views on whether newer or emerging technologies can support coexistence between additional users in the band, and if so, how?</p>	<p><i>Is this response confidential? – N</i></p> <p>A dynamic, fully automated data base approach with high temporal and geographic granularity, including coordination of secondary users, would be the best approach for the use cases mentioned above.</p>
<p>Question 7. Please outline any comments on the current licensing process (e.g. ease of application, time taken, the information we require). If relevant, please note aspects you are currently content with and areas which could be improved.</p>	<p><i>Is this response confidential? –N</i></p> <p>The licensing process needs to be fully automated and should support ad-hoc deployment. Therefore, the time between applying for a license and getting it should be in the range of minutes.</p>
<p>Question 8. Do you have any comments on the suitability of available spectrum for your use cases? Please consider the relevance of the additional bands we are proposing for the framework, and the impact of any limitations on existing bands.</p>	<p><i>Is this response confidential? – N</i></p> <p>The spectrum range 3.8-4.2GHz seems to be very promising for the PMSE use case.</p>
<p>Question 9. Do you have any comments on equipment availability limiting deployment options in 3.8-4.2 GHz? Please comment on the impact of any experiences you have had, and where relevant, your expectations for when more equipment will be broadly available across the band.</p>	<p><i>Is this response confidential? –N</i></p> <p>Equipment is available based on the 3GPP 5G ecosystem to support private networks. Other ecosystems may develop.</p>
<p>Question 10. Do you have any other general comments on the Shared Access framework? Please consider any areas where future innovations could further support Ofcom’s policy objectives for this spectrum, and/or improve the experience for users.</p>	<p><i>Is this response confidential? – N</i></p> <p>Based on joint work with the Wireless Innovation Forum (WInnForum) which developed the specifications for the Spectrum Access System (SAS) for the U.S. shared Citizens Broadband Radio Service (CBRS) band, ETSI TC RRS recently published a technical report on spectrum sharing frameworks: TR 103 885 (see link) “Feasibility study on existing spectrum sharing frameworks for temporary and flexible spectrum access”, which evaluates the</p> <ul style="list-style-type: none"> • suitability of sharing frameworks for temporary and flexible spectrum access to support ad hoc and on-demand use cases, • procedures and functionalities for automated spectrum negotiation, assignment, and application specific QoS guarantee,

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- suitability for the support of scalable localized dedicated networks, and
 - suitability for the support of fixed, nomadic, or mobile deployments.

Ofcom may find the ETSI TR useful to further support its policy objectives to diversify and increase the use of this spectrum while improving the experience for users.