

**Digital Colony Partners****Pegasus House  
37 – 43 Sackville Street****London****W1S 3EH****12<sup>th</sup> March 2018****Ofcom****Riverside House  
2a Southwark Bridge Road  
London  
SE1 9HA****Re: Enabling opportunities for innovation**

Dear Sir or Madam,

We welcome the opportunity to respond to Ofcom's consultation 'Enabling opportunities for innovation'<sup>1</sup> ('the Consultation'). As a new entrant into the UK market, Digital Colony UK Holdco Ltd ('Digital Colony') welcomes Ofcom's approach to proactively managing spectrum and enabling investment in innovative mobile solutions in the UK.

It is the focus of Digital Colony to work collaboratively with Ofcom and the Mobile Network Operators ('MNO's') to ensure that our Neutral Host model furthers the development and deployment of these next generation connectivity solutions.

We broadly welcome Ofcom's approach to enabling innovation and spectrum sharing and have provided our feedback to the consultation in the below response letter.

**Introduction to Digital Colony**

Digital Colony is a global investment firm with a unique focus on next generation mobile and internet infrastructure. Digital Colony combines the sector knowledge of Digital Bridge, a leading owner and operator of digital infrastructure businesses, and the investment expertise of Colony Capital, Inc. (NYSE: CLNY), a leading real estate investment management firm. Having acquired Opencell and Stratto in the UK in 2018, Digital Colony is actively looking to invest across the mobile and fixed infrastructure sector including planned investments in Data Centres, Mobile Towers, Small Cells and Fibre networks.

**Ofcom approach to spectrum sharing**

We support Ofcom's objectives and statutory duties in enabling the improvement in mobile coverage and ensuring the efficient usage of spectrum in the UK. These objectives combined with Ofcom's continued focus on fostering innovation and competition in wider markets concur with many of the investment criteria of Digital Colony when assessing the UK as a market for inward investment. We believe that the proposed approaches to spectrum sharing broadly support Ofcom's objectives and we welcome this timely consultation.

**Common approach to shared spectrum bands**

We broadly welcome the proposed common approach for users to access the shared spectrum bands. We support the proposed 'per area licence' for low power licences and 'per base station licence' for medium power licences. Furthermore, we support the proposed 'first come, first served' basis of licence authorisation.

We particularly welcome Ofcom's statement that a common approach to shared spectrum '*will provide a simple way for users to access spectrum where they need it, with a choice of bands to suit their needs and with certainty in spectrum access*

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<sup>1</sup> Ofcom (Dec 2018). 'Enabling opportunities for Innovation'

*and quality of service*'. It is our belief that having a simple, efficient process of accessing valuable spectrum resources can only serve to support Ofcom's objectives of optimal utilisation of spectrum and improvement in mobile coverage across the UK.

We also recognise Ofcom's foresight in setting in place this common approach to support the potential for Dynamic Spectrum Access ('DSA') similar to that of the CBRS process in the USA. We look forward to collaborating with Ofcom on DSA as it emerges over time.

A vital part of successfully supporting shared spectrum access and collaboration with the wider mobile market is for users to secure a Mobile Network Code ('MNC'). As discussed in our separate response letter to Ofcom's 700MHz and 3.6GHz spectrum award, Digital Colony intends to deploy its own network infrastructure in collaboration with MNO's to cover 'not-spot' locations. We intend on working closely with the MNOs to collaborate on a number of similar deployments so as to support efficient usage of spectrum and drive additional coverage in the UK. For this innovative model to succeed, it is vitally important that Digital Colony secures an MNC from Ofcom. Whilst we recognise Ofcom's concern that there to be an influx of demand for MNC's, we are happy to consult with Ofcom as to how this might be managed in the event of limited supply in the future. For example, we suggestion assigning MNCs with a requirement to have an agreement in place with an incumbent mobile operator to collaborate on deploying new network or to have short term plans to deploy owned infrastructure and coverage improvement.

## Shared access spectrum – three proposed bands

Whilst we support Ofcom's progressive proposal on allocating some spectrum in mobile bands for shared access, we believe there may be some limitations to the success of this proposal.

The proposed 3.8GHz-4.2GHz shared spectrum is broadly welcomed as it has been earmarked as a 5G band in several countries. However, due to the lack of equipment currently available in this spectrum band, we believe that this is a medium-term solution to shared spectrum access to support Fixed Wireless Access (FWA) or Local Private Networks.

The 1800MHz spectrum proposed for shared access has seen little or no take up since being awarded in 2006. This is due to limitations of MNO's engaging with licence holders to provide roaming agreements with licensees. Furthermore, the spectrum being proposed (2x3.3MHz) is of little value due to the lack of wide band spectrum capable of supporting mobile data services of any meaningful value.

The 2300MHz spectrum proposed for shared access is part of a valuable band used to support mobile data services. However, given the spectrum band is a Time Division Duplex ('TDD') spectrum band, the quantity of spectrum required to support meaningful mobile data services is not currently supported by the proposal. 10MHz of TDD spectrum as a standalone deployment will have little or no value due to the cost of deploying such a small amount of TDD only spectrum. Most mobile operators have agreed that quantities in excess of 60MHz of TDD spectrum are required to justify the deployment of TDD spectrum in any given band.

## Licence fee calculation

We acknowledge Ofcom's requirement to set a price for spectrum access in a cost-based approach. The proposed licence fees are acceptable and urge Ofcom to maintain a low price for accessing this underutilised spectrum so as to encourage investment and deployments.

## Access to awarded mobile spectrum

We particularly welcome Ofcom's proposal for a new licence – 'Spectrum Access – Local Licence' to enable users to collaborate with MNO's and access spectrum that has been awarded to MNOs on a national basis. We appreciate that this proposal is in line with the Department of Digital, Culture, Media and Sport (DCMS) position that *'third parties should be able to access awarded mobile spectrum in places where it is not being used by the MNO'*.

As we discussed in our separate response letter to the 700MHz and 3.6GHz award consultation, wide area networks will most likely be deployed on low- to mid-band spectrum resulting in mid- to high-band spectrum not being utilised in large swathes of the landmass of the UK.

We believe that a collaborative approach to managing underutilised spectrum directly with the MNOs is the most efficient mechanism for supporting better utilisation of mid- to high-frequency spectrum and further supporting coverage in the current 'not-spots' in the market. Our main reasons for this point of view are:

- A need to be able to seamlessly serve customers of the UK MNOs without delay or forced interaction on the device
- A need to access large blocks of spectrum (2x20MHz) in order to serve high speed data rates and high capacity

By working closely with MNO's, we can deploy their spectrum in areas where they have not intended on deploying the spectrum due to high deployment costs and utilise additional spectrum to deploy our own services to further improve the economics of us deploying in rural areas. We are currently in discussions with a UK MNO to trial a private LTE network on this basis. We set out this proposed trial below.

[&lt; Redacted for non-confidential version]

We support Ofcom's proposed Local Access licensing process as it supports collaborative efforts by third parties (e.g. Digital Colony) and the MNO's to agreeing local access terms and supports an efficient mechanism for the third party to deploy using the spectrum. Furthermore, in the event of there being no agreement in place with an MNO, it still supports the third party to request access to underutilised spectrum in areas that it is not deployed. We would urge Ofcom to continually review this process as, in the event of no agreements, it would be our position that Ofcom must enforce underutilised spectrum to be access by third parties.

As discussed in the above section, we acknowledge Ofcom's cost-based approach to licence pricing and urge Ofcom to maintain a low price on these licences to encourage investment.

## Conclusion

Digital Colony applauds Ofcom for embracing spectrum sharing as a mechanism to enable opportunities for innovation in the UK market. By setting in place a common approach to users accessing shared spectrum bands, Ofcom sets in place efficient processes for third parties to access and utilised valuable spectral resources and further support the development of mobile technologies in the UK.

As the mobile market prepares for 5G technology and the use case for mobile technology evolves (e.g. Industrial IoT, logistics) the mobile market will need to evolve to deliver on this change. Emerging business models, including the Neutral Host model, will unlock greater coverage both inbuilding and outdoor and help to share infrastructure costs as mobile network deployments dramatically increase. Shared spectrum is a vital component in supporting both competition and collaboration between market actors as the market evolves.

We have set out some of our areas of immediate concern, mainly access to MNC, must be collaborative with the incumbent mobile operators to allow their customers to utilise neutral host networks seamlessly. We request that Ofcom address

these issues in order to make shared spectrum commercially viable. Furthermore, we have provided our sense of the limitations to some of the proposal set out regarding the 'three shared spectrum bands'. However, we greatly support Ofcom's position regarding Local Access licensing and Ofcom's foresight in setting in place common approaches to spectrum sharing ahead of further spectrum sharing developments such as DSA.

The steps outlined in this proposal greatly affirm Digital Colony's commitment to investing in the UK telecommunications market and we look forward to collaborating with Ofcom and wider market players in the years to come.

We welcome further discussions on the topics raised in this letter and look forward to Ofcom's response.

Best Regards

A handwritten signature in black ink that reads "G. Payne". The signature is written in a cursive, flowing style.

**Graham Payne**  
**CEO**  
**Digital Colony UK Holdco Ltd**