TELEFÓNICA UK LIMITED RESPONSE TO:

"Strategic Review of UHF Spectrum at 420-470 MHz: UHF Bands 1 and 2"

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I. INTRODUCTION

1. Telefónica UK Limited ("Telefónica") welcomes the opportunity to respond to Ofcom's call for inputs on the Strategic Review of UHF Spectrum at 420-470 MHz: UHF Bands 1 and 2[1].

II. GENERAL COMMENTS

2. In our view, Aegis's report[2] underestimates the potential future demand for 420-470 MHz spectrum from mobile operators.

3. While current usage of 450 MHz wideband services may be largely driven by rural coverage and fixed wireless access, we expect this band to be also relevant for other mobile use cases in the future.

4. In particular, some future mobile services may have a need for very wide coverage. These services may not be targeted directly to consumers, or the user equipment may be something other than a Smartphone. This means that the issues identified by Aegis in adding 450 MHz to a mass market Smartphone would not be relevant for these cases.

5. For example, a future service targeted at Machine to Machine ("M2M") or the Internet of Things ("IoT") would benefit from the expanded coverage possible with 450 MHz. Connected cars, traffic lights or waste bins are large enough to include antennas that support the lower frequency. Note that these services may not necessarily use LTE, as other technologies designed for IoT have been proposed.

6. Other potential future mobile services in the 450 MHz band could include LTE Broadcast/eMBMS, mobile operator-hosted public networks, services for fieldwork-based businesses or logistical services for transport companies. Some of these services are already offered in this band elsewhere in Europe, for example by Ukkoverkot[3] in Finland.

[1] http://stakeholders.ofcom.org.uk/binaries/consultations/420-470-mhz/summary/420-470-mhz.pdf

[2] http://stakeholders.ofcom.org.uk/binaries/consultations/420-470-mhz/annexes/aegis-report.pdf

[3] http://telecoms.com/311751/ukkoverkot-ceo-explains-benefits-of-450mhz-band/

7. Therefore, we urge Ofcom to consider options for the 450 MHz band that accommodate its potential use by mobile operators, whether for LTE or other technologies.

8. We focus the remainder of this document on our responses to Ofcom's specific consultation questions.

III. RESPONSES TO QUESTIONS

Question 1: Do you agree with Aegis's conclusions on congestion of current use of 420-470 MHz spectrum? Are there any other signs or areas of congestion that Aegis have not identified from their review?

9. No comment.

Question 2: Do you agree with Aegis's conclusions on the future demand and use of 420-470 MHz spectrum over the next ten years? Are there any other future uses or areas for future demand that Aegis have not identified from their review?

10. In our view, Aegis's report underestimates the potential future demand for 420-470 MHz spectrum from mobile operators.

11. Please see our comments above.

Question 3: Do you agree with Aegis's conclusions that there is not yet any UK demand for wideband services in the 450-470 MHz band (which could for example, be used to improve rural mobile coverage)? Please provide any supporting evidence for your position.

12. We disagree with Aegis's conclusion that an LTE-450 network deployment in the UK should be expected within closed user groups (e.g. Utilities) rather than by a mobile operator.

13. Please see our comments above.

Question 4: Have you experienced degradation in your systems' performance which you consider to be caused by continental interference in the last 12 months? If yes, what approach did you take towards managing and minimising interference?

Please provide any supporting evidence which explains the frequency (of occurrence), impact, duration, time, location and cause (whether suspected or investigated) of the interference with respect to your specific sector(s).

14. No comment.

Question 5: Is there additional information relevant to the configuration of the 420-470 MHz band that we should consider in developing our approach to its future management? Please provide any evidence to support your views.

15. No comment.

Question 6: Do you agree with the potential solutions Aegis have proposed for managing the 420-470 MHz band to both meet the continued growth in congestion and demand from incumbent spectrum users, and to facilitate the deployment of wideband technologies? Are there any other solutions which you consider we should examine that Aegis have not identified from their review?
Please provide any evidence to support your position and reference each solution in your response as appropriate.

16. In our view, Aegis has underestimated demand from mobile operators for this band. Potential solutions that allow for use by mobile operators should therefore be given higher priority.

17. Please see our comments above.

Question 7: Do you have any further comments relevant to how we might manage spectrum between 420-470 MHz?

18. No further comments.

Question 8: Do you have any comments on our proposed programme of work, the outcomes from which we will use to inform future decisions on how we manage the 420-470 MHz band? Are there any additional areas you consider we should explore?

19. We support Ofcom's intention to continue improving its understanding of the potential for new uses in this band, and to investigate opportunities for band reconfiguration. In particular, we urge Ofcom to consider options for the 450 MHz band that accommodate its potential use by mobile operators, whether for LTE or other technologies.

20. Please see our comments above.