

Your response

Question	Your response
Section 2: The quality of mobile connectivity we want to see What are your views on the use of the Map Your Mobile good performance metric and how should the measure evolve over time?	Confidential? – ~~Y~~/ N The Map Your Mobile "good performance" metric is a useful step forward because it moves beyond simple coverage reporting and begins to reflect the quality of service users actually experience. However, as currently conceived, it risks oversimplifying mobile performance by providing a single pass/fail indicator that may not fully capture congestion, reliability, or variations in performance throughout the day. Key considerations for future evolution include: - Retain a simple, user-friendly metric that allows consumers to easily compare networks and locations. - Incorporate capacity and congestion measures, recognising that networks may meet performance thresholds at quiet times but perform poorly during peak demand. - Include additional indicators such as latency, reliability, call success rates and service availability, not just download speeds. - Report performance across different times of day, particularly during peak periods and major events. - Provide greater geographic granularity, enabling users and local authorities to identify street-level or neighbourhood-level variations. - Differentiate between indoor and outdoor performance, reflecting how people actually use mobile services. - Develop separate measures for 4G and 5G performance, recognising their different capabilities and use cases. - Enable trend reporting so users can see whether network performance is improving or deteriorating over time. Overall, the good performance metric should evolve from a basic coverage-quality indicator into a broader

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What are your views on the usefulness of: - the 90% figure as a benchmark applicable across geographies and based on crowdsourced data?, and - Whether the 90% benchmark is realistic and sufficiently ambitious?	measure of real-world user experience, combining speed, reliability, responsiveness and consistency. This would provide consumers, regulators and local authorities with a more meaningful assessment of mobile network performance and help target investment where it is most needed. - A 90% good performance benchmark provides a clear, simple and easily understood measure of mobile network quality that can be applied consistently across the UK. - Using crowdsourced data is valuable because it captures the real-world experience of users rather than relying solely on operator predictions or modelled coverage. - A common benchmark supports comparisons between operators, locations and over time, helping consumers, regulators and local authorities identify areas of poor performance. - However, a single national benchmark may not fully reflect the differing challenges of urban, suburban and rural geographies, where user density, terrain and network demand vary significantly. - Crowdsourced data can also be less reliable in areas with lower user activity, potentially resulting in gaps in the evidence base.
Section 3: Market-led improvements in mobile network quality - What information do customers need about network quality to choose the best network for their needs, and where are the main gaps in current provision of that information?	Confidential? – ~~Y~~/ N - Customers need access to accurate, location-specific information on mobile network quality, including coverage, download and upload speeds, latency, reliability, call success rates and performance during peak periods. - Information should reflect the real-world user experience, rather than theoretical coverage predictions, and differentiate between indoor and outdoor coverage. - Customers would benefit from being able to compare network performance at the locations that matter most to them, such as their home, workplace, commuting routes and frequently visited destinations.

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How well does Map Your Mobile currently meet customer and stakeholder needs, and what specific improvements would make it more useful?	- Greater transparency around network congestion, service availability and outage history would help customers understand how networks perform under varying demand conditions. - Information should also distinguish between 4G and 5G performance and provide confidence levels where data is based on modelled or crowdsourced information. Current gaps in provision include: - Coverage maps often show where a signal is available but provide limited information on the quality and consistency of service. - There is insufficient visibility of peak-time performance and network congestion, particularly in city centres, transport hubs and large event venues. - Data is often not available at a sufficiently granular geographic level to support informed decision-making. - Limited information is available on reliability, latency and service continuity, despite these factors having a significant impact on user experience. - Local authorities and consumers would benefit from more transparent, independently verified and regularly updated performance data to better understand network quality and identify areas requiring improvement. - Map Your Mobile is a positive development as it provides a more user-focused view of mobile performance than traditional coverage maps and helps consumers compare networks using real-world crowdsourced data. - The platform has the potential to support not only consumers but also local authorities, regulators and operators by improving transparency and highlighting areas of poor performance. - However, its usefulness is currently limited by the lack of information on network capacity, congestion, reliability and peak-time performance, which often have a greater impact on user experience than coverage alone. - The platform would be more valuable if it provided greater geographic granularity, allowing users to assess performance at street, neighbourhood or postcode level.

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	- Performance information should distinguish between indoor and outdoor coverage, as well as between 4G and 5G services. - Additional metrics such as latency, call success rates, outage history and service availability would provide a more complete picture of network quality. - Users would benefit from the ability to view performance at different times of day, particularly in areas prone to congestion such as city centres, transport hubs and major event venues. - For local authorities and other stakeholders, access to more detailed performance and capacity data, including downloadable datasets and GIS-compatible information, would support evidence-based planning and targeted infrastructure investment. - Greater transparency around data sources, sample sizes and confidence levels would also improve trust in the information presented. Overall, Map Your Mobile provides a useful foundation, but its value would be significantly enhanced by incorporating measures of real-world network quality, capacity and reliability, alongside more granular and actionable location-based information.
Section 4: Connectivity in busy areas	Confidential? – ~~Y~~/ N 4.23 highlights that the Government has launched a review of the planning framework for telecoms developments in England however, planning is a devolved responsibility, and the outcomes will not automatically apply in Wales. Nevertheless, the findings may provide useful evidence of measures that could support the more efficient deployment of digital infrastructure. We would encourage continued collaboration between the UK and Welsh Governments to ensure that best practice is shared and that any successful reforms which facilitate improved mobile connectivity can be considered within the Welsh planning framework.

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What do you think are the biggest barriers to achieving better mobile performance in town and city centres and why? • What do you think should be Ofcom's main priorities for our future work in this area?	- Network capacity and congestion in high-demand areas: Cardiff experiences significant fluctuations in mobile demand, particularly in the city centre, Cardiff Bay, transport hubs, and during major events at venues such as the Principality Stadium. While coverage may be available, network performance can deteriorate significantly at peak times due to insufficient capacity. - Insufficient network densification: As data consumption continues to grow, providing good performance increasingly requires additional infrastructure such as small cells, street works equipment and upgraded mast sites. In dense urban areas, existing macro sites alone are often insufficient to meet growing demand. - Challenges securing suitable sites and power: Operators can face difficulties identifying and deploying infrastructure in the most effective locations, particularly where space is limited, power supplies require upgrading, or equipment must be integrated into existing streetscapes and public assets. - Planning and deployment timescales: Although efforts have been made to streamline deployment, obtaining the necessary consents and coordinating works across multiple stakeholders can still slow network upgrades and the rollout of new technologies. - Limited visibility of network performance and congestion data: Current public coverage information does not always provide sufficient insight into real-world performance, capacity constraints or congestion hotspots. This can make it difficult for local authorities and regulators to identify where interventions or investment are most needed. - Growing demand for mobile data: Increased use of video streaming, cloud services, digital public services, hybrid working and emerging technologies is placing continual pressure on network capacity, requiring ongoing investment in both spectrum and infrastructure. - Complex urban environment: Cardiff's mix of modern developments, dense city centre buildings, historic areas and varying topography can affect signal propagation

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What information would stakeholders, especially local authorities / planning authorities find useful for Ofcom to provide further insights on and why?	and make consistent indoor and outdoor mobile performance more challenging to achieve. In summary, the greatest challenge in Cardiff is no longer basic coverage but ensuring sufficient network capacity and resilience to deliver consistent performance where and when demand is highest. Addressing this will require greater network densification, better use of public assets, improved access to performance data, and continued collaboration between operators, Ofcom, the Welsh Government and local authorities to support timely infrastructure deployment. - More granular mobile performance data at postcode, street or neighbourhood level, including speeds, latency, reliability and service availability. This would help local authorities identify areas experiencing poor user experience despite nominal coverage. - Network capacity and congestion data, particularly during peak periods and major events. Understanding where networks are approaching capacity limits would enable authorities to support targeted infrastructure deployment and future planning. - Indoor versus outdoor performance information, as many residents and businesses experience connectivity issues indoors that are not reflected in standard coverage maps. - Coverage and performance data for individual technologies (4G, 5G and future mobile technologies), helping authorities understand where upgrades are required and where digital disparities exist. - Performance trends and future demand forecasts, allowing local authorities to anticipate areas where increasing population growth, regeneration projects or major developments may require enhanced mobile infrastructure. - Operator investment and rollout plans, where commercially appropriate, to provide greater visibility of planned network upgrades and support coordination with local development and infrastructure projects. - GIS-compatible datasets and mapping tools, enabling mobile network information to be incorporated directly

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	into local authority planning systems and digital mapping platforms. - Information on network performance at strategic locations, including city centres, transport corridors, hospitals, schools, business parks and major event venues, where reliable connectivity is critical for economic activity and public services. - Independent benchmarking and comparative performance data between operators to improve transparency and support evidence-based decision making. - Coverage and performance information for disadvantaged or underserved communities, helping local authorities target interventions and support digital inclusion objectives.
Section 5: Connectivity in indoor, shared public places • What do you think are the biggest barriers to achieving better mobile performance indoors and why? • What do you think should be Ofcom's main priorities for our future work in this area? • What information would you find useful for Ofcom to provide further insights on in relation to connectivity indoors and why?	Confidential? – Y / N
Section 6: Connectivity on trains • What do you think are the biggest barriers, technical and commercial, to achieving better mobile performance on trains? Which are most significant and why?	Confidential? ~~Y~~ / N The biggest barriers to achieving better mobile performance on trains are a combination of technical challenges associated with the rail environment and commercial challenges relating to the cost and complexity of deployment. From a technical perspective, one of the most significant barriers is the difficulty of maintaining a consistent mobile connection along an entire rail corridor. Trains travel

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Do you agree with our proposal to work with government to support improvements in train connectivity?	at high speed through a variety of environments, including urban areas, cuttings, tunnels, rural locations and stations, resulting in frequent handovers between mobile cells and varying signal strength. Modern train carriages can also significantly attenuate mobile signals due to metal construction and energy-efficient window coatings, reducing the quality of service experienced by passengers even where external coverage exists. In addition, peak passenger volumes can place substantial demand on available network capacity, particularly on busy commuter routes and at major stations. From a commercial perspective, the cost of deploying and maintaining infrastructure alongside rail corridors can be considerable, particularly in less densely populated areas where the commercial return on investment may be limited. Delivering seamless connectivity often requires collaboration between multiple parties, including mobile network operators, Network Rail, train operating companies and infrastructure providers, which can add complexity and extend deployment timescales. Access to railway land, power supplies, backhaul connectivity and infrastructure sharing arrangements can also present challenges. The most significant barrier is arguably network capacity and infrastructure deployment along rail routes, as addressing this challenge underpins many of the other issues. Even where coverage exists, passengers may continue to experience poor performance if networks lack sufficient capacity to cope with demand or if infrastructure is not positioned to provide continuous service along the route. A coordinated approach involving targeted investment in trackside infrastructure, improved in-train signal solutions, infrastructure sharing and better performance monitoring will be essential to deliver a consistently high-quality mobile experience for rail passengers. Yes, we agree with Ofcom's proposal to work with government and industry stakeholders to support improvements in mobile connectivity on trains. The challenges associated with rail connectivity extend beyond the remit of any single organisation and require coordinated action between government, regulators, mobile network

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What information would you find useful for Ofcom to provide further insights on in relation to connectivity on trains and why?	operators, infrastructure providers, Network Rail and train operating companies. A collaborative approach is therefore essential to address barriers relating to track-side infrastructure deployment, access to railway land, power availability, spectrum utilisation and onboard connectivity solutions. We particularly support measures that encourage investment in continuous coverage and capacity along rail corridors, recognising that passengers increasingly rely on mobile connectivity for work, access to public services and communication while travelling. Improving connectivity on trains can deliver wider economic and social benefits by supporting productivity, enhancing passenger experience and enabling more reliable access to digital services. Consideration should also be given to establishing clear performance metrics based on the end-to-end passenger experience, including reliability, continuity of service and performance throughout entire journeys, rather than focusing solely on geographic coverage. Continued collaboration and information sharing between stakeholders will be critical to identifying priority routes, addressing infrastructure constraints and delivering meaningful improvements to mobile connectivity across the rail network. Ofcom could provide additional insight into train connectivity through the publication of more detailed, route-specific performance data that reflects the real experience of passengers throughout a journey. This should include information on network availability, download and upload speeds, latency, call success rates, and service continuity by operator across individual rail corridors. Of particular value would be data identifying persistent coverage gaps, congestion hotspots, tunnels, stations and other locations where connectivity regularly deteriorates. It would also be beneficial for Ofcom to publish comparative performance data during different times of day, particularly on busy commuter routes where network capacity constraints may be most apparent. Information on the causes of poor performance, whether related to signal propagation, train carriage design, infrastructure limitations or network congestion, would help stakeholders

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	better understand the challenges involved and target interventions accordingly. For local authorities, transport bodies and infrastructure planners, access to GIS-compatible datasets, route-level performance maps and future demand forecasts would support more effective planning and investment decisions. Greater transparency around planned infrastructure upgrades, trackside deployment opportunities and best practice examples from successful rail connectivity programmes would also help inform collaborative approaches to improving mobile connectivity across the rail network. Ultimately, the most useful insight would be a shift from measuring coverage alone to assessing the end-to-end passenger experience, enabling stakeholders to identify where improvements are needed most and track progress over time. We concur with Ofcom's approach to improving the provision of mobile connectivity on rail networks and recognise the unique challenges associated with delivering consistent and reliable service to passengers. Mobile connectivity on trains is influenced by a combination of factors, including coverage gaps along rail corridors, signal attenuation caused by carriage design, the speed of moving users between cells, and significant fluctuations in passenger demand. Addressing these challenges will require continued collaboration between mobile network operators, rail operators, infrastructure owners and government bodies to support targeted investment in trackside infrastructure and onboard connectivity solutions. Given the increasing reliance on mobile connectivity for work, access to public services and passenger information, improving connectivity on rail routes should remain a priority. Consideration should also be given to monitoring performance across complete journeys rather than coverage alone, ensuring that measures reflect the actual experience of passengers travelling on the network.

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Section 7: Connectivity in rural areas • What do you think are the biggest barriers to achieving better mobile performance in rural locations and why? • What do you think should be Ofcom's main priorities for our future work in rural locations and what outcomes should we aim to achieve? • What solutions (technical, commercial, policy or delivery) could improve rural mobile performance? • What information would you find useful for Ofcom to provide further insights on in relation to rural connectivity and why?	

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