

## ONEWEB RESPONSE

### GUERNSEY COMPETITION & REGULATORY AUTHORITY (GCRA) - SATELLITE LICENSING FRAMEWORK: SATELLITE USER TERMINALS AND EARTH STATION GATEWAYS

1. OneWeb welcomes GCRA's Consultation & Call for Expressions of Interest regarding its Satellite Licensing Framework. OneWeb believes that satellite systems have a key role to play in a multi-network broadband ecosystem, complementing terrestrial telecommunication solutions to unlock opportunities for growth, and contribute to the economic and social prosperity of Guernsey.
2. In particular, Low Earth Orbit (LEO) constellations - such as OneWeb's – will be an essential part of ensuring the UK can meet future, greater demand for broadband services. Specifically, LEOs will deliver:
  - Ubiquitous and mobile coverage, notably for those areas where terrestrial infrastructure is not available or too costly to deploy.
  - High-speed and low latency connectivity to enable Internet applications (e.g. apps, Virtual Private Networks, video calls), whilst also improving the web browsing end-user experience and support of 4G, 5G, and eventually 6G backhaul services.
  - Reliability and resilience for responding to natural disasters and other emergencies.

### BACKGROUND TO ONEWEB

1. OneWeb is a UK company building a global communications network that will deliver low latency, high-speed broadband through a LEO constellation providing Fixed Satellite Services (FSS). Unlike traditional FSS, OneWeb's LEO satellites (which are orbiting much closer to Earth, in a pattern that covers the whole globe at the same time) will not suffer from the delay well-known to occur via *geostationary* satellites (GEOs).
2. OneWeb's network will include a number of gateway earth stations around the world and will be able to communicate with a variety of different types of user terminals so that different customer markets (aero, land mobile, maritime, residential, traditional fixed) can all enjoy affordable, fast, high-bandwidth and low-latency communications services. Providing connectivity to the hardest to reach locations, as well as for government applications and the aviation, land mobile, and maritime sectors is the very reason OneWeb is being built.
3. OneWeb will be a wholesaler of services, providing B2B (business-to-business) satellite services to telecommunication companies, governments, and large-scale enterprise business users (as opposed to direct-to-consumer). This includes providing cellular backhaul to existing mobile network operators so they can extend their coverage in areas where terrestrial network infrastructure investment is not commercially or geographically feasible.
4. OneWeb has begun deploying its first constellation ('Gen 1') of approximately 650 satellites which will deliver coverage spread evenly across the globe. Our current fleet of satellites is the second largest globally, with 394 satellites currently in orbit. Commercial services start in early

2022 in areas above 50 degrees north latitude, including the UK, Canada, Alaska and Northern Europe, with full global coverage achieved by the end of 2022.<sup>1</sup>

5. OneWeb is already in discussions with customers about their requirements for a next generation constellation ('Gen2'), that will complement the Gen1 satellites and add greater capacity and extended capabilities, with increased capacity targeted where it is most needed. The Gen2 satellites are expected to be operational in just a few years and will be a further enabler to help meet future connectivity needs.
6. OneWeb is dedicated to Responsible Space with a sustainability framework and set of key commitments that are designed to protect the Space environment for generations to come. These include: employing responsible satellite design and operational practices, developing the space ecosystem, and supporting sustainable policy outcomes through collaboration with government and industry partners.

**Question 1: Do you have any general comments on our proposed changes to GCRA telecommunications licences to authorise the provision of satellite services?**

7. OneWeb agrees with the GCRA that the best approach for adapting the fixed telecommunications licence to authorise the provision of satellite services, is to attach a new Part for the standard fixed license that specifically authorises satellite services, i.e. the "second option".
8. This approach would ensure that holder of the fixed telecommunications license is providing a service via a satellite system that is operating in accordance with the relevant Wireless Telegraphy Act (WTA) satellite license(s) issued by Ofcom.
9. However, OneWeb does not agree that the fixed telecommunication licensee must also hold the WTA license(s) itself. This is because Ofcom's licensing process only allows Satellite (Earth Station) Network licenses to be held by NGSO satellite operators; meaning only satellite operators would be able to provide NGSO satellite services directly to end users in Guernsey. This would prevent Guernsey's already licensed and established telcos and Mobile Network Operators (MNOs) from partnering with satellite operators to deliver a range of tailored and competitive services to the benefit of Guernsey's consumers and businesses.
10. If consumers are only able to receive satellite services directly from the satellite operator (as is currently proposed), then competition would be severely limited. This would fly in the face of the GCRA's role to promote competition and deliver value and choice for Guernsey consumers to the benefit of the Guernsey economy.

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<sup>1</sup> Note that as OneWeb is a wholesale, B2B provider, thus the timing of any particular location's service availability and pricing will depend on our distribution partners and their roll-out schedule.

11. It is therefore essential that the new licensing regime does not lock out the wider telecommunications market by limiting the provision of satellite services to just operators who provide services direct to end users, but instead enables both new and established telecommunication license holders to partner with satellite operators (who hold the appropriate WTA licenses) to deliver a diverse range of services and business models. This wholesale model approach not only complements and expands the services of incumbent operators but encourages new service providers which will expand Guernsey's offerings.
12. When a satellite operator follows a business-to-business commercial model (such as OneWeb), the satellite operator's 'distribution partners' (DPs) or 'service providers' (SPs) hold their own telecommunication licence separate from that of the satellite operator. This is due to the respective legal responsibilities and liabilities of the parties involved, e.g. the DP/SP is responsible for liaising and managing contracts (including pricing) with the end users of the service. The DPs/SPs are not satellite operators and are therefore not licensed as such.
13. This is a similar approach to terrestrial mobile networks: where a Mobile Network Operator provides the infrastructure, and a service provider is responsible for managing and providing the associated services to the end user.
14. With respect to the licensing proposals set out in this consultation, this 'separation' of responsibilities could be achieved by specifying in the new fixed telecommunication license that the holder can only provide services through a satellite system which has been licensed by Ofcom, i.e. by partnering with a satellite operator that holds the appropriate WTA licence(s).
15. This would allow there to be an entity – the satellite operator – responsible for holding the WTA license (and so ensuring compliance with Ofcom's NGSO licensing processes), whilst allowing DPs/SPs to provide end user services in accordance with their standard commercial model, ultimately to the benefit of Guernsey's consumers.

#### Timescale for commencement of services

16. OneWeb agrees with the proposal that the license holder must commence services within 18 months after the issuing of the telecommunications license. However, the condition/licensing process should take into account exceptional circumstances (e.g. those outside the control of the licensee) which may result in this timeframe not being met.

#### **Question 2: Do you have any specific comments on the draft text of the proposed new licence Part set out in Annex 4.**

17. As set out in the answer to Question 1, the proposed new Part for the fixed telecommunication license should enable the possibility of the telecommunication license holder being a separate entity to the holder of the WTA license(s), i.e. the satellite operator.
18. We therefore recommend that Section 3 of the '*DRAFT Telecommunications licence Part authorising satellite services*' at Annex 4, be amended as follows:

### 3. OBLIGATION TO COMPLY WITH WIRELESS TELEGRAPHY LICENCE

3.1 The Licensee shall comply with any other requirement in law or practice to obtain any additional consents, permissions, authorisations or licences as may be necessary for the provision of the Licensed Satellite Telecommunications Services. ~~Such licences shall include, but not be limited to, a Wireless Telegraphy Licence to use appropriate radio frequency spectrum to operate the Licensee's Satellite Telecommunications Network.~~

3.2 The Licensee's Satellite Telecommunications Service shall only be provided via a satellite system authorised under the appropriate Wireless Telegraphy Licence(s).

19. Further, the proposed definition of 'Licensed Satellite Telecommunications Services' in Annex 5 should be amended to:

*"means those Telecommunications Services provided by way of transmissions between satellites and satellite earth stations and/or satellite user terminals, where those earth stations, terminals and, to the extent applicable, any transmissions over them are those which are authorised under and envisaged by the following types of Wireless Telegraphy Licence(s) under the UK Wireless Telegraphy Act 2006 (as this Act has effect in Guernsey) ~~and which have been granted to the Licensee:~~*

- a) Satellite (Earth Station Network) Licence;*
- b) Satellite (Non-Geostationary Earth Station) Licence;*
- c) Satellite (Permanent Earth Station) Licence."*

#### **Question 3: Do you have any comments on our proposed two-stage award process for a satellite telecommunications licence and access to spectrum?**

20. It is important to note that spectrum is shared between satellite systems providing services, and so it is not correct to say that if a satellite operator is using spectrum, then it 'denies' that spectrum's availability to another operator.
21. Satellite spectrum is internationally coordinated by ITU regulations to ensure satellite networks operate without harmful interference. Indeed, the ITU regime - based on the principle that the right to use spectrum resources for a satellite system is acquired through negotiations concerned by actual usage of the same portion of the spectrum - has proven to be the best means of achieving rational, cost-effective, and efficient spectrum management. Thanks to current ITU framework and Coordination Procedures, 99.95% of spectrum<sup>2</sup> assigned to satellite networks is free from reported harmful interference.
22. This is different to terrestrial spectrum management (as referenced in the consultation document), where (e.g.) Mobile Network Operators require *exclusive* use of a specific range of frequencies – and therefore for whom a market-based approach is appropriate. As stated above, this is not the case for satellite spectrum as it is coordinated internationally and is accessed on a

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<sup>2</sup> <https://www.itu.int/bestofwrs20/wp-content/uploads/sites/4/2021/05/WRS-20-Orbit-Spectrum-International-Regulatory-Framework.pdf>

non-exclusive basis. It is even more the case when, instead of nationally, the said spectrum is only used at a spot location such as satellite earth station. In this scenario, spectrum should only be assigned administratively, and on a case-by-case basis.

23. Indeed, this is demonstrated in practice by CEPT Electronic Communication Committee Decisions (17)04<sup>3</sup> and (18)05<sup>4</sup> - which exempt satellite user terminals<sup>5</sup> from individual licensing, based upon the principle that it is possible for operators to share spectrum with other satellite operators and services.
24. Therefore, whilst the 'two-stage' market-based mechanism could be applied to securing the location of NGSO gateways in the occasion of demand from the Expression of Interest exceeding the number of suitable sites (which may be limited due to geographic, planning and infrastructure constraints for example), it is not an appropriate or relevant process to determine the spectrum licensing of operators providing fixed satellite services in Guernsey.

**Question 4: Do you have any views on the optimal competitive method for awarding a satellite telecommunications licence and access to spectrum, should there be excess demand – an auction, a comparative selection process ('beauty contest') or alternative method.**

25. An auction or other competitive based method is not appropriate for the granting of access to spectrum to satellite operators. It is important to note that globally spectrum for satellite services is made available via administrative licencing process and there is no precedence or indication whatsoever that this mechanism will be replaced by auctions.
26. The fundamental principle of an auction of any sort is to provide exclusive access to a resource where demand exceeds supply. This is often the case for terrestrial mobile operators where spectrum cannot be shared amongst the MNOs and each operator needs exclusive access to a particular spectrum range.
27. However, the auction mechanism does not work on a resource where the demand and supply are unquantifiable, and is accessed on a non-exclusive basis, such as the spectrum shared between multiple Fixed Satellite Service (FSS) operators (as OneWeb and the other internet-from-space operators are classified). It is even more the case when, instead of nationally, the said spectrum is only used at a spot location such as a satellite earth station, either a gateway or a smaller 'user terminal'. In this scenario, spectrum should only be assigned administratively, and on a case-by-case basis.

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<sup>3</sup> <https://docdb.cept.org/download/89ca1a89-b33c/ECCDEC1704.pdf>

<sup>4</sup> <https://docdb.cept.org/download/1462>

<sup>5</sup> Operating in the 10.7-12.75 GHz and 14.0-14.5 GHz frequency bands.