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Implementation of the Broadband Cost Reduction Directive

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Executive Summary

The broadband cost reduction directive (BCRD) aims to facilitate and incentivise the roll-out of high-speed electronic communications networks by promoting the joint use of existing physical infrastructure and by enabling a more efficient deployment of new physical infrastructure so that such networks can be rolled out at lower cost. The BCRD in particular defines tasks for a dispute settlement body (DSB) and a single information point (SIP). In order to get a deeper insight in the implementation of the BCRD and to foster the exchange of experiences between NRAs this report has the following three objectives. Firstly, it aims to give an overview on which tasks of the BCRD were appointed to NRAs and whether the NRAs already started their activities on a general level based on information from all 28 EU countries. Secondly, it aims to give an overview of the implementation of the tasks appointed to the NRAs based on the experiences of 16 EU countries with regard to the DSB and seven EU countries with regard to the SIP. Thirdly, it aims to provide a more detailed description of the implementation by NRAs of the DSB in five EU countries and of the SIP in six EU countries. The analysis is descriptive and does not aim to be normative or to recommend best practice.

The report shows that the tasks of the DSB and the SIP were appointed in the 28 EU countries to the NRAs as follows. The tasks of the DSB were appointed to the NRA in 22 countries and to the NRA and another organisation in one country and the tasks of the SIP were appointed to the NRA in ten countries and to the NRA and other organisations in three countries. In the other countries, the tasks of the DSB and the SIP were appointed to other organisations than the NRA (e.g. to a ministry) in two and 10 countries respectively, in three and four countries respectively not yet to any organisation since the transposition of the BCRD into national law is not yet finished and in one country the SIP was not established.

The analysis of the implementation of the DSB in the 16 countries considered can be summarised as follows:

- Operation of the DSB: In all 16 countries the NRA commenced operation as DSB.
- DSB before BCRD: In 15 countries, the NRA already had tasks to fulfil defined in the BCRD for the DSB or similar to them before transposition of the BCRD into national law.
- Rules the DSB could or has to follow: In nine countries legal authorities issued rules which NRAs have to or could follow when they carry out the tasks of the DSB defined in the BCRD appointed to them.
- Organisations which have to provide access to their existing physical infrastructure and/or co-ordinate their civil works: Other organisations than network operators have this obligation in 11 countries and nine countries respectively.
- Total number of disputes resolved: In total, 106 disputes were resolved so far, 96% with a binding decision and 4% with mediation. 91 of these 106 disputes were resolved in only one country (PL), and the other 15 disputes in eight other countries.
- Topics of the disputes resolved: 88% of the disputes resolved with a binding decision relate to the topic “access to in-building physical infrastructure” (Art. 9) (all in one country), 8% to “access to existing physical infrastructure” (Art. 3) and 6% to further topics.
- Challenges: The topics of the most difficult challenge the NRAs were faced with were “setting the price for access to existing physical infrastructure” (Art. 3) in four

countries, “refusal of access to existing physical infrastructure” (Art. 3) in two countries and two different further topics each in one country.

The analysis of the implementation of the SIP in the seven countries considered can be summarised as follows:

- Operation of the SIP: The SIP is in operation fully in six countries and partly in one country.
- Information available via the SIP: More than the minimum information defined in the BCRD is available via the SIP in two countries. In six countries, the SIP provides also information of critical national infrastructure, in three of them only if provided voluntarily to the SIP.
- Organisations which have to make information on physical infrastructure available via the SIP: Public sector bodies have this obligation in five countries which is foreseen in the BCRD as an option (Art. 4.2) and further organisations also in five countries which is not demanded by the BCRD.
- Submission of applications for permits for civil works via the SIP: The BCRD foresees this option (Art. 7.2), however, in none of the countries considered it is used.
- Challenges: The topics of the most difficult challenge the NRAs were faced with were “information which has to be provided to the SIP” in four countries and “increase the use of the SIP” and “critical infrastructure” each in only one country.

Altogether, it seems that the electronic communications network operators either reach in nearly all requests an agreement with the infrastructure provider without the need to involve the DSB or they do not have interest in their rights laid down in the BCRD (or do not know these rights). The BCRD is still in an initial phase and therefore its use by electronic communications network operators may further increase in the future.

1 Introduction and objective

The broadband cost reduction directive (BCRD)[1] aims to facilitate and incentivise the roll-out of high-speed electronic communications networks by promoting the joint use of existing physical infrastructure and by enabling a more efficient deployment of new physical infrastructure so that such networks can be rolled out at lower cost. Member States were required to adopt and publish the laws, regulations and administrative provisions necessary to comply with the BCRD by 1 January 2016 and to apply those measures from 1 July 2016.

The BRCD in particular contains rules with regard to access to existing physical infrastructure, coordination of civil works and access to in-building physical infrastructure. In case the involved parties are not able to reach an agreement or access is refused, either party is entitled to refer the issue to the competent national dispute settlement body (DSB). The BCRD also foresees measures to increase the transparency concerning physical infrastructure and planned civil works and defines which information should be available via a single information point (SIP). Finally the BRCD requires that information regarding permit-granting procedures is also available via the SIP.

NRA may be involved in the implementation of the BCRD e.g. in the role of the DSB and/or the SIP. BEREC already held a workshop in October 2016 in order to exchange information and experience so far on the state of play of the implementation and related challenges. This report goes one step further and examines the implementation of the BCRD in more detail. In order to get a deeper insight in the implementation of the BCRD and to foster the exchange of experiences between NRAs this report has the following three objectives. Firstly, it aims to give an overview on which tasks of the BCRD were appointed to NRAs and whether the NRAs already started their activities on a general level based on information from all 28 EU countries. Secondly, it aims to give an overview of the implementation of the tasks appointed to the NRAs based on the experiences of 16 EU countries[2] with regard to the DSB and seven EU countries[3] with regard to the SIP. Thirdly, it aims to provide a more detailed description of the implementation by NRAs of the DSB in five EU countries[4] and of the SIP in six EU countries[5]. The analysis is descriptive and does not aim to be normative or to recommend best practice.

The document begins with an overview of which of the tasks of the BCRD were appointed to the NRAs in the 28 EU countries (section 2) and then analyses the implementation of the DSB and the SIP of the NRAs in 16 and seven EU countries, respectively (section 3). The examination of the implementation of the DSB of the NRAs (section 3.1) includes general information on the implementation of the DSB, information on the disputes resolved so far and the most difficult challenge the NRA was faced with in the dispute settlement procedures. The analysis of the implementation of the SIP of the NRAs (section 3.2) covers

[1] Directive 2014/61/EU of the European Parliament and the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks

[2] Austria, Croatia, Finland, France, Germany, Greece, Hungary, Italy, Lithuania, Poland, Portugal, Romania, Slovenia, Spain, Sweden, United Kingdom

[3] Austria, Germany, Finland, Lithuania, Poland, Portugal, Sweden

[4] Hungary, Poland, Portugal, Spain, Sweden

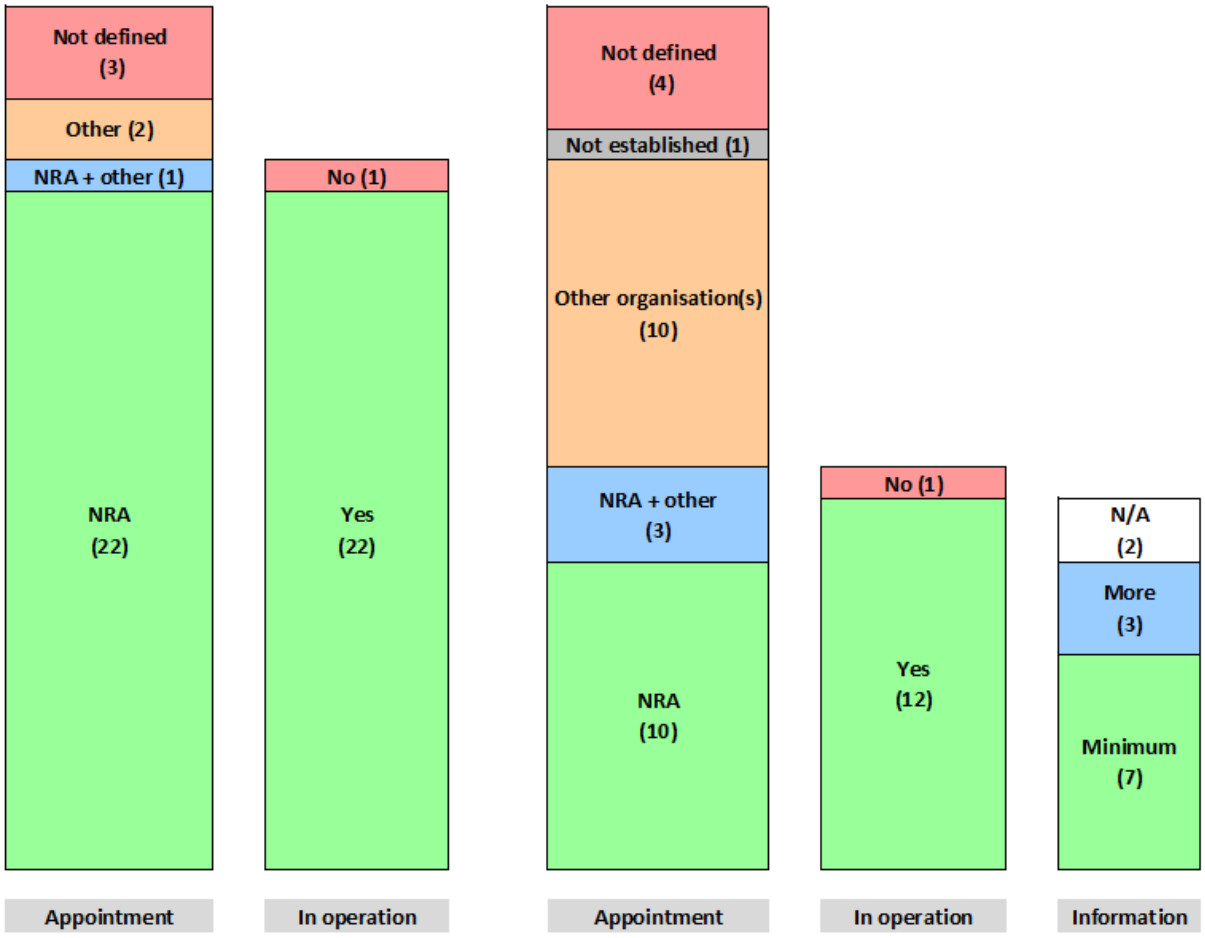
[5] Austria, Germany, Lithuania, Poland, Portugal, Sweden

the tasks of the SIP defined in the BCRD appointed to the NRAs, the examination of the implementation of each of these tasks by the NRAs and the most difficult challenges the NRAs were faced with as SIP. Finally, conclusions are drawn (section 4). More detailed information on the implementation of the DSB and the SIP is provided for five and six countries, respectively, in the Annexes 1 and 2 and data on which the analysis is based upon is provided in Annex 3.

2 Overview of the tasks of the BCRD appointed to NRAs in the EU

This section provides an overview of the tasks of the BCRD appointed to NRAs in the EU. The information provided is as of mid-September of 2017 (see Figure 1 and Table 1), and based on the responses of the NRAs of all 28 EU countries.

In 22 (79%) of the 28 EU countries considered, the tasks of the DSB defined in the BCRD were appointed to the NRA, in one country to the NRA and another organisation and in two countries to other organisations. In three countries, the BCRD is not yet transposed into national law regarding the DSB.



Source: BEREC

Figure 1: Tasks of the BCRD appointed to NRAs in the EU

In 22 (96%) of the 23 countries in which the tasks of the DSB were entirely (22) or partly (1) appointed to the NRA, the NRA is as DSB in operation, in the other country this is not yet the case.

In ten (36%) of the 28 EU countries considered, the tasks of the SIP defined in the BCRD were appointed to the NRA, in three countries to the NRA and other organisations and in ten countries to other organisations. In one country, the SIP was not established and in four countries, the BCRD is not yet transposed into national law regarding the SIP.[6]

Table 1: Tasks of the BCRD appointed to NRAs in the EU

DSB		SIP		
Appointed to	**In operation**	**Appointed to**	**In operation**	**Information (Art.4)**
NRA (22) AT, CY, CZ, DE, EE, ES, FI, FR, GR, HR, HU, IE, IT, LT, LU, LV, PT, RO, SE, SI, SK, UK	Yes (22): AT, CY, CZ, DE, EE, ES, FI, FR, GR, HR, HU, IE, IT, LT, LU, PL, PT RO, SI, SK, SE, UK	NRA (10) AT, CY, CZ, DE, FI, IE, LT, PL, PT, SE	Yes (12): AT, CY, CZ, DE, FI, IE, LT, LU, PL, PT, SI, SE	Minimum (7): AT, CY, CZ, IE, LT, PL, SE
NRA and other organisation (1): PL	No (1): LV	NRA and other organisation (3): LU, RO, SI	No (1): RO	More (3): DE, FI, PT
Other organisation (2): DK, MT		Other organisation (10): DK, EE, ES, FR, GR, HR, HU, IT, LV, MT		
Not yet defined (3): BE, BG, NL		Not established (1): UK[6]		
		Not yet defined (4): BE, BG, NL, SK		

Source: BEREC

In 12 (92%) of the 13 countries in which the tasks of the SIP were entirely (10) or partly (3) appointed to the NRA, the SIP established by the NRA is in operation, in the other country this is not yet the case.

The BCRD defines the minimum information with regard to existing physical infrastructure the SIP has to provide (Art. 4.1[7]). In three of the 12 countries in which the SIP of the NRA is in operation, the SIP provides more than this minimum information and in seven of these 12 countries the minimum information. In two countries, this task of the SIP was not appointed to the NRA but to another organisation or not to any organisation.

Table 2 provides an overview of the organisations to which the tasks of the SIP were appointed in those ten countries which did not designate the NRA with these tasks. In six of these ten countries, the tasks of the SIP were appointed to a ministry, in one country to a ministry and another national authority, in two countries to (an)other national authority(ies) than a ministry and in one country to a private company.

[6] In UK, a centralised SIP was not established as the UK Government considered that planning decision making bodies already carry out the functions required by the BCRD.

[7] Short form of Article 4 paragraph 1

Table 2: Tasks of the SIP appointed to other organisation(s) than the NRA

Tasks of the SIP appointed to	Number countries	Country
Ministry	6	EE, ES, FR, GR, IT, LV
Ministry + other national authority	1	HR
Other national authority(ies)	2	DK, MT
Private company	1	HU

Source: BEREC

3 Analysis of the implementation of the DSB and the SIP by NRAs

This section analyses the implementation of the DSB of the NRAs in 16 EU countries[2] and of the implementation of the SIP of the NRAs in seven EU countries[3]. The analysis reflects the state of data as of mid-September 2017 and the data used in the examination is provided in the tables in Annex 3.

The BCRD defines the term "physical infrastructure" and rules of the BCRD which are relevant for both, the DSB and the SIP, refer to this term. The transposition of this term into national law, therefore, is of relevance with regard the impact of the BCRD at the national level.

Table 3 shows how the term "physical infrastructure" is defined at the national level. In 13 of the 16 countries analysed in this section, it is defined according to the definition of the BCRD (Art. 2.2) and in the other three countries the definition includes further infrastructure which is not included in the definition of the BCRD. In these three countries, the definition includes the following further infrastructures: In Austria dark fibre, in France water towers and in Lithuania cable.

Table 3: Definition of the term "physical infrastructure"

Definition of "physical infrastructure"	Number countries	Country
According to BCRD (Art. 2.2)	13	DE, ES, FI[8], GR, HR, HU, IT, PL, PT, RO, SE, SI, UK
Definition includes additional infrastructure:		
• Dark fibre	1	AT
• Water towers	1	FR
• Cables	1	LT

Source: BEREC

3.1 Analysis of the implementation of the DSB by the NRAs

This section analyses the implementation of the DSB of the NRAs in 16 EU countries (AT, DE, ES, FI, FR, GR, HR, HU, IT, LT, PL, PT, RO, SE, SI, UK) with regard the following topics:

- general information on the implementation of the DSB;

[8] In Finland, the term "physical infrastructure" has been defined according to the BCRD, however, the national legislation includes also cables and other active network elements.

- information on the disputes resolved so far; and
- the most difficult challenge the NRA was faced with in the dispute settlement procedures.

More detailed information on the implementation of the DSB is provided for five countries (ES, HU, PL, PT, SE) in Annex 1.

3.1.1 General information on the implementation of the DSB

With regard to general information on the implementation of the DSB by the NRA the analysis answers the following questions:

- Which tasks of the DSB defined in the BCRD have been appointed to the NRA?
- Did the NRA commence operations as DSB?
- Did the NRA already have tasks to fulfil defined in the BCRD for the DSB (or similar to them) before transposition of the BCRD into national law?
- Did a legal authority (e.g. NRA) issue rules which the DSB has to or could apply?
- Do also other organisations than network operators (e.g. public administrations) have to provide access to its existing physical infrastructure and/or co-ordinate its civil works?

Tasks of the DSB

The BCRD defines the following tasks of the DSB. The DSB has to settle disputes with regard to:

- access to existing physical infrastructure (Art. 3.4 and 3.5);
- transparency concerning physical infrastructure (Art. 4.6);
- coordination of civil works (Art. 5.3 and 5.4);
- transparency concerning planned civil works (Art. 6.4); and
- access to in-building physical infrastructure (Art. 9.3).

In all 16 countries considered, all of these tasks were appointed to the NRA with the following exceptions (see Table 11 to Table 14 in Annex 3). The tasks to settle disputes with regard to coordination of civil works and transparency concerning planned civil works were not appointed to the NRA in Portugal[9] and Poland.[10]

DSB in operation?

In all 16 EU countries considered, the NRA commenced operation as DSB (see Table 15 to Table 18 in Annex 3).

[9] However, in Portugal, the national law demands the coordination of civil works and establishes the terms for supplying the information concerning planned civil works. Non-fulfilment of these obligations constitute a breach of the law. The law also foresees sanctions in case of refusal of coordination of civil works.

[10] In Greece, the task access to in-building infrastructure was appointed to the NRA, however not fully (see Table 12 in Annex 3).

DSB already before transposition of BCRD into national law

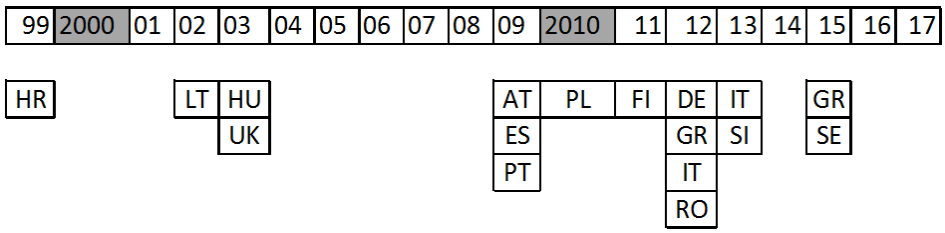
In 15 (94%) of the 16 countries considered, the NRA already had tasks to fulfil defined in the BCRD for the DSB (or similar to them) before transposition of the BCRD into national law. Table 4 shows that these tasks of the NRA relate to the following topics: "access to existing (physical) infrastructure" in 13 countries, "coordination of civil works" in one country, "access to in-building infrastructure" in six countries and to other topics (e.g. permits regarding rights of way) in three countries. The definition of which organisations have the right to get access to which (physical) infrastructure and to which in-building infrastructure vary between the countries considered. Table 15 to Table 18 in Annex 3 provide more information on these tasks of the NRAs.

Table 4: Tasks of the DSB before transposition of the BCRD into national law

Tasks relate to the topic	Number countries	Country
Access to existing (physical) infrastructure	13	AT, DE, GR, HR, HU, IT, LT, PL, PT, RO, SE, SI, UK
Coordination of civil works	1	IT
Access to in-building infrastructure	6	ES, FI, GR, IT, PL, RO
Other	3	GR, IT, UK

Source: BEREC

Figure 2 provides an overview since when the NRAs have these tasks. In Croatia since 1999, in Lithuania since 2002, in UK[11] and Hungary since 2003, in Austria, Spain and Portugal since 2009 and in Poland since 2010. In seven other countries, such tasks have been appointed to the NRA in this decade: in 2011 in Finland, in 2012 in Germany, Greece, Italy and Romania, in 2013 in Slovenia and further tasks to the NRA in Italy and in 2015 in Sweden and further tasks to the NRA in Greece.



Source: BEREC

Figure 2: Period since when the NRAs have tasks similar to those defined in the BCRD for the DSB

Rules which the DSB has to or could apply

Legal authorities may issue rules which NRAs have to or could follow when they carry out the tasks of the DSB defined in the BCRD appointed to them. In nine (56%) of the 16 countries analysed, this is the case. Table 5 provides an overview on the rules of these eight countries. In eight of the nine countries, general or procedural rules (e.g. the process the NRA is likely to follow in resolving disputes) and in one country specific rules with regard to in-building infrastructure have been issued. Table 19 to Table 22 in Annex 3 provide further information on these rules. In seven countries, the rules are binding, and in the two others not. In five

[11] Prior to 2003 Ofcom's predecessor Oftel had dispute resolution powers.

countries, the rules were issued by the NRA, in two countries by the government and in two further countries by the national parliament.

Table 5: Overview on the rules which the DSB has to or could apply

Information on the rules	Number of countries	Country
Which kind of rules?		
• General / procedural rules	8	DE, GR, IT, LT, RO, SE, SI, UK
• Specific to in-building infrastructure	1	PL
Binding or non-binding rules?		
• Binding	7	DE, GR, IT, LT, RO, SE, SI
• Non-binding	2	PL, UK
Which authority issued the rules?		
• NRA	5	IT, LT, PL, RO, UK
• Government	2	GR, SE
• National parliament	2	DE, SI

Source: BEREC

Other organisations than network operators which have to provide access to their existing physical infrastructure and/or co-ordinate their civil works

According to the BCRD, network operators of the electronic communications sector and also other sectors (e.g. gas, electricity, heating, water, transport services) have to provide access to their existing physical infrastructure according to the rules in Art. 3. of the BCRD and to coordinate their civil works according to the rules in Art. 5 of the BCRD. National legislation may impose also on other organisations such obligations. Table 6 shows that this is the case with regard to access to existing physical infrastructure in 11 (69%) and coordination of civil works in 9 (56%) of the 16 countries considered.

Table 6: Other organisations than network operators which have to provide access to their physical infrastructure and/or coordinate their civil works

Other organisations than network operators have to	Number of countries	Country
Provide access to their existing physical infrastructure?		
• Yes	11	AT, DE, ES, FR, GR, HR, IT, LT, PT, RO, SI
• No	5	FI, HU, PL, SE, UK
Co-ordinate their civil works?		
• Yes	9	DE, ES, FR, GR, IT, LT, PT, RO, SI
• No	7	AT, FI, HR, HU, PL, SE, UK

Source: BEREC

Other organisations than network operators which have to provide access to their physical infrastructure and to coordinate their civil works are e.g. all organisations which have infrastructure useable for communication lines (AT[12], FR, IT, RO, SI[12]) and (certain) public administrations (ES, PT). Table 23 to Table 26 in Annex 3 provide more detailed information on which organisations have these obligations.

[12] These organisations have only to provide access to their existing physical infrastructure but not in addition also to coordinate civil works.

3.1.2 Information on disputes resolved so far

This section analyses the disputes resolved so far by the NRAs since the transposition of the BCRD into national law.[13]

Disputes brought before the NRA may be resolved with a binding decision or the involved parties reached an agreement themselves by mediation.[14] Table 7 shows that in three (19%) of the 16 countries considered, the NRA resolved disputes with mediation, while in the other 13 countries (AT, ES, FI, FR, GR, HR, IT, LT, PL, PT, RO, SE, UK) this is not the case so far. In these three countries together, four disputes were resolved with mediation, two in Hungary and one in Germany and Slovenia.

Table 7: Total number of disputes resolved so far

Method	Number of disputes resolved	Number of countries	Country
With mediation			
	2	1	HU
	1	2	DE,SI
With a binding decision[15]			
	91	1	PL
	4	1	SE
	2	2	DE, IT
	1	3	AT,ES, PT

Source: BEREC

In seven (44%) of the 16 countries analysed, the NRAs resolved disputes with a binding decision, in the other nine countries (FI, FR, GR, HR, HU, LT, RO, SI, UK) this is not yet the case.[15] In Poland, the NRA resolved 91 disputes, in Sweden four disputes, in Germany and Italy two disputes and in Austria, Portugal and Spain one dispute.

Table 8 provides an overview of the topics of the disputes resolved so far with a binding decision. With regard to access to in-building physical infrastructure 90 disputes were settled with a binding decision so far (all in Poland), with regard to access to existing physical infrastructure eight disputes (two in IT and SE, one in AT, ES, PL, PT), with regard to coordination of civil works four disputes (two in DE[18] and SE), with regard to transparency concerning planned civil works one dispute (SE) and with regard to transparency concerning physical infrastructure also one dispute (SE).

59 (66%) of the 90 disputes resolved with regard to access to in-building physical infrastructure granted the requestor this access fully and 27 disputes (30%) partially. In the

[13] These disputes are not necessarily the consequence of the BCRD, since in 15 of the 16 countries considered the NRA already had tasks to fulfil defined in the BCRD for the DSB (or similar to them) before transposition of the BCRD into national law (see section 3.1.1). Requests which were not accepted by the DSB because they did not fulfil all formal requirements (e.g. incomplete application) are not considered.

[14] In some cases (e.g. DE, PL) proceedings before the NRA were closed due to the requestor withdrew its request which may be the result of an agreement reached between the involved parties (see Table 27 to Table 30 in Annex 3).

[15] The figures refer to disputes resolved by the NRA with a binding decision on the subject of the dispute. They do not include proceedings closed due to withdrawal of the request by the requestor or because the request did not meet all formal requirements.

other four disputes (4%), access to in-building physical infrastructure was denied mostly because other in-house wiring did exist.[16]

Table 8: Topics of the disputes resolved so far with a binding decision[15]

Topic	Number of disputes	Country
Access to existing physical infrastructure (Art. 3)	8	AT(1), ES (1), IT(2), PL(1), PT(1), SE(2)[17]
Transparency concerning physical infrastructure (Art. 4)	1	SE[17]
Coordination of civil works (Art. 5)	4	DE(2)[18], SE(2)[19]
Transparency concerning planned civil works (Art. 6)	1	SE[19]
Access to in-building physical infrastructure (Art. 9)	90	PL

Source: BEREC

All eight disputes resolved with regard to access to existing physical infrastructure granted the requestor this access. The dispute resolved with regard to transparency concerning physical infrastructure and the dispute resolved with regard to transparency concerning planned civil works granted access to this information. Three of the four disputes with regard to coordination of civil works did grant this coordination the other dispute did not since the request was not sufficiently detailed.

In the dispute settlement procedures so far operators requested access to existing physical infrastructure (according to Art. 3) of the following sectors: in nine (45%) of the 20 requests NRAs received in total so far of the electronic communications sector, in three (15%) requests of the electricity sector, in three (15%) requests of the transport sector, also in three (15%) requests of municipalities and in two (10%) requests of a multi-utility company active in several sectors. With regard to coordination of civil works the operators of all five requests which were brought before the NRAs in total so far requested this coordination from operators in the electronic communications sector.

3.1.3 Challenges the NRAs were faced with as DSB

Table 9 provides an overview of the most difficult challenges the NRAs were faced with in dispute settlement procedures in those seven countries in which disputes were already resolved with a binding decision. In these seven countries, the most difficult challenge relates to the following topics: in four countries (AT, ES, IT, PT), to setting the price for access to existing physical infrastructure (Art. 3), in two countries (IT[20], PL) to refusal of access to existing physical infrastructure (Art. 3), in one country (DE) to setting the price for coordination of civil works (Art. 5) and in one country (SE) to the relation between BCRD and national law.

[16] In these cases, access to existing in-building networks belonging to other telecom operators was ensured. Allowing new operators to duplicate existing in-house wiring would excessively limit the building owners' rights.

[17] In one dispute, two issues were resolved, one with regard the topic access to existing physical infrastructure and the other with regard to transparency concerning physical infrastructure.

[18] In Germany, both procedures with regard to the coordination of civil works have been quite specific. In both cases municipalities requested not to negotiate agreements about the coordination of civil works. To that extend such request have been the other way round as expected.

[19] In one dispute, two issues were resolved, one with regard the topic coordination of civil works and the other with regard to transparency concerning planned civil works.

[20] In Italy, the NRA was faced with two relevant challenges.

Table 9: The most difficult challenges NRAs were faced with as DSB

Topic	Country	Description
Setting the price for access to existing physical infrastructure (Art. 3)	AT	Selection of the most appropriate costing methodology for the specific case that also the infrastructure owner offers public communications services
	ES	According to national law, price has to be based on gross revenue, however, the network operator did not provide retail services
	IT	Selection of the most appropriate costing methodology for the specific case
	PT	The national law did not foresaw power for the NRA to impose a specific cost methodology
Refusal of access to existing physical infrastructure (Art. 3)	IT	To decide on the refusal of access due to not sufficient space to host the network elements is available
	PL	To decide on the technical suitability of the physical infrastructure and the availability of space to host the network elements
Setting the price for coordination of civil works (Art. 5)	DE	To set the price in case of coordination of civil works in consideration of cost sharing
Relation between BCRD and national law	SE	Relation between • Art. 3.2 BCRD and the duct obligation in the incumbents SMP decision on market 3a • The law which implemented the BCRD in Sweden and the constitutional law

Source: BEREC

Setting the price for access to existing physical infrastructure (Art. 3)

The challenges with regard the setting of the price for access to existing physical infrastructure which, according to the BCRD (Art. 3.5), has to be "fair" and "reasonable" differ between all four countries. In Austria, both operators, the one which requested access and the one which provided access, offered their services on the electronic communications market and the challenge was to select the most appropriate costing methodology for this specific situation. The solution used was to set the access price based on fully distributed costs including costs of idle capacity since this ensures that costs to build infrastructure or to use the infrastructure of other operators are (rather) the same and that the risk of investment is not only borne by the operator which provide access which contribute to maintain a level playing field.

In Spain, according to national law, the access price has to be based on gross revenue, however, in the dispute resolved with a binding decision the network operator did not provide retail services. Finally, it was possible to take some income of this network operator at the wholesale level into account (see also section 4 of Annex 1).

In Italy, the challenge was in one case that the access seeker, a communications service provider, requested access to existing physical infrastructure of a multi-utility in the energy sector (gas, electricity) in an historical urban area. It was necessary to select the most appropriate costing methodology for this specific situation. In order to ensure that the maximum price for dark fibre access and duct access set by the NRA is fair and reasonable, as demanded by the BCRD (Art. 3.5), the same costing methodology was used as in the last access market analysis (decision n. 623/15/CONS) i.e. a bottom-up LRIC costing model. Similarly, in another dispute a communications service provider reported a violation of the access obligation to the infrastructures owned by an electricity distribution company. In this case, the general issue was to ensure fair and reasonable access to the existing infrastructure in terms of technical and economic conditions of the Reference Offer.

In Portugal, the national law (DL 123/2009) did not foresaw power for the NRA to impose a specific cost methodology and therefore, if the NRA found a situation of excessive pricing, it was not possible to impose a cost oriented price, but it was possible to oblige the owner of the infrastructure to adjust the price to comply with the cost orientation principle. The planned solution was to foresee in the national law that the NRA shall specify ex-ante a methodology to determine the price of access to existing physical infrastructure. The amended national law now provides the NRA with the power to specify the price methodology, however, with some restriction.[21]

Refusal of access to existing physical infrastructure (Art. 3)

In Italy, the challenge with regard refusal of access to existing physical infrastructure (Art. 3) was faced in the first dispute above mentioned in which the NRA also had to set the price for access to existing physical infrastructure. At some locations the NRA also had to decide whether or not the existing physical infrastructure has sufficient space to host the elements of the high-speed electronic communications network of the access seeker. The solution was to conduct a thorough analysis.

In Poland, the challenge was to determine whether the existing physical infrastructure to which access was requested is technically suitable and also, as in Italy, has sufficient space to host the elements of the high-speed electronic communications network of the access seeker. Solutions are still in development.

Setting the price for coordination of civil works (Art. 5)

In Germany, the challenge was to set the price in case of coordination of civil works in consideration of cost sharing. In both disputes resolved, the solution was that the parties had to participate only on additional costs beyond costs regarding the civil works. This was done, because the costs of the civil works were already covered by the fees, customers have paid for the house connection to the municipality (requestor) (water, gas, electricity and even broadband access).

Relation between BCRD and national law

In Sweden, in the four disputes resolved so far with a binding decision, the most difficult challenge was the relation between the BCRD and national law. In one dispute, it was the relation between the rules regarding access to existing physical infrastructure of the BCRD (Art. 3.2) and the duct obligation of the incumbent in the SMP decision on market 3a and in the other dispute, the relation between the law which implemented the BCRD in Sweden and the constitutional law.[22] The solution was to conduct a thorough analysis from a legal point of view (see section 5 in Annex 1).

[21] According to DL123 (changed by Decree-Law 92/2017 of 31st July 2017) the price methodology to be specified by the NRA does not apply to the municipalities, since they will determine their own methodologies.

[22] In Sweden, the BCRD is implemented through “the Act (2016:534) on measures for deployment of broadband networks” (Deployment Act).

3.2 Analysis of the implementation of the SIP by the NRAs

This section analyses the implementation of the SIP of the NRAs in seven EU countries (AT, DE, FI, LT, PL, PT, SE). It begins with an analysis which tasks of the SIP defined in the BCRD were appointed to the NRAs, then examines the implementation of each of these tasks by the NRAs and, finally, considers the most difficult challenges the NRAs were faced with as SIP. More detailed information on the implementation of the SIP is provided for six countries (AT, DE, LT, PL, PT, SE) in Annex 2.

3.2.1 Tasks of the SIP

The BCRD defines tasks of the SIP with regard to the following topics:

- transparency concerning physical infrastructure (Art. 4);
- transparency concerning planned civil works (Art. 6); and
- permit-granting procedure (Art. 7).

In all countries considered, all of these tasks were appointed to the NRA with the following exceptions. The tasks with regard the topic “transparency concerning physical infrastructure” (Art. 4) were only partly appointed to the NRAs in Germany[23] and the tasks with regard the topic “permit-granting procedure” (Art. 7) were not appointed to the NRA in Lithuania.[24] Table 11 to Table 14 in Annex 3 provide more information on that.

3.2.2 Transparency concerning physical infrastructure (Art. 4)

This section examines

- the information available via the SIP and how it is presented to the communications network operators which request this information from the SIP;
- which organisations have to provide information to the SIP; and
- whether the SIP is already in operation.

Information available via the SIP and its presentation

According to the BCRD (Art. 4.1), the SIP has to provide the following minimum information concerning the existing physical infrastructure:

- location and route;
- type and current use of the infrastructure; and
- a contact point.

However, the BCRD foresees (Art. 1.3) that EU countries have the possibility to maintain or introduce measures in conformity with EU law which go beyond the minimum requirements

[23] In Germany the reason is that the legislator did not foresee the rule that public sector bodies have to make available information to the SIP acc. Art. 4.2.

[24] In none of the countries considered, communications network operators have the right to submit, by electronic means via the SIP, applications for permits required for civil works (Art. 7.2) and therefore this task has not to be fulfilled by the SIP. In Portugal, the SIP does not process the procedures related to the permit-granting procedure for civil engineering although it gathers information on these.

established by the BCRD. In one (FI) of the seven countries considered, this is actually the case. In Finland, the SIP provides also information about underground active network infrastructure. In the other six countries, the minimum information is available via the SIP, however, in one of them (PT), the SIP provides in addition to the minimum information also information regarding occupation of infrastructures if this information is voluntarily provided by the infrastructure owner.

The BCRD (Art. 4.7) foresees exemptions from the obligation to provide the minimum information e.g. in case of critical national infrastructure. In six (AT, DE, FI, LT, PT[25], SE) of the seven countries considered, the SIP provides also information of critical national infrastructure, in the other (PL), when the critical infrastructure will be specified in the national regulation, the SIP will not provide such information.[26] In two countries (AT, PT[27]), the NRA decides on a case-by-case basis whether information of critical infrastructure is made available to the network operator which requested this information. In one country (DE), information on certain (but not all) critical infrastructure is made available. In the three other countries (FI, LT, SE), information of critical infrastructure is only available via the SIP if this information is provided voluntarily to the SIP.[28] Table 49 and Table 50 in Annex 3 and sections 1, 2 and 5 of Annex 2 provide more information on which information of critical national infrastructure is available via the SIP.

The information available via the SIP is presented to the network operators which request access to information of the SIP as follows. In all seven countries, the SIP provide a graphic presentation of the data, the possibility to choose between several scales (except in Finland), to export data (except in Lithuania) and also to print out the data (except in Finland and Poland). Network operators have different possibilities to select the infrastructure in the area in which they request access to information. In two countries (AT, PT), they can select the infrastructure of a single operator from a list of all operators which have infrastructure in the required area and they can switch between operators. In three countries (DE, PT, SE) they have the possibility to select multiple operators and in two of them (DE, PT) also all operators at once. In one country (LT), these possibilities depend on the information provided to the SIP. Six countries provide also further functionalities as e.g. search, zoom and outline map. Table 51 and Table 52 of Annex 3 provide further information on the presentation of the information available via the SIP.

Organisations which have to make information available via the SIP

The BCRD (Art. 4.2) foresees that EU countries have the possibility to require every public sector body to make the minimum information concerning existing physical infrastructure available via the SIP, if it has such information from network operators in electronic format

[25] In Portugal, the SIP is prepared to gather information on critical national infrastructures but there may be instances where this does not occur.

[26] In Poland, currently, all relevant data can be submitted to the SIP, without specifying whether it is or not critical infrastructure.

[27] In Portugal, before issuing the decision, the NRA shall hear the position of related entities regarding the exemption (e.g. the position of the energy authorities is mandatory).

[28] In Finland, the NRA restricts access to this information in order to ensure that the access to this information does not endanger network security, public or national security, business and business secrets.

and by reason of its tasks. In five (AT, FI[29], LT, PL, PT[30]) of the seven countries considered, public sector bodies have this obligation, in two of them (AT, FI) all public sector bodies. In the two other countries (DE, SE) this is not the case. However, in Sweden, public sector bodies have to make this information available via the SIP or alternatively by other electronic means (e.g. own webpage) and in Germany, public sector bodies have to provide the same information as network operators according to Art. 4.1 of the BCRD, if they own or operate a network listed in Art. 2.1 of the BCRD. Table 47 and Table 48 provide more information on which public sector bodies do have this obligation.

The BCRD does not demand that further organisations have to make the minimum information concerning existing physical infrastructure available via the SIP. However, in five (AT, DE, FI, PL, PT) of the seven countries considered, further organisations have this obligation e.g. network operators as defined in the BCRD (Art. 2.1) which include also operators of other sectors than the electronic communications sector (e.g. gas, electricity, water) (AT, PT) or network operators which own or operate infrastructure that can be used for telecommunication purposes (DE, FI[31]). In one (SE) of the two other countries analysed, also further organisations (all network operators and network owners) have the obligation to make the minimum information available, however, they can choose between via the SIP or by other electronic means (e.g. own webpage). Table 47 and Table 48 provide more information on which further organisations have to make the minimum information concerning existing physical infrastructure available via the SIP.

Operation of the SIP

In all seven countries analysed, the SIP is in operation with regard to transparency concerning physical infrastructure (Art. 4). The approximate number of requests the SIP answered per month with regard to this kind of information is as follows: 220 in Austria, 140 in Germany and 26 in Sweden.[32] In Finland, the SIP is an initial stage and therefore statistics on the number of requests are not yet available. In Poland and Portugal, the number of requests is not monitored. In Poland, the reason is that the SIP offers a search tool and therefore no formal requests are required. In Portugal, the reason is that SIP is implemented on an information sharing basis and not as a “one stop shop” and therefore only the number of accesses to the SIP but not the number of requests is monitored. In Lithuania, requests are not necessary, since information regarding Art. 4 is made public.

3.2.3 Transparency concerning planned civil works (Art. 6)

The BCRD states (Art. 6.1 and 6.3) that network operators of the electronic communications sector and other sectors (e.g. gas, electricity, transport) have to make the following minimum information concerning planned civil works available via the SIP on request:

[29] If the information is not otherwise available.

[30] It is the responsibility of the infrastructure entities (and not the NRA) to assure the accuracy of the information placed in SIP.

[31] Excluding network operators which activities are targeted at a low number of users, are locally restricted and economically de minimis.

[32] In Sweden, the SIP forwards the request to the infrastructure owner and the infrastructure owner answers the request directly to the network operator which sent the request.

- the location and the type of works;
- the network elements involved;
- the estimated date for starting the works and their duration; and
- a contact point.

The network operators have to provide in six (AT, DE, FI, LT, PL, SE) of the seven countries considered this minimum information and in one country (PT) more than this minimum information. In Portugal, network operators also have to provide e.g. information on the characteristics of the intervention, charges and other conditions to be observed and the time limit to join the works to be executed.

In all seven countries analysed, the SIP is in operation with regard to information concerning planned civil works. The approximate monthly number of such requests answered by the SIP is 150 in Sweden and five in Austria.[32] In Finland, Poland and in Portugal the situation is the same as with regard to transparency concerning physical infrastructure (see section 3.2.2). In Germany and in Lithuania, the NRA publishes this information on their websites and therefore no requests are necessary.

3.2.4 Permit-granting procedure (Art. 7)

This section analyses the implementation of the SIP with regard the topic “Permit-granting procedures” (Art. 7) of six of the seven countries considered in section 3. Lithuania is not included since in this country the tasks of the SIP with regard to the topic “Permit-granting procedures” were not appointed to the NRA.

According to the BCRD (Art. 7.1), EU countries have to ensure that all relevant information concerning the conditions and procedures applicable for granting permits for civil works needed with a view to deploying elements of high-speed electronic communications networks is available via the SIP.

In five (AT, FI, PL, PT, SE) of the six countries studied in this section, the SIP is in operation and provides this information. In the other (DE), the NRA will publish this information on its website but did not yet receive the pertinent information which needs to be made available.

In four countries (AT, FI, PL, SE) the information regarding permit-granting procedures is publicly available on the website of the NRA and therefore no requests are necessary. In Portugal, the information regarding permit-granting procedures is available via the SIP but the number of requests to that information is not monitored.[33]

EU countries can also foresee (BCRD Art. 7.2) that electronic communications network operators have the possibility to submit (by electronic means) applications for permits for such civil works via the SIP. In none of the six countries considered in this section, this is the case.

[33] The reason is that the SIP is implemented on an information sharing basis and not as a “*one stop shop*” (with requests and answers), therefore the number of requests to a specific information is not monitored.

3.2.5 Challenges the NRAs were faced with as SIP

Table 10 provides an overview of the most difficult challenges NRAs were faced with in fulfilling the tasks of the SIP. In four countries (DE, FI, LT, PT), the topic of the most difficult challenge is related with the "information which has to be provided to the SIP". In Finland and in Portugal[34], the challenge is to incentivise the organisations which have to provide information concerning existing physical infrastructure (Art. 4) to the SIP to meet this obligation. In Finland, measures taken by the NRA in order to achieve this are founding a network for information sharing and gathering feedback, contacting stakeholder organisations representing network owners of different sectors (e.g. energy, water, municipalities) to spread information and using possibilities to give presentations in industry seminars as well as hosting stakeholder events. In Portugal, the measures taken by the NRA are promoting several actions and training across the country within organisations which have to provide information to the SIP and also by sending official letters informing them about their legal obligations regarding the SIP.

Table 10: The most difficult challenges NRAs were faced with as SIP

Topic	Number of countries	Country
Information which has to be provided to the SIP	4	DE, FI, LT, PT
Increase the use of the SIP	1	SE
Critical infrastructure	1	AT

Source: BEREC

In Lithuania, the challenge is that the organisations which have to provide information concerning existing physical infrastructure (Art. 4) to the SIP manage this information in different ways (different formats, software, etc.). The solution to resolve this issue is still in development.

In Germany, the challenge was the collection of data from over 1,200 entities. The data must be kept up-to-date, requiring a lot of effort. It must be determined if the entity is a network operator at all, who exactly is holding the necessary data, in which quality the data is delivered etc. From its experience with this process the NRA has taken away several lessons – first and foremost clear communication with the market and administrative proceedings that are as uniform as possible.

In Sweden, the most difficult challenge was to increase the use of the SIP. The NRA is continuously making information efforts related to the SIP and also related to the law which implemented the BCRD in Sweden. The NRA has also started to analyse the extent to which municipalities publish information according to this law.[22]

In Austria, the challenge was to find the appropriate balance between reducing costs of high-speed networks and the protection of critical infrastructure. The BCRD neither defines the term "critical infrastructure" nor provides examples of cases which are accepted for refusal of access to the information. The solution developed by the NRA is to decide for each request for information of critical infrastructure individually whether or not access is granted.

[34] Nevertheless, with the publication of Decree-Law 92/2017 of 31st July, the obligation of the organisations to provide infrastructure information to the SIP was reinforced.

In Poland, the NRA was not faced with major challenges so far, however, some challenges were the strict deadline to launch SIP and, similar to Finland and Portugal, to incentivise the infrastructure owners to provide data as well as the topic which information is relevant to national security.

Table 57 and Table 58 as well as Annex 2 provide further information on the challenges the NRA were faced with in fulfilling the tasks of the SIP.

4 Conclusions

In conclusion, the appointment of the tasks of the BCRD in the 28 EU countries can be summarised as follows. The tasks of the DSB were appointed in 22 countries to the NRA, in one to the NRA and another organisation, in two countries to other organisations and in three countries this decision has not yet been taken since the BCRD is not yet transposed into national law regarding the DSB. In 22 of the 23 countries, in which the tasks of the DSB were assigned entirely (22) or partly (1) to the NRA, the DSB of the NRA is in operation. The tasks of the SIP were appointed in ten countries to the NRA, in three countries to the NRA and other organisations, in 10 countries to other organisations, in one country the SIP was not established and in four countries this decision has not yet been taken since the BCRD is not yet transposed into national law regarding the SIP. In 12 of the 13 countries in which the tasks of the SIP were entirely (10) or partly (3) appointed to the NRA, the SIP established by the NRA is in operation.

The analysis of the implementation of the DSB in the 16 countries considered can be summarised as follows:

- Tasks of the DSB: In 14 countries all and in two countries some of the tasks of the DSB defined in the BCRD were appointed to the NRA.
- Operation of the DSB: In all 16 countries the NRA commenced operation as DSB.
- DSB before BCRD: In 15 countries, the NRA already had tasks to fulfil defined in the BCRD for the DSB or similar to them before transposition of the BCRD into national law.
- Rules the DSB could or has to follow: In nine countries legal authorities issued rules which NRAs have to or could follow when they carry out the tasks of the DSB defined in the BCRD appointed to them.
- Organisations which have to provide access to their existing physical infrastructure and/or co-ordinate their civil works: Also other organisations (e.g. public administrations) than network operators have the obligation to provide access to existing physical infrastructure in 11 countries and to coordinate civil works in nine countries.
- Total number of disputes resolved: In total, 106 disputes were resolved so far, 96% with a binding decision and 4% with mediation. 91 of these 106 disputes were resolved in only one country (PL), and the other 15 disputes in eight other countries.
- Topics of the disputes resolved: 88% of the disputes resolved with a binding decision relate to the topic “access to in-building physical infrastructure” (Art. 9) and all of these disputes were resolved only in one country (PL), 8% to “access to existing physical infrastructure” (Art. 3), 4% to the topic “coordination of civil works” (Art. 5)

and 1% to the topic “transparency concerning physical infrastructure” (Art. 4) and to the topic “transparency concerning planned civil works” (Art. 6).

- Challenges: In the seven countries in which the NRA already resolved disputes with a binding decision, the topics of the most difficult challenge the NRAs were faced with were “setting the price for access to existing physical infrastructure” (Art. 3) in four countries, “refusal of access to existing physical infrastructure” (Art. 3) in two countries, “setting the price for coordination of civil works” (Art. 5) in one country and “relation between BCRD and national law” also in one country.

The analysis of the implementation of the SIP in the seven countries considered can be summarised as follows:

- Tasks of the SIP: In five countries all and in two countries some of the tasks of the SIP defined in the BCRD were appointed to the NRA.
- Operation of the SIP: In all seven countries the SIP is in operation with regard to transparency concerning physical infrastructure (Art. 4) and information concerning planned civil works (Art. 6) and in five countries with regard to information concerning permit-granting procedures (Art. 7).
- Information available via the SIP: More than the minimum information defined in the BCRD is available via the SIP in one country concerning existing physical infrastructure (Art. 4) and in one (other) country concerning planned civil works (Art. 6). In six countries, the SIP provides also information of critical national infrastructure, in three of them only if provided voluntarily to the SIP.
- Organisations which have to make information on physical infrastructure available via the SIP: In five countries, public sector bodies have the obligation to provide data to the SIP which is foreseen as an option in the BCRD (Art. 4.2). Also in five countries, further organisations have to make the minimum information concerning existing physical infrastructure (Art. 4.1) available via the SIP although this is not demanded by the BCRD.
- Submission of applications for permits for civil works via the SIP: The BCRD foresees this option (Art. 7.2), however, in none of the countries considered it is used.
- Challenges: The topics of the most difficult challenge the NRAs were faced with were “information which has to be provided to the SIP” in four countries and “increase the use of the SIP” and “critical infrastructure” each in only one country.

Altogether, it seems that the electronic communications network operators either reach in nearly all requests an agreement with the infrastructure provider without the need to involve the DSB or they do not have interest in their rights laid down in the BCRD to get access to existing physical infrastructure, coordinate civil works and get access to in-building physical infrastructure (or do not know that they have these rights). The BCRD is still in an initial phase and therefore its use by electronic communications network operators may further increase in the future.

5 Abbreviations for countries

Abbreviation	Country
AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland

Abbreviation	Country
FR	France
GR	Greece
HU	Hungary
HR	Croatia
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands

Abbreviation	Country
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
UK	United Kingdom

6 Abbreviations for NRAs

Abbreviation	Country
ACM	Netherlands
AGCOM	Italy
AKOS	Slovenia
ANACOM	Portugal
ANCOM	Romania
ARCEP	France
BIPT	Belgium
BNetzA	Germany
CNMC	Spain
COMREG	Ireland

Abbreviation	Country
CRC	Bulgaria
CTU	Csech Republic
DBA	Denmark
EETT	Greece
ETRA	Estonia
FICORA	Finland
HAKOM	Croatia
ILR	Luxembourg
MCA	Malta
NMHH	Hungary

Abbreviation	Country
OCECPR	Cyprus
OFCOM	United Kingdom
PTS	Sweden
RRT	Lithuania
RTR	Austria
RU	Slovakia
SPRK	Latvia
UKE	Poland

7 Further abbreviations

BCRD	Broadband Cost Reduction Directive
CIS	Centralized Information System
DL	Decree-Law
DSB	Dispute Settlement Body
EU	European Union
FTP	File Transfer Protocol
GIS	Geographic Information System
LRIC	Long Run Incremental Costs
MINETAD	Ministry of Energy, Tourism and Digital Agenda
NRA	National Regulatory Authority

SIIA	Information System of Suitable Infrastructures
SIP	Single Information Point
SMP	Significant Market Power

Annex 1: Examples of the implementation of the DSB

This annex describes the implementation of the DSB by the NRA of the following five countries: Hungary, Poland, Portugal, Spain and Sweden.

1. Hungary

Since 2003, dispute settlement procedures could be initiated at the NRA (NMHH) for example if an electronic communications service provider's right, which is based on law that regulates electronic communications, infringed by another electronic communications service provider. Therefore, the NRA already settled disputes prior to the implementation of the BCRD. The implementation of the BRCD expanded the range of dispute settlement procedures.

Since the implementation of the BCRD, the authority conducted two dispute settlement procedures. Both were initiated upon BCRD Art. 3 (access to existing physical infrastructure).

In order to fix an electronic communication appliance, the electronic communications service provider requested from the NMHH to establish rights of use on two antenna towers and determine the basic conditions of use of the towers, which were in the possession of another electronic communications service provider in Budapest. Despite the legal provisions, the owner of the infrastructure had not responded to the offer before the initiation of the dispute settlement procedure, thus the council had to collect all the relevant statements during the procedure. In both cases settlement agreements were lodged in, therefore the council closed the procedures with its resolution, which confirmed the settlement agreements.

2. Poland

a) Introduction

In 2016, the Act of 7 May 2010 on supporting the development of telecommunications services and networks and the Act of 16 July 2004 on The Telecommunication Law were amended in compliance with the BCRD. Since then, the pre-existing rules according to which the Polish National Regulatory Authority (UKE) settles disputes regarding access to existing physical infrastructure owned by network operators and to in-building physical infrastructure have been changed to fully comply with the BCRD.

b) Setting the price

According to the aforementioned Act of 7 May 2010 access to buildings, in-building infrastructure and telecommunications connections owned by other entities than telecom operators is free of charge. The only financial obligation is to reimburse costs incurred by the owner of the real estate. In few disputes regarding access to buildings and in-building infrastructure owned by other telecom operators that were settled by UKE in previous years (before implementation of the BCRD) setting prices was the most challenging task. UKE defined prices using benchmarking of contractual terms used in local markets.

In one resolved dispute regarding access to existing physical infrastructure owned by a network operator of the electricity sector UKE set prices on the exact levels as they were set in other contracts between that network operator and a telecom operator which requested access. Prices were not a matter of dispute in this case. It should be noted that – due to

limited experience of UKE so far - providing conclusive information regarding such disputes requires at least finishing the ongoing proceedings.

c) Setting of terms and conditions excluding price

According to the aforementioned Act of 7 May 2010, UKE can grant access to buildings, in-building infrastructure and telecommunications connections only after previous negotiations between a telecom operator and the owner, perpetual lessee or administrator of the real estate. Conditions set in a decision must be proportional and non-discriminatory. UKE is imposing similar sets of conditions in each case unless one of the parties presents strong arguments advocating alternative solutions. This set of conditions has been gradually developed under the influence of market practices and UKE's experiences in settling disputes since the Act of 7 May 2010 came into force.

In one resolved dispute regarding access to existing physical infrastructure owned by network operator of the electricity sector the key challenge was to determine whether there is a technical suitability of the physical infrastructure (electric poles) for the telecom operator. UKE granted requested access. It should be noted that – due to limited experience of UKE so far - providing conclusive information regarding such disputes requires at least finishing the ongoing proceedings.

d) Refusal of access and refusal of coordination of civil works

According to the above mentioned Act of 7 May 2010 access to buildings and in-building infrastructure for the purpose of providing new in-house wiring can be granted only if there is no existing network that could be used by a telecom operator. It is assumed that a network is available and suitable for a telecom operator, if it allows the provision of services in technology of the operator's choice and if its owner is willing to share it under fair conditions. During four conducted proceedings UKE determined that buildings are indeed equipped with (available and suitable) in-house wirings that should not be duplicated without a risk of excessively limiting the building owners' rights. In those cases UKE denied requested access.

Some disputes regarding access to buildings and in-building infrastructure were not settled because reasons for issuing a decision on access ceased to exist during the proceedings. It is quite common that the sole act of bringing a dispute before UKE speeds up negotiations between telecom operators and buildings and in-building infrastructure owners. When an agreement is reached UKE is legally bound to state discontinuance of such proceeding. Similar decisions are made, if during a proceeding it is found that a request which started the proceeding does not meet certain formal requirements which cannot be fixed by the applicant.

The task of the DSB with regard coordination of civil works (Art. 5) was entrusted to local government authorities and not to UKE.

e) Other topics (e.g. exemptions)

In the disputes resolved so far, no other topics were relevant.

3. Portugal

a) Introduction

The NRA (ANACOM) has acted as a DSB in the context of Decree-Law No. 123/2009 of 21 May, as amended and republished by Decree-Law No. 258/2009, of 25 September, by Law No. 47/2013, of 10 July (DL123), by Law No. 82-B/2014 of 31st December and by Decree-Law No. 92/2017 of 31st July (DL123/2009) [35], since it entered in force, i.e. 21 May 2009.

According to Article 19 of DL123/2009 (prior to amendments determined by the DL92/2017), at the request of electronic communications companies, ANACOM shall assess and decide, in a particular case, whether the access price requested is appropriate in the light of a cost orientation rule.

In addition, when, in a specific situation, an entity (of those listed in Article 2 of DL123/2009) refuses the access to its infrastructure by an electronic communications company, any of the involved parties may apply to ANACOM for a binding decision on the matter.

b) Setting the price

ANACOM solved so far (following Article 19 of DL123/2009 prior to amendments determined by the DL92/2017) one dispute regarding the conditions of access to infrastructures.[36] By application presented on 28 March 2013, DSTelecom Norte, S.A. (hereinafter DST) requested, under DL123/2009, the intervention of ANACOM in the scope of its dispute with a municipalities association (Associação de Municípios da Terra Quente Transmontana – hereinafter AMTQT).

On 17 May 2013, ANACOM notified AMTQT of the application it had received (from DST) and, in order to evaluate whether the remuneration demanded by AMTQT for the use of its infrastructures was appropriate (according to DL123/2009 Article 13 paragraph 4 and Article 19 paragraphs 1 and 4)[37], requested AMTQT to submit the following information:

- All information on suitable infrastructures (pipelines, masts, etc.) it uses or manages, identifying in particular:
  - infrastructures suitable for the accommodation of electronic communications networks that are held or managed by AMTQT, according to point a) of Article 17, bearing in mind the Article 96[38], both of DL123/2009;
  - the identification of held or managed infrastructures which are part of public or private domain of local authorities, and why was their management entrusted to AMTQT;

[35] The Decree-Law No 92/2017 of 31st July (DL92/2017) completed the transposition of the BCRD into the national legislation and is available at https://dre.pt/application/file/a/107784638.

[36] See https://www.anacom.pt/streaming/Decision4sep2015DSTelecom.pdf?contentId=1376182&field=ATTACHED_FILE

[37] These paragraphs of DL123 were subsequently changed with the publication of Decree-Law no. 92/2017 of 31st July.

[38] Article 96 was revoked with the publication of Decree-Law no. 92/2017 of 31st July.

- procedures and conditions for access to and use of infrastructures that are held or managed by the Association, according to point c) of Article 17, bearing in mind point b) of paragraph 2 of Article 96[39] of DL 123/2009;
- Which electronic communication networks are installed in infrastructures (e.g. ducts) that are held or managed by the Association, as well as terms and conditions applied to those networks;
- List of infrastructures registered so far.

- Detail of costs involved, bearing in mind paragraph 1 of Article 19 of DL123/2009[40], both as regards the set of infrastructure associated to DST's request, as well as other accesses granted, as well as the reasoning for prices proposed for access.

According to available data, ANACOM deemed that the total cost of construction of pipelines for the purpose of the determination of the cost of access must include the value of "Transfers from AMTQT and Municipal Councils", plus paid interest and capital amortisation up to the date of signature of the contract, as well as the amount of capital outstanding on that date, in the proportion of the area effectively occupied (a single-pipe).

The view expressed above was based on the fact that an initial payment was requested, and, as such, the amount of capital outstanding may be reimbursed in advance.

In addition, it was deemed that, although AMTQT did not include costs relating to infrastructure operation and maintenance, an analysis of cost-orientation of prices should take this component under consideration. Without having better information, ANACOM deemed to be reasonable, according to the method adopted in the assessment of prices for access to MEO's pipelines, an annual cost of a certain percentage of the value of investment in the construction of infrastructures.

The value that results from the sum of components detailed above and values duly updated at the date of the contract is compatible, in a perspective of cost-orientation of prices, with the value that AMTQT requests from DST for access to its pipelines, in the conditions for payment included in the signed contract, and, as such, there is no evidence that the price proposed does not comply with that principle.

Thus, ANACOM concluded that there were no signs that the price for access to pipelines (per single-pipe) is not cost-oriented or is discriminatory and resolved the dispute with a binding decision on 4 September 2015.

c) Setting of terms and conditions excluding price

So far, there have been no dispute resolutions regarding terms and conditions excluding price.

d) Refusal of access and refusal of coordination of civil works

So far, there have been no dispute resolutions regarding refusal of access and refusal of coordination of civil works.

[39] Article 96 was revoked with the publication of Decree-Law no. 92/2017 of 31st July.
[40] Prior to amendments determined by Decree-Law No. 92/2017 of 31st July.

e) Other topics (e.g. exemptions)

So far, there have been no dispute resolutions regarding other aspects (e.g. critical national infrastructure).

4. Spain

a) Introduction

The only dispute that the NRA (CNMC) has settled is dated 24 January 2017. Its matter was access prices to certain ducts, the access provider being the Municipality of Torelló[41] (Catalunya) and the seeker being Guifi.net, a nonprofit operator whose business model is based on collaborative economy. The main decision was to modify the costs model originally proposed by the municipality.

b) Setting the price

The cost attribution proposed by the municipality had to be corrected in relation to (i) average costs of the ducts, (ii) depreciation periods and (iii) excavation of one trench.

A very particular issue arose from this conflict regarding the nature of the operator. One of the criteria foreseen by Spanish law[42] in order to set the price for the use of public municipal ways to a supplier of a general interest service is a percentage of the gross revenue of the supplier proceeding from the municipality. In the case of Guifi.net, this became a challenge, given that according to its business model, it does not provide services to end-users but rather manages a common network to be exploited by third agents. This means there would be no retail revenue to consider. However, CNMC found some income at the wholesale level that could be taken into consideration.

c) Setting of terms and conditions excluding price

CNMC did not resolve so far any dispute with regard setting of terms and conditions excluding price.

d) Refusal of access and refusal of coordination of civil works

CNMC did not resolve so far any dispute with regard refusal of access and refusal of coordination of civil works.

e) Other topics (e.g. exemptions)

In the dispute resolved between municipality of Torelló (Catalunya) and Guifi.net (see sub-sections a) and b) above), the following two further “topics” arose.

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[41] See Table 2. The RD 330/2016 goes beyond the concept of “network provider” as defined by article 2.1) of the BCRD and on to one of “obliged subjects”. The concept of “obliged subjects” in the RD 33/2016 includes network providers (in the sense of the BCRD), as well as “public administrations with entitlement to physical infrastructure susceptible to host electronic communications networks” (as might be the municipalities; see article 3.5.d)).

[42] Artículo 24.1.c) del Texto Refundido de la Ley de Haciendas Locales (TRLHL), aprobado por Real Decreto Legislativo 2/2004, de 5 de marzo – *Consolidated Text of the Law of Local Finance, approved by Royal Legislative Decree 2/2004, of 5 March*.

Type of agreement with a local government.

The operator initially refused to sign a collaboration agreement with the city council in order to formalize their relationship. CNMC ruled that the telecom regulation does not oppose to this type of document (between a municipality and an electronic communications operator) to govern the access to infrastructure, as long as it does not exclude access to other operators and the guiding principles of access are preserved (in particular equality and non-discrimination).

Local tax revenue mechanism.

The municipality faced difficulty on choosing the right type of fiscal / financial mechanism to obtain economic compensation for the occupation of its public domain. Given that CNMC had no legal authority to rule on the matter, it suggested for the municipality to take into account the payments required to the same operator for tax concepts intimately linked with the access to physical infrastructure susceptible to host electronic communications networks.

5. Sweden

a) Introduction

In Sweden, the BCRD is implemented through "the Act (2016:534) on measures for deployment of broadband networks" (Deployment Act) which did entry into force 1 July 2016 and the NRA (PTS) was by then ready to receive requests for dispute settlements.

b) Setting the price

PTS did not resolve any dispute with regard setting the price so far.

c) Setting of terms and conditions excluding price

PTS did not resolve any dispute with regard setting terms and conditions so far.

d) Refusal of access and refusal of coordination of civil works

PTS resolved the following four disputes so far.

Case 1) Local housing association / TeliaSonera Skanova Access AB[43]

The case is about access to the incumbent TeliaSonera's existing physical infrastructure (Article 3 BCRD) originally for the copper network. A local housing association (of 34 single-family houses) outside Stockholm requested access to the incumbent's physical infrastructure. TeliaSonera refused to give access and referred to the duct obligation of their SMP-decision on Market 3a Wholesale local access provided at a fixed location (where TeliaSonera cannot supply reasonable access to fibre, instead obligation to supply reasonable access to duct with non-discriminatory cost-orientated LRIC-pricing).

TeliaSonera also offered to build a high-speed fiber network for the housing association. PTS resolved that TeliaSonera on fair and reasonable grounds should give access to the physical

[43] TeliaSonera Skanova Access AB has since the decision changed its name to Skanova AB.

infrastructure. The decision is appealed to court by TeliaSonera and the company did ask for suspension but the second instance court has denied suspension of PTS decision.

Challenges and experiences: In this dispute a challenge was to decide the relation between Art. 3.2 BCRD and the duct obligation in the incumbents SMP decision on market 3a. A further challenge was to decide if an offer to build a high-speed fiber network is an alternative mean according to Art. 3.3.f BCRD.

The solution used to resolve these challenges is as follows. Concerning access to existing physical infrastructure the Deployment Act is not applicable if there is a conflict with a corresponding obligation to access in a SMP decision (Chapter 2 section 1).

According to TeliaSonera´s SMP decision on Market 3a there is a duct obligation (obligation 3). In summary, the duct obligation stipulates that if TeliaSonera cannot supply reasonable access to fiber, TeliaSonera has the obligation to meet all reasonable requests from another operator to lay fiber in TeliaSonera's ducts.

Therefore, the question was whether the local housing association is an operator or not. There is no definition of network operator in the SMP-decision. But due to the definition in The Swedish Electronic Communications Act (2003:389) Chapter 1 section 7 an operator is "anyone in possession or otherwise disposing of a public communications network or associated installation."

PTS has decided that the local housing association is not an operator and has not yet built an electronic communications network. Therefore, the Deployment Act is applicable.

The principal rule in the Deployment Act is that access shall be provided (Chapter 2 section 1). But there are also criteria for refusal of access for example viability of alternative means or other similar circumstances (Chapter 2 section 1 p. 7 and 8). Therefore, the question was whether TeliaSonera´s offer to build fiber in the ducts can constitute to be a viability of alternative means or other similar circumstances.

According to comments in Swedish preparatory works, the Government bill to the Deployment Act (prop. 2015/16:73 page 38), there is a limited opportunity to refuse access. But there can be circumstances in the individual case. PTS states that an obligation for TeliaSonera to meet a request for access to the company's ducts is not going to entail an inefficient duplication of network elements since there only is copper in the ducts. TeliaSonera has not presented any concrete plans to build fiber in the mentioned ducts and there are no circumstances leading to the conclusion that the local housing association is free-riding on TeliaSonera´s expense. PTS means that there is no reason to equate TeliaSonera´s offer to build a fiber network with an offer to access an existing fiber network. TeliaSonera´s offer to build a fiber network is for that reason not equivalent with an offer to access an existing fiber network.

Case 2) Regional broadband developer / Municipality-owned energy company

A regional broadband developer in the southwest of Sweden requested coordination of civil works (Article 5) with a municipality-owned energy company and information about planned civil works (Article 6). The request for coordination was denied by PTS because not detailed enough, but confirmed obligation for municipality-owned energy company to supply information. PTS decided that municipality-owned company must provide information

according to the Deployment Act, in parallel with obligations under public access to information and secrecy act (constitutional rules). The decision is appealed to court by the municipality-owned energy company.

Challenges and experiences: The challenges relate to transparency concerning planned civil works (Art. 6). About the request for information PTS decided that municipally-owned company must provide information according to the Deployment Act, in parallel with obligations under public access to information and secrecy act (constitutional rules). The relation between the Deployment Act and the constitutional law was the primary challenge.

The solution used to resolve this challenge is as follows. The broadband developer requested information from the energy company about planned civil works in the municipality. The energy company applied the Swedish Freedom of Press Act (constitutional law) and the Swedish Public Access to Information and Secrecy Act and decided not to give the broadband developer access to some of the requested documents. In the following dispute settlement case the energy company meant that PTS not has the competence to retry the company´s decision regarding access of public documents according to the Swedish Freedom of Press Act and the Swedish Public Access to Information and Secrecy Act. PTS emphasizes in the dispute settlement decision that the energy company is obliged to provide information according to the Deployment Act. But according to this law (Chapter 4 section 8) the minimum information can be limited and The Swedish Public Access to Information and Secrecy Act shall be applied in the public sector instead of this paragraph.

Case 3) Local housing association / Skanova AB

The case concerns access to the Swedish incumbent Skanova´s (subsidiary of Telia Company AB) existing physical infrastructure (Article 3) and also transparency regarding physical infrastructure (Article 4). A local housing association in the south east of Sweden requested access to Skanova´s physical infrastructure. To this extent the case is similar with case no 1 above. The housing association also requested information regarding the physical infrastructure and requested to make an on-site survey. Skanova refused access to the requested information on the ground that it was available through the SIP (Ledningkollen). Skanova also refused the on-site survey on the ground that it was not reasonable. PTS resolved that Skanova, on fair and reasonable grounds, should give access to the physical infrastructure. The obligation to give access should also include to provide the needed relevant information. Skanova should also, under proportionate, non-discriminatory and transparent terms and conditions, grant the request to make an on-site survey. The decision is appealed to court by Skanova.

Challenges and experiences: Concerning access to Skanova´s physical infrastructure, the challenges were the same as in Case 1) above. Concerning the request for information about the physical infrastructure and the request to make an on-site survey of the infrastructure the challenges were to keep the deadline (two months) and at the same time get enough investigation material from the parties. In these dispute settlement cases a party can often also be both rather small and inexperienced.

Case 4) IP-Only Network AB / Municipality-owned energy company

The network operator IP-Only requested coordination of civil works (Article 5) with a municipality-owned energy company in the north east of Sweden. The energy company is developing a fiber network between towns and villages in the area. The energy company refused the request and meant that the request for coordination was made too late, did not meet the formal requirements in the Deployment Act and also that the request was not reasonable.

PTS resolved that the municipality-owned energy company should meet any reasonable request from IP-Only to coordinate civil works on transparent and non-discriminatory terms at the construction of ducts in a joint cabel trench with the energy company. The decision is not applicable on sections of the relevant network finished prior to PTS decision.

Challenges and experiences: The challenges relates to what are the formal requirements for a request for coordination of civil works. What can the reasons be to deny coordination and what facts do the energy company have to state for the denial.

e) Other topics (e.g. exemptions)

Case 2) above does also concern a request for information on planned civil works (Article 6).
Case 3) does also concern a request for information on physical infrastructure (Article 4).

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Annex 2: Examples of the implementation of the SIP

This annex describes the implementation of the SIP by the NRA of the following six countries: Austria, Germany, Lithuania, Poland, Portugal and Sweden.

1. Austria

a) Introduction

The BCRD focuses on access to existing physical infrastructure, coordination of civil works and permit-granting procedures.

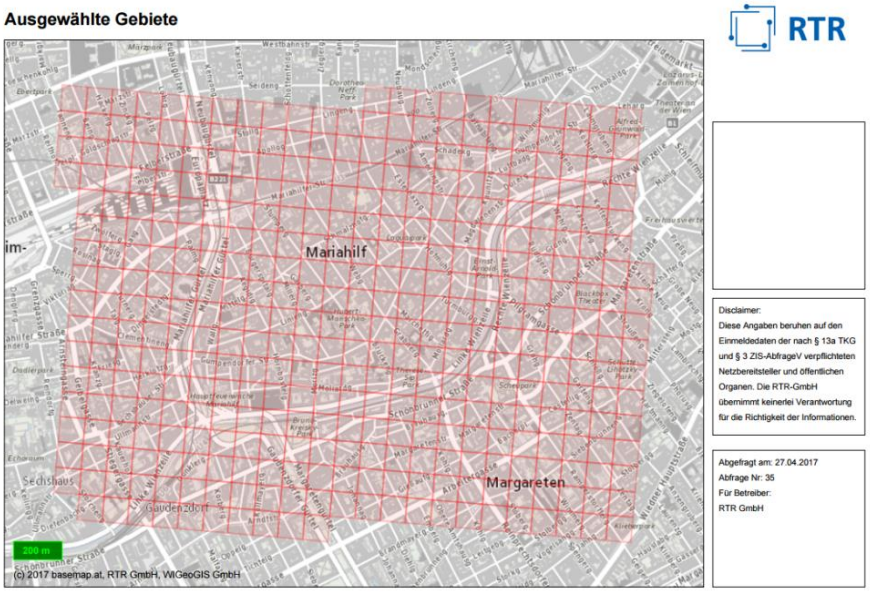
By implementing the SIP in Austria, minimum information on existing physical infrastructure as well as on planned civil works is available to public communications network operators since January 2017.

While Austria does provide information on the relevant permit-granting procedures on the RTR-website including links to the webpages of the authorities, permit requests cannot be submitted via a single contact point. Austria does not plan on implementing that single contact point either, as not all permit-granting procedures have their basis in national law but some are the responsibility of the provinces or municipalities.

b) Information available at the SIP

The SIP provides maps of data that have been uploaded by network operators and public sector bodies. Actual geodata are not made available. The quality of the information only depends on the geodata originally provided and cannot be influenced by RTR.

Figure 3 shows an example of the PDF-plan that can be downloaded at the SIP after an information request has been answered positively. There are no data included as they



Source: BEREC

Figure 3: PDF-plan provided by the SIP

may not be made public, but blue point and line features would depict the infrastructure of one network operator. There would be individual PDF-plans available for each network operator that uploaded data in the area requested and the top right box would include contact information for that operator.

If a public communications network operator wishes to be informed about infrastructure that has been marked critical legal proceedings need to be initiated. If the result of these proceedings says that the infrastructure is no critical in that context an updated PDF-plan will be made available including but not highlighting critical infrastructures.

c) Access to the information of the SIP

The SIP is not for public access and it distinguishes between network operators and public sector bodies that have an obligation to only provide data and those operators that are also allowed to access the information.

All network operators and public sector bodies that are required to upload their data have been contacted via e-mail providing them with a username for their account at the SIP. The SIP is designed as a web application and can be accessed using a browser via the RTR-website. By only entering the username, the user receives an e-mail including an automatically generated password. The same e-mail-address is used for username and password, but both are not sent at the same time. After login, data can be uploaded.

Public communications network operators also have the possibility to access the information collected at the SIP but there are further restriction in order to protect such sensitive data.

- The network operator or public sector body needs to prove that it acts as a public communications network operator by registering for a general authorisation at RTR.
- The network operator must then apply at RTR for accessing information within the SIP.
- The network operator must provide a letter of authorisation for the individuals that are actually going to access the platform.
- Each individual must log in not only providing username and password, but using his or her mobile phone signature or citizen card that allows the system to identify each individual.

After formally having access to the SIP, operators use the web-application to request information on existing physical infrastructures or planned civil works as follows:

1. They have to choose between existing physical infrastructures or planned civil works.
2. They have to fill out the web-form providing information on the project in the course of which they wish to access existing infrastructure or coordinate civil works.
3. If interested, they can check the box that they wish to be informed about critical infrastructure.
4. In a map, they hava to select the area in which they plan to deploy their projects. They have a certain amount of tiles at their disposal that vary in size. Selecting different sizes results in different detail of information, when the map with infrastructures will be provided.
5. They have to submit their information request.

Each information request is individually viewed and answered in order to avoid a strategic collection of data by public communications network operators.

d) Process by which the SIP is filled with information

Network operators and public sector bodies are required to upload geodata of existing physical infrastructures or planned civil works if these are usable for electronic communication and already available in electronic format.

The following list includes all electronic formats that can be uploaded via the SIP:

- ESRI Shape
- KML
- DXF
- GML
- GeoTIFF
- Geodatabase (Access DB, CSV, XLS, GDB)
- ZIP-file without encryption

In order to fulfil their obligation of providing data, they can access the SIP via the website of RTR and login with the user information provided by RTR, as mentioned in section c).above. After login, they can create three different sorts of folders depending on what geodata they have electronically available:

- Geodata on existing physical infrastructure
- Geodata on planned civil works
- Confirmation, that they do not have geodata available

Confirming that no geodata are available in electronic form does not require any sort of document and can be completed within a minute. This step is still very important for RTR as it differentiates between network operators and public sector bodies that do not have access to any relevant data and those that just have not yet fulfilled their obligation to provide data.

Uploading geodata on existing physical infrastructure and on planned civil works basically follows the same process. The network operators and public sector bodies have to proceed as follows:

1. Creation of a new folder defining the kind of information they are going to provide.
2. Selection of electronic format, ZIP-file (if applicable), geographic projection.
3. Selection whether or not these are data of critical infrastructure.
4. Selection the file containing the relevant data.
5. If applicable, definition which columns contain latitude and longitude.
6. Upload.
7. The platform provides them with the possibility to view their data integrated in a map and, if necessary, they can mark individual point and line features as critical.

There are information boxes throughout the upload-process. Further media to support network operators and public sector bodies are available on the website and additionally, RTR helps out via e-mail or phone.

After the upload, all the geodata are collected in a database that security level is state of the art and provides the basis for making this information available to public communications network operators.

e) Other topics (e.g. exemptions)

As mentioned above, the SIP includes a process for handling critical infrastructures. Infrastructures are defined as critical by the network operators themselves. This could include infrastructures that are essential for their business and sharing infrastructures of that category for public communications purposes could jeopardise the security and functionality of that operator's network. These infrastructures do need to be uploaded to the SIP but can be marked as critical. This implies that information about these infrastructures is not shared directly after an information request but proceedings need to be initiated for each information request in order to determine whether or not sharing the infrastructures marked as critical is, in fact, critical.

2. Germany

a) Introduction

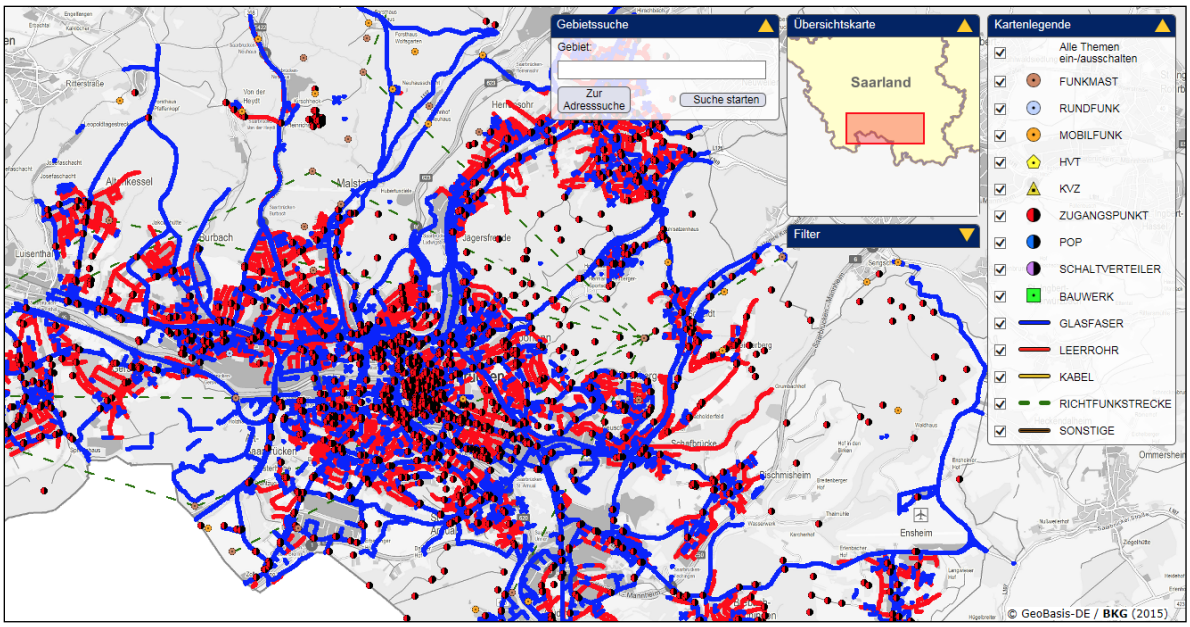
The "Infrastrukturatlas" originally commenced operation in 2009. At that stage it served as a voluntary platform for network operators wanting to share information on their infrastructure. Participation became mandatory in 2012. It is now gradually transitioning from the existing "Infrastrukturatlas" to the full scope of the SIP.

b) Information available at the SIP

The Infrastrukturatlas is a web-based GIS application that contains data on the geographic location and type of infrastructure (e.g. dark fibre, empty or protective conduits, radio links, radio masts, mobile radio, cross connection cabinets, main distribution frames, points of presence, buildings). It also contains contact information.

The data is generalised by BNetzA so that lines are shown with a minimum width of 50m in relation to the real world and points with a diameter of 100m. The scale ranges from 1:250 000 to 1:30 000.

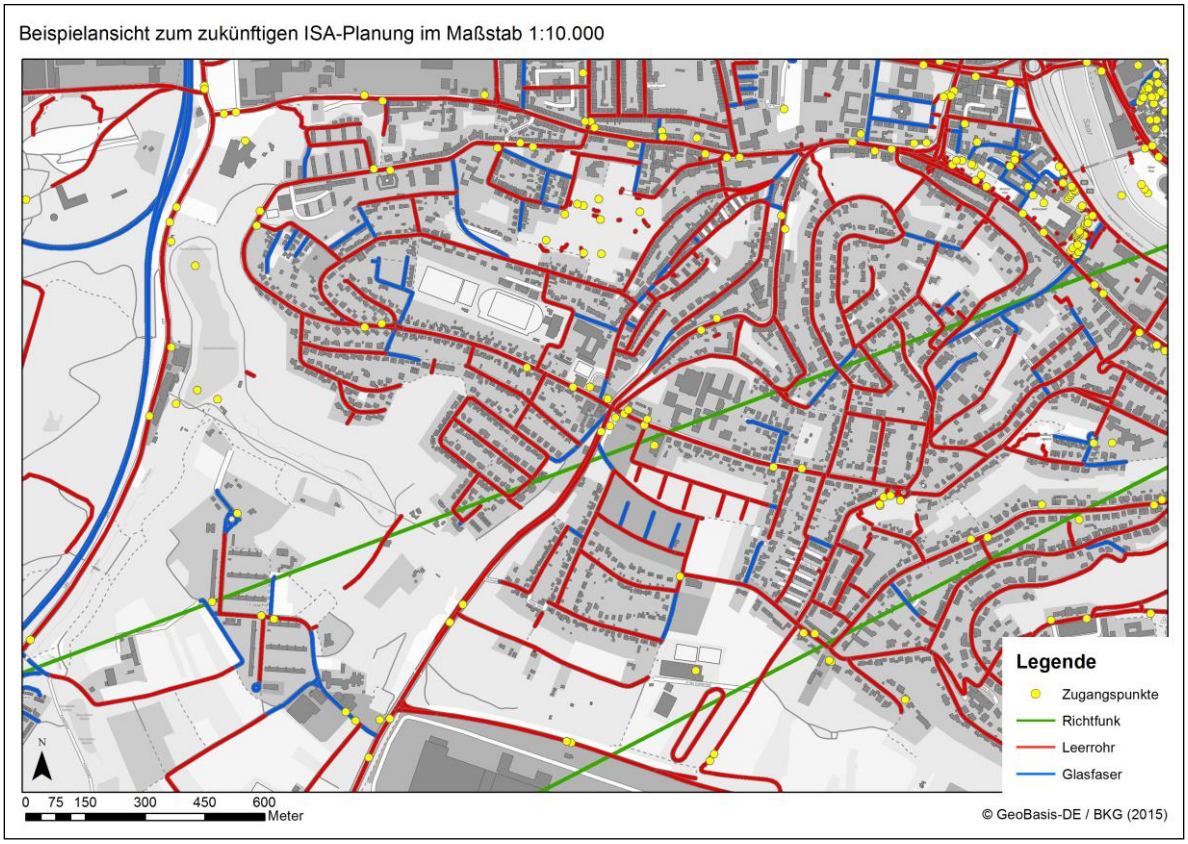
Figure 4 shows a current example of the Web GIS application.



Source: BEREC

Figure 4: Current example of the Web GIS application

BNetzA aims to change these parameters in the near future, to a minimum width of 10m and a minimum diameter of 20m in relation to the real world, and a maximum scale of 1:10 000. Figure 5 shows an example of the Web GIS application with these future parameters.



Source: BEREC

Figure 5: Example of the Web GIS application with future parameters

Apart from the data currently contained in the Infrastrukturatlas there will be an opportunity to make information available via the Web GIS application in order to fulfil transparency requests according to Art. 4.1 of the BCRD. Information made available this way will not be generalised and shown with a maximum scale of 1:1 000.

Additionally, BNetzA publishes information regarding planned civil works on its website.

c) Access to the information of the SIP

Transparency requests may be filed via email or mail. The access to the Web GIS application is then usually granted within five working days. During the process, the applicant has to show that they are working on a specific project for the development of high-speed networks or other networks according to Article 2.1 of the BCRD.

The accessible information is geographically limited in scope according to the project description. This helps to establish a balance between the need for transparency and the right of the infrastructure operators or owners to protect their business secrets, including the location of some critical infrastructures..

d) Process by which the SIP is filled with information

Within the scope of the previous “Infrastrukturatlas” the NRA has the discretion to oblige networks operators via administrative acts to submit their data. However, the NRA strives not to resort to administrative acts and offers contracts under public law to the network operators in question. The majority of data is collected via contract. The material obligations under both contract and administrative act are the same.

In cases of specific transparency requests according to Article 4.4 of the BCRD network operators can make their minimum information available via the SIP but they are not obliged to. They only have to answer the request bilaterally within the two month period set by Article 4.4 of the BCRD.

In the experience of BNetzA, the main challenge for maintaining the SIP is data collection, especially for practical reasons. Data provided by 1,200+ entities must be kept up-to-date, which requires a significant amount effort. It must be determined if the entity is a network operator at all, who exactly is holding the necessary data, in which quality the data is delivered etc. From its experience with this process the German NRA has taken away several lessons – first and foremost clear communication with the market and administrative proceedings that are as uniform as possible.

e) Other topics (e.g. exemptions)

The transposition of the BRCD into German law has introduced a catalogue of specific exemptions for public safety concerns and also to protect business secrets. The exemptions are now far more detailed in the wording of the law; Germany will thus have to re-evaluate its criteria for exemptions. BNetzA also expects that the exemptions will be invoked more often than before. In cases where an exemption is successfully invoked only contact information is displayed for the general area in which the exempt infrastructure is located.

3. Lithuania

a) Introduction

The NRA (RRT) performs functions of the SIP referred to in Art. 4 and 6 of the BCRD. Information mentioned in Art 6 is made public on RRT website.[44]

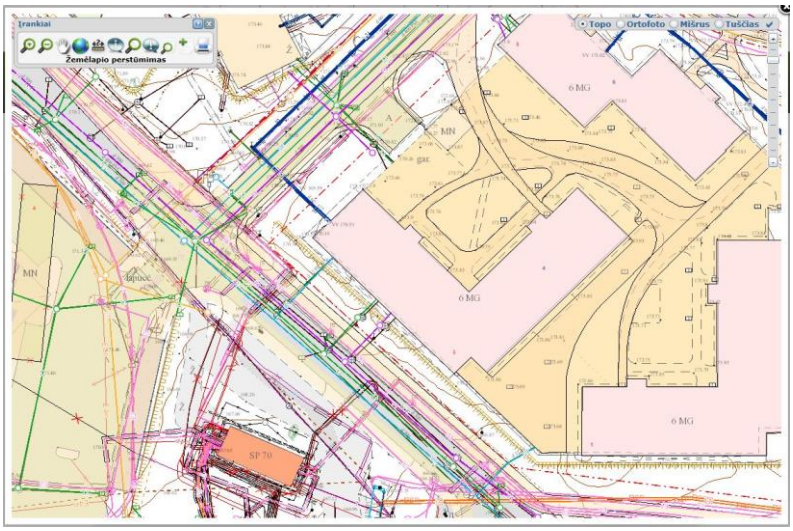
Information mentioned in Art 4 now is made public through website www.e-infrastruktura.lt. This website was launched in 2011 in cooperation with local municipalities in order to ensure and enhance on-line access to the Infrastructure maps (GIS) managed by municipalities. Currently our website covers maps of eight from 60 municipalities, including the four biggest municipalities of Lithuania.

b) Information available at the SIP

What concerns information about planned civil works, according to the Law on Electronic Communications, infrastructure manager should provide RRT with information on:

- type of physical infrastructure, its elements, and place of installation;
- intended beginning of the installation works and duration of these works;
- contact (personal or unit) data.

What concerns information about existing physical infrastructure, only maps (topographical data) are available at the SIP (see Figure 6).



Source: BEREC

Figure 6: Example of the map provided by the SIP

[44] See http://www.rrt.lt/lt/verslui/salygos-veiklai/ketinimai-irengti-infrastruktura.html

c) Access to the information of the SIP

Information about planned civil works is public and easy accessible via RRT website. Information about existing physical infrastructure accessible through website www.e-infrastruktura.lt is available only to registered users.

d) Process by which the SIP is filled with information

What concerns information about planned civil works, according to the Law on Electronic Communications, infrastructure managers who intend to carry out installation works of physical infrastructure, intended for the provision of production, supply, distribution, and/or transport services that are fully or partially funded with resources of the State, municipality, European Union structural funds shall furnish the RRT with the following information (in a written form approved by RRT): (i) the intended beginning of the installation works and (ii) possibilities for infrastructure users to have installed the electronic communications infrastructure at the time of carrying out the installation works by infrastructure possessors. This information has to be provided within a period not later than two months before appealing to competent institutions for obtaining the necessary permits to perform the installation works (if such permits are not necessary, before the start of installation works).

What concerns information about existing physical infrastructure, the SIP is being filled with the relevant information (maps) on a contractual basis with the local municipalities.

According to the Law on Electronic Communications, state or municipal institutions, state or municipal bodies, state or municipal enterprises, and public establishments the owner whereof or at least one of the owners is the State or municipality managing and/or handling information on the existing physical infrastructure, shall give access to the RRT to the information they manage and/or handle electronically on the existing physical infrastructure (type of infrastructure, place of installation, routing, filling, etc.).[45] Access to the updated information shall be given to the RRT not later than within two months from the date of receipt of the new information. This time-limit may be extended for a period not longer than one month, if this is necessary for ensuring reliability of the information furnished. Now the RRT is working on elaborating the abovementioned procedure to gain access to the electronic information on the existing physical infrastructure.

e) Other topics (e.g. exemptions)

According to the Law on Electronic Communication, obligation related to the provision of the information shall not be applied to the information the provision whereof would endanger the safety and/or integrity of the physical infrastructure, public safety and/or health.

4. Poland

a) Introduction

In 2016, the Polish law was updated in compliance with BCRD. The Polish NRA (UKE) was tasked with developing and running the SIP. Version 1.0 was launched on 1 January 2017.

[45] Under the procedure laid down by the Government of the Republic of Lithuania

UKE is working on creating version 2.0 of SIP that will contain more information and provide better user experience. Website of SIP is: https://pit.uke.gov.pl/ (Polish language only).

b) Information available at the SIP

The SIP provides information regarding procedures applicable to investments in broadband networks and information about existing infrastructure, including on network routes and infrastructure location. It contains URLs of webpages of entities managing networks with terms and conditions of access to infrastructure. It shows information about payments for access to roads submitted by local governments and other entities managing roads.

c) Access to the information of the SIP

Part of information in the SIP is accessible to general public on the website. Some information at this time is accessible only to network operators and other entities (like ISPs) listed in the bill regulating the Polish SIP. These entities need to create a verified account. This account allows access to information submitted to SIP by other entities.

d) Process by which the SIP is filled with information

Each entity required to send data to the SIP or interested in doing so needs to create an account on SIP's website by filling a form requesting the creation of this account. The form is signed with electronic signature that verifies the entity. With this account the entity can either upload files formatted in specified schema to enter data in bulk or use the forms on the website. The latter is an easy and convenient way for entities that do not need to enter a lot of information e.g. local governments that submit information about payments for access to roads they are managing etc.

e) Other topics (e.g. exemptions)

Information crucial to national security is exempt from any requirements like national survey conducted by UKE every year etc. and therefore it is not available at the SIP.

5. Portugal

a) Introduction

The Decree-Law 123/2009 of 21st May (DL123/2009)[46] establishes the implementation of a database of all the infrastructures suitable to accommodation of electronic communication networks. Article 25 of DL123/2009 assigned to ANACOM the design, management, and maintenance of SIP making it accessible and available. The term used in the DL123/2009 to designate the SIP is SIIA ("Information System of Suitable Infrastructures") and was CIS ("Centralized Information System") before the publication of DL92/2017 of 31st July.

[46] This DL123/2009 was rectified by Statement no. 43/2009, of 25 June, 1st amended and republished by Decree-Law no. 258/2009, of 25 September, 2nd amended and republished by Decree-Law no. 47/2013, of 10 July, 3rd amended by Law no. 82-B/2014, of 31 December and recently amended and republished by the Decree-Law no. 92/2017 of 31st July (DL92/2017). The DL92/2017 is available at https://dre.pt/application/file/a/107784638 https://www.anacom.pt/render.jsp?contentId=975261&languageId=1.

Following the launch of a public tender by ANACOM decision of 23rd January 2014[47] (including the terms of reference and technical requirements), the design of SIC was assigned to AMBISIG - Ambiente e Sistemas de Informação Geográfica, S.A.by ANACOM Decision of 20th November of 2014[48].

This was the result of a 2nd public tender launched by ANACOM since the result of the first one, launched by ANACOM in 2010[49], was subject of an appeal to Court by one of the candidates and thus, following the Court sentence, ANACOM decided in 9th May 2013[50], to not assign to any entity the design of the SIC.

After the design and testing of the platform which occurred during 2015, SIC (now SIIA) became operational on 14th of January of 2016[51.]

SIIA is implemented on an information sharing basis and is based on five flows of information (infrastructure, access conditions, rights of way, civil works announcements, and data on the entities). In this sense, SIIA is not implemented as a “one stop shop” so it is a platform which does not provide exactly a specific answer to a specific request (e.g. an answer to a request for access to a certain infrastructure).

SIIA is still in an initial phase of its operation (less than 2 years) and the main effort is approaching the public and private entities (specified in Article 2 of DL123/2009) in order for them to become suppliers (and/or clients) of the information.

b) Information available at the SIIA

According Article 25 of DL123/2009, the SIIA has to ensure the provision of information regarding:

- procedures and conditions on which depends the allocation of rights of way;
- advertisements on the construction of infrastructures suitable for the accommodation of electronic communications networks;
- georeferenced records containing comprehensive and integrated information of all infrastructures suitable for the accommodation of electronic communications networks; and
- procedures and conditions applicable to the access to and use of each infrastructure, including the technical instructions referred in article 21 of DL123/2009 if they exist.

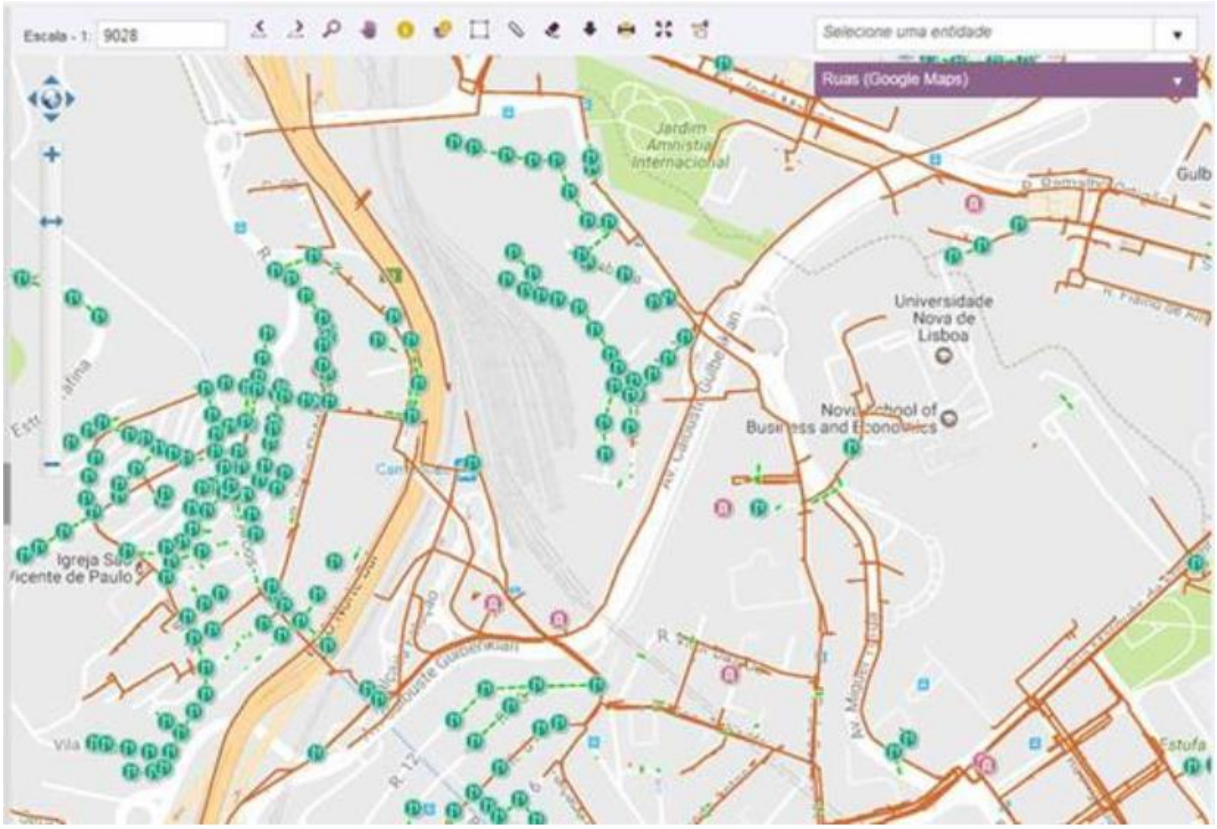
It is also foreseen in the Article 25 of DL123/2009 that the entities who hold infrastructures suitable for the accommodation of electronic communications networks shall permanently update the information above referred, assuring its quality and feasibility. With the publication of DL92/2017, the article 25 of DL123/2009 foresees specific time periods to be accomplished by the infrastructure entities, regarding the placing of information in the SIIA, being their non-fulfilment subject to sanctions.

[47] https://www.anacom.pt/render.jsp?contentId=1189835&languageId=1.
[48] https://www.anacom.pt/render.jsp?contentId=1343349&languageId=1.
[49] https://www.anacom.pt/render.jsp?contentId=1062882&languageId=1.
[50] https://www.anacom.pt/render.jsp?contentId=1191374.
[51] https://www.anacom.pt/render.jsp?contentId=1376844&languageId=1.

On 11th November of 2010[52], after issuing a public consultation procedure, ANACOM published a Decision regarding, among other issues, the definition of the formats of the infrastructure objects (e.g. duct), and their respective elements of characterization (e.g. location), to be provided at the SIIA – data structure (shapefile).

Thus, infrastructure owner entities shall draw up and make available in the SIIA the information referred in the number 1 of Article 25 of DL123/2009 in accordance with the procedures and in the format laid down by ANACOM. Following the SIIA specification and implementation, the information thereby provided can go beyond that minimum (e.g. optional information on infrastructure occupation level).

Figure 7 shows an example of the graphical presentation of information available via the SIIA.



Source: BEREC

Figure 7: Example of the graphical presentation of information available via the SIIA

c) Access to the information of the single information point

The SIIA is only accessible to sector regulators and to entities which comply with the obligations required for the inclusion of information in the system, such as state bodies, autonomous regions, local authorities, government-supervised entities, state companies and concessionaires, electronic communications companies.

[52] https://www.anacom.pt/render.jsp?contentId=1062883&languageId=1.

SIIA is based on a principle of information sharing and reciprocity and is available to entities which assure the obligations needed for the inclusion of the information in the system (i.e. entities from article 2nd of DL123/2009 and regulators – article 26th, number 2).

It is ANACOM's responsibility to manage, maintain and guarantee the SIIA accessibility and availability, as under DL123/2009. The information contained in SIIA is binding upon the undertakings responsible for its production and availability, which are also responsible for ensuring that this information is kept up-to-date at all times.

d) Process by which the SIP is filled with information

The loading of data in the SIIA by the entities who hold infrastructures suitable for accommodation of electronic communication networks can be done:

- Manually: through the manual creation of infrastructure objects inside the SIIA
- Data loading: by loading a shapefile using FTP protocol
- System to System Integration: automation of the loading process.

A more detailed description can be found in ANACOM's decision of 11 November 2010 and the specifications of the public tender launched by ANACOM in January 2014.

e) Other topics (e.g. exemptions)

DL123/2009 foresees the possibility of exemptions regarding the availability of information about critical national infrastructures. This exemptions are foreseen in two areas: exemptions to the obligation of publishing and cooperation in civil works (article 9-A) and exemption to the publication of information in the SIIA (article 24-A).

In those cases, DL123/2009 determines that shall be incumbent on the National Security Office to provide an opinion, based on the grounds presented by entities managing the infrastructures included in the SIIA, on which information should be deemed as confidential or reserved, being ANACOM responsible for deciding which classification is to be given to the referred information, having heard the entity managing infrastructures and the Commission of Access to Administrative Documents (CADA)[53].

In case of doubts on the ability of infrastructures to accommodate electronic communications networks, ANACOM, at the request of the infrastructure owner entities, shall decide on their inclusion in the records, taking into account reasons submitted by such entities and the utility of the infrastructures under consideration within the context of the development of electronic communications access networks, namely in the connection of end-users to core networks.

6. Sweden

a) Introduction

The Deployment Act which implemented the BCRD in Sweden did entry into force 1 July 2016 and the SIP was by then also in service. The SIP was made by combining two services:

[53] Please consult article 24-A of DL123/2009.

- Utbyggnadsportalen, a new service, with information about rights and obligations in the Deployment Act, information about permit-granting and other information services.
- Ledningskollen, a well-functioning information service, established in 2010 for sharing information on cables, pipelines and other underground infrastructure to reduce excavation damages and provide opportunities for digging coordination. Ledningskollen was modified to fulfil SIP-requirement as stated in the Deployment Act.

As mentioned in section 3, it is not mandatory to use the SIP, it is possible to fulfil obligations by other information services.

b) Information available at the SIP

Utbyggnadsportalen has information about rights and obligations in the Deployment Act, information about permit-granting and other information services.

Ledningskollen can be used by network operators to give communication network operator (broadband developer) information about existing infrastructure. In order to get information about existing infrastructure a communication network operator (broadband developer) creates a case where necessary information (time, type of project and geographical information) is included. Ledningskollen assigns cases to network operators with infrastructure in the area. Each network operator gives individual information about their infrastructure.

Network operators can also use Ledningskollen to publish information about upcoming civil works projects (Article 6). This is done by creating a case in Ledningskollen where necessary information (time, type of project and geographical information) is included. All projects are visible for communication network operator (broadband developer) in Ledningskollen´s case map. A communication network operator (broadband developer) can also be assigned to a project-case by creating control areas where they want to build their network.

Note: Network operators does not store any detailed geographical information in Ledningskollen, only approximate information (area of interest) with a minimum resolution of 1x1 km.

c) Access to the information of the SIP

Utbyggnadsportalen is a public web page which means that everyone can access the information.

Information and use of functionality in Ledningskollen requires an account and that the organization has joined Ledningskollen.

d) Process by which the SIP is filled with information

Utbyggnadsportalen is filled with information by PTS (the Swedish NRA) via a standard content management system.

In Ledningskollen network owners are responsible to update information about approximate location of their infrastructure and contact information. The geographical information can be drawn on a map in Ledningskollen, by uploading a file or by API. Ledningskollen only stores information in squares (minimum 1x1 km). When a communication network provider creates

a request about infrastructure in a certain area (drawn, uploaded GIS- or CAD-file (several formats available) or via API). Ledningskollen uses this approximate information to assign the request only to network operators with infrastructure in the requested area.

Communication network operators can set up control areas for easier handling of cases regarding upcoming civil works projects.

Annex 3: Basic data of the report

This annex provides data as of mid-September 2017.

Table 11: Tasks of the BCRD appointed to the NRA and definition of the term "physical infrastructure" (AT, HR, FI, FR)

Country	Austria	Croatia	Finland	France
The BCRD defines tasks for a national DSB. Which of these tasks were appointed to the NRA? The tasks defined in:[54,]				
• Article 3 para 4 and 5	Yes	Yes	Yes	Yes
• Article 4 para 6	Yes	Yes	Yes	Yes
• Article 5 para 3 and 4	Yes	Yes	Yes	Yes
• Article 6 para 4	Yes	Yes	Yes	Yes
• Article 9 para 3	Yes	Yes	Yes	Yes
The BCRD defines tasks for a SIP. Which of these tasks were appointed to the NRA? The tasks defined in:[54]				
• Article 4 para 2 to 4	Yes	No	Yes	No
• Article 6 para 2 and 3	Yes	No	Yes	No
• Article 7 para 1	Yes	No	Yes	No
The transposition of the BCRD into national law defined "physical infrastructure" according to the BCRD (Art. 2(2)) or does this term include additional infrastructure (e.g. dark fibre)?	Additional. The term "physical infrastructure" includes also dark fibre"	According to the BCRD	• Physical infrastructure has been defined according to the BCRD. • In addition, the national legislation includes also cables and other active network elements.	Additional. The term "physical infrastructure" includes also water towers

Source: BEREC

[54] Regardless whether these tasks were transposed exactly or (slightly) different into national law.

Table 12: Tasks of the BCRD appointed to the NRA and definition of the term "physical infrastructure" (DE, GR, HU, IT)

Country	Germany	Greece	Hungary	Italy
The BCRD defines tasks for a national DSB. Which of these tasks were appointed to the NRA? The tasks defined in:[54]				
• Article 3 para 4 and 5	Yes	Yes	Yes	Yes
• Article 4 para 6	Yes	Yes	Yes	Yes
• Article 5 para 3 and 4	Yes	Yes	Yes	Yes
• Article 6 para 4	Yes	Yes	Yes	Yes
• Article 9 para 3	Yes	Yes[55]	Yes	Yes
The BCRD defines tasks for a SIP. Which of these tasks were appointed to the NRA? The tasks defined in:[54]				
• Article 4 para 2 to 4	• Article 4 para 2, 3: No; • Article 4 para 4: Yes	No	No	No
• Article 6 para 2 and 3	Yes	No	No	No
• Article 7 para 1	Yes	No	No	No
The transposition of the BCRD into national law defined "physical infrastructure" according to the BCRD (Art. 2(2)) or does this term include additional infrastructure (e.g. dark fibre)?	Same	According to the BCRD	Same	According to the BCRD

Source: BEREC

[55] Only in cases of disputes between electronic communications providers. Not in cases of disputes between civilians and electronic communications providers

Table 13: Tasks of the BCRD appointed to the NRA and definition of the term "physical infrastructure" (LT, PL, PT, RO)

Country	Lithuania	Poland	Portugal	Romania
The BCRD defines tasks for a national DSB. Which of these tasks were appointed to the NRA? The tasks defined in:[54]				
• Article 3 para 4 and 5	Yes	Yes	Yes	Yes
• Article 4 para 6	Yes	Yes	Yes	Yes
• Article 5 para 3 and 4	Yes	No	No[56]	Yes
• Article 6 para 4	Yes	No	No[57]	Yes
• Article 9 para 3	Yes	Yes	Yes	Yes
The BCRD defines tasks for a SIP. Which of these tasks were appointed to the NRA? The tasks defined in:[54]				
• Article 4 para 2 to 4	Yes	Yes	Yes[58]	Yes
• Article 6 para 2 and 3	Yes	Yes	Yes	No
• Article 7 para 1	No	Yes	Yes	No
The transposition of the BCRD into national law defined "physical infrastructure" according to the BCRD (Art. 2(2)) or does this term include additional infrastructure (e.g. dark fibre)?	Additional, the term also includes cables	Same	According to the BCRD	Same"

Source: BEREC

[56] However, the DL123/2009 demands the coordination of civil works and in case this obligation is not met it foresees sanctions since this constitutes a breach of this law.
[57] However, the DL123/2009 establishes the terms for supplying the information concerning on-going or planned civil works and constitutes its non-fulfilment a breach.
[58] ANACOM makes the platform available but does not input the information.

Table 14: Tasks of the BCRD appointed to the NRA and definition of the term "physical infrastructure" (SI, ES, SE, UK)

Country	Slovenia	Spain	Sweden	UK
The BCRD defines tasks for a national DSB. Which of these tasks were appointed to the NRA? The tasks defined in:[54]				
• Article 3 para 4 and 5	Yes	Yes[59]	Yes	Yes
• Article 4 para 6	Yes	Yes[59]	Yes	Yes
• Article 5 para 3 and 4	Yes	Yes[59]	Yes	Yes
• Article 6 para 4	Yes	Yes[59]	Yes	Yes
• Article 9 para 3	Yes	Yes[60]	Yes	Yes
The BCRD defines tasks for a SIP. Which of these tasks were appointed to the NRA? The tasks defined in:[54]				
• Article 4 para 2 to 4	No, this task has been appointed to another organisation	No[61]	Yes	No[62]
• Article 6 para 2 and 3	Yes	No[63]	Yes	No
• Article 7 para 1	No	No[63]	Yes	No[64]
The transposition of the BCRD into national law defined "physical infrastructure" according to the BCRD (Art. 2(2)) or does this term include additional infrastructure (e.g. dark fibre)?	According to the BCRD	According to the BCRD	According to the BCRD (does not include dark fibre).	According to the BCRD

Source: BEREC

[59] According to the Royal Decree 330/2016 of 9 of September, on measures to reduce the cost of deploying high-speed electronic communications networks

[60] The current regulation is based on a decision of CMT (former CNMC) of 12 February 2009 on symmetrical access obligations to electronic communications operators in relation to fiber networks of their property to be deployed inside buildings (hereinafter "Verticals Resolution"). The CNMC has to resolve disputes which may arise from this. A project for a royal decree of the Ministry of Energy, Tourism and Digital Agenda (MINETAD) which will impose the same kind of regulations is currently in public consultation. The project contemplates the CNMC to be appointed as the DSB.

[61] The Royal Decree 330/2016 appoints the MINETAD for such task in a discretionary way (it "may" set up the SIP). The SIP is not yet operational, nor is its operation regulated.

[62] Although the UK Regulations do not establish a SIP, the UK has implemented the provision in Article 4.4 of the BCRD which requires network operators to provide access to relevant information upon request.

[63] The Royal Decree 330/2016 appoints the MINETAD for such task in a compulsory way (it "shall" set up the SIP). However, the SIP is not yet operational, nor is its operation regulated.

[64] The UK Government considered existing permits already comply with the requirements of the BCRD.

Table 15: General information on the DSB – part 1 (AT, HR, FI, FR)

Country	Austria	Croatia	Finland	France
Did the NRA already commence operations as DSB? If not so far, when is it planned?	Yes	Yes	Yes	Yes
Did the NRA already has tasks to fulfil defined in the BCRD for the DSB (or similar to them) before transposition of the BCRD into national law?	Yes	Yes	Yes	No
If this is the case, which tasks and since when?	• Since 2009, electronic communications network operators have the right to use existing infrastructure useable for communication lines of third parties. • The NRA has to settle disputes which may arise from this.	• Since 1999 (According to article 9 of Act on telecommunications, OG 76/99), telecom operators have the right to use existing electronic communications infrastructure (physical infrastructure) of other legal or natural persons, if technical conditions for shared use (e.g. free space) are met.[65] • The NRA has to settle disputes which may arise from this.[65]	• Since 2011, electronic communications service providers have the right to get access to in-building physical infrastructure. • The NRA has to settle disputes which may arise from this.	N/A

Source: BEREC

[65] This obligation of shared use of electronic communications infrastructure as well as NRA's role has been continued and updated in all later enacted telecommunications and electronic communications acts and ordinances up to now.

Table 16: General information on the DSB – part 1 (DE, GR, HU, IT)

Country	Germany	Greece	Hungary	Italy
Did the NRA already commence operations as DSB? If not so far, when is it planned?	Yes	Yes	Yes	Yes
Did the NRA already has tasks to fulfil defined in the BCRD for the DSB (or similar to them) before transposition of the BCRD into national la?	Yes	Yes	Yes	Yes
If this is the case, which tasks and since when?	Access rights were introduced to national law in 2012. Those targeted especially federal roads, waterways and railways.	• Since 2015, electronic communication network operators have the obligation to satisfy any reasonable request for access to their existing electronic communication network's infrastructure from other electronic communication network operators for building broadband networks.[66] • The NRA has to settle disputes which may arise from this. • In addition, since 2012, the NRA may act as an arbitrator between public authorities that administer permits and electronic communication network operators that request rights of way.[67]	• Since 2003 any service provider or other business entity whose right or lawful interest related to electronic communications is violated by another service provider (hereinafter referred to as "dispute") may seek remedy at the Authority.[68] • Since 2003 in the few cases the NRA (NMHH) had, the Authority regulated access to existing physical infrastructure.	• Since January 2012 decision n. 622/11/CONS regulates access to existing physical infrastructure, coordination of civil works, permission granting. • Since October 2013 decision n. 538/13/CONS regulates access to in-building physical infrastructure. In both cases (decisions of 2012 and 2013), the NRA has to settle disputes which may arise.

Source: BEREC

[66] According to the regulation of collocation and facility sharing which was issued in 2015

[67] According to a common Ministerial decision issued in 2012

[68] This right or lawful interest could refer to (i) contracts governed by electronic communications regulations, (ii) network contracts specified in the Electronic Communications Act, (iii) requirements related to wholesale open access obligations prescribed with regard to the winner of the network development tender (funded or co-funded from European Union resources) and (iv) contracts concluded under the above mentioned.

Table 17: General information on the DSB – part 1 (LT, PL, PT, RO)

Country	Lithuania	Poland	Portugal	Romania
Did the NRA already commence operations as DSB? If not so far, when is it planned?	Yes	Yes	Yes	Yes
Did the NRA already has tasks to fulfil defined in the BCRD for the DSB (or similar to them) before transposition of the BCRD into national la?	Yes	Yes	Yes	Yes
If this is the case, which tasks and since when?	• Since 2002, in specific circumstances, the NRA (RRT) may request that any provider of electronic communications networks should permit, on non-discriminatory terms, the sharing of the existing electronic communications infrastructure where this is cost efficient and does not require significant additional work. • The NRA has to settle disputes between providers of electronic communications networks which may arise from this.	Since 2010, the NRA conducts procedures for establishing conditions on which telecom operators are granted access to technical infrastructure (incl. in-building physical infrastructure)	• Since May 2009,[69] if an entity (listed in article 2) refuses the access to its infrastructure by an electronic communications company in a specific situation, any of the involved parties may apply to the NRA (ANACOM) for a binding decision on the matter. • At the request of electronic communications companies, ANACOM shall assess and decide, in a particular case, whether the access price requested is appropriate in the light of a cost orientation rule.	• Since 2012, when the Infrastructure Law was adopted which allows communications network operators to use existing infrastructure useable for communication lines of third parties. • The NRA may also impose on a provider of electronic communications networks or on the infrastructure owner the obligation to allow other providers of electronic communications networks to share the ducts installed in buildings or up to the first concentrator or network distribution point situated outside the building.

Source: BEREC

[69] When DL123/2009 entered into force.

Table 18: General information on the DSB – part 1 (SI, ES, SE, UK)

Country	Slovenia	Spain	Sweden	UK
Did the NRA already commence operations as DSB? If not so far, when is it planned?	Yes	Yes.	Yes	Yes
Did the NRA already has tasks to fulfil defined in the BCRD for the DSB (or similar to them) before transposition of the BCRD into national law?	Yes	Yes (see footnote 60)	Yes	Yes
If this is the case, which tasks and since when?	Since 2013, communications network operators have the right to use existing infrastructure useable for communication lines of third parties. The NRA has to settle disputes which may arise from this.	Conflict resolution related to fibre networks to be deployed inside buildings (final sections), deriving from the Verticals Resolution (see footnote 60), since 12 February 2009.	Yes, disputes relating to the duct obligation in TeliaSonera´s SMP decision on Market 3a (Wholesale local access provided at a fixed location), since 19 February 2015.	Since 2003[70], Ofcom has had jurisdiction to resolve disputes brought by communications providers relating to: (1) the provision of network access, (2) entitlements to network access a communications provider is required to provide and (3) rights and or obligations imposed.

Source: BEREC

[70] Prior to 2003 Ofcom's predecessor Oftel had dispute resolution powers.

Table 19: General information on the DSB – part 2 (AT, HR, FI, FR)

Country	Austria	Croatia	Finland	France
Did a legal authority (e.g. NRA) issued rules which the DSB has to or could apply?	No	No	No	No
If this is the case:				
• Which rules?[71]	N/A	N/A	N/A	N/A
• Are these rules binding or non-binding?	N/A	N/A	N/A	N/A
• Which authority issued these rules?	N/A	N/A	N/A	N/A
• Web reference	N/A	N/A	N/A	N/A

Source: BEREC

[71] E.g. rules how to manage the dispute or rules how to set the access price

Table 20: General information on the DSB – part 2 (DE, GR, HU, IT)

Country	Germany	Greece	Hungary	Italy
Did a legal authority (e.g. NRA) issued rules which the DSB has to or could apply?	Yes, there are general rules included in the Electronic Communications Law (TKG) regarding the operation of the NRA as a DSB (especially §§ 77n, 134a TKG)	Yes, there are general rules included in the Electronic Communications Law regarding the operation of the NRA as a DSB. The same rules will apply for all issues included in the BCRD.	No, but currently under reparation.	Yes
If this is the case:				
• Which rules?[71]	General Rules related to the procedure of issuing a request for a dispute settlement and the procedure that the NRA follows to examine this request	General Rules related to the procedure of issuing a request for a dispute settlement and the procedure that the NRA follows to examine this request	N/A	Definition of the procedural rules concerning dispute resolution settlement
• Are these rules binding or non-binding?	Binding	Binding	N/A	Binding
• Which authority issued these rules?	Law amendment of the TKG by the German parliament based on a draft by the relevant ministry	Issued by state law	N/A	NRA
• Web reference	See footnote[72]	See footnote[73]	N/A	Decision. 449/16/CONS https://goo.gl/LpdjIl

Source: BEREC

[72] http://www.gesetze-im-internet.de/tkg_2004/index.html

[73] http://www.eett.gr/opencms/export/sites/default/admin/downloads/telec/elliniki_nomothesia/nomoi/N4070-2012.pdf and http://www.eett.gr/opencms/export/sites/default/admin/downloads/telec/elliniki_nomothesia/nomoi/N4070-2012.pdf (only in Greek)

Table 21: General information on the DSB – part 2 (LT, PL, PT, RO)

Country	Lithuania	Poland	Portugal	Romania
Did a legal authority (e.g. NRA) issued rules which the DSB has to or could apply?	Yes	Yes	No[74]	Yes
If this is the case:				
• Which rules?[71]	The rules how to manage disputes.	NRA's position on understanding of statutory conditions of access to in-building infrastructure (e.g. regarding reimbursement)	N/A	The NRA has issued rules establishing the procedure to follow in order to solve the disputes that it is entitled to solve under the BCRD.
• Are these rules binding or non-binding?	Binding	Non-binding	N/A	The rules are binding both for the parties and the NRA.
• Which authority issued these rules?	NRA	The NRA	N/A	The NRA.
• Web reference	See footnote[75]	See footnote[76]	N/A	See footnote[77]

Source: BEREC

[74] Nevertheless, the DL123/2009 contains procedure rules that must be followed.
[75] http://www.rrt.lt/lt/verslui/gincu-sprendimas.html (Lithuanian version only)
[76] https://www.uke.gov.pl/stanowisko-do-art-30-ustawy-szerokopasmowej-13199
[77] The procedure for solving the disputes is available (only in Romanian): http://www.ancom.org.ro/uploads/forms_files/Decizie_2016_11711480406029.pdf

Table 22: General information on the DSB – part 2 (SI, ES, SE, UK)

Country	Slovenia	Spain	Sweden	UK
Did a legal authority (e.g. NRA) issued rules which the DSB has to or could apply?	Yes	No	Yes	Yes
If this is the case:				
• Which rules?[71]	General rules how to manage disputes.	N/A	In all PTS dispute settlement cases the reporting officer shall have a law degree (2007:951). Supplementary provisions to the Deployment Act, which e.g. stipulates that PTS is the DSB (2016:538).	Guidance on several aspects e.g. the process Ofcom is likely to follow in resolving disputes.[78]
• Are these rules binding or non-binding?	Binding	N/A	Binding	Non-binding
• Which authority issued these rules?	Law amendment of the Electronic Communications Act (ZEKom-1) by the Slovenian parliament	N/A	The government	Ofcom
• Web reference	N/A	N/A	See footnote[79]	See footnote[80]

Source: BEREC

[78] Guidance on the form and manner in which dispute references should be made and the process Ofcom is likely to follow in resolving disputes as well as guidance on the considerations Ofcom is likely to take into account in resolving disputes.

[79] http://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-2007951-med-instruktion-for-post-_sfs-2007-951 and http://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-2016538-om-atgarder-for-utbyggnad_sfs-2016-538

[80] https://www.ofcom.org.uk/__data/assets/pdf_file/0025/95191/Guidance-under-the-Communications-Access-to-Infrastructure-Regulations-2016.pdf

Table 23: General information on the DSB – part 3 (AT, HR, FI, FR)

Country	Austria	Croatia	Finland	France
Do also other organisations than network operators (e.g. public administrations) have to				
• Provide access to its existing physical infrastructure?	Yes, all organisations which have infrastructure useable for communication lines (see Table 15)	Yes, any legal or natural person who owns electronic communications infrastructure is obliged to provide access to it.	No	Yes, all organisations which have infrastructure useable for communication lines
• Co-ordinate its civil works?	No	No	No	Yes, all organisations which have infrastructure useable for communication lines

Source: BEREC

Table 24: General information on the DSB – part 3 (DE, GR, HU, IT)

Country	Germany	Greece	Hungary	Italy
Do also other organisations than network operators (e.g. public administrations) have to				
• Provide access to its existing physical infrastructure?	Yes, any public body or institution operating any of the network types listed in Art. 2.1 of the BCRD[81]	Yes, organizations that provide a public communications network (even if they belong to the state) and organizations that provide an infrastructure for electricity, gas, water and transport services[82]	No, only the network operator (according to BCRD Art. 2.)	Yes, all organizations which have infrastructures usable for communication lines.
• Co-ordinate its civil works?	Yes, public authorities commissioning civil works on transport infrastructure need to ensure the installation of adequate amounts of physical infrastructure and dark fibre.	Organisations of the abovementioned categories if they are funded for the implementation of their civil works	No, only the network operator (according to BCRD Art. 2.)	Yes, all organizations which have infrastructures usable for communication lines.

Source: BEREC

[81] In the BCRD (Art. 2.1), the term “Network operator” includes undertakings but not public bodies or institutions.

[82] In the BCRD, the term “network operator” refers to “undertaking” and the transposition into national law refers to “organisation or undertaking” which explicitly includes network operators not privately owned i.e. owned by the state.

Table 25: General information on the DSB – part 3 (LT, PL, PT, RO)

Country	Lithuania	Poland	Portugal	Romania
Do also other organisations than network operators (e.g. public administrations) have to				
• Provide access to its existing physical infrastructure?	Yes, if certain organizations own physical infrastructure suitable for the deployment of the electronic communications infrastructure.	No	Yes. The State, autonomous regions, local authorities and all entities under the authority or supervision of those, performing administrative tasks, regardless of their entrepreneurial nature.	Yes, all organisations which have infrastructure useable for communication lines are included in the "network operator" definition
• Co-ordinate its civil works?	Yes, if certain organizations intend to carry out installation works of physical infrastructure intended for the provision of production, supply, distribution, and/or transport services based on particular public funds[83]	No	Yes, the same organisations as mentioned above.	Yes, all organizations included in network operator category have the obligation to inform (SIP) about the planned civil-works in order to allow co-ordination

Source: BEREC

[83] In case they are fully or partially funded with resources of the State, municipality and/or the European Union structural funds.

Table 26: General information on the DSB – part 3 (SI, ES, SE, UK)

Country	Slovenia	Spain	Sweden	UK
Do also other organisations than network operators (e.g. public administrations) have to				
• Provide access to its existing physical infrastructure?	Yes, all organisations which have infrastructure useable for communication lines (see Table 17)	Yes, public administrations[84]	No.[85] However, if e.g. public administrations are "network operators" according to the BCRD, then they have to grant access (like any other "network operator").	No, only organisations defined as network operators according to Article 2(1) of the BCRD
• Co-ordinate its civil works?	Yes, the obligation also applies to investors in other types of public infrastructure, which are not network operators.	Yes, the same which have to provide access to their existing physical infrastructure (see above)[86]	No[85]	No

Source: BEREC

[84] The Royal Decree 330/2016 goes beyond the concept of "network provider" as defined by Article 2.1 of the BCRD and on to one of "obliged subjects". The concept of "obliged subjects" in the Royal Decree 33/2016 includes network providers (in the sense of the BCRD), as well as "public administrations with entitlement to physical infrastructure susceptible to host electronic communications networks" (see Articles 3.5.d and 4).

[85] 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 correspond to the BCRD´s definition of "network operator" and is clarified in the government bill that a network holder should be the one who owns a network or infrastructure or otherwise disposing over it (bill 2015/16:73 p. 31, see also the BCRD preamble 13.)

[86]. When performing (directly or indirectly), either fully or partially civil works, financed by public means (according to Article 6 of the RD 330/2016).

Table 27: Number of disputes resolved (AT, HR, FI, FR)

Please note, in this table, the disputes resolved refer to the disputes resolved so far since transposition of BCRD into national law and requests which were not accepted by the DSB because they did not fulfil all formal requirements (e.g. incomplete application) are not taken into account.

Country	Austria	Croatia	Finland	France
Total number of disputes resolved so far				
• With mediation	0	0	0	0
• With a binding decision[87]	1, 3 pending[88] (before transposition of the BCRD (see Table 15) approx. 10 decisions)	0	0	0
Number of disputes resolved[87] which relate to				
• Article 3	1, 3 pending[88]	0	0	0
• Article 4	0	0	0	0
• Article 5	0	0	0	0
• Article 6	0	0	0	0
• Article 9	0	0	0	0

Source: BEREC

[87] Disputes resolved by the NRA with a binding decision only refer to disputes which were resolved with a binding decision on the subject of the dispute. Therefore, proceedings the NRA closed because the requestor withdrew its request or the request did not meet all formal requirements are not taken into account.

[88] These disputes are not the consequence of the BCRD since the NRA already had the task to resolve such disputes before transposition of the BCRD into national law.

Table 28: Number of disputes resolved (DE, GR, HU, IT)

Please note, in this table, the disputes resolved refer to the disputes resolved so far since transposition of BCRD into national law and requests which were not accepted by the DSB because they did not fulfil all formal requirements (e.g. incomplete application) are not taken into account.

Country	Germany	Greece	Hungary	Italy
Total number of disputes resolved so far				
• With mediation	1 (ending with closing of the proceedings – settlement of parties)	0	2, NRA approved agreement	0
• With a binding decision[87]	2[89]	0	0	2 decisions taken (before transposition of the BCRD (see Table 16) no decision taken[90])
Number of disputes resolved[87] which relate to				
• Article 3	0	0	2	2 decisions taken
• Article 4	0	0	0	0
• Article 5	2	0	0	0
• Article 6	0	0	0	0
• Article 9	0	0	0	0

Source: BEREC

[89] In addition, one proceeding was closed without a decision since the parties involved reached an agreement and therefore the requestor withdrew its request.

[90] Agcom has just provided opinions on the application of the national decisions taken (see Table 16), in the framework of its monitoring duties.

Table 29: Number of disputes resolved (LT, PL, PT, RO)

Please note, in this table, the disputes resolved refer to the disputes resolved so far since transposition of BCRD into national law and requests which were not accepted by the DSB because they did not fulfil all formal requirements (e.g. incomplete application) are not taken into account.

Country	**Lithuania**	**Poland**	**Portugal**	**Romania**
Total number of disputes resolved so far				
• With mediation	0	0	0	0
• With a binding[87] decision	0	91	1 (DST Norte versus AMTQT) since May 2009,[91] 1 pending	0
Number of disputes resolved[87] which relate to				
• Article 3	0	1[92]	1 (DST vs AMTQT), 1 pending	0
• Article 4	0	0	0	0
• Article 5	0	0	0	0
• Article 6	0	0	0	0
• Article 9	0	90[93]	0	0

Source: BEREC

[91] See https://www.anacom.pt/render.jsp?contentId=1374318&languageId=1

[92] Moreover, one dispute was closed with a binding decision which stated discontinuance of proceedings.

[93] In addition, 38 disputes were closed with a binding decision which stated discontinuance of proceedings mainly due to withdrawal of requests since agreements were reached without the regulator's intervention.

Table 30: Number of disputes resolved (SI, ES, SE, UK)

Please note, in this table, the disputes resolved refer to the disputes resolved so far since transposition of BCRD into national law and requests which were not accepted by the DSB because they did not fulfil all formal requirements (e.g. incomplete application) are not taken into account.

Country	Slovenia	Spain	Sweden	UK
Total number of disputes resolved so far				
• With mediation	1	0	0	0
• With a binding decision[87]	0	1	4 (3 decisions are appealed to court and 1 decision can still be appealed) (before transposition of the BCRD (see Table 16) approx. 130 decisions taken)	0
Number of disputes resolved[87] which relate to				
• Article 3	0	1	2 (in one dispute both Article 3 and 4 in the same dispute)	0
• Article 4	0	0	1 (Article 3 and 4 in the same dispute)	0
• Article 5	1	0	2 (in one dispute both Article 5 and 6 in the same dispute)	0
• Article 6	0	0	1 (Article 5 and 6 in the same dispute)	0
• Article 9	0	0	0	0

Source: BEREC

Table 31: Percentage of disputes resolved which granted what the requestor demanded (AT, HR, FI, FR)

Country	Austria	Croatia	Finland	France
Percentage of the total number of disputes resolved[87] which granted what the requestor demanded (e.g. access to physical infrastructure, coordination of civil works, access to in-building physical infrastructure)	100% (1 of 1 dispute resolved so far with a binding decision) (nearly all decisions taken before transposition of the BCRD (see Table 2) granted what the requestor demanded)	N/A, no dispute resolved so far	N/A, no dispute resolved so far	N/A, no dispute resolved so far
Percentage of disputes resolved[87] which granted				
• Access to physical infrastructure according to Article 3	100% (1 of 1 dispute resolved so far with binding decision)	N/A, no dispute according to Article 3 resolved so far	N/A, no dispute according to Article 3 resolved so far	N/A, no dispute according to Article 3 resolved so far
• Access to information on physical infrastructure according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• An on-site survey according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• Coordination of civil works according to Article 5	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far
• Access to information on planned civil works according Article 6	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far
• Access to in-building physical infrastructure according to Article 9	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far

Source: BEREC

Table 32: Percentage of disputes resolved which granted what the requestor demanded (DE, GR, HU, IT)

Country	Germany	Greece	Hungary	Italy
Percentage of the total number of disputes resolved[87] which granted what the requestor demanded (e.g. access to physical infrastructure, coordination of civil works, access to in-building physical infrastructure)	0%	N/A, no disputes so far since the transposition of the BCRD	N/A, disputes resolved so far with agreement	100% (2 of 2 disputes resolved)
Percentage of disputes resolved[87] which granted				
• Access to physical infrastructure according to Article 3	N/A, no dispute according to Article 3 resolved so far	N/A, no dispute according to Article 3 resolved so far	N/A, both disputes were resolved with mediation	100% (2 of 2 disputes resolved)
• Access to information on physical infrastructure according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• An on-site survey according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• Coordination of civil works according to Article 5	0%	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far
• Access to information on planned civil works according Article 6	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far
• Access to in-building physical infrastructure according to Article 9	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far

Source: BEREC

Table 33: Percentage of disputes resolved which granted what the requestor demanded (LT, PL, PT, RO)

Country	Lithuania	Poland	Portugal	Romania
Percentage of the total number of disputes resolved[87] which granted what the requestor demanded (e.g. access to physical infrastructure, coordination of civil works, access to in-building physical infrastructure)	N/A, no dispute resolved so far	60 (66%) fully and 27 (30%) partially of 91 disputes resolved in total granted access	100% (1 of 1 dispute partially resolved)[94]	N/A, no dispute resolved so far
Percentage of disputes resolved[87] which granted				
• Access to physical infrastructure according to Article 3	N/A, no dispute according to Article 3 resolved so far	100% (1 of 1 dispute resolved)[92]	100% (1 of 1 dispute resolved)[94]	N/A, no dispute according to Article 3 resolved so far
• Access to information on physical infrastructure according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• An on-site survey according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• Coordination of civil works according to Article 5	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far
• Access to information on planned civil works according Article 6	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far
• Access to in-building physical infrastructure according to Article 9	N/A, no dispute according to Article 9 resolved so far	59 (66%) fully and 27 (30%) partially of 90 disputes resolved granted access[93]	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far

Source: BEREC

[94] However, the requestor demanded a price revision which the NRA did not grant.

Table 34: Percentage of disputes resolved which granted what the requestor demanded (SI, ES, SE, UK)

Country	Slovenia	Spain	Sweden	UK
Percentage of the total number of disputes resolved[87] which granted what the requestor demanded (e.g. access to physical infrastructure, coordination of civil works, access to in-building physical infrastructure)	N/A[95]	N/A, only one dispute resolved so far and in this case the matter was the access price[96]	4 disputes resolved with a total of 7 issues. In 6 of the 7 issues the requests were granted => 86%	N/A, no dispute resolved so far
Percentage of disputes resolved[87] which granted				
• Access to physical infrastructure according to Article 3	N/A, no dispute according to Article 3 resolved so far	N/A, only one dispute resolved so far and in this case the matter was the access price[96]	2 disputes and the requests were granted => 100%	N/A, no dispute according to Article 3 resolved so far
• Access to information on physical infrastructure according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	1 dispute and the request was granted => 100%	N/A, no dispute according to Article 4 resolved so far
• An on-site survey according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	1 dispute and the request was granted => 100%	N/A, no dispute according to Article 4 resolved so far
• Coordination of civil works according to Article 5	N/A, no dispute according to Article 5 resolved so far (except 1 with mediation)	N/A, no dispute according to Article 5 resolved so far	2 disputes and 1 request was granted => 50%.	N/A, no dispute according to Article 5 resolved so far
• Access to information on planned civil works according Article 6	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	1 dispute and the request was granted => 100%	N/A, no dispute according to Article 6 resolved so far
• Access to in-building physical infrastructure according to Article 9	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far

Source: BEREC

[95] The DSB has had only 1 dispute processed. The dispute was resolved with mediation between the parties involved, with the help of the NRA, but outside the formal proceedings.
[96] The main decision was to modify the costs model originally proposed by one party.

Table 35: The most frequent reason why the DSB decided to not grant access (AT, HR, FI, FR)

Country	Austria	Croatia	Finland	France
The most frequent reason why the dispute settlement body decided to not grant:				
• Access to physical infrastructure according to Article 3	N/A, NRA (RTR) did grant access	N/A, no dispute according to Article 3 resolved so far	N/A, no dispute according to Article 3 resolved so far	N/A, no dispute according to Article 3 resolved so far
• Access to information / on-site surveys according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• The coordination of civil works according to Article 5	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far
• Access to information according Article 6	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far
• Access to in-building physical infrastructure according to Article 9	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far

Source: BEREC

Table 36: The most frequent reason why the DSB decided to not grant access (DE, GR, HU, IT)

Country	Germany	Greece	Hungary	Italy
The most frequent reason why the dispute settlement body decided to not grant:				
• Access to physical infrastructure according to Article 3	N/A, no dispute according to Article 3 resolved so far	N/A, no dispute according to Article 3 resolved so far	N/A, both disputes were resolved with mediation	N/A, NRA (AGCOM) did grant access
• Access to information / on-site surveys according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• The coordination of civil works according to Article 5	N/A, NRA (BNetzA) did grant access	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far
• Access to information according Article 6	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far
• Access to in-building physical infrastructure according to Article 9	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far

Source: BEREC

Table 37: The most frequent reason why the DSB decided to not grant access (LT, PL, PT, RO)

Country	Lithuania	Poland	Portugal	Romania
The most frequent reason why the dispute settlement body decided to not grant:				
• Access to physical infrastructure according to Article 3	N/A, no dispute according to Article 3 resolved so far	N/A, NRA (UKE) did grant access[92]	N/A, NRA (ANACOM) did grant access[97]	N/A, no dispute according to Article 3 resolved so far
• Access to information / on-site surveys according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far
• The coordination of civil works according to Article 5	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 5 resolved so far	N/A, no dispute according to Article 3 resolved so fa5
• Access to information according Article 6	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far
• Access to in-building physical infrastructure according to Article 9	N/A, no dispute according to Article 9 resolved so far	Other in-house wiring	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far

Source: BEREC

[97] However, ANACOM did not found that prices demanded by the requestor (AMTQT) were not cost oriented.

Table 38: The most frequent reason why the DSB decided to not grant access (SI, ES, SE, UK)

Country	Slovenia	Spain	Sweden	UK
The most frequent reason why the dispute settlement body decided to not grant:				
• Access to physical infrastructure according to Article 3	N/A, no dispute according to Article 3 resolved so far	N/A, no dispute resolved which did not grant access	N/A, NRA (PTS) did grant access.	N/A, no dispute according to Article 3 resolved so far
• Access to information / on-site surveys according Article 4	N/A, no dispute according to Article 4 resolved so far	N/A, no dispute according to Article 4 resolved so far	N/A, NRA (PTS) did grant access.	N/A, no dispute according to Article 4 resolved so far
• The coordination of civil works according to Article 5	N/A, no dispute according to Article 5 resolved so far (except 1 with mediation)	N/A, no dispute according to Article 5 resolved so far	The request was denied because it was not detailed enough.	N/A, no dispute according to Article 5 resolved so far
• Access to information according Article 6	N/A, no dispute according to Article 6 resolved so far	N/A, no dispute according to Article 6 resolved so far	N/A, NRA (PTS) did grant access.	N/A, no dispute according to Article 6 resolved so far
• Access to in-building physical infrastructure according to Article 9	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far	N/A, no dispute according to Article 9 resolved so far.	N/A, no dispute according to Article 9 resolved so far

Source: BEREC

Table 39: Sectors involved in dispute settlement procedures so far (AT, HR, FI, FR)

Country	Austria	Croatia	Finland	France
Operators requested access to existing physical infrastructure (acc. Art. 3) of which sectors so far:				
• Electronic communications	Yes, 1 of 4 requests so far	N/A, no requests so far	1	N/A, no requests so far
• Electricity	No	N/A, no requests so far	0	N/A, no requests so far
• Gas	No	N/A, no requests so far	0	N/A, no requests so far
• Heating	No	N/A, no requests so far	0	N/A, no requests so far
• Water[98]	No	N/A, no requests so far	0	N/A, no requests so far
• Transport	Yes, 1 of 4 requests so far	N/A, no requests so far	0	N/A, no requests so far
• Other	Yes, 2 (municipality, multi-utility company[99]) of 4 requests so far	N/A, no requests so far	0	N/A, no requests so far
Operators requested coordination of civil works (acc. Art. 5) with operators of which sectors so far:				
• Electronic communications	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Electricity	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Gas	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Heating	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Water[98]	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Transport	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Other	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far

Source: BEREC

[98] Including disposal or treatment of waste water and sewage, and drainage systems and excluding elements of networks used for the provision of water intended for human consumption (see Art. 2(1)iv and Art 2(2)).

[99] In one case access is requested from an energy supply company active in several sectors (e.g. electricity, gas, heating).

Table 40: Sectors involved in dispute settlement procedures so far (DE, GR, HU, IT)

Country	Germany	Greece	Hungary	Italy
Operators requested access to existing physical infrastructure (acc. Art. 3) of which sectors so far:				
• Electronic communications	No	No requests so far	Yes	Yes, 1 of 2 requests acc. to Art. 3[100]
• Electricity	No	No requests so far	No	Yes, 2 of 2 requests acc. to Art. 3[100]
• Gas	No	No requests so far	No	Yes, 1 of 2 requests acc. to Art. 3[100]
• Heating	No	No requests so far	No	0
• Water[98]	No	No requests so far	No	0
• Transport	Yes, 1 of 1 requests so far (for a federal waterway)	No requests so far	No	0
• Other (which?)	No	No requests so far	No	
Operators requested coordination of civil works (acc. Art. 5) with operators of which sectors so far:				
• Electronic communications	Yes, 2 of 2 requests acc. to Art. 5.	No requests so far	No requests so far	N/A, no such requests so far
• Electricity	No requests so far	No requests so far	No requests so far	N/A, no such requests so far
• Gas	No requests so far	No requests so far	No requests so far	N/A, no such requests so far
• Heating	No requests so far	No requests so far	No requests so far	N/A, no such requests so far
• Water[98]	No requests so far	No requests so far	No requests so far	N/A, no such requests so far
• Transport	No requests so far	No requests so far	No requests so far	N/A, no such requests so far
• Other (which)?	No requests so far	No requests so far	No requests so far	N/A, no such requests so far

Source: BEREC

[100] One request refers to a multi-utility company owning an infrastructure used for electronic communications, electricity and gas.

Table 41: Sectors involved in dispute settlement procedures so far (LT, PL, PT, RO)

Country	Lithuania	Poland	Portugal	Romania
Operators requested access to existing physical infrastructure (acc. Art. 3) of which sectors so far:				
• Electronic communications	N/A, no requests so far	Yes – 4 of 6 cases	No	N/A, no requests so far
• Electricity	N/A, no requests so far	Yes – 2 of 6 cases	No	N/A, no requests so far
• Gas	N/A, no requests so far	No	No	N/A, no requests so far
• Heating	N/A, no requests so far	No	No	N/A, no requests so far
• Water[98]	N/A, no requests so far	No	No	N/A, no requests so far
• Transport	N/A, no requests so far	No	Yes 1of 2 requests acc. to Art. 3	N/A, no requests so far
• Other (which?)	N/A, no requests so far	No	Yes (municipalities), 1 of 2 request acc. to Art. 3	N/A, no requests so far
Operators requested coordination of civil works (acc. Art. 5) with operators of which sectors so far:				
• Electronic communications	N/A, no such requests so far	N/A	No	No requests so far
• Electricity	N/A, no such requests so far	N/A	No	No requests so far
• Gas	N/A, no such requests so far	N/A	No	No requests so far
• Heating	N/A, no such requests so far	N/A	No	No requests so far
• Water[98]	N/A, no such requests so far	N/A	No	No requests so far
• Transport	N/A, no such requests so far	N/A	No	No requests so far
• Other (which)?	N/A, no such requests so far	N/A	No	No requests so far

Source: BEREC

Table 42: Sectors involved in dispute settlement procedures so far (SI, ES, SE, UK)

Country	Slovenia	Spain	Sweden	UK
Operators requested access to existing physical infrastructure (acc. Art. 3) of which sectors so far:				
• Electronic communications	No	No	Yes, 2 of 2 requests acc. to Art. 3.	N/A, no requests so far
• Electricity	No	No	No	N/A, no requests so far
• Gas	No	No	No	N/A, no requests so far
• Heating	No	No	No	N/A, no requests so far
• Water[98]	No	No	No	N/A, no requests so far
• Transport	No	No	No	N/A, no requests so far
• Other	No	Yes (municipality), 1 of 1 request acc. to Art. 3	No	N/A, no requests so far
Operators requested coordination of civil works (acc. Art. 5) with operators of which sectors so far:				
• Electronic communications	Yes, 1 of 1 request	N/A, no requests so far	Yes, 2 of 2 requests acc. to Art. 5.	N/A, no requests so far
• Electricity	N/A, no requests so far	N/A, no requests so far	No	N/A, no requests so far
• Gas	N/A, no requests so far	N/A, no requests so far	No	N/A, no requests so far
• Heating	N/A, no requests so far	N/A, no requests so far	No	N/A, no requests so far
• Water[98]	N/A, no requests so far	N/A, no requests so far	No	N/A, no requests so far
• Transport	N/A, no requests so far	N/A, no requests so far	No	N/A, no requests so far
• Other	N/A, no requests so far	N/A, no requests so far	No	N/A, no requests so far

Source: BEREC

Table 43: The most difficult challenge the NRA was faced with in the dispute settlement procedures (AT, HR, FI, FR)

Country	Austria	Croatia	Finland	France
Description of the most difficult challenge	Setting the access price for access to existing physical infrastructure	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
The most difficult challenge is related to:				
• Task of Article 3 and/or 4 and/or 5 and/or 6 and/or 9	Article 3	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Setting of terms and conditions excluding price	No	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Setting the price	Yes	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
• Determining whether criteria for refusal of access to physical infrastructure (acc. Art. 3, Art. 9) or of request for coordinating civil works (acc. Art. 5) are fulfilled	No	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far
Description of the solution used to resolve the most difficult challenge	In most cases (since 2009) access to existing physical infrastructure of communications network operators was requested. In these cases, the access price was set based on fully distributed costs including costs of idle capacity. The reasons are: (i) Both operators (the one who request access and the one which provides access) are active on the communications market. (ii) This method ensures that costs to build infrastructure or to use the infrastructure of other operators are (rather) the same. (iii) Therefore, method maintains level playing field.	N/A, no requests so far	N/A, no requests so far	N/A, no requests so far

Source: BEREC

Table 44: The most difficult challenge the NRA was faced with in the dispute settlement procedures (DE, GR, HU, IT)

Country	Germany	Greece	Hungary	Italy
Description of the most difficult challenge	Price setting in consideration of cost sharing due to coordination of civil works	N/A as there has not been a decision by the DSB yet	The network operator had not responded to the service provider's offer before the initiation of the dispute settlement procedure. All relevant statements had to be collected during the procedure, which took much longer time.	• Setting the price for the access to existing physical infrastructure for the specific case (e.g. in case of an historical urban area) • To decide whether the existing physical infrastructure has sufficient space to host the elements of the high-speed network
The most difficult challenge is related to:				
• Task of Article 3 and/or 4 and/or 5 and/or 6 and/or 9	Article 5	N/A	Article 3	Article 3
• Setting of terms and conditions excluding price	No	N/A	Yes	Yes
• Setting the price	Yes	N/A	Yes	Yes
• Determining whether criteria for refusal of access to physical infrastructure (acc. Art. 3, Art. 9) or of request for coordinating civil works (acc. Art. 5) are fulfilled	Yes, Art. 5	N/A	No	Yes, with reference to Article 3.
Description of the solution used to resolve the most difficult challenge	In both cases, the parties had to participate only on additional costs beyond costs regarding the civil works. This was done, because the costs of the civil works were already covered by the fees, customers have paid for the house connection to the municipality (requestor) (water, gas, electricity and even Broadband Access)	N/A	Collecting the missing data and the relevant statements and implementing the settlement agreement into the resolution.	• With regard the access price the solution was in one case to use the same costing methodology which was used in the last access market analysis (decision n. 623/15/CONS) i.e. a bottom-up LRIC costing model. • With regard availability of space the solution was to conduct a thorough analysis

Source: BEREC

Table 45: The most difficult challenge the NRA was faced with in the dispute settlement procedures (LT, PL, PT, RO)

Country	Lithuania	Poland	Portugal	Romania
Description of the most difficult challenge	N/A, no requests so far	Determining whether criteria for refusal of access to physical infrastructure are fulfilled	Defining the price for the access to the physical infrastructure (e.g. ducts, poles). The law (DL 123/2009) did not foresaw ANACOM's powers to impose a specific cost methodology. Therefore, ANACOM had not the possibility to impose a cost oriented price when it found a situation of excessive pricing.	N/A, no dispute so far
The most difficult challenge is related to:				
• Task of Article 3 and/or 4 and/or 5 and/or 6 and/or 9	N/A, no requests so far	Article 3	Article 3 of BCRD	N/A, no dispute so far
• Setting of terms and conditions excluding price	N/A, no requests so far	No	No	N/A, no dispute so far
• Setting the price	N/A, no requests so far	No	Yes	N/A, no dispute so far
• Determining whether criteria for refusal of access to physical infrastructure (acc. Art. 3, Art. 9) or of request for coordinating civil works (acc. Art. 5) are fulfilled	N/A, no requests so far	Yes (the technical suitability of the physical infrastructure / availability of space to host the elements of high-speed electronic communications networks)	No	N/A, no dispute so far
Description of the solution used to resolve the most difficult challenge	N/A, no requests so far	Cases are pending – no solution has been applied yet in a resolved dispute after the transposition of BCRD	The approval of the amendments to the DL123/2009 by Decree-Law 92/2017 of 31st July 2017 now provides the NRA with the power to specify the cost methodology, however, with some restriction.[101]	N/A, no dispute so far

Source: BEREC

[101] The price methodology to be specified by the NRA does not apply to the municipalities, since they will determine their own methodologies.

Table 46: The most difficult challenge the NRA was faced with in the dispute settlement procedures (SI, ES, SE, UK)

Country	Slovenia	Spain	Sweden	UK
Description of the most difficult challenge	N/A, the DSB has had only 1 dispute processed. The dispute was resolved with mediation between the parties involved, with the help of the NRA, but outside the formal proceedings. Therefore, it is premature to point out any challenges.	In the one dispute resolved so far the main challenge relates to the access price. In this case, according to Spanish law, the price has to be based on the gross revenue, however, the operator concerned did not provide retail services (see section 4 of Annex 1)	• In the 4 disputes resolved so far the most difficult challenge was the relation between BCRD and national law. • In dispute no 1 (Art. 3) to decide the relation between Art. 3.2 BCRD and the duct obligation in the incumbents SMP decision on market 3a; • In dispute no 2 (Art. 6) the relation between the Deployment Act and the constitutional law	N/A, no requests so far
The most difficult challenge is related to:				
• Task of Article 3 and/or 4 and/or 5 and/or 6 and/or 9	N/A	Article 3 of BCRD	Art. 3 dispute no. 1, Art. 6 dispute no. 2	N/A, no requests so far
• Setting of terms and conditions excluding price	N/A	No	No	N/A, no requests so far
• Setting the price	N/A	Yes	No	N/A, no requests so far
• Determining whether criteria for refusal of access to physical infrastructure (acc. Art. 3, Art. 9) or of request for coordinating civil works (acc. Art. 5) are fulfilled	N/A	No	No	N/A, no requests so far
Description of the solution used to resolve the most difficult challenge	The solution was achieved outside the formal proceeding	The NRA (CNMC) found some income at the wholesale level that could be taken into consideration.	See section 5d) in Annex 1	N/A, no requests so far

Source: BEREC

Table 47: Information available at the SIP according Article 4 of BCRD – part 1 (AT,FI, DE, LT)

Country	Austria	Finland	Germany	Lithuania
Do public sector bodies have the obligation to make information available via the SIP by electronic means[102]	Yes – all (national/regional/local level) which hold, in electronic format, by reason of their tasks elements of the minimum information defined in the BCRD in Art. 4 para 1.	Yes, all network owners and also other public authorities if the information is not otherwise available.	Yes, in part – there is no specific requirement for public sector bodies parallel to Art.4.2 but there is a general obligation for any entity, public or private, which owns or operates infrastructure that can be used for telecommunication purposes to make their data available via the SIP.	Yes - state or municipal institutions, bodies, enterprises, and public establishments managing and/or handling information on the existing physical infrastructure are obliged to give access to RRT to the information they manage and/or handle electronically on the existing physical infrastructure (type of infrastructure, place of installation, routing, filling, etc.).
Do also other organisations (e.g. network operators[103]) have the obligation to make information available via the SIP?	Yes, “network operators” according to Art. 2 para 1 of the BCRD and operators of cableway infrastructure	Yes, network operators which own or operate infrastructure that can be used for telecommunication purposes except their activities are targeted at a low number of users, locally restricted and economically de minimis	Yes, any entity which owns or operates infrastructure that can be used for telecommunication purposes (see above)	No
Do communications network operators have the right to access more than the minimum information defined in Article 4 para 1 (on request and/or via SIP)?	No	Yes, also information about underground active network infrastructure	No	No

Source: BEREC

[102] According to Article 4 para 2 Member States have the possibility to require this.

[103] E.g. public communications network operators, utilities providing gas, electricity, heating etc. (see BCRD Article 2 para 1)

Table 48: Information available at the SIP according Article 4 of BCRD – part 1 (PL, PT, SE)

Country	Poland	Portugal	Sweden
Do public sector bodies have the obligation to make information available via the SIP by electronic means[102]	Yes, The Chief Surveyor of Poland, Voivodeships, counties and entities managing roads[104]	Yes - entities referred in article 2 of DL123/2009 who hold infrastructures suitable for the accommodation of electronic communications networks, electronic communications companies, as well as holders of infrastructures suitable for the accommodation of electronic communications networks that are used by the latter, which includes public sector bodies.[105]	• Information shall be provided via SIP or by other electronic means (for example own webpage). • Obligation applies also to all network holders.[85]
Do also other organisations (e.g. network operators[103]) have the obligation to make information available via the SIP?	Yes[106]	Yes – see above (this includes network operators as defined in the BCRD)	• Not mandatory. Information shall be provided via SIP or by other electronic means (for example own webpage). • Information to be provided on request. • Obligation applies to all network holders.[85]
Do communications network operators have the right to access more than the minimum information defined in Article 4 para 1 (on request and/or via SIP)?	No	No, however, information regarding occupation of infrastructures may also be available in SIIA[107] if voluntarily provided by the infrastructure owner (it is an option not mandatory).	No, only obligation to provide minimum information.

Source: BEREC

[104] The Chief Surveyor of Poland is required to provide information relevant to SIP from his geodetic databases (cadastral, land surveying etc.). Voivodeships and counties may be asked by the President of UKE to provide similar information from their registers. Entities managing roads are required to provide data about technical infrastructure in roads as well as information about planned construction works and renovations.

[105] The State, autonomous regions, local authorities and all entities under the authority or supervision of those, performing administrative tasks, regardless of their entrepreneurial nature

[106] The following entities are obliged to make information available via the SIP: (i) network operator who has been granted administrative decision on terms of access to the infrastructure (ii) entity managing closed area (e.g. railways) (iii) owner, holder of a perpetual usufruct or administrator of at least 10 residential multiple dwellings, buildings of collective residence or public utility buildings. These entities provide the President of UKE addresses of their websites, containing conditions of access.

[107] The term used in the national law (DL123/2009) to designate the SIP is SIIA ("Information System of Suitable Infrastructures").

Table 49: Information available at the SIP according Article 4 of BCRD – part 2 (AT,FI, DE, LT)

Country	Austria	Finland	Germany	Lithuania
Does the SIP provide information also on existing physical infrastructure of critical national infrastructures?	Yes	Yes, if network owners provide this information voluntarily. They do not have to give the information if it endangers network security, general or national safety or company or trade secrets.	Yes, in part. Only parts of critical infrastructures that are vital to its functioning are exempt from transparency requests.	Yes. SIP provides information about existing physical infrastructure by making public infrastructure maps (GIS) prepared by municipalities available, i.e. SIP does not edit it. Therefore, if critical infrastructure is reflected on the map, it becomes public.
If this is the case, is access to this information the same as for other infrastructures or is there any difference?	Difference. See Table 57, line description of the solution used to resolve the challenge	Same	Same, for the parts that are not exempt from transparency requests	Same.
Is the SIP already in operation and does it answer requests for information regarding Article 4?	Yes	Yes	Yes	Yes, SIP is in operation, but there is no need to answer requests, because all information is made public
Average monthly number of requests for information regarding Article 4 answered by the SIP	Approx. 220	No statistics yet available as network owners are starting just testing the service.	Approx. 140	There is no need to answer requests, since information regarding Article 4 is made public.

Source: BEREC

Table 50: Information available at the SIP according Article 4 of BCRD – part 2 (PL, PT, SE)

Country	Poland	Portugal	Sweden
Does the SIP provide information also on existing physical infrastructure of critical national infrastructures?	No, when the critical infrastructure will be specified in the national regulation, the SIP will not provide such information[26]	Yes, but information of critical infrastructures can be exempted from being provided[108]	The network holders decide which information they want to provide.
If this is the case, is access to this information the same as for other infrastructures or is there any difference?	N/A	The implementation of a difference in access is yet to be defined[109]	The network holders decide which information they want to provide.
Is the SIP already in operation and does it answer requests for information regarding Article 4?	Yes	• Yes, SIIA is in operation since 14th January of 2016[110.] • SIIA is implemented on an information sharing basis and is not implemented as a "one stop shop"[111] • Therefore, SIIA does not count the number of requests.	SIP is in operation. However, it is not mandatory to make information acc. to Article 4 available via the SIP. It is possible to find such information if SIP is used by the network holder concerned
Average monthly number of requests for information regarding Article 4 answered by the SIP	Not monitored since the SIP offers a search tool and no formal requests are required	• SIIA does not count the number of requests for information regarding Article 4	26 cases per month have been published since June 2016 (up to January 2017).

Source: BEREC

[108] DL123/2009 includes exemptions for critical national infrastructures and determines that the National Security Office shall provide an opinion, based on grounds presented by bodies managing infrastructures included in the SIP, on which information should be deemed as confidential or reserved, ANACOM being then responsible for deciding which classification is to be given to the referred information, having heard the body managing infrastructures and Commission of Access to Administrative Documents.

[109] E.g. the knowledge of this information is useful for entities performing civil works in the same area where critical infrastructure exists.

[110] See https://www.anacom.pt/render.jsp?contentId=1376844&languageId=1

[111] The SIIA is based on 5 flows of information (infrastructure, access conditions, rights of way, civil works announcements, and data on the entities).

Table 51: Information available at the SIP according Article 4 of BCRD – part 3 (AT,FI, DE, LT)

Country	Austria	Finland	Germany	Lithuania
Functionalities provided by the SIP for network operators which request access to the information:				
• Graphic presentation of data?	Yes	Yes (network areas)	Yes	Yes
• Range of scale (1:x to 1:y)	Grid 100mx100m up to 5kmx5km	1km x1km	1:30.000 – 1:250.000	It depends on city, but usually 1:500
• Possibility to export data?	Geographic data - no, Pdf - yes	Yes, geographical data	Yes, PDF Export	No
• Printing option?	Yes	No	Yes	Yes
• In required area, selection of infrastructures of a single and/or multiple and/or all infrastructure owners is possible (single/multiple/all)?	Single. The infrastructure which should be shown can be chosen from a list of all operators which have infrastructure in the required area.	All: Does show only network owners having network in the area. User can request the detailed information from network owner via the SIP.[112]	Multiple – infrastructure can be selected by type, but not by operator/owner	Possibility of selection depends on the certain map received from the certain municipality.
• Other functionalities which support user-friendliness?[113]	Yes, outline map, search and zoom functionality, requests can be stored before they are submitted to the NRA, results of a request remain available after the request	No	Yes. Outline map, zoom functionality, data generated as the result of a request may be kept for up to two years	Search and zoom functionality.
• Other functionalities?	No	Yes, possibility to send information/contact requests.	No	No

Source: BEREC

[112] The network owner answers the request it receives from the user via SIP using SIP.

[113] E.g. outline map, search functionality

Table 52: Information available at the SIP according Article 4 of BCRD – part 3 (PL, PT, SE)

Country	Poland	Portugal	Sweden
Functionalities provided by the SIP for network operators which request access to the information:			
• Graphic presentation of data?	Yes	Yes.	Yes
• Range of scale (1:x to 1:y)	1:1000 – 1:1000000	Urban Areas: 1: 1,000 to 1:2,000; Rural Areas: 1:5,000	Down to approximate 1:1,500
• Possibility to export data?	Information regarding broadband infrastructure - Yes (PDF, CSV), other data - No	Yes. (Formats xls and/or .pdf)	Yes, possible to export the compiled request. Geographical data could be exported on various coordinates- and GIS system.[114]
• Printing option?	No	Yes	Yes
• In required area, selection of infrastructures of a single and/or multiple and/or all infrastructure owners is possible (single/multiple/all)?	All. There are some filters but filtering by specific owner is not available.	Yes. It is possible to have information on single and/or multiple infrastructure owners (it is possible to filter).	Multiple
• Other functionalities which support user-friendliness?[113]	Search	Yes, outline map, search and zoom functionalities available.	• Outline map, property map, orthophotographic maps, search and zoom functionality. • Request can be forwarded to other users.[115]
• Other functionalities?	No, however further development of the SIP is planned.	Yes. Dashboard (with several indicators), management of several alerts, the possibility to request infrastructure routes[116]	Yes

Source: BEREC

[114] There is also an API available for network owners where they can collect requests and handle them in their own systems

[115] Network owners shall in SIP indicate if they have or have not infrastructure in required area. If they have infrastructure, SIP will inform broadband builder on how to ask for access.

[116] It is possible to request and get an infrastructure route between 2 geographic points (with a filter on 1, 2 or more infrastructure owners)

Table 53: Information available at the SIP according Article 6 of BCRD (AT, FI, DE, LT)

Country	Austria	Finland	Germany	Lithuania
Do communications network operators have the right to access more than the minimum information defined in Article 6 para 1 (on request and/or via SIP)?	No	No	No	No
Is the SIP already in operation and does it answer requests for information regarding Article 6?	Yes	Yes	Yes	Yes, SIP is already in operation, but there is no need to answer requests, because all information is made public.
Average monthly number of requests for information regarding Article 6 answered by the SIP	5	No statistics yet available as network operators and network builders are just testing the service.	BNetzA currently publishes the information defined in Article 6 on our website so BNetzA cannot track the number of requests.	Whereas SIP provides all information about planned civil works by making it public on its website, there is no need for requests.

Source: BEREC

Table 54: Information available at the SIP according Article 6 of BCRD (PL, PT, SE)

Country	Poland	Portugal	Sweden
Do communications network operators have the right to access more than the minimum information defined in Article 6 para 1 (on request and/or via SIP)?	No	Yes, e.g. also information on the characteristics of the intervention, charges and other conditions to be observed and the time limit to join the works to be executed.	No, only obligation to provide minimum information
Is the SIP already in operation and does it answer requests for information regarding Article 6?	Yes	• Yes, SIIA is in operation since 14th January of 2016[110] • SIIA is implemented on an information sharing basis and is not implemented as a "one stop shop"[111] • Therefore, SIIA does not count the number of requests.	Yes, SIP in operation.
Average monthly number of requests for information regarding Article 6 answered by the SIP	Not monitored since the SIP offers a search tool and no formal requests are required	• SIIA does not count the number of requests for information regarding Article 6	150 requests /month (June 2016 - January 2017).

Source: BEREC

Table 55: Information available at the SIP according Article 7 of BCRD (AT,FI, DE, LT)

Country	Austria	Finland	Germany	Lithuania
Do communications network operators have the right to submit, by electronic means via the SIP, applications for permits required for civil works (according Article 7 para 2)?	No	No	No	N/A, RRT doesn't perform SIP tasks mentioned in Article 7.
Is the SIP already in operation and does it answer requests for information regarding Article 7?	Yes	Yes	BNetzA has not received any pertinent information yet so BNetzA cannot publish it at the moment.	N/A, RRT doesn't perform SIP tasks mentioned in Article 7.
Average monthly number of requests for information regarding Article 7 answered by the SIP	Information is available to the public, no monitoring of numbers of requests	Information is available to the public, no monitoring of numbers of requests	N/A	N/A, RRT doesn't perform SIP tasks mentioned in Article 7.

Source: BEREC

Table 56: Information available at the SIP according Article 7 of BCRD (PL, PT, SE)

Country	Poland	Portugal	Sweden
Do communications network operators have the right to submit, by electronic means via the SIP, applications for permits required for civil works (according Article 7 para 2)?	No	No.	No
Is the SIP already in operation and does it answer requests for information regarding Article 7?	Yes	• Yes[117], SIIA is in operation since 14th January of 2016[110] • SIIA is implemented on an information sharing basis and is not implemented as a "one stop shop"[111] • Therefore, SIIA does not count the number of requests.	Yes
Average monthly number of requests for information regarding Article 7 answered by the SIP	Not monitored since the SIP offers a search tool and no formal requests are required	• SIIA does not count the number of requests for information regarding Article 7	Information is available to the public, no monitoring of numbers of requests

Source: BEREC

[117] SIIA contains information on the procedures and conditions on which the granting of rights of way depends, but does not contain information on the procedures prior control of the urban operation - prior notice - that pursuant to article 7 of DL 123/2009 and DL 555/99 must be complied with, although in this case it is a simplified procedure which allows (being the communication in the required terms and paid the fees due) to start the urban intervention.

Table 57: The most difficult challenge the NRA was faced with in the function as SIP and the solution used to resolve it (AT, FI, DE, LT)

Country	Austria	Finland	Germany	Lithuania
Description of the most difficult challenge	Critical national infrastructure. To find the appropriate balance between reducing costs of high-speed networks and the protection of critical infrastructure. BCRD neither defines the term “critical infrastructure” nor provides examples of cases which are accepted for refusal of access to the information.	The main issue is to incentivise the organisations which have to provide information concerning existing physical infrastructure (Art. 4) to the SIP to meet this obligation.	Data collection from 1,200+ entities	There are almost 60 municipalities in Lithuania and they manage and/or handle information on the existing physical infrastructure in different ways (different formats, software, etc.).
The most difficult challenge is related to:				
• Task of Article 4 and/or 6 and/or 7?	Article 4	Articles 4	Article 4	Article 4
• The setting up of the SIP and/or the operation of the SIP?	Operation of the SIP	Operation of the SIP	Operation of the SIP	Operation of the SIP.
Description of the solution used to resolve the most difficult challenge	Whether or not access to information of critical national infrastructure is granted is decided individually for each request. This decision takes into account the planned use of the critical infrastructure by the requestor of the information. E.g. a gas pipeline may be a critical infrastructure, however, if the requestor of the information just wants to install fibre along the pipeline, then this may be acceptable. Whether an infrastructure is a “critical infrastructure” or not is decided based on a definition of this term in national law.	In Finland, NRA has taken several actions to reach and inform all network owners by founding a network for information sharing and gathering feedback. Also stakeholder organisations representing network owners of different sectors (e.g. energy, water, municipalities) has been contacted to spread knowledge. NRA is also using email distributions, possibilities to give presentations in industry seminars and hosting stakeholder events..	Clear communication with the market and administrative proceedings that are as uniform as possible.	The solution is not found yet.

Source: BEREC

Table 58: The most difficult challenge the NRA was faced with in the function as SIP and the solution used to resolve it (PL, PT, SE)

Country	Poland	Portugal	Sweden
Description of the most difficult challenge	No major challenges so far, some challenges were the strict deadline to launch SIP, to incentivise the infrastructure owners to provide data and the interpretation which information is relevant to national security. Some challenges related to the introduction of version 2.0 of SIP might occur.	The most difficult challenge faced by ANACOM has been incentivizing the entities which own or manage physical infrastructures to contribute putting their record information in the SIIA.	Our main challenges have been to inform about the service and to increase the use of the SIP.
The most difficult challenge is related to:			
• Task of Article 4 and/or 6 and/or 7?	N/A	Article 4	Related to communication and information about the SIP.
• The setting up of the SIP and/or the operation of the SIP?	N/A	The setting up of the SIIA (since the publication of the DL123 in 2009, it took until 2016 for the SIIA to became operational).	Related to communication and information about the SIP.
Description of the solution used to resolve the most difficult challenge	N/A	By promoting several actions /training along the territory within the entities that own or manage infrastructures and by sending official letters informing about their legal obligations regarding the SIIA. Also, by the fixation of time periods for the inclusion of information in the SIIA through the publication of DL92/2007.	• PTS is continuously making information efforts related to the SIP and also related to the Deployment Act. • PTS has also started to analyze the extent to which municipalities publish information.

Source: BEREC