



Liberty Global response to the European Commission's public consultation on the Draft RSPG Opinion on the development of 6G and possible implications for spectrum needs and guidance on the rollout of future wireless broadband networks

Liberty Global welcomes the opportunity to comment on the European Commission's public consultation of the Draft RSPG Opinion on *The development of 6G and possible implications for spectrum needs and guidance on the rollout of future wireless broadband networks* (the Draft RSPG Opinion).¹ Liberty Global strongly supports the European Commission's continued commitment to engage with stakeholders on issues that are relevant to them, particularly in the rapidly evolving and impactful domain covered by the EU's digital strategy. Liberty Global is convinced that such engagement will help further achieving a Europe fit for the digital age, by ensuring that this transformation will, indeed, work for both people and businesses.

Introduction

The European Commission's objectives for the Draft RSPG Opinion

For the European Commission, the main objective of the Draft RSPG Opinion appears to have been to conduct an *'additional evaluation of 5G in Europe (licensing strategies, auction design, deployment progress, etc.) with the aim to gain knowledge around what has been successful and what still needs to be addressed, thus providing valuable input when designing future 6G strategies'*.

Liberty Global generally supports this objective and the RSPG's evidence-based approach, in light of the *'early signals of demand for additional spectrum as well as the necessity to make a certain amount of harmonised spectrum for 6G available in a timely manner'* and – as the report also recognizes – the *'pivotal role of wireless broadband'* for the EU's citizens.

Although work on 6G is currently still at a research stage (to describe the services offered from circa 2030) and much is therefore still uncertain, the potential use of new radio standards and/or additional spectrum for mobile use cases will require substantial investment and development times. For Europe to be a frontrunner in the development, deployment, and governance of 6G – and to surpass its achievements on those aspects in the context of 5G – the timely emergence of a supportive regulatory and policy framework for 6G is key.

The RSPG's work can play a fundamental role in this process, by helping shift focus on important aspects, such as spectrum allocation mechanisms. A shift from the currently dominant, almost singular focus on maximum (auction) returns, to a European vision pursuing a set of balanced objectives (including returns, but also availability, coverage and other aspects related to the EU's Digital Decade

¹ European Commission, *DRAFT RSPG Opinion, the development of 6G and possible implications for spectrum needs and guidance on the rollout of future wireless broadband networks*, 14 June 2023, RSPG23-026 FINAL.



targets), would help strengthen Europe's position as a frontrunner in the pursuit of innovation and investment in 6G.

The importance of stakeholder engagement

Liberty Global commends the European Commission for transparently engaging stakeholders – via workshops – in the process leading up to the adoption of the RSPG Opinion and for allowing all parties, including those active in adjacent sectors, to respond to the current public consultation as well. Liberty Global supports the RSPG's intention to continue *'to engage in the sharing of information and experience in support of a successful development and future roll-out of 6G in the EU and [to] provide targeted guidance on authorisation and implementation issues, if such a need is identified'*.

Considering the broad societal implications of this next generation of wireless networks, Liberty Global recommends the European Commission and RSPG to continue this broad level of stakeholder engagement in the next steps of this process (e.g. future 6G spectrum roadmaps of the RSPG beyond 2023) and in the potential adoption of forthcoming measures which will help shape the broader policy and regulatory framework for 6G (e.g. the evaluation, in due course, of instruments such as the European Electronic Communications Code).

In light of the broad implications of 6G and the equally broad spectrum of regulatory and policy questions at hand, an efficient rollout of 6G will require reasonable and 6G compatible framework conditions (limits, definition, metrics, etc.). The (continued) involvement of a broad range of stakeholders from the private and public sector, including building and licensing authorities, public health experts and others in policymaking is key.

Substantive appreciation of the Draft RSPG Opinion

Key findings – 5G Implementation and learnings

Generally, Liberty Global agrees with several of the key findings of the Draft RSPG Opinion. Firstly, the RSPG's recognition that 5G implementation is currently still ongoing in the primary and pioneer bands identified for 5G and that roll-out – in some cases – has been hampered by Member States' diverging regulatory practices. Secondly, Liberty Global subscribes to the RSPG's observation that, whilst some new solutions for more dynamic and shared use of spectrum have already been introduced with the uptake of 5G, this demand is expected to only increase with 5G development and the uptake of 6G. At the same time, however, we expect the extensive infrastructure investments already made in 5G and 4G at a national level to continue to play an essential role in the uptake of 6G as well. So, whilst 6G use cases and services certainly have revolutionary potential, at the same time, the near-natural *evolution* of 4G and 5G technologies will be key to support a seamless transition to 6G.

Liberty Global supports the RSPG's conclusion that this expected increase in demand could require more flexibility in terms of spectrum access, such as via one or more of the methods suggested by the RSPG: Intra network Dynamic Spectrum Sharing, the facilitation of leasing arrangements and/or the



creation of mechanisms which *'share spectrum dynamically between different terrestrial mobile broadband networks and other types of networks in a flexible and effective way'*. The suitability of such methods should be determined on a case-by-case basis, in line with the principles of appropriateness and proportionality, whilst ensuring that sharing mechanisms deliver solutions that work in the real world for sharers, and are tractable and not administratively burdensome for the authority or spectrum licensees and sharers.

In this regard, Liberty Global is pleased to see the RSPG's acknowledgment of the broad and successful practice of intra network dynamic spectrum sharing by MNOs. The on demand and real-time sharing of spectrum resources between 4G and 5G (at present) will likely also enable a swift roll-out of 6G services with ample coverage in the future. At the same time, however, Liberty Global expresses reservations about the merits of 'forced' leasing and sharing arrangements. In any event, such arrangements should respect the fundamentals of EU competition law. Moreover, in principle, mobile network operators require a large degree of autonomy and control over their spectrum assets to be able to guarantee quality of service, coverage and other factors associated with societal expectations and regulatory obligations. Thus far, in some markets, leasing and sharing arrangements between private network operators and mobile network operators have been *theoretical* options at best. In Liberty Global's view, such arrangements should therefore not be regarded as a 'magic bullet' to address the spectrum needs associated with 6G.

Thirdly, Liberty Global subscribes to the RSPG's identification of an increasing demand for spectrum for local and vertical applications (e.g. in the context of private networks) – in parallel with the increasing needs of national mobile networks – and the RSPG's recognition of a *'benefit in and increased need for common European approaches for spectrum access for verticals with options for enabling local access to spectrum'*. Harmonization is a key contributor to legal certainty, and thus integral to ensuring continued innovation and investment in the digital sector, and to ensuring the competitiveness of European services and operators. Liberty Global therefore encourages the RSPG and the European Commission's ambitions to further adopt common European approaches in this regard. Well-balanced approaches are necessary in this domain, with due regard for the most efficient use of spectrum resources by mobile network operators or vertical operators.

To meet the increasing demand for spectrum in a *timely* fashion, the RSPG correctly identifies that a *'proactive position is essential for supporting the development and deployment of 6G'*. Liberty Global supports the RSPG's intention to conduct further work on the early recognition of spectrum needs, with a view to enabling the European launch of services by the target date of 2030 and welcomes the RSPG's consideration of publishing a 6G spectrum roadmap *'in 2024 or later'*. In view of the aforementioned ambitious target date for a European 6G launch (2030), Liberty Global strongly recommends the European Commission and RSPG to work towards the publication of this spectrum roadmap by 2025 *at the latest*.



At the same time, however, the RSPG also recognizes correctly that Member States may – in the short term and in some instances – be able to meet the additional capacity needs for the existing mobile network technologies (pre-6G) without additional EU harmonization, e.g. by using the current spectrum more efficiently or by introducing additional spectrum for terrestrial mobile broadband.

Liberty Global agrees with this two-pronged approach for policymakers and regulators, advocated in the Draft RSPG Opinion. On the one hand, it remains necessary to ensure that national authorities already act today to make sure additional capacity needs are met using the ‘tools’ they currently have available – and do not postpone such actions until further harmonization efforts at EU-level are undertaken. On the other hand, in light of the significant *additional* spectrum demand by 6G and its specific characteristics, no time should be lost in the pursuit of a European 6G spectrum roadmap and the associated work on the early recognition of spectrum needs, with a view to making the necessary spectrum available in a timely and harmonized manner. The rapid conjunction of both prongs is key.

Key findings – The importance of the right ‘technology mix’ and the principle of technology neutrality

Liberty Global finds itself in agreement with the clear statement by the RSPG that *‘technology neutrality and spectrum sharing are applicable and the existing harmonised bands for [Electronic Communications Services] will be also made available for 6G. Further, there is a need to assess the suitability of harmonised technical conditions to support the long-term development of 6G in the bands as it has been done for 5G’*. Liberty Global is pleased to see the RSPG’s explicit acknowledgement of the key regulatory principle of technology neutrality – a staple of *inter alia* the European Electronic Communications Code.

Liberty Global also supports the RSPG’s recognition of the value to 6G of a vibrant technology ecosystem of related and adjacent technologies, such as *‘the role and need of license exempt or light-licensed spectrum for offloading some of the 6G traffic and to provide private and personal networks’* as well as the *‘role of and need for non-terrestrial networks to support 6G development further [to] current initiatives on 5G’*. The deployment of such technologies in non-contentious parts of the spectrum will help the 6G ecosystem to flourish, by – for example – supporting connectivity needs of applications which *‘do not require a predictable quality of service’* (in the case of license exempt or light-licensed spectrum) or by serving *‘as a fallback layer or backhaul for terrestrial networks’* (in the case of non-terrestrial networks).

In this context, Liberty Global notes that current work on 6G seeks to describe services and use cases, and not specifically the use of a specific radio technology. It is therefore key that the EU’s spectrum policy respects the *‘need to ensure technology neutrality[,] enabling [(mobile) network operators] to*



design and manage their own networks', a cornerstone of the European Electronic Communications Code.

Finally, Liberty Global emphasizes that the providers of both public and private networks can provide the same set of services to verticals. License conditions should not favor one form of delivery of such services over another, in order to avoid distortions of competition. Therefore, careful analysis is required in the setting of such conditions, to ensure spectrum – an inherently scarce resource – is allocated in accordance with maximum efficient use and broad coverage.

Policy recommendations

Shaping the next generation of mobile networking through solid policymaking

Since innovation on 6G is only just beginning, now is the time for the EU to help shape the next generation of (mobile) networking. The fast and extensive 5G deployment across the EU is a precondition for a European launch of 6G by the ambitious target date of 2030. The removal of barriers to investment and 5G rollout will ensure Europe can become a proving ground for 6G as well. Spectrum allocation conditions, which are currently extremely fragmented, should be harmonized so Europe cannot just benefit from a rapid 5G rollout, but also lay the foundations for nascent technologies such as 6G. Furthermore, to secure rapid deployment of such networks, spectrum allocation mechanisms should prioritize this aspect over maximum returns. After all, the denser networks required by 6G in turn will require more significant investments in the rollout phase. It is therefore key that flexibility as regards the spectrum allocation mechanisms is maintained – or even improved – to ensure optimal societal outcomes in terms of coverage, rapid deployment and uptake and other relevant factors (which may evolve over the next few years) are pursued, instead of maximum returns.

Harmonization with a view to addressing regulatory fragmentation

As highlighted above, in the appreciation of the Draft RSPG Opinion's findings on meeting the increasing demand for spectrum through common European approaches, harmonization is a powerful tool to increase legal certainty and to address regulatory fragmentation. Addressing regulatory fragmentation through EU-level coordination – including through the institution of harmonised award procedures, with a view to reducing unpredictable or costly auction outcomes – can significantly lower barriers to innovation and investment, improve regulatory clarity and at the same time contribute to substantively sound regulatory frameworks. This will foster the Digital Single Market, enabling operators to leverage scale and further the fast development of 6G and adjacent technologies.

Measures should be proportionate and appropriate

The role of policymakers and regulators is to ensure that market players do not interfere with the normal functioning of the market through engaging in anti-competitive practices. Liberty Global warns



against policymakers and regulators taking up the role of market maker as this would distort competition.

This applies equally to European digital markets. Any intervention in the digital sector must be necessary, appropriate, and proportionate to the identified harm. It is also essential that the benefits of intervention are properly balanced against the costs and impact on investment and innovation.

Regulatory interventions should be minimal and based on established competition law principles

Liberty Global believes that potential regulatory interventions in mobile markets should be based on established competition law principles and practice. EU competition law principles are sufficiently flexible and have long proven their ability to address market imperfections and various types of potentially anti-competitive practices. Similarly, EU competition law has been designed to minimise intervention whereby markets and market practices are assessed on a case-by-case basis (including regarding potential benefits of certain practices), and remedies designed to address the identified harm.

A departure from these existing competition law principles and practice – and the underlying economic principles – would create significant legal uncertainty and have significant negative effects on investment and innovation across the whole of the EU. Intervention in line with existing competition law and practice is therefore integral to ensuring continued innovation and investment in the digital sector, and to ensuring the competitiveness of European businesses and markets.

Conclusions and recommendations

Liberty Global's perspective on the Draft RSPG Opinion, and its key recommendations for the European Commission in this regard, can best be summarised as follows.

Firstly, Liberty Global advises the European Commission to pursue a harmonized spectrum policy, particularly as regards spectrum allocation mechanisms, with a view to utilizing spectrum resources in an optimal way – for the benefit of society as a whole. It is therefore key to move beyond the currently dominant, focus on maximum (auction) returns, to a European vision pursuing a set of balanced objectives (including returns, but also availability, coverage and other aspects related to the EU's Digital Decade targets). Europe needs strong mobile network operators, to be able to drive the innovation and investment needed for the EU to become a frontrunner on 6G.

Secondly, with a view to the ambitious timeline in pursuit of a European 6G launch by 2030, Liberty Global recommends the European Commission to pursue swift policymaking, with a view to giving all relevant stakeholders maximum regulatory clarity and legal certainty in an early stage. Liberty Global supports the RSPG's suggestion of publishing a spectrum roadmap for 6G and recommends the European Commission that this initiative should be completed by 2025 at the latest.



Finally, in order to secure the necessary innovation and investment needed to make 6G a reality, Liberty Global encourages the European Commission to adopt all potentially relevant instruments in accordance with its cornerstone regulatory principles for the digital domain. This includes not only the pursuit of harmonization, but also other fundamental principles of EU administrative law such as the principles of appropriateness and proportionality. In addition, wherever there are intervention by the state in markets, it is key that such interventions adhere to the fundamentals of EU competition law and, certainly in the digital domain, such interventions respect the principle of technology neutrality.



About Liberty Global

Liberty Global (NASDAQ: LBTYA, LBTYB and LBTYK) is a world leader in converged broadband, video and mobile communications services. We deliver next-generation products through advanced fiber and 5G networks, and currently provide over 86 million connections² across Europe and the United Kingdom. Our businesses operate under some of the best-known consumer brands, including Virgin Media-O2 in the U.K., VodafoneZiggo in The Netherlands, Telenet in Belgium, Sunrise in Switzerland, Virgin Media in Ireland and UPC in Slovakia. Through our substantial scale and commitment to innovation, we are building Tomorrow's Connections Today, investing in the infrastructure and platforms that empower our customers to make the most of the digital revolution, while deploying the advanced technologies that nations and economies need to thrive.

Our consolidated businesses generate annual revenue of more than \$7 billion, while the VMO2 JV and VodafoneZiggo JV generate combined annual revenue of more than \$17 billion.³ Liberty Global Ventures, our global investment arm, has a portfolio of more than 75 companies across content, technology and infrastructure, including strategic stakes in companies like ITV, Televisa Univision, Plume, AtlasEdge and the Formula E racing series.

For more information, please visit www.libertyglobal.com.

² Represents aggregate consolidated and 50% owned non-consolidated fixed and mobile subscribers. Includes wholesale mobile subscribers of the VMO2 JV and B2B fixed subscribers of the VodafoneZiggo JV.

³ Revenue figures above are provided based on full year 2022 Liberty Global consolidated results (excluding revenue from Poland) and the combined as reported full year 2022 results for the VodafoneZiggo JV and full year 2022 U.S. GAAP results for the VMO2 JV.

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