

PUBLIC CONSULTATION ON THE DRAFT COMMUNICATION FROM THE COMMISSION: GUIDELINES ON STATE AID FOR BROADBAND NETWORKS

STANDPOINT BY DEUTSCHE TELEKOM AG

EXECUTIVE SUMMARY

Deutsche Telekom AG welcomes the possibility to comment on the draft Communication from the Commission – Guidelines on State Aid for broadband networks (hereinafter: draft Guidelines)

Deutsche Telekom AG is the operator with highest market value in the EU, 80.8 billion EUR as of 20.01.2002. Our current investment plans foresee several dozens of billions of EUR investments into fiber rollout by 2030 (30 bn EUR for FTTH in Germany alone). Mobile networks operated under the “T” brand are routinely designated as the best in various independent tests, and for example in Germany, our biggest market, we already cover 95% of the population with 5G. It is against this background that the future Guidelines on State aid for broadband networks are of utmost relevance for past, present and planned investments throughout our extensive footprint in the EU markets.

The draft Guidelines aim to bring a number of amendments in the regime applicable to state aid for fixed and mobile broadband networks, e.g., adaption to new connectivity targets, market and technological developments etc. Our strong concern with the draft Guidelines is that, while aiming to update state aid rules so as to reflect the actual and even future demand by customers, they go too far and **introduce a paradigm change that puts actual and planned investments in VHCN infrastructure at risk**. On too many occasions will the new Guidelines, unless amended, create the risk of crowding out private investments and of overbuilding existing ultrafast or even gigabit-ready broadband infrastructure. Adoption of the draft without the necessary amendments will **send an immediate negative signal to investing operators and capital markets, disincentivizing new investments and depreciating ones already made**. Besides, many elements of the proposal bring about **excessive bureaucracy and complexity**, e. g. via duplication of already existing processes or instruments, not at all being necessary when looking at many years’ practical experience with state aid schemes for broadband throughout the EU.

Therefore, there are multiple aspects of major significance which need to be amended. **Overall, priority of private investment must be strengthened, rather than being weakened by the risk of crowding-out**. Yet, the draft Guidelines and their Annex I contain several elements which imply a more lenient/generous approach to state aid than before:

- a) too broad concept of market failure,
- b) shortening the “relevant time horizon” used for verifying planned private investments in the framework of the public consultations from min. 3 to min. 2 years,
- c) the requirement to make private investment plans binding,
- d) the requirement to take account of usual amortization periods of private investments and thus grant a protection period to private investments before initiating a state aid project is only optional,
- e) the option of “direct investment model” where Member States may de facto enter the market themselves,
- f) inappropriate technical recommendations for calculating and mapping “achievable performance” of networks in Annex I on the basis of a very specific peak time scenario,
- g) the definition of “premises passed” meaning that services can be activated within four weeks from the date of request at the normal activation fee,
- h) Member States de facto to have more discretion to use state aid schemes for fixed networks in grey and even black areas,
- i) state aid for backhaul in fixed networks without clear conditions and limits.

Besides amendments needed with respect to the aspects mentioned above, a new, additional, early-stage mechanism is needed in addition to public consultations. Otherwise, there is a real risk that far too many state aid projects are launched in the near future, and thus far before 2030. Yet, the EU

connectivity targets rightly aim at 2030 only. Consequently, **sufficient scope must be guaranteed for private investment plans for the same time horizon up until 2030.**

Regarding state aid for mobile networks, the Guidelines must take proper account of the fact that all EU mobile markets are characterized by infrastructure competition on a national scale, providing consumer benefit in terms of high quality, broad choice of services etc. While publicly funded infrastructure may overcome a specific identified market failure in a given area, it should not alter the sustainably competitive market structure, but instead enable nation-wide players to extend their network reach further to better serve citizens and businesses. Therefore, state aid – and thus also wholesale obligations - must be limited to passive infrastructure. In this context, we welcome the recognition that aid for broadband access at a fixed location and for access while on the move should be dealt with separately.

To summarize, there is a need for careful analysis where the proposed changes to the state aid regime instead of becoming part of the solution will indeed exacerbate the situation by disincentivizing investments and exacerbating other challenges already existing. For example, in Germany there is currently no shortage of funds for fiber rollout, however there is shortage of namely planning and construction capacity (same shortage we witness elsewhere in the EU markets where we are present, e.g., in Slovak Republic). More state aid funds will make this problem worse by further increasing prices of construction and planning services. Overall, **state aid for broadband must remain an instrument of last resort to overcome digital divides at local or regional level**, and scarce public resources should be spent primarily on the areas, where private sector has no or little stake, as health & social care or education.

Major amendments to the draft Guidelines and Annex I are therefore needed in order to grant the due priority to private investments and planning certainty, reduce the level of bureaucracy and to better prevent crowding-out. In the end, it pays to strengthen private investment and effectively grant priority to private investment wherever private investors see potential, as privately-funded rollout is much faster and cost-efficient, due to less red tape involved.

DETAILED COMMENTS

I. Comments valid both for funding for fixed broadband and for mobile broadband

I.1 Public consultation: relevant time horizon (Para. 19 lit. I)

The draft Guidelines provide that the “relevant time horizon” used for verifying planned private investments “cannot be shorter than two years”. This time horizon is too short and **must remain three years, as before, for two reasons:**

- Firstly, it does not correspond to the usual time frame of deployment of a state funded network, as suggested (defined as starting from the moment of publication of the public consultation on the planned intervention until the entry into operation of the network). In practice, the whole process for deployment of a state funded VHC network takes at least three years, if not longer, depending, amongst others, on the duration of permit procedures, the size of the area, and the technology being rolled out. For mobile network rollout, the acquisition of mast sites is an additional, and sometimes very time-consuming, challenge.
- Secondly, and more importantly, even a time horizon of three years for the public consultation cannot be the only instrument to establish whether a market failure exists, and therefore state aid is justified. The “Digital Decade” connectivity targets as flagship policy ambition are set for 2030. Therefore, state aid measures which are rightly confirmed as *ultima ratio* for providing broadband coverage where market forces do not deliver, must not be taken too early. If, e.g., a public consultation is initiated already in 2023 covering a time horizon of only 2, or maybe even 3 years (that is, until 2025 or 2026), all areas for which private investors do not submit private investment plans would already become eligible for state aid once the results of the consultation will have been analyzed, i.e. in 2023. And this, even though private investors would have had an interest and the financial, planning deployment and other capacities to invest in network rollout in these areas e.g. in 2027, and thus still much ahead of 2030.

In Germany, various industry associations (VATM, Breko) in 2021 declared that private investors intend to invest almost 50 billion Euros into FTTH/B networks in Germany in the years to come (mid and longer term). Thus, **Germany at least does not have an investment problem, but rather an execution challenge:** the financial means available cannot all be invested simultaneously, in view of limited planning, civil engineering, permit granting capacities etc. The **execution challenge**, however, **cannot be solved by state aid**. Rather on the contrary: **too much state aid too early** will only **exacerbate the bottlenecks** and increase the cost of the scarce resources.

The same applies for mobile network rollout: a major “execution challenge” of private investment plans here is the acquisition of mast sites, i. e. finding a landlord willing to rent or sell land or rooftop sites. This is aggravated by citizens’ initiatives against such sites (“NIMBY” phenomenon). State aid projects for mobile rollout would be faced with the same challenges and will not be able to overcome them faster than privately funded projects. Typical time for administrative approvals in most EU member states (incl. Austria but also Germany, Czech Republic, Italy, Spain, Portugal etc.) takes up to 12 months and in several other EU member states (incl. Greece, Bulgaria) even up to 24 months.²

In the long run, **it pays off to strengthen private investment and effectively grant priority to private investment wherever private investors see the potential**, as privately-funded rollout is much faster and cost-efficient, due to less red tape involved. This is why, in addition to covering a time horizon of 3 years in the framework of the public consultation, an additional safeguard is needed to ensure that the full potential of private investment projects in the “pipeline” until 2030 is granted priority over state aid projects. We see two options here:

- either let the market carry out its private investment plans completely unhampered” by public consultations until 2028, or

² GSMA Report p. 37, link: <https://www.gsma.com/gsmaeurope/wp-content/uploads/2021/03/GSMA-Mobile-Network-Deployment-Policy-and-BCRD-Report-March2021.pdf>

- if public consultations, and thus state aid projects are to be possible earlier, introduce an additional “pre-assessment instrument identifying which areas are likely to be rolled out by private investors, and which areas are unlikely to be rolled out without state aid. Whereas public consultations may not start before 2028 in areas likely to be covered with gigabit speeds by private investors according to the preassessment, public consultations for the latter areas could start earlier than 2028. Such preassessments should be carried out by independent bodies, be it scientific institutions or consultancies, mandated by the Member State, and take into account aspects such as household density, topology etc. relevant for the profitability of a rollout project.

I.2 Public consultations: recommendation of binding rollout commitments by operators (Para. 88)

The draft Guidelines provide for the possibility to request binding rollout commitments as a necessary condition for the prevention of a state aid project: (para. 88) *“If a Member State considers that ...private investment plans are credible, it may decide to invite operators to sign commitment agreements including obligations to report progress on ...milestones.”*

Firstly, it is unclear why private investors should sign commitment agreements, even though they submit credible investment plans. With regard to mobile network rollout, such “binding commitments” exist already in the form of spectrum obligations in various Member States.

Due to **high uncertainties surrounding the rollout planning** process (see point I.1 above), we consider such **binding rollout commitments to be disproportionate**. In practice, it will be impossible to combine such commitment requirement with the **legitimate discretion of the declaring operators** to prolong or **modify the deployment plans** for various reasons, including many outside of their control (such as delays in the permit-granting process, or in the acquisition of sites for masts in the case of mobile network rollout). Therefore, such commitments would either have to include numerous disclaimers taking account the aforementioned factors outside of investors’ control, in turn questioning the value added of the commitments. Yet even more often, **such requirement would most probably lead to a false result of the public consultation**: Most operators would not undertake such binding commitments on privately-funded investments planned for the next 2 or 3 years. The consequence would be that the purpose of such public consultations can be questioned altogether, as the result will most probably always be the same (no binding commitment by any operator). Yet, this result must not be misinterpreted as market failure, and justification for state aid. In fact, the very ***raison d’être* of the public consultations has been, und must remain, the prevention of crowding-out, without undue requirements**.

Finally, as footnote 70 refers to *“a similar mechanism set out in Art. 22 (of the EECC)”*, it should be clarified that there is no need for transparency on private investment plans other than in the context of state aid projects. And in the context of state aid schemes, **transparency on private investment plans must serve exclusively the aim of preventing crowding-out, rather than monitoring or even steering private investment, keeping bureaucracy and documentation requirements involved to a minimum, rather than increasing it**.

I.3 Conditions where aid may be granted to publicly owned wholesale-only operators without a competitive procedure (“direct investment model”) (Paras.125-126)

Para.125 suggests **the option to grant aid without a competitive selection procedure to a public authority** to deploy and manage a broadband network at wholesale level directly, or through an in-house entity (direct investment model), and that the public authority may be allowed to provide retail services as a “retailer of last resort” where a consumer cannot get a retail service from the market.

First of all, while Member States have a very legitimate interest in good nationwide broadband coverage, and, at least in some cases, also a (constitutional, as e.g., the case in Germany) duty to guarantee this, it is nonetheless very questionable, to say the least, in view of the liberalization of the telco sector within the EU, whether Member States can enter these liberalized markets as an additional network operator, using state aid. **A much less intrusive option is described in para.126**, according to which a concession or other entrustment by a public authority or in-house entity to design, build or operate the network must be allocated through an open, transparent and non-discriminatory competitive selection procedure. Therefore, **the option described in para.125 should be deleted, as it goes much beyond the purpose of state aid to remedy occasional market failures on a case-by-case basis, and effectively puts the entire privatization of EU telecom industry into question**

If the direct investment model is applied at all, in order to limit the intrinsic distortion of competition, a public consultation must be conducted beforehand to avoid crowding out. In addition, it must be guaranteed **that the funded assets are not owned by a single, nationwide entity**, but rather at the municipal level. The Bavarian mobile scheme is a good reference for that, where the funded towers are owned by the municipality for the first 7 years, after which a sale to a private investor is envisaged.

In any case, investment in and operation of the active network layer, as well as retail activities must be clearly and strictly excluded from the direct investment model.

Finally, the Guidelines must clarify that a public consultation must be conducted first, to prevent crowding-out.

I.4 Mapping and use of existing infrastructure for the funded rollout project (Paras.128-134)

Overall, the requirement, or at least the idea as such is not new, and is already part of existing state aid schemes. It should be clarified, though, that the requirements of para. 132a are met by feeding the nationwide infrastructure atlas. **As such infrastructure atlases have already been implemented in all Member States on the basis of the BCRD, these atlases can and should be used also for the purposes of para.132a, avoiding the need for further bureaucracy**

Yet, para.132b must not mean that bidders owning and/or controlling dark fiber in the target area must commit to make it available for use by 3rd parties in their bids. Otherwise, early investments in dark fiber would be disincentivized. Access to ducts and other forms of passive infrastructure under the BCRD regime is a sufficient, reasonable and fair possibility available to all access seekers.

I.5 State aid for backhaul (Paras.70, 110, 140, 141)

Separate and/or specific, retail-independent state aid schemes for backhaul should not be possible for fixed networks. Rather, state aid should be limited to identified market failure at the retail level, i. e. insufficient broadband services in the retail market. If this is established, state aid should be eligible to the extent necessary. If need be, including for backhaul, for the specific area of the state aid project.

Backhaul funding for mobile networks should be **restricted to white spots, and thus requiring clear evidence of a market failure, determined on the basis that no network meeting predefined end-user requirements is or will be available in the medium term.** Such white spots will typically be located in rural/remote areas. Closing the identified demand gap in such areas will generally require a new mobile site. For such new mobile sites/towers, ducts and fiber backhaul might be necessary as an ancillary component. Under these circumstances state aid for backhaul will ensure the use of the funded new site by potentially all MNOs, and thus support better coverage for all end-users. **And only if limited to these scenarios, will infrastructure competition, respectively existing competitive advantages not be distorted.** For instance, Telekom Deutschland continuously wins awards as it is outperforming its competitors in terms of coverage and speed.³ This is to a large extent due to a much higher percentage of mobile masts connected by fiber than in the case of its competitors.

I.6 Reflection of environmental impacts in the application assessment (Paras.42 and 124)

³ <https://www.tutela.com/announcements/t-mobile-provides-best-mobile-network-experience-orange-for-fastest-speeds-in-poland#:~:text=Orange%20was%20on%20the%20leaderboard,5G%2F4G%20and%20total%20coverage.>
<https://swordstoday.ie/cosmot-is-one-of-the-best-mobile-networks-in-greece/>
<https://www.insidetelecom.com/best-croatian-mobile-network-goes-to-croatian-telecom/#:~:text=The%20confirmation%20that%20Croatian%20Telecom,P3%20in%20the%20Croatian%20mark>
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<https://www.opensignal.com/reports/2021/03/slovakia/mobile-network-experience>
<https://www.umlaut.com/en/stories/t-mobile-awarded-best-in-test-worldwide-by-umlaut>
https://www.chip.de/artikel/Handy-Netztest-Oesterreich-A1-Magenta-und-Drei-im-Test_183318942.html
<https://www.opensignal.com/reports/2021/02/hungary/mobile-network-experience>

We recommend that this part is aligned with the incoming Broadband Cost Reduction Directive, which may also lay down certain special conditions for the assessment of the environmental impact of access networks. Yet, we already welcome that the Draft states that state aid measures must be compatible with Internal Market rules.

II. Funding for fixed broadband

II.1 Mapping and measurement methodology (Para. 74; Annex I, parts 3.1 - 3.3)

The “recommended” **methodology in the Annex** which the Commission considers to be “the most accurate” is **very prescriptive on the one hand, while being far from practice** on the other hand. It focusses on ‘achievable performance’ that can be relied upon **under ‘peak-time conditions’, i. e. “when a minimum 20% of the users are active and transmitting concurrently at the nominal peak rate”**, or, alternatively, but similarly unrealistic, relying on conditions described in recitals 4, 5, 9, 10 and 12 of Section 2, i.e. based on achievable performance under “peak-time conditions” **and on a too strict definition of premises passed.**

This proposed methodology would likely **lead to an underestimation and a distorted representation of actual speeds available to subscribers.** As a consequence, it has the potential to **inflate the number of addresses/areas eligible for funding** – areas classified as “black” today would then be classified as “grey” or “white”. The underestimation is likely to occur due to the following:

- **The methodology does not reflect the real experience of users.** It assumes that only if a minimum of 20% of the users are active and transmitting concurrently at the nominal peak rate downstream and upstream, is the overall connectivity in the area sufficient and satisfactory for users. Yet, the assumption is far from reality. Of course, network operators take peak load factors into account for network dimensioning. **Yet, peak load factors are rather driven by typical use cases for different user groups and can be very different across the EU reflecting national circumstances.** Therefore, the recommended methodology is not a methodology that network operators use when dimensioning network capacity. To the contrary, it will generate inconsistent and likely less reliable results compared with nationally proven approaches. Ultimately, this also means that it is dubious that this methodology is the “most accurate”, as claimed in para. 74 of the draft Guidelines.
- **The proposed methodology adds complexity**, emanating, amongst others, from the fact that a network operator offering wholesale services has limited insights into the access seeker’s advertising, product portfolio and usage assumptions within its capacity dimensioning methodologies,
- **the proposed methodology is not in line with multiple national methodologies used for other purposes, e.g. for “Broadband Atlases”**, and will therefore generate severe inconsistencies between closely related processes and overall increases administrative load.

For these reasons, rather the technically or theoretically maximum achievable bandwidth at the address should be the recommended methodology – as this is a methodology easy to use. An alternative, fallback solution might be the maximum bandwidth according to the Open Internet Regulation (Regulation (EU) 2015/2120). An advantage of this methodology is that it is already applicable across the EU in connectivity contracts between operators and end-users.

In any case, in order to limit the bureaucratic burden on operators, duplication of mapping exercises (worse still on the basis of different methodologies) must be avoided. Therefore, the reference in para. 74 of the draft Guidelines to the recommended mapping methodology or **the too narrow conditions for alternative methodologies described in recitals 4, 5, 9, 10 and 12 of Annex I** must be deleted. Alternatively, the conditions described in recitals 4, 5, 9, 10 and 12 of Annex I must be replaced by a **broader framework for alternative methodologies**, at least allowing for those which are based on harmonized speed concepts, such as the Open Internet Regulation.

Lastly, while we support that mapping is carried out on the basis of “premises passed”, **the requirement of a connection and activation period of 4 weeks in recital 10 of the Annex I cannot be used to determine a market failure and thus serve as justification for state aid, as it ignores the fact that the activation period mainly depends on factors outside of the control of network operators:** difficulties in identifying and reaching out to the property owner and the janitor, to announce the requested installation wish, and corresponding rollout plans on private ground, plus, if need be, including inhouse,

and the necessity to agree on time and conditions for the necessary works on the private property. Most recently, also global supply shortages and shortages in electricians' availability have aggravated the situation. Thus, there are considerable transaction costs involved in this process.

Therefore, the suggested 4-week timeline largely is too short. Yet, this does not mean that extending the time period would remedy the **inappropriateness of the definition**. **In fact, if market failure were established on the basis of this questionable definition, this would trigger a 100% overbuild of the existing network with state aid to up to the same point (up to the curb), and no further, for the reasons described above, beyond the control of the aid beneficiary.** To overcome the challenges described (consent of home owner; potential need to rollout new inhouse infrastructure), **vouchers for home owners might be a much more (cost-) efficient, appropriate and effective approach**, providing an incentive effect for this stakeholder group (see also below, II.5 "Vouchers").

Instead, the definition of "premises passed" must be based only on the availability of the passive network at the curb to the private property.

To summarize, the **requirement to refer to (extreme) peak time conditions, and an unchanged definition of "premises passed" result in a distorted picture of the actual coverage situation in terms of available bandwidths.** A market failure, and thus justification for state aid, **cannot be concluded based on these concepts far from practice.** Investments made in technologies which serve customers' needs well and more than sufficiently would be **crowded out by these overly strict concepts.**

II.2 White/grey/black area definition for fixed networks (Guidelines 55-61)

We support that the EU Commission sticks to the **white/grey/black area logic** when assessing the legitimacy of state aid. This takes due account of the fact that on the one hand, the probability of a market failure decreases, and the distortion of competition immanent to state aid for broadband on the other hand, increases depending on the "colour" of the area: The **probability of a market failure is highest in white areas, and generally not given in black areas.** Thus, there is least distortion emanating from state aid for white areas, and most from state aid for black areas. Consequently, we also support that the EU Commission takes a graded approach depending on the "colour" of the area concerned, attaching least conditions to state aid for white areas, more conditions to state aid for grey areas, and in principle ruling out (with exceptions) state aid for black areas. Furthermore, we support that the EU Commission bases the "colour" logic for the years to come on the existence of an ultrafast broadband network (providing at least 100 Mbit/s), rather than on the existence of an NGA network, as before.

However, while we fully support the assumption of the EU Commission that the existing infrastructure competition in black areas guarantees that (evolving) customer needs will be met by the market, and that as a rule, there is neither a need nor legitimacy for state aid in these areas, **we see with great concern several new levers in the draft Guidelines and the Annex which lower the eligibility of black areas for state aid:** one potential lever is the recommended methodology for mapping, potentially turning black areas into grey areas (see II.1 above). Another lever is contained in para. 60, **introducing a new upload-related intervention threshold (200 Mbps), deviating from the intervention thresholds in the most recent state aid decision of November 2020 on the National Gigabit Scheme for Germany.** Furthermore, while para. 61 as such rightly states that *if at least two ...existing networks can be upgraded to... 1 Gbps download, it can be assumed that... competition will lead to ... upgrade to 1 Gbps download, 200 Mbps upload (and state support ...will, in principle, lead to... unacceptable distortion of competition)*, **footnote 55 is worrying** here: upgradable to 1Gbps is defined as meaning limited investment, such as active equipment upgrade only. **This means in practice, that aid becomes de facto possible in black areas where no parallel, upgraded Docsis, and FTTH networks exist.** Even in the case of a parallel Docsis 3.1 and FTTB network, aid becomes possible, as FTTB networks are not upgradable to the required speed on the basis of active equipment only.

These options severely hamper planning certainty for investors in areas with well-functioning infrastructure competition already providing at least ultra-fast broadband. In addition, it is not comprehensible, why in black areas, a need is perceived for 2 parallel gigabit networks, one of them supported by state aid. **Therefore, para. 61 and footnote 55 must be deleted, as well as the new upload intervention threshold introduced in para. 60.**

As a consequence, also paras.104 and 105 of the draft Guidelines must be deleted: They imply that state aid might be allowed also in presence of at least 2 independent network/s providing 1 Gbps download

speed (and 200 Mbps upload speed) but not 1 Gbps upload speed. This provision, too, opens black areas with functioning infrastructure competition to public intervention. Indeed, even though it is true that upload is becoming more important, the specific future relevance and bandwidth demand of upload remains difficult to predict, especially for the mass-market. **Yet, the existing infrastructure competition in black areas will guarantee that evolving needs of end users are being met. Opening black areas for public intervention** – be it on the basis of an assumed future upload demand not met by the market, or any other grounds - **will crowd out private investments in FTTH** or other VHC networks **made in the past, currently made or planned for the years to come.** Therefore, also this provision should be deleted. This would be a **detrimental signal to capital markets** at a time, when, according to the Commission's own estimates, total annual investment gap for the digital transformation remains significant and is estimated to amount to EUR 125 billion, including EUR 42 billion in communication networks

Finally, in view of the crowding-out risk in both grey and black areas, we support that para. 97 states that aid “can be subject, where justified, **to a private investment protection period**, of in principle up to 7 years”. This requirement should be **mandatory for all state aid projects in areas with ultrafast networks** already in place.

II.3 “Step change” definition for fixed (Para. 99)

DT proposes to amend the following requirement for a step change for white areas: *“Below 30 Mbps download speed: at least double the download speed and at least reach 30 Mbps download speed.”*

At the current stage using state aid for rollout of networks reaching 30 Mbps speed or simply doubling the download speed in a white area is clearly inefficient. It would mean that the funded network is still very far from the connectivity targets for 2030. Therefore, if state aid is used, the funded network should provide gigabit connectivity right away.

Also, and more importantly, the step change requirement in para.106 re. grey areas should be amended, clarifying that the tripling of the download speed, and sufficient upload increase must be realized at the basement of the building. The reason is that speeds at household/apartment level depend on the homeowner's consent to upgrade inhouse cabling, or to upgrade the inhouse cabling itself.

III.4 Wholesale obligations (Paras.142-153)

The EU Commission seems to ignore the fact that in state aid projects, the beneficiary operator invests to the same degree as in other areas where no aid is granted, as only the profitability gap is closed by state aid. Therefore, the **scope of obligations** in the subsidised expansion **should not exceed the regulatory scope**. Access to an active product (Layer2 BSA) is already sufficient. Anyway, access to dark fibre as proposed can only contain dark fibre lines within the access network.

We do not believe that access on fair and non-discriminatory terms should be synonymous with an obligation to expand the infrastructure (upgrade and increase capacity). Access is generally a right to participate in an existing network and not an obligation to expand or continue to build the existing network.

The existing regulation, according to which **access is to be granted for seven years, is to be retained**. There is no reason to deviate from this time requirement.

It is also not comprehensible why the subsidized network should be dimensioned in such a way that 3 networks can be operated. The utilization of the subsidized network would be reduced if the demand were to be distributed over a total of three networks.

With regard to **private extensions** (paras. 147-149), it should be clarified that “on the basis of the wholesale access conditions” means availing of the active wholesale access obligations of the funded networks. In addition, to avoid any doubts, it should be clarified that the private extensions will not be subject to the wholesale access obligations.

Wholesale access prices can among others be based on prices in more competitive areas of the Union (para. 151a). The prices in other EU Member States should not – as such - be used as a benchmark, as numerous parameters such as for example network structures, pricing principles etc. cannot be compared. Moreover, civil engineering costs differ significantly in Europe as EuroStat.³ showing that in Germany they are more than double the cost in countries like Hungary or Portugal. “Wrong” prices could lead to distortions of competition on the national market. They can also lead to under-investments in infrastructure if investors risk regulated access at too low prices. **The introduction of cost-oriented prices (para. 151 c), provided that there are neither regulated nor market prices would be a severe intervention and would be administratively burdensome.** This becomes another, completely excessive *ex ante* regulation that should be avoided. **Guideline 151 c should be deleted.** In reality, there should be sufficient benchmarks from commercial and regulated prices to serve as reference points to establish fair and reasonable prices.

II.5 Vouchers (Paras. 171-201)

Under certain circumstances also “supply-side” support for network deployment via vouchers might be justified in white or grey areas. This might in particular be the case for inhouse ducts or cables – which are often missing altogether, or not fit for gigabit speeds. In general, it is either the homeowner’s responsibility to provide at least for inhouse ducts, possibly including dark fibers. Alternatively, the homeowner’s consent is necessary for deploying inhouse wiring. **Providing vouchers for homeowners for inhouse wiring** in white or grey areas might incentivize them to seize the opportunity (limited in time, by the limited duration of a voucher scheme), and thus have the passive inhouse infrastructure installed or modernized so that network operators can deliver gigabit speeds. Such voucher schemes would help to overcome the complex transaction costs existing at the interface of public and private grounds described above.

Furthermore, deployment and demand often go hand in hand. More than that, in areas where new VHCNs are planned and advertised to prospective customers, it is quite difficult to distinguish between “deployment” and “encouragement of demand”, while from the operational perspective higher interest from potential customers to take up a VHCN subscription leads to higher incentives to deploy a VHC network in these areas. Footnote 122 supports this correlation, and also vouchers for homeowners, for inhouse wiring.

Last, but not least, vouchers for alternative technical broadband solutions such as fixed-wireless access, satellite or radio relay, can be a necessary and **cost-efficient solution for homeowners in underserved, isolated locations** – in particular those addresses where no network rollout is planned mid-term in the vicinity.

III. Funding for mobile broadband

III.1 Mapping and measurement methodology (Para.74, Annex I, parts 4.1 - 4.2)

The recommended methodology is strict, prescriptive and far from practice also for mobile networks. The highest risk that we see is that without a comprehensive, given set of planning parameters and performance requirements the calculation results will differ significantly among operators and there will therefore only be a limited basis for an objective evaluation of the reachable network performance and user experience. Just to mention one parameter: Topology cannot be addressed in a one-size-fits-all calculation model, yet it has an impact on network performances.

On the other hand, even if the European Commission provided such comprehensive list of parameters and requirements, in many cases it would very likely fail to capture important national circumstances, first of all for the following reasons:

- The methodology **aims to approximate user experience**, thus necessarily implying numerous assumptions. Yet, it is extremely complex to wholistically simulate user experience. For example, the 50% cell load suggested does not take into account that **actual network load may be to a**

³ [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Price_level_indices_for_construction_and_its_components,_2020_\(EU%3D100\)_v1.png](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Price_level_indices_for_construction_and_its_components,_2020_(EU%3D100)_v1.png)

much larger extent dependent on the type of content that users transmit at a given time rather than how many users are simultaneously transmitting. For instance, one user with heavy traffic needs (e. g. high-quality video stream or online gaming) may cause more load than a dozen users using their connection for emails or other applications with comparably low data intensity.

- **Where license obligations are in place**, operators need to take these into account when **deploying the infrastructure and the site grid to comply with these, in addition to their intrinsic interest of ensuring a future-proof network performance.** A potential need to increase network performance to meet the requirements of a new methodology would demand a rapid densification of the site grid, which could not be realized on the basis of currently planned deployment but would require massive additional network deployment.

Most importantly, **many Member States have been extensively using other methodologies for various other mapping purposes:** for assessment of compliance with obligations under the individual rights to use spectrum, for transparency on mobile coverage to the public, and for identifying market failure as a basis for state aid, for example in Germany, where state aid schemes for mobile broadband have already been launched. These methodologies have been tested in practice, are easier to apply and consequently also to verify. For example, compliance with coverage obligations by the German NRA is defined and measured in the form of bandwidth/capacity expressed as a certain requisite signal level available (and measured) at the site edge. Any different methodology used in parallel to assess network capability will almost certainly generate different results, therefore reducing credibility of network coverage measurements by the NRA.

Individual rights for spectrum usage are increasingly encompass demanding conditions for not only coverage but also quality. For example, in Germany, the biggest European market where Deutsche Telekom is active, the most recent spectrum licences awarded require 5G be provided to 98% of the population in every federal state at 100 Mbps speed or higher. Additionally, national highways, 1-grade motorways and railroad segments with min. 2000 passengers, and 500 “white spots” notified by the federal states, have to be covered with at least 100Mbps speed.

Indeed, we are strongly convinced that the **methodology used to determine the absence of sufficient network coverage as a precondition for state aid should be the same as used for determining the presence of network coverage under the conditions and obligations of individual rights of use for radio spectrum, especially given the rule that state aid cannot be used for meeting the coverage obligations.**

To summarize, in the end, the proposed methodology would be a “black box”, prone to purpose-oriented results, and a fake picture of the actual coverage. **Based on the reasons outlined above, the recommended measurement methodology** (including recitals 4, 5, 8 – 10, 12 of Annex I describing conditions to be applied when implementing alternative methodologies) **should be abandoned. Member States should continue using their current methodologies, first of all those which are used to determine compliance with obligations under the individual right of use for radio spectrum.**

III.2 Funding of active vs. passive mobile infrastructure

The draft Guidelines rightfully acknowledge that, in contrast to previous generations of mobile networks including 5G non-standalone, the 5G standalone networks are expected to enable more performant mobile data services, including lower latency and higher transmission capabilities, and allow advanced usage scenarios and applications. This presumption is further analyzed in the context of the “step change” concept: it is mentioned that 5G standalone is likely to be a step-change in comparison with previous generations and with 5G non-standalone networks. The draft Guidelines are however less clear if a change from 4G to 5G non-standalone may qualify as a “step change”.

Article 52a para. 3 of the valid Commission Regulation No 651/2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (GBER) is more precise in this respect: it outlines the rule that only transition from 3G to 5G and 2G to 4G, but not 4G to 5G should be eligible for public funding. Further, in para. 6 it is clearly stated that *“a step change takes place if, as a result of the subsidised intervention, a significant new investment in the mobile network is undertaken and the subsidised network brings significant new capabilities to the market in terms of*

mobile service availability, capacity, speeds and competition compared to the present or credibly planned networks. The project must include substantial investments in passive infrastructure going beyond marginal investments related merely to the upgrade of the active elements of the network.” **We consider this GBER-based standard of “significant new capabilities and significant new investment (in passive access infrastructure)” as fundamental, with which also the final Guidelines have to be consistent.**

The definition of “step change” under the GBER however exposes the difficulty of using technological generations as thresholds for establishing such change. This difficulty is first of all clearly visible in the insufficiently clear parts of the Guidelines we cite at the beginning of this section. Indeed, in many cases neither a transition from 4G to 5G non-standalone, nor from 5G non-standalone to 5G standalone may require significant new investment in passive infrastructure: 5G non-standalone may be implemented on legacy spectrum bands as a software upgrade in the 5G-ready RAN network. A subsequent transition of 5G non-standalone to 5G standalone is a matter of core network upgrade, and not a RAN upgrade. As a result, **transition between generations in itself is not a valid criterion determining significant new investment going beyond incremental upgrades of active elements of the network.** Under normal circumstances, i. e. when a 4G network is already available to a significant extent, **only actual significant investment first of all in passive infrastructure necessary for a densification of a 5G network meets the letter and spirit of the “step change” definition, and not a nominal transition to 5G.**

Based on the above, the final **Guidelines have to clearly adopt the definition of step change under the GBER which focusses on “substantial investments in passive infrastructure going beyond marginal investments related merely to the upgrade of the active elements of the network” and shall avoid making any references to technology upgrades qualifying as “step change”.**

As a result, only passive infrastructure should under normal circumstances be eligible for state aid.

III.3 Wholesale obligations for mobile access networks (Para.139)

The draft Guidelines suggest that for publicly funded mobile network elements *“the widest range of wholesale access products, including among others bitstream access, access to poles/masts/towers, and, as they become available, those access products necessary to exploit the most advanced features of 5G and future mobile generations networks.”* should be available.

Footnote 97 cites *“Roaming, Multi-Operator-Access- Network (MORAN), Multi-Operator Core Network (MOCN), network slicing”* as forms of access covered by the guidelines.

These recommendations appear to aim at maximizing access obligations irrespective of efficiency and proportionality considerations, thereby opening the way for access requirements which are **disproportionate, unsuitable or outright technically unfeasible.** Overall, the **focus should be on non-discriminatory rather than “widest possible” access.**

National authorities should aim for a market consensus on where an effective and efficient point of access to publicly funded network elements is located. We have outlined above that under normal circumstances **only passive mobile infrastructure should be eligible for funding to ensure there is a “step change.” Accordingly, open access requirements** in the case of state aid for mobile networks **should as a rule be limited to passive infrastructure access. Beneficiaries of such aid – in particular tower companies –** are generally not in a position to grant active access such as “roaming” and should not - and cannot - be forced to do so. Practical implementation of “open access” at the core network level is even more problematic. **Passive access preserves existing infrastructure competition in mobile (s. below), leading to better performance for all end-users.** Based on our experience, the essential challenge for improving coverage and performance, from both financial and operational perspective is investment in and rollout of passive infrastructure, not active. Once passive infrastructure is built with state aid, active technology extensions are less problematic. At the same time, the subsidized passive infrastructure enables infrastructure competition. If the Guidelines nonetheless foresaw that, exceptionally, active equipment would also be covered by state aid, access should be reciprocal, as there are several mobile network operators active in each market and reciprocal terms and conditions are least distortive to infrastructure competition. Also, we see a slight inconsistency between para. 139 and footnote 97. The former refers by definition only to (local) “access networks” (RAN), while

the latter refers to "slicing" as a core function of the entire network, which cannot be limited to local access network.

The Guidelines should explicitly recognize the fact that all EU mobile markets are characterized by infrastructure competition on a national scale in retail markets as well as in wholesale markets for passive and active access to mobile networks, providing consumer benefit in terms of high quality, broad choice of services etc. **While publicly funded infrastructure may overcome a specific identified market failure in a certain area, it should not alter the sustainably competitive market structure, but instead enable nation-wide players to extend their network reach further to better serve citizens and businesses.**

The **draft Guidelines** instead appear to be modelled after the open access rules for fixed networks, with **detrimental consequences for investment incentives**. For example, a **"network slice" is a software-based virtual network that is not, and cannot reasonably be, limited to publicly funded sites**. In fact, it does not "square" with the concept of access to publicly funded infrastructure in the first place. It is a service specifically offered by a mobile network operator, or a third party, to fulfill a specific demand, e. g. for quality of service of a business user. It is unclear how – or indeed why – public funding for a specific mobile site or subset of sites could result in an access obligation for a 'network slice' which would require service-level guarantees across the entire MNO network. In a more general sense, access on the active level of mobile networks is technically extremely demanding and costly – as the experience in the framework of the grey-spot sharing with MOCN (German example) has shown. In summary, open access requirements must be aligned with the relevant funding scope – normally, access to passive infrastructure for mobile networks. **If access requirements are too broad**, this might make an aid scheme too unattractive for MNOs to participate and could **negatively affect existing investment** as well as **significantly distort competition**.

Proposal: **as normally only passive mobile infrastructure should be eligible for funding to ensure there is a "step change" (see previous part above), also, accordingly, open access requirements should as a rule be limited to passive infrastructure access.**

III.4 "Step change" definition for mobile

As we have stressed above in part III.2, **the "step change" definition under the GBER should be used**, as it refers to the essence of improvements brought about by any major funding of telecom networks, public or private: a significant new investment in the mobile network is undertaken bringing new capabilities to the market, including substantial investments in passive infrastructure going beyond marginal investments related merely to the upgrade of the active elements of the network.

Based on that, the final Guidelines should avoid any references to "generations" of mobile communications (such as 2G, 3G, 4G and 5G) in the context of defining a step change, as upgrades from one such generation to another not necessarily imply new capabilities let alone substantial investment into new passive infrastructure. There is no time pressure to have 5G standalone subsidies, as many operators are already starting to roll out this technology on a wide scale. For Germany, at least, it is expected that the rollout will be completed in the medium term by all MNOs.

Instead, **the final Guidelines have to clearly adopt the definition of step change under the GBER which focusses on "substantial investments in passive infrastructure going beyond marginal investments related merely to the upgrade of the active elements of the network"** and shall avoid making any references to technology upgrades qualifying as "step change".

In the future, based on the proliferation of new use cases especially for industrial users, it may be necessary to split the assessment for needs of residential and business customers, based on concrete use cases. The proposals included in paras. 62, 66 and 67 may prove to be too generic in this respect. Yet, for the time being, a more detailed definition, is hardly feasible, given the current state of 5G standalone deployment.