

## Your response

Question	Your response
<p data-bbox="256 327 483 590"><b>Question 1: Do you have any comments on our proposal to open access to the 5925-6425 MHz band for licence-exempt Wi-Fi use?</b></p>	<p data-bbox="503 394 1287 657">Federated Wireless commends Ofcom for its continued leadership in making available much-needed licensed, unlicensed, and shared spectrum to meet the surging demand for broadband and next-generation wireless services. We urge Ofcom to act expeditiously to make spectrum in the 6 GHz band available for unlicensed use as broadly as possible and leverage the lessons learned in implementing other sharing regimes to ensure the present and future needs of both incumbent licensed and newly authorized unlicensed users are met.</p> <p data-bbox="503 695 1323 993">To these ends, we recommend that Ofcom consider the use of database-enabled sharing technology, such as an automated frequency coordination (“AFC”) system, to maximize flexibility and access opportunities for new unlicensed devices while ensuring protection of incumbent services in the 6 GHz band. For example, the use of an AFC system would enable Ofcom to authorize higher transmit power levels and implement fewer operating restrictions on unlicensed devices while opening more spectrum across the entire 6 GHz band. Such an AFC system could assist Ofcom in achieving the following key objectives:</p> <ul data-bbox="548 1031 1292 1226" style="list-style-type: none"><li data-bbox="548 1031 1292 1125">A) Protect incumbent operations by reflecting the current (and future) operating characteristics of incumbent 6 GHz bands users; and</li><li data-bbox="548 1129 1292 1226">B) Maximize spectrum access opportunities for new unlicensed devices and use cases by leveraging the capabilities of the cloud to optimize the development and deployment opportunities.</li></ul> <p data-bbox="548 1264 1292 1593"><b>A) Incumbent Protection.</b> Federated Wireless recommends that Ofcom implement a database-enabled sharing regime, such as an AFC, for the 6 GHz band to ensure that incumbent operations can continue and grow unimpeded while maximizing the amount of spectrum available to meet exponentially growing demand for unlicensed capacity. In order to conduct the interference calculations needed to coordinate unlicensed operations on a non-interference basis with respect to licensed users, an AFC system would need information regarding both incumbent licensed and newly authorized unlicensed operations.</p> <p data-bbox="548 1631 1315 1898">With respect to incumbent operations, AFC system operators would need access to data regarding incumbent licensees’ locations and operational characteristics, including power levels, antenna height, among others. The AFC would then use such information for conducting the analyses necessary to implement and enforce incumbent protection criteria. Regularly synchronizing the AFC system with a database(s) containing relevant information regarding licensed operations in the 6 GHz band will be critical to enable the</p>

AFC to account for newly licensed facilities or any changes to licensed facilities.

Similarly, when establishing a connection to the AFC system and submitting a query requesting channel availability information, 6 GHz unlicensed access points would need to provide location and technical information to the AFC system with sufficient accuracy that it can conduct the computations needed to identify the channels on which the unlicensed device could operate in accordance with the incumbent protection criteria. The provision of this location and technical information, such as antenna height and power level, is fundamental to allowing the AFC to perform its intended incumbent protection functions.

In this way, knowledge of information about both incumbents and new entrants enables the AFC system to conduct the computations needed to determine the channels on which a device may operate without causing interference to nearby incumbent users. To that end, this information allows the AFC system to enforce any incumbent protection criteria that Ofcom may adopt – whether today or in the future.

**B) Maximizing Flexibility and Spectrum Access for New Unlicensed Users.** In addition to its benefits for incumbent protection, Federated Wireless recommends the use of an AFC to maximize flexibility and spectrum access for new unlicensed devices and use cases. We believe Ofcom’s proposal to limit new indoor unlicensed devices to 250 mW EIRP and outdoor unlicensed devices to only 25 mW EIRP is overly restrictive and will limit the use cases that such devices can support.

With use of an AFC higher power operations both indoors and outdoors could be enabled depending on the location and nearby incumbent operations. Such operational flexibility will be necessary to support the wider channel bandwidths of the latest Wi-Fi standards as well as the variety of high throughput/ low latency applications envisioned for this band. Adoption of overly restrictive requirements is likely to result in overprotection of incumbents at the expense of new uses without demonstration that any individual incumbent would actually be harmed. Furthermore, use of an AFC could also enable Ofcom to make more spectrum in the 6 GHz band available for unlicensed devices while continuing to protect incumbents.

Significant work has already been done to develop AFC capability for the 6 GHz band. Together with unlicensed equipment vendors, Federated Wireless is ready to commercialize our AFC system to enable access to 6 GHz spectrum before the end of 2020. We encourage Ofcom to consider options, such as use of an AFC, to avoid limiting transmit power levels and restricting use cases to solving the challenge of introducing shared access to the 6 GHz band.

<b>Question 2: Do you have any comments on our technical analysis of coexistence in the 5925-6425 MHz band?</b>	
<b>Question 3: Do you agree with our proposal to remove DFS requirements for indoor Wi-Fi up to 200mW from the 5725-5850 MHz band?</b>	
<b>Question 4: Do you have any comments on other options that may be available for Wi-Fi and RLANs within the 5 GHz band?</b>	See discussion above regarding opportunity to use AFC to manage incumbent protection.