Consultation response form

Your response

Question	Your response
Question 1: Do you have any comments on Ofcom's proposed Plan of Work 2023/24?	*Is this response confidential?* –No Wi-Fi Alliance commends Ofcom for striving to make communications work for everyone and for prioritizing this vision in the Plan of Work for 2023/24 (the "Plan"). In the Plan, Ofcom astutely recognizes that increased demand and adoption of new and future services has driven greater dependence on digital networks. In particular, Ofcom notes that, "*As of autumn 2022, 68% of homes are now able to get gigabit capable broadband. This is up from 47% in 2021*." And Ofcom further recognizes that, "*full-fiber broadband reaches 11 million UK households, up from 7 million a year ago*." (see the Plan at paragraph 2.5). With extensive fiber deployments the average data traffic volumes are increasing at over 20% per year. Considering that most of this connectivity and data traffic is distributed over Wi-Fi, it is expected that requirements on Wi-Fi will increase correspondingly (i.e., ~20% per year). In fact, forecasts estimate a three-fold increase in broadband data traffic over 2020-2025 period. Ever increasing data traffic volumes combined with expanding performance requirements and a growing number of devices continue to drive Wi-Fi spectrum needs. Notably, Ofcom's own projections indicate that Wi-Fi "demand could grow between six and ten times over ten years" (see Ofcom Improving Spectrum Access for Wi-Fi, July 2020, at paragraph 3.24). As Ofcom noted in the report, Wi-Fi has become increasingly important in connecting people and devices everywhere and that 6 GHz spectrum is critical for futureproofing of Wi-Fi connectivity. And the key findings of Ofcom's 2021 Mobile Matters Report indicate that 73% of data connections are made over wi-fi rather than a cellular network(see Fig.1 of the Report).

	Wi-Fi Alliance commends Ofcom for the recent decision that partially mitigated Wi-Fi spectrum shortfall by allowing Wi-Fi operations in the 5 945-6 425 MHz band, but access to the remaining portion of the 6 GHz (6 425-7 125 MHz band (i.e., upper 6 GHz band)) is urgently needed to meet demand for Wi-Fi connectivity. This Plan comes at a pivotal time in the development of the Wi-Fi ecosystem. Last year, Wi-Fi Alliance introduced the new Wi-Fi 6E brand to distinguish the latest generation Wi-Fi 6 devices that are capable of 6 GHz operation. Wi-Fi 6E brings a common industry name for Wi-Fi users to identify devices that offer the features and capabilities of Wi-Fi 6 – including higher performance, lower latency, and faster data rates – extended into the 5925–7125 MHz band. Wi-Fi 6E devices are quickly becoming available, following regulatory approvals in several countries. As the 6 GHz regulatory landscape evolves, Wi-Fi Alliance member companies continue to expand the Wi-Fi 6E ecosystem even further. Initial deployments in the band included Wi-Fi 6E consumer access points, smartphones, computers, and televisions, followed by enterprise-grade access points. Industrial environments are also expected to see strong adoption of Wi-Fi 6E to deliver applications including machine analytics, remote maintenance, and virtual employee training (see Wi-Fi Alliance 2022 Wi-Fi trends). Wi-Fi 6E utilizes the lower and upper 6 GHz bands to support much anticipated immersive experiences use cases (e.g., VR/AR/XR, industrial IoT, automotive, telepresence, 3D-video, and other applications). The list of Wi-Fi 6E certified products is rapidly expanding. In 2021, over 300 million Wi-Fi 6E devices entered the market and over 350 million devices in 2022. Regulatory harmonization in the 6 GHz band will create economies of scope and scale and produce a robust equipment market, benefitting UK businesses, consumers, and the economy. But these benefits cannot be realized in the absence of Wi-Fi access to adequate spectrum capacity. Access to less than the entire 6 GHz band (i.e., lower and upper 6 GHz bands) would substantively reduce Wi-Fi 6E performance in terms of latency and data throughput. The 5925-6425 MHz band (i.e., 500 MHz) does not provide sufficient spectrum bandwidth to support future Wi-Fi connectivity. And, importantly, there are no alternative frequency bands that may address expanding Wi-Fi spectrum requirements in the future. In fact, the next

generation of Wi-Fi (Wi-Fi 7) is being designed. Wi-Fi Alliance asks Ofcom to note that Wi-Fi 7 is designed to deliver unprecedented quality of service (QoS) benefits at higher data rates and lower latencies. But Wi-Fi 7 optimal performance will depend on access to multiple wider (e.g., 320 MHz) channels in the 6 GHz band– without Wi-Fi access to 6 425-7 125 MHz, UK consumers and enterprises will not realize the full benefits of Wi-Fi 6E, Wi-Fi 7 and future generations of Wi-Fi technologies. And, importantly, connectivity delivered by these generations of Wi-Fi technology is essential to Ofcom stated goal of the "*Internet we can rely on – fast and reliable connections and services for everyone, everywhere.*"

Wireless connectivity is becoming increasingly integrated into the lives of the UK consumers and business. Appropriately, Ofcom seeks to ensure that everyone in the UK has access to high-quality, affordable and ubiquitously available connectivity. Similarly, policymakers worldwide recognize that digital connectivity is increasingly dependent on Wi-Fi and that Wi-Fi delivers significant socioeconomic benefits. The advantages of a harmonized Wi-Fi across the 6 GHz band include commonality of equipment, economies of scale, larger markets, increased competition, lower product prices, and a wider choice of products, to name just a few. As other countries proceed to authorize Wi-Fi deployments in the 5 925-6 425 MHz and 6 425-7 125 MHz bands, timely action facilitating similar regulatory framework is imperative to enabling wireless connectivity in UK. Conversely, lack of spectrum access to the upper-6 GHz band or regulatory uncertainty resulting from delays in spectrum availability may impair current and future Wi-Fi generations in UK.

In light of the above, Wi-Fi Alliance respectfully asks Ofcom to prioritize consideration of making the 6 425-7 125 MHz band available for Wi-Fi in its Plan of Work for 2023/24.

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