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COMMUNICATION FROM THE COMMISSION

Guidelines on State aid for broadband networks

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1 INTRODUCTION

- (1) Connectivity is the most fundamental building block of the digital transformation. It is of strategic importance for growth and innovation in all economic sectors of the Union and for social and territorial cohesion.
- (2) The Union has set ambitious connectivity objectives in the ‘Gigabit Communication’¹, the Communication on ‘Shaping Europe’s digital future’², the ‘Digital Compass’ Communication³ and in its proposal for a decision establishing the 2030 Policy Programme ‘Path to the Digital Decade’⁴ (Digital Decade Policy Programme, DDPP).
- (3) In the Gigabit Communication, the Commission set out the following connectivity objectives for 2025: (i) all Union households, rural or urban, should have an internet connectivity of at least 100 Mbps download speed, upgradable to 1 Gbps; (ii) socio-economic drivers, such as digitally intensive enterprises, schools, hospitals and public administration should benefit from Gigabit connectivity (1 Gbps upload and download); and (iii) all urban areas and major transport paths should have an uninterrupted 5G coverage.
- (4) The Communication on Shaping Europe’s digital future explains that the term ‘100 Mbps, upgradable to Gigabit speed’ reflects the Commission’s expectation that, as the decade progresses, households will increasingly need 1 Gbps speed.
- (5) The Digital Compass Communication envisages that, by 2030, all Union households should be covered by a Gigabit network⁵, and all populated areas should be covered by 5G. The DDPP proposal underlines that ‘*Societal needs for upload and download bandwidth are constantly growing. By 2030, networks with gigabit speeds should become available at accessible conditions for all those who need or wish such capacity*’.
- (6) To achieve the Union’s objectives for 2025 and 2030, adequate investments are needed. Such investments primarily come from commercial investors and may be complemented, where necessary, by public funds, in accordance with State aid rules. The Communication on shaping Europe’s digital future indicates an estimated overall

¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions of 14 September 2016, ‘Connectivity for a Competitive Digital Single Market - Towards a European Gigabit Society’ (COM/2016/0587 final).

² Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee the Committee of Regions of 19 February 2020, ‘Shaping Europe's digital future’ (COM/2020/67 final).

³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee the Committee of Regions of 9 March 2021, ‘2030 Digital Compass: the European way for the Digital Decade’ (COM/2021/118 final).

⁴ Proposal for a Decision of the European Parliament and of the Council establishing the 2030 Policy Programme ‘Path to the Digital Decade’, COM(2021) 574 final, 2021/0293 (COD).

⁵ At the current stage of development, fibre to the home, fibre to the building and Docsis 3.1 (performant cable networks) are able to deliver 1 Gbps download speeds.

investment gap of EUR 65 billion per year for digital infrastructure and networks in the Union.

- (7) The COVID-19 pandemic underlined the role of performant electronic communications networks for people, businesses and public institutions. On 27 May 2020, the Commission put forward its proposal for a major recovery plan to mitigate the economic and social impact of the pandemic, NextGenerationEU⁶. One of the key priorities of the Recovery and Resilience Facility⁷ ('RRF') is to support the digital transition, through connectivity measures aimed in particular at bridging the digital divide between urban and rural areas and at addressing market failures with respect to the deployment of performing networks. The RRF Regulation requires that each Member State devote at least 20% of the allocated funding to measures fostering the digital transition.
- (8) Moreover, electronic communications networks can help achieving sustainability goals. The Union's 2050 objective of climate neutrality, as set out in the European Green Deal Communication⁸, cannot be reached without a fundamental digital transformation of society. One of the essential components of the digital transformation of the Union is the development of secured and performant electronic communication networks that help making an important contribution to the main Union's environmental objectives. At the same time electronic communications networks themselves will have to become more sustainable and energy and resource efficient.
- (9) The electronic communication sector has undergone a thorough liberalisation process and is now subject to sectoral regulation. The European Electronic Communications Code (the 'Code') was established by Directive (EU) 2018/1972 of the European Parliament and of the Council⁹. The Code provides the regulatory framework for electronic communications, including the possibility of national regulatory authorities ('NRAs') to impose access remedies on undertakings with significant market power¹⁰. The market for wholesale local access at a fixed location is subject to *ex ante* regulation in almost all Member States. Such regulation is important to foster competitive markets, to encourage investment and to increase consumer choice. Further deployment of broadband networks continues to require the intervention of the

⁶ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic And Social Committee and the Committee of the Regions of 27 May 2020, 'Europe's moment: Repair and Prepare for the Next Generation', COM(2020) 456 final.

⁷ Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility (OJ L 57, 18.2.2021, p. 17) and Council Regulation (EU) 2020/2094 of 14 December 2020 establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 crisis (OJ L 433I, 22.12.2020, p. 23).

⁸ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions of 11 December 2019, 'The European Green Deal' (COM (2019) 640 final).

⁹ Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (OJ L 321, 17.12.2018, p. 36).

¹⁰ See Article 73 of Directive (EU) 2018/1972.

NRA due to their role, among others, in ensuring effective competition of the electronic communications sector.

- (10) Competition policy, and State aid rules in particular, have an important role to play in fulfilling digital strategy objectives and developing a co-ordinated investment strategy for connectivity. The purpose of State aid control in the broadband sector is to ensure that State aid measures will result in a higher level of broadband coverage and use than would be the case without State aid, while supporting higher quality, more affordable services and pro-competitive investments. Any State intervention should limit as much as possible the risk of crowding out private investments, of altering commercial investment incentives and ultimately of distorting competition contrary to the common interest.
- (11) In 2020, the Commission launched an evaluation of the 2013 Broadband Guidelines¹¹ to assess whether they were still fit for purpose. The results¹² showed that, in principle, the rules work well. However, the evaluation also showed that some targeted adjustments are needed. In particular, the Broadband Guidelines should be adapted to reflect recent legislative developments, current priorities, as well as market and technology developments¹³.

2 SCOPE, TYPE OF BROADBAND NETWORKS, DEFINITIONS

2.1 Scope

- (12) To prevent State aid from distorting or threatening to distort competition in the internal market and affecting significantly trade between Member States, Article 107(1) of the Treaty on the Functioning of the European Union ('the Treaty') lays down the principle that State aid is prohibited¹⁴. In certain cases, however, such aid may be compatible with the internal market on the basis of Article 107(2) and 107(3) of the Treaty.
- (13) Member States are required to notify State aid pursuant to Article 108(3) of the Treaty, with the exception of measures that fulfil the conditions laid down in Commission Regulation (EU) No 651/2014¹⁵.
- (14) These guidelines provide guidance on how the Commission will assess, on the basis of Article 106(2), Article 107(3) point (c), and Article 107(2) point (a), of the Treaty, the

¹¹ Communication from the Commission of 26 January 2013, 'EU Guidelines for the application of State aid rules in relation to the rapid deployment of broadband networks', OJ C 25, 26.1.2013 (the 2013 'Broadband Guidelines').

¹² See the Commission Staff working document on the results of the evaluation of 7 July 2021, SWD (2021) 195 final.

¹³ See the Commission staff working document executive summary of the evaluation of the State Aid rules for broadband infrastructure deployment {SWD(2021) 194 final}

¹⁴ See also Section 2.1 of the Broadband Guidelines.

¹⁵ Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (OJ L 187, 26.6.2014, p. 1).

compatibility of State aid for the deployment and/or take-up of fixed and mobile broadband electronic communication networks.

- (15) Public interventions not fulfilling one of the conditions laid down in Article 107(1) of the Treaty do not constitute State aid¹⁶. Consequently, they are not subject to the compatibility assessment principles laid down in these guidelines.
- (16) Union funding centrally managed by the institutions, agencies, joint undertakings or other bodies of the Union that is not directly or indirectly under the control of Member States¹⁷ does not constitute State aid.
- (17) Aid for deployment and/or take-up of broadband electronic communications networks may not be awarded to undertakings in difficulty as defined by the Commission Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty¹⁸.
- (18) When assessing aid in favour of an undertaking that is subject to an outstanding recovery order following a previous Commission decision declaring an aid illegal and incompatible with the internal market, the Commission will take account of the amount of aid still to be recovered¹⁹.

2.2 Definitions

- (19) For the purposes of these guidelines, the following definitions apply:
 - a) ‘*broadband electronic communications network*’ means a network able to provide high-speed internet access via various technologies and includes active and passive components;
 - b) ‘*fixed network*’ means an electronic communications network providing high-speed data transmission services to end-users at a fixed location using a variety of technologies, including cable, Digital Subscriber Line (‘DSL’), fibre optics, and wireless;
 - c) ‘*mobile network*’ means a wireless electronic communications network which provides connectivity to end-users at any location in the area covered by the network using various generations of mobile technology (2G, 3G, 4G, 5G, 6G, etc.);

¹⁶ Annex II presents a comprehensive, but not exhaustive, overview of instances in which the application of State aid rules or the existence of State aid may be excluded.

¹⁷ Such as funding provided under Connecting Europe Facility (CEF) - OJ L 249, 14.7.2021, p. 38–81 - Regulation (EU) 2021/1153 of the European Parliament and of the Council of 7 July 2021 establishing the Connecting Europe Facility and repealing Regulations (EU) No 1316/2013 and (EU) No 283/.

¹⁸ Communication from the Commission ‘Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty’ (OJ C 249, 31.7.2014, p. 1).

¹⁹ See the Judgment of the Court of First Instance of 13 September 1995, *TWD v Commission*, Joined Cases T-244/93 and T-486/93, ECLI:EU:T:1995:160, paragraph 56. See also the Communication from the Commission ‘Commission Notice on the recovery of unlawful and incompatible State aid’ (OJ C 247, 23.7.2019, p. 1).

- d) ‘*access network*’ means the segment of a broadband electronic communications network connecting the backhaul network with the end user premises;
- e) ‘*backhaul network*’ means the part of the broadband electronic communications network which constitutes the intermediate link between the backbone network and the access network and which does not connect end-users.;
- f) ‘*backbone network*’ means the core network that interconnects backhaul networks; it consists in the portion of the network where the traffic of all end-users is aggregated, that connects different areas or regions ;
- g) ‘*active network*’ means a broadband network with active components (for instance transponders, routers and switches, radio base stations, control and management servers) and passive components (for instance ducts, poles, masts, dark fibres, cabinets and manholes);
- h) ‘*passive network*’ means a broadband network without any active component and typically comprises the physical part of the network (pipes, masts, ducts, inspection chambers, manholes, street cabinets, towers and poles, etc.) and broadband cables (dark fibre, copper cables, etc.);
- i) ‘*speed*’ means the performance, based on the number of bits per second, of a connection, as defined in recital (5) of Annex I;
- j) ‘*ultrafast access network*’ means an access network providing at least 100 Mbps download speed as defined in recital (19)i);
- k) ‘*end-user*’ means a natural or legal person (citizens, businesses, public administrations) using or requesting electronic communications services;
- l) ‘*relevant time horizon*’ means a time horizon used for verifying planned private investments and corresponding to the time frame of the planned deployment of the State funded network, starting from the moment of publication of the public consultation on the planned State intervention until the entry into operation of the network (a provision of wholesale and/or retail services). The relevant time horizon cannot be shorter than two years.
- m) ‘*overbuilding*’ means deploying a State funded network on top of one or more privately financed networks.
- n) ‘*crowding out of private investors*’ means that public spending drives down or even eliminates private spending, for instance when a private investment in a fixed network and/or a mobile network is discontinued, dismantled, does not take place as planned or is disincentivised due to government subsidisation of an alternative investment;
- o) ‘*step-change*’ means a significant improvement delivered by the State funded networks, bringing substantial new infrastructure investments in the electronic communications networks and significant new capabilities to the market in

terms of broadband service availability, capacity, speed or other relevant characteristics of the network and competition;

2.3 Types of broadband networks

- (20) For the purposes of State aid assessment, these guidelines distinguish between fixed ultrafast access networks, mobile access networks and backhaul networks, as defined in Section 2.3.1-2.3.3.

2.3.1 Fixed ultrafast access networks

- (21) For the purposes of State aid assessment, these guidelines consider fixed ultrafast access networks as networks which provide at least 100 Mbps download speed at a fixed location as defined in recital ((19)j).
- (22) At the current stage of technological development, there are different types of fixed ultrafast networks, including: (i) fibre-based networks (FTTx)²⁰; and (ii) advanced upgraded cable networks using at least the ‘DOCSIS 3.0’ standard. Wireless networks such as certain fixed wireless access networks²¹ and in the future satellite networks²² may also be able to provide ultrafast broadband services.

2.3.2 Mobile access networks

- (23) At the current stage of market and technological development, several generations of mobile technologies coexist²³.
- (24) The transition to each new mobile generation is generally incremental²⁴. At the current stage, 4G networks continue to be deployed in some parts of Europe and deployments

²⁰ FTTx refers to various type of networks including fibre to the building (FTTB), fibre to the home (FTTH), fibre to the premises (FTTP) or fibre to the cabinet (FTTC). However, FTTC networks are able to provide ultrafast services only when using vectoring (technology that enhances the performance of VDSL).

²¹ In particular fixed wireless access networks based on 5G technology, potentially also other wireless technologies that include fixed radio solutions, especially the next generation of Wi-Fi (Wi-Fi6).

²² Satellite technology solutions are currently mostly used in remote or isolated areas in situations where they can provide a suitable level of fixed-line electronic communications services. While currently available satellites in the Union are still not able to provide ultrafast broadband services, more advanced satellites able to significantly improve the quality of broadband services and deliver ultrafast speeds are expected to become available in the future (e.g. Very High Throughput Satellite). Satellites are also expected to play a significant role in providing services to the public authorities. Furthermore, there are several Low Earth Orbit (LEO) satellite constellations under preparation, which are expected to be able to lower the latency and the cost of the services for the end-users.

²³ Propagation characteristics of spectrum bands determine their use. For instance, among the three pioneer bands identified for 5G services, it is estimated that 700 MHz is suitable for wide area and indoor coverage, 3.6 GHz (3.4-3.8 GHz) is characterised by high capacity and high coverage, 26 GHz (24.25-27.5 GHz) is likely to be deployed in urban areas and sub-urban hot-spots areas with very high demand, for example transport hubs, entertainment venues, industrial or retail sites or along major roads and railway tracks in rural areas and will not be used to create wide area coverage. New mobile generations may also use frequency bands initially used by previous generations.

²⁴ Cellular technologies have had a life cycle of approximately 20 years from launch. Several subsequent versions of 2G (so called 2G enhanced or 2.xG) were superior to 2G itself. Incremental upgrades over 3G (so-called 3.xG versions) had better performances in comparison to 3G. Also in case of 4G, 4.5G cellular

of 5G non-standalone networks rely on existing 4G Long Term Evolution ('LTE') core networks. In a next stage, the 5G network will become standalone and not rely on LTE. By contrast to previous generations of mobile technology, 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.

- (25) To ensure the most effective and efficient use of radio spectrum Member States may attach conditions to individual rights of use for radio spectrum, such as coverage and quality of service obligations. Such obligations may include geographical and/or population coverage with certain minimum quality of service requirements²⁵.

2.3.3 Backhaul networks

- (26) Backhaul networks are necessary inputs to sustain both fixed and mobile access networks. Backhaul networks can be based on copper, fibre optic, microwave and satellite solutions²⁶.

3 THE COMPATIBILITY ASSESSMENT UNDER ARTICLE 106(2) OF THE TREATY

- (27) In some cases, Member States may define the provision of broadband electronic communications services as a service of a general economic interest ('SGEI') within the meaning of Article 106(2) of the Treaty²⁷ and provide public funding for the deployment of a network to provide such services on this basis.
- (28) In such cases, Member States' measures will be assessed according to the rules applicable to State aid in the form of public service compensation ('the SGEI package')²⁸. These guidelines only illustrate the definition of a SGEI, in application of

communication system is better than 4G in several aspects. 4.5G is the outcome of the LTE evolution whose legacy is LTE Advanced. 5G standalone networks can offer significant improvements in speed and latency while supporting a greater density of connected devices in comparison with previous generations.

²⁵ For instance, to date coverage obligations attached to some spectrum bands require, depending on types of spectrum, a coverage of a certain percentage of population and/or territory and minimum quality requirements in terms of speed and latency. The coverage obligations are typically to be fulfilled within a period of up to 5 years from the assignment of the relevant spectrum, and exceptionally up to 7 years.

²⁶ In the early generations of cellular the backhaul, from the radio base station to the mobile switching centre, was largely provided by point to point microwave connections. The deployment of LTE and the introduction of 5G have led to higher backhaul requirements and an increasing use of optical fiber networks also to connect base stations.

²⁷ According to case-law, undertakings entrusted with the operation of services of general economic interest shall have been assigned that task by an act of a public authority. For instance, a SGEI may be entrusted to an operator through the grant of a public service concession; see judgment of the Court of First Instance of 13 June 200, *EPAC - Empresa para a Agroalimentação e Cereais, SA v Commission*, joined Cases T-204/97 and T-270/97, ECLI:EU:T:2000:148, paragraph 126 and Judgment of the Court of First Instance of 15 June 2005, *Fred Olsen, SA v Commission*, T-17/02, ECLI:EU:T:2005:218, paragraphs 186, 188-189.

²⁸ The SGEI Package includes the Commission Communication on the application of the European Union State aid rules to compensation granted for the provision of services of general economic interest (OJ C 8, 11.01.2012, p. 4), the Commission Decision of 20 December 2011 on the application of Article 106(2) of the Treaty on the Functioning of the European Union to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest (OJ L 7, 11.01.2012, p. 3), Commission Communication on a European Union framework for State aid in the form of

the rules laid down in the SGEI package, to broadband electronic communications, in light of sectoral specificities.

- (29) Member States may define the deployment and/or the operation of a broadband network as a SGEI under the following conditions:
- a) The project must address a market failure, this is to say only in unconnected areas where it can be demonstrated that private investors are not in a position to provide adequate broadband coverage to all users in the relevant time horizon, thus leaving a significant part of the population unconnected²⁹. The Commission considers that in areas where private investors have already invested in a broadband network (or are further expanding the network) and are already providing competitive broadband services with an adequate coverage, setting up a parallel competitive and State funded broadband network - cannot be defined as a SGEI within the meaning of Article 106 (2) of the Treaty³⁰. However, where it can be demonstrated that private investors are not in a position to provide, in the relevant time horizon adequate coverage³¹ to all end-users, thus leaving a significant part of the population unconnected, an undertaking may be entrusted with the operation of an SGEI to ensure connectivity for the part of the population unconnected, in accordance with the rules applicable to State aid in the form of public service compensation.

public service compensation (2011) (OJ C 8, 11.01.2012, p. 15) and Commission Regulation (EU) No 360/2012 of 25 April 2012 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to *de minimis* aid granted to undertakings providing services of general economic interest (OJ L 114 of 26.4.2012, p. 8). At the time of drafting of these guidelines, the Commission has started the procedure for the evaluation of State aid rules for health and social services of general economic interest (SGEI) and of Commission Regulation (EU) No 360/2012.

²⁹ In implementing the provisions regarding Universal Service Obligations set out in Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (Recast) (OJ L 321, 17.12.2018, p. 36), a Member State may design universal service obligations and potential compensation thereof if it has established, taking into account the results, where available, of the geographical survey conducted in accordance with that Directive, and any additional evidence where necessary, that the availability at a fixed location of an adequate broadband internet access service and of voice communications services as defined in that Directive cannot be ensured under normal commercial circumstances or through other potential public policy tools in its national territory or different parts thereof.

³⁰ See paragraph 49 of the Commission Communication on the application of the European Union State aid rules to compensation granted for the provision of services of general economic interest. See also paragraph 154 of the judgment of the General Court of 16 September 2013, *Colt Télécommunications France v European Commission*, T-79/10, ECLI:EU:T:2013:463, and Commission Decision C(2016)7005 final of 7 November 2016 in case SA.37183 (2015/NN) – France – Plan France Très Haut Débit, recital 263 (OJ C 68, 3.3.2017, p.1).

³¹ The networks to be taken into consideration for assessing the need for an SGEI should always be of the same category (depending on the level of services defined as SGEI).

- b) the network must offer universal connectivity for all residential and business premises in the target area. Support for connecting businesses is not sufficient³²;
 - c) the network must be technologically neutral³³ and must offer wholesale-only services³⁴ (retail services being excluded)³⁵; and
 - d) the SGEI provider must offer all possible forms of open wholesale access on a non-discriminatory basis, fostering the provision of competitive and affordable services to end-users.
- (30) Where the provider of the SGEI mission is also a vertically integrated broadband operator, adequate safeguards should be put in place to avoid any conflict of interest, undue discrimination and any other hidden indirect advantages³⁶.

4 THE COMPATIBILITY ASSESSMENT UNDER ARTICLE 107(3), POINT (C), OF THE TREATY

- (31) The Commission will consider State aid for the deployment and/or take-up of broadband electronic communications networks compatible with the internal market pursuant to Article 107(3), point (c), of the Treaty only if the aid contributes to the development of certain economic activities or of certain economic areas (first condition), and where such aid does not adversely affect trading conditions to an extent contrary to the common interest (second condition).
- (32) In its compatibility assessment, the Commission examines the following aspects:
- a) Under the first condition, the Commission examines whether the aid is intended to facilitate the development of certain economic activities, and in particular:
 - (i) the economic activity facilitated by the aid measure;

³² In line with paragraph 50 of the Commission Communication on the application of the European Union State aid rules to compensation granted for the provision of services of general economic interest. See also Commission Decision C(2006)436 final of 8 March 2006, case N284/05 – Ireland – Regional broadband Programme: *Metropolitan Area Networks* ('MANs'), phases II and III (OJ C 207, 30.8.2006, p.3), and Commission Decision C(2007) 3235 final of 10 July 2007, case N890/06 – France – Aide du Sicoval pour un réseau de très haut débit (C 2018, 18.9.2007, p.1).

³³ A network should be technologically neutral and thus enable access seekers to use any of the available technologies to provide services to end users in line with the envisaged parameters of the public intervention.

³⁴ See Commission Decision C(2016)7005 final of 7 November 2016 in case SA.37183 (2015/NN) – France – Plan France Très Haut Débit, recital 263 (OJ C 68, 3.3.2017, p.1) pursuant to which the operator was not allowed to provide retail services (paragraph 163 of the decision).

³⁵ This limitation is justified by the fact that, once a broadband network providing universal connectivity has been deployed, retail operators operating on market terms are normally able to provide communication services to end-users at a competitive price.

³⁶ Such safeguards should include, in particular, an obligation of accounting separation, and may also include the setting up of a structurally and legally separate entity from the vertically integrated operator. Such entity should have sole responsibility for complying with and delivering the SGEI mission assigned to it.

- (ii) the incentive effect of the aid, in that it changes the behaviour of the undertakings concerned in such a way that they carry out an additional activity which they would not carry out without the aid or would carry out in a restricted or different manner or location;
 - (iii) the existence of a breach of any provision of Union law in relation to the measure at stake.
- b) Under the second condition, the Commission weighs up the positive effects of the planned aid and the negative effects that the aid may have on the internal market, in terms of distortions of competition and adverse effects on trade caused by the aid, and in particular:
- (i) the positive effects of the aid;
 - (ii) whether the aid is needed and targeted to addressing a situation where it can bring about a material improvement that the market cannot deliver itself, for example by remedying a market failure or addressing an equity or cohesion concern;
 - (iii) whether the aid is an appropriate policy instrument to meet its objective;
 - (iv) whether the aid is proportionate and limited to the minimum necessary to attain its objective and stimulates additional investment or activity in the area concerned;
 - (v) whether the aid is transparent: to measure and minimise the impact on the internal market Member States, stakeholders, the general public and the Commission must have easy access to information on the aid awarded;
 - (vi) the negative effects of the aid on competition and trade between Member States.
- (33) As a final step, the Commission will balance the identified negative effects on the internal market of the aid measure with the positive effects of the planned aid on the supported economic activities. Failure to comply with one of the conditions in paragraph (32) will result in aid being declared incompatible with the internal market.
- (34) The steps in the Commission's assessment of aid for the deployment and take-up of broadband electronic communications networks are set out in further detail in the Sections 5, 6, 7 and 8.

5 AID FOR THE DEPLOYMENT OF BROADBAND ELECTRONIC COMMUNICATIONS NETWORKS

- (35) The Commission considers the market for fixed broadband services as separate from the market for mobile broadband services³⁷. The rules for the assessment of aid may therefore differ, depending on the market concerned.

³⁷ Where deployment costs of a fixed network are very high, a high performance mobile network may be used as an alternative to fixed network. However, there remain significant qualitative differences between the two

5.1 First condition: facilitation of the development of an economic activity

5.1.1 Networks as facilitators of economic activities

- (36) The Member States must identify the economic activities that will be facilitated as a result of the aid (such as the deployment of fixed networks for the provision of performant fixed communication services or the deployment of mobile networks for the provision of high-performance mobile voice and data services) and explain how the development of those activities is supported.
- (37) Aid for the deployment of fixed networks and aid for the deployment of mobile networks can facilitate the development of a range of economic activities by increasing connectivity and access to the electronic communications networks for citizens, businesses and public administrations. Such aid can facilitate the development of economic activities in areas where such activities were either not present or only ensured at a level that would not adequately fulfil the needs of consumers.

5.1.2 Incentive effect

- (38) Aid can be considered as contributing to the development of an economic activity only if it has an incentive effect.
- (39) Aid has an incentive effect if it incentivises the beneficiary to change its behaviour towards the development of a certain economic activity supported by the aid that it would not have carried out within the same timeframe, or would only have carried out in a limited or different manner or location, if the aid was not granted.
- (40) The aid must not finance the costs of an activity that an undertaking would carry out in any event and must not compensate for the normal business risk of an economic activity³⁸.
- (41) Proving an incentive effect of aid for the deployment of fixed or mobile networks entails the verification through mapping and public consultation, as described in Sections 5.2.2.4.1 and 5.2.2.4.2, whether stakeholders have invested or intend to invest in, respectively, fixed or mobile networks in the target areas within the relevant time horizon. If a similar investment would be made in the area even without the aid, it can be considered that the aid lacks an incentive effect. For instance, where an operator is subject to legal obligations, such as obligations to ensure a certain coverage of the target area pursuant to coverage and quality of service obligations attached to the rights of use of certain radio spectrum for mobile deployments, State aid cannot be used to fulfil such obligations as it is unlikely to have an incentive effect, and thus unlikely to be compatible with the internal market. State Aid can, however, be granted to provide a quality of service beyond the requirements provided in such obligations.

technologies. Unlike fixed networks, mobile networks allow end users to move while communicating (for instance in a car). On the other hand, fixed networks offer a higher degree of stability and security in particular for data transmission. For the time being, end-users typically use both technologies as complements instead of substitutes.

³⁸ See Judgment of the Court of Justice of 13 June 2013, *HGA and others v Commission*, C-630/11 P to C-633/11 P, ECLI:EU:C:2013:387, paragraph 104.

5.1.3 *Compliance with other provisions of Union law*

- (42) If a State aid measure, the conditions attached to it (including its financing method when that method forms an integral part of the aid measure) or the activity it finances entail a violation of a provision or general principles of Union law, the aid cannot be declared compatible with the internal market³⁹. This may be the case for aid measures where the award of aid is subject to the obligation for the beneficiary to have its headquarters or to be established in the relevant Member State, or to subject the aid to clauses conditioning it directly or indirectly on the origin of products or equipment, such as the requirements for the beneficiary to purchase domestically produced products.

5.2 Second condition: the aid measure must not unduly affect trading conditions to an extent contrary to the common interest

5.2.1 *Positive effects of the aid*

- (43) Member States must describe whether and, if so, how the aid will entail positive effects.
- (44) Member States may decide to design State aid measures that contribute to the achievement of objectives of Union digital policy, and more specifically, to reduce the 'digital divide'. They may choose to intervene to correct social or regional inequalities, or to achieve equity objectives, that is to say, as a way of improving access to an essential means of communication and participation in society, thereby improving social and territorial cohesion. Further, Member States may decide to design State aid measures that also contribute to foster the achievement of Union Green Deal objectives and promote sustainable green investments across all sectors.

5.2.2 *Necessity for State intervention*

- (45) State aid must be targeted towards situations where aid can bring about a material improvement that the market alone cannot deliver.
- (46) Due to economies of density, the deployment of broadband networks is generally more profitable where potential demand is higher and concentrated, that is to say, in densely populated areas. Because of high fixed costs of investment, unit costs increase significantly as population densities drop. Therefore, when deployed on commercial terms, broadband networks tend to profitably cover only part of the population. State aid measures can, under certain conditions, correct market failures, thereby improving the efficient functioning of markets and enhancing competitiveness.
- (47) A market failure exists if markets, left to their own devices, without public intervention fail to deliver an efficient outcome for society. This may arise, for instance, when certain investments are not being undertaken even though the

³⁹ Judgment of the Court of Justice of 22 September 2020, *Austria v Commission*, C-594/18 P, EU:C:2020:742, paragraph 44.

economic benefit for society exceeds their cost⁴⁰. In such cases, the granting of State aid may produce positive effects and overall efficiency can be improved by adjusting the economic incentives for stakeholders.

- (48) In the fixed and mobile sector, one form of market failure is related to positive externalities that are not internalised by market operators. For example, the availability of fixed and mobile networks paves the way for the provision of more services and for innovation. The overall benefits are likely to be higher than the economic benefits they generate for the investors of the network. The market outcome would therefore generate insufficient private investment in fixed and mobile networks.
- (49) Further, where markets provide efficient outcomes but these are deemed unsatisfactory from a cohesion policy point of view, State aid measures may be necessary to correct social or regional inequalities to obtain a more desirable, equitable market outcome. In particular, well-targeted State intervention in the broadband field can contribute to reducing the digital divide⁴¹.
- (50) A market failure may also be demonstrated if the existing network provides citizens or business end-users with a suboptimal combination of service quality and prices⁴². This may be the case when certain categories of users may not be adequately served or, especially in the absence of regulated wholesale access tariffs, retail prices may be higher than those charged for the same services offered in more competitive but otherwise comparable areas or regions of the Member State. If, in addition, there are only limited prospects that alternative operators will enter the market or provide services in that area, the funding of an alternative network could be appropriate.
- (51) However, if State aid for the deployment of fixed and mobile networks were to be used in areas where market operators would normally choose to invest or have already invested, this could significantly undermine the incentives of commercial investors to invest in the first place. The mere existence of market failures in a certain context is not sufficient to justify State intervention. State aid may only be directed at the market failure that remains unaddressed by other policies and measures⁴³, for instance regulatory obligations on the effective and efficient use of radio spectrum, including coverage and quality of service obligations attached to rights of use for radio spectrum.

⁴⁰ However, the fact that a specific company may not be capable of undertaking a project without aid does not mean that there is a market failure. For instance, the decision of a company not to invest in a project with low profitability may not be an indication of a market failure, but rather of a market that functions well.

⁴¹ Although there are several reasons for this 'digital divide', the existence of adequate broadband infrastructures is a prerequisite for enabling connectivity and closing the gap. The degree of urbanisation is an important factor for access to and use of information and communications technologies. Internet penetration may remain lower in thinly populated areas throughout the Union.

⁴² In case Member States consider that this is the reason to intervene, the Commission will examine whether the Member State can demonstrate clearly and with verifiable facts that end users needs are not met. This could be proven through consumer survey, independent study, etc.

⁴³ Administrative and regulatory measures are generally less distortive, and should be considered before State aid interventions.

5.2.2.1 Existence of market failure as regards fixed access networks

- (52) Aid can bring about a material improvement that the market alone does not deliver in areas where there is no fixed network in place or credibly planned to be deployed within the relevant time horizon, able to address end-users' needs. At the current stage of market development and given identified end-users' needs⁴⁴, a market failure may be demonstrated where the market does not and is not likely to provide end-users with a connectivity of 1 Gbps download speed. Upload speed is becoming increasingly relevant to guarantee user's access to a number of services. Market failure may therefore also be demonstrated in the absence (and unlikely provision by the market in the relevant time horizon) of a connectivity of 200 Mbps upload speed⁴⁵. As the decade progresses, a market failure may also be demonstrated⁴⁶, where the market does not and is not likely to satisfy identified end-users' needs for enhanced upload speed⁴⁷ up to 1 Gbps (see Section 5.2.3.1.4).
- (53) A careful assessment is required to verify to what extent the private sector is able to address end-users' needs with its own means.
- (54) In order to assess market failure a distinction is made between the types of target areas. Intervention areas are classified as white, grey or black areas, depending on presence of ultrafast networks.

5.2.2.1.1 White areas

- (55) White areas are those in which there is no ultrafast broadband network and such network is unlikely to be developed in the relevant time horizon.

5.2.2.1.2 Grey areas

- (56) Grey areas are those in which one ultrafast network is present or credibly planned in the relevant time horizon. The mere existence of one ultrafast network⁴⁸ does not necessarily imply that no market failure exist.
- (57) A market failure may be demonstrated if the existing or credibly planned ultrafast network cannot provide at least 1 Gbps download and 200 Mbps upload speeds⁴⁹.

⁴⁴ Sonia Strube Martins, Christian Wernick; Telecommunication policy journal 45 (2021): Regional differences in residential demand for very high bandwidth broadband internet in 2025.

⁴⁵ Broadband networks typically provide download speeds higher than upload speeds. Typical upload speeds range between 10% and 30% of the download speed.

⁴⁶ Demonstrating a need for enhanced upload means that the Member State provides reliable evidence from verifiable sources, for instance surveys of end-users' needs, studies on profile of end-users and traffic evolution, smart specialisation strategies, etc.

⁴⁷ Enhanced upload speed means upload speed that is more than 30% and up to 100% of the download speed.

⁴⁸ The competitive situation is assessed according to the number of existing network operators. In Commission Decision C(2011) 7285 final of 19 October 2011, case N 330/2010 — France – Programme national «Très Haut Débit » - Volet B (OJ C 364, 14.12.2011, p.2), it was clarified that the existence of several retail providers on one network (including Local Loop Unbundling (LLU)) does not turn the area into a black area, but that the territory remains a grey area as only one network is present.

5.2.2.1.3 Mixed areas (white and grey)

- (58) In principle, the proposed intervention should be designed such that the entire target area is either white or grey.
- (59) However, for reasons of efficiency, Member States may select target areas which are partly white and partly grey. Where some citizens and business users are already adequately served in the target area (or will be in the relevant time horizon), it has to be ensured that the public intervention does not lead to an undue overbuilding of the existing network. This can be prevented if the public intervention is limited to ‘gap-filling’ measures only. Where Member States can demonstrate that a limited overbuilding of the existing network is proportionate and does not create undue distortions of competition, the public intervention may take place⁵⁰. Overbuilding must be limited to maximum 10% of all premises in the target area⁵¹. In such situations, the entire target area will be treated as ‘white’ for the purposes of assessing the public intervention (meaning that the conditions that apply to white areas also apply here).

5.2.2.1.4 Black areas

- (60) Black areas are those in which at least two independent⁵² ultrafast networks are present or credibly planned. In such areas, broadband services are typically provided under competitive conditions (infrastructure-based competition)⁵³. A market failure may be demonstrated if none of the existing networks can provide 1 Gbps download and 200 Mbps upload speeds and if none of the existing providers commits to upgrade its network to those speeds in the relevant time horizon⁵⁴.

⁴⁹ While download and upload speeds are currently the most relevant quality of service parameters, certain users or the provision of certain services may increasingly require specific characteristics in addition to speed (such as latency or jitter) that could be taken into account to justify the existence of a market failure.

⁵⁰ The Member State must demonstrate that the overbuilding ensures a significant reduction of the State aid amount which is needed for the target area (including that revenues from the grey area will be used to ensure coverage of the white area, thus significantly reducing the funding gap). For instance, to the extent that revenues made from connections are taken into account in the funding gap calculation (thus not relevant for wholesale-only networks), a public intervention providing the premise at the end of the street with a connection could become costly if, in order to avoid undue distortions of competition, it were not allowed to connect any other premises which are passed by the new aided network (even if those households are already passed by another network), given that this would reduce the revenues that the operator could expect to make, thereby increasing the funding gap.

⁵¹ The State aid amount has to take into account the revenues made from the premises affected by overbuilding to avoid overcompensation in the calculation of the funding gap.

⁵² The same company may operate separate networks in the same area (e.g. fixed and fixed-wireless) but this will not change the ‘colour’ of such area. In the same vein, the colour of the area does not change even if there are two networks operated by different companies belonging to the same group.

⁵³ If only one network is present, even if this network is used — via unbundling (LLU) — by several alternative operators, the area shall be considered as a grey area. See also Commission Decision C(2011) 7285 final of 19 October 2011, case N 330/2010 — France – Programme national «Très Haut Débit» - Volet B (OJ C 364, 14.12.2011, p. 2).

⁵⁴ Irrespective of demonstrated needs for enhanced upload speed, no intervention is possible if there are at least two networks that can be upgraded to provide at least 1 Gbps upload speed.

(61) If at least two independent existing networks can be upgraded to provide 1 Gbps⁵⁵ download speed, it can be assumed that, as demand for higher speeds unfolds, competition will lead to a timely upgrade to 1 Gbps download and 200 Mbps upload speed. State support for the construction of an additional broadband network with comparable capabilities will, in principle, lead to an unacceptable distortion of competition, and the crowding out of private investors⁵⁶.

5.2.2.2 Existence of market failure as regards mobile access networks

(62) The Commission considers that a market failure exists in areas where there is no mobile network, in place or credibly planned to be deployed within the relevant time horizon⁵⁷, able to address end-users' needs.

(63) Existing and future applications increasingly rely on performant mobile networks that are available on a wide geographical basis⁵⁸. End-users have a need for mobility while communicating but also for access to information 'on the move'. New forms of economic activity are expected to develop which require seamless online access to both, data and voice mobile services. As such, economic activities and new mobile services develop over time, mobile network needs to provide increasingly higher performance. A lack of, or insufficient mobile connectivity may be detrimental for certain economic activities such as industrial, agriculture or touristic activities or connected mobility or can cause a safety risk for citizens⁵⁹. This may be in particular the case of remote regions or low population density or unpopulated areas.

(64) In an area where there is already at least one mobile network in place or credibly planned to be deployed within the relevant time horizon, public support for the construction of a new mobile network could distort market dynamics.

(65) Public support for the deployment of a mobile network in such an area may be considered necessary only when it can be cumulatively demonstrated that the existing or planned mobile network does not provide end-users with sufficient quality of services to satisfy their evolving needs and the public support will adequately remedy

⁵⁵ A network is considered to be upgradable to provide 1Gbps download speed, if it can provide 1 Gbps download speed on the basis of limited investment such as an active equipment upgrade.

⁵⁶ See Commission Decision C(2006) 3226 final of 19 July 2006, case C 35/05 (ex N 59/05) — The Netherlands – Broadband infrastructure in Appingedam (OJ L 86, 27.3.2007, p. 1). In this decision, the Commission noted that the competitive forces of the specific market were not duly taken into account. In particular, that the Dutch broadband market was a fast-moving market in which providers of electronic communications services, including cable operators and Internet Service Providers, were in the process of introducing high capacity broadband services without any State support.

⁵⁷ See, for instance, Commission Decision C(2021) 3492 final of 21 May 2021, case SA.58099 (2021/N) – Germany – Mobile communications Mecklenburg-Western Pomerania (OJ C 260, 02.07.2021).

⁵⁸ See also the Gigabit Communication that identifies applications needed for the automotive, transport, manufacturing and health sectors as well as for next generation safety and emergency services (for instance connected and automated driving, remote surgery, precision farming).

⁵⁹ Article 26(5) of the Universal Service Directive provides for the obligation of electronic communications operators to make caller location information available as soon as the call reaches the authority handling the emergency call. As of 21 December 2020, Article 109 EECC makes mandatory the availability of not only network-based but also of the more accurate handset-derived location information to the most appropriate Public Safety Answering Point.

the identified market failure, thus bringing about a material improvement that the market cannot deliver⁶⁰. Limited capacities of the existing or planned mobile networks may be due to, for instance, insufficient density of antennas, specific spectrum bandwidth or the characteristics of active equipment⁶¹.

- (66) A market failure might thus exist in the presence of a 4G or even a 5G network where such a network does not and is not likely to provide end-users with sufficient quality of services to satisfy their evolving needs.
- (67) New forms of economic activity and services will require seamless online access (for instance for connected and automated mobility along transport paths) and, in addition to certain minimum speeds and capacity, also other specific characteristics such as lower latency, network virtualization or the capacity to connect multiple terminals in the industrial or agricultural context. In such situations, despite the presence of a mobile network, public support may be needed to address specific market failures related to identified use cases.
- (68) As a matter of principle, even in the presence of a market failure, State aid cannot be granted to deploy a mobile network if the deployment of such network is part of the fulfilment of the obligations linked to the spectrum allocation. However, State aid can be granted to provide additional quality of service required to meet demonstrated end-users' needs going beyond what is already required in order to comply with such obligations, Such aid can only cover additional costs necessary to ensure increased network quality.
- (69) Where, in a given area, there is or there will be within the relevant time horizon at least one mobile network providing services satisfying the end-users' evolving needs (see paragraphs (63), (65) and (67)), public support for an additional mobile network with equivalent capabilities will, in principle, lead to an unacceptable distortion of competition, and the crowding out of private investments. In the absence of a clearly demonstrated market failure, the Commission will take a negative view of such measures.

5.2.2.3 Existence of market failure as regards backhaul networks

- (70) Backhaul network is a necessary prerequisite for the deployment of access networks. Backhaul networks have the potential to stimulate competition in the access areas to

⁶⁰ See, for instance, Commission Decision C(2020) 8939 final of 16 December 2020, case SA.54684 – Germany – High-capacity mobile infrastructure roll-out in Brandenburg (OJ C 60, 19.2.2021, p. 2); and Commission Decision C(2021) 1532 final of 10 March 2021, case SA.56426 – Germany – High-performance mobile infrastructure roll-out in Lower Saxony (OJ C 144, 23.4.2021, p. 2); Commission Decision C(2021) 3565 final of 25 May 2021, case SA.59574 – Germany - Deployment of high-performance mobile infrastructure in Germany (not yet published).

⁶¹ Currently, coverage obligations typically require a provision of speeds between 30 Mbps download and 100Mbps download. Areas where such higher speeds are provided are unlikely to be subject to a market failure at the current juncture and with the current market development. However, this is a market where end-user needs are fast-evolving. State-of-the-art mobile networks in Europe are today capable of providing 150 Mbps download and 50 Mbps upload speeds - BEREC Guidelines on Very high Capacity Networks - BoR (20) 165

the benefit of all access networks and technologies. A performing backhaul may stimulate private investments to connect end-users, provided that the backhaul network ensures access on open, transparent and non-discriminatory conditions to all operators and technologies. Public funding of backhaul networks is generally a measure that fosters competition and investments as it enables third-party operators to rollout access networks and offer connectivity services to end-users.

- (71) As backhaul networks transport the traffic of various fixed and/or mobile access networks, backhaul networks require a significantly higher transmission capacity than individual access networks. Taking into account the current needs of end-users, the ongoing rapid upgrading of access networks with ever-increasing demand for data transmission and the increased performance of each new mobile generation, backhaul networks need to cater for significant increase in capacity required. At the current stage of technological development, such increase in the demand for capacity can be addressed by fibre based backhaul networks or by backhaul networks based on other technologies able to provide the same level of performance and reliability of fibre based backhaul networks.
- (72) A market failure as concerns backhaul network may be present where there is no backhaul or the existing or planned backhaul is not based on fibre or on other technologies able to provide the same level of performance and reliability of fibre⁶².

5.2.2.4 Instruments to determine the existence of market failure

- (73) To identify market failure areas, Member States must determine on the basis of a detailed mapping (see Section 5.2.2.4.1) and public consultation (see Section 5.2.2.4.2), whether fixed or mobile networks are present or credibly planned to be deployed in the area in the relevant time horizon.

5.2.2.4.1 Detailed mapping and analysis of coverage

- (74) Member States must identify which geographic areas will be covered by the aid measure in question, by carrying out a mapping exercise. The Commission regards the methodology described in Section 3 (for fixed access networks) and 4 (for mobile and fixed wireless access networks) of Annex I as the most accurate mapping method. Member States may propose the use of alternative methods to those described in these two sections provided that they comply with recitals (4), (5), (9), (10) and (12) of Section 2, are duly justified and include a reasoned opinion by the national regulatory authority supporting the use of the proposed alternative methodology.
- (75) Member States have significant discretion to define the target areas. However, they are encouraged to take into account economic, geographical and social conditions in the definition of relevant areas. For instance, the size of the target areas may play a role in

⁶² In order to avoid that the backhaul network becomes a bottleneck, it may be necessary to increase its capacity in parallel to the deployment of more performing access networks. For instance, Croatia proposed a State intervention in its national backhaul market, which was characterised by capacity constraints. This led into high prices on the downstream market. The existing backhaul operator was not willing to invest into a capacity increase. As the issue could not be solved by the national regulator, the Commission approved a State aid scheme for investment into fibre backhaul infrastructure finding that the dominant position had become a bottleneck which constituted a market failure. Commission Decision C(2016) 436 final of 25 January 2016, case SA.38626 – Croatia – National Broadband Plan (OJ C 104, 18.3.2016, p.1).

the outcome of the competitive selection procedure as areas that are too small might not provide sufficient economic incentives for market players to bid for the aid, while areas that are too big might reduce the competitive outcome of the selection procedure. Defining several smaller areas, which would lead to organising several selection procedures, would allow different potential undertakings to benefit from State aid thereby avoiding that one (possibly already dominant) operator's market position is further strengthened by the measure.

(76) The consultation of the NRA is strongly recommended as set out in Section 5.2.3.5.

5.2.2.4.2 Public consultation

(77) Member States must publish, including on an appropriate publicly available webpage at national level⁶³, the main characteristics of the measure and the list of target areas identified in the mapping exercise⁶⁴.

(78) The public consultation must invite interested parties to comment on the measure and to submit substantiated information regarding their networks present or credibly planned to be deployed in the target area within the relevant time horizon⁶⁵.

(79) In considering the prospective time frame for the deployment of the aided network, Member States must consider all aspects that can be reasonably expected to impact the duration of the deployment of the new network (i.e. the time required by the selection procedure, possible legal actions and challenges, time to obtain rights of ways and permits, other obligation stemming from national legislation and regulation, etc.);

(80) Credible investment plans must be taken into account in the public consultation only if they would, on their own, provide similar performances with the foreseen State funded network.

(81) The public consultation must ensure to the best extent possible the same level of granularity as the mapping exercise and should be carried out as set out in Annex I⁶⁶ taking into account the clarifications in recital (74).

(82) Irrespective of whether the mapping exercise may already have collected information on future investment plans, the result of the mapping exercise must always be verified

⁶³ Letters to known suppliers do not fulfil the requirements of a public consultation which shall ensure openness and transparency towards any interested parties, in the interest of legal certainty.

⁶⁴ This should include, among others: list of target areas and their colour based on mapping, duration of the measure, budget, sources of public financing, identification of the relevant time horizon, eligibility criteria including quality of services to be provided (upload and download speeds of services to be provided), thresholds for intervention (i.e. upload and download speeds of services that may be overbuilt by the measure), wholesale access requirements and pricing or pricing methodology.

⁶⁵ The results of a public consultation are only valid for the relevant time horizon, after which if changes or additions to target areas are proposed, mapping and public consultations shall be redone.

⁶⁶ A public consultation may also include questions to stakeholders as to what wholesale access products they would like to see offered on any newly created State funded network resulting from any public intervention in the future, to inform the design of the measure. This should not prevent access seekers from requesting new forms of access products under an 'access on reasonable demand' approach.

in the public consultation. This is necessary to minimize possible undue distortions of competition with existing providers and with those who already have credible investment plans for the relevant time horizon.

- (83) The public consultation must last at least 30 days. As from the end of the public consultation, the Member State has one year to launch the selection procedure or to start the implementation of the project for direct investment models. If the Member State does not launch the selection procedure or the implementation within one year, it must carry out a new public consultation.

5.2.2.4.3 Best practices⁶⁷: assessment of private investment plans in the public consultation

- (84) There is a risk that a mere ‘expression of interest’ in future private investment plans in the target area by a stakeholder in a public consultation could delay deployment of broadband networks if such investment does not subsequently take place while public intervention has been stalled.
- (85) To reduce the risk that public interventions are prevented on the basis of future investment plans that will not materialise, Member States may decide to ask stakeholders to provide, within a timeframe that is adequate and proportionate to the level of information requested⁶⁸, evidence to demonstrate the credibility of their investment plans. This may include, for instance, a detailed deployment plan with milestones (for example, for every six months period), demonstrating that the investment will be completed within the relevant time horizon and will ensure similar performances as the planned State funded network.
- (86) To assess the credibility of the declared performance and coverage, Member States may use the same criteria used to assess the performance of the existing networks, where reasonable and appropriate, as set out in Annex I.
- (87) When assessing the credibility of the future investment plans, Member States may take account of the following criteria:
- a) the investor has submitted a sound business plan factoring in adequate criteria concerning, for example, timeframe, budget, the location of households targeted, quality of service to be provided, type of network and technology to deploy, take-up rate;
 - b) the investor has submitted a credible high level project plan which properly takes into account major project milestones such as administrative procedures and permits including rights of way, environmental permits, safety and security provisions (for example, for 5G), civil engineer works, the completion of the network, the start of the wholesale operations and the commercialisation of the services to end-users;

⁶⁷ The sections ‘Best practices’ provide additional non-binding guidance and examples on possible ways to implement aid measures.

⁶⁸ Member States may include this request directly in the public consultation, in the interest of time. Alternatively, after the public consultation, as part of their assessment of the results of the public consultation, Member States may request further information from certain providers who have provided in the public consultation information that may risk amounting to a mere ‘expression of interest’.

- c) the adequacy of the size of the company to the size of the investment;
 - d) the investor track record in comparable projects;
 - e) if necessary and appropriate, the geographical coordinates of key elements of the planned network (base stations, points of presence, etc.).
- (88) If a Member State considers that the private investment plans are credible, it may decide to invite operators to sign commitment agreements including obligations to report progress on their stated milestones.
- (89) It is the responsibility of stakeholders to provide meaningful information subject to the application of the relevant Union⁶⁹ or national rules.
- (90) If relevant information is not provided in response to the public consultation, the Member State may take a decision on the basis of whatever information has been made available in the public consultation. The information provided in response to the public consultation must be assessed by the Member State as set out in this Section and Annex I. Member States should communicate the results of their assessment and the reasons thereof to every stakeholder which submitted information on their private investment plans.
- (91) The Member State should consult the NRA on the results of the public consultation, including on the Member State's assessment of the credibility of the future investment plans⁷⁰.

5.2.2.4.4 Best practices: *ex-post* monitoring of the implementation of private investment plans

- (92) If the Member State considers that the private investment plans submitted are credible and consequently the corresponding area has been carved out from the public intervention, it may decide to require the operators that have submitted the plans or have entered into commitment agreements to report regularly on their stated milestones to deploy the network and provide the services within the declared timeframe.
- (93) If the Member State identifies deviations from the plan submitted which suggest that the project will not materialise or has sufficient reasons to doubt that the investment will be completed as declared, the Member State may decide to require the stakeholder to provide further information demonstrating the continued credibility of the investment.
- (94) If the Member State has significant doubts as to whether the investment will be completed as declared, it may decide at any time during the relevant time horizon to include the areas concerned by the investment in a new public consultation exercise, in view of verifying their potential eligibility for a public intervention.

⁶⁹ Article 29 of Directive (EU) 2018/1972.

⁷⁰ A similar mechanism is set out in Article 22 of Directive (EU) 2018/1972.

5.2.3 *Appropriateness of the aid measure as a policy instrument*

- (95) The Member State must demonstrate that the aid and its design are appropriate to address the identified market failure and to achieve the objectives pursued by the aid. An aid measure will not be considered compatible with the internal market if it is not appropriate, for instance if the same outcome is achievable through other, less distortive measures.
- (96) In order to be appropriate, the State funded fixed and mobile networks must provide significantly enhanced characteristics in comparison to existing networks. Thus, State funded fixed and mobile networks should be able to ensure a step-change. A step-change can be demonstrated if as the result of the public intervention (i) the new fixed or mobile network deployment represents a significant new investment in broadband network⁷¹ and (ii) the State funded network brings significant new capabilities to the market in terms of broadband service availability, capacity, speeds and competition. The step-change must be compared to the performance of the existing network(s). Credibly planned network roll-outs are not taken into account for the assessment of the step-change unless they would, on their own, provide similar performance to that of the planned State funded network within the relevant time horizon.
- (97) Public intervention can be subject, where justified, to a private investment protection period, of in principle up to seven years⁷².

5.2.3.1 Step-change – Fixed access networks

- (98) For fixed access networks, enhanced characteristics may be measured in terms of speeds. In such a case a step-change requires a substantial increase of download and upload speed (see paragraph 5.2.3.1.4) compared to existing network.

5.2.3.1.1 White areas

- (99) Where the existing networks are not able to provide ultrafast download speed, public support must:
- a) Below 30 Mbps download speed: at least double the download speed and at least reach 30 Mbps download speed.
 - b) 30 Mbps and above download speed: at least triple the download speed and at least reach ultrafast download speed. The Union has set a strategic objective

⁷¹ For instance, in case of fixed networks marginal investments related merely to the upgrade of the active components of the network should not be considered eligible for State aid. Similarly, although certain copper enhancing technologies (such as vectoring) could increase the capabilities of the existing networks, they may not require significant investments in new network hence should not be eligible for State aid. In case of mobile networks, investments in active equipment may play an important role in the quality of services provided. In such cases, public support may be extended also to active equipment, provided that it does not consist of merely incremental upgrades but constitutes integral part of a significant upgrade in the capabilities of the network. See for instance Commission Decision (CXXXX) – Spain- SA.57216 Mobile coverage in rural areas in Galicia (not yet published).

⁷² The relevance and length of any private investment protection period would depend on the specificities of the protected networks, e.g. the underlying network technologies, the deployment periods, the existence of earmarked periods, etc.F

that, by 2025, ‘all European households, rural or urban, will have access to Internet connectivity offering a downlink of at least 100 Mbps, upgradable to Gigabit’⁷³.

(100) In all cases the new network must sufficiently increase the upload speed⁷⁴ of the existing network that provides the highest download speed.

(101) As explained in recital (96) the State supported intervention must also represent a significant new infrastructure investment bringing significant new capabilities to the market⁷⁵.

5.2.3.1.2 Grey areas

(102) Where there exists already one ultrafast network, public support for a more performing network may only be granted if the State funded investment in the new network at least triples the download speed and sufficiently increases the upload speed as compared to the existing infrastructure. As indicated in the previous section, the publicly supported intervention must also represent a significant new infrastructure investment bringing significant new capabilities to the market⁷⁶.

5.2.3.1.3 Black areas

(103) Where there exist already at least two ultrafast networks, public support for a more performing network may be granted if, in addition to the requirement of at least tripling the download speed and sufficiently increase the upload speed as compared to the existing network, the new network provides at least 1 Gbps download speed.

5.2.3.1.4 Enhanced upload speeds

(104) As the decade progresses and in light of the expected market developments, there may be a demonstrated need for enhanced upload speed up to 1 Gbps. In such circumstances networks providing 1 Gbps download speeds but not 1 Gbps upload speeds may not sufficiently satisfy end-users’ particular needs.

(105) On this basis, public intervention to deploy networks providing upload speed up to 1 Gbps upload can be allowed in areas where a network providing 1 Gbps download

⁷³ Connectivity for a Competitive Digital Single Market - Towards a European Gigabit Society”, COM(2016) 587 final

⁷⁴ Broadband networks typically provide download speed higher than upload speed. Typical upload speeds are in the range of 10% to 30% of the download speed. ‘Sufficient increase of the upload speed’ means that the resulting upload speed must be at least within this range.

⁷⁵ This is for example the case when the new network extends substantially the fibre from the core of the network toward the edge of the network, e.g.,(i) the deployment of fibre to the base stations to support the deployment of fixed wireless access networks; (ii) the deployment of fibre to the cabinets where the cabinets were not previously connected to a fibre network; (iii) the increase (deepening) of the fibre in cable networks

⁷⁶ See also footnote 82.

speed already exists⁷⁷ if the Member State demonstrates that there is an identified need for enhanced upload speed up to 1 Gbps upload and subject to the fulfilment of the conditions described in Section 5.2.2.3. To this end, Member States should provide reliable factual evidence from verifiable sources.

- (106) State aid for the deployment of networks providing enhanced upload speed must lead to a significant, sustainable, pro-competitive and non-temporary technological advancement without creating disproportionate disincentives to private investments. Step-change – Mobile access networks

5.2.3.2 Step-change – Mobile access networks

- (107) A State funded mobile network must ensure a ‘step-change’ in terms of mobile service availability, capacity, speeds and competition which may foster the adoption of new innovative services⁷⁸.
- (108) As indicated in Section 2.2.2, the transition to each new mobile generation is generally incremental. In between the two full consecutive generations, there exist incremental hybrid systems, which are usually more performant than their predecessors. For instance, 4G LTE cellular communication system is better than 4G in several aspects and 5G standalone is more performant than 5G non-standalone. In the same vein, each new generation of mobile services has provided new capabilities⁷⁹. While all mobile communications technology generations allow for mobile voice services, only the newer generations allow for the provision of performant mobile data services. The most important differentiating factor of mobile communications technology generations is the increased overall capacity, as newer generations provide for lower latency and higher transmission capacities.
- (109) As the provision of new capabilities requires more capacity, new generation technologies require new frequencies. As frequencies are a scarce resource, in the Union the allocation of such frequencies is carried out on the basis of an auction or other competitive selection procedures. Where a new mobile generation technology is implemented as a result of this process, it can be presumed that this technology will provide significant new capabilities in comparison to existing mobile networks. Mobile operators are only willing to face significant upfront costs for obtaining new rights of use of spectrum supporting a new mobile generation technology if they expect that the this new technology offers superior capabilities which would allow them to have a return on such investment over time. On this basis, the Commission has accepted that the additional features of 4G networks over previous generations amount to a step-change⁸⁰. In the same vein, 5G standalone networks have additional functional capabilities compared to previous generations and compared to 5G non-

⁷⁷ Irrespective of the demonstrated needs for enhanced upload speed, no intervention is possible if there are at least two networks that can be upgraded to provide at least 1 Gbps upload speed.

⁷⁸ This may include the provision of new services which would not have been possible absent the public intervention, e.g. connected and automated mobility.

⁷⁹ See also footnote 24.

⁸⁰ See, for instance, Commission Decision C(2020) 8939 final of 16 December 2020, case SA.54684 – Germany – High-capacity mobile infrastructure roll-out in Brandenburg (OJ C 60, 19.2.2021, p. 2).

standalone solutions, such as ultra-low latency, high reliability and the possibility to reserve part of the network for a particular use and guarantee a certain quality of service. These features will allow 5G standalone networks to support new services (e.g.: health monitoring and emergency services, real-time control of factory machines, smart grids for renewable energy management, connected and automated mobility, precise fault detection and quick intervention) thus ensuring a step-change in comparison with previous generations and 5G non-standalone networks. Next generation mobile technologies (e.g. 6G) are expected to provide further enhanced capabilities in the future.

5.2.3.3 Step change – Backhaul networks

- (110) A State funded backhaul network must ensure a ‘step-change’ in terms of services that it can support. A ‘step-change’ can be demonstrated if the new backhaul network at least doubles the download and upload speed of the existing and planned backhaul networks.

5.2.3.4 Alternative policy instruments

- (111) State aid is not the only policy instrument available to Member States to boost investment in the deployment of broadband electronic communications networks. Member States can use other, more appropriate instruments available, such as non-monetary demand-side measures, administrative and regulatory measures or market based instruments (see Annex II). Likewise, the results of *ex post* evaluations as described in Section 8 may be taken into account to assess the appropriateness of the proposed aid measure.

5.2.3.5 Best practices: role of NRAs, NCAs, national competence centres and BCOs

- (112) The role of NRAs in designing the most appropriate State aid measure in support of broadband is particularly important. The NRAs have gained technical knowledge and expertise due to the crucial role assigned to them by sectoral regulation and are best placed to support public authorities with regard to the design of State aid measures.
- (113) Member States are encouraged to systematically consult NRAs on the design of State aid measures, and in particular but not limited to, on: the identification of target areas (mapping and public consultation), the assessment of step-change, the wholesale access products, conditions and pricing, the conflict resolution mechanisms, as well as in the event of disputes in relation to any of those aspects. Member States are encouraged to provide NRAs with the resources and competences they need to give such support. Where necessary, Member States should provide an appropriate legal basis for such involvement of NRAs in State aid broadband projects⁸¹.
- (114) In keeping with best practices, without prejudice to the competences of the NRAs under the regulatory framework, NRAs may issue guidelines for local authorities on, inter alia, carrying market analysis and definitions of wholesale access products and

⁸¹ When the NRA has received the necessary competences under national law for their involvement in State aid broadband projects, the Member State should send to the NRA a detailed description of aid measures and the relevant characteristics, at least two months prior to a State aid notification to allow the NRA to have a reasonable period of time to provide its opinion.

pricing. Such guidelines should take into account the regulatory framework and recommendations issued by the Commission⁸².

- (115) In addition to the involvement of NRAs, Member States may also consult National Competition Authorities (NCAs), for instance to receive advice on how to establish a level playing field for operators and to avoid that a disproportionately high share of State funds is earmarked to one operator, thereby strengthening a (possibly already dominant) market position⁸³.
- (116) Member States may set up national competence centres or Broadband Competence Offices (BCOs), that may help authorities design adequate State aid measures and ensure consistency in the application of the measures, which are subject to State aid rules falling in the scope of the present guidelines⁸⁴.

5.2.4 *Proportionality of the aid measure*

- (117) Member States must demonstrate that the aid is proportionate to the problem tackled, essentially showing that the same change in behaviour (as per the incentive effect) would not be obtained with less aid and less distortions. Aid is considered proportionate if its amount is limited to the minimum necessary and the potential distortions of competition are minimised, in accordance with Section 5.2.4.1 to 5.2.4.7.

5.2.4.1 Competitive selection procedure

- (118) An aid measure is considered to be proportionate if the aid amount is limited to the minimum needed for the aided economic activity to take place.
- (119) The aid must be allocated to providers of electronic communications networks and services on the basis of an open, transparent and non-discriminatory competitive selection procedure in line with the principles of public procurement⁸⁵ and respecting the principle of technology neutrality, as specified in Section 5.2.4.2, without prejudice to the applicable public procurement rules.

⁸² This would increase transparency, ease the administrative burden on local authorities and could mean that NRAs would not have to analyse each State aid case individually.

⁸³ See, for instance, Avis No12-A-02 du 17 janvier 2012 relatif à une demande d'avis de la commission de l'économie, du développement durable et de l'aménagement du territoire du Sénat concernant le cadre d'intervention des collectivités territoriales en matière de déploiement des réseaux à très haut débit (French Competition Authority's opinion in relation to the deployment of very high speed broadband networks).

⁸⁴ See, for instance, Commission Decision K(2008) 6705 of 5 November 2008, case N 237/08 – Germany – Broadband support in Niedersachsen (C 18, 24.01.2009, p.1); Commission Decision C(2012) 8223 final of 20 November 2012, case SA.33671 (2012/N) – United Kingdom – National Broadband scheme for the UK - Broadband Delivery UK (OJ C 16, 19.1.2013, p. 2) and Commission Decision C(2016) 3208 final of 26 May 2016, case SA 40720 (2016/N) – United Kingdom - Broadband Delivery UK (OJ C 323, 2.9.2016, p. 2).

⁸⁵ Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC (OJ L 94, 28.3.2014, p. 65), and Directive 2014/23/EU of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts (OJ L 94 28.3.2014, p. 1).

- (120) Aid is deemed proportionate and limited to the minimum amount necessary if the aid is granted through a competitive selection procedure attracting a sufficient number of participants. Where the number of participants is not sufficient, the Member State must entrust an independent auditor with the assessment of the bid (including cost calculations) submitted by the winning bidder.
- (121) Various procedures may be suitable depending on circumstances. For projects with high technical complexity, or where otherwise appropriate, Member States may choose to engage in a competitive dialogue procedure with potential bidders, aiming to ensure the most appropriate design of the project.
- (122) The Member State must ensure that the most economically advantageous solution is selected. For this purpose, the Member State must establish objective, transparent and non-discriminatory qualitative award criteria and specify the relative weighing of each criteria in advance. Qualitative award criteria must be weighed against the requested aid amount. At similar if not identical quality conditions, the bidder requesting the lowest amount of aid must be awarded the aid.
- (123) Qualitative award criteria may include, among others, the performance of the network (including its security), the geographical coverage, the future proof qualities of the technological approach, the impact of the proposed solution on competition (including wholesale access terms, conditions and pricing)⁸⁶ and the total cost of ownership⁸⁷.
- (124) Member States are also encouraged to consider criteria pertaining to the climate and environmental performance of the network. Such criteria may include, for instance, the climate- and environmental impact of the network⁸⁸, or compliance of the measure with national and EU climate and environmental regulations. Member States may also include obligations for the selected bidder to implement mitigating measures in case the network may negatively impact the environment.
- (125) Where the aid is granted without a competitive selection procedure to a public authority to deploy and manage a broadband network at wholesale level⁸⁹ directly, or through an in-house entity (direct investment model), the Member State must similarly justify its choice of network and technological solution⁹⁰.

⁸⁶ For instance, network topologies allowing full and effective unbundling should receive more points.

⁸⁷ The total cost of ownership (TCO) is considered, for example, by companies when they are looking to make investments in capital projects. TCO includes the initial investment as well as all direct and indirect expenses over the long term. While the initial investment can be easily reported, companies most often seek to analyse all potential indirect expenses that can be of significant influence in deciding to invest.

⁸⁸ For instance, of the energy consumption or the life-cycle of the investment, taking into account the Do No Significant Harm (DNSH) criteria as introduced in the Taxonomy Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment.

⁸⁹ The aid beneficiary may be allowed to provide retail services as a ‘retailer of last resort’ where a consumer cannot get a retail service from the market. See Commission Decision C(2019) 8069 final of 15 November 2019, case SA.54472 (2019/N) – Ireland – National Broadband Plan (OJ C 7, 10.1.2020, p. 1).

⁹⁰ See Commission Decision C(2018) 6613 final of 12 October 2018, case SA.49614 (2018/N) – Lithuania – Development of Next Generation Access Infrastructure – RAIN 3 (OJ C 424, 23.11.2018, p. 8); Commission Decision C(2016) 3931 final of 30 June 2016, case SA.41647 – Italy – Strategia Banda

- (126) Any concession or other entrustment by such a public authority or in-house entity to a third party to design, build or operate the network must be allocated through an open, transparent and non-discriminatory competitive selection procedure, in line with the principles of public procurement and respecting the principle of technology neutrality, without prejudice to the applicable public procurement rules, based on the most economically advantageous offer.

5.2.4.2 Technological neutrality

- (127) The technological neutrality principle requires that public intervention must not favour or exclude any particular technology, both in the selection of beneficiaries and in the provision of wholesale access. As different technological solutions exist, the tender should not favour or exclude any particular technology or network platform. Bidders should be entitled to propose the provision of the required services using or combining whatever technology they deem most suitable. This is without prejudice to the possibility for the Member States to determine the desired performance, including the energy efficiency of the networks ex-ante and to grant priority points to the most suitable technological solution or mix of technology solutions based on objective, transparent and non-discriminatory criteria, in accordance with Section 5.2.4.1. A State funded electronic communications network must enable access on fair and non-discriminatory conditions to all access seekers irrespective of the technology used.

5.2.4.3 Use of existing infrastructure

- (128) The re-usability of existing infrastructure is one of the main determinants to reduce the overall cost of deployment of a new broadband network and to limit its negative impact on environment⁹¹.
- (129) Member States must set up a national database on the availability of existing infrastructures that could be re-used for broadband roll-out, including commercial infrastructure assets and those owned by public bodies.
- (130) Member States must include in the competitive selection procedure's documents all information on available existing infrastructure, identified on the basis of the national database, as supplemented or updated based on the mapping and public consultation exercise.
- (131) Member States should encourage operators participating in a competitive selection procedure (bidders) to have recourse to any available existing infrastructure, so as to avoid unnecessary and wasteful duplication of resources and to reduce the amount of public funding. This may include, among others: use of the operator's own infrastructure; use of other operators' infrastructure (including regulated products⁹²);

Ultralarga (OJ C 258, 15.7.2016, p. 4); Commission Decision C(2019) 6098 final of 20 August 2019, case SA.52224 – Austria – Broadband project in Carinthia (OJ C 381, 8.11.2019, p. 7).

⁹¹ Examples of measures for reducing the costs of deployment of networks and their impact on the environment are set out in the Broadband Cost Reduction Directive (Directive 2014/61/EU of the European Parliament and the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks, OJ L 155, 23.5.2014, p. 1).

⁹² When existing network is accessed using a product that is available as a result of regulatory obligations, the limitations that the use of that regulated access product entails shall be taken into account in the evaluation

use of other existing utilities infrastructure (including, for example, water and sewerage pipes and relevant electricity infrastructure); reutilisation of radio masts; public infrastructure, etc.

- (132) Any operator that owns or controls infrastructure (irrespective of whether it is actually used) in the target area and that wishes to participate in the tender, must:
- a) inform the aid granting authority and the NRA about that infrastructure during the mapping and public consultation exercise;
 - b) commit to make the infrastructure available for use by other operators in their bids; and
 - c) provide adequate information regarding the use of that infrastructure (including terms, conditions, pricing).
- (133) The information indicated in recital (132)c), must be provided sufficiently in advance to allow for it to be taken into account effectively in the bids of other operators and to allow for any clarifications or missing information to be provided. In any case, the information must be provided at least two months before the deadline to submit the bid in the competitive selection procedure.
- (134) Member States may consult the NRA on the appropriateness of the terms, conditions and pricing proposed by operators for the use of the existing infrastructure, to verify that conditions are not excessively prohibitive or risk hindering the use of that infrastructure.

5.2.4.4 Wholesale access

- (135) Third parties' effective wholesale access to State funded networks is an indispensable component of any State aid measure. In particular, wholesale access enables third party operators to compete with the selected bidder, thereby strengthening choice and competition in the areas concerned by the measure while at the same time avoiding the creation of regional service monopolies. By enabling competition to develop in the target area it also ensures the development of the market in that area in the longer term. This condition is not contingent on any prior market analysis within the meaning of Chapter III of Directive (EU) 2018/1972. The type of wholesale access obligations imposed on a State funded network should be aligned with the portfolio of access obligations laid down under the sectoral regulation. However, aid beneficiaries should provide a wider range of wholesale access products than those imposed by NRAs on the operators who have significant market power since the aid beneficiary is using not just its own resources but taxpayers' money to deploy the network. Such wholesale access should be granted as early as possible before starting providing the relevant services and, where the network operator also intends to provide retail services, at least six months before the launch of retail services.

of the proposal in the competitive selection process. Only bidders who do not own or control that regulated existing network may use a regulated access product in their bid. See Commission Decision C(2016) 3208 final of 26 May 2016, case SA 40720 (2016/N) – United Kingdom - Broadband Delivery UK (OJ C 323, 2.9.2016, p. 2).

(136) The State funded network must offer effective access under fair and non-discriminatory conditions to all operators who request it. This may imply the upgrade and increased capacity of existing infrastructure where necessary and the deployment of sufficient new infrastructure (e.g. ducts large enough to cater for a sufficient number of networks that cannot be less than three and different network topologies)⁹³.

5.2.4.4.1 Wholesale access products

5.2.4.4.1.1 Fixed access networks deployed in white and grey areas

(137) The State funded network must ensure bit-stream access, virtual unbundled access ('VULA'⁹⁴), access to street cabinets, poles/masts/towers, ducts and dark fibre⁹⁵.

5.2.4.4.1.2 Fixed access networks deployed in black areas and providing enhanced upload speed

(138) In black ultrafast areas and for networks providing enhanced upload speed (see paragraph 5.2.3.1.4) the State funded network must provide effective and full physical unbundling in addition to what is foreseen for white and grey areas.

5.2.4.4.1.3 Mobile access networks

(139) For interventions supporting mobile access networks, the State funded network must offer⁹⁶ the widest range of wholesale access products, including among others bit-stream access, access to poles/masts/towers, and, as they become available, those access products necessary to exploit the most advanced features⁹⁷ of 5G and future mobile generations networks⁹⁸ Effective access may include access to components of the network that have not been publicly funded but that are necessary in order for the access seeker to provide its services⁹⁹.

⁹³ This may include, depending on the type of intervention: adequately sized ducts, sufficient number of dark fibres, type and upgrade of poles/masts/towers, type and size of street cabinets to provide effective unbundling etc. See Commission Decision C(2016) 3208 final of 26 May 2016, case SA 40720 (2016/N) – United Kingdom - Broadband Delivery UK (OJ C 323, 2.9.2016, p. 2) and Commission Decision C(2019) 8069 final of 15 November 2019, case SA.54472 (2019/N) – Ireland – National Broadband Plan (OJ C 7, 10.1.2020, p. 1).

⁹⁴ To be eligible for State aid, any VULA product must have received the prior approval by the competent NRA.

⁹⁵ Fixed-wireless access ('FWA') operators have to give access to their physical infrastructure. This includes granting access to masts/towers to operators on a non-discriminatory basis.

⁹⁶ Including to FWA access seekers.

⁹⁷ Such as roaming, Multi-Operator-Access- Network (MORAN), Multi-Operator Core Network (MOCN), network slicing.

⁹⁸ When granting the aid, Member States must ensure that masts and towers have the adequate dimension to ensure that such access can be granted.

⁹⁹ Effective access implies that the access seeker is able to convey signals from the mast/tower into the backhaul network to which the mast/tower is connected.

5.2.4.4.1.4 Backhaul networks

- (140) For interventions in backhaul networks, the State funded network must ensure bit-stream access and access to poles/masts/towers, ducts and dark fibre.
- (141) The State funded network must offer effective access under fair and non-discriminatory conditions to all operators who request it. In line with recital (136), this may imply the deployment of sufficient new infrastructure (for instance. ducts large enough to cater for deployment of enough dark fibre to accommodate the foreseeable needs of all the operators in the market).

5.2.4.4.2 Wholesale access terms and conditions

- (142) Effective wholesale access must be granted for at least ten years for all access products except VULA.
- (143) Access based on VULA must be granted for a period of time equal to the lifespan of the passive infrastructure for which VULA is a substitute¹⁰⁰.
- (144) Access to new passive infrastructure (such as ducts, poles, cabinets, dark fibre, etc.) must be granted for the lifespan of the network element concerned¹⁰¹. If State aid is granted for new passive infrastructure, the passive infrastructure must be large enough to cater for at least three networks and different network topologies¹⁰². This is without prejudice to any similar regulatory obligations that may be imposed by the NRA in the specific market concerned in order to foster effective competition or measures adopted during the same period or after the expiry of the ten years period.
- (145) Member States must consult NRAs on wholesale access products, conditions and pricing and NRAs are encouraged to provide guidance, as set out in Section 5.2.3.5.
- (146) The same access conditions must apply on the entirety of the State funded network, including the parts of the network where existing infrastructures have been used¹⁰³. The access obligations must be enforced irrespective of any change in ownership, management or operation of the State funded network.
- (147) Using their own resources, the aid beneficiary or access seekers connecting to the State funded network may extend the network into adjacent areas. Adjacent areas are

¹⁰⁰ As VULA is considered a substitute of physical unbundling to new passive infrastructure, the same rules for new passive infrastructure applies.

¹⁰¹ See Commission Decision C(2019) 8069 final of 15 November 2019, case SA.54472 (2019/N) – Ireland – National Broadband Plan (OJ C 7, 10.1.2020, p. 1). Whenever the aid recipient will decide to upgrade or replace the passive infrastructure before the lifespan of the aided infrastructure expires, the aid recipient will have to continue to give access to the new infrastructure for the whole lifetime of the original infrastructure.

¹⁰² For instance, where new ducts are built, they should cater for at least 3 independent cables each able to host at least several operators. Where existing infrastructure has capacity constraints and cannot provide access to at least three independent cables, based on the principle first-come-first-served, the operator of the publicly funded network has to make available at least 50 % of the existing capacity to access seekers.

¹⁰³ For instance, the usage of wholesale access by third parties cannot be limited only to the provision of retail broadband services.

to be understood as areas outside the target area. Access seekers may carry out such extensions on the basis of the wholesale open access condition. If they are not linked to the aid beneficiary, there is no limitation on their private extensions.

- (148) When carrying out a public consultation inquiring about existing or planned network in the target area (see Section 5.2.2.3), the Member State must indicate that private extensions are permitted at a later stage unless interested parties in an adjacent area oppose such extensions during public consultation process.
- (149) If, in the mapping exercise and public consultation, interested parties demonstrate that the planned extension enters an adjacent area which is already served by at least two independent networks providing speed comparable to those of the State funded network or that there is at least one comparable network in the adjacent area which entered into operation less than five years before the State funded network, private extension into such adjacent area may only be carried out two years after the publicly funded network enters into operation¹⁰⁴.
- (150) As an exception from Section 5.2.4.4.1, in certain circumstances, Member States may limit the provision of certain access products that would disproportionately increase investment costs without delivering significant benefits in terms of increased competition to cases of reasonable demand from an access seeker. Such an exception is possible under the following conditions:
- a) The area concerned is an area with low population density, where there are limited broadband services, or where the aid beneficiaries are small local companies¹⁰⁵;
 - b) Access cannot be limited on the basis of reasonable demand in densely populated areas where one may expect infrastructure competition to develop; in such areas, the State funded network should offer all types of network access products;
 - c) Member States must demonstrate the disproportionate increase in costs for each access product concerned with detailed and objective cost calculations;
 - d) The demand is considered reasonable if (i) the access seeker provides a coherent business plan which justifies the development of the product on the State funded network and (ii) no comparable access product is already offered in the same geographic area by another operator at equivalent prices to those of more densely populated areas¹⁰⁶;

¹⁰⁴ These rules also apply in the case of connections to publicly funded backhaul networks or in the case of publicly funded mobile network which is subsequently used for FWA into areas which are already covered by fixed network.

¹⁰⁵ For instance, see Commission Decision C(2011) 7285 final of 19 October 2011, case N 330/2010 — France – Programme national «Très Haut Débit» - Volet B (OJ C 364, 14.12.2011, p.2) and Commission Decision C(2012) 8223 final of 20 November 2012, case SA.33671 (2012/N) – United Kingdom – National Broadband scheme for the UK - Broadband Delivery UK (OJ C 16, 19.1.2013, p. 2).

¹⁰⁶ Other conditions may be accepted by the Commission as part of the proportionality analysis in light of the specificities of the case and the overall balancing exercise. See for example, Commission Decision C(2011) 7285 final of 19 October 2011, case N 330/2010 — France – Programme national «Très Haut Débit» -

- e) If an access request meets the requirements listed in paragraphs (150)a)-(150)d), the additional cost of providing such access is borne by the aid beneficiary¹⁰⁷.

5.2.4.4.3 Wholesale access pricing

- (151) In setting the prices for the wholesale access products, Member States must ensure that the wholesale access price for each access product is based on one of the following benchmarks and pricing principles:
 - a) the average published wholesale prices that prevail in other comparable, more competitive areas of the Member State or the Union; or
 - b) in the absence of such published prices, the regulated prices already set or approved by the NRA for the markets and services concerned; or
 - c) in the absence of such published or regulated prices, cost orientation or the methodology mandated in accordance with the sectorial regulatory framework.
- (152) Without prejudice to the competences of the NRA under the regulatory framework, the NRA should be consulted on wholesale access products, the terms and conditions for wholesale access, including on prices and on related disputes, as set out in Section 5.2.3.5.
- (153) Member States must indicate the wholesale access products, the terms and conditions and the prices in the tender documents and must publish that information on a comprehensive State aid website, at national or regional level. The general public should be allowed to access the website without any restrictions, including prior user registration.

5.2.4.5 Claw-back

- (154) Often, the aid amount for measures supporting the deployment of fixed and mobile network is established on an *ex ante* basis so as to cover the expected funding gap over the lifespan of the project.

Volet B (OJ C 364, 14.12.2011, p.2) and Commission Decision C(2012) 8223 final of 20 November 2012, case SA.33671 (2012/N) – United Kingdom – National Broadband scheme for the UK - Broadband Delivery UK (OJ C 16, 19.1.2013, p. 2). If the conditions are fulfilled, access should be granted within a period which is customary for the particular market. In the case of conflict, the aid granting authority should ask the NRA or another competent national body for an advice.

¹⁰⁷ No additional aid may be granted to cover such access cost.

- (155) In this case, as future costs and revenues developments are generally surrounded by a degree of uncertainty, Member States should closely monitor the implementation of the broadband project during the entire duration of the project and foresee a claw-back mechanism making it possible to properly take into account information that the aid beneficiary did not factor in the original business plan when applying for State aid. Factors which may have an impact on the profitability of the project and which may be difficult, or even impossible, to establish *ex-ante* with adequate accuracy are, for example: (i) the actual deployment costs of the network; (ii) the actual revenues from the core services; (iii) the actual take-up; and (iv) the actual revenues from 'non-core' services¹⁰⁸.
- (156) Member States must implement a claw-back mechanism for at least the duration of the project if the aid amount of the project is above EUR 5 million, and must set out its rules transparently and clearly *ex-ante* (including in the documentation for the competitive selection procedure).
- (157) A claw-back is not necessary where the project is carried out by means of the direct investment model (see Annex III) in which a publicly owned, wholesale only network, is built and operated by the public authority with the sole purpose of granting fair and non-discriminatory access to all operators¹⁰⁹.
- (158) As various factors may have either a positive or a negative impact on the business plan of the aid beneficiary, the claw-back mechanism should be designed in a way to take into account and balance two objectives: (i) it should allow the Member State to recuperate amounts that exceed a reasonable profit¹¹⁰; (ii) it should not endanger the incentives for operators to participate in a tender¹¹¹ and to strive for cost efficiencies (efficiency gains) when rolling out the network. To achieve a suitable balance of the

¹⁰⁸ For instance, a claw-back mechanism may help recover profits that are higher than reasonably anticipated, e.g. due to: (i) higher than forecast take-up of broadband products resulting in additional profits and a smaller investment gap; and (ii) higher than forecast revenues from non-broadband products resulting in additional profits and a smaller investment gap (e.g. revenues from new wholesale access products). See Commission Decision C(2016) 3208 final of 26 May 2016, case SA 40720 (2016/N) – United Kingdom - Broadband Delivery UK (OJ C 323, 2.9.2016, p. 2).

¹⁰⁹ A claw-back mechanism may also be suitable in certain public ownership models, where a clawback mechanism may be based on an ex post, net present value comparison of the beneficiary's actual returns from the project accounts at the end of the contract against the beneficiary's forecast returns from the project model included in the contract. See for instance Commission Decision C(2016) 3208 final of 26 May 2016, case SA 40720 (2016/N) – United Kingdom - Broadband Delivery UK (OJ C 323, 2.9.2016, p. 2).

¹¹⁰ Reasonable profit should be taken to mean the rate of return on capital that would be required by a typical company, taking into account the level of risk specific to the broadband sector and the type of services provided. The required rate of return on capital is typically determined by the weighted average cost of capital ('WACC').

¹¹¹ The participation in the tender depends on expected profit and losses. Losses can arise for instance if the operator has been too optimistic with regard to expected future revenues arising from the provision of broadband services or if unexpected costs materialize. As the aid granting authority does not reimburse any unexpected losses, a tight claw-back mechanism on future profits may increase the overall risk for the investor and discourage participation in the tender.

two objectives, Member States should introduce incentive criteria related to gains in productive efficiency¹¹².

- (159) The incentive amount must be set to a maximum of 30 % of the reasonable profit. Member States should not claw-back any extra profit below that threshold (that is to say, the reasonable profit increased by the incentive amount¹¹³). Any profit in excess of the 30 % threshold must be shared between the aid beneficiary and the Member State, on the basis of the aid intensity resulting from the outcome of the competitive selection procedure¹¹⁴.
- (160) Claw-back mechanisms must also take into account profits made from other transactions concerning the State funded network. For instance, where a company is set up specifically to build and/or operate the State funded network, if an existing shareholder of this company sells all or part of its shares in the company within seven years from the completion of the network or within 10 years from the award of the tender, the Member State must recover any amount by which the sales proceeds exceed the price at which the current shareholder would achieve a reasonable profit¹¹⁵.
- (161) In all cases, clawed-back amounts must be returned to the Member State. Member States may decide to reinvest clawed-back amounts in the extension of the network under the same conditions of as the original State aid measure (for example to fund new projects under an approved State aid scheme).

5.2.4.6 Accounting separation

- (162) To ensure that aid remains proportional and does not lead to overcompensation or cross-subsidisation of non-aided activities, the aid beneficiary must ensure accounting separation between the funds used for the construction and the operation of the network and other funds at its disposal.

5.2.4.7 Transparency of the aid

- (163) Member States must comply with the requirements laid down in Section 7.

5.2.5 *Negative effects on competition and trade*

- (164) Aid for the deployment of fixed and mobile networks may have negative effects in terms of market distortions and impact on trade between Member States.

¹¹² Efficiency gains shall not reduce the quality of the service provided.

¹¹³ If the reasonable profit is 10 %, the incentive amount would be 3 %. Member States shall not recover any profit below 13 %.

¹¹⁴ For instance, if the actual profit is 20 % and the reasonable profit is 10 %, the incentive amount is 3 %. The aid intensity is 70 %: Member States shall not recover any profit below 13 %. From 13 % to 20 % the profit will be shared 70 % to the Member State and 30 % to the broadband investor.

¹¹⁵ Assuming a shareholder owns 20% of the share of the subsidized company whose reasonable profit calculated (on the basis of footnote 114) is 10 %. The Net Present Value (NPV) of the company using 10 % as discount rate being X. If the shareholder sells its share at Y, the Member State shall recover from the shareholder $Y - 20\% * X$.

(165) The Commission assesses the significance of the distortion of competition and effect on trade in terms of effects on competitors. If competitors see the profitability of their prior investment decreasing because of the aid, they may decide to reduce their own future investment, withdraw from the market altogether or decide not to enter into a new market or a geographic area¹¹⁶. The public support may also encourage local service providers to have recourse to the services offered by the State funded network rather than other market solutions. Additionally, where the aid beneficiary is likely to be an undertaking which is already dominant on a market or may become dominant due to the public investment, the aid measure could weaken the competitive constraints that competitors can exert. Even where distortions may be considered limited at an individual, on a cumulative basis, aid schemes might still lead to high levels of distortion. .

5.2.6 Weighing the positive effects of the aid against the negative effects on competition and trade

(166) The Commission will balance the positive effects of the planned aid measure on the supported economic activities with its identified negative effects on competition and trading conditions. For the aid to be compatible with the internal market, the positive effects of the aid measure must outweigh its negative effects.

(167) First, the Commission assesses the positive effects of the aid measure on the supported economic activities, including its contribution to objectives of digital policy. The Member State must demonstrate, on the basis of a counterfactual analysis, that the measure has positive effects compared with what would have happened without the aid. As indicated section 5.2.1, positive effects may include the achievement of the desired objectives, such as the roll-out of a new network delivering additional capacity and speed on the market as well as lower prices and better choice for consumers, higher quality and innovation. This would also result in more access for end-users to online resources and, together with increased consumer protection in this area, it is likely to stimulate an increase in demand. This will contribute to the completion of the Digital Single Market and bring benefits to the Union economy as a whole.

(168) In addition, the Commission may also take into account, where relevant, whether the aid brings about other positive effects, for instance the improvements in energy efficiency of the network operations. Where such other positive effects reflect those embodied in Union policies, such as the European Green Deal, then aid aligned with such Union policies can also be considered to have such wider positive effects.

(169) Second, the Commission assesses whether any negative effects are limited to the minimum necessary. Member States must demonstrate that the negative effects are limited to the minimum necessary. They should take into account the necessity, appropriateness and proportionality of the aid measure (Sections 5.2.2. to 5.2.4) and, for example, the size of projects, the individual and cumulative aid amounts, the expected beneficiaries (for instance whether the beneficiary has significant market power) as well as the characteristics of the targeted areas (for instance the number of performant networks present or credibly planned in a given area). In order to enable the Commission to assess the likely negative effects, Member States are encouraged to

¹¹⁶ This type of effects can be referred to as ‘crowding out’.

submit any impact assessment at their disposal as well as *ex post* evaluations carried out for similar predecessor schemes.

- (170) The Commission will consider an aid measure compatible with the internal market only where the positive effects outweigh the negative effects on competition and trade. In cases where the proposed aid measure does not address a well-identified market failure in an appropriate and proportionate way, the negative distortive effects on competition will tend to outweigh the positive effects of the measure. The Commission will therefore be likely to conclude that the proposed aid measure is incompatible.

6 COMPATIBILITY ASSESSMENT OF TAKE-UP MEASURES

- (171) While the availability of an electronic communications network is a prerequisite for the possibility to subscribe to internet access services, this could, in some cases, not be sufficient to ensure that end-users' needs referred to notably in paragraphs (52) and (63) will be satisfied and the benefits for the society as a whole will materialise.
- (172) This may result from the end-users' relatively low propensity to subscribe to internet access services. Such low propensity may be due to various reasons, including the economic impact of the cost of subscribing to the electronic communications services for end-users in general or for certain categories of end-users in fragile situations in particular, and the inaccurate perception of the benefits that the subscription to broadband services will procure.
- (173) Take-up measures such as vouchers may be useful to remedy a specific market failure in terms of take-up of available electronic communications services. Widespread and affordable access to connectivity generates positive externalities because of its ability to accelerate growth and innovation in all sectors of the economy. Where affordable access to suitable electronic communication services cannot be ensured due to, for instance, high retail prices, State aid may help to remedy such a market failure. In such cases, the granting of State aid may produce positive effects and overall efficiency can be improved.
- (174) Voucher schemes aim to increase the take-up (subscriptions) or in some circumstances to incentivise end-users to maintain the subscription to fixed or mobile access services.
- (175) They are designed to reduce the costs for end-users (for example, the set-up costs and the subscription fee for a certain time-period). They can be used to subscribe to new fixed or mobile services or to upgrade the current subscriptions.
- (176) Vouchers would not amount to aid with regard to end-users including individual consumers if the latter do not carry out an economic activity falling within the scope of Article 107(1) of the Treaty. Vouchers may amount to aid with regard to end-users if the latter carry out an economic activity falling within the scope of Article 107(1) of the Treaty. However in most cases that aid could be *de minimis*, considering the limited value of vouchers.
- (177) The existing case law of the Court of Justice of the European Union confirms that where an advantage is granted to end-users such as individual consumers that do not carry out an economic activity, it may also amount to an advantage granted to certain

other undertakings and may constitute State aid within the meaning of Article 107(1) of the Treaty¹¹⁷. Such other undertakings may be electronic communications operators or other undertakings collecting the vouchers.

- (178) Vouchers can confer an advantage on electronic communications operators providing services to end-users (and in some cases can provide an advantage to network operators) who will be able to offer services over existing electronic communications networks to a larger number of end-users, strengthening their market position¹¹⁸. Electronic communications services providers and operators are undertakings and are subject to State aid control, if the advantage they receive exceeds *de minimis* levels.

6.1 Social vouchers

- (179) Social vouchers aim to support certain individual consumers to procure or maintain fixed or mobile services. They can be found compatible with the internal market on the basis of Article 107(2), point (a) of the Treaty, as ‘*aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned*’¹¹⁹.
- (180) To be compatible under Article 107(2), point (a), of the Treaty, such vouchers must have a social character and be reserved for particular categories of individual consumers (undertakings are not eligible) whose financial circumstances justify the payment of aid for social reasons (for example, lower income families, students, pupils, etc.), for instance in order to enable them to acquire or maintain a fixed or mobile subscription, in order to benefit from distance learning, teleworking, etc.
- (181) Various means of implementation may be foreseen under national rules. For instance, the voucher scheme may foresee payments directly to the end-users or directly to the service provider chosen by the end-users.
- (182) Eligible costs may be the monthly fee, the standard¹²⁰ set-up costs and the end-user’s necessary terminal equipment (modem/router) for access to the internet.
- (183) The vouchers must only be used to subscribe to new fixed or mobile services or to maintain existing ones. Vouchers must not be awarded for switching between providers providing the same quality of service, to limit risks of opportunistic behaviours not in line with the social objective of such vouchers. Vouchers must not be used to upgrade existing fixed or mobile subscriptions unless it can be clearly

¹¹⁷ Judgment of the General Court of 4 March 2009, *Italy v Commission*, T-424/05, ECLI:EU:C:2007:367, recital 108; judgment of the Court of 28 July 2011, *Mediaset v Commission*, C-403/10 P, ECLI:EU:C:2011:533, paragraph 81.

¹¹⁸ Without prejudice to the assessment under State aid rules of measures taken at national level in the implementation of the universal service obligations included in the Union regulatory framework for electronic communications (Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (Recast), OJ L 321, 17.12.2018, p. 36).

¹¹⁹ See Commission Decision C(2020) 8441 final of 4 December 2020, case SA.57357 (2020/N) – Greece – Broadband voucher scheme for students (OJ C 41, 52.2021, p. 4).

¹²⁰ Standard costs are the ones, which applies to all end-users irrespective of their specific situations.

demonstrated that the performances of the current subscriptions are unable to fulfil end-users' minimum reasonable needs.

- (184) The requirement to avoid any discrimination related to the origin of the products is fulfilled by complying with the technology neutrality principle. End-users must be able to use the voucher to procure the eligible fixed or mobile services from any provider capable of providing them, irrespective of the technology used for providing the service. The measure must ensure equal treatment of all possible service providers and must offer end-consumers the widest possible choice of suppliers. For this purpose, the Member State must set-up an online registry of all eligible service providers or implement an equivalent alternative method to ensure the openness, transparency and non-discriminatory nature of the measure. End-users must have the possibility to consult the online registry to be informed about all operators able to provide the eligible services. All providers capable of providing the eligible fixed or mobile services must have the possibility to be included in the online registry based on objective and transparent criteria (for example, ability to comply with the minimum requirements for the provision of the eligible fixed or mobile services). The online registry may also provide additional information to assist end-users, such as the type of service provided by the various operators.
- (185) Social voucher schemes must be limited in time to a reasonable period not exceeding three years.
- (186) Member States may implement additional safeguards to avoid undue distortion of competition and possible misuse of vouchers by end-users or electronic communication operators. Additional safeguards may be necessary to ensure that vouchers will not be used to procure fixed or mobile internet access services where another member of the same household already has a subscription to an adequate service.
- (187) In addition, Member States must comply with the requirements laid down in Section 7 on transparency, reporting and monitoring.

6.2 Connectivity vouchers

- (188) Connectivity vouchers may be designed for broader categories of end-users (for example, vouchers for all citizens or certain undertakings, such as SMEs) to promote the take-up of fixed or mobile services contributing to the development of an economic activity. Such measures can be declared compatible with the internal market on the basis of Article 107(3), point (c), TFEU.
- (189) The Commission will consider such measures to be compatible if they contribute to the development of an economic activity (first condition) without unduly affecting trading conditions to an extent contrary to the common interest (second condition).

6.2.1 First condition

- (190) The Commission considers that voucher schemes that effectively facilitate the take-up of fixed or mobile services can facilitate the development of a range of economic activities by increasing connectivity and access to the internet access services.

- (191) In order to provide an incentive effect, the voucher must only cover up to 50 % of the eligible costs. Eligible costs may be the monthly fee, the standard set-up costs and the end-user's necessary terminal equipment (modem/router) for access to the internet. The costs for in-house wiring and some limited deployment in the end-user's private property or in the public property in close proximity of the end-user's private property may also be eligible to the extent they are necessary and ancillary to the provision of the service.
- (192) Various means of implementation may be provided for under national rules. For instance, the voucher scheme may provide for payments directly to the end-users or directly to the service provider chosen by the end-users.
- (193) If a State aid measure, the conditions attached to it (including its financing method when that method forms an integral part of the measure) or the activity it finances entails a violation of a provision or general principles of Union law, the aid cannot be declared compatible with the internal market¹²¹.

6.2.2 *Second condition*

- (194) State aid should be targeted towards situations where aid can bring about a material improvement that the market alone cannot deliver, that is to say, where there is a market failure in terms of take-up. For instance, if State aid for the take-up of fixed and mobile electronic communication services is not targeted at a market failure in terms of take-up (for instance if vouchers are misused for supporting deployment instead of encouraging demand) or does not respect technological neutrality, aid in the form of vouchers would not be an appropriate policy instrument and the measure could alter conditions for investment and create distortions detrimental to the good functioning of the markets concerned. In such cases, aid in the form of vouchers would risk to unduly affect trading conditions to an extent contrary to the common interest; the aid measure for connectivity vouchers cannot be declared compatible with the internal market.
- (195) Vouchers may be necessary to support subscription to a new service or to upgrade the current one. Vouchers may be used to upgrade the existing fixed or mobile subscription only to the extent it does not unduly distort competition at retail and wholesale level.
- (196) The Commission considers that connectivity vouchers that are technologically neutral are also proportionate as they allow end-users to procure the services of the best value for money from any provider capable of providing them, irrespective of the technology used for providing the service. Furthermore, such measures may limit the negative effects on competition resulting from the aid if they ensure equal treatment of all possible service providers and offering end-users the widest possible choice of suppliers. For this purpose, the Member State must set-up an online registry of all eligible service providers or implement an equivalent alternative method to ensure the openness, transparency and non-discriminatory nature of the measure. End-users must have the possibility to consult such information about all operators able to provide the eligible services. All providers capable of providing the eligible services must have

¹²¹ Judgment of the Court of Justice of 22 September 2020, *Austria v Commission*, C-594/18 P, EU:C:2020:742, paragraph 44.

the possibility to request to be included in the online registry or using any alternative method chosen by the Member State based on objective criteria (for example, ability to comply with the minimum requirements for the provision of the eligible fixed or mobile services). The online registry (or the alternative method chosen) may also provide additional information to assist end-users, such as the type of service provided by the various operators.

- (197) Connectivity vouchers must be available to end-users only in areas where there is at least one existing network¹²² able to provide the eligible services, which must be verified through mapping and public consultation. The mapping exercise and the public consultation must cover the duration of the voucher scheme, and must be carried out in line Sections 5.2.2.4.1 5.2.2.4.2 respectively. The public consultation must invite interested parties to comment on the main characteristics of the measure and not only on the availability of networks in the target areas.
- (198) Member States must limit risks that voucher schemes may unduly distort competition. For the aid to be compatible, Member States must carry out a market assessment to identify the eligible providers present in the area and collect information to calculate their market share. The market assessment must aim to establish if the voucher scheme may confer a disproportionate advantage on some providers to the detriment of others possibly reinforcing (local) market dominance. The market assessment must also aim to establish the actual need to implement a voucher scheme by comparing the situation in the intervention area(s) with the situation in other areas of the Member State or the Union. The trends in take-up by end-users may also be assessed to conclude on the opportunity to implement the voucher scheme.
- (199) In order to be included in the voucher scheme, where the operator is vertically integrated and has a retail market share above 25%, that provider must offer, on the corresponding wholesale access market, to any electronic communication services providers at least one wholesale access product able to ensure that the access-seeker will be able to reliably provide the eligible services, under open, transparent and non-discriminatory conditions. The wholesale access price must be set as specified in Section 5.2.4.4.3.
- (200) Connectivity voucher schemes will be considered to have limited negative effects on competition if they are limited in time to a reasonable period not exceeding two years.
- (201) In addition, Member States must comply with the requirements laid down in Section 7 on transparency, reporting and monitoring.

¹²² A voucher measure to increase the up-take of the future network may be included in the aid measure for the network.

7 TRANSPARENCY, REPORTING, MONITORING

7.1 Transparency

- (202) Member States must publish the following information in the Commission's transparency award module¹²³ or on a comprehensive State aid website, at national or regional level:
- a) the full text of the decision approving the aid scheme or the individual aid, and its implementing provisions, or a link to it;
 - b) information on each individual aid award exceeding EUR 100 000, in accordance with Annex IV.
- (203) The information referred to in paragraph (202)b), shall be published within six months from the date of award of the aid, or, for aid in the form of tax advantages, within one year from the date the tax declaration is due¹²⁴.
- (204) Member States must organise their comprehensive State aid websites, as referred to in paragraph (202), in such a way as to allow easy access to the information. For aid that is unlawful but subsequently found to be compatible, Member States must publish the information within six months from the date of the Commission's decision declaring the aid compatible.
- (205) To enable the enforcement of State aid rules under the Treaty, the information must be available for at least 10 years from the date on which the aid was granted. The information must be published in a non-proprietary spreadsheet data format, which allows data to be effectively searched, extracted, downloaded and easily published on the internet, for instance in CSV or XML format. The general public must be allowed to access the website without any restrictions, including prior user registration.
- (206) The Commission will publish on its website the link to the national or regional State aid website referred to in paragraph (202).

7.2 Reporting

- (207) Pursuant to Council Regulation (EU) 2015/1589¹²⁵ and Commission Regulation (EC) No 794/2004¹²⁶, Member States are required to submit annual reports to the Commission in respect of each aid measure approved under these guidelines.

¹²³'State Aid Transparency Public Search', available at the following website: <https://webgate.ec.europa.eu/competition/transparency/public?lang=en>

¹²⁴ If there is no formal requirement for an annual declaration, 31 December of the year for which the aid was granted will be considered as the granting date for encoding purposes.

¹²⁵ Council Regulation (EU) 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union (OJ L 248, 24.9.2015, p. 9).

¹²⁶ Commission Regulation (EC) No 794/2004 of 21 April 2004 implementing Council Regulation (EC) No 659/1999 laying down detailed rules for the application of Article 93 of the EC Treaty (OJ L 140, 30.4.2004, p. 1).

- (208) In addition to the annual reports referred to in paragraph (207), Member States must submit a report to the Commission every two years containing key information on the aid measures approved under these guidelines, in accordance with Annex V. When adopting a decision under these guidelines the Commission may require additional reporting regarding the aid measure.

7.3 Monitoring

- (209) Member States must maintain detailed records regarding all aid measures. Those records must contain all information necessary to establish that all the compatibility conditions set out in these guidelines are fulfilled. Member States must maintain those records for 10 years from the date of award of the aid and shall provide them to the Commission upon request.

8 EX POST EVALUATION PLAN

- (210) To further ensure that distortions of competition and trade are limited, the Commission may require that certain schemes be subject to a time limitation (of normally four years or less) and to an ex post evaluation in order to verify (i) whether the assumptions and conditions which led to the compatibility decision have been realised; (ii) the effectiveness of the aid measure in light of its pre-defined objectives; (iii) the impact of the aid measure on markets and competition and that no undue distortive effects arise throughout the duration of the aid scheme that is contrary to the interests of the Union¹²⁷.
- (211) Ex post evaluation may be required for schemes with large aid budgets, or containing novel characteristics, or when significant market, technology or regulatory changes are foreseen. In any case, evaluation will be required for schemes with a State aid budget or accounted expenditure over EUR 150 million in any given year or EUR 750 million over their total duration, that is to say, the combined duration of the scheme and any predecessor scheme covering a similar objective and geographical area, starting from publication of the guidelines. Given the objectives of the evaluation, and to avoid putting a disproportionate burden on Member States, ex post evaluations are only required for aid schemes the total duration of which exceeds three years, starting from publication of the guidelines.
- (212) The ex post evaluation requirement may be waived for aid schemes that are an immediate successor of a scheme covering a similar objective and geographical area that has been subject to an evaluation, delivered a final evaluation report in compliance with the evaluation plan approved by the Commission and has not generated any negative findings. Where the final evaluation report of a scheme is not in compliance with the approved evaluation plan, that scheme must be suspended with immediate effect upon request of the Commission.
- (213) The aim of the evaluation should be to verify whether the assumptions and conditions underlying the compatibility of the scheme have been achieved, in particular the necessity and the effectiveness of the aid measure in the light of its general and

¹²⁷ See for instance Commission Decision C(2012) 8223 final of 20 November 2012, case SA.33671 (2012/N) – United Kingdom – National Broadband scheme for the UK - Broadband Delivery UK (OJ C 16, 19.1.2013, p. 2).

specific objectives. It should also assess the impact of the scheme on competition and trade.

- (214) For aid schemes subject to the evaluation requirement referred to in paragraph (211), Member States must notify a draft evaluation plan, which will form an integral part of the Commission's assessment of the scheme, as follows:
- a) together with the aid scheme, if the State aid budget of the scheme exceeds EUR 150 million in any given year or EUR 750 million over its total duration;
 - b) within 30 working days following any significant change that increases the budget of the scheme to over EUR 150 million in any given year or EUR 750 million over the total duration of the scheme;
 - c) within 30 working days following the recording in official accounts of expenditure under the scheme in excess of EUR 150 million in any year.
- (215) The draft evaluation plan must be in line with the common methodological principles provided by the Commission¹²⁸. Member States must publish the evaluation plan approved by the Commission.
- (216) The ex post evaluation must be carried out by an expert independent from the aid granting authority on the basis of the evaluation plan. Each evaluation must include at least one interim and one final evaluation report. Member States must publish both reports.
- (217) The final evaluation report must be submitted to the Commission in due time to assess any prolongation of the aid scheme and at the latest nine months before its expiry. That period may be reduced for schemes triggering the evaluation requirement in their last two years of implementation. The precise scope and arrangements for each evaluation will be set out in the decision approving the aid scheme. The notification of any subsequent aid measure with a similar objective must describe how the results of the evaluation have been taken into account.

9 FINAL PROVISIONS

- (218) These guidelines will be applied from the first day following their publication in the *Official Journal of the European Union*.
- (219) The Commission will apply these guidelines to all notified aid measures after the guidelines are published in the Official Journal, even where the projects were notified prior to that date.
- (220) In accordance with the Commission notice on the determination of the applicable rules for the assessment of unlawful State aid¹²⁹, the Commission will apply, to unlawful

¹²⁸ Commission staff working document, Common methodology for State aid evaluation, Brussels, 28.5.2014, SWD(2014) 179 final, or any of its successors.

¹²⁹ OJ C 119, 22.05.2002, p. 22.

aid, the rules in force at the time when the aid was granted. Accordingly, it will apply these guidelines in the case of unlawful aid granted after their date of publication.

(221) The Commission proposes to Member States, on the basis of Article 108(1) of the Treaty, the following appropriate measures:

- a) Member States must amend, where necessary, their existing aid schemes in order to bring them into line with the provisions of Section 7.1. of these guidelines within twelve months after their publication in the Official Journal of the European Union;
- b) Member States should give their explicit unconditional agreement to the appropriate measures (including amendments) proposed in point (a) within two months from the date of publication of the guidelines in the Official Journal of the European Union. In the absence of any reply, the Commission will assume that the Member State in question does not agree with the proposed measures.

