

**TELEFÓNICA UK LIMITED RESPONSE TO:**

**“Improving consumer access to mobile services at 3.6 to 3.8 GHz”**

**NON-CONFIDENTIAL RESPONSE**

**September 2017**

## I. INTRODUCTION

1. Telefónica UK Limited (“Telefónica”) welcomes the opportunity to respond to Ofcom’s statement and consultation on improving consumer access to mobile services at 3.6 to 3.8GHz<sup>1</sup>.
2. Telefónica is supportive of appropriate actions, such as the timely release of spectrum, which can facilitate 5G and long term growth in consumer and citizen benefits from the increasing demand for mobile services.
3. Ofcom correctly highlights that this growing demand for mobile services continues, it therefore follows that Ofcom should take full account of this demand and the phenomenal growth of mobile data traffic, when making decisions concerning the allocation of spectrum for mobile services. Indeed, it is our expectation that this growth trend will continue well beyond 2020 and thus a sufficiently long term view is needed.
4. Ofcom must address the strategic challenges facing the UK regarding the growing demand for mobile data and the spectrum used to deliver it, with a strong focus on healthy and sustainable competition and the consumer and economic benefits that it can bring.
5. Ofcom’s Mobile Data Strategy<sup>2</sup> outlined an approach to ensuring that sufficient spectrum is available to meet this evidential growing demand for mobile data from consumers and businesses. It identified bands for potential future mobile broadband use which included the 3.6 to 3.8GHz band. Telefónica supports efforts to ensure

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<sup>1</sup>[https://www.ofcom.org.uk/data/assets/pdf\\_file/0017/103355/3-6-3-8ghz-statement.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0017/103355/3-6-3-8ghz-statement.pdf)

<sup>2</sup> <http://stakeholders.ofcom.org.uk/binaries/consultations/mobile-data-strategy/statement/statement.pdf>

that this band is made available for mobile services in order to support future demand and to facilitate the development of the next generation of mobile services.

## **II. GENERAL COMMENTS**

6. Telefónica agrees with Ofcom's proposal to make the 3.6 to 3.8GHz band available for future mobile services, including 5G, and to proceed with option B. Option B will result in the optimal use of the spectrum and provide the greatest benefits to UK citizens and consumers. By contrast, proceeding with option A would result in very densely populated areas with large numbers of users, being denied access to mobile services using the band. This would neither represent an efficient use of the spectrum, nor a scenario which maximises the benefits to citizens and consumers. It is essential that Ofcom proceeds with option B and ensures that the spectrum is made available for mobile use in all areas where it can be deployed by mobile operators to bring maximum benefits in order to further the interests of consumers and promote competition.

### **THE DEVELOPMENT OF 5G**

7. Ofcom highlights the fact that The UK Government has set out a clear ambition that the UK should be a global leader in 5G to take early advantage of its potential and help to create a world-leading digital economy that works for everyone, with high quality coverage where people live, work and travel. Telefónica recognises the Government's vision for 5G and the benefits it can bring to the UK. We are excited by the possibilities and opportunities presented by 5G and, as a provider of 4G services and a major investor in national infrastructure, Telefónica is well placed to help the Government achieve its vision.
8. Telefónica is already actively laying the groundwork for 5G. This is evidenced by our small cell deployment in the City of London and our position as a founding member of the 5G Innovation Centre (5GIC) at the University of Surrey.
9. As a wider company group, Telefónica is also actively playing a key role in the development of 5G technologies, contributing to relevant international projects, industry associations and standardisation bodies. For example, Telefónica has founded 5TONIC, an open research and innovation laboratory focusing on 5G technologies.
10. Crucial to the future of 5G deployment is the continued evolution of 4G. Telefónica considers that ongoing investment and development in 4G technologies is a decisive

step towards 5G deployment. The continued evolution of 4G will ensure that consumers receive the best possible experience and that networks are able to support new use cases such as the Internet of Things (IoT). Continued investment in 4G is therefore necessary to ensure that 4G reaches its full potential and is, in itself, vital to ensuring the right conditions exist for the development of 5G.

11. Telefónica has therefore identified the following as key enablers of continued 4G evolution and, ultimately, 5G deployment:

- **Removal of barriers to investment**

Ofcom must continue to work on removing barriers to investment and competition. Whilst Ofcom will necessarily play a crucial role in 5G deployment in the UK, its focus should be on helping to remove the barriers to investment and not prescribing the model that network providers must use. To this end, it is critical that Ofcom continues to focus on, and has success with, measures to promote investment and competition which are imperative to future development. As well as access to fibre networks, Ofcom should work with Government to reduce the burden for planning regulations and increase the ease with which networks can be deployed.

- **Access to high quality and competitively priced fibre**

Access to spectrum for mobile services does not negate the need to access high quality and competitively priced fibre. Fibre will play a vital role in 5G by helping to ensure high quality and continuous network coverage throughout the UK and in enabling consumers and businesses to benefit from higher speeds and increased network capacity. Competitive access to dark fibre will be key to ensuring that the future backhaul needs of mobile sites can be met and provide an economically viable path to small cell deployment. As such, Ofcom's proposals to relax the current DPA usage restriction are essential for the roll out of fibre networks in the UK.

- **Freedom for the industry to determine the best approach to infrastructure sharing and co-investment**

MNOs have proven themselves capable of sharing infrastructure effectively. The own-initiative network sharing arrangements currently in place in the UK are evidence that industry is best placed to determine the risks and opportunities of investment and whether such investment is best made separately or jointly. The most efficacious way of ensuring requisite building of and investment in infrastructure, is for Ofcom to focus on removing barriers to investment.

- **Future deployment of 5G should be based on international standards so as to ensure the widest possible compatibility of equipment and devices**

Technologies and standards must only be chosen once they have been rigorously tested, and deployment must come after requisite technologies have been proven to work. This is especially important given the uncertainty as to demand for 5G services. Ofcom should resist unwarranted prescription of deployment and certain approaches which could restrict rollout. Deployment must be based on the commercial viability of services and the recognition that some areas will need public investment. To this end, Telefónica welcomes Ofcom's offer to make spectrum available in the 3.6-3.8GHz band to facilitate trials and pre-commercial deployments, including for 5G, to support innovation in the UK. Ensuring the effective testing, development and research of 5G technologies is vital to successful deployment.

### **III. OFCOMS PROPOSALS FOR THE 3.6GHZ to 3.8GHZ BAND**

12. Telefónica strongly supports Ofcom's proposed adoption of policy option B; to remove existing users' authorisation under the Wireless Telegraphy Act to transmit for fixed links and no longer take registered satellite earth stations with a receive component in the 3.6GHz to 3.8GHz band into account for frequency management purposes.
13. Option B will deliver optimal use of the spectrum and is the only option that would facilitate mobile deployment across the country and allow for the greatest benefits from making the band available for mobile. Wide availability and unconstrained access to the 3.6GHz to 3.8GHz band for mobile services across the UK will be an important factor in providing additional capacity to support higher data rates for large numbers of connected devices and enabling new and improved future mobile services including 5G, maximising the benefits to citizens and consumers across the UK.
14. By contrast, proceeding with option A would result in very densely populated areas with large numbers of users, being denied access to mobile services using the band. This would neither represent an efficient use of the spectrum, nor a scenario which maximises the benefits to citizens and consumers. It is therefore essential that Ofcom proceeds with option B and ensures that the spectrum is made available for mobile use in all areas where it can be deployed by mobile operators to bring maximum benefits in order to further the interests of consumers and promote competition.
15. Telefónica agrees with Ofcom's proposed approach towards registered fixed link and satellite earth station users of the 3.6GHz to 3.8GHz band. We also agree with Ofcom

that the benefits of enabling more widespread future mobile services in the band outweigh the costs to existing registered users of doing so.

#### **THE APPLICATION OF RESTRICTIONS IN FUTURE MOBILE LICENCES**

16. Telefónica is concerned that Ofcom is giving consideration to the application of restrictions in future mobile licences to facilitate the continued operation of satellite services in the band. Given Ofcom's proposal to proceed with Option B and not to proceed with Option A (retain existing users current authorisations) it appears contradictory that Ofcom is giving consideration to the continued operation of satellite services in the band.
17. Given that the estimated value of future 5G services is very significant, building on the high value associated with existing improvements to mobile data services such as through 4G, Telefónica is very concerned about any proposals to apply restrictions on future mobile services in the 3.6-3.8GHz band. Any restrictions in mobile licences could prevent the widespread deployment of mobile services, impact upon competition, devalue the spectrum and result in a loss of benefits to consumers and citizens in the UK.
18. We note Ofcom's intention to explore applying restrictions in future mobile licences on a localised basis, where these would not have a material impact on mobile deployment. This could involve MNOs having to take steps to mitigate interference when deploying base station sectors in the direct line of sight of a receiving dish within a specified area or to reduce transmit power. We note Ofcom's expectation that such arrangements would apply to relatively small areas, however, Ofcom states it will also consider larger areas if these would not have a material impact on mobile deployment. This raises the inevitable question of what constitutes material impact. Telefónica considers that any uncertainty created by such restrictions would constitute material impact and urges Ofcom to carefully consider the implications of such restrictions.
19. Telefónica provides coverage nationally and areas of interest for the usage of the 3.6-3.8GHz band would be UK wide. This leads us to the conclusion that it is UK wide licensing of the 3.6-3.8GHz, without restrictions on mobile network operators deployment, which will ensure a homogeneous deployment of 5G services. Ultimately, 5G services evolution will determine the extent to which regions become a focus for deployment. Telefónica and other mobile network operators have successfully deployed spectrum on a national basis to meet the needs of both businesses and consumers. Ofcom should support this approach so as to ensure that

mobile operators including Telefónica can meet the needs of their customers in the future.

20. Telefónica supports the notion of spectrum sharing in principle. Given the right conditions, it can be used as an effective tool to maximise the efficient use of spectrum and support increasing demand. Such sharing may well be useful in some of the very high frequency bands, but it should not be used in the 3.6GHz to 3.8GHz band as it would be likely to create a hindrance and introduce uncertainty into the rollout of services. Unhindered access to 3.6 to 3.8GHz spectrum for mobile services is vital to facilitate enhanced mobile communications and enable the 5G solutions that will improve connectivity and support increased data demand. This makes it an important band which could be relevant to the success of 5G in the UK.

#### **UK BROADBAND (HUTCHISON 3G UK) LICENCE**

21. Telefónica supports Ofcom's intention to consider the issues relating to the UK Broadband licence (now owned by Hutchison 3G UK) in this band further, and believes that it is important for Ofcom to consult with stakeholders on any proposals.