



UK preparations for the  
World  
Radiocommunication  
Conference 2023 (WRC-  
23)




UK provisional views and  
positions for WRC-23

BT's response to Ofcom consultation  
document issued on 24 June 2022



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**BT Group**



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# 1 Introduction

BT<sup>1</sup> welcomes this opportunity to provide its views on Ofcom's provisional views and positions for the WRC-23<sup>2</sup>. This ITU conference includes agenda items that are of significant interest to BT and we are pleased to contribute to the development of the UK positions.

In **section 2** we provide our opinion of the priority items from BT's perspective and why these matter for the UK.

In **section 3** we provide responses to the specific consultation questions that Ofcom has posed.

## 2 Importance of WRC-23 to UK's future wireless infrastructure

### Additional internationally harmonised spectrum for mobile

Government's ongoing review of the Wireless Infrastructure Strategy (WIS)<sup>3</sup> is exploring ways in which investment in mobile infrastructure can be increased and potential barriers removed. Industry has identified spectrum policy as an important component of this strategy and the WRC-23 positions should be central to those considerations.

This conference agenda provides a timely opportunity for the UK to take international regulatory decisions now that will pave the way to secure optimal and efficient use of the spectrum in the future and deliver greatest value to UK consumers. Specifically, the conference will consider spectrum bands at 600 MHz (Agenda Item 1.5) and 6 GHz (Agenda Item 1.2) that would have high value for future public mobile network use if harmonised internationally for that purpose.

A UK position to support international harmonisation of 600 MHz and U6 GHz spectrum to enable future mobile use would be consistent with an objective to secure optimal and efficient use of these spectrum bands. It would benefit consumers as it would open a path to enable operator investments in mobile infrastructure to deliver improved coverage capacity in urban and rural areas. Without access to additional spectrum in the medium term (by end of this decade) the quality of UK national public mobile networks will be adversely affected. The projected growth in demand cannot be satisfied in the busiest locations and the quality of coverage in rural and indoor locations will diminish as capacity growth is unable to keep up with ever growing demand. It is not feasible or affordable to rely solely on other options to grow network capacity.

The mobile industry has collectively developed evidence to support the requirements for additional low band spectrum<sup>4</sup> and mid band spectrum<sup>5</sup> via the GSMA and demonstrated that identification of the 600 MHz and U6 GHz bands for cellular mobile networks represents an optimal use of these spectrum bands. We commend both these reports to Ofcom as they provide compelling and detailed analyses to support the case for international harmonisation as a key step to enabling these bands to be utilised for mobile.

We provide more detail on our views on Agenda Item 1.2 (U6 GHz band) in our response to Question 3C.

We provide more detail on our views on Agenda Item 1.5 (600 MHz band) in our response to Question 7.

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<sup>1</sup> BT, including our mobile subsidiary EE Ltd.

<sup>2</sup> [https://www.ofcom.org.uk/data/assets/pdf\\_file/0025/239407/WRC-23\\_Call\\_for\\_Input.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0025/239407/WRC-23_Call_for_Input.pdf)

<sup>3</sup> <https://www.gov.uk/government/consultations/wireless-infrastructure-strategy-call-for-evidence/wireless-infrastructure-strategy-call-for-evidence>

<sup>4</sup> Low-band spectrum for 5G - the need for sub-1 GHz spectrum to deliver the vision of 5G; A report by Coleago Consulting Ltd. (May 2022); <https://www.gsma.com/spectrum/wp-content/uploads/2022/07/Low-Band-Spectrum-for-5G.pdf>.

<sup>5</sup> Estimating the mid-band spectrum needs in the 2025-2030 time frame; Global Outlook; A report by Coleago Consulting Ltd" (Jul. 2021), GSMA <https://www.gsma.com/spectrum/wp-content/uploads/2021/07/Estimating-Mid-Band-Spectrum-Needs.pdf>.

Looking to the long-term (post 2030) and the advent of 6G mobile communications it will be necessary to consider possible spectrum requirements beyond the presently harmonised spectrum for mobile and the new bands addressed under the WRC-23 Agenda Items 1.2 and 1.5. An agenda item at WRC-27 is likely to be appropriate and the UK should consider bringing forward proposals under the WRC-23 Agenda Item 10. The exact scope of such a proposal will need to be developed in the coming months. The UK Spectrum Policy Forum has commissioned a study examining bands in the 7-20 GHz range which may provide some elements that could assist consideration of a possible proposal for a future 6G agenda item. See our response to Question 32 for further details.

## 3 Answers to consultation questions

***Question 1: Do you agree with the prioritisation of the agenda items, as shown in Annex 5, and if not why?***

Yes, we agree with the prioritisation that Ofcom has determined.

The Agenda Items 1.2 and 1.5 are of particular relevance for BT and we are pleased that Ofcom recognises that these are among the most important issues for the UK at this conference.

***Question 2: What are your views on the continued need to protect global aeronautical and maritime services, in the 4.8 – 4.99 GHz band, under this agenda item?***

We have no comments on this item.

***Question 3a: Do you agree that the UK interest in the bands 3 600-3 800 MHz and 3 300-3 400 MHz in Region 2 (North & South Americas) should be limited to any impacts on UK operational use in those areas?***

Yes, we agree with this position, although we note that in general, global harmonisation can bring benefits to the UK where we already use the band for mobile.

***Question 3b: Do you agree that the UK should maintain its objections to changes to the regulatory environment for the band 3300-3400 MHz (in Region 1, Europe, Africa, Middle East), noting UK has interests in use of radar for both ground and airborne operations?***

We have no comments on this item.

***Question 3c: What is your view on the use of 6425-7025 & 7025-7125 MHz, and what evidence do you have to support this view? How does that inform your views on a IMT identification in these bands?***

### Summary of BT's view on U6 GHz band

BT believes that making these U6 GHz bands available for national public mobile networks would generate the greatest economic value for the UK and represents the most optimal and efficient use of this spectrum. Availability of this spectrum for mobile networks would support improved network capacity to meet the ever increasing demand for mobile data, which cannot be practically or economically met solely by other means.

As such we urge Ofcom to pursue the identification of these bands for IMT at the WRC-23, to promote international harmonisation of the spectrum for this application, which in turn will help accelerate development and availability of network equipment and devices and will reduce the cost of these by economies of scale.

### Importance of U6 GHz for mobile networks

Adequate spectrum needs to be made available to fulfil the UK's 5G vision and to deliver sustainable best in class networks. Availability of the U6 GHz band for wide area mobile networks is key to delivering this vision.

Other potential solutions to deliver more capacity on national public mobile networks are not viable from an economic or practical standpoint as the *sole* means of meeting future capacity demand. These include building additional macro sites, deployment of small cells, use of more efficient technology and use of other spectrum bands that will become available at

higher frequencies (mmWave). Whilst these techniques will certainly be important elements in the provision of additional capacity in some locations, availability of additional mid-band spectrum that can be added to existing mobile sites will be the only or most economically viable solution in many cases. Additional mid-band spectrum may also be efficiently used if dedicated to small cells in some scenarios as it could avoid interference with co-channel macro network sites that can reduce macro site capacity in scenarios where a large number of small cells are deployed in an area of macro network coverage.

The U6 GHz band is attractive for mobile use as it could offer complementary capacity to 3.4 – 3.8 GHz band based on the same macro cellular grid.

We anticipate that demand for mobile data will continue to grow significantly and may accelerate as new use cases emerge and a ubiquitous “Metaverse” is needed with good indoor and outdoor coverage to support applications such as augmented reality (AR) and virtual reality (VR). These applications will demand high data rate (Gbit/s) mobile communications anytime, anywhere. U6 GHz will be an important resource for macro-cellular networks to deliver these requirements.

The U6 GHz band represents the only likely source of additional mid-band spectrum to meet the ever growing traffic demands and will be needed before the end of the decade if the required capacity is to be provided to avoid a reducing quality of service as all available spectrum is exhausted in busy areas and other options to grow capacity are unfeasible. The GSMA has published a document<sup>6</sup> that reviews the ecosystem development and timeline within which the U6 GHz band is required.

3GPP has concluded the technical specifications of 5G NR base stations and user equipment for 6425-7125 MHz in 3GPP band n104<sup>7</sup>, defining the band plan, system parameters including channel bandwidth, transmitter and receiver characteristics, as well as other technical requirements. An identification for IMT in the Radio Regulations and making the band available for mobile networks in the UK will be important steps in ensuring the commercial availability of products.

## Competing demands to use U6 GHz for Wi-Fi

We acknowledge that making the U6 GHz bands available for low power licence-exempt use such as Wi-Fi, as an alternative to higher power licenced use in national public mobile networks, would also be valuable and could deliver an improved user experience in some scenarios. For example: in a residential scenario, if Wi-Fi deployments in adjacent properties are very closely spaced (and potentially multiple access points are connected within a user’s property using Wi-Fi spectrum) and adjacent users have much faster backhaul connections than are available today and they simultaneously require very high throughputs.

BT has a strong interest in ensuring that suitable Wi-Fi connectivity is possible for customers to use with fixed broadband as well as suitable capacity on its public mobile network, and also in the convergence of these two access mechanisms. This is true in today’s scenario as well as the future scenarios where both the fixed and mobile network capabilities will continue to grow.

Consequently we have strong interest in ensuring that adequate spectrum is available for both Wi-Fi and wide area mobile networks. In the case of U6 GHz we have come to the view that although a case can be made for both uses, there is clearly a greater benefit to UK consumers if the U6 GHz band can be made available for wide area cellular mobile networks. This use of the U6 GHz band would bring clear and consistent benefits to millions of mobile customers using wide area mobile networks in some of the busiest places and represents a fair balance of spectrum to meet capacity requirements of licensed and licence-exempt mobile technologies.

Wi-Fi was recently assigned an additional 500 MHz of spectrum at L6 GHz that is not yet significantly used, but will be increasingly used to meet its capacity needs. Assigning U6 GHz for mobile networks use would be a balanced measure, whereas assigning it for Wi-Fi would create a large and unjustified imbalance in the proportion of spectrum available for licensed wide area and licence-exempt short-range use. The present balance between (i) Licensed shared access; (ii) Licensed national mobile network; and (iii) licence-exempt spectrum use is illustrated in Figure 1 below. The amount of spectrum for licensed networks may appear to be comparable to the amount for licence exempt use, but we need to remember that each mobile network operator has access to only a fraction of this spectrum, whereas the licence exempt bands are available in their entirety to everyone.

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<sup>6</sup> <https://www.gsma.com/spectrum/wp-content/uploads/2022/08/6-GHz-IMT-Ecosystem.pdf>

<sup>7</sup> 3GPP TS 38.104 V17.6.0 (2022-06) “3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; Base Station (BS) radio transmission and reception (Release 17)”

The licence exempt and shared access spectrum combined far exceeds the spectrum used on public networks and to assign a further 600MHz of U6 GHz to shared use, or to local shared access licences, would not be an optimal and efficient use of that spectrum band compared to making it available for higher power licensed use in national mobile networks.

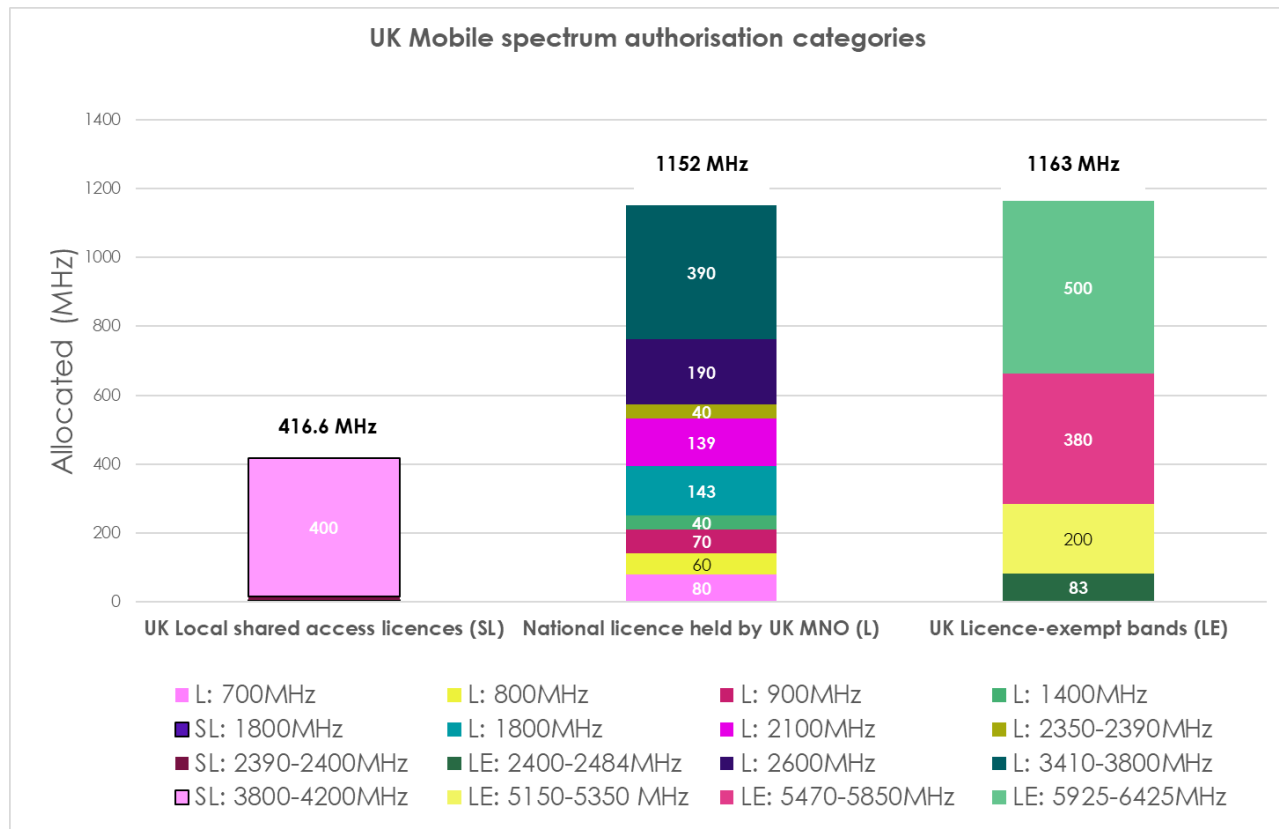


Figure 1

## Making U6 GHz available for mobile networks maximises benefits

GSMA Intelligence<sup>8</sup> estimates that 5G will generate \$960 billion in gross domestic product (GDP) in 2030 on a global basis, given the availability of an adequate amount of mid-bands spectrum (2 GHz as per GSMA's estimation), with \$610 billion of this being a result of deployments in mid-bands and representing almost 65% of the overall socio-economic value generated by 5G. However, up to 40% of the expected benefits of mid-bands 5G could be lost if no additional mid-bands spectrum is assigned to mobile services.

GSMA Intelligence has conducted a cost-benefit analysis<sup>9</sup> to understand the consequences of different authorisation models for the 6 GHz band. When analysing the benefits of allocating the band to licensed mobile or licence-exempt use, the report concludes that:

- Allocating the full 6 GHz band (5945-7125 MHz) for licensed mobile use would drive the greatest economic benefit in most considered scenarios, however this is not an option in Europe;

<sup>8</sup> The socio-economic benefits of mid-band 5G services (June 2022), GSMA <https://www.gsma.com/spectrum/wp-content/uploads/2022/02/mid-band-5G-spectrum-benefits.pdf>

[1] <sup>9</sup> The socioeconomic benefits of the 6 GHz band; Considering licensed and unlicensed options (Jan. 2022), GSMA Intelligence <https://data.gsmaintelligence.com/api-web/v2/research-file-download?id=72941571&file=160622-The-socioeconomic-benefits-of-the-6-GHz-band.pdf>

- Allocating the upper 6 GHz band (6425-7125 MHz) for licensed mobile use when the lower 6 GHz band (5945-6425 MHz) is allocated for licence-exempt use would drive the greatest socio-economic benefits even with extremely high speed fixed broadband availability<sup>10</sup>;
- Allocating the full 6 GHz band for licence-exempt use would not be the most beneficial option in any of the considered analyses.

Therefore, considering the current situation, where the lower 6 GHz band is already designated for licence-exempt use suited to Wi-Fi, allocating the upper 6 GHz for licensed mobile use is the most beneficial option in Europe/UK.

## Mobile sharing with existing services

We consider that use of the U6 GHz band by national public mobile networks would be possible by ensuring suitable coordination arrangements with existing fixed link deployments where and if required. The exact requirements would need to be defined and managed on a national basis.

We also consider that sharing with satellite uplinks is feasible, as has been demonstrated in ongoing ITU studies<sup>11</sup>. We note that the use of the band for satellites is declining in Europe<sup>12</sup> and according to Ofcom's Wireless Telegraphy Register there is very limited UK use. This is unsurprising as the paired downlink frequencies are heavily used for terrestrial services.

Please refer to BT's response to Ofcom's consultation on proposals to introduce shared access licenses in the U6 GHz band for a detailed discussion and analysis of the potential for sharing between mobile networks and existing fixed and fixed-satellite services in the U6 GHz band<sup>13</sup>.

## Recommended UK position on U6GHz band

In summary, our view is that the UK's interests are best served if Ofcom pursues an identification of the 6425-7025 MHz & 7025-7125 MHz frequency bands for IMT at the WRC-23 under agenda item 1.2. We would not agree that a No Change position is an appropriate UK position or that it is necessary to maintain flexibility.

***Question 3d: What are your thoughts on the current UK view that IMT should not be identified in Region 2 in the band 10-10.5 GHz in order to ensure the protection of the globally operating EESS (active) systems and airborne & vessel mounted radars?***

We have no comments.

***Question 4: Do you agree that, where no additional technical limitations are placed on mobile services, the UK can support an upgrading of the mobile allocation, in 3600 - 3800 MHz, from secondary to primary?***

Yes, we support this position.

***Question 5: What are your views on the development of regulatory conditions to facilitate deployment of high altitude IMT base stations in IMT identified bands below 2.7 GHz?***

We agree with Ofcom's assessment of this issue. There is growing interest in high altitude platforms for provision of mobile services in hard to reach areas and the possibility that these would have application in the UK or neighbouring countries should not be ruled out. It will be important that the international regulatory framework takes such technological

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<sup>10</sup> For example, where there is high fibre/cable broadband adoption and very high fixed broadband speeds of 10 Gbit/s to all fibre/cable users

<sup>11</sup> See Annex 4.19 to ITU Working Party 5D Chairman's Report, July 2022 [https://www.itu.int/dms\\_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361/H4-N4.19!MSW-E.docx](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361/H4-N4.19!MSW-E.docx)

<sup>12</sup> For example see "The use of extended c-band, planned c-band and the 7025-7075 MHz band for satellite services" (May 2022); Euroconsult <https://www.euroconsult-ec.com/wp-content/uploads/2022/05/Extended-C-band-report-Key-findings.pdf>

<sup>13</sup> BT's response to Ofcom's consultation on "Enabling spectrum sharing in the upper 6 GHz band" [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0022/238081/bt.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0022/238081/bt.pdf)

developments into account and that a suitable framework exists to properly manage new interference scenarios that may arise.

**Question 6: Do you agree that a formal modification to the Radio Regulations is not needed for fixed service applications that use IMT technologies?**

We agree with Ofcom's views on this matter.

**Question 7: What are your views on the proposed approach for 470-694 MHz, recognising the national decisions already in place and taken for DTT multiplex licensing in the band, and the additional and supplementary spectrum made available for UK PMSE usage?**

## Summary of BT's views on 470-694 MHz band

This conference presents an opportunity to support a long-term UK spectrum roadmap where, according to market demand and technological developments, the spectrum currently dedicated to digital terrestrial TV and ENG/OB use in 470 – 694 MHz could be reduced and migrated to other higher value use in the longer term.

The existing users do not face the opportunity costs of the current spectrum use, which is somewhat of an anomaly since Ofcom generally argues that in other bands users should do so, and that inputs to production should not be subsidised. Government has however recognised in its decisions earlier this year<sup>14</sup> that the current broadcasting use may change beyond 2034 and possibly as early as 2030. Now is therefore absolutely the right time to take international regulatory decisions that would give the UK the greatest possible flexibility to facilitate future changes and would support development of a mobile ecosystem at 600 MHz that the UK could take advantage of at the appropriate time.

We believe that the addition of a primary mobile allocation in the 470 – 694 GHz band is important to provide the necessary future flexibility and support development of a mobile ecosystem for this band.

## Importance of additional sub-1GHz spectrum for mobile networks

Incremental sub-1GHz frequencies are needed to provide additional capacity in the more difficult to reach places and will enhance the network quality experienced by consumers. This results from the favourable propagation characteristics of these bands and the possibility to efficiently use the frequencies with existing site infrastructure. The availability of additional sub-1GHz frequencies will result in increased connection speeds experienced by users in places where coverage is only possible with lower frequencies, such as in buildings served by outdoor base stations and towards the edge of coverage of rural cells.

The availability of additional sub-1GHz spectrum is also important for improving the quality coverage of roads and rail and closing the digital divide by enabling improved network performance in more rural areas.

Although we expect the main benefit of additional spectrum would be improvements to network quality as a result of deploying the spectrum on existing sites, the availability of additional sub-1GHz spectrum can reduce the cost of delivering a given amount of capacity as fewer sites would be needed to cover an area. A recent study by Coleago Consulting for GSMA<sup>15</sup> presents simulations that show that:

- an additional 2x20 MHz can reduce an operator's cost of building rural 5G coverage to unconnected areas by 33%.
- an additional 2x35 MHz or 2x40 MHz of sub-1 GHz spectrum made available for mobile, depending on the region and country, could increase indoor speeds by 30 to 50%.

These are very significant benefits that would arise from future availability of additional spectrum for mobile in parts of the 470 – 694 GHz band.

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<sup>14</sup> <https://www.gov.uk/government/news/future-of-channels-such-as-itv2-and-dave-secured-as-freeview-licences-renewed-for-another-decade>

<sup>15</sup> Low-band spectrum for 5G - the need for sub-1 GHz spectrum to deliver the vision of 5G; A report by Coleago Consulting Ltd. (May 2022); <https://www.gsma.com/spectrum/wp-content/uploads/2022/07/Low-Band-Spectrum-for-5G.pdf>.



## Decisions are needed at WRC-23 to prepare for future mobile use of 600MHz

BT recognises the challenges and uncertainty around timescales with releasing the spectrum from Broadcasting. However, it is important that Ofcom begins preparations now for potential future change by supporting addition of a primary allocation to the Mobile service in the Table of Frequency Allocations in the ITU Radio Regulations for ITU Region 1 in the band 470 – 694 MHz, and identification for possible IMT use, via a decision taken at the forthcoming WRC-23 conference.

We have encouraged Ofcom to be proactive in scenario planning for possible eventual migration of some further spectrum from broadcasting to mobile. This would be consistent with Government's recent decisions in relation to broadcasting, considering that:

- Following consultation, in August 2021 the Government announced its decision on renewal of the digital terrestrial television (DTT) multiplex licences – used by both PSBs and commercial operators to reach viewers via broadcast TV. The Government decided on option (b) 'renewal until 2034 but with the inclusion of a new revocation clause' which the Government has said cannot take effect before the end of 2030<sup>16</sup>.
- While the decision was framed by Government PR teams as securing the future of commercial PSB and broadcast as a technology for another decade<sup>17</sup>, the decision sets out the likely timetable for the end of broadcast, between 2030 and 2034.
- The Government said "We also recognise that the DTT platform and its future will continue to remain an ongoing area of interest for the sector and that this will be of further relevance following the next World Radio Conference (WRC) in 2023. As such the government will ask Ofcom to continue to track changes to DTT viewing and to undertake an early review on market changes that may affect the future of content distribution before the end of 2025."

Reducing spectrum for terrestrial TV broadcasting fits with projected viewer patterns that there will only be a few million households left with broadcast as their only way of watching TV by the early 2030s. Recent data published by Ofcom<sup>18</sup> shows that there are currently 4.4m "DTT only" households in UK, which is a reduction of 41% since 2017, or -10% CAGR. Given the fixed cost economics of broadcast, it is likely the broadcasters will be seeking to exit this delivery method around if not before 2030, as the cost per viewer of reaching viewers this way rises.

The UK Spectrum Policy Forum has recently initiated a consultancy study<sup>19</sup> to explore the issues around future use of the band and the regulatory implications. This work may provide useful insight to Ofcom's work on the agenda item 1.5 preparations.

## Recommended UK position on UHF band

We encourage Ofcom to take a UK position of proposing / supporting addition of a primary Mobile service allocation in Region 1 in the band 470 – 694 MHz at the WRC-23. If need be, as a compromise, this could come into force from 2030.

***Question 8: What are your views on the need to establish an international regulatory environment that provides adequate protection of UK fixed links from earth stations in motion, in the band 12.75 – 13.25 GHz, which is also practicable from an enforcement/implementation perspective?***

We have no comments.

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<sup>16</sup> <https://www.gov.uk/government/consultations/consultation-on-the-renewal-of-digital-terrestrial-television-dtt-multiplex-licences-expiring-in-2022-and-2026/outcome/consultation-on-the-renewal-of-digital-terrestrial-television-dtt-multiplex-licences-full-government-response>

<sup>17</sup> <https://www.gov.uk/government/news/future-of-channels-such-as-itv2-and-dave-secured-as-freeview-licences-renewed-for-another-decade>

<sup>18</sup> Ofcom media Nations Report, Fig. 30, August 2022 - [https://www.ofcom.org.uk/data/assets/pdf\\_file/0016/242701/media-nations-report-2022.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0016/242701/media-nations-report-2022.pdf)

<sup>19</sup> <https://www.techuk.org/asset/B8BF90BE-B1D0-42C9-8D47D1E06A2591F5/>

**Question 9: Do you agree that the UK continues to support the maritime distance figure for ESIMs that work to non-geostationary satellites and to test the other conditions agreed at WRC-19 for ESIMs working to geostationary satellites to ascertain whether these remain appropriate for non-geostationary satellites?**

We have no comments.

**Question 10: What are your views on whether an allocation to inter satellite links is necessary for existing satellite allocated bands and whether this would provide benefits internationally?**

We have no comments.

**Question 11: What are your views on the need for additional satellite allocations in support of narrowband IoT "M2M" type applications, noting that there remains the continued use of PMSE for wireless cameras in the band 2010 – 2025 MHz?**

We have no comments.

**Question 12: What are your views on the proposed approach to this agenda item concerning the fixed satellite service in 17.3-17.7 GHz in Region 2?**

We have no comments.

**Question 13a: On Topic B, what are your views on the post milestone procedures for non-geostationary satellite systems?**

We have no comments.

**Question 13b: On Topic L, what are your views on regulatory conditions for Telemetry, Tracking and Command (TT&C) for NGSO in-orbit servicing?**

We have no comments.

**Question 13c: What are your views on the remaining topics currently listed for Agenda Item 7?**

We have no comments at this time.

**Question 14: Noting that any UK position will be developed only after the ITU Plenipotentiary Conference, do you have any comments relating to the use of Article 48 that may be addressed at WRC-23?**

We have no comments.

**Question 15: What are your views on the need to establish an international regulatory environment for sub-orbital vehicles, which at the same time does not limit flexibility of spectrum options, and retains international safety considerations?**

We have no comments.

**Question 16: Do agree that where the adjacent band compatibility issues are addressed and ICAO coordination processes are not compromised, that the addition of an aeronautical satellite (AMS(R)S) allocation to the band can be supported?**

We have no comments.

**Question 17: Do agree that functions related to international aviation safety are a matter for ICAO? On this basis, and absent any contrary information from ICAO, should the UK support the development of an international spectrum regulatory framework for UA use of FSS that would support efficient use of spectrum?**

We have no comments.

**Question 18: Recognising the recent diminishing industry interest in this item relating to possible modification of the aeronautical HF assignment plan, and the general lack of global interest, do you agree that UK move towards a No Change proposal under this agenda item?**

We have no comments.

**Question 19: What are your views on the need for additional spectrum, specifically in the 15 and 22 GHz bands, for non-safety aeronautical use?**

We have no comments.

***Question 20: What are your views on Agenda Item 1.11 and the proposed UK position to support modernisation of GMDSS?***

We have no comments.

***Question 21: What are your views on the approach to the review of 1240-1300 MHz, recognising that discussions concerning future satellite navigational needs for the UK are a matter for Government?***

We have no comments.

***Question 22: What are your views on a new spectrum allocation in the 40-50 MHz range to support and enhance climate monitoring, such as, environmental shifts in ice sheets?***

We have no comments.

***Question 23: What are your views on upgrading the Space Research Service allocation, from secondary to primary, in the 14.8-15.35 GHz band?***

We have no comments.

***Question 24: What are your views on the potential for defragmentation in this band to facilitate both EESS (passive) use and provide for larger contiguous blocks for fixed & mobile allocations?***

We have no comments.

***Question 25: Do you agree that formal international recognition for Space Weather Sensors should be implemented in the Radio Regulations?***

We have no comments.

***Question 26: What are your views on the limits proposed to protect EESS (passive) under Agenda Item 9.1 topic d) and do you have any views on which of these limits might be accommodated in the Radio Regulations and how?***

We have no comments.

***Question 27: Do you agree that the formalised time reference in common global use, is not a matter of spectrum regulation?***

We have no comments.

***Question 28: Do you have any comments concerning the Standing Agenda Items, where not covered elsewhere in this document?***

We have no comments.

***Question 29: Do you have a view on any of the footnotes to which UK is a party?***

We have no comments.

***Question 30: Are you aware of any specific issues, not covered elsewhere in this document, which are likely to be raised in this part of the Director's Report and of which you think Ofcom should be aware?***

We have no comments.

***Question 31: Do you have any comments on Agenda Item 9.3 considering Resolution 80?***


We have no comments.

***Question 32: What changes to the Radio Regulations have you identified that would benefit from action at a WRC and why? Do you have any proposals regarding UK positions for future WRC agenda items or suggestions for other agenda items, needing changes to the Radio Regulations, that you would wish to see addressed by a future WRC?***

We agree that an IMT agenda item could be needed for WRC-27 to address possible specific spectrum requirements for 6G/IMT-2030. The discussions are underway in various countries on this matter and the UK Spectrum Policy Forum has recently commissioned work to look at the potential suitability of bands in the 7 – 20 GHz range for 6G.

***Question 33: What are your views on the use of IMT stations that use antennas that consists of an array of active elements, in bands shared with satellite services?***

We broadly agree with Ofcom's views on this matter. We are concerned that IMT must not be unduly constrained. We agree that the effort should focus on addressing the 26 GHz band and not expanding the issue to further bands without proper studies. We are following the technical discussions ongoing in ITU and CEPT and in industry fora such as GSMA. We do not have a firm view at this point as to what solution is best, either as an interim or long-term solution. We agree with Ofcom's concerns in relation to ensuring that a TRP based solution takes account of the bandwidths that were considered when the existing RR No. 21.5 limits were originally set.



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