

# Public Consultation on the Evaluation and Review of the Broadband Cost Reduction Directive

Fields marked with \* are mandatory.

## Introduction

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The Broadband Cost Reduction Directive (2014/61/EU) aims to facilitate and incentivise the roll-out of high-speed electronic communications networks by lowering the costs of deployment with a set of harmonised measures. The measures focus on access to existing physical infrastructure, coordination of civil works, simplification of administrative procedures and requirements for in-building physical infrastructure for new buildings and major renovations. It also includes provisions to ensure transparency of relevant information through Single Information Points and dispute resolution mechanisms.

The review of the Broadband Cost Reduction Directive is part of the actions announced in the Communication on '[Shaping Europe's Digital Future](#)' (COM (2020)67 final), which stressed that, for digital infrastructure and networks alone, the EU has an investment gap of EUR 65 billion per year. Moreover, adequate investments at EU, national and regional levels are necessary to achieve the EU 2025 connectivity objectives and a [Gigabit Society \(COM\(2016\) 587 final\)](#) in Europe.

The evidence gathered so far by the Commission, including the [report on the implementation of the Broadband Cost Reduction Directive \(COM\(2018\) 492\)](#) and the continuous monitoring of its implementation in the Member States, gives rise to the need for the Broadband Cost Reduction Directive to be evaluated and possibly revised. At the same time, the revised instrument should adapt to recent and current technological, market and regulatory developments and help foster a more efficient and fast deployment of more sustainable very high

capacity networks, including fibre and 5G, ensuring alignment with the European Electronic Communications Code and contributing to greening the Information and Communication Technology sector as part of the [‘European Green Deal’ \(COM\(2019\) 640\)](#).

The Commission is carrying out an evaluation of the current measures under the Broadband Cost Reduction Directive and an impact assessment of a possible revised instrument, in a back-to-back process. In this context, this public consultation has two main objectives:

1. collect stakeholders’ views and inputs on the implementation of the Directive to support the analysis of the backward-looking evaluation and,
2. collect stakeholders’ views and inputs to support forward-looking policy options.

Written feedback provided in other document formats can be uploaded through the button made available at the end of the questionnaire.

## About you

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### \* Language of my contribution

- Bulgarian
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- German
- Greek
- Hungarian
- Irish
- Italian
- Latvian

- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

\* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business organisation
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union
- Other

\* First name

Markus

\* Surname

Ortwein

\* Email (this won't be published)

ortwein@buglas.de

\* Organisation name

*255 character(s) maximum*

European Local Fiber Alliance (ELFA)

\* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

*255 character(s) maximum*

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

\* Country of origin

Please add your country of origin, or that of your organisation.

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| <input type="radio"/> Argentina           | <input type="radio"/> Ethiopia           | <input type="radio"/> Malta         | <input type="radio"/> Sierra Leone                     |

- Armenia
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- Barbados
- Belarus
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- Benin
- Bermuda
- Bhutan
  
- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
  
- Falkland Islands
- Faroe Islands
- Fiji
- Finland
- France
  
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
  
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland
  
- Grenada
- Guadeloupe
  
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- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
  
- Marshall Islands
- Martinique
- Mauritania
- Mauritius
- Mayotte
  
- Mexico
- Micronesia
  
- Moldova
  
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar /Burma
- Namibia
- Nauru
  
- Nepal
  
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
  
- Singapore
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
  
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
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- Svalbard and Jan Mayen
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- Switzerland
  
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- Taiwan
- Tajikistan
- Tanzania
- Thailand
  
- The Gambia

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- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
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- Romania
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- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
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- Zimbabwe

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **For the purpose of transparency, the type of respondent (for example, ‘business association, ‘consumer association’, ‘EU citizen’) country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.** Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

### \* Contribution publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

#### **Anonymous**

Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.

#### **Public**

Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

I agree with the [personal data protection provisions](#)

\* Please specify further the capacity(s) in which you are replying to the questionnaire (several answers may be selected):

- Operator of electronic communications networks (individual operator or industry association).
- Operators of physical infrastructure intended to host electronic communications networks (individual operator or industry association).
- Operator of other types of networks intended to provide a service of production, transport or distribution of gas, electricity (including public lighting), heating and water (including disposal or treatment of waste water and sewage and drainage systems), as well as transport services, including railways, roads, ports and airports (individual operator or industry association).
- Government (national) Authority/Body
- Regional Authority/Body
- Local Authority/Body
- National regulatory authority for the electronic communications sector.
- National regulatory authority for other sectors (energy, transport, etc.).
- EU body or institution
- Other public body or institution
- Owner or manager of private property that may be used for the deployment of electronic communications networks (individual or association).
- Supplier of electronic communications equipment and related services (individual operator or industry association).
- Building and civil works sector (individual operator or industry association).
- Stakeholder with a general interest in the deployment of very high capacity networks and services including citizens, social and economic organisations /groups, and nongovernmental bodies.
- Stakeholder interested in environmental protection, including citizens, social and economic organisations/groups, and nongovernmental bodies.
- Expert in the subject matter, including academia and think tanks
- Other

General questions

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This section includes some general questions on the benefits of widespread high quality connectivity, the joint deployment of networks, and the role of public authorities to facilitate this deployment.

**1. In your opinion, to what extent can widespread high quality connectivity play a role in the response to the COVID-19 crisis and the economic recovery?**

The COVID-19 pandemic and its impact on everyday life has stressed the importance of connectivity in all sectors of the economy and the society. Communication technologies, in particular fibre networks, have helped us stay connected, work from home, facilitate e-learning for children and maintain social contact. That being said, the Coronavirus crisis has demonstrated that further efforts are needed to achieve nationwide fibre deployment in Europe. Only nationwide fibre infrastructures will allow to fully exploit the potential of digitalisation as a pillar of the future economic recovery. Moreover, fibre networks are crucial to a digital economy that leaves no one behind nor unconnected and are central to the successful delivery of the European Green Deal, an overarching EU priority. This can only be achieved by prioritising economically viable fibre deployment which does not rely on public subsidisation, and by strengthening private investment and market competitiveness.

**2. To what extent is it appropriate to apply measures at European Union level to facilitate and incentivise the roll-out of high-speed electronic communications networks?**

In light of technological, market and regulatory developments in recent years, it is necessary to align the rules governing the deployment of very-high speed broadband with the new EU telecoms rules, the European Electronic Communications Code (EECC). However, it is important that reform introduces further clarifications in the existing legal framework rather than new regulatory obligations, which might curb the deployment of VHCN and disincentivise private investment therein. Any new regulatory measures should take into account the unique and varying conditions in the individual member States without adopting a one-size-fits-all approach.

**3. In your opinion, what benefits could be obtained from the coordination of civil works for the joint deployment of networks (telecommunications, electricity, gas, roads)?**

The measures for the coordination of civil works for joint deployment should be outlined with sufficient clarity and detail on European level so as not to give rise to inadvertent inequities and unintended consequences capable of negatively impacting competition on the national markets.

It is also crucial to differentiate between telecommunication networks and other networks. In Germany, this lack of differentiation has had an extremely negative impact on the implementation of the BCRD.

**4. Besides public funding, what role should public administrations –at different levels- play to facilitate the deployment of electronic communications networks?**

Given that different EU Members States are at different stages of deployment for their respective electronic communication networks, it is imperative that the measures taken at different levels of governance do not cause greater fragmentation at European level. However, the variations and discrepancies between the Member States indeed require a robust framework which duly takes into account different market dynamics at national, regional and local levels.

As such, regulatory authorities at all levels of governance should strive to reduce existing market barriers, for instance by facilitating harmonised and digitised permit granting procedures.

## Evaluation of the overall functioning of the Broadband Cost Reduction Directive

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This section includes some general questions on the overall evaluation of the functioning of the Broadband Cost Reduction Directive in relation to the key evaluation criteria established in the Commission's Better Regulation Guidelines (i.e. effectiveness, efficiency, coherence, relevance and EU added value).

5. To what extent has the Broadband Cost Reduction Directive been **effective to achieve its general objective** of reducing the cost for high-speed electronic communications networks deployment?

- Not effective at all
- Not effective
- Neutral
- Effective
- Very effective
- No opinion

Please explain your response, including if there are factors other than the implementation of the Directive that have contributed to reducing the cost of high-speed broadband deployment.

Synergies have been identified and used even before the CRD had been introduced by the European Commission. If the deployment of passive infrastructure offered benefits to both parties, the initial deployer /owner and the access seeking telecommunications company, cooperative behavior could regularly be observed in the market. Agreements are currently made based on free negotiations between partners. But if a site coordination or access request has negative implications for the Business Case of one or both parties, the obligation of access imposed by the state does not lead to more coordination or co-use in practice. The costs that are raised through litigation and conflict resolution entities seem very high

6. To what extent has the Broadband Cost Reduction Directive been **effective to achieve its operational objectives**?

	Not effective at all	Not effective	Neutral	Effective	Very effective	No opinion
Increased access to existing physical infrastructure suitable for high-speed broadband roll-out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reinforced coordination of civil works	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction of time and cost of permit granting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased access to existing physical infrastructure suitable for high-speed broadband roll-out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

7. As regards the **efficiency** of the Broadband Cost Reduction Directive and its implementing measures, if you compare the costs of implementation and of compliance borne by your organisation with the benefits accrued, how do you rate the cost-benefit ratio at scale 1 to 5 (1=costs significantly exceed benefits, 5=benefits significantly exceed costs)?

- 1
- 2
- 3
- 4
- 5
- No opinion

Please explain your answer:

8. Could you give an estimate of annual direct costs/savings for your organisation in applying the Broadband Cost Reduction Directive? Please indicate, if possible, the cause of these costs/savings.

9. As regards the **relevance** of the Broadband Cost Reduction Directive, to what extent has this legislation at EU level facilitated and incentivised the roll-out of electronic communications networks through the following means?

	Not relevant at all	Not relevant	Neutral	Relevant	Very relevant	No opinion
Access to existing physical infrastructure and related transparency measures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordination of civil works and related transparency measures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Permit-granting procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-building physical infrastructure and related access measures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competent bodies and other horizontal provisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

10. To what extent is the Broadband Cost Reduction Directive **coherent** with other EU policies?, in particular with:

	Not coherent at all	Not coherent	Neutral	Coherent	Very coherent	No opinion
The 2009 electronic communications <a href="#">regulatory framework</a> , in particular its provisions on access (Significant Market Power and non- Significant Market Power), as well as on rights of way and rights to install facilities, dispute resolution, co-location and sharing of network elements and associated facilities.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The <a href="#">European Electronic Communications Code</a> , in particular its provisions on access (Significant Market Power and non- Significant Market Power), as well as on small-area wireless access points, rights of way and rights to install facilities, dispute resolution, co-location and sharing of network elements and associated facilities.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sector-specific EU Law on other network industries, in particular, in the energy and transport sectors.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition policy and state aid	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other EU policies	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers, and indicate if you have identified any areas for improvement of coherence.

ELFA would like to stress that the coherence of the BCRD with a number of other EU policies is difficult to assess at present. The reason for this is that the majority of EU Member States is still due to implement large parts of the EECC and its guidelines for a consistent application on national level. This is important because the Code also includes a number of symmetric regulations (e.g. Art. 61(3)), providing guidance to National regulatory Authorities (NRAs) on the criteria to determine access points, new and small network deployments, and high and non-transitory barriers to replication. Another policy instrument which is due to be transposed in the Member States is the Recommendation on Relevant Markets (RRM) which was published by the Commission in December 2020. All these legal and policy instruments have differing objectives and entail varying regulatory approaches. It is therefore questionable how far changing and expanding the scope of the BCRD is compatible with these legislative measures and review procedures.

11. As regards the **EU added value** of the Broadband Cost Reduction Directive, to what extent is the harmonisation brought by the Directive beneficial compared to individual national measures?

	Not beneficial at all	Not beneficial	Neutral	Beneficial	Very beneficial	No opinion
Ease of doing business across the EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Economies of scale for companies with operations in multiple EU countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulatory stability and legal certainty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simple and efficient administrative procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

## Subject matter and scope

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The Broadband Cost Reduction Directive aims to facilitate and incentivise the roll-out of high-speed electronic communications networks by promoting the joint use of existing physical infrastructure and by enabling a more efficient deployment of new physical infrastructure so that such networks can be deployed at lower cost. To this end, the Directive establishes minimum requirements relating to civil works and physical infrastructure, with a view to approximating certain aspects of the laws, regulations and administrative provisions of the Member States in those areas (Article 1).

The terms used in this section, in particular 'network operator', 'physical infrastructure', 'civil works', 'permit', and 'high-speed electronic communications network' are understood as defined in Article 2 of the Broadband Cost Reduction Directive. In addition, the term 'physical infrastructure' also includes 'street furniture such as light poles, street signs, traffic lights, billboards, bus and tramway stops and metro stations' as set out in Article 57 of the European Electronic Communications Code.



12. In your experience, to what extent do the following aspects influence the timely and efficient deployment of electronic communications networks?

	Not significantly at all	Less significantly	Moderately significantly	Significantly	Very significantly	No opinion
Permit-granting procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Permit-granting fees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information about on-going or planned civil works	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordination of civil works and other co-investment or joint roll-out mechanisms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information about existing physical infrastructures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information about other elements and facilities suitable to install network elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to existing physical infrastructures of electronic communication networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to existing physical infrastructures of electricity supply networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to existing physical infrastructures of other supply networks (e.g. water, heat, gas supply, sewerage)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to other elements and facilities suitable to install network elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to in-building physical infrastructures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers, including whether the factors negatively or positively affects network deployment, and any other factors that in your opinion may affect the timely and efficient deployment of electronic communications networks.

13. Do any of the aspects referred to in the previous question particularly affect deployment of networks depending on the type of area\* or the access technologies\*\*?. If so, please explain how and why?

\*Different types of areas where the network deployment is taking place can be identified based on the location of the users or connected objects as follows:

- Urban, suburban, rural areas: areas with different population densities in terms of human users and connected objects (e.g. sensors for IoT applications such as smart agriculture, water resources management, or critical communications)
- Business / industrial parks: areas with business users.
- Communication routes: areas along major terrestrial transport paths such as roads or railways, where e.g.
- Connected Automated Mobility or other logistics applications will be deployed.

\*\*Access technologies can be classified according to the physical media of the access network with which they are associated:

- Fibre networks technologies: Passive/Active Optical Network technologies.
- Hybrid fibre-copper (twisted pair or coaxial) networks technologies: xDSL (G.Fast), DOCSIS technologies.
- Wireless networks with macro cells (range > 2,5 km) technologies: 4G, 5G, WiMax
- Wireless networks with small cells (femtocells, picocells, metrocells or microcells, range < 2,5 km) technologies: mainly 5G.

14. Do you consider that any of the definitions in the current Directive should be reviewed and/or that additional definitions should be provided for to clarify concepts used in existing provisions? Please explain your response:

Yes, an additional definition on what constitutes “public means” is necessary to close the problem of misuse of the CRD in Germany. Currently, the CRD can be used by traditional telecommunication companies to overbuild telecommunication infrastructure of alternative providers that are owned by the respective municipality (public utilities). Public utility companies that deploy broadband networks not using public means in a competitive market are at great risk to be regarded as publicly financed companies and therefore might give rise to the notion that their networks are funded by public means – even though in practice they are not. Private investments that have been made in a competitive market become very risky and public utility companies experience an artificial competitive disadvantage against traditional telecommunication companies. It is of greatest importance to the German project to rollout of fiber networks that public funds are specified as funds that originate from public budgets in order to resolve the misunderstanding that has ensued on the political stage in Germany. For more detail see answer to question 18 and 26.

15. Do you consider that the current scope of the Broadband Cost Reduction Directive, – by reference to high-speed networks of above 30 Mbps- remains appropriate, in particular taking into account the 2025 Gigabit strategic connectivity objectives ([Towards a European Gigabit Society - COM\(2016\)587](#)) and the new objective of promoting connectivity and access to, and take-up of very high capacity networks in the European Electronic Communications Code? Please explain your response:

The BCRD needs to address the changes that have been brought about by the European Electronic Communications Code (EECC). There should be no room to provide telecommunication providers with a legal claim for accessing physical infrastructure in order to deploy technically inferior networks, such as fiber to the curb networks. Since a revised version of the BCRD will only take effect in some years (2025), the focus needs to be put on Very-High-Capacity Networks (VHCN), as defined by the BEREC guidelines (BoR (20) 165) for Very High Capacity Networks, which set the criteria on what currently constitutes a fixed high-speed network. That is, any network providing a fixed-line connection with a fibre roll out at least up to the multi-dwelling building (FTTB).. Accordingly, the definition of a high-speed network under the BCRD should be amended to align with the EECC in terms of most up-to-date quality parameters to ensure that Europe can swiftly transition to a gigabit society. Only future proof technologies should be granted the legal right to coordinate sites or co-use existing physical infrastructures, especially in the light of the European Commission's Connectivity Goals.

## Access and availability of physical infrastructure

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Article 3 of the Broadband Cost Reduction Directive requires network operators (not only operators of electronic communications networks, but also operators of other types of networks, such as energy and transport), to meet reasonable requests for access to physical infrastructure for the purposes of deploying high-speed electronic communication networks, under fair and reasonable terms and conditions, including price. Refusals must be grounded on objective, transparent, and proportionate criteria. Where access has been refused or an agreement has not been reached within two months from the day of the request, access seekers can refer the issue to a dispute settlement body, which is empowered to resolve the dispute, including by setting fair and reasonable terms and conditions.

The Directive also requires that all newly constructed and majorly renovated buildings be equipped with physical infrastructure, such as mini-ducts, capable of hosting high-speed networks, and an easily accessible access point in the case of multi-dwelling buildings (Article 8). Providers of public communications networks must have access to the access point and the in-building physical infrastructure under fair and non-discriminatory terms and conditions, if duplication is technically impossible or economically inefficient (Article 9).

16. Please provide an estimation of the percentage that costs linked to physical infrastructure represent in relation to the overall costs of deployment of fixed and mobile/wireless networks for your organisation.

Fixed networks:

- Up to 20%

- 20%-40%
- 40%-60%
- 60%-80%
- More than 80%

Please explain your answer, including where relevant, for cases where new physical infrastructure is built and for cases where existing physical infrastructure is accessed.

Mobile/wireless networks:

- Up to 20%
- 20%-40%
- 40%-60%
- 60%-80%
- More than 80%

Please explain your answer, including where relevant, for cases where new physical infrastructure is built and for cases where existing physical infrastructure is accessed.

17. With respect to access to existing physical infrastructure, to what extent have the following factors led to a more costly or lengthy network deployment?

	Not at all significantly	Less significantly	Moderately significantly	Significantly	Very significantly	No opinion
Lack of availability of suitable physical infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of information on existing physical infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty to agree on terms and conditions of access with owner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Slow/ineffective dispute resolution process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer, identifying where relevant potential differences between fixed and mobile/wireless networks.

18. Do you consider that the obligations to meet reasonable requests for access under fair and reasonable terms and conditions, including pricing (Article 3(2) of the Broadband Cost Reduction Directive), are appropriate to ensure effective and proportionate access to different types of existing physical infrastructure?

	Not at all appropriate	Not appropriate	Neutral	Appropriate	Very appropriate	No opinion
Physical infrastructure owned by operators of electronic communications networks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical infrastructure owned by operators of networks other than electronic communications networks	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer, including, if relevant, how these access obligations should be modified.

Above all, it is important to highlight that access obligations must remain a measure of last resort for physical infrastructure owned by operators of electronic communication networks. Negotiated solutions and open access agreements should be the basis for ensuring access to existing physical infrastructure, and the imposition of access requirements should only be considered as a final remedy where all other options have failed to produce an equitable outcome acceptable to all parties.

Access obligations are appropriate, if they refer to physical infrastructures of other networks that are not telecommunication networks. Access obligations to passive infrastructures of telecommunication providers has an adverse effect on the first mover's business case. It is not only inefficient to rollout two or more fiber networks next to each other, but first movers are reluctant to deploy a first and initial network if they must fear to be overbuild. As a result, less networks are deployed, especially in those areas that are less profitable, namely rural areas.

In addition, access to telecommunication networks should only be imposed through SMP-regulation and therefore be based on the condition of market dominance. In its current form or in an extended form the BCRD does not pay into its goal to accelerate the deployment of very-high capacity networks.

19. Has the principle of 'fair and reasonable terms and conditions' for access to physical infrastructure under Article 3 of the Broadband Cost Reduction Directive been applied effectively (with respect to the outcome) and efficiently (with respect to the time taken) by dispute resolution bodies?

Effectively (with respect to the outcome)

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Efficiently (with respect to the time taken)

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- No opinion

Please explain your answer, including, if relevant, the benefits and/or problems encountered in the application of this principle.





20. Do you consider that the criteria provided in Article 3 of the Broadband Cost Reduction Directive for refusing access to existing physical infrastructure are appropriate?

	Not at all appropriate	Not appropriate	Neutral	Appropriate	Very appropriate	No opinion
Technical suitability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of space	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety and public health concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrity and security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk of serious interferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of alternative means	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer based on your experience, indicating if other criteria could be relevant.

21. Based on your experience, how relevant have been the current provisions on high-speed-ready in-building physical infrastructure as provided in the Broadband Cost Reduction Directive in facilitating the deployment of electronic communications networks?

- Not at all relevant
- Less relevant
- Moderately relevant
- Very relevant
- Mostly relevant
- No opinion

Please explain your answer, indicating where relevant how the current provisions could be improved.

22. To what extent would the availability and access to neutral host infrastructures\* facilitate the deployment of electronic communications networks?. Please explain your response and whether neutral host infrastructures could particularly affect deployment of networks depending on the type of area (urban / suburban / rural, business parks, communication routes) or access technology (wired / wireless).

\* A neutral host infrastructure comprises a single, shared network solution provided on an open access basis to all electronic communications operators.

## Coordination of civil works

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Article 5 of the Directive provides for the right of every network operator (not only operators of electronic communications networks, but also operators of other types of networks, such as energy and transport) to negotiate agreements concerning the coordination of civil works for the purpose of deploying high-speed electronic communications networks. Moreover, it provides for the obligation of every network operator which is fully or partially financed by public means, to meet any reasonable request to co-ordinate civil works on transparent and non-discriminatory terms, provided that such request is submitted in a timely manner, it does not entail additional costs or delays and the network operator can retain control over the coordination. Member States may provide for exemptions from the obligation for works of minor

significance, or related to critical infrastructure. Member States may also provide rules on the apportioning of the relevant costs. Where coordination has been refused or an agreement has not been reached within one month from the day of the request, access seekers can refer the issue to a dispute settlement body, which is empowered to resolve the dispute, including by setting fair and non-discriminatory terms, conditions and charges.

23. Please provide an estimation of the percentage that costs linked to physical infrastructure represent in relation to the overall costs of deployment of fixed and mobile/wireless networks for your organisation.

Fixed networks - cost savings

- Up to 10%
- 10%-20%
- 30%-40%
- 40%-50%
- More than 50%

Please explain your answer:

Mobile/wireless networks – cost savings

- Up to 10%
- 10%-20%
- 30%-40%
- 40%-50%
- More than 50%

Please explain your answer:

24. To what extent is it relevant for the deployment of electronic communications networks to coordinate civil works with the following types of networks?

	Not at all relevant	Less relevant	Moderately relevant	Very relevant	Mostly relevant	No opinion
Electronic communications networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gas networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electricity networks (including public lightning)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heating networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transport networks (including railways, roads, ports and airports)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer, identifying differences between fixed and mobile /wireless networks, if relevant.

25. Which factors (for example, mismatch of timing –planning and/or execution-, work techniques, interest in an area), have made coordination of civil works for the deployment of electronic communications networks difficult?

26. To what extent has the obligation to meet requests for coordination of civil works financed by public means been appropriate? Please explain your answer, including whether improvements could be made in regard to the apportioning of costs.

In practice in Germany, the obligation unfortunately leads to considerable problems and a harmful parallel deployment of telecommunications infrastructures. This is due, on the one hand, to the inadequate definition of the term "public means" and, on the other, to the lack of an option to reject coordination when there is a risk of duplication of network infrastructures. The problem exists in particular in the expansion of telecommunications infrastructures by companies in which the public sector has a stake. In these cases, there is considerable uncertainty as to when the expansion of municipal companies is deemed to be "financed from public funds" and accordingly triggers an obligation to grant a request for coordination. In several cases, a request for coordination was therefore granted before the national dispute resolution body, even though no funds from public budgets were used for the construction work itself and the result was an economically inefficient parallel development of new telecommunications infrastructures or, in some cases, predominantly strategically motivated superstructures. The result of the directive is therefore that municipal companies no longer undertake any rollout, especially in regions that are difficult to develop economically, as this would become completely uneconomical in the event of a threatened coordination application by a free rider. It must therefore be ensured that the term "construction work financed from public means" is defined sufficiently clearly to the effect that it covers only a direct inflow of means from public budgets. Furthermore, it must be ensured that coordination applications do not lead to overbuilding or parallel expansion of fiber optic networks for which open network access is provided. The reasons for rejection in the area of access obligations may be a point of reference in this regard.

27. Do you consider that the obligation referred to in the previous question should be extended to civil works not financed by public means, or that new measures should be taken in regard to coordination of civil works, with a view to avoiding duplication ("dig once" principle), thereby increasing the efficiency of network deployment and reducing its environmental impact?

Please explain your answer:

## Transparency measures

Pursuant to Article 4 of the Broadband Cost Reduction Directive, Member States shall ensure that every undertaking providing or authorised to provide public communications networks has the right to access, upon request to any network operator, minimum information concerning the existing physical infrastructure. Member States may also require every public sector body holding, in electronic format and by reason of its tasks, information concerning the physical infrastructure of a network operator, to make it available via the single information point, while Member States shall require such public sector bodies to make it available, upon request.

Pursuant to Article 6 of the Broadband Cost Reduction Directive, Member States shall also require any network operator to make available, upon the specific written request of an undertaking providing or authorised to provide public communications networks, minimum information concerning on-going or planned civil works related to its physical infrastructure for which a permit has been granted, a permit granting procedure is pending or first submission to the competent authorities for permit granting is envisaged in the following six months.

28. In your opinion, to what extent would the availability, through the single information point, of constantly updated information concerning the elements listed in the table be relevant to facilitate network deployment?

	Not relevant at all	Not relevant	Neutral	Relevant	Very relevant	No Opinion
Physical infrastructure from operators of electronic communications networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical infrastructure from operators of other networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical infrastructure from public bodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other elements and facilities suitable to install network elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private buildings or facilities other than residential and that are not part of a network (e.g. shopping centres, sports facilities, industrial plants /business facilities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public buildings or facilities that are not part of a network (e.g. administrative buildings, communal centres)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Civil works in progress or planned by electronic communications operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Civil works in progress or planned by other network operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Civil works in progress or planned by public authorities, in the short, medium and long term (such as new or renovated industrial areas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acquisition and construction of sites for the deployment of mobile base stations, in progress or planned.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your response, and if relevant, whether and how the relevance of having this information depends on the deployment area (urban / suburban / rural, business parks, communication routes) or the access technologies (wired / wireless).

The constant process of updating existing information on existing physical infrastructures on the items listed in the table is not relevant for facilitating network expansion. On the contrary, the human and financial resources tied up here are a burden on small and medium-sized enterprises, such as municipal enterprises, which expand and operate a large part of the supply and disposal infrastructure. Moreover, there is no need for constantly updated information for infrastructures, since a request for access (shared use or construction site coordination) always necessitates an availability query during the progress of requesting access to physical infrastructures.

29. What minimum information concerning physical infrastructures should be available to operators seeking to deploy electronic communications networks, beyond that specified in Article 4(1) of the Broadband Cost Reduction Directive?

You can select multiple answers.

- None
- Georeferenced location and/or route
- Total and spare capacity to host network elements (e.g. nr. of ducts, m2 of available space)
- Other

Please explain your answer, including the aspects related to cost efficiency.



30. What would be, in your opinion, the best mechanism for ensuring the most appropriate and efficient access to relevant information regarding existing physical infrastructure and planned civil works?

- A unique information repository, to be populated by network operators and public bodies
- Federation of existing information repositories, of different network operators and/or public bodies
- Other

Please explain your answer, and give suggestions for implementation:

The existing information instruments are sufficient and should not be expanded. The interest in information on the one hand is always offset by the considerable effort that companies have to make to collect and transmit the information. Smaller companies in particular are especially burdened by such obligations. The resources that the companies have to expend to fulfill these obligations are ultimately lacking in network expansion. Therefore, it must always be carefully weighed up which concrete benefit follows from an additional information obligation and which costs are incurred as a result.

In particular, the ongoing documentation and updating of remaining capacities in existing infrastructures causes extraordinarily high costs that are disproportionate to the expected benefits. Therefore, the existing information instruments should not be expanded.

31. In your opinion, how could the different administrative levels in a Member State (national, regional, local) collaborate to maximise transparency as regards information on existing physical infrastructures and planned civil works (for example, providing a common platform, defining standards, collecting and validating information)?

## Permit-granting procedures

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Pursuant to Article 7 of the Broadband Cost Reduction Directive, Member States need to ensure that all relevant information on the conditions and procedures for granting civil works permits with a view to deploying electronic communications networks is available from a single information point and that in principle decisions relating to permits have to be made within 4 months. Civil works, as provided in Article 2 (4) of Broadband Cost Reduction Directive ‘means every outcome of building or civil engineering works taken as a whole which is sufficient of itself to fulfil an economic or technical function and entails one or more elements of a physical infrastructure’. Concerning the term “permit”, the Directive refers to any permit ‘concerning the deployment of electronic communications networks or new network elements (...) including

building, town planning, environmental and other permits, in order to protect national and Union general interests' (Recital 26).

32. To what extent do the following factors affect the complexity and length of permit-granting procedures to deploy or upgrade electronic communications networks?

	Not at all significantly	Not Significantly	Neutral	Significantly	Very Significantly	No Opinion
Non-respect of the deadline to grant all electronic communications network deployment related permits, including those for rights of way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of information concerning the conditions and procedures applicable for granting permits.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Application for permits cannot be submitted by electronic means	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multiplicity of permits needed for electronic communications network deployment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of coordination between the various authorities competent for granting permits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of explicit rules including on compensation in case requirements for permit-granting procedures are not met, in particular deadlines and refusal conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your response, in particular, whether any of the above factors is more or less relevant depending on the network deployment area (urban, semi-urban or rural areas; business/industrial parks or communication routes, cross-border regions/areas).

33. To what extent would the following measures streamline the procedures to grant the necessary permits to roll-out electronic communications networks?

	Not significantly at all	Less significantly	Moderately significantly	Significantly	Very Significantly	No Opinion
Allow operators to submit applications by electronic means	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Single entry point (one stop shop), acting as an intermediary, routing permit applications to any competent authority (national, regional or local)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrated permit granting procedure that encompasses all different procedures of each of the competent authorities involved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Coordination and monitoring by a single body (or set of bodies) of all the involved authorities' permit granting procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Centralisation of the competence for all permits in one authority within the Member State	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Harmonization of permit procedures at Member State level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Harmonization of permit procedures at EU level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your response, and give suggestions for implementation:

see question 34

34. Would simplified permit procedures (such as no need to obtain a permit or permit exemption, tacit approval in the event that a certain deadline is exceeded, prior-communication accompanied by ex-post verifications only, etc) be appropriate to facilitate certain types of network deployment (e.g. technological upgrades, low impact installations, etc)?

Please explain your response, including which simplified procedures would be relevant for which type of network deployments:

Tacit approvals can have a considerable acceleration effect, provided that it is ensured that a corresponding written approval is automatically issued by an appropriate mechanism after the approval period has expired. In practice, it can be observed that it is often difficult to communicate the occurrence of the approval fictitiousness to civil engineering companies and that written approval is requested before construction work begins.

35. In your view, are there specific obstacles to the joint roll-out of electronic communications networks and to different forms of network sharing (e.g. sharing of passive or active elements of a network)?

If your answer is yes, what are these obstacles and should there be any measures taken to further facilitate these forms of cooperation?

## Environmental impact of electronic communications networks

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In its Communication on a European Green Deal ([A European Green Deal- COM\(2019\) 640](#)), the European Commission has pointed out that digital technologies are a critical enabler for attaining its sustainability goals in many different sectors. At the same time, the digital sector itself needs to put sustainability at its heart and undergo its own green transformation, including in particular by reducing its greenhouse gas emissions to address climate change. To support this effort, the Commission is assessing the need for more stringent sustainability measures when deploying and operating electronic communications networks.

36. Do you consider that the deployment and/or operation of electronic communications networks can have a negative impact on the environment, in particular due to emissions of CO2 and other greenhouse gases?

	Not at all significant	Less significant	Moderately significant	Significant	Very significant	No opinion
Deployment of fixed networks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operation of fixed networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deployment of mobile/wireless networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operation of mobile/wireless networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer for each of the above categories:

Fibre is a key technology for achieving the European Green Deal and making the European Union's economy more sustainable. Fibre networks are distinguished by their long lifespan and comparatively low maintenance requirements, which result in low material consumption in the overall product lifecycle. Full fibre networks (FTTB/H), which allow the transfer of almost unlimited amounts of data, are fundamental to sustainable digitalisation. To reap the benefits of digitalisation and to enable a more sustainable future, a strong political commitment to fibre technology is needed.



37. What are the factors that determine the environmental impact resulting from the deployment of electronic communications networks?

	No contribution at all	No significant contribution	Neutral	Some contribution	Significant contribution	No opinion
Deployment techniques, e.g. type of trenching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Type of networks, e.g. fixed or wireless/mobile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Manufacturing of the equipment, materials used and logistics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

ELFA would like to stress that the type of electronic communication network plays a central role when determining the environmental of different technologies. In that sense, it is important to highlight the role of fibre, which has a far lower energy consumption than traditional fixed networks. This was also observed in BREKO's expert assessment conducted by the University of Applied Sciences (technische Hochschule) Mittelhessen, comparing the access network technologies FTTH and FTTC. Based on the electricity consumption per bitrate, the report shows that copper-based networks (VDSL2 vectoring, super vectoring) consume three to seventeen times more electricity than fibre networks at 50% to 100% average capacity rate.

38. What are the factors that most contribute to greenhouse gas emissions resulting from the operation of electronic communications networks (without considering end-user equipment)?

	No contribution at all	No significant contribution	Neutral	Some contribution	Significant contribution	No opinion
Energy efficiency (e.g. energy consumed per unit of service delivered)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carbon intensity of energy sources used for the generation of power supplying the network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

39. What could be appropriate criteria to qualify network deployment projects as ‘environmentally sustainable’, already before such deployments have started?

	Not at all appropriate	Not appropriate	Neutral	Appropriate	Very appropriate	No opinion
Medium used (for fixed), e.g. fibre, copper, cable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Technology generation used (for mobile), e.g. 4G/5G	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy efficiency of network equipment used	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Passively shared network	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Actively shared network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Network deployed with coordinated civil works with other networks (electronic communications, electricity, gas, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

An actively shared network is much more sustainable than a passively shared network, since the latter requires each network operator to install and operate its own active network technology. Accordingly, two systems are supplied with power and resources are tied up for components. Compared with an economically nonsensical inefficient double expansion, however, sharing a common passive network is still much more sustainable in both ecological and economic terms.

Consequently, bitstream open access is the most sustainable and ecologically sensible way to share a network. Open Access at the active wholesale level pays directly into the goals of the Green New Deal.

40. Which type of positive incentives can foster the deployment of electronic communications networks which have a reduced environmental footprint?

	No incentive	Weak incentive	Moderate incentive	Considerable incentive	Strong incentive
Expedited administrative treatment of all permits related to the deployment of the specific network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Permit requirements limited to prior communication only	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction or abolishment of permit fees related to the deployment of the specific network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction or abolishment of access fees related to the deployment of the specific network for physical infrastructure that is owned or controlled by public bodies/authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

### Governance and enforcement: Competent bodies and other horizontal provisions (penalties, dispute resolution)

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According to Articles 10 and 11 of the Broadband Cost Reduction Directive, Member States need to appoint one or more bodies to provide information on physical infrastructure, civil works and permits and one or more independent bodies to resolve disputes between network operators regarding access to

infrastructure, access to information and requests to coordinate civil works. Moreover, Member States shall lay down appropriate, effective, proportionate and dissuasive penalties applicable to infringements of national measures adopted pursuant to the Broadband Cost Reduction Directive.

41. In your opinion, to what extent is the dispute settlement system provided in the Broadband Cost Reduction Directive appropriate, concerning:

	Not appropriate at all	Not appropriate	Neutral	Appropriate	Very appropriate	No opinion
Access to existing physical infrastructure (Art. 3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transparency concerning physical infrastructure (Art. 4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordination of civil works (Art. 5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transparency concerning planned civil works (Art. 6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to in-building physical infrastructure (Art. 9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Please explain your answer(s):

42. In case you consider it not appropriate at all or not appropriate, what are the main reasons?

	Not relevant at all	Not relevant	Neutral	Relevant	Very Relevant	No opinion
Non-compliance with Broadband Cost Reduction Directive deadlines to solve a dispute resolution process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too long dispute resolution process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of rules on apportioning the cost (in case of coordination of civil works, Art. 5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of clarity on "fair and reasonable terms" concept (Art. 3 and 5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The need for payment of fees when referring a case to the Dispute Settlement Body	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other reasons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

43. In your view, how relevant are the following measures to guarantee a satisfactory dispute resolution process:

	Not relevant at all	Not relevant	Neutral	Relevant	Very relevant	No opinion
Imposing penalties on the dispute resolution body if resolution is not issued with the deadline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Setting rules on apportioning the cost (in case of coordination of civil works, Art. 5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guaranteeing a free process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

44. In your view, how useful are the national rules on penalties applicable to infringement of the obligations provided in the Broadband Cost Reduction Directive

- Not useful at all
- Not useful
- Neutral
- useful
- Very useful
- No opinion

45. In case you reply that the national penalty mechanism is not useful at all or not useful, the reasons are:

	Yes	No	No opinion
The penalty mechanism has not been applied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The regulation providing infringements is broad and general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The penalties imposed are not dissuasive enough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

## Legal instrument

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46. In your opinion, how appropriate has been the choice of a Directive as a legal instrument to regulate the measures to reduce the cost of deploying electronic communications networks?

- Not appropriate at all

- Not appropriate
- Neutral
- Appropriate
- Very appropriate
- No opinion

Please explain your answer:

47. In your opinion, what would be the most appropriate legal instrument when reviewing the Broadband Cost Reduction Directive?

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	No opinion
Directive with minimum harmonization (similar to the Broadband Cost Reduction Directive)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Directive with maximum harmonization	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other instrument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer(s):

ELFA considers that a directive remains the most appropriate legal instrument to achieve the BCRD's intended purpose. However, the challenges and difficulties faced with the current implementation of the BCRD stem largely from lack of clarity causing a large degree of interpretive divergence among the Member States in their national transpositions. It is important that the BCRD is improved and made more effective through increased clarity before considering any expansion of scope that could give rise to additional measures or regulatory requirements.

## Final comments

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48. Final comments:

Please upload your file

The maximum file size is 1 MB

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

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