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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND
THE COUNCIL**

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

1. Introduction

Directive 2014/61/EU on measures to reduce the cost of deploying high-speed electronic communications networks¹ (‘the Broadband Cost Reduction Directive’, hereafter ‘the Directive’) aims to facilitate and incentivise the roll-out of high-speed electronic communications networks by lowering the costs with a set of harmonised measures.

The Directive had to be transposed into Member States’ national laws by 1 January 2016, to become applicable in all Member States from 1 July 2016.

Article 12 of the Directive requires the Commission to present by 1 July 2018 a report to the European Parliament and the Council on its implementation, including a summary of the impact of the measures and an assessment of the progress made towards achieving the Directive’s objectives, including whether and how the Directive could further contribute to reaching more ambitious broadband targets than the Digital Agenda ones.

The Commission has reviewed the implementation of the Directive drawing on:

- an external study on the implementation and monitoring of measures under the Directive;²
- a BEREC report on the implementation of the Directive;³
- Digital Economy and Society Index and Report 2018 — Telecoms chapters;
- other data sources, such as fact finding missions to the Member States and analysis of national legislation carried out by Commission.

This report was drafted less than 2 years after the national laws transposing the Directive were supposed to become applicable, with significant delays in many Member States. As a result, the evidence used as the basis for assessing the impact of its measures and the progress made towards achieving its objectives was relatively limited. The report nevertheless aims to lay the foundations for establishing a baseline scenario against which an evaluation can be carried out in the future.

2. The Directive’s scope and main provisions

Scope of the Directive

In order to maximise synergies across networks, the Directive is addressed not only to electronic communications network operators but also to other undertakings providing physical infrastructures suitable to host electronic communications network elements, such as electricity, gas, water and sewage, heating and transport services⁴.

The scope of the Directive covers ‘high-speed electronic communications networks’, meaning networks that are capable of delivering broadband at speeds of at least 30 Mbps.⁵

¹ OJ L 155, 23.5.2014, p. 1.

² Study SMART 2015/0066, performed by a consortium led by WIK Consult, final report available [here](#).

³ BoR (17) 245: http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/7534-berec-report-on-the-implementation-of-the-broadband-cost-reduction-directive

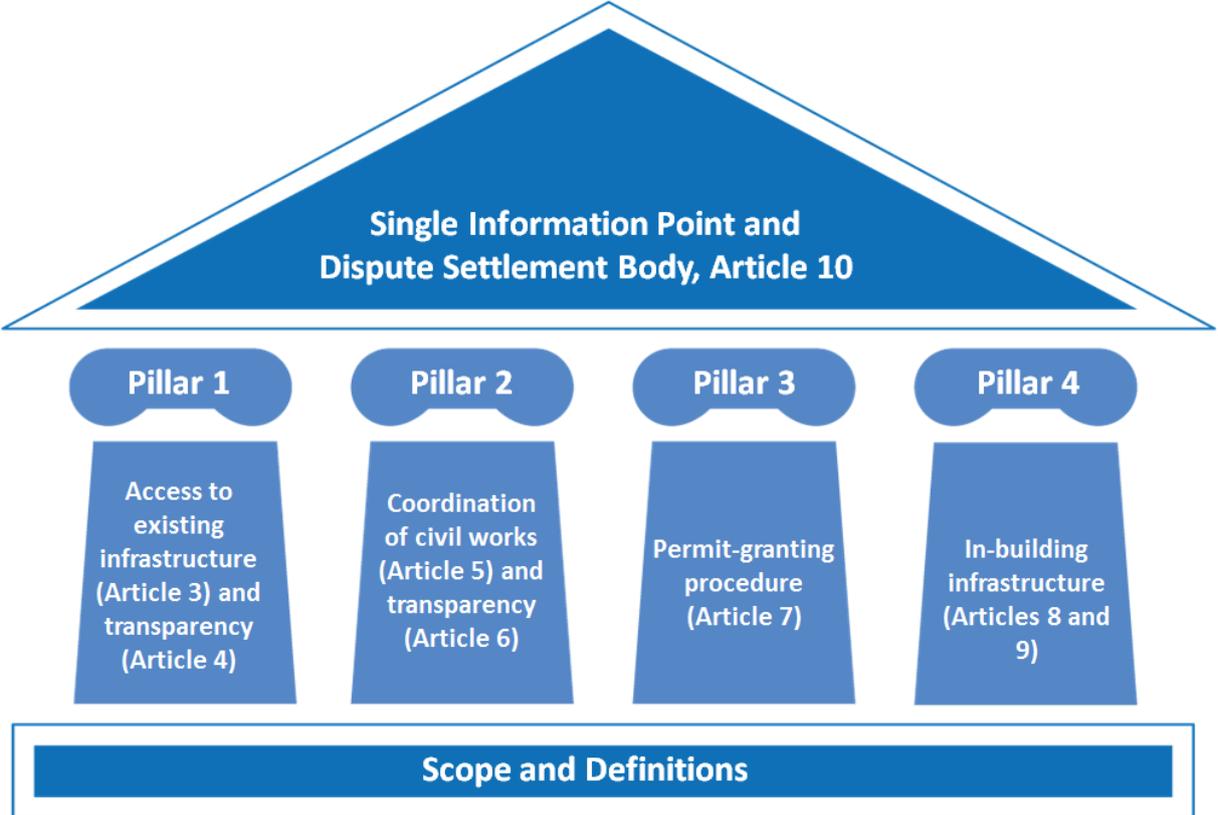
⁴ Article 2(1) of the Directive.

⁵ Article 2(3) of the Directive.

Furthermore, the Directive applies only to ‘physical infrastructure’⁶ which is defined as ‘any element of a network which is intended to host other elements of a network without becoming itself an active element of the network.’

Main provisions

The Directive consists of four pillars and additional requirements to set up a single information point and a dispute settlement body. These apply to all the pillars, as well as requirements to lay down penalties.



The Directive provides for minimum harmonisation, therefore Member States may go beyond the minimum requirements of the Directive to better achieve its objectives. However, if Member States decide to take such measures, they must ensure compliance with Union law, including with the regulatory framework for electronic communications.

Pillar 1: Access to existing physical infrastructure and transparency

Under the first pillar, all network operators (electronic communications, energy utilities, etc.) are required to give access to their physical infrastructure (e.g. ducts, manholes, cabinets, poles), on fair and reasonable terms and conditions, to operators intending to roll out high-speed broadband networks. Access may be refused based on objective, transparent and proportionate criteria.

Pillar 2: Coordination of civil works and transparency

⁶ Article 2(2) of the Directive.

The second pillar allows any network operator to coordinate civil works with electronic communications providers. In addition, network operators carrying out civil works fully or partially publicly financed have to meet any reasonable request to coordinate civil works.

Pillar 3: Permit-granting procedure

Under the third pillar, Member States need to ensure that all relevant information on the conditions and procedures for granting civil works permits with a view to deploying high-speed communications networks is available from a single information point and that in principle decisions relating to permits have to be made within 4 months.

Pillar 4: In-building physical infrastructure

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

Other provisions

Finally, Member States need to appoint one or more bodies to provide information on physical infrastructure, civil works and permits and one or more independent bodies to resolve disputes between network operators regarding access to infrastructure, access to information and requests to coordinate civil works.

3. Contribution to the gigabit society objectives

The EU's strategic objectives for a gigabit society by 2025⁷ are based on the foreseeable connectivity needs of the European digital society in the coming years.

Access to very high capacity network connections is needed for cloud computing, multiple simultaneous uses, and other advanced and smart home applications, as well as in a number of industries for professional use, often in conjunction with mobile access (e.g. manufacturing, healthcare, energy, first responder services).

New applications will require not only faster speeds, but also uplink bandwidth, resilience and error or latency parameters. The deployment of such high capacity and high quality networks, which would need to be based primarily on optical fibre, will require significant additional investment.

By contributing to increase coverage of fibre infrastructure, the Directive could help make 100Mbit/s broadband, upgradable to gigabit speeds, universally available.

⁷ The 2025 Gigabit Society targets are: 1) gigabit connectivity for all main socioeconomic drivers such as schools, transport hubs and the main providers of public services, as well as digitally intensive enterprises; 2) uninterrupted 5G coverage for all urban areas and all major terrestrial transport paths; 3) internet connectivity with a downlink of at least 100 Mbps, upgradable to gigabit speed for all European households. <https://ec.europa.eu/digital-single-market/en/policies/improving-connectivity-and-access>

Likewise, sharing infrastructure and coordinating civil works may also contribute to the deployment of high capacity backbone and access connections to socioeconomic drivers such as small and medium-sized enterprises, schools or hospitals, even in underserved or remote areas.⁸

Given their role in the backhauling of 5G cells, fibre networks are becoming increasingly vital for reaching the corresponding 5G targets for 2025.

Access to existing physical infrastructure under the Directive has the potential to enable fibre-based infrastructure competition, leading to higher quality broadband and greater choice for consumers and businesses, including in more densely populated areas. The Directive could therefore also boost fibre investment in support of dense cells, helping to get 5G coverage in all urban centres, as well as along transport routes, and stimulating the development of 5G wireless applications, including connected cars and automated driving.

The Directive could also play a significant role in relation to the Internet of Things (IoT), as it aims to bring about collaboration between potential beneficiaries of IoT — such as transport systems, energy and water — and the telecoms operators that could provide connectivity.

This could in turn spur the development of smart city applications, smart grids and metering and intelligent transport systems, paving the way for future innovation.

4. Transposition and implementation of the Directive

Under Article 13, Member States were required to adopt and publish national measures transposing the Directive by 1 January 2016 and to apply these measures from 1 July 2016.

After the adoption of the Directive, the Commission organised several events for Member States and stakeholders and had numerous contacts with national authorities to raise awareness of and provide guidance on transposition requirements.

Nevertheless, all Member States except Italy were late with the adoption of the transposition measures, prompting the Commission to send letters of formal notice to the remaining 27 Member States on 23 March 2016. The Commission subsequently sent reasoned opinions to 19 Member States on 30 September 2016, urging them to adopt measures to reduce the cost of deploying high-speed electronic communications networks. In the meantime, all Member States except Belgium have notified full transposition of the Directive into national law.

As the Directive touches upon cross-sectoral competences and not only imposes obligations on the telecommunications sector, but also concerns utilities, building laws, administrative law etc., transposition often proved complex and required adaptations of various measures (also at regional and local levels) in the Member States.

Since the Directive built on best practices in certain Member States and scaled them up at EU level, many Member States already had relevant national legislation in place, which in some cases or aspects went well beyond the requirements of the Directive.

⁸ For instance by accessing existing poles to facilitate rural deployment.

The Directive contains a number of possibilities for Member States to exempt certain infrastructure or certain buildings from its obligations (e.g. from the transparency obligations) if such exemptions are duly reasoned.

Only some Member States have made extensive use of the exemptions. Most have either not used them at all or made them subject to secondary legislation that has not yet been adopted.

The Directive also includes several optional provisions, which it leaves to the Member States' discretion to transpose. Below is an overview of how the Member States made use of these optional provisions:

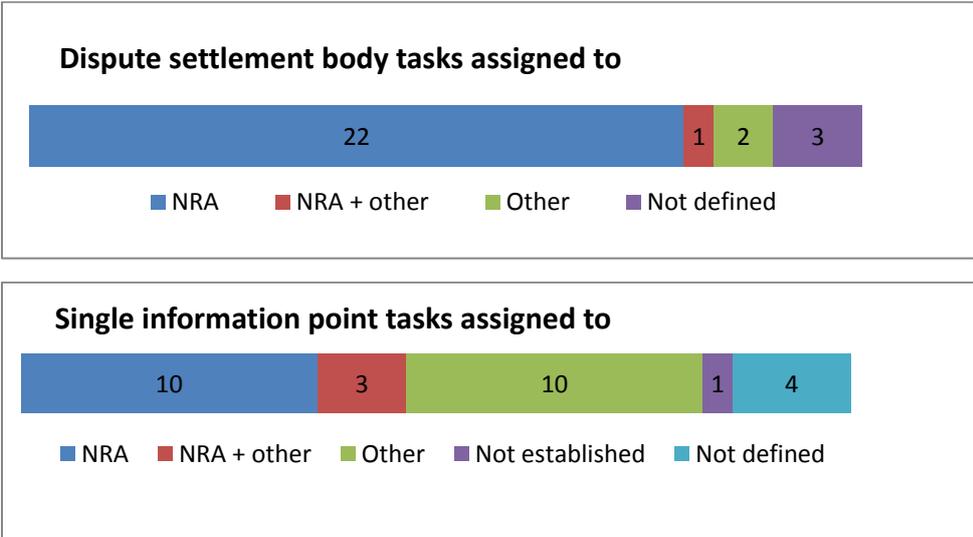
- Several Member States, such as Bulgaria, Cyprus, Denmark, Estonia, Germany, Finland, Luxembourg, Slovenia and Spain established a reciprocal right whereby access to the infrastructure of electronic communications network operators can be requested for the installation of non-telecommunication infrastructure (Article 3(1)).
- Obligations to require public sector bodies to make the minimum information concerning existing physical infrastructure available via the single information point, if it has such information from network operators in electronic format and by reason of its tasks, exist for instance in Austria, Bulgaria, Cyprus, Czech Republic, Greece, Finland, Lithuania, Poland, Portugal and Slovakia (Article 4(2)).
- Rules on apportioning the cost of coordinating civil works have been established for instance in Austria, Portugal and France (Article 5(2)).
- Electronic submission of permit applications via the single information point is possible in Bulgaria, Cyprus, Denmark, Estonia, Latvia, Lithuania, Luxembourg and Malta (Article 7(2)).
- Portugal and Italy have introduced broadband-ready labels and Spain and Germany are considering following suit. In France there is a standard to indicate fibred zones (Article 8(3)).

The Directive provides that Member States appoint one or more independent dispute settlement bodies and one or more bodies to act as a single information point.

The tasks of the dispute settlement body were assigned to the national regulatory authority responsible for dispute resolution under the regulatory framework of electronic communications (NRA), or partially to the NRA, in most of the Member States, and to other bodies in only two Member States.

The tasks of the single information point were assigned to the NRA, or partially to the NRA, in 14 Member States. In 10 Member States other bodies were put in charge of performing the function of the single information point, in most cases a ministry.

Figure 1 — Tasks, set out under the Directive, assigned to NRAs in the EU



Source: BEREC

5. Impact and progress

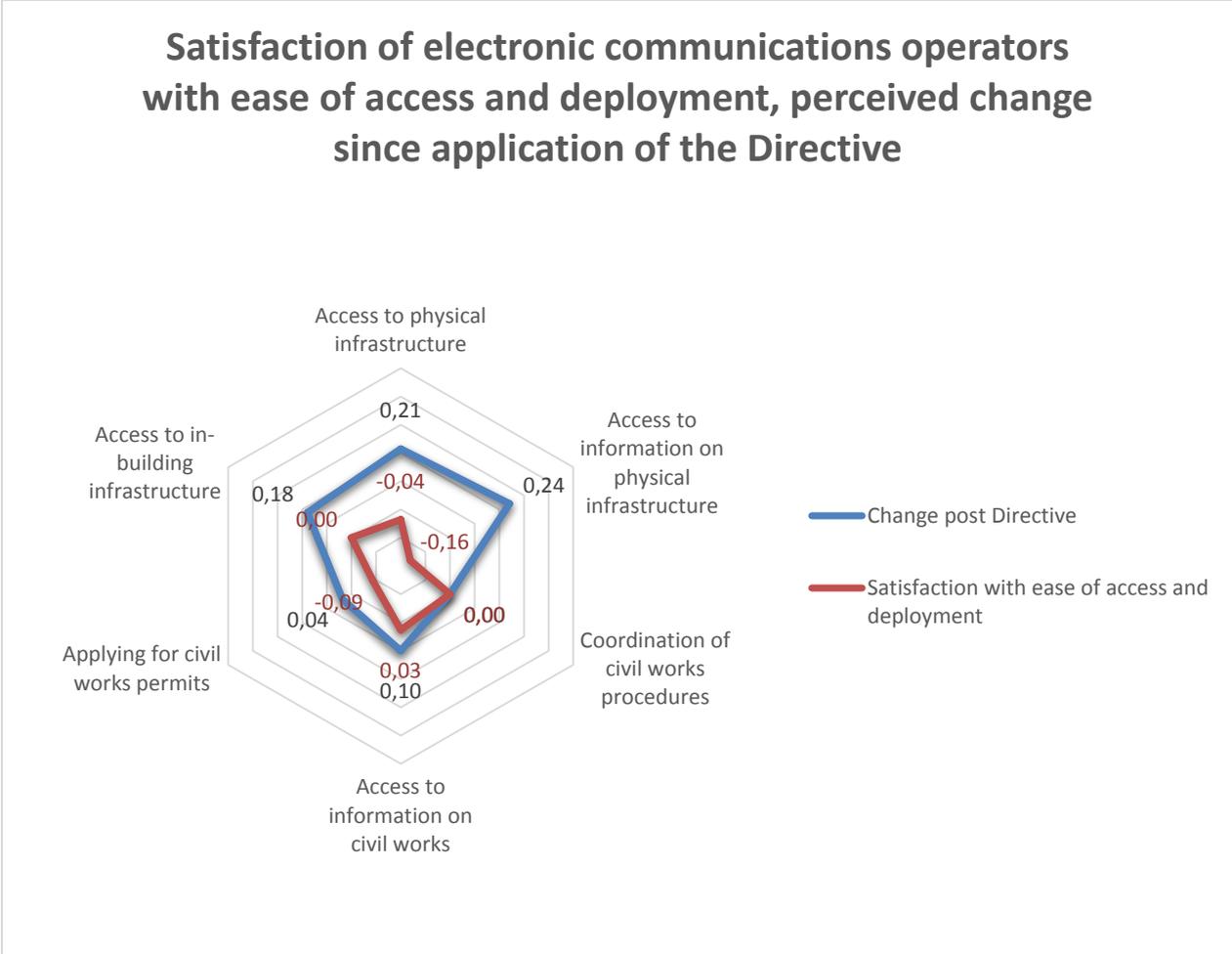
Since this report was drafted less than 2 years after the application deadline of the Directive and most Member States were late in transposing the Directive, its application in practice has only recently started and the experience is so far limited.

Nevertheless, evidence from Member States which previously applied provisions similar to those in the Directive and from undertakings which have engaged in cross-sectoral collaboration confirms that there could be significant benefits, including the expansion of high-capacity broadband to underserved areas, if other Member States follow suit.⁹

Responses to the survey carried out for the study supporting this report show that electronic communications operators believe that there have been improvements in access to physical (including in-building) infrastructure and the information relating to them since the Directive was applied. However, there is still room for improvement, with operators indicating that limited progress has been made in supporting the coordination of civil works, easing the process of applying for civil works permits, or facilitating access to buildings for the installation of in-building infrastructure.

⁹ See Study SMART 2015/0066. For instance, the re-use of utility infrastructure has allowed Open Fibre in Italy to save costs of up to 50 % in the initial phase of deploying FTTH. Open Fibre has an investment plan covering 6 700 remote municipalities identified as areas of ‘market failure’.

Figure 2: Satisfaction of electronic communications operators with ease of access to existing infrastructure and deployment possibilities — vs perceived change in ease of access and deployment since the application of the Directive



Source: WIK/VVA based on responses from telecoms operators to online survey August 2017

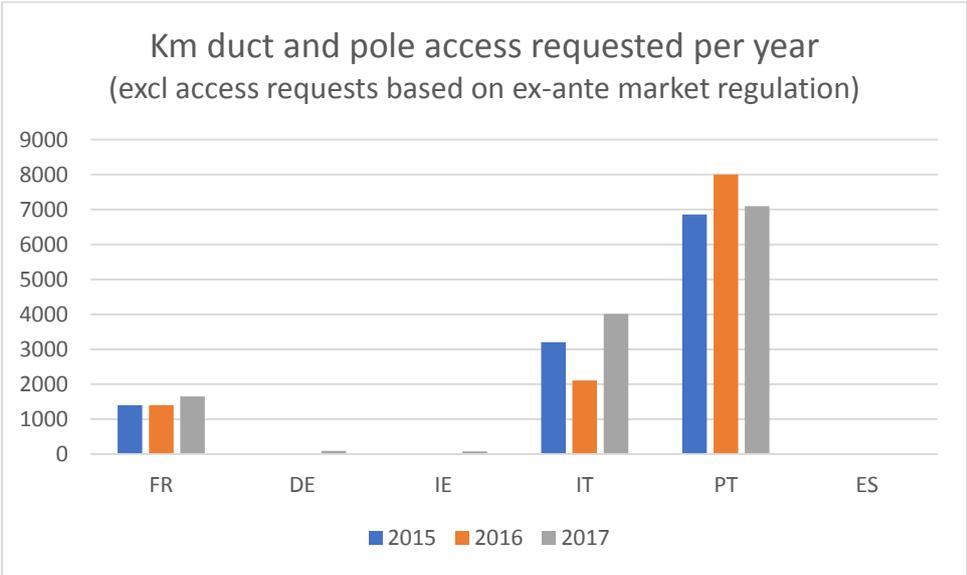
These results should be regarded as a baseline, given the survey was carried out only 1 year after the application deadline of the Directive. The reasons for being dissatisfied may also vary depending on the interests of the parties.

The following sections go into more detail on each subject, on the basis of the study carried out for this report.

Pillar 1: Access to existing physical infrastructure and transparency (Articles 3 and 4)

Data on the use of access to existing physical infrastructure identifies Member States in which there has so far been limited use (Germany, Ireland and Spain), as well as Member States in which the use of such access is well developed (France, Italy and Portugal). In these latter three countries demand had already existed before the implementation of the Directive.

Figure 3: Pole and duct access requested (km) per year 2015-H1 2017



Source: WIK-Consult/VVA based on telecoms operator surveys (except FR — sourced from utilities)

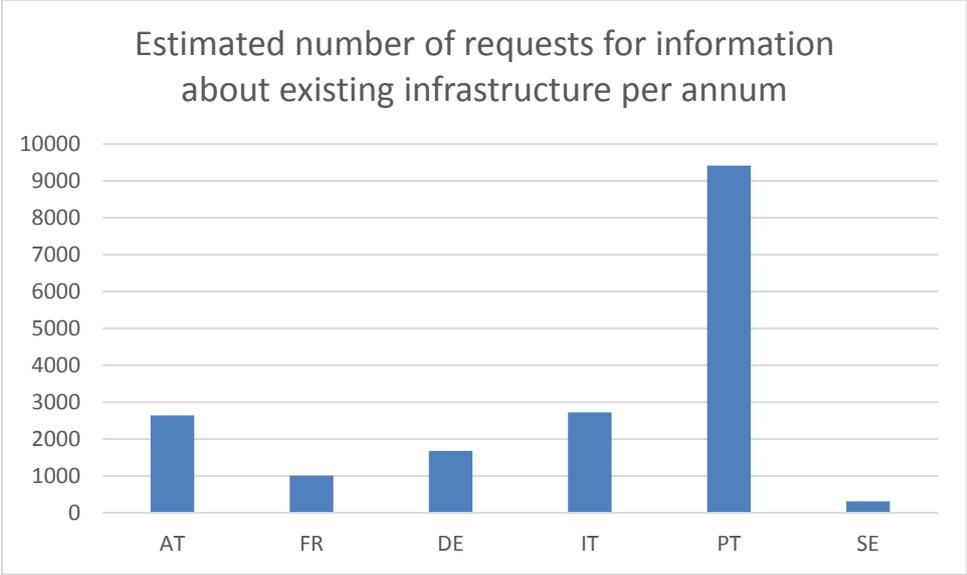
Nevertheless, an increasing interest in access to physical infrastructure is emerging in some Member States where demand previously used to be low. These include Austria, Belgium, Germany, Ireland, Sweden and Spain.

Operators believe that the Directive has made it easier to access physical infrastructure and that the total cost of deploying a network using third party physical infrastructure is much or somewhat cheaper than deploying their own.

Low use of access in some countries, such as Germany and Sweden, might also be related to the fact that municipalities and utilities have in several cases been providing very high capacity communications infrastructure, and have therefore opted not to give potential competitors access to physical infrastructure, but proposed alternatives such as dark fibre or bitstream access.

With regard to transparency, there was a particularly high number of requests for information about existing physical infrastructure in Portugal and a considerable number of them in Austria, Italy, Germany and France.

Figure 4: Estimated number of requests for information about existing infrastructure per annum based on 2016 operator data and BEREC 2017 report



Source: WIK/VVA based on telecoms network operator survey data for 2016 FR, IT, PT, and BEREC report BoR (17) 245 AT, DE, SE

A number of stakeholders considered that the conditions for accessing information about existing infrastructure had improved following the implementation of the Directive, but others indicated that in certain Member States the single information point might not be effectively operational or has been implemented in a light manner only.

The greatest use of infrastructure access is in Member States with effective information provision and well developed rules or recommendations about pricing and/or contractual terms. Specific factors that have contributed to successful outcomes in these countries include the development of a comprehensive single information point, rules (in the form of legislation, guidelines or dispute resolution) on access pricing, reference offers and rules enabling regulated utility companies to benefit at least partially from the profits of providing access.

Use of infrastructure access in other Member States could therefore increase once contractual terms and pricing principles are more clearly set out. Fully developing single information points in Member States where it is not yet the case may also contribute to increased usage.

Pillar 2: Coordination of civil works and transparency (Articles 5 and 6)

In general, coordination of civil works seems to have received less attention both from NRAs and stakeholders than access to existing infrastructure under the Directive.

Only very limited information was available about the number of agreements for civil works coordination and no information on the extent of the network involved in such requests. On the basis of the data available, there was significant activity in civil works coordination (over 200 requests per country reported as made or received in 2016) in Belgium, Slovenia and Italy, and some activity in Spain, Portugal, Austria and France. In nearly all of these cases coordination requests were also made in 2015, before the date of application of the Directive.

There has not been a visible upward trend in civil works coordination since the Directive was adopted.

Electronic communications providers consider that the total cost of deploying networks by coordinating works is cheaper than doing so in isolation. However, the savings were mostly considered to be less than those that could be made by sharing physical infrastructure.

Fewer Member States have taken pro-active approaches to transparency in co-deployment than to information on existing infrastructure. Operators have expressed their concerns about the lack of transparency and the absence of a single information point, which may be affecting the degree to which co-deployment occurs.

Cost-sharing in the context of co-deployment can be a particular source of dissatisfaction and dispute. In this context, practices vary across and even within countries, ranging from charging the incremental cost to equally shared costs. While equally shared costs may give electronic communications operators the feeling they are bearing a disproportionate share of the costs compared to utilities, incremental cost can raise concerns amongst utilities also active in providing electronic communications services that they are being required to make offers to competitors that would undermine their business case.

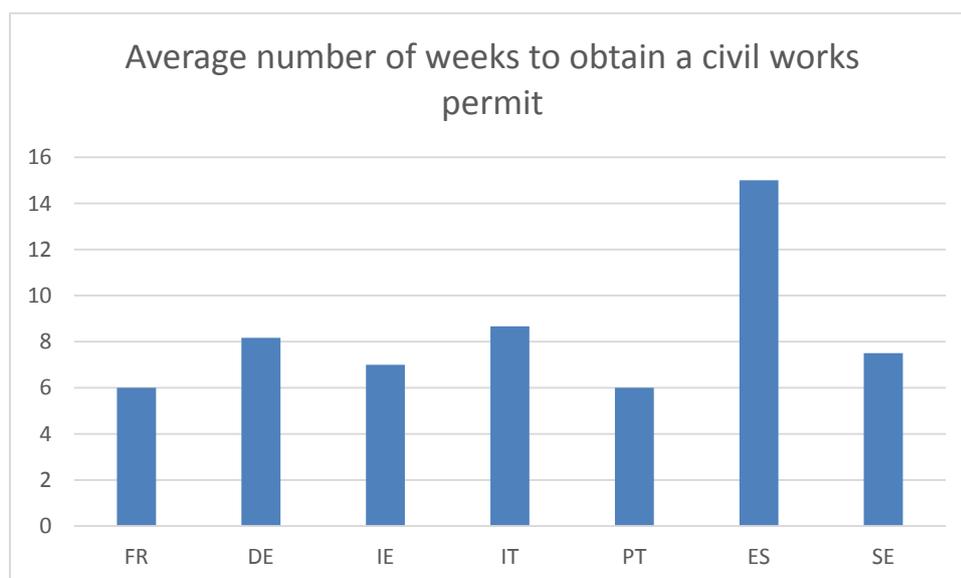
Setting up a detailed single information point, establishing specific procedures for civil works coordination, and elaborating (either commercially or in a regulated manner) rules on cost apportionment could increase interest in co-deployment. Some or all of these measures have been taken in countries such as Belgium, Italy and Portugal, which use co-deployment a lot.

Pillar 3: Permit-granting procedure (Article 7)

The availability of information about permits and permit granting procedures has not improved so far. It appears that even where single information points concerning application procedures exist, operators may not be aware of them or have concerns about their effectiveness. Timelines for permit applications have not been enforced in all Member States, and only a few Member States have opted to make electronic permit applications possible.

Where information was available, permits for civil works were on average processed within 4 months. However, operators in some Member States expressed concerns about significant variations in the time for permit processing, depending on the local authorities concerned. Operators in Germany highlighted delays of more than 6 months in some cases, while variations in time were also observed in Spain and Italy.

Figure 5: Average time (weeks) it takes to obtain a civil works permit (based on operator survey)



Source: WIK/VVA based on operator survey

Pillar 4: In-building physical infrastructure (Articles 8 and 9)

Effective implementation of the provisions on in-building infrastructure appears to be linked to the definition of standards setting out what is meant by high-speed-ready in-building infrastructure, and the associated access point, and mechanisms to monitor and enforce adherence to these standards.

For instance, in France, Portugal and Spain mandatory standards set out how the infrastructure must be installed and where the access point must be located. Broadband-ready infrastructure has been relatively widely deployed in these countries, with the standards mentioned above contributing to high rates of FTTH/B deployment in Portugal and Spain.¹⁰

A majority of stakeholders consider broadband-ready labels a good way of supporting the deployment and take-up of high-speed networks, but such labels have been introduced in only a few Member States so far. Furthermore, as broadband-ready labels have only recently been introduced, it is too early to evaluate their take-up.

As regards access to in-building physical infrastructure, stakeholders have not noticed a significant change since the implementation of the Directive because provisions were already in place, or had only recently been transposed. Some improvements were reported in Spain and Italy, in terms of a reduction of cases where the building owner refused access. Nevertheless, operators in some Member States had problems getting permission to access apartment buildings (from building owners) to install and upgrade in-building infrastructure for high-speed broadband.

Member States which have not yet established rules or settled disputes relating to access to in-building infrastructure could learn from France, Portugal and Spain, whose experience suggests that having in place technical standards concerning the access point, accompanied by

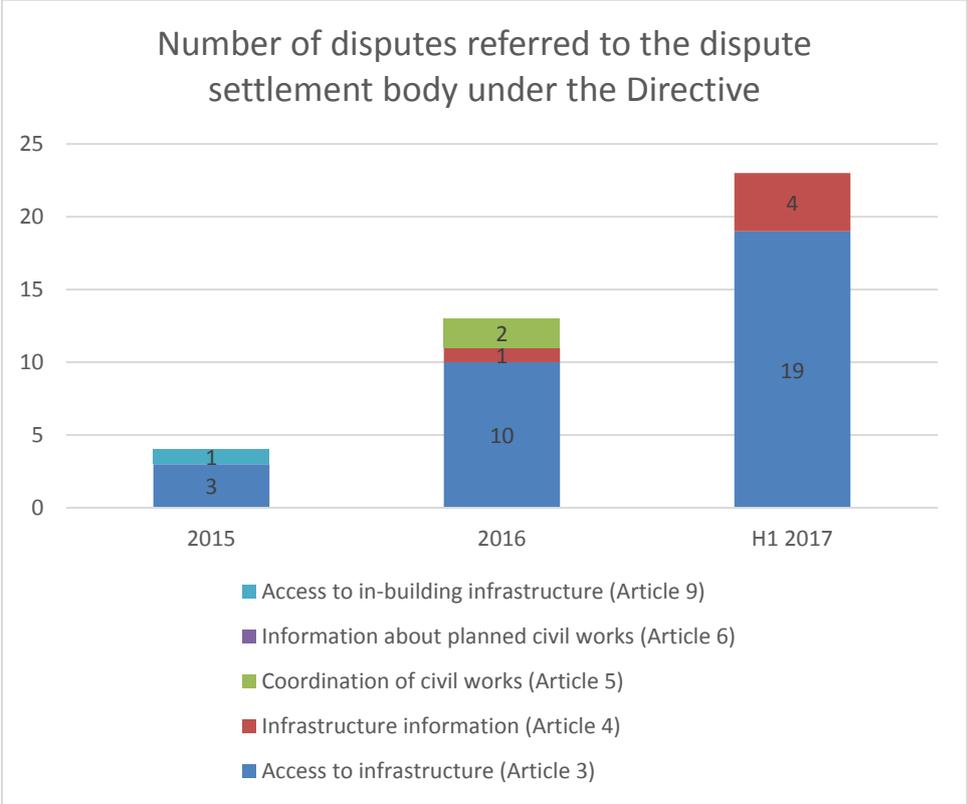
¹⁰ The 2016 Study on Broadband Coverage in Europe shows that in June 2016 FTTH was available to 86 % of households in Portugal and 63 % in Spain. Coverage has continued to expand since then.

rules on the terms and conditions of access to in-building infrastructure, can help bring more certainty and increase use of access to in-building infrastructure.

Dispute resolution process

Between 2015 and the first half of 2017, 40 disputes were reported, which had been referred to the dispute settlement body under the Directive, or previous regimes, where applicable. There has been an increase in the number of disputes since the application of the Directive, with 23 reported as referred to the dispute settlement body in the first half of 2017 alone. The vast majority of disputes concerned access to existing infrastructure (83 % in 2017) or information on existing physical infrastructure (14 %).

Figure 6: Number of disputes



Source: WIK-Consult/VVA based on NRA questionnaires — 24 respondents

Most of the Member States have set legislative deadlines for resolving disputes in line with the deadlines specified in the Directive. In some cases they have even set shorter deadlines.¹¹ However, in practice, deadlines were exceeded in several cases for internal (e.g. complexity in settling key issues such as pricing) or external reasons (e.g. the use of mediation, coordination efforts) and some operators are concerned that dispute resolution procedures may in fact have contributed to additional delays.

In several Member States, NRAs have started developing rules or guidelines on dispute settlement (e.g. the process the NRA is likely to follow in resolving disputes), which may enhance legal certainty and reduce the effort and time needed to resolve disputes.

¹¹ E.g. HR, HU, IT, PL have set the deadline at 2 months for resolving disputes relating to Article 3.

6. Recommended actions

Effective and timely implementation of the Directive is crucial, not only for ensuring that its objectives are achieved, but also for achieving the Gigabit Society strategic objectives, along with other actions envisaged by the Commission to support broadband deployment, such as the toolkit for broadband in rural areas.¹²

Experience so far would suggest the following actions to be taken in order to maximise the effective implementation of the Directive and to facilitate the achievement of its objectives:

1. Ensure transparency as a prerequisite for the shared use of physical infrastructure and co-deployment

For this purpose, single information points should not only be established in all Member States, but should also be adequately equipped to enable them to perform their tasks effectively. For existing infrastructure, the single information point could further be enhanced to a mapping exercise and include data on availability and capacity. In the case of co-deployment, Member States should consider a pro-active approach, whereby relevant public (and if relevant private) actors are required to pre-notify deployment plans and invite interested parties to respond. The national and regional Broadband Competence Offices¹³ could be an additional source of information, coordination and exchange of best practices.

2. Enhance regulatory certainty in relation to terms and conditions, including prices and cost apportionment

NRAs or other bodies could do this by drawing up guidelines, indicating which methodology would be used to resolve disputes, how costs for sharing infrastructure or co-deployment would be apportioned and the extent to which regulated utilities could benefit from any cost savings or profits arising out of collaboration.

3. Ensure greater overall efficiency of permit-granting procedures

Firstly, it is crucial for information on permits to be centrally available from single information points. Secondly, the relevant authorities should strictly enforce deadlines for granting permits. Thirdly, Member States should consider making it possible to electronically apply for permits via the single information point.

4. Develop standards for and clear rules on access to in-building physical infrastructure

Member States that have not already done so could consider putting in place standards for in-building infrastructure and associated broadband labelling schemes. Pro-active measures should be taken (for instance by NRAs) to ensure that clear rules are established concerning the terms, conditions and price of access to in-building infrastructure.

5. Promote better cooperation amongst regulators

Coordination amongst regional and local authorities and sectoral regulators is particularly important for the coordination of civil works or access to municipal infrastructure. BEREC,

¹² <https://ec.europa.eu/digital-single-market/en/news/european-commission-joins-forces-help-bringing-more-broadband-rural-areas>

¹³ <https://ec.europa.eu/digital-single-market/en/broadband-competence-offices>

ACER and other sectoral regulatory groups at EU level could also consider developing guidelines on best practice contractual terms and pricing/cost apportioning approaches.¹⁴

6. Ensure efficient data gathering on key performance indicators

To enable continuous monitoring and a future evaluation of the implementation of the Directive, NRAs and/or dispute settlement bodies should gather data on the scale of access to physical infrastructure under the Directive, as well as the proportion of high-speed networks deployed in co-deployment. Member States should gather data from local authorities on the timeframes for permit granting, and the number of buildings certified as deployed with high-speed-ready in-building infrastructure.

¹⁴ In this regard, BEREC has already started working on a report on pricing of access to infrastructure and civil works.