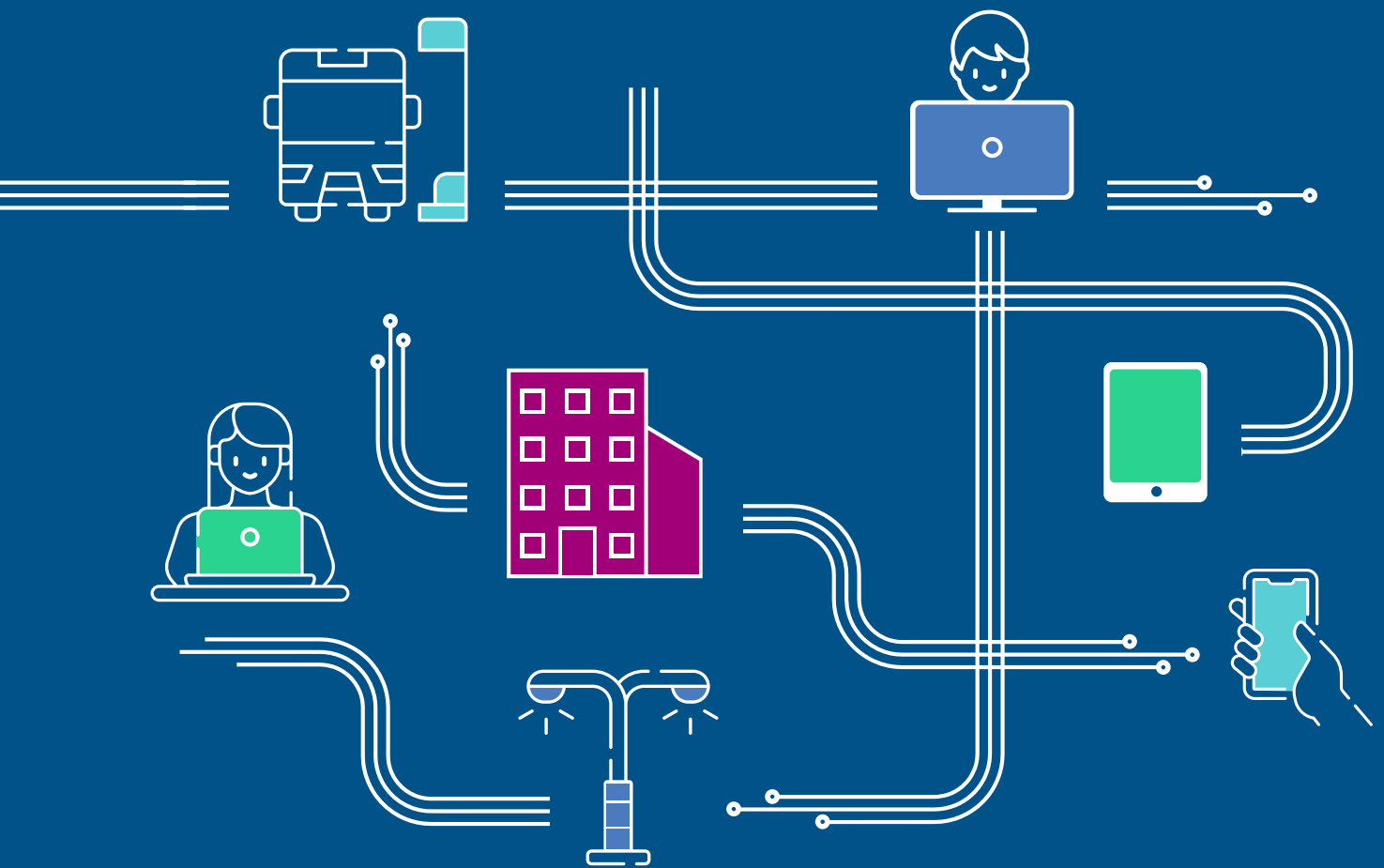


BROADBAND COST REDUCTION DIRECTIVE REVIEW

ETNO Discussion Paper



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INTRODUCTION

The Broadband Cost Reduction Directive (2014/61/EU) is one of the key regulatory initiatives at EU level aiming to facilitate and incentivise the roll-out of high-speed electronic communications networks.

Since its adoption in 2014, the Broadband Cost Reduction Directive (hereinafter BCRD) has considerably contributed to improving conditions for roll-out of electronic communications networks. The continuous monitoring of the implementation of BCRD, as well as the technological, market and regulatory developments in recent years make the evaluation and possible revision of BCRD both desirable and necessary.

The European Commission has initiated the revision process in 2020, as part of the actions announced in its Communication on 'Shaping Europe's Digital Future' (COM (2020)67 final). This effort will continue throughout 2021 through the evaluation of the current measures and an impact assessment of a potentially revised policy.

ETNO is committed to actively contributing to the public discussion around the revision of BCRD; an ambitious and well-functioning policy instrument is essential to the achievement of the 2025 Gigabit Society targets and 2030 Digital Compass ambitions. This paper aims to discuss and bring additional arguments for an ambitious and pro-investment revised BCRD.

The paper explores the different elements of the current BCRD on access to existing physical infrastructure, coordination of civil works, permit granting and requirements for in-building physical infrastructure. The objective is twofold: (i) identify key hurdles in the implementation of the current Directive requirements; and (ii) explore ways by which these difficulties can be overcome in a potentially revised instrument. A set of recommendations and scenarios are put forward aimed at improving and furthering the scope of the current Directive.

EXECUTIVE SUMMARY

The following paper explores how the current Cost Reduction Directive (BCRD) is meeting its objectives, and where an extension of the scope might be required.

The report looks at four elements of the BCRD:

1. ACCESS TO EXISTING PHYSICAL INFRASTRUCTURE

2. TRANSPARENCY OF WORKS

3. PERMIT GRANTING

4. IN-BUILDING INFRASTRUCTURE

For each of these aspects an assessment has been made in how far the current text is meeting the objectives set out, and where an extension or adaptation of the current text might be required.

Based on the assessment the following main recommendations have emerged. The recommendations are summarized under the key elements explored.

1. Access to existing physical infrastructure

Enlarging the notion of "network operator"

The notion of "network operator" should be enlarged with the scope to include any entity which, irrespective of business classification, may provide access to physical infrastructures relevant for the roll-out of fixed and wireless very high-capacity networks. Despite some best practices found in various Member States, there is need to provide uniformity and consistency throughout the EU, via a specific revision of art. 2.1 BCRD.

Clarifying application of BCRD to public bodies

It should be made clear that the notion of "network operator" include both private and public organizations, irrespective how they are called or classified by national legislation. Also in this case, despite best practices found in various Member States, the fragmented scenario resulting from national discretionary implementation requires a harmonizing intervention at European level.

Exclusion of dark fibre and active elements

It is recommended to continue to monitor the implementation of the Directive, to detect inconsistent national practices including dark fibre and active elements into the definition of "physical infrastructure". Should such inconsistent practices become more frequent, then the matter should be addressed at European level.

Expanding the notion of physical infrastructure

The notion of "physical infrastructure" should be updated and widened based on technological and market development (emergence and densification of 5G networks, including fiber backhauling) as well as of new EU regulation (in particular the EECC). The new definition should encompass any kind of resource which is potentially useful for the deployment of VHCN, including 5G networks. Special attention should be paid to land and buildings, especially roofs under the control of public organisations, which are extremely important for the deployment of antennas and edge computing equipment.

Change the term “network operator”?

In light of the above, the same notion of “network operator” could be revised, since the concept of “physical infrastructure” is expected to embrace resources other than networks elements, such as spaces (in particular roofs) and properties in general. In addition, the term should be sufficiently neutral to embrace both private and public organisations. Therefore, the notion of “network operator” could be eventually modified into “hosting organisation” or something similar.

Clarify the principles regarding access pricing

The Directive should give additional elements – beyond ‘fair and reasonable’ to the supervising authority to apply more effective control. BCRD should clarify that the notion fair & reasonable means holding a clear relation to the costs that are proportional to the access or other element of cost reduction that is activated; a prohibition to apply excessive prices, and an obligation for transparent and a prohibition of non-discriminatory treatment of all beneficiaries and a prohibition to cross-subsidise its own services to the detriment of beneficiaries.

In condominium access to the in-building physical infrastructure should be free as is already the case for the utilities (e.g. electricity, gas, water).

2. Transparency and coordination of planned civil works

Access to an infrastructure atlas

The SIP should have access to an infrastructure atlas (either as a platform as in Belgium, or integrated into the SIP, as in Portugal or Bulgaria).

Pertinence and accuracy of information available through the SIP

This can address two topics: (a) **what information** is covered and for **which types of infrastructures**- in the revised BCRD, this could potentially include not just the energy and water utilities data, but also urban furniture, for example, which will become crucial in the 5G deployment (such as, but not limited to: bus stops, lamp posts, public buildings, etc.); and (b) how actionable the information provided is- it is essential that the **information is up-to date and accurate** from all infrastructure owners. To ensure that information is accurate and comparable, the revised BCRD could require Member States to foresee **provisions at national level by which the information on planned civil works is given in a pre-defined, uniform manner.**

Clear timelines across the process

To ease side-by-side deployment, the revised BCRD could propose a **well-defined, sequential process** and clarify: when does the intention of works need to be notified- when does the interest on coordinating civil works need to be notified- when does the permit request need to be submitted. Shorter deadlines for the expression of coordination’ interest would contribute to accelerating the process from planning to deployment.

Linking the SIP for coordination of civil works to the permit granting portal

A SIP that is directly linked to the permit granting portal. This would be an important recommendation, as through the SIP the permit granting authority would already have a lot of the mapping information required in the permit application. Furthermore, it would save duplication of already available public information. By **making SIP consultation with subjects potentially interested in coordinating civil works a requirement for permits**, it increases transparency; on the other hand, could allow **to submit a single, common permit application.**

Digital by default

In this context an all-electronic system would also significantly contribute to un-burden the processes.

3. Permit granting

Electronic permit system

In addition to the establishment of a single portal for granting permits, further recommendations can be envisaged, framed around 2 key principles:

- **“Digital by default”** - all applications should be accepted strictly in electronic format
- **“Once only principle”** - cooperation between public authorities should be strengthened and enforced, so as to reduce the burden on permit applicants. No document should be required more than once.

Linking permits to “transparency”

The BCRD suggests that the “one stop shop” for permit application is linked to the SIP. This is only partially applied. In the countries where electronic permit applications are supported this is not necessarily linked to the SIP.

Such a combination will make the process more streamlined for all parties involved. The applicants can use a single portal, and the **coordination of civil works and permit-granting will be easier and more transparent.**

Capacity building for local administration.

Because of the reasons outlined above, the revised BCRD might make it a requirement for the SIP manager to train users so that the system is applied and implemented.

Such **soft measures or accompanying measures** could go further by setting up a mediation team that assists municipalities resolve permit granting issues (both for fixed ultrafast broad-

band networks and 5G). The objective of this mediation team is to accelerate permitting before they come to the appeal body. Both municipalities and telecommunications operators can appeal to the mediator. In the same way as the BCRD requires an appeal body it could promote the **creation of a mediator.**

Fees/ rights of way

Regarding the fees for application for permit, the revised BCRD should clearly state that these can only be **cost covering.**

5G permits

Art. 57 of the European Electronic Communications Code require easing of permits for small cells. It would be relatively easy for this to be **extended to include 5G antennas.**

In general, the revised BCRD should foresee some **easing of rules for 5G antennas permitting**, as the densification of the network, linked to the coverage obligations of the spectrum owners will make an acceleration of the permitting essential.

Tacit approval

Tacit approval of permits because of non-answers of municipalities is a good solution that should be implemented where possible as is already the case in some Member States, however it may for constitutional reason not be an option in some Member States and it does not necessarily provide certainty for all parties involved. Indeed, the work promoter needs the legal certainty of a permit to start works, engage contractors, etc.

Therefore, a tacit approval / deadline of 15 days for administrations to assess the completeness of the application dossier might offer an alternative where tacit approval of the permit is not possible or it can be an additional solution to speed up the process also in Member States with a tacit approval of the permit. This would mean that if no request for further documents is

issued by the permit granting authority, a decision must be taken based on the original application. This would lead to increased percentage of applications being treated in the prescribed four months.

Permit exemptions

Exemptions from permits should be extended.

Examples could include, but not be limited to:

- Roofs of public buildings
- Duct deployment along major roads
- Aerial cabling over posts and poles
- Upgrades of existing deployments and technologies not significantly altering the physical load of the infrastructure
- Civil works in low and middle depth of the ground, such as nano-trenching and micro-trenching

Of course, the deployed infrastructure would have to follow certain **technical specifications** to be exempted from permits (i.e., max radiation, certain distance from power cable, etc.).

One area- one application

Implementation of a single electronic portal, as proposed above, is likely to streamline the permit granting process. However, in many cases for the same infrastructure possibly several permit applications need to be introduced, as several administrations might be responsible. An example is when a municipality is responsible for the works application, but a separate application must be made to a separate administration for environmental or conservation reasons. The **revised BCRD should require that a single application per infrastructure is sufficient**. The administration in charge of the area (generally the municipality) should then coordinate the exchange with possible other administrations.

4. In-building infrastructure

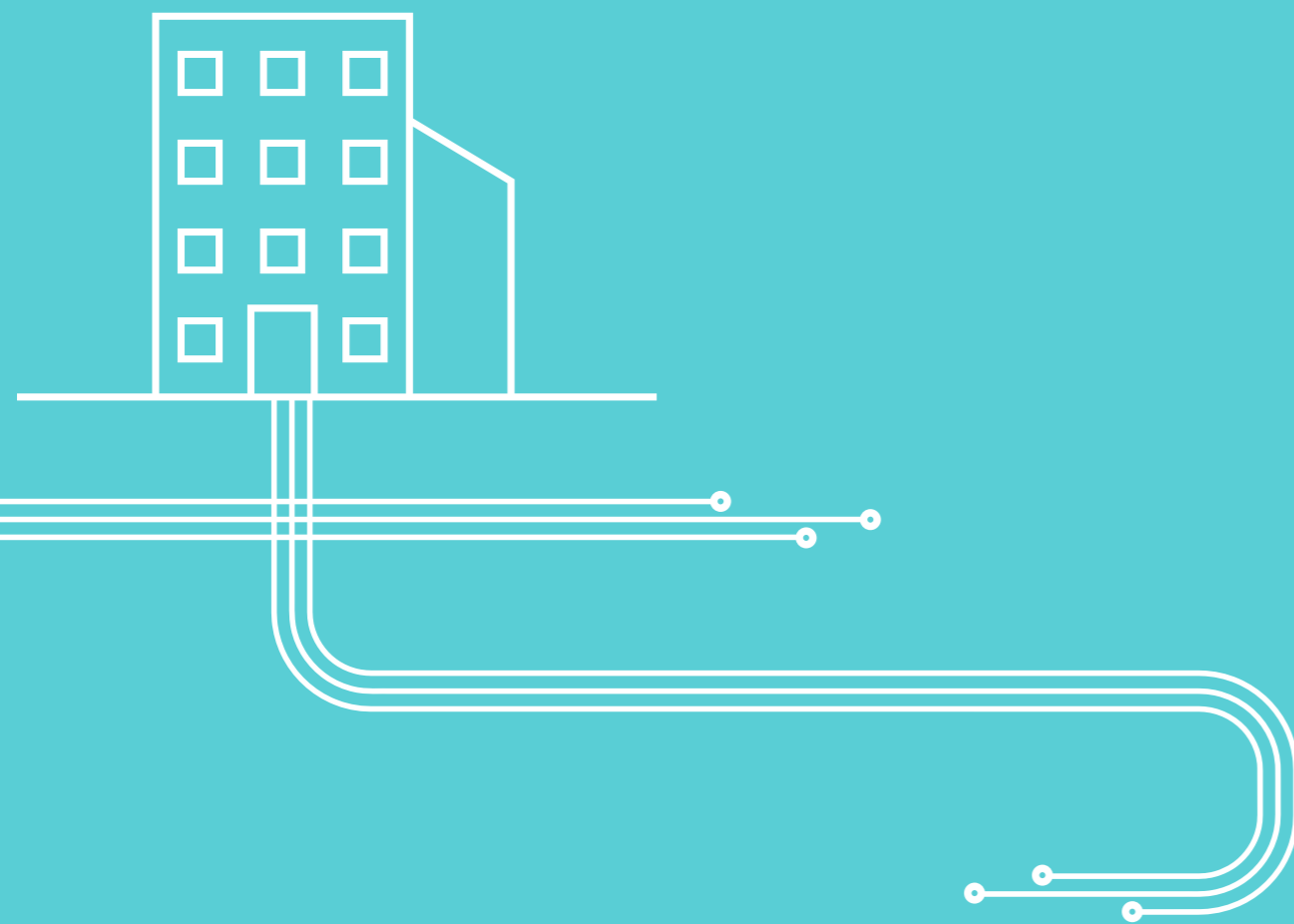
Promotion and guidance on the application of Art 8

The introduction of guidelines or promotion of good practices for actual in-building cabling is desirable. Such guidelines would be beneficial both for the technical specifications for the actual in-building infrastructure, as well as for the access point. Furthermore, clear interpretation and publication of these guides would facilitate the application of the Directive, notably the access to the in-building infrastructure. The objective would not be for the EU to issue such guidelines, but for each of the competent authorities in the Member States to develop these with the operators in line with their rules and industry-led practices.

Creation of a mediator for in-building infrastructure access

Disputes for access are relatively burdensome, and an intermediary step, such as an effective mediator, which could have a role in overcoming blockages for building access would be beneficial.

1 ACCESS TO EXISTING PHYSICAL INFRASTRUCTURE



Starting point and ambitions

This section aims at assessing whether a broader and more consistent ambit of application of BCRD is possible with respect to the following topics:

1. Ambit of application of BCRD with respect to entities obliged to provide access.

The BCRD focuses on “network” operators, because its scope consists in expanding the number of infrastructures which can be re-used for the installation of high-speed electronic communication networks; therefore, it mainly contemplates facilities connecting households or places on a given geographic area. Consequently, the main target of BCRD are operators managing telecom networks or telco-like infrastructures such as public utilities and transportation services. This paper explores possibilities to define a broader range of useful organisations that can be subject to access obligations under the BCRD, by including private or public bodies which, irrespective whether or not they manage “networks” pursuant to the above meaning, own or manage facilities potentially useable for the installation of high-speed electronic communications networks.

2. Types of resources to be available to the ECN industry

Because of the specific focus on network operators, the physical infrastructures contemplated by the BCRD mainly consist of network-based facilities which can be identified on the basis of traditional telecom practice developed so far (starting with the 2000 Unbundling Local Loop regulation). In contrast to that, and in view of more (cost) effective roll-out of high-speed electronic communications networks, which should include also mobile and fixed very high capacity networks (hereinafter: “VHCN”), in line with the new European Code of electronic communica-

tions (hereinafter: “EECC”), the paper explores whether additional facilities could be contemplated, for example:

- buildings/land under the control of public organisations;
- public infrastructures mentioned in art. 57,4 EECC such as street furniture (light poles, street signs, traffic lights, billboards, bus and tramway stops and metro stations)
- any other facility potentially useful for the roll-out of fixed and wireless VHCN, also considering the emergence of new and innovative network architectures.

Main relevant provisions of the BCRD

Art. 2 and 3 BCRD are the main provisions relevant for regulating access to existing physical infrastructure.

The above provisions of the BCRD shall be read and interpreted in coherence with new legislation enacted after its entry into force (i.e., after 2014). Amongst others, one should pay attention to the 2016 Gigabit Society Communication and the EECC adopted in December 2018. This is particularly relevant for articles 2 and 3 BCRD because:

- The concept of “high-speed electronic communications networks”, meaning a network of above 30 Mbps in the context of BCRD, needs to be adapted taking into account the notion of VHCN introduced by the EECC and the connectivity targets laid down with the Gigabit Society Communication;
- In force of such adaptation, also 5G networks are clearly in the scope of the BCRD;
- The creation of a policy objective for NRAs to promote the availability and take up of fixed and mobile VHCNs gives a clear objective and a strong legislative mandate for actions to accelerate investment in VHCN.

It should be recalled that BCRD sets a minimum standard of harmonization which does not preclude¹ Member States to maintain or introduce further measures, as far as this is consistent with the view to better achieving the directive's scope, as indicated in its Art. 1,1: *"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 rolled out at lower cost"*.

Ambit of application of BCRD with respect to entities obliged to provide access

Article 3,2 of BCRD provides that "network operators" shall be subject to a specific regime of access to existing physical infrastructures with a view to deploying elements of high-speed electronic communications networks.

"Network operators" are defined by article 2,1 of BCRD as follows: *"network operator" means an undertaking providing or authorised to provide public communications networks as well as an undertaking providing a physical infrastructure intended to provide:*

(a) a service of production, transport or distribution of: (i) gas; (ii) electricity, including public lighting; (iii) heating; (iv) water², including disposal or treatment of waste water and sewage, and drainage systems;

(b) transport services, including railways, roads, ports and airports;"

With respect to network operators falling within the ambit of application of BCRD, article 3 BCRD provide also for:

- Fundamental criteria of the access regime, including price (commas 1 and 2)
- Justification for refusal (comma 3)
- Dispute resolution (commas 4 and 5).

Network operators, defined as above, are subject also to the transparency rules (art. 4 BCRD) and to the obligation to coordinate their civil works (art. 5 BCRD).

Relevant provisions with respect to the types of resources to be available to the ECN industry

The resources which can be used to deploy elements of high-speed electronic communications networks under the BCRD consist of the so-called "existing physical infrastructures" which are defined by art. 2,2 as follows:

"physical infrastructure" means any element of a network which is intended to host other elements of a network without becoming itself an active element of the network, such as pipes, masts, ducts, inspection chambers, manholes, cabinets, buildings or entries to buildings, antenna installations, towers and poles;"

But with the exception of:

"cables, including dark fibre, as well as elements of networks used for the provision of water intended for human consumption, as defined in point 1 of Article 2 of Council Directive 98/83/EC (1)".

To sum up, this definition contemplates traditional (in coherence with established telecom practice) passive network elements, with the exclusion of active elements such as, as per explicit definition of the BCRD, cables and dark fibers.

Where are the hurdles?

Setting the scene: successes and failures with the implementation of the BCRD

Both the 2018 Commission's report³ and the WIK Study⁴ on the BCRD implementation show various criticalities of the Directive, mainly with respect to the coordination in civil works, easing the process of applying for civil works permits, or facilitating access to buildings for the installation of in-building wiring. As regards the access to physical infrastructures covered by art. 3 BCRD, the main issues relate to price and spaces negotiation, as it will be discussed below.

Both the 2018 Commissions' report and the WIK Study agree that the main difficulties in enforcing the BCRD derive by its late and difficult implementation in general, with the result that the best performing countries were the ones which already had in place a BCRD-like legislation before 2014. This is very relevant for the use of access to existing physical infrastructure, which has been particularly important in France, Italy and Portugal, while in other countries (namely Germany, Ireland and Spain) such use has been limited. As regards the top 3 leading countries, previous national legislation (and market demand, accordingly) already existed before the

implementation of the BCRD.⁵ According to the Commission, however, an increasing interest in access to physical infrastructure is generally emerging, also in some Member States where demand previously used to be low, these including Austria, Belgium, Germany, Ireland, Spain and Sweden⁶.

Scarce use of existing infrastructures may also be due to competitive factors and hurdles in cross-sectorial cooperation⁷. In countries such as Germany and Sweden, for instance, municipalities⁸ and utilities installed their own fibre optical networks and became engaged in the high-speed communications business with the result to be less incentivised to provide access to potential competitors⁹.

Implementation of the BCRD and review of the access provisions

The 2018 Commission's report does not address the need to review the current ambit of application of art. 3 BCRD, at least with reference to the two questions proposed above. This preliminary evaluation is reflected in the text of the recent BCRD public consultation¹⁰, whose questions aimed at exploring the potential extension of the BCRD's ambit of application considering new regulation and technology developments, rather than on the basis of implementation hurdles.

¹Art. 1,3 BCRD.

²However, please note that use of facilities for the provision of water intended for human consumption is limited by art. 2,2 BCRD.

³Report from the Commission to the European Parliament and the Council on the implementation of Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks, dated June 27, 2018 COM(2018) 492 final (hereinafter: the "2018 Commission Report")

⁴Study on Implementation and monitoring of measures under Directive 61/2014 by WIK/VVA (hereinafter: the "WIK Study").

⁵2018 Commission Report, figure 3 p. 8.

⁶2018 Commission Report, p. 8.

⁷Evidence from the market show that sometimes cross-sectorial cooperation may be a hurdle per se. This is the case when shared usage of networks may create liability issues for the network operator which has to respect specific standards for the main service provided through the physical infrastructures. In addition, the various operators using the same infrastructure may become competitors over the time, with result that the network provider may be reluctant to open its network to the benefit of potential, future competitors.

⁸WIK study reports (p. 41) that *"The Swedish NRA PTS noted that Municipalities which own fibre infrastructure may not have an incentive to collaborate with other entrants interested in fibre deployment because new construction would compete with their existing network"*.

⁹It must be recalled that art. 3.3 BCRD authorises network operators to provide, in alternative to access to their physical infrastructures, *"viable alternative means of wholesale physical network infrastructure access suitable for the provision of high-speed electronic communications networks"*.

¹⁰Public consultation on the review of the Broadband Cost Reduction Directive

The 2018 Commission's position is based on the outcome of the WIK Study reporting that telecom operators have seen "some improvements in access to physical infrastructure and the associated information"¹¹ since the BCRD entered into force. According to WIK, the main hurdle in the area of access to existing infrastructures lies with "information and elaborated rules to provide certainty to access providers and access seekers". Both 2020 WIK questionnaire sent to operators, and the Commission's questionnaire indirectly address the need to enlarge the scope of the BCRD with respect to entities or resources subject to it¹².

Access to existing infrastructure is considered by the operators, and especially by access seekers, as one of the most significant and controversial issue in the implementation of the BCRD. Most frequent issues concern availability, pricing, terms and conditions of access¹³. Access appears to be the issue mostly associated with disputes filed since entry into force of BCRD¹⁴.

These hurdles are consequence of potential uncertainty of the BCRD's ambit of application analysed here. Uncertainty regarding the status of a network operator (whether or not to be falling within the definition of "network operator" of art. 2,1 BCRD) or assets (whether or not to be falling within the definition of "physical infrastructure" set by art. 2,2 BCRD) do not necessarily result in refusal to access: instead, the most frequent consequence are harder commercial negotiations that, without the guarantees provided by the BCRD, that lead to higher prices and take longer delays to reach agreements and/or re-

solve disputes. .

This kind of hurdle appears quite frequently with public bodies which, in principle, should be incentivised to make available their resources to high-speed electronic networks in order to maximise public welfare. Uncertainty about status and resources of public organisation (with subsequent uncertain application of BCRD) may be exploited by the latter to increase access price, rather than refusing access. In other words, some public bodies are tempted to extract the maximum economic value from their assets to cover financial needs, rather than using them for the public welfare.

Scenarios for addressing hurdles

Hurdle 1: Undertakings falling within the notion of "network operator"

The notion of "network operator" under art. 2,1 BCRD is currently limited to telecommunications operators, public utilities and transportation operators. The choice to target organisations operating within specific industrial sectors is historically due to the fact that, when the Directive was discussed and approved (that is to say between 2012 and 2014), only certain operators and their infrastructures appeared to be pertinent for the roll-out of "high-speed electronic communications networks", as intended by the Directive. The latest notion, despite being technologically neutral, was de facto conceived having in mind the architecture of traditional fixed (and to a lesser extent wireless) broadband networks. The consequence was that, despite the scope

of BCRD to be open and neutral, the categories of concerned operators were listed in a specific and limited way, while omitting categories which could be potentially useful.

A further downside of the above approach is that facilities which are not clearly connected with a "network" may not be accessible under the BCRD (see below the section on transportation infrastructures).

The recent adoption of both EECC and Gigabit Society Communication, which have enlarged the connectivity objectives of the European Union, has created some discontinuity with the BCRD, especially with regard its specific ambit of application. The new notion of very high-capacity networks, as well as the large emphasis on 5G suggest enlarging the notion of "network operator" of art. 2,1 BCRD by including any organisation which can potentially cooperate for the achievement of the new European policy and connectivity targets, including the future 2030 Digital Compass objectives.

The reference to specific industrial sectors could remain in the wording but only as an example, so that the list of operators' categories should not be exhaustive and could remain open to any useful network operator, irrespective of the classification. Beyond the already mentioned utilities, any company owning or managing infrastructure that might be suitable to host elements of a VHC and of any fixed and mobile network capable of achieving the objectives set out in the Gigabit Society Communication should be covered by art. 2,1 BCRD.

Best practices

BCRD's implementation practice shows that various European countries have de facto enlarged the notion of "network operator" with the scope to include entities which, irrespective whether they can be classified as undertakings operating

in specific sectors (telecom, public utilities, and transportation), may provide access to physical infrastructures relevant for the roll-out of high speed electronic communications networks. In fact, at least 13 European countries have expanded the notion of art. 2,1 BCRD, namely Austria, Croatia, Czech Republic, Denmark, France, Germany, Greece, Italy, Lithuania, Portugal, Romania, Slovenia, and Spain. This extended implementation has contemplated organisations which have infrastructure useable for deploying elements of high speed electronic communications networks (particularly in Austria, France, Italy, Romania and Slovenia), but also certain public administrations as it will be seen below.

Conclusions

There is a clear need to enlarge the notion of "network operator" with the scope to include any entity which, irrespective of its business classification, may provide access to physical infrastructures relevant for the roll-out of fixed and wireless very high-capacity networks, including any fixed and mobile network capable of achieving the objectives set out in the Gigabit Society Communication¹⁵. Some Members States have already done it, but in different ways, through national transposition or practice. For a matter of consistency throughout the EU, some uniformity should be done via a revision of the BCRD. The same notion of "network operator" could be revised, since the concept of "physical infrastructure" is expected to embrace resources other than networks elements, such as spaces (in particular roofs) and properties in general. Therefore, the notion of "network operator" could be eventually modified as "hosting operator".

Hurdle 2: Public bodies and network operators

BCRD does not make any distinction with respect to the ownership of network operators, whether private or public. Therefore, as far as

¹¹WIK Study, Executive Summary, p. XV

¹²As evidenced by question 17 of BCRD public consultation: "With respect to access to existing physical infrastructure, to what extent have the following factors led to a more costly or lengthy network deployment?" Option1: Lack of availability of suitable physical infrastructure". WIK questionnaire mentions among the options for measures which are NOT currently addressed in the access provisions of the BCRD or elsewhere (e.g. Art 57 EECC) and which in view of the respondents should be addressed in a revision of the Directive: "Extension of access obligation to cover all facilities which could host electronic communications networks (regardless of whether they are owned by a network operator or deployed for the purpose of hosting network elements) such as public or commercial buildings, street furniture (in addition to facilities which are intended to host such networks)"

¹³See also p. 43 of the WIK Study.

¹⁴See also pp. 207 and ff. of the WIK Study.

¹⁵Very high-capacity networks to be understood like that throughout the present document.

public organisations qualify as “undertakings” owning facilities contemplated by art. 2,1 BCRD, they should be subject to the access obligations. This is frequently the case of municipalities which manage networks contemplated by the BCRD (i.e., telcos, utilities and transportation) via a separated entity subject to commercial law.

However, if the network and the other facilities of a public organisation are not operated via a separate entity, the situation may be uncertain. The term “undertaking” refers to a private status and implies economic or business activities which are normally out of the scope of public organisations. Therefore, even in countries where the notion of network operator has been enlarged (as shown above), it may be uncertain whether public bodies are effectively included in the scope of BCRD.

Furthermore, even the separation of a network operator from the public bodies may cause specific issues. Such separated companies normally operate on the basis of a concession (i.e., a public contract granted via a regulated procedure) enumerating the activities and the assets subject to the public service scope. However, in some cases separated companies own or dispose further assets which are not formally subject to the concessions such as, for instance, buildings or spaces (frequently in the transportation sector). Therefore, the question is whether such assets, not covered by the concession, are subject to the BCRD’s application.

All the above limitations and uncertainties may result in hurdles because they may exclude, from the BCRD’s ambit of application, a large set of facilities potentially useful for the roll-out of VHCN, which are owned and used, directly or indirectly, by public organisations. According to various telecom operators interviewed in the

course of this study, assets and land owned by public bodies are increasingly important for the roll-out of 5G networks, because such resources are, *inter alia*, particularly valuable for the installation of small cells and in general for the densification of 5G low-frequency antennas.

It must be noted that controversies regarding public bodies refusing to provide access are relatively scarce¹⁶. By contrast, it appears that public bodies more frequently leverage the uncertainty of their status to negotiate higher access prices (and by doing so avoiding the application of a fair price under the BCRD).

Impact of new legislation

The need to include public bodies amongst the network operators which must provide access to physical infrastructures has been addressed by the EECC, namely by its art. 57,4, with respect to public infrastructures suitable for hosting small cells or to connect such access points to a backbone network. Art. 57,4 EECC impose the access obligation upon “national, regional and local public authorities” by referring to procedures adopted in accordance with BCRD and on the basis of same principles (reasonable access, fair price, non-discriminatory terms and conditions, single information point).

The same subject of application of BCRD upon public organisations is addressed by the 2020 BCRD Toolbox Recommendation¹⁷ (hereinafter: the “ToolBoxRecc”), which specifically recommends (art. 1,1a) to expand “access rights to existing physical infrastructure controlled by public sector bodies” on similar conditions as those set in Art. 3,2 BCRD.

In particular, the ToolBoxRecc states (art. 14) that “To increase the number and types of fa-

cilities available to operators for the deployment of elements of very-high capacity networks, Member States should develop best practices for enabling operators to obtain access to physical infrastructure (including buildings and street furniture) controlled by public bodies, which is capable of hosting very high capacity network elements, on similar conditions as those set in Article 3 of the Broadband Cost Reduction Directive”.

This is further reinforced by the Connectivity Toolbox¹⁸ adopted in March 2021, which, in Recommendation 14, foresees: “Member States are encouraged to ensure that all reasonable requests for access to physical infrastructure owned or controlled by public bodies or entities, which is capable of hosting VHCN elements are met, where legally feasible”.

Best practices

As mentioned above, various Member States have transposed BCRD by extending the notion of “network operators” also to certain public bodies.

This is the case of Spain where the Royal Decree 330/2016 goes beyond the concept of “network provider” as defined by Article 2.1 of the BCRD. The organisations covered by Spanish legislation well comprehend network providers in the sense of the BCRD, as well as “public administrations owning physical infrastructure susceptible to host electronic communications networks”¹⁹ (see Articles 3.5.d and 4 of the Royal Decree).

In Italy, the notion of “network operator” includes undertakings, as well as “a public body or body governed by public law” to the extent that it

manages a physical infrastructure aimed at providing a utility or transport service²⁰.

Likewise, in Portugal the notion of network operator has been extended to public bodies, by including State, autonomous regions, local authorities and all entities under the authority or supervision of those, performing administrative tasks, regardless of their entrepreneurial nature. In Austria shared use of physical infrastructure of public bodies was mandatory since 2009.

In Germany, any public body or institution operating any of the network types listed in Art. 2.1 of the BCRD is obliged to provide access²¹.

In Greece, the transposition into national law refers to “organisation or undertaking” which explicitly includes network operators not privately owned, i.e., owned by the state²². Therefore, any organization that provides a public communications network, even if belonging to the Greek state, is subject to the BCRD access regime.

The Czech Republic explicitly included municipalities in the notion of “network operator” with the scope of capturing other investors owning infrastructure suitable for the installation of electronic communications networks²³.

In Denmark, the Mast Act and Digging Act apply to physical infrastructures held by most public bodies.

In Croatia, public bodies must offer physical infrastructure to operators on conditions and prices which are equivalent to regulated prices of physical infrastructure in the market, or even more favourable.

¹⁶More recently, cases of refusal of physical infrastructures by public bodies are motivated by the desire to meet desire by some part of public opinion which is against the installation of 5G networks for alleged healthy reasons.

¹⁷Commission Recommendation (Eu) 2020/1307 of 18 September 2020 on a common Union toolbox for reducing the cost of deploying very high-capacity networks and ensuring timely and investment-friendly access to 5G radio spectrum, to foster connectivity in support of economic recovery from the COVID-19 crisis in the Union

¹⁸Common Union Toolbox for Connectivity pursuant to Commission Recommendation (EU) 2020/1307 on a common Union toolbox for reducing the cost of deploying very high-capacity networks and ensuring timely and investment-friendly access to 5G radio spectrum, to foster connectivity in support of economic recovery from the COVID-19 crisis in the Union.

¹⁹Articles 3.5.d and 4 of Royal Decree 330/2016.

²⁰Legislative Decree n. 33 of February 15, 2016, art. 2,1,c.

²¹Telekommunikationsgesetz (TKG), §§ 77 and ff.

²²2017 BEREC Report, Tables 24, Annex 3.

²³WIK Study, pag. 156.

The case of Sweden is a bit more complex. In principle, the notion of network operator has not been explicitly extended to public organisations. The Swedish Deployment Act uses the term "network holder" ("nätinnehavare" in Swedish) to avoid misunderstandings with the term "operator"; in the Swedish Electronic Communications Act, network holder, however, totally corresponds to the BCRD's definition of "network operator" and the government bill clarifies that a network holder should be the one who owns a network or infrastructure or otherwise disposing over it²⁴. Therefore, public administrations which are "network operators" according to the BCRD must grant access like any other network operator.

Conclusions

An extension of the ambit of application of BCRD, as set by its art. 2,1, in order to cover public bodies, irrespective of the fact that they provide a utility/transport service, appears desirable. Various Member States have already done it by transposition or practice, although in fragmented ways, sometimes including all kind of public organisations (like in the case of Italy²⁵ and Portugal), or by referring to some local bodies (such as municipalities like in the Czech Republic and Denmark). Considering the diversity within the EU member States in defining public organisations, a robust clarification through a revised BCRD is needed. However, in order to set a definition susceptible to embrace both private and public organisations, the term "undertakings" and "operator", which normally refer to private businesses, could be replaced with a more neutral term.

Hurdle 3: Physical infrastructures and active elements

The definition of "physical infrastructure" pursuant to Art. 2,2 BCRD is limited to passive facilities, with an explicit exclusion for cable, dark fibers and any resource which can be active element of the network. This is in line with the scope of the BCRD consisting in the efficient re-use of existing physical infrastructures to reduce the costs of networks roll-out. This scope is fully achieved with respect to physical infrastructures which require high sunk investment, while dark fibres, cables or active elements do not offer the same material saving of costs. In addition, access to active elements is regulated by the EECC, and hence, mandatory symmetric access pursuant to BCRD should be maintained, without creating overlaps.

Nevertheless, some European Member States have adopted transposition measures going beyond the notion of passive facilities and have included additional infrastructures: Lithuania has added cable to the definition of physical infrastructure²⁶, while Austria has added dark fiber²⁷. France has added water towers.

In Finland and Slovenia, the term "physical infrastructure" has been defined according to the BCRD. However, Slovenia allows a telecom operator to apply for access to used optical fibre²⁸, while in Finland national legislation includes also cables and other active network elements²⁹.

Apart from the case of France, the above transposition practices appear to be in contrast with the wording and the scope of BCRD which is focused on passive infrastructures. The reason

for these enlarged definitions including active elements may be due to local circumstances which have not been investigated in this paper. It is likely that the concerned Member States have relied upon the fact that the BCRD provides for a minimum harmonization allowing national authorities to implement measures beyond the wording of the Directive. However, it is doubtful whether such expanding transposition measures may be legitimate as far as they contrast with the main scope of the Directive.

BEREC appears aware of such controversial transposition practices, which in fact are reported in its reports, but we do not have information about legal recourses aiming at challenging them (infringement procedures or preliminary ruling to the CJEU).

Best practices

In at least 13 EU Member States, such as Croatia, Finland, Italy, Germany, Greece, Poland, Portugal, Romania, Spain, Slovenia, Sweden, United Kingdom³⁰ and Hungary, the notion of "physical infrastructure" is defined with the same wording of Art. 2,2 BCRD or according to it, therefore focusing on traditional passive resources, and with the exclusion of active elements³¹. However, as previously noted, Finland and Slovenia, despite complying with the BCRD definition, then admit access to some active elements.

Conclusions

The inconsistent practices of few Member States including dark fibers and active elements in the ambit of application of BCRD are clearly in contrast with the wording and the spirit of the Directive. However, for the time being it would be advisable to monitor the situation and rely on the correct practice of the majority of Mem-

ber States. Should the implementation situation change, so as to provoke confusing overlaps of the BCRD with the EECC, then the problem should be addressed.

Hurdle 4: Limits of current definition of "physical infrastructures"

The question is whether the current definition of physical infrastructures under art.2,2 BCRD is still adequate to effectively meet the needs of investors and telecom operators committed to achieving the targets of the Gigabit Society, especially with regard to the roll-out of fixed and mobile VHCN, and especially 5G networks.

The BCRD's scope is not limited to fixed infrastructures, although its wording has been drafted having mainly in mind the practice developed so far in the fixed markets, and only to a lesser extent in mobile ones (the latter being only rarely regulated in the EU). While the BCRD's scope should remain neutral to keep the directive flexible, the notion of "physical infrastructure" could be expanded to better serve network densification required by 5G and VHCN roll-out, considering, *inter alia*, the expansion of mobile networks through the installation of small cells (and related edge computing equipment) as well as the increasing deployment of fibres to facilitate 5G backhaul.

According to interviewed operators, the current wording of the BCRD is not susceptible to cover all facilities which are potentially useful for the deployment of VHCN (especially 5G), since most of them are not clearly covered by the definition of "physical infrastructure" under art. 2,2 of BCRD. Amongst such potential facilities, roofs are reported to be the most important resource which should be clearly covered by the BCRD, since roofs are very important for the installation and densification of antennas, and therefore for

²⁴Bill 2015/16:73 p. 31, see also the BCRD preamble 13 according to which: ".....this Directive should apply not only to public communications network providers but to any owner or holder of rights to use, in the latter case without prejudice to any third party's property rights, extensive and ubiquitous physical infrastructures suitable to host electronic communications network elements, such as physical networks for the provision of electricity, gas, water and sewage and drainage systems, heating and transport services".

²⁵In the case of Italy, as specified earlier, only public organisations providing utility/transport services are included, not all relevant of public organisations, hence the specification on this in the conclusion.

²⁶2017 BEREC Report, p. 9, Table 3.

²⁷2017 BEREC Report, p.9, Table 3, and WIK Study, p. 156.

²⁸WIK Study, p. 156.

²⁹2017 BEREC Report, p. 9, Table 3. Information about such active elements is made public by the local SIP as part of the transparency obligations, see WIK Study p. 168.

³⁰This study considers a period also before the Brexit.

³¹2017 BEREC's report, p. 9.

the deployment of 5G networks.

According to interviews carried out with operators, it appears that the sector mostly affected by this hurdle is transportation, since the notion of “physical infrastructure” pursuant to art. 2,2 BCRD is frequently challenged in this area. This is due to the fact, *inter alia*, that various facilities used by transportation operators have mixed uses and that the extent of transportation concessions is sometimes questionable. Based on this, we propose a non-exhaustive list of transportation facilities which would need to be clearly covered by art. 2,2 BCRD:

- Roofs and external parts of recreational and shopping areas/buildings integrated into stations
- Roofs and external parts of buildings (other than stations) owned by a transportation operator and physically integrated with the transportation system, but not used for that service or not covered by the concessions
- Street furniture, such as light poles, street signs, traffic lights, billboards and advertising columns, bus and tramway stops
- Spaces, roofs and external parts of buildings, gardens and parking spaces separated by the public roads
- Tunnels, bridges, waterways.

In addition to transportation, according to interviewed operators, clarification is needed also for the following facilities without distinction of sectors:

- Facilities and resources connected to waste disposal plants
- Roofs and external parts of sport, commercial and entertainment facilities (stadium, messes, congress and concerts halls)
- Roofs and external parts of museums as well as of other social places opened to the public
- Roofs and external parts of public buildings in general
- Public spaces such as squares and gardens
- Roofs and external parts of building, and spaces, belonging to religious bodies (subject to celebrations and heritage rules)

- Some cemeteries' facilities
- Water towers
- Dismissed utilities networks.

Impact of new legislation

The EECC, adopted in 2018, provides various provisions to streamline the grant of spectrum and facilitate the roll-out of 5G networks. Amongst them, art. 57,4 EECC de facto extends the ambit of application of BCRD to the facilities necessary to deploy small-area wireless access points, such as “any physical infrastructure controlled by national, regional or local public authorities, which is technically suitable to host small-area wireless access points or which is necessary to connect such access points to a backbone network, including street furniture, such as light poles, street signs, traffic lights, billboards, bus and tramway stops and metro stations. Public authorities shall meet all reasonable requests for access on fair, reasonable, transparent and non-discriminatory terms and conditions, which shall be made public at a single information point.” The physical and technical characteristics of small cells are ruled by Regulation 2020/1070.

Art. 57,4 EECC addresses some of the mentioned hurdles emerged in the transportation sector. However, its application is limited to small cells and does not cover VHCN in general.

The above limitation seems to be addressed by the “ToolBoxRecc”, which specifically recommends (art. 1,1a) to expand “access rights to existing physical infrastructure controlled by public sector bodies” on similar conditions as those set in Art. 3,2 BCRD. In particular, the ToolBoxRecc states (art. 14) that “To increase the number and types of facilities available to operators for the deployment of elements of very-high capacity networks, Member States should develop best practices for enabling operators to obtain access to physical infrastructure (including buildings and street furniture) controlled by public bodies, which is capable of hosting very high capacity network elements, on similar con-

ditions as those set in Article 3 of the Broadband Cost Reduction Directive”.

In addition, the recommendation specifies (with some redundancy with art, 57,4 EECC) that: “Such physical infrastructure would include buildings, particularly rooftops, and street furniture, such as poles for streetlights, street signs, traffic lights, billboards, bus and tramway stops and metro stations” (Recital 18).

This is re-confirmed by the 2021 Connectivity Toolbox³², which specifically mentions: “An obligation imposed on public bodies would be the most direct way to enable operators to obtain access to physical infrastructure (including buildings and street furniture) controlled by these bodies, that is suitable for the deployment of electronic communications networks, including VHCN, following the conditions set in Article 3 of the Broadband Cost Reduction Directive”.

The ToolBoxRecc and the Connectivity Toolbox aim at closing some of the loops addressed by the present study, in particular with regard to facilities owned by public bodies. However, it should be stressed that European recommendations are not binding acts.

Best practices

The situation in the EU Member States appear quite diversified. The countries where the transposition of BCRD has been more extended, by enlarging the notion of “network operator” and including public organisations provide better practices with respect to physical infrastructures which may be accessed to deploy VHCN. In addition, EU Member States are expected to comply with art. 57,4 ECC (which should have been applicable as from December 20, 2020) and with the ToolBoxRecc.

This said, some EU countries have developed best practices to facilitate access to facilities which are not clearly contemplated in the notion

³²Connectivity Toolbox, Recommend 14 (16)

³³Art. 36 of Ley 9/2014 dated 9 May 2014, General de Telecomunicaciones

of “physical infrastructure” pursuant to art. 2,2 BCRD.

In Germany, the State of Hesse supports the use of physical infrastructure owned by public organisations, such as buildings and street furniture, as well as radio communications sites and masts. For this purpose, a list of public properties is made available to private mobile network operators, which can then identify suitable properties and approach Hesse's State Company for Building and Properties for the conclusion of lease or rental agreements.

The City of Hamburg makes available free-of-charge public lighting masts and masts of parking guidance and information systems, with the scope of the installation of WiFi access points having a direct fiber optic network connection with operator.

In Spain, the General Law on Telecommunications³³ establishes that newly created urban projects must provide for the installation of civil works infrastructure to facilitate the deployment of public electronic communications networks, including passive network elements and equipment, which must be made available to operators on equal, transparent and non-discriminatory basis. Such facilities are integrated into the municipal public domain.

In addition, some city councils (i.e., Barcelona, Toledo) are setting protocols, conditions and collaboration agreements in order to give access to street furniture. The municipality of Toledo signed a collaboration agreement with a telecom operator to deploy optical fibre in the historic centre (under cultural protection), including through access to some municipal physical infrastructures. After the deployment, the telecom operator had to provide access to that infrastructure.

In Denmark, the Danish Building and Property Agency owns a large portfolio of properties

on behalf of the state across the country. This centralisation of management of a large share of state-owned buildings means that inquiries regarding leases on government property (especially office buildings) can usually be addressed consistently to the Danish Building and Property Agency, rather than ad hoc to the individual public organisation.

In the Netherlands, a policy guideline³⁴ is in place since 2000 on installations of antennas on properties owned by the central government, making available such facilities to mobile telecom operators. The guideline concerns office buildings, sites and structures such as bridges, locks and roads.

In addition to the above, the Special Group for developing a common Union Toolbox for connectivity (created in force of the ToolBoxRecc) published in December 2020 a report summarising relevant best practices throughout the European Union³⁵. The report contains, *inter alia*, information from all Member States on best practices for a fast VHCN deployment with a focus on the reduction of the costs of network deployment and identifies, in particular, physical infrastructures controlled by public bodies which may be suitable for this purpose³⁶:

- Public properties (in general), including state-owned building/properties
- Masts of public lighting, parking guidance and information systems
- Physical infrastructures and street furniture controlled by public authorities (to deploy small cells)
- Objects owned or managed by the central government that are available for the implementation of antenna installations by mobile telecom operators (office buildings, sites and structures such as bridges, locks and road portals).

Conclusions

The notion of “physical infrastructure” pursuant to art. 2,2, BCRD needs to be updated considering technological development (emergence and densification of 5G networks, including fiber backhauling), as well as new regulation (EECC). While still covering typical network elements (such as ducts, masts etc.), this notion should also embrace resources which are not typically integrated into networks, but nevertheless are extremely important for the deployment of antennas and edge computing equipment, such as spaces (especially roofs) and buildings.

This adaptation may even imply a revision of the BCRD’s scope: while the original scope focused on the re-use of existing (network) infrastructures, a more extended scope should embrace any physical infrastructure which may potentially serve the deployment of VHCN and especially 5G, irrespective whether they are part of an existing network.

Recommendations

BCRD’s provisions regarding access to existing physical infrastructure (mainly arts. 2 and 3) deserve a refining with respect to the two questions examined in this paper, such as the definitions of “network provider” and “physical infrastructure” respectively. Such refinement (not a radical modification, however) is needed to adapt the pertinent legal wording to technological and market developments, new legislation enacted after 2014 and also in light of implementation hurdles discovered through this study.

Also taking into account the best practices cases described above, the following recommendations can be tabled:

A. Enlarging the notion of “network operator”

The notion of “network operator” should be enlarged with the scope to include any entity which, irrespective of business classification, may provide access to physical infrastructures relevant for the roll-out of fixed and wireless VHCN. Despite some best practices found in various Member States, there is need to provide uniformity and consistency throughout the EU, via a specific revision of art. 2,1 BCRD.

B. Clarifying application of BCRD to public bodies

It should be made clear that the notion of “network operator” include both private and public organisations, irrespective how they are called or classified by national legislation. Also in this case, despite best practices found in various Member States, the fragmented scenario resulting from national discretionary implementation requires a harmonising intervention at European level.

C. Exclusion of dark fibres and active elements

It is recommended to continue to monitor the implementation of the Directive, in order to detect inconsistent national practices including dark fibres and active elements into the definition of “physical infrastructure”. Should such inconsistent practices become more frequent, then the matter should be addressed at European level.

D. Expanding the notion of physical infrastructure

The notion of “physical infrastructure” should be updated and widened based on technological and market development (emergence and densification of 5G networks, including fiber backhauling) as well as of new EU regulation (in particular the EECC). The new definition should encompass any kind of resource which is potentially useful for the deployment of VHCN, including 5G networks. Special attention should be paid to land and buildings, especially roofs which

are extremely important for the deployment of antennas and edge computing equipment.

E. Change the term “network operator”?

In light of the above, the same notion of “network operator” could be revised, since the concept of “physical infrastructure” is expected to embrace resources other than networks elements, such as spaces (in particular roofs) and properties in general. In addition, the term should be sufficiently neutral to embrace both private and public organisations. Therefore, the notion of “network operator” could be eventually modified into “hosting organisation” or something similar.

F. Clarify the principles regarding access pricing

The term ‘fair and reasonable’ does not provide legal certainty, while the access prices proposed by some infrastructure owners have at times not been reasonable, untransparent and giving rise to disputes. The Directive should give additional elements – beyond ‘fair and reasonable’ to the supervising authority to apply more effective control. In this respect we see as relevant:

- The notion that fair & reasonable means holding a clear relation to the costs that are proportional to the access or other element of cost reduction that is activated
- A prohibition to apply excessive prices, and an obligation for transparency
- A prohibition of discriminatory treatment of all beneficiaries and a prohibition to cross-subsidise its own services to the detriment of beneficiaries.

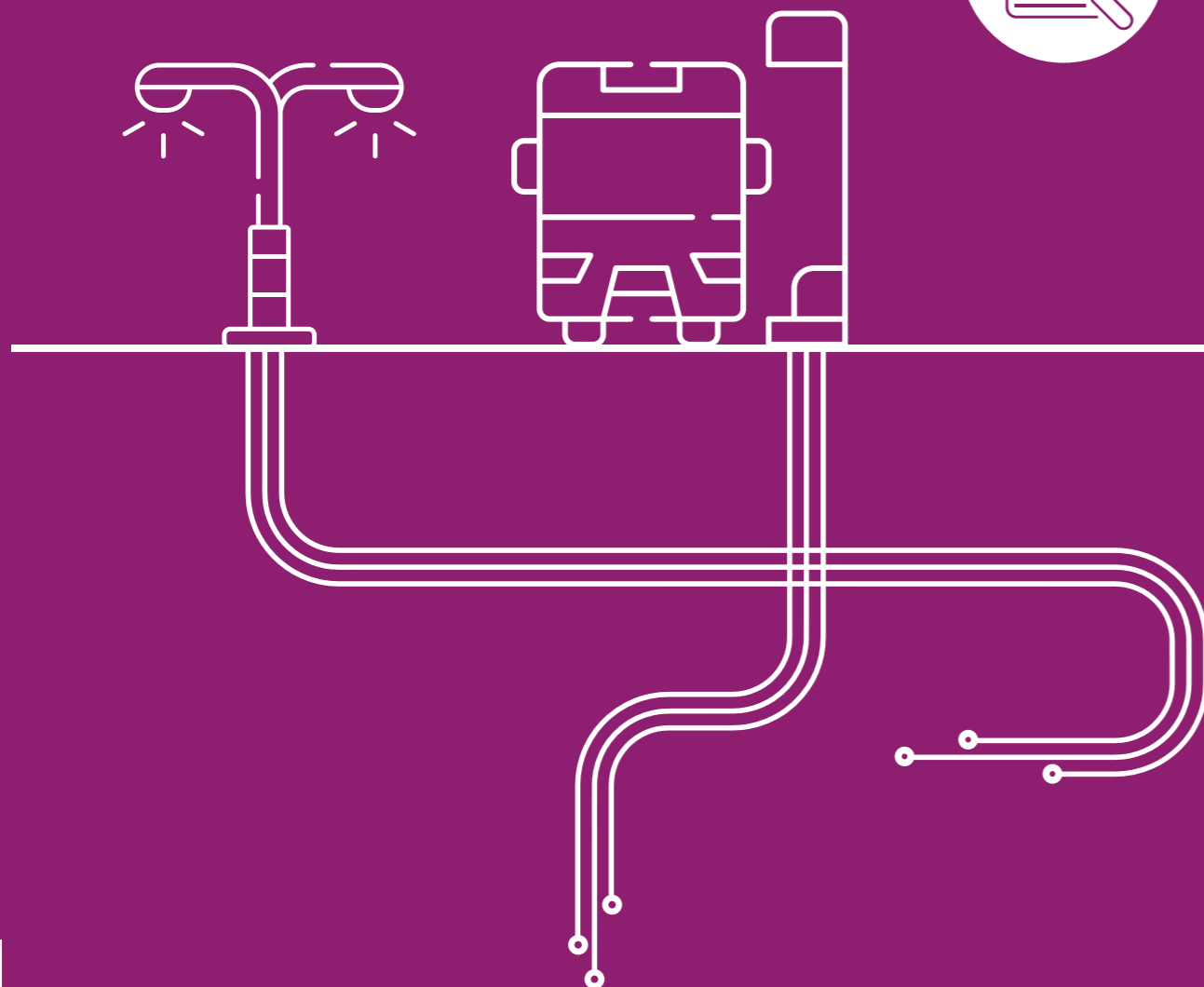
BCRD should also specify that a condominium should provide free access to the in-building physical infrastructure, as is already the case for the utilities (e.g. electricity, gas, water).

³⁴Gedragslijnantennes op rijksobjecten, dated 8 December 2000

³⁵Summary Report of Best Practices - Outcome of phase 1 of the work of the Special Group for developing a common Union Toolbox for connectivity 16/10/2020-20/12/2020, dated December 18, 2020

³⁶Question 17, referring to art. 14 of the ToolBoxRecc)

2 TRANSPARENCY AND COORDINATION OF PLANNED CIVIL WORKS



Starting point and ambitions

This section aims to explore scenarios by which the BCRD could further facilitate and incentivise the efficient coordination of civil works for deployment of high-speed telecommunications networks. The analysis will focus on two main aspects addressed by the Directive:

- Transparency concerning planned civil works and the efficient and effective access to information on these works for interested stakeholders
- Mechanisms for coordination of civil works

The objective is twofold:

- Identify **key hurdles in the implementation of the current Directive** requirements and explore an initial set of scenarios of how these difficulties could be overcome through the upcoming revision of the BCRD
- Explore ways by which the revised Directive can be **extended in scope** in order to, on the one hand help overcome the existing hurdles, and on the other hand respond to the new developments around deployment of very high-capacity networks and 5G infrastructures.

Main relevant provisions of the BCRD

Articles 5 and 6 of the BCRD address coordination of civil works and transparency regarding planned civil works; they will represent the core element of the analysis in this section.

Article 5: coordination of civil works

Article 5 of the BCRD sets the framework that allows network operators to **negotiate coordination of civil works with other telecommunications providers**, with a view to co-deploying elements of high-speed electronic communications networks.

In addition, and of particular interest for this paper, is the provision of § 2, compelling network operators fully or partially financed by public funds to meet any **reasonable request to coordinate civil works submitted by electronic communications operators aiming to co-deploy communications networks**. These requests should be met on transparent and non-discriminatory terms, under certain conditions:

- They **do not entail additional costs** for the initially planned civil works, including in terms of **timing delays**
- They **do not restrict control** over the coordination of works
- The requests for coordination are submitted in a timely manner, and at least **one month before the submission of the final project to permit granting authorities**.

The Directive gives the **possibility** to Member States to provide **rules on apportioning the costs** associated with the coordination of civil works, but this is not a mandatory requirement.

It also allows Member States to provide for **exemptions to the obligation of coordinating civil works** in specific and justified cases (e.g., minor civil works, critical national infrastructure).

Article 5 of BCRD also includes provisions on dispute settlements, should agreement on coordination of civil works not be achieved.

Article 6: transparency on planned civil works

Article 6 of BCRD addresses transparency concerning planned civil works, which is an essential element for an efficient coordination side-by-side deployment.

Network operators are thus compelled to provide, upon **specific written request of telecommunications operators, minimum information on ongoing or planned civil works** for which (i) a permit has been granted, (ii) a permit granting procedure is pending or (iii) where the first submission to the relevant authority is envisaged in the **following six months**.

The **minimum information network operators should provide, within two weeks** from the receipt of the written request of the telecommunications operator, include: location and type of works; network elements involved; estimated date for starting the works and their duration; a contact point. This information should be provided under proportionate, non-discriminatory and transparent terms. The information will be **made available via the single information point**.

Limitations concerning access to the minimum information above can be envisaged in specific cases (considerations related to the security of the networks and their integrity, national security, public health or safety, confidentiality or operating and business secrets). In addition, exemptions from access to information obligations can be provided for in the case of civil works of insignificant value or in the case of critical national infrastructure.

Access to such minimum information can be refused by the network operator if (i) the information has been made publicly available in electronic format, or (ii) access to information is ensured via the single information point.

Article 6 of BCRD also makes provisions on dispute settlement arising from the rights and obligations foreseen by the Directive.

Hurdles in the implementation of the Directive

We explore several elements that have been identified as potential hurdles to efficient coordination of civil works of electronic communications networks operators with other public/private civil works. Specific attention will be paid to **transparency on planned civil works**, which can be considered an essential element apt to significantly facilitate efficient coordination.

There are three fundamental challenges concerning the **transparency planned civil works**:

- How can an operator know **where and when** other infrastructure will be deployed?
- How can an operator know **what cost savings** this might mean for them?
- How can an operator **incorporate these elements into their deployment planning**?

The first challenge is to **know when and where coordination opportunities will arise**. This requires a **sharing of information**. Under the current Directive provisions, there is no obligation for network operators to provide information on a continuous, pro-active manner; the BCRD only requires network operators to provide such information at the **written request of a telecommunications company**.

In many cases permit granting administrations already do share this information. However, it is not always the case that this information is shared in an **efficient and transparent way**. Only if there is a single portal, will operators have full transparency of opportunities, and be able to plan coordination of civil works. Otherwise, there is always a risk that coordination opportunities are missed, and that therefore coordination is not fully exploited as a mechanism to reduce infrastructure costs. An increasing number of Member States are creating such **single portals**, and the examples of pioneering countries such as Portugal could potentially help overcome this hurdle. A key element to the usefulness of such a portal is the **accuracy and pertinence of the shared information**.

Finally, a key element related to transparency of civil works is **timing**. Indeed, if the information is shared only shortly before works start, the telecom operators will not have a chance to integrate the opportunity into their planning, and the chances of actual coordination are very low. On the other hand, if information is shared too long ahead of time there is a dual risk that: a) the information might change by the time of actual works, and b) the delay on the lead builder will be a disincentive for investment.

Is the Directive meeting its objectives? Can it be improved?

Considering the factors and hurdles identified above, several mechanisms and potential scenarios become apparent and could contribute to further increasing the Directive impact on encouraging coordination of civil works:

- **Single information point (SIP)**. It appears that a telecom operator may have less opportunities for coordination unless there is a single, electronic point of contact. The requirement for a **single point of information on all relevant planned works requests should therefore, in the absence of comparable alternatives, be mandatory and enforced**. The same portal could be used to **combine several BCRD functions**. By way of example, a single portal, with distinct entry points, could be envisaged to allow for **both permit application and notification of planned works**.
- **Transparency, relevance, and accuracy of information**. To have a single point of contact that provides actionable information, this should be easily readable and comparable, as well as relevant, so that the telecommunications operator understands where and when the works will take place, and what opportunities for coordination they offer. To ensure that such transparency exists, the

information provided by network operators should be made available in comparable formats (for example, through pre-defined templates), and should be pertinent (by way of example, precise geographic information can be considered crucial to understand the business potential of coordinating civil works).

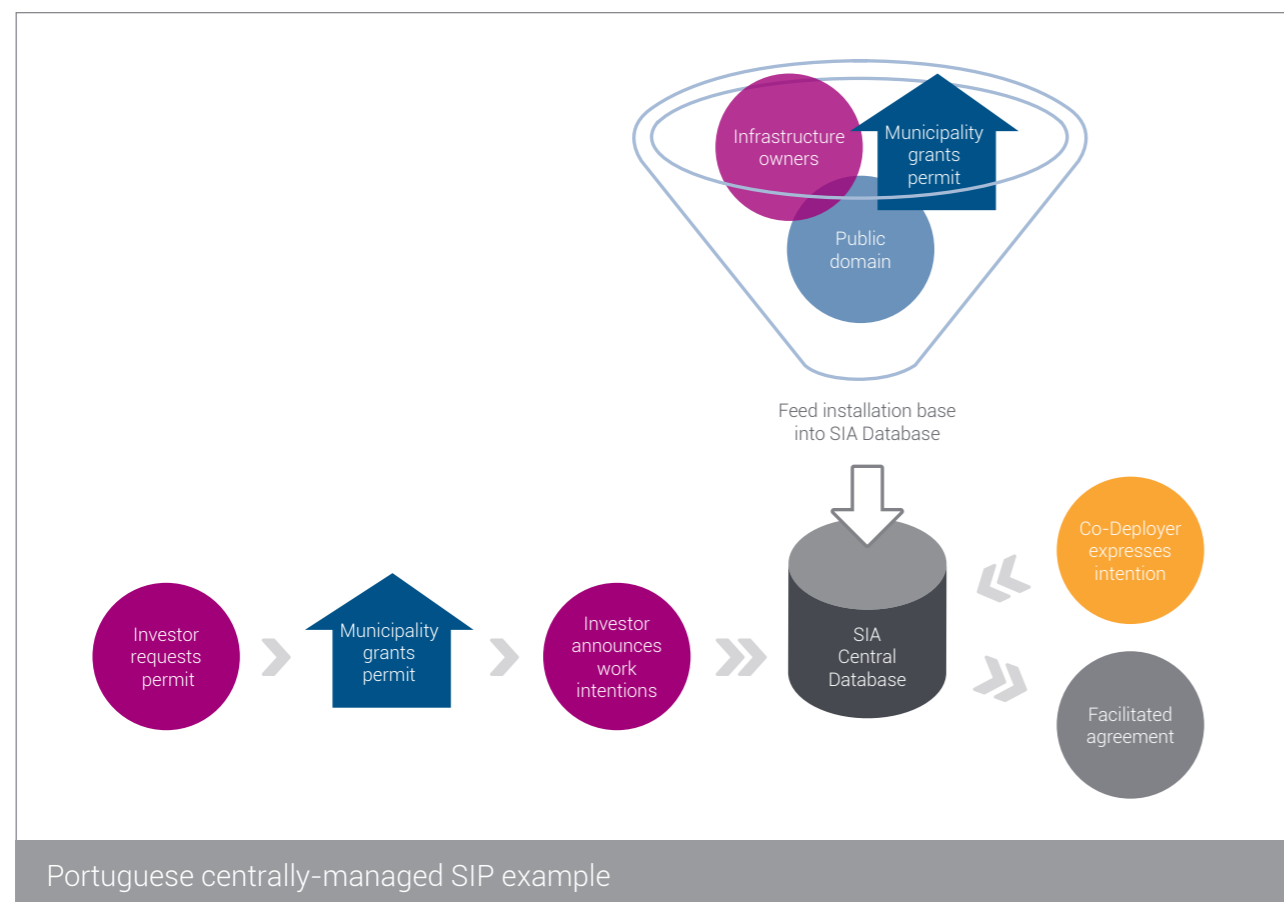
- **Timelines.** For the system to work, clear timelines are essential. The telecom operator must have a reasonable expectation that the information is received early enough so that co-deployment can be analysed and potentially requested. At the same time, a clear understanding of the planned works timeline is also crucial to assessing the potential opportunity of coordination.

Examples of good practices

There are several Member States which have introduced Single Information Portals (SIPs) by now. Two systems are quoted as good practices by both the WIK study, as well as the Commission's impact assessment³⁷, notably the Portuguese and Belgian SIPs.

We will briefly explore below the different workings and very different approaches by the two systems.

PORTUGUESE SIP EXAMPLE



³⁷European Commission- "REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the implementation of Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks"

PORTUGUESE CENTRAL PORTAL EXAMPLE

The Portuguese system is run centrally by the government. It captures the infrastructure installation base of most infrastructure owners (utilities, telecoms, municipalities, etc.). Through this portal, any entity planning works must pre-announce these works and allow potential co-deployers an opportunity to join. The announcement is made after the project promoter has secured the building permit. Therefore, the response time for interested parties is quite short (20 days).

The portal also provides access conditions for the infrastructures.

The portal intervenes after the permit is granted, and as such does not facilitate the permitting. However, through the combination of the infrastructure atlas elements and the transparency of works it provides good elements for decisions regarding a business case for co-deployment.

BELGIAN DECENTRALISED PORTALS EXAMPLE

The Belgian portals are run quite differently. There are two types of portals:

- **Portals in view of coordination of civil works:** the coordination of civil works (and possibly resulting cost synergies) aspect is handled by the regions (three in Belgium).
- **Portal on presence of infrastructure:** the information on presence of infrastructure is handled by a federal portal for Wallonia and Brussels (and a Flemish version for the Flemish region).

1. Regional portals in view of coordination of civil works

The coordination portal is not a database, but a dynamic platform between utility network operators that is used in the interaction between infrastructure providers to announce and show interest in coordinating civil works in a common open trench. Next to that, it also contains elements affecting access to roads opening (markets, fairs, demonstrations, races and other events that have an impact on the use of the road).

Workflow and timelines:

- At least **2 months before initiating a new work/trench**, operators are to submit their intention to the portal
- Other operators have **15 days to express an interest** to join the works
- Co-deployers then have **one additional month to submit the concrete elements** of their works

The submission and expression of interest for coordinated civil works of potential co-deployers through these portals is a **precondition for submitting a permit request** to the municipality. Therefore, in the case of Belgium, the SIP comes into play ahead of permit granting – the opposite situation to Portugal.

The portal also facilitates **streamlining of certain permit requests**, which can be introduced through the portals to the municipalities.

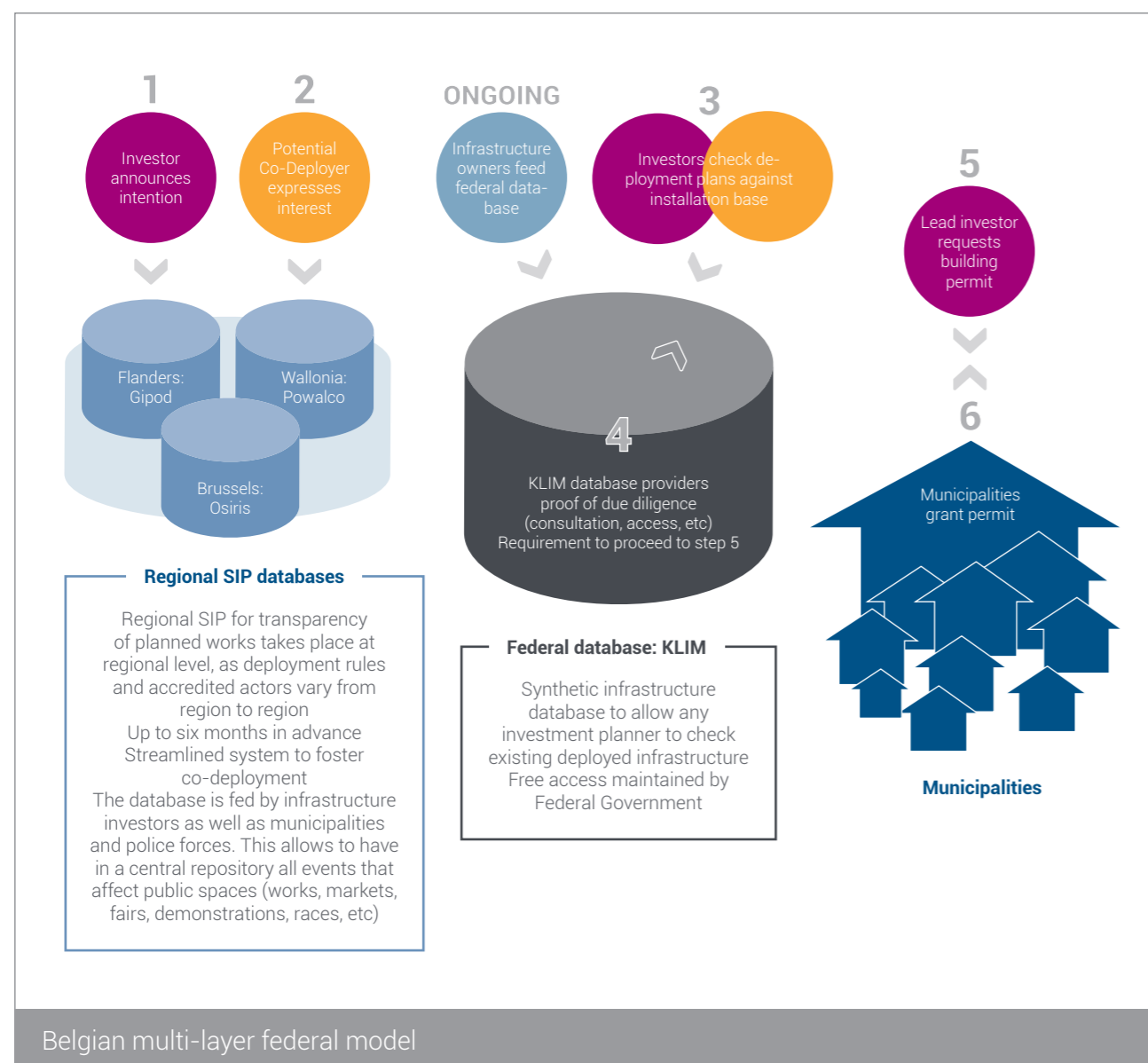
2. KLIM/KLIP portal on presence of infrastructure

In parallel to the three regional SIPs, the Federal government and Flanders Region operate a central portal of infrastructure installation. This portal is to be **consulted prior to every work** to confirm the **possible pre-existence of infrastructure**. Again, this is not a database, but an interactive platform.

A request for information on the possible pre-existence of infrastructure is sent through the portal to all parties to the portal, which then send their part of the information out, again through the portal. In the Flanders version, all this information is plotted on **one single map**.

As this database can be consulted to obtain **information on existing physical passive infrastructure**, it is the starting point to accessing such infrastructure. In case the portal notifies the pre-existence of infrastructure, the relevant operators are to be contacted to inform about the actual availability of such infrastructure.

Therefore, to **assess the business case and to plan the works**, any investor will need to refer to this central platform.



Recommendations

The examples above, both highlighted as good practices by the Commission, show that there is currently not a single way to interpret and implement the BCRD. The Belgian case seems more in line with the reading of the current Directive, which states that the requests for coordination are submitted in a timely manner, and at least one month before the submission of the final project to permit granting authorities.

The **implementation of an electronic single information point** to facilitate coordination seems a clear recommendation to be considered by the revised BCRD. From the point of view of the telecommunications industry, for the SIP proposed above to have a practical and significant impact on lowering broadband deployment costs, in the sense of the Directive, it should serve two functions:

- Create civil works coordination opportunities
- Facilitate permit granting

On the coordination topic, several recommendations and proposed features of the SIP can be envisaged.

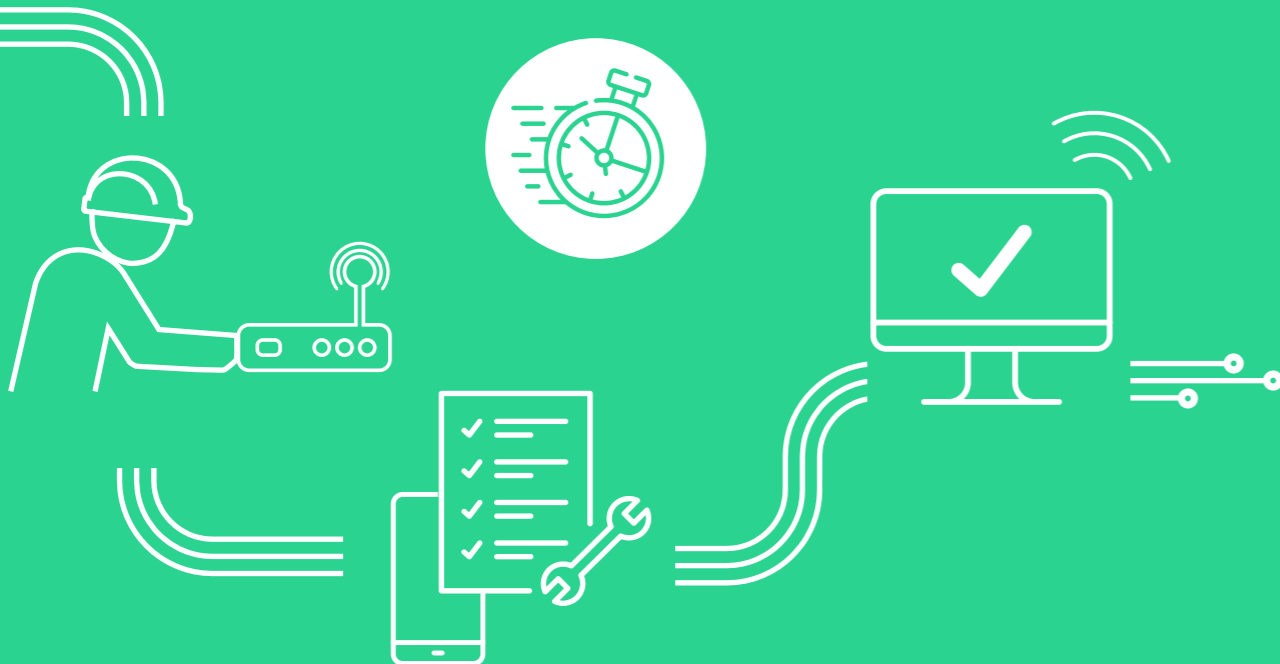
SIP facilitation of coordination of civil works - proposed features

- 1. Access to an infrastructure atlas.** The SIP should have access to an infrastructure atlas (either as a platform as in Belgium, or integrated into the SIP, as in Portugal or Bulgaria).
- 2. Pertinence and accuracy of information available through the SIP.** This can address two topics: (a) **what information** is covered and for **which types of infrastructures**- in the revised BCRD, this could potentially include not just the energy and water utilities data, but also urban furniture, for example, which will become crucial in the 5G deployment (such as, but not limited to: bus stops, lamp posts, public buildings, etc.); and (b) how actionable the information provided is- it is essential that the **information is up-to date and accurate** from all infrastructure owners. To ensure that information is accurate and comparable, the revised BCRD could require Member States to foresee **provisions at national level by which the information on planned civil works is given in a pre-defined, uniform manner.**
- 3. Clear timelines across the process.** At this moment, the Directive does not foresee a clear timeline and succession of procedural steps throughout the process. To ease coordination, the revised BCRD, could propose a well-defined, sequential process and clarify: when does the intention of works need to be notified- when does the interest on co-ordinating civil works need to be notified- when does the permit request need to be submitted. Shorter deadlines for the expression of interest would contribute to accelerating the process from planning to deployment.

4. **Linking the coordination SIP to the permit granting portal.** So far, only Estonia, Bulgaria, and to a degree in Belgium (and in the future Greece) seem to have a SIP that is directly linked to the permit granting portal. This would be an important recommendation, as through the SIP the permit granting authority would already have a lot of the mapping information required in the permit application. Furthermore, it would save duplication of already available public information. The Belgian example described above seems to have several advantages and could be replicated: on the one hand, by **making SIP consultation with potential operators interested in coordinating civil works a requirement for permits**, it increases transparency; on the other hand, the Walloon SIP also allows **coordinating operators to submit a single, common permit application**.
5. **Digital by default.** The all-electronic system would also un-burden a lot of the application processes.
6. **Open and clear access conditions.** One element that is currently an issue in many countries is represented by the conditions for joining civil works for the deployment of new infrastructures. In both Portugal and Bulgaria, operators who plan civil works must publish the access conditions for these civil works on the SIP. This increased transparency - which goes beyond the publication of work intentions - is of great help for a potential operator interested to coordinate civil works to assess the business case. Therefore, access conditions should be a mandatory element to be provided in the SIP.



3 PERMIT GRANTING



Starting point and ambitions

The aim of this section is to explore scenarios and elements apt to streamline permit-granting procedures for deployment of high-speed telecommunications networks. The starting point of the analysis consists of the current provisions of the BCRD and their implications on key elements of permit granting, notably timing, information, charges, grant permit procedural requirements.

The objective is on the one hand to assess whether the current BCRD requirements are sufficiently extensive to address these key elements and potential hurdles perceived as burdensome by the telecommunications industry, and on the other hand explore new mechanisms and insights on how the scope of the Directive could be extended in the upcoming revision process.

Main relevant provisions of the BCRD

Article 7 of the BCRD addresses the topic of permit-granting procedures and will represent the core element of this section.

With the goal to simplifying permit granting and making the process more transparent, art. 7 addresses 3 key elements related to permit granting: access to information on permit granting, means to submit permit requests, and timing for processing of permit requests.

1. **Access to information on permit granting:** all relevant information related to conditions and procedures for granting permits related to deployment of broadband networks should be made available via the single information point.
2. **Means to submit permit requests:** the Directive gives the option to Member States to make provision for electronic permit applications; this is, however, not a mandatory obligation.
3. **Timing for processing of permit requests:** permit granting authorities are compelled to grant or refuse permits within four months from the receipt of the complete permit request. This deadline can be extended in exceptional and justified circumstances. Should the deadlines not be observed, telecommunications operators having incurred damages thereof should have the right to receive compensation for the damage suffered.

³⁹European Commission: "Summary Report of Best Practices. Outcome of phase 1 of the work of the Special Group for developing a common Union Toolbox for connectivity"

Hurdles in implementation of the Directive

This section explores several elements that have been identified as potential hurdles to achieving BCRD objectives, namely simplifying the permit granting process and rendering it more efficient.

Examples of factors that can cause delays in granting of permits and make the process more burdensome include:

- **De-centralization of the permit granting process**, leading to granularity in conditions to obtain permits (non-uniform administrative rules and requirements) and, in the absence of a common access point to submit permit requests, a variety of actors and processes to be observed by telecommunications operators
- **Lack of capacity of local administrations** in applying the rules, causing delays
- **Non-observance of deadlines** to process permit requests and lack of tacit approval provisions, causing delays in the deployment of networks
- **Different technical requirements for different infrastructures**, making granting permits for coordinated civil works more difficult
- **Non-consistent application of rights of way fees and taxes**
- **Specificity of 5G deployment**

In most Member States (20)³⁸ the granting of permits is the **responsibility of the local authorities** (sometimes in combination with another level of administration). Therefore, operators will generally have to deal with a wide panoply of decision makers to acquire permits. The impact of this granularity would be attenuated if the number of municipalities is small, or if they are following a common set of rules, standards.

However, at this stage only a few countries have developed such common rules or standards (Bulgaria, Greece or Croatia can be given as examples). Even when such a common approach is supported, the **capacity of local administrations** to apply such rules varies widely, as in many cases permit granting is done by administrators who are generally not trained in telecom infrastructure issues.

A further complexity arises from the fact that for the purposes of the BCRD, in case of coordination of civil works, the permit for telecom infrastructure should be granted together with the permit for some other infrastructure deployment. In many cases there are very specific **technical standards** of how permits can be granted, and in some cases these requirements are contradictory, which makes co-deployment permits difficult. For example, water infrastructure is generally required to be dug deeper than other infrastructures, and in many cases, pipes are to run towards the centre of the streets – whereas for telecom infrastructure the requirements are generally for less deep ducts and towards the edge of the street. Similarly, electric cabling is generally required to be deployed at a certain distance from other infrastructures for safety reasons, and co-deployment of cables is more difficult. In a few countries, guides exist for handling such co-deployment, however most permit granting administrators might not be familiar with the technical details and make permitting difficult or at least delayed.

³⁸European Commission: "Summary Report of Best Practices. Outcome of phase 1 of the work of the Special Group for developing a common Union Toolbox for connectivity"

In addition to the technical standards, there are often **urbanistic requirements** that cause additional delays in permit granting. While these are generally well regulated in the countries, they can still cause delays in permit awards. For instance, in urban areas with historic protected buildings, special rules for conservation apply, which for instances requires specific trenching and prohibits on-façade deployment. In principle these are just technical standards to be included in the permit – however, in many cases when environmental protection or historic preservation elements are included in the permit, different administrations need to get involved, potentially causing delays.

Other hurdles perceived as burdensome are related to **rights of way** and to taxation of the infrastructure. We will not address the cost-sharing element here, which would merit a study in its own right. However, the rights of way are a major hurdle to deployment. Indeed, the lands that telecom operators have to pass in order to deploy infrastructure often are under the management of different owners, from private to public. It is the general rule that access to private land is handled by the operators through private contract. While the same is often the case for public land, there is no single approach of how public land access is handled for the purposes of deployment. For instance, access to the ducts on municipal roads might be the responsibility of the municipality, but some forest roads might be the responsibility of the forest administration, the access to some land along streams the responsibility of the water authority or utility, etc. This mosaic of landowners makes permit acquisition fastidious in many cases. The burden of permit acquisition in many cases lies with the applicant, rather than the permit granting authority.

Finally, there are hurdles linked to the **costs of access, the rights of way and taxes**. In some countries these are fixed, but in many cases, they are negotiated bilaterally by the applicant. The lack of guidance leads to delays, but more importantly to unpredictability of costs, and therefore of the business case. A unitary approach and common guidance should also be considered with regard to the **fees perceived by public authorities for granting of permits**. There is no unitary approach across the Member States regarding this- only 7 countries have horizontal legal arrangements foreseeing that any fees should be proportionate and only cover the administrative costs³⁹.

In theory the current BCRD applies to both fixed and wireless deployment. However, in many municipalities the challenges around permits for **5G deployment** are even higher. This is the case as often each site must be dealt with individually (whereas an underground cable that covers several blocks might only need one application). Furthermore, concerns around EMF radiation lead to delays in many cases for 5G permits. It might therefore be desirable that the new BCRD addresses these elements specifically.

Scenarios for improving and furthering the scope of the Directive

The Directive addresses the matter of transparency on information related to permit granting procedures. However, it does not foresee standardization of the process at national level and between different permitting authorities. Given the variety of constitutional and institutional arrangements in the Member States, it is unrealistic to expect that an EU wide rule could be envisaged in this regard. However, other measures can be foreseen to attenuate the effects of this granularity at local level. Indeed, the current BCRD gives the option to Member States to make provision for electronic permit

³⁹European Commission: "Summary Report of Best Practices. Outcome of phase 1 of the work of the Special Group for developing a common Union Toolbox for connectivity"

applications, but this is not mandatory. In this sense, the Directive could foresee implementation of a **one-stop-shop, digital system for permit application**, as well as impose measures to **enhance the capacities of local public administrations** in processing permits.

Similarly, the Directive addresses the issue of speed of approval, but does not specifically push for tacit approval or other accelerating mechanisms. Together with instances of **permit exemptions, tacit approval mechanisms** could also be considered. In addition, the specificities of **5G permits** might need to be addressed explicitly.

Finally, the current BCRD does not address the issue of **rights of way**, where the burden potentially remains with the applicant, leading to delays. Similarly, the issue of **technical standards** is not addressed explicitly, but left under the general heading of "permit". The differing technical requirements might well be used as reason for not granting permits. It would therefore appear that this article either needs strengthening to address the issues of rights of way and technical barriers, or new articles need to be envisaged.

There are various possible scenarios on how the Directive could be further improved and extended in scope, addressing the elements above. Some of these are explored below and will then be further discussed in the preliminary recommendations, against evidence from examples of best practices in Member States.

Single portal

Key features of the single portal - scenario

The **single portal could combine two BCRD related functions: transparency on planned civil works and facilitation of permit granting**. Thus, in the proposed scenario, the single portal could be based on the portal used by infrastructure owners for the notification of planned works; thus, a single portal, but with different entry points should allow for both permit application and notification of planned works. This will allow on-line standardised applications that granting authorities can then process.

The **digitalisation of the permit application should be made mandatory**; the portal should be mandatorily used by all granting authorities, following the principle "digital by default".

This single portal will then allow a **cross referencing of planned investments** into a) planned, b) permit introduced, c) permit granted status. Thus, it will allow getting a more transparent monitoring of the 4 months' **timelines** currently imposed by BCRD, and hence contribute to its **enforcement**.

Permit exemptions and tacit approval mechanisms

There are various instances where some of the Member States already foresee permit exemptions or tacit approval mechanisms⁴⁰.

Examples of instances where permit exemptions are foreseen by various EU member states

Associated network elements (boxes, conduits...)	1 MS
Masts/cabinets/antennas/cables satisfying certain criteria	11 MS
Minor works	2 MS regarding rights of way, 1 MS under conditions
Technical innovation/Technical adaptation on existing masts/supports	2 MS
Infrastructure contained in framework agreements	2 MS
Cable deployment on electricity poles	3 MS
Certain categories of infrastructure (optical fibre, cables under certain conditions)	4 MS
Deployments on already existing physical infrastructure	3 MS

Examples of instances where tacit approval is foreseen by various member states

Italy	Tacit approval processes foreseen by national legislation for the authorisation for the deployment of mobile sites (within 90 days from the submission of the application) and for the authorization for the excavation works and occupation on public land of territorial bodies as well as on ports, interports and public owned real estates, water, maritime and forests (within 30, 10 and 8 days depending on the type of intervention).
Greece	Law 4070/2012, includes provisions for tacit approval in case the licensing procedures have not been accomplished within 4 months. A new law is under development in 2021 to extend tacit approval to non-invasive works, the permit is granted within a one-month timeframe, unless the municipality objects.
Germany	Tacit approval for granting of rights of way within 3 months, this timeline is reduced to one months for granting of rights of way related to minor constructions.

⁴⁰European Commission: "Summary Report of Best Practices. Outcome of phase 1 of the work of the Special Group for developing a common Union Toolbox for connectivity"

Access to public land

Measures to ease access to public land - proposals

- Access to public land could be eased by default – only when critical infrastructure or security is at risk should access to public land be denied.
- This should be accompanied by measures ensuring that costs for access to public land are proportionate, transparent, openly available, and predictable.
- Clear and transparent guidance on common standards for fees could be foreseen as an obligation for all Member States.
- In some cases, approval should be tacit – i.e., if a permit request is not opposed by the administration, it is deemed granted (as in the German example above).

Technical standards

Technical standards - proposals

- The Directive encourages Member States to create and share ways to overcome technical barriers to co-deployment. This will require separate actions in each Member State, but the outcome could and should be shared through the single portal.
- The Broadband Competence Offices (BCO) or a similar body could be mandated to help overcome technical barriers – act as help desk / support facility
- Similarly, a joint task force of different industry regulators could be created to draft bridging recommendations that would allow/ facilitate consistency in the various standards and facilitate permit granting for co-deployed infrastructures.

Recommendations and examples of good practices

Permit granting is the element of the current BCRD that is the most difficult to implement, and considered the most burdensome for industry operators. The diversity of decision makers remains a hurdle in all countries. Still some encouraging examples have been identified, addressing some of the hurdles discussed above. These will be explored below, together with the lessons learnt from the current existing practices.

A. Electronic permit system

A relatively small number of Member States have implemented an electronic system for permit granting, foreseen by the BCRD as an optional element. By now, 4 countries have reported the existence of the SIP as a single-entry point for submitting applications for permits at national level, while 3

others are either currently implementing or have plans to do so in the immediate future⁴¹. While these electronic systems work and can be considered an advance in easing permit application procedures, based on the feedback and interviews with stakeholders in Bulgaria and Croatia, they have **limited impact on the acceleration of the permit procedures.**

Based on this current experience, the setting up of a “one stop shop” for permit application does not seem a sufficient condition to actually impact the acceleration of permits. The main reasons seem to be:

- Lack of digital capacities at local authorities’ level
- Municipalities still require additional conditions to the portal, which makes streamlining of the process only superficially true
- Hard copies of documents, plans may still be requested

Therefore, in addition to the establishment of a single portal for granting permits, further recommendations can be envisaged, framed around 2 key principles:

- **“Digital by default”**- all applications should be accepted strictly in electronic format
- **“Once only principle”**- cooperation between public authorities should be strengthened and enforced, so as to reduce the burden on permit applicants. In fact, many of the support documents that the public authorities request are issued by another administration – the private sector acts as “oil in the system”, with no new information being produced for most requested documents. This should be reinforced by the revised BCRD.

B. Linking permits to “transparency”

The BCRD suggests that the “one stop shop” for permit application is linked to the SIP. This is only partially applied. In the countries where electronic permit applications are supported this is not necessarily linked to the SIP.

Such a combination will make the process more streamlined for all parties involved. The applicants can use a single portal, and the **coordination of civil works and permitting will be easier and more transparent.** Such a system is already in place in Bulgaria and Wallonia. The lack of capability of the municipalities remains a hurdle here as well.

C. Capacity building for local administration

Because of the reasons outlined above, the revised BCRD might make it a requirement for the SIP manager to train users so that the system is applied and implemented.

Such **soft measures or accompanying measures** already exist in many countries. In Estonia, Croatia, Greece, or Germany, the Ministry or BCO offer training and capacity building to the municipalities to promote the usage of the SIP and the uniform application of the rules.

⁴¹European Commission: “Summary Report of Best Practices. Outcome of phase 1 of the work of the Special Group for developing a common Union Toolbox for connectivity”

In the Czech Republic, the Ministry / BCO goes further by having set up a mediation team that goes around municipal to resolve permit granting issues (both for fixed lines and 5G). The objective of this mediation team is to accelerate permitting before they come to the appeal body. Both municipalities and telecommunications operators can appeal to the BCO. In the same way as the BCRD requires an appeal body it could promote the **creation of a mediator**.

D. Fees/ rights of way

The fees applied for the right of access in many countries vary widely, with municipalities asking for prices with a variation factor of 1 to 10. This makes predictability of deployment costs impossible and arbitrary.

Existing best practices may offer insights on possible options for application. In the case of the Czech Republic, for example, a Memorandum of Understanding was signed by the association of municipalities to agree a smoothing around these discrepancies.

Regarding the fees for application for permit, the revised BCRD should clearly state that these can only be **cost covering if any**. In particular, any administrative charge for granting permits for civil works needed with a view to deploying elements of very high capacity networks shall:

- a) in total, cover only the administrative costs which will be incurred in the management, control and enforcement of the permit granting procedure;
- b) be imposed upon the network operator in an objective, transparent and proportionate manner which minimises additional administrative costs and attendant charges.

E. 5G permits

Art. 57 of the European Electronic Communications Code requires easing of permits for small cells. It would be relatively easy for this to be **extended to include 5G antennas**.

In general, the revised BCRD should foresee some **easing of rules for 5G antennas permitting**, as the densification of the network, linked to the coverage obligations of the spectrum owners will make an acceleration of the permitting essential.

F. Tacit approval

Tacit approval of permits because of non-answers of municipalities is a good solution that should be implemented where possible as is already the case in some Member States, however it may for constitutional reason not be an option in some Member States and it does not necessarily provide certainty for all parties involved. Indeed, the work promoter needs the legal certainty of a permit to start works, engage contractors, etc.

Therefore, a tacit approval / deadline of 15 days for administrations to assess the completeness of the application dossier might offer an alternative where tacit approval of the permit is not possible or it can be an additional solution to speed up the process also in Member States with a tacit approval of the permit. This would mean that if no request for further documents is issued by the permit granting authority, a decision must be taken based on the original application. This would lead to increased percentage of applications being treated in the prescribed four months.

G. Permit exemptions

As shown above, permit exemptions are already foreseen for specific works in several Member States. In addition, as mentioned under point E, for micro cells permits will not be required in many cases. Where the deployed infrastructure follows certain **technical specifications**, its installation should be exempted from permits (i.e., max radiation, certain distance from power cable, etc.), as already provided by the EECC for small-cells. Such **exemptions from permits should occur for example**, but not be limited to:

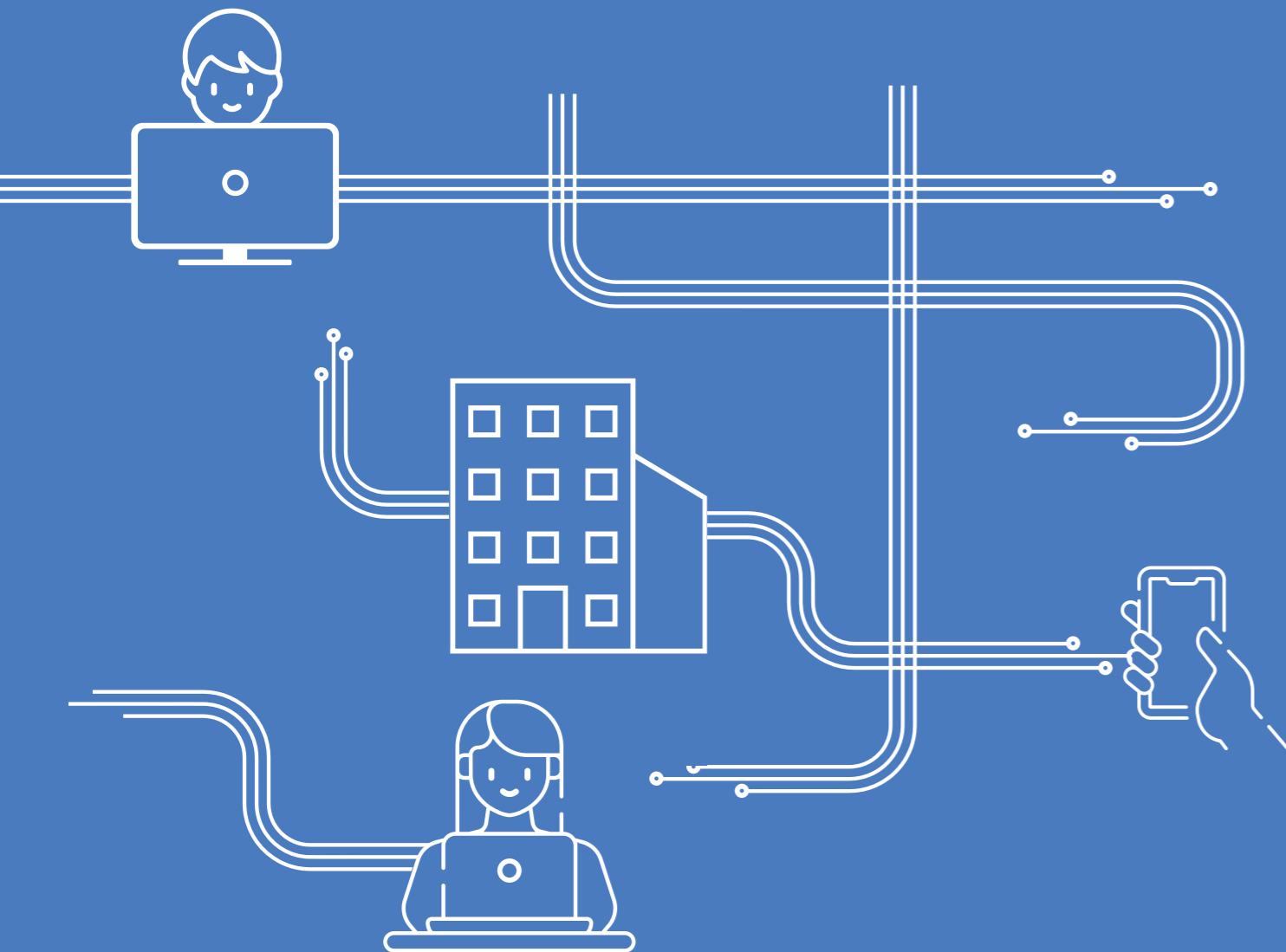
- Roofs of public buildings
- Duct deployment along major roads
- Aerial cabling over posts and poles
- Upgrades of existing deployments and technologies not significantly altering the physical load of the infrastructure
- Civil works in low and middle depth of the ground, such as nano-trenching and micro-trenching

H. One area- one application

The implementation of a single electronic portal, as proposed above, is likely to streamline the permit granting process. However, in many cases for the same infrastructure possibly several permit applications need to be introduced, as several administrations might be responsible. An example is when a municipality is responsible for the works application, but a separate application must be made to a separate administration for environmental or conservation reasons. The **revised BCRD should require that a single application per infrastructure is sufficient**. The administration in charge of the area (generally the municipality) should then coordinate the exchange with possible other administrations.



4 IN-BUILDING INFRASTRUCTURE



Starting point and ambitions

The objective is to explore scenarios by which the revised BCRD could facilitate a more proactive preparation of the in-building environment to reduce time and costs to connect and activate households. This analysis will focus on two main aspects addressed by the Directive:

- **In-building physical infrastructure deployment** and promotion of such investment by private and public landlords
- **Access to in-building infrastructure** for telecom network operators

Main relevant provisions of the BCRD

Articles 8 and 9 of the BCRD address the promotion of in-building physical infrastructure and access to this infrastructure for telecom operators; they will represent the core element of this section.

Article 8: In-building physical infrastructure

Article 8 of the BCRD sets the requirement of Member States to promote and facilitate the deployment of in-building infrastructure.

The main aspects of the article covered, and of particular interest for this study, are the provision of § 1 & 2, compelling Member States to ensure that all building permits require the building owners to foresee in-building high speed infrastructure to an access point, as well as easy access to the designated access point.

- The requirement for in-building high speed ready infrastructure applies to all new buildings
- The requirement for in-building high speed ready infrastructure applies to buildings subject to major renovation works

It also allows Member States to create a “broadband ready” label, to promote the increase value of properties equipped with the in-building infrastructure deployed.

Article 9: Access to in-building physical infrastructure

Article 9 of BCRD addresses the right to access the in-building infrastructure, as well as the building access point. In both cases the article foresees that network providers should be given due access to the building. Network operators have a right to deploy their infrastructure up-to the access point and up to the premises of the subscriber in the absence of available high-speed-ready in-building infrastructure, subject to the agreement of the subscriber.

Article 9 of BCRD also makes provisions on dispute settlement arising from the rights and obligations foreseen by the Directive.

Hurdles in implementation of the Directive

This section explores several elements that have been identified as potential hurdles to efficient in-building **cabling**.

There are three fundamental challenges concerning the **in-building cabling issue**:

- Are owners encouraged to provide in-building cabling; if so, does it go beyond ducts?
- How is access to this in-building infrastructure guaranteed to operators?
- How are access points to the building managed?

The first challenge of owners planning in-building infrastructure is generally linked to construction rules and construction permit granting rules in the Member States. If there is no requirement for in-building cabling for new buildings, if there is no requirement for in-building cabling in major renovation, what other measures are Member States applying? If there is a requirement, are there rules or guidelines on the type of infrastructure to be deployed?

The second challenge is linked to the access rights to be granted on the one hand by the building owner on the other hand by the tenants. The rules are not clear in all countries to guarantee this access and make intervention by operators difficult in some cases. Furthermore, issues arise if the in-building infrastructure is already used by one operator and another operator wishes to co-deploy / co-use in the same duct. The rules around the shared infrastructure are not always clear.

Finally, not all countries have clear rules when it comes to guarantee access from the curb to the building. This can lead to a short distance where the access rights are unclear, and potentially the ownership of the infrastructure. Indeed, the in-building infrastructure is covered by the current BCRD. However, in cases where the building is more than a short distance from the public road there could be a distance on private property not covered by the "in-building" requirement, but still creating access limitations for operators.

Is the Directive meeting its objectives? Can it be improved?

Considering the factors and hurdles identified above, several mechanisms and potential scenarios become apparent and could contribute to further increasing the Directive's impact on facilitating the network deployment inside building up to the end user premises:

- **In-building cabling.** It appears that not all Member States have made in-building cabling mandatory as yet for new buildings. When rules exist for new buildings, generally they also encompass some rules on renovations⁴². Therefore, a first requirement would be for all Member States to apply Art 8. However, Art 8 does not require any particular type of in-building infrastructure. This can therefore be limited to ducts or comprise any type of cabling. If no rules exist, the objective of easing and accelerating broadband roll-out is partially missed, as operators connecting a building have no guarantee of what infrastructure they will be confronted with. Similarly, buyers or renters of buildings have no guarantee of what the "future proof" and IT readiness of any building will be.

⁴²See section 4 p90 ff of WIK Study 2018

Furthermore, it must be noted that in some countries the BCRD has been transposed, including Art 8. However, this is often done through a Law affecting the telecommunications sector primarily. Construction companies involved in construction and renovation are not always aware of the rules in place, and thus they do not get applied. Therefore, both an adaptation of Art 8 into the national / regional construction law and an information campaign aimed at informing on the obligation and the standards to be applied would be more appropriate.

It would therefore appear essential that a future BCRD requires building guidelines to be included in all countries. The guidelines will need to be defined country by country, or at regional level depending on the country's set up. In most cases these can build on existing industry practices / guidelines. In any case the BCRD can go beyond the current requirement for in-building physical infrastructure and extend this requirement to introduce an obligation to mount in-building vertical VHCN cabling as a minimum, and add an obligation to set / agree upon (industry-led)⁴³ VHCN-ready construction guidelines.

Other elements to be considered are:

- Ready-to-use standardised VHCN cabling (i.e., more than ducts)
- Clear access between the street and the "access point" (also to be covered by a set of guidelines)

Access to in-building infrastructure. In those cases where Art 8 is transposed, see above, so generally is Art 9. However, the law being in force does not guarantee an understanding by building owners. It would appear that only few countries so far have set up appeal bodies to address this issue⁴⁴. Therefore, the current provision foreseen appeal body would probably suffice to ensure that fair access can be achieved. It is therefore more a matter for Member States to enforce Art 9.3⁴⁵.

However, dispute settlement is generally a step many telecom operators are not willing to take, as the time and costs are not proportionate to the problem at stake. Therefore, similarly to the good practice identified in the case of permit granting, it could be envisaged that Member States set up a mediation office which could facilitate access in the case of blockages, prior to the dispute settlement mechanism. Furthermore, common guidelines and interpretation of the rules of access would help, as was the case in Poland.

Another key element is the cost of access to the infrastructure. The access should be free when the in-building infrastructure has been deployed based on the legislative requirements stemming from Article 8.

- **Building access point.** The situation of access points is addressed in Art 8, which makes the inclusion of access points obligatory since 2016. However, similarly to the in-building infrastructure there are no prescribed standards or guidelines. The rules would have to ensure a clear access between the curb and the "access point", which is not always guaranteed currently.

⁴³If so, any standard is to be developed from now on it should ensure that in-building cabling support VHCN. Industry-led agreements can be based on consultations with (representative organisations of) network operators, building promoters, utility and electricity network installers.

⁴⁴BEREC Opinion on the Revision of the Broadband Cost Reduction Directive; BEREC BoR 21/30 Report 2021

⁴⁵See assessment of NRA interventions in BEREC 21/30

Examples of good practices

Art 8 Good practices

There are several Member States which have introduced standards to complement and guide the implementation of Art 8.

The Member States with the longest established rules seem to be France, Spain and Portugal⁴⁶. All have rules on the exact standards for in-house cabling. In most cases they foresee not just ducts but cables to enable fast internet usage. In the case of France, the rules specifically foresee the deployment of multi-cables or fibres to allow up to four operators to access the infrastructure without hurdles⁴⁷. Such a system might not be replicable in all Member States. Still the concept of clear building guidelines that accelerate and help broadband deployment clearly contribute to a high rate of equipped buildings.

Art 9 Good practices

There is little evidence on the implementation of the access to the building for operators. The main source are the reports from the NRAs which have dealt with disputes in this regard. The only country where this seems to have been promoted actively seems to be Poland. Here the NRA has dealt with over 3000 disputes⁴⁸. As a consequence, for example the Polish NRA has issued non-binding guidance rules on how to handle access rights. For another example, the Italian NRA is planning to publish guidelines for clarifying rules for in-building access. This would seem to be a constructive approach which could easily be replicated in other countries.

Recommendations

Based on the findings above the introduction of guidelines or promotion of good practices for actual in-building cabling seem desirable. Such guidelines would be beneficial both for the technical specifications for the actual in-building infrastructure, as well as for the access point. Furthermore, clear interpretation and publication of these guides would facilitate the application of the Directive, notably the access to the in-building infrastructure. The objective would not be for the EU to issue such guidelines, but for each Member States to develop these with the operators in line with their rules and industry-led practices.

Secondly, the involvement of the NRAs or other appeal bodies to also address access to in-house cabling should be promoted. This would not per se require a change to the current BCRD text, but rather a more thorough implementation of the Directive. Disputes for access are relatively burdensome, and an intermediary step, such as an effective mediator, which could have a role in overcoming blockages for building access would be beneficial.

⁴⁶WIK Study

⁴⁷WIK Study p99ff

⁴⁸BEREC Opinion 21/30

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