FCS Response to Ofcom's Meeting future demand for mobile data consultation - April 2022

Introduction

The Federation of Communication Services represents companies which provide professional communications solutions to business users. Our members deliver telecommunications services via mobile and fixed line telephony networks, broadband, satellite, wi-fi and business radio. Our members' customers range from SMEs, home-workers and micro-businesses up to the very largest private enterprises and public sector users. FCS is the largest trade organisation in the professional communications arena, representing the interests of circa 350 businesses which supply B2B services nationwide.

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Your response

Question	Your response
We invite interested parties to consider the initial analysis we set out in this document and to let us know their own views.	Confidential? – ~~Y~~ / N **FCS analysis of key points in this consultation relevant to our members are covered in red.** . **mobile consolidation**. The question of whether a particular MNO merger is likely to result in a substantial lessening of competition depends on the effectiveness of competition that can be expected in the market after the merger, rather than just the number of competitors. Ofcom stance on a potential merger would be informed by specific circumstances of that particular merger, taking into account how markets are evolving. FCS feel it is not just mobile to mobile MNO mergers that need to be considered but mobile to fixed as well, as we move towards an All-IP environment. IP connectivity will be key going forward and FCS believes infrastructure being legally separated out (from retail/wholesale business arms of the large providers) will aid competition and stimulate growth (as the historical Openreach/BT model for WLR has proven). Any consolidation of the mobile operators must force a proper Wholesale offer being made available without having to go down an MVNO route. **review of the UK's net neutrality framework**, which impacts the way operators manage their networks and the services they can offer. Ofcom promote net neutrality, the principle that all traffic is treated equally, so that users of the internet (rather than their service provider) can control what they see and do online. Ofcom is currently carrying out a review of how the net neutrality framework is functioning and expect to publish initial findings in Summer 2022. FCS believes that no operator/service provider should be able to block, deprioritise or impact QoS on fixed/mobile/wireless networks and the FCS response to the separate Ofcom Network Neutrality consultation, makes this point clear.

FCS consider these fixed/mobile/wireless networks elements to be a part of a holistic IP based network.

prioritise promoting competitive markets to support investment in strong, secure networks, getting everyone connected, and delivering fairness for customers. These are reflected in the range of outcomes that Ofcom want mobile markets to deliver:

a) Investment in new technologies and strong, secure networks to meet the future needs of customers and the country.

b) Widespread availability of reliable mobile services to keep people and businesses connected wherever they live, work and travel.

c) Quality, value for money and choice for customers to meet a variety of needs.

d) Customers who are empowered to shop around with confidence, and can make well informed decisions, and switch easily.

e) Support for customers who may be vulnerable, including those in financial difficulty.

FCS strongly feel that the Regulatory environment should require the legal separation of infrastructure and the retail/wholesale elements for the larger vertically integrated suppliers. When mergers /acquisitions /consolidations occur, customers tend to stay with their existing supplier, which has the potential to act as an advantage for monopoly activities. Going forward, infrastructure will carry only IP, over fixed, mobile and wireless mediums, therefore FCS feels it is important that Ofcom carefully considers and establishes how competition will work in the new All-IP environment. The GCs can potentially be revised to promote and provide guidance on how a consolidated fixed/mobile/wireless infrastructure should operate for the benefit of the end consumer and UKplc. Consideration should also be given to the consolidation of system requirements that will be required to support a future All-IP network I.e. One Touch Switching, Number Porting, Messaging and Central Data Base linkage. Other sectors/services such as Business Radio, providing critical communication services, may start to utilise an All-IP network as it becomes more standardised across the UK. FCS supports the removal of the Mobile Phone levy which

(currently) means that all non-mobile operators subsidise the discounts that mobile operators give their own users. The mobile networks should not require this levy and if they need additional money then they should charge their user the correct price for the services provided.

MNOs may continue to separate out their infrastructure, resulting in more infrastructure-sharing or new network-sharing and ownership models. Greater separation of network assets as MNOs seek to monetise their assets. Examples include sharing tower infrastructure, restructuring to increase transparency of the value of network assets, or structural separation (of services and infrastructure) and sale of network assets. Emergence of different models for providing network infrastructure. As the trends of commercialisation and divestment continue, in future we could see greater sharing of infrastructure, or new network sharing and ownership models.

FCS has no issues with this proposal as long as Infrastructure arms are separated as legal entities from retail arms and there are structured information walls in the very large vertically integrated providers (a further development and evolution of the existing successful Openreach model, moving towards an energy sector model of infrastructure separation from supply/retail).

Amazon, Google and Microsoft (hyperscalers) have a greater role in the provision of mobile networks. MNOs to make greater use of cloud infrastructure to perform network functions, enabling them to deliver more flexible, scalable and cost-efficient networks, benefiting from significant economies of scale and scope.

FCS feel that the hyperscalers need to be recognised as common providers with revised GCs applied appropriately to this type of VoIP service suppliers. Online services (such as WhatsApp, Google Duo and MS Teams) should be regulated and a strategic review of OTT services and Security could be completed so that appropriate overheads can be applied to these companies (at present CPs/our FCS members for example, fund the hyperscalers overheads).

Ofcom is currently carrying out further research into small businesses' experience with the communications market, which we will be able to incorporate into our conclusions later this year.

FCS is pleased that Ofcom is carrying out this small business research and is keen to engage and provide any required input going forward. Experience indicates to the FCS that large mobile operators generally retain the end customer relationship and to counterbalance this, FCS would like to see a wholesale market that would negate the many problems our member's currently encounter. Because they not legally separated, very large vertically integrated providers can utilise their own retail arm intelligence to assess/check what could potentially disadvantage their own retail arms with respect to other providers who take their services and can potentially then tailor their own commercial offerings to enhance their own internal retail commercial offers while MVNO customers could potentially not receive the same commercially attractive deal(s).

Private mobile networks increasingly accessible by a closed group of people and devices. Often used in business premises or campus environment. Wide range of new uses, such as fully automated construction robots, and safer remote operation of heavy machinery in industrial units. Wide range of players deploying and operating these networks, MNOs, equipment vendors (Nokia), managed service providers and system integrators (Accenture) and hyperscalers (Amazon).

These private mobile networks are referred to as wireless connectivity by FCS. They are built and generally then connect the required services into existing fixed/mobile networks. FCS believe they should be included in the infrastructure separation from retail within large vertically integrated providers, argument.

FWA - There may be increased use of mobile services to provide internet access in the home via Fixed Wireless Access (FWA). Continued use of FWA in fixed broadband not-spots, but also in households that prefer shorter contracts

available with FWA compared to many broadband connections. Generally, use of FWA is likely to be focused on locations where fixed broadband is not available (for example, in more rural areas where securing a connection would be prohibitively expensive) and where there is a good enough mobile signal.

FCS believes this FWA should be classified as infrastructure. An example of this is EE connecting to the BT network. In future any FWA will carry only IP service, therefore FWA should be classified as infrastructure and be legally separated from Retail/Wholesale arms of larger vertically integrated providers. FWA should not be treated as a silo going forward.

For businesses, potential for more significant new uses, the most transformative effects of 5G for businesses may relate to the development of very large-scale machine-to-machine applications (M2M), as part of the digitisation of manufacturing and service provision. Collectively, these are often referred to as the Industrial Internet of Things and are likely to require features such as high reliability, security, bespoke capabilities and speeds. These can support a number of "Industry 4.0" type applications across a range of industries. examples are: a) In manufacturing and logistics, the low latency, reliability and speed of 5G could generate improvements in processes that lend themselves to being highly or fully automated, such as the use of robots in grocery packing in warehouses, allow for safer remote operation of heavy machinery. Sensors could also allow for the creation of a 'digital twin' of a factory or production process, supporting asset monitoring and even pre-emptive maintenance based on fault prediction. In agriculture and rural industries, may see greater investment in smart tracking and remote monitoring of livestock and resources. Drones and autonomous robots could be used more widely in the delivery of goods and services to remote areas (e.g. last mile delivery for parcels or carrying out safer remote inspection of industrial sites). These uses require low latency, secure, reliable connectivity across specific areas. Today, drones are not typically controlled over mobile networks; instead, alternative spectrum is available for line-of-sight remote

control. But Ofcom is currently assessing the impact of a number of spectrum options for drone wireless control and data delivery, which may enable drones to be controlled over mobile networks. Smart cities may make greater use of sensors and mobile services to provide enhanced monitoring of waste, air and water quality management, street lighting and traffic sensors. Having access to real-time sensor data may enable better forecasting of future demand, help reduce energy consumption and lead to more efficient management of resources. Healthcare provision may make increasing use of remote monitoring via wearables, offering patients and healthcare professionals 24/7 access to reliable information that could help with medical diagnoses. The high bandwidth offered by 5G could allow ambulance crews to perform scans and send high-resolution images to hospitals while in transit, giving clinicians earlier access to vital information and speeding up treatment on arrival.

FCS is keen that any infrastructure/network is 'open access' and legally separated from any large provider retail arms, encouraging open competition. Businesses can use 'open access' infrastructure to provide services and increase productivity, generally to the benefit of the end customer and UKplc. Historically opening access for WLR, drove competition and growth, which provided evidence that 'open access' is a successful model for the whole of UKplc going forward.

Ofcom expect MNO to continue to separate out infrastructure from the rest of their businesses (services), and we may see greater sharing of infrastructure, or new network sharing and ownership models emerge. Changes in network sharing arrangements evolving with greater emphasis on passive sharing. The MBNL and CTIL towers have in the past been mostly built by their respective MNO partners and there is very little cross-provision of towers between the two groups. However, this bifurcation is starting to change. Vodafone, Virgin Media O2 and Three have agreed to build and share 222 new towers across the three MNOs to improve coverage as part of the

SRN175 and the recent move to commercialise CTIL opens the way for more sharing.

More customers buying mobile services as part of a wider bundle Most users tend to purchase mobile services on a standalone basis but in future, we could see an increase in customers' purchasing mobile services as part of a wider bundle of services:

Providers may seek to encourage greater take-up of bundles to increase revenue and retention. Such strategies can increase revenue if providers can boost demand by offering discounts as part of a bundle, without having to offer across the board price reductions to users only taking one service. If rivals are not in a position to offer similar bundles, then this approach may enhance differentiation and also aid customer retention, as customers may find it inconvenient and more expensive to switch providers and/or buy services separately.

Consumers may be motivated to take bundles if they offer a discount relative to buying services separately or where it is more convenient to buy services from one provider, particularly where they are using a large number of connected devices. Mobile providers could bundle mobile services in a fixed-mobile bundle. The purchase of fixed-mobile bundles has not been a strong feature of the UK market to date.

Recent merger of VM and O2 created second significant mobile network operator with own fixed network in the UK, it is possible that the sale of fixed/mobile bundles could increase. VM O2 has already launched its Volt bundles for users taking VM's cable/TV and O2's mobile

services together in a bundle. Not clear what impact this would have, but non-converged providers are able to offer fixed-mobile bundles using regulated wholesale services from Openreach, or commercial wholesale services from other wholesale providers. CMA's recent assessment of the merger between Virgin Media and O2 did not identify any competition concerns.

FCS believe that bundles available to end customers cannot largely be improved upon unless larger provider retail arms are legally split away from infrastructure arms. However, the FCS accepts this will involve commercial challenges. Bundles, from a system perspective, should be separated and should be commercial bundles (i.e. WLR, BB, mobile and TV should be technically separate products), providing the end customer with a better choice of individual products if they so choose. There should be no artificial combining of individual products that impacts customer choice or limits a customer's ability to move service.

Ofcom expect to see a more complex system of competition across a fragmented value chain. Networks/Wholesaler services/Devices and Operating System/Retail Services/Apps and content

We may see market dynamics change, expect changes to lead to greater fragmentation of the mobile value chain which may lead to weaker competition across one or more parts of the value chain that affects the delivery of good outcomes. Ofcom's biggest concern is lack of MNO investment, competition is key and drives investment.

FCS believes 'Open Access' infrastructure will generate more competition, more investment, more innovative applications & products and benefit end customers and UKplc. Vertically integrated companies limit access, competition and investment. Legally separating larger provider infrastructure arms from retail, will result in an effective, competitive industry operating model.

Ofcom do not expect to introduce new consumer pricing rules recent consumer empowerment and protection initiatives helped address a range of concerns, Ofcom

expect these to deliver significant benefits for consumers over time. In addition, the Fairness for Customers commitments set clear standards for providers, to help ensure they treat customers fairly. Ofcom now expect to shift focus to promoting effective compliance, monitoring and understanding the impact of recent interventions.

FCS feel that the wholesale market is not yet fully developed in the IP environment and needs careful and ongoing assessment and close observation as industry moves towards All-IP. Currently there is no clear understanding of who has significant wholesale market power and the potential to influence end customer prices. FCS is therefore unable to comment currently on Ofcom implementing any new pricing rules.

Areas where Ofcom would welcome views and evidence:

1) Do you agree that the key potential market developments over the next five to ten years are those set out in Section 5 (précised below)? Are there any other key developments we should consider?

- expect mobile services to become more important over the coming years
- expect data use to continue to rise, growing demand for higher quality mobile services
- greater use of wearables and IoT, some of which will connect to mobile networks
- greater use of mobile services instead of fixed broadband, at least in the short term. FCS believes that while the user themself will largely be on mobile devices, the infrastructure they utilise will be a mix of mobile and IP. i.e. in the home or office, a mobile user will potentially transparently utilise fixed IP based broadband. Therefore, while transparent to users, the underlying infrastructure (converged IP/mobile) will be critical. The quality of the service

and the cost of the usage at specific locations and usage patterns will determine how the user consumes service.

- for businesses, there is the potential for more significant new uses
- potential for greater use of mobile services in the public sector

2) Do you agree that competition among MNOs is likely to continue to play a key role in the delivery of good outcomes, as outlined in Section 6? FCS agrees that competition is good but feels it is not MNO competition in isolation. Competition should be encouraged among all infrastructure providers and MNOs including MNOs. MNO's providing open access will create MNO competition so that customers have better choices. (i.e. MNO A customer can move to MNO B) and the legal separation of the MNO infrastructure operator and its retail arm will create competition and increase all retailer's choice of supplier.

3) Do you consider that there are likely to be significant wider external benefits (externalities) from a quicker or more widespread rollout of high-quality networks than that which the market is likely to deliver, as discussed in Section 6? If so, please provide clear examples to help explain your answer. FCS believes yes, but thinking should not be limited to only mobile network roll-out, it is all infrastructure I.e. 5G service is dependent on the quality of the underlying fibre infrastructure. The changes in technology will ultimately mean that mobile (and fixed) operators will be providing a data only network (5G, IP voice etc). On this basis illogical separation of assets like mobile and fixed numbers should be removed. Mobile operators should be obligated to work with the emerging IP voice networks to provide full interoperability enabling SMS to be used across all network and number types.

4) Do you agree with our views on how competition across the value chain may evolve over the next ten years, and the potential implications for the delivery of good outcomes, as outlined in Section 6?

5) As set out in Section 6, do you agree that quality of experience will become more important in the future? Do you agree that developing better information on quality of experience for customers will help further the delivery of good outcomes? FCS believe the customer quality of experience (business and residential) is very important to industry now, not only in future.

6) Do you think there is more that could be done to reduce barriers to customers receiving good indoor coverage (see Section 6)? If so, please outline what steps could be taken and what impact those steps would be likely to have. FCS believe that going forward, mobile device users will predominantly use pure mobile infrastructure when out and about, but when indoors will be able to switch seamlessly onto fixed IP infrastructure. Further fixed infrastructure will be required to improve existing customer service.

7) Do you agree that clarifying our future regulatory approach will help encourage investment, as outlined in Section 7?

- impact of regulation on investment
- competition rather than regulation should continue to be the key driver of investment

The key drivers and predominantly competition, should aim to encourage investment in open access mobile and IP infrastructure to the benefit of the end customer and UKplc. Regulation going forward should not be siloed (i.e. just mobile) it should consider and cover all infrastructure.

8) Are there any other potential barriers to the delivery of good outcomes over the next five to ten years that we have not considered? If so, please outline what these are likely to be, with supporting examples/evidence where possible, and any

suggestions for how they might be reduced. FCS feel the Regulation model needs to change and not operate in silos. Competition rules and Switching processes need to be aligned and simple to use for residential and business services. There should be coordination between mobile and fixed switching and all regulation should be aligned as we move to All-IP?

While FCS has answered the eight specific questions asked by Ofcom in this consultation, we feel it is important to emphasise that these questions seem very narrow and limited to only mobile networks. FCS feel that mobile needs to be considered in conjunction with fixed and wireless networks so that regulation going forward covers All-IP and the multiple infrastructures it will utilise to provide end customer services.