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LES ACTES DE L'ARCEP

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Arcep Decision on the technical and operational terms and conditions for sharing ultra-fast broadband optical fibre electronic communication networks

Decision No. 2015-0776 of 2 July 2015

ARCEP
Autorité de régulation des communications électroniques et des postes
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Regulatory Authority for Electronic Communications and Postal Affairs

Decision No. 2015-0776 of 2 July 2015

On the technical and operational terms and conditions for sharing ultra-fast broadband optical fibre electronic communication networks

Regulatory Authority for Electronic Communications and Postal Affairs (hereinafter "Authority");

Having regard to Directive No. 2002/21/EC of the European Parliament and Council of 7 March 2002 on a common regulatory framework for electronic communication networks and services (Framework Directive), notably its Articles 6, 7 and 12, amended;

Having regard to Directive No. 2002/19/EC of the European Parliament and Council of 7 March 2002 on access to, and interconnection of, electronic communication networks and associated facilities ("Access Directive") notably its Article 5, amended;

Having regard to Recommendation No. 2010/572/EU of the European Commission of 20 September 2010 on regulated access to next generation access networks (hereinafter "NGA Recommendation");

Having regard to the French Postal and Electronic Communications Code (hereinafter "CPCE"), notably its Articles L. 32-1, L. 33-6, L. 34-8, L. 34-8-3, L. 36-6 and R. 9-2 to R. 9-4;

Having regard to the French Construction and Housing Code, notably its Articles L. 111-5-1, R. 111-1 and R. 111- 14;

Having regard to the Decree of 16 December 2011 amended regarding the application of Article R. 111-14 of French Construction and Housing Code;

Having regard to Decision No. 2009-1106 of the Regulatory Authority for Electronic Communications and Postal Affairs of 22 December 2009 specifying, in application of CPCE Articles L. 34-8 and L. 34-8-3, the access terms and conditions for ultrafast optical fibre electronic communications lines and the instances in which the share access point can be located on private property;

Having regard to Arcep Decision No. 2010-1312 of 14 December 2010 specifying, in application of CPCE Articles L. 34-8 and L. 34-8-3, the access terms and conditions for ultrafast optical fibre electronic communications lines nationwide, except in very high-density areas;

Having regard to Arcep Decision No. 2012-1503 of 27 November 2012 on collecting information about fixed broadband and ultra-fast broadband markets;

Having regard to Arcep Decision No. 2013-1475 of 10 December 2013 amending the list of very high-density areas' municipalities defined by Arcep Decision No. 2009-1106 of 22 December 2009;

Having regard to Decision No. 2014-0733 of 26 June 2014 on the definition of the relevant wholesale market for offers for accessing the physical infrastructures that make up the fixed local loop, on the designation of an operator with significant power in this market and on the obligations imposed on that operator in this market;

Having regard to Decision No. 2014-0734 of 26 June 2014 on the definition of the relevant wholesale market for activated broadband and ultra-fast broadband bitstream offers, on the designation of an operator with significant power in this market and on the obligations imposed on that operator in this market;

Having regard to the Arcep Recommendation of 23 December 2009 on the access terms and conditions for ultra-fast broadband optical fibre electronic communications lines;

Having regard to the Arcep Recommendation of 14 June 2011 on the access terms and conditions for ultra-fast broadband optical fibre electronic communications lines in certain buildings in very high-density areas, notably those with fewer than 12 units;

Having regard to the Arcep Recommendation of 25 April 2013 on identifying fibre to the home lines;

Having regard to the Arcep Recommendation of 21 January 2014 on the access terms and conditions for ultra-fast broadband optical fibre electronic communications lines for buildings with fewer than 12 units and business premises in very high-density areas;

Having regard to the Arcep public consultation on the draft Decision on the technical and operational terms and conditions for sharing ultra-fast broadband optical fibre electronic communication networks, launched on 15 July 2014 and closed on 26 September 2014;

Having regard to the responses to this public consultation;

Having regard to the request for opinion from the Competition Authority of 10 December 2014;

Having regard to the Competition Authority's Opinion No. 15-A-04 de of 6 February 2015;

Having regard to Arcep's public consultation on the draft Decision on the technical and operational terms and conditions for sharing ultra-fast broadband optical fibre electronic communication networks, launched on 10 December 2014 and closed on 20 January 2015;

Having regard to the responses to this public consultation;

Having regard to the European Commission notification to the Body of European Regulators for Electronic Communications (hereinafter "BEREC") and to National Regulatory Authorities on the draft Decision on the technical and operational terms and conditions for sharing ultra-fast broadband optical fibre electronic communication networks of 22 May 2015;

Having regard to the observations of the European Commission of 18 June 2015;

Having regard to the consultation of the Electronic Communications Advisory committee (hereinafter CCCE) of 26 June 2015;

After having deliberated on 2 July 2015.

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1 Purpose of the Decision

1.1 Introduction and applicable legal framework

The terms used in the present Decision, whose first occurrence is followed by an asterisk, are defined in Annex 1.

The present Decision concerns the technical and operational terms and conditions implemented for ultra-fast broadband optical fibre electronic communication network sharing schemes. It aims to provide a framework for the terms and conditions defined by building operators* (aka infrastructure operators) for the provision of ultra-fast broadband optical fibre electronic communication networks to commercial operators*. In addition to the measures imposed on building operators, the Authority makes a number of recommendations to promote better interoperability between operators.

The present Decision applies to the entire national territory, in other words both very high-density areas* and the rest of the country.

1.1.1 Arcep's competencies / powers and responsibilities

CPCE Article L. 36-6 provides that:

"*Subject to the provisions of this Code and its implementing regulations ..., the Regulatory Authority for Electronic Communications and Postal Affairs shall specify the rules concerning:* [...]

Para. 2 The provisions applicable to the technical and financial conditions of interconnection and access, in accordance with Article L. 34-8 [...] and *the technical and financial conditions of access, in accordance with Article L. 34-8-3;* [...]

Decisions taken pursuant to this Article shall, after approval by order of the Minister responsible for e-Electronic Communications, be published in the Official Journal.*"*

The definition of access is set out in CPCE Article L. 32:

"[...] 8) Access. Access refers to the provision of means, hardware or software, or services, with a view to enabling the beneficiary to provide electronic communications services (...)".

P I of Article L. 34-8 provides:

"[…] *In order to achieve the objectives set out in Article L. 32-1, the Authority may impose, in an objective, transparent, non-discriminatory and proportionate manner, the terms and conditions for access and interconnection:*

a) Either on its own initiative, after consultation with the Competition Authority, public consultation and notification to the European Commission and to the competent Authorities of the other European Union Member States; the Decision shall be adopted under procedural conditions previously published by the Authority;

b) Or at the request of one of the Sections, under the conditions provided for in Article L. 36-8.

Decisions adopted pursuant to (a) and (b) shall state the reasons on which they are based and shall specify the equitable technical and financial conditions under which interconnection or access is to be ensured."

CPCE Article L. 34-8-3 in its version resulting from the law of 17 December 2009, specifies that:

"*Any person establishing or having established in a constructed building or operating a ultra-fast broadband optical fibre electronic communications line to serve an end-user shall grant reasonable requests for access to the said line and the associated facilities from operators, with a view to providing electronic communications services to that end-user.*

Access is provided under transparent and non-discriminatory conditions at a point located, except in cases defined by the Regulatory Authority for Electronic Communications and Postal Affairs, outside the limits of private property and allowing the operative connection of third-party operators, under reasonable economic, technical and accessibility conditions. In the cases defined by the Regulatory Authority for Electronic Communications and Postal Affairs, access may consist of the provision of specific facilities and network elements requested by an operator before the building was equipped with ultra-fast broadband optical fibre electronic communications lines, in exchange for that operator assuming a fair share of the

costs. Any refusal to grant access shall be justified.

It is the subject of an agreement between the entities concerned. This determines the technical and financial conditions of access. It shall be sent to the Regulatory Authority for Electronic Communications and Postal Affairs upon request.

Disputes relating to the conclusion or execution of the agreement provided for in this Article shall be submitted to the Regulatory Authority for Electronic Communications and Postal Affairs in accordance with Article L. 36-8.

In order to achieve the objectives defined in Article L. 32-1, and in particular with a view to ensuring the consistency of deployments and uniform coverage of the areas served, the Authority may specify, in an objective, transparent, non-discriminatory and proportionate manner, the terms and conditions of access.

In its Decisions No. 2009-1106 and No. 2010-1312, Arcep clarified the general framework governing access to ultrafast optical fibre lines* for deployments inside and outside very high-density areas.

The purpose of the present Decision is to complete this framework by clarifying the technical terms and conditions for implementing access.

In addition, some of the measures provided for are taken in accordance with provisions defining the general rules incumbent on electronic communications operators. These include provisions relating to the conclusion and content of interconnection and access agreements (CPCE Articles D. 99-6 to D. 99-9), as well as the obligation for operators to measure the value of the quality of service indicators defined by Arcep under the conditions set out in CPCE Article L. 36-6 and Article D. 98-4.

1.1.2 Consistency with the European legal framework

Article L. 34-8-3 is derived from the Law on the Modernisation of the Economy No. 2008-776 of 4 August 2008 as well as from the Law No. 2009-1572 of 17 December 2009 on fighting the digital divide, adopted in accordance with Article 12 of the Framework Directive 2002/21/EC.

The European framework for electronic communications was revised in 2009, however. As a result, Article 12 of the Framework Directive, as amended by Directive 2009/140/EC of 25 November 2009, now provides that:

"1. Where an undertaking providing electronic communication networks has the right, under national law, to install facilities on, above or below public or private property, [...] national regulatory authorities, taking full account of the principle of proportionality, may require the sharing of such resources or land, including buildings, building accesses, building wiring, masts, antennas, towers and other retaining structures, ducts, conduits, inspection holes and boxes.

[...]

3. Member States shall ensure that national authorities are also empowered to require the holders of the rights referred to in paragraph 1 and/or the owner of such wiring, after an appropriate period of public consultation during which all the Sections concerned shall have the opportunity to present their views, to share wiring inside buildings or up to the first point of concentration or distribution if it is located outside the building, where justified by the fact that duplicating the infrastructure would be economically inefficient or physically impracticable. Such sharing or coordination terms and conditions may include regulations on the allocation of the costs of sharing resources or land, adjusted according to risks, as appropriate. [...]."

Article 8(5) of the same Directive adds that:

"In order to pursue the objectives referred to in paragraphs 2, 3 and 4, national regulatory authorities shall apply objective, transparent, non-discriminatory and proportionate regulatory principles, including the following:

[...]

c) *Promote efficient investment and innovation in new and improved infrastructure, including by ensuring that any access obligation takes due account of the risk to investing firms and by allowing for various cooperation schemes between investors and those seeking access, in order to diversify investment risk, while ensuring that competition in the market and the principle of non-discrimination are safeguarded."*

In addition, on 20 September 2010 the European Commission published the NGA Recommendation on Regulated Access to Next Generation Access Networks. The fourth recital in the preamble to that Recommendation states that:

"Where duplication of infrastructure would be economically inefficient or physically impracticable, Member States may also, in accordance with Article 12 of the Directive, impose obligations on businesses operating an electronic communications network to share resources that would eliminate bottlenecks in civil engineering infrastructure and last-mile segments."

Article 7 of this same Recommendation adds that:

"When applying symmetrical measures in accordance with Article 12 of Directive 2002/21/EC to grant access to a business's civil engineering infrastructure and last-mile segment, NRAs should adopt implementing measures under Article 5 of Directive 2002/19/EC."

It follows from the foregoing that European Union law has explicitly recognised the increased role of symmetrical regulation in regulating the deployment of new electronic communication networks and that, in this context, it is up to the Authority, in accordance with national law and in accordance with European law, to specify the terms and conditions governing access to optical fibre lines, in an objective, transparent, non-discriminatory and proportionate manner, in particular with a view to promoting effective investment and innovation, and ensuring the consistency of deployments and uniformity of the areas served.

1.1.3 Procedure applicable to the present Decision

The present Decision is taken pursuant to CPCE Articles L. 36-6, L. 34-8 and L. 34-8-3.

The Authority submitted an initial version of the draft Decision to public consultation. Nine stakeholders responded to this public consultation.

At the conclusion of this public consultation, the Authority amended its draft. A second version of the draft Decision was then submitted to a second public consultation and submitted to the Competition Authority for opinion. Seven stakeholders responded to this public consultation.

After having received the contributions and the opinion, the draft Decision was notified to the European Commission and the other competent NRAs in European Union Member States.

The Authority also consulted with the Electronic Communications Advisory Committee (CCCE).

Lastly, the Decision was adopted on 2 July 2015 and submitted for approval to the Minister responsible for Electronic Communications.

1.2 Background on fibre to the home deployments

1.2.1 Fibre to the home deployments

The number of operators deploying fibre-to-the-home local loops is increasing, in particular due to public initiative networks (PINs). The number of building operators identified by the Authority has increased from five at the end of 2007 (including two PINs) to 34 at the end of 2014 (including 28 PINs[1]), and it is expected to continue to increase with the intensification of PIN action. At the beginning of May 2015, 97 Departments had completed their digital development blueprint (SDTAN) and 15 had updated theirs. Of the four remaining Departments and as of this writing, the Department of the Rhône has not yet finalised its SDTAN blueprint, and the other three never drafted one (Bouches-du-Rhône, Hauts-de-Seine and Paris). The 84 SDTAN blueprints completed as of 1 May 2015, at the departmental or regional level, provide for the construction of 8.7 million ultra-fast broadband optical fibre electronic communications lines, including 4.4 million by 2018, most often by future PIN operators (not yet accounted for in the previous figures).

At the same time, the number of commercial operators accessing ultrafast optical fibre networks is also growing significantly[2].

[1] Responses collected in the context of the Authority's Decisions on gathering information on the fixed broadband and ultra-fast broadband markets, the most recent of which is Decision No. 2012-1503 of 27 November 2012. It should be noted that for PINs, all of the project's companies that are subsidiaries of the same national group are counted separately.

[2] The number of operators registered on the list provided for in CPCE Article R. 9-2 increased from five to 20 between April 2009 and September 2014, and the number of operators who declared having activated at least one access line on a fibre-to-the-home network increased from 11 to 27 between Q1 2012 and Q4 2014.

As a result, information sharing between operators is becoming increasingly complex[3].

1.2.2 Work performed by Authority

Since the adoption of Decisions No. 2009-1106 and No. 2010-1312, the Authority has been leading a multilateral working group on operational processes for sharing ultra-fast broadband optical fibre electronic communication networks to resolve the operational issues posed by access to fibre-to-the-home lines, in concert with operators.

On 25 April 2013, the Authority also adopted a Recommendation on identifying fibre to the home lines[4], with the aim of facilitating access to these lines and reducing the number of service technicians having to travel into the field, which leads to significant costs and increased complexity of customer journeys.

The provisions set out in this Decision are based largely on the work of the multilateral group led by Arcep (series of questionnaires, in-session discussions), as well as on regular exchanges with the Interop' Fibre group presented hereinafter.

1.2.3 The Interop' Fibre group

The Interop' Fibre group was created in late 2008 at the initiative of France Telecom and SFR to define the practical rules for managing processes and information sharing to be implemented for ultra-fast broadband optical fibre electronic communication network sharing.

The Interop' Fibre group has gradually expanded and now has twelve member operators: Orange, SFR, Numericable, Free, Bouygues Telecom, Colt, Axione, Tutor, the Ain inter-municipal energy and e-communication syndicate (SIEA), Céliéno (REG. I.E.S. broadband and ultrafast networks), Altitude Infrastructure and Covage.

The group also includes three thematic sub-working groups operating in parallel: infrastructure, access and after-sales service.

Each of the sub-groups establishes a set of protocols, which are approved by the operators, then published on the Arcep website[5]. Every operator is then invited to implement the protocols approved by the group in its own information system. The group recommends that, for each subgroup, a maximum of two versions of the protocol versions be in effect at any given time.

1.2.4 The need for greater interoperability

The Interop' Fibre group's recommendations are not binding. In addition, some operators may not adhere to the set of choices underlying the adoption of a protocol, and there may be disparities between the protocols defined by the group and the protocols actually implemented by the building operators. It also happens that some protocols are not detailed enough or that they include some leeway in their implementation (optional fields, etc.). Indeed, the group distinguishes between invariants that are intended to be applied by all and recommendations that are simply best practices. The actual implementation can therefore differ between two given building operators. Such is the case, for instance, when there are multiple concentration points for a given address, which are treated differently by operators, making it difficult to access the facility or place access line orders. These difficulties have been extensively documented in the various exchanges between the operators and the Authority. Moreover, this situation is further complicated by the fact that the operators do not all describe the premises*, buildings and addresses in their information system in the same way and with the same degree of precision: while some confine themselves to an address-level description, others create an additional level of detail using the notion of building. These structural differences in the way objects are described compromise the system's overall interoperability.

The current system thus requires extensive IT development and bilateral trials be carried out between each building operator and each commercial operator[6]. A new commercial operator must therefore undertake

[3] The number of pairs made up of a building operator and a commercial operator present via passive access on at least one building operator's concentration point* increased from 15 to 27 between the first quarter of 2012 and the fourth quarter of 2013. This number could continue to increase if we look to the clear upward trend in the number of building operators and commercial operators described above.
[4] This Recommendation can be downloaded at the following URL: www.arcep.fr/fibre
[5] The group's publications (in French) can be downloaded at the following URL: http://www.arcep.fr/fileadmin/reprise/dossiers/fibre/modele-info-echange-mutualisation-fibre.zip.
[6] During the public consultation that ran from 15 July 2014 to 26 September 2014, several operators indicated that it would still be necessary to carry out tests in twos to ensure the proper functioning of their processes. The measures provided for in this Decision are

technical developments and perform operational tests with each of the building operators whose networks it wants to access. By the same token, a new building operator must undertake technical developments and perform operational tests with each of the commercial operators likely to access its network.

However, given the growing number of operators in the wholesale market (see above) and the cost of interfacing tied, for instance, to the implementation of security policies between only two stakeholders, the Authority considers that there is a significant risk that the multiplication of these costs will create sizeable barriers to entry for commercial operators in the retail market, and that it will eventually be increasingly difficult for some building operators to market the networks they have deployed.

In particular, managing this complexity and the resulting inefficiencies would require significant human and financial resources from each of the stakeholders. In the longer term, the disparities in operators' information systems throughout the country and the operational issues between network and commercial operators could lead to customer dissatisfaction and high operating costs and, ultimately, jeopardise the development of ultra-fast broadband optical fibre electronic communication networks and operative access to these networks.

It is thus vital that the standardisation of ultra-fast broadband optical fibre electronic communication network processes be strengthened and accelerated in order to enable large-scale marketing of these networks. As of 31 December 2014, 4,064,000 households and business premises in France were eligible for a retail offer on these networks[7], i.e. 12%. It is expected that the number will rise to 80% of households and business premises by 2020[8]. The number of subscribers on these networks currently stands at 935,000[9], which is only 3.6% of the total number of fixed broadband and ultra-fast broadband subscribers. This number is expected to increase significantly in the coming years. It is therefore vital to begin enabling this ramp-up by preparing immediately for the industrialisation of the processes.

1.3 Objectives pursued

In this context, the Authority considers it necessary to continue its work in this area, to improve the operational processes for ultra-fast broadband optical fibre electronic communication network access, which will require the mobilisation of all of the sector's stakeholders.

The objectives pursued in this Decision are multiple.

The first goal is to simplify operators' access to ultra-fast broadband optical fibre electronic communication networks to facilitate the marketing of these networks and, ultimately, to promote the deployment of ultrafast optical fibre networks nationwide. As mentioned earlier, an increase in the number of building operators and commercial operators threatens to increase the system's complexity and the number of interfaces, which could make network access difficult, and so likely to lead to the creation of barriers to entry, if a new system needs to be developed for each new operator that deploys a network or accesses the networks. To this end, the Authority aims to standardise the interfaces for managing the various operational processes: access to infrastructures, ordering access lines, incident management, etc., and to increase the quality of access to ultra-fast broadband optical fibre electronic communication networks. To achieve this, it is important that the building operators make all the necessary information available to other operators in a short period of time, ensure that this information is kept up to date, easy to access and permanently available. It is also important not to multiply specific cases and instead aim to industrialise the processes. This means ascertaining that what is intended to be the majority case, of all the concentration points deployed nationwide, is the outdoor concentration point* serving several buildings, whereas processes were initially built around concentration points at the foot of the building in very high-density areas.

The Authority is especially careful to ensure that the switch from copper to fibre does not result in a regression in quality, transparency or non-discrimination. Operational processes on the copper network have ~~indeed evolved a great deal since~~ the onset of unbundling (LLU) to reach the level of industrialisation we

intended to enhance the interoperability of the processes implemented by building operators but do not prohibit the performance of such tests in cases where operators deem them necessary.

[7] Quarterly Observatory of Wholesale Electronic Communications Markets (fixed broadband and superfast broadband services) in France, Q4 2014

[8] Annual conference on the France Très haut débit Ultra-fast broadband rollout scheme, 6 February 2013

[9] Quarterly Observatory of Electronic Communications retail markets (fixed broadband and superfast broadband services) in France, Q4 2014

know today. This is the same path that operational processes on ultra-fast broadband optical fibre electronic communication networks must take, particularly as the number of building operators is increasing.

The clarifications provided by this Decision are also intended to prevent the risk of discrimination, in particular between integrated operators and other operators, with regard to access to the network and information, and to enable Arcep to fully monitor the provision of information to all the operators concerned, under good conditions and, for operators, in accordance with the regulatory framework.

In order, on the one hand, to enable commercial operators to establish their business plans and to organise themselves from an operational standpoint and, on the other hand, to strengthen the implementation of the principle of non-discrimination, the Authority considers it necessary to implement sufficient advance notice for the supply of information. To this same end, and to create the conditions for geographical consistency between the different building operators' deployments, and inform the stakeholders concerned – starting with local authorities – the Authority also wants to set up mandatory prior consultations for the deployment of ultra-fast broadband optical fibre electronic communication networks, albeit without delaying current or upcoming rollouts.

In addition, the Authority wants to strengthen the regulatory framework's incentivising dimension, the aim being to make building operators more efficient by clarifying their responsibilities and defining and publishing performance indicators on the wholesale market for the supply of ultra-fast broadband optical fibre electronic communications lines.

Finally, the Authority considers it necessary to clarify certain principles and obligations, most of which have already been set out in Decisions No. 2009-1106 and No. 2010-1312, in particular with regard to the content of offers for accessing ultra-fast broadband optical fibre electronic communication networks, the regulatory framework applicable to new buildings, and the implementation of the three-month period provided for in Annex 2 of Decision No. 2009-1106.

2 Information sharing on ultra-fast broadband optical fibre electronic communication network deployments

2.1 Principles governing information sharing

Information must be provided under effective and non-discriminatory conditions. The principles defined below aim to ensure that the information and elements of the shared network are made available under industrial conditions to commercial operators who have signed an access agreement with an building operator.

Some information is essential to ensure operative access. Article 2 of Arcep Decision No. 2009-1106 in fact provides that "*access to the lines themselves shall be accompanied by the provision of the necessary facilities associated with the operative implementation of access under reasonable and non-discriminatory conditions, in particular those specified in Annex II of the present Decision.*". Annex II of the same Decision thus provides a non-exhaustive list of these necessary resources. This includes information relating to the buildings (address, identity of the owner, number of residential units and business premises served, name of the building operator), information relating to the elements of the shared network and in particular the concentration points (identifier, address, technical characteristics, addresses of the buildings served) and, finally, the information necessary for the operation of the lines.

2.1.1 Information availability and sustainability

Whether it relates to prior consultations, supplying elements of the shared network or providing building-specific data, information today is sent in the form of "information flows" by the building operator performing the deployment to commercial operators. The building operator therefore sends the information to all of the commercial operators at once.

While it has the advantage of being simple to implement for building operators, this situation is proving to be a source of significant operational inefficiencies. The information is widely dispersed between all of the flows being sent, and it can be difficult for commercial operators to reconstruct the history of a particular subject and find the latest information on that subject. Through the multilateral work it leads, the Authority notes that a growing number of commercial operators are having to mobilise significant information

processing resources, most of which could be avoided by having building operators be more transparent[10] with third parties, thanks to a harmonisation of building operators' information system.

Having building operators deliver their information in a centralised fashion would make this information accessible over the long term under non-discriminatory conditions, and create the ability to guarantee the information's reliability and traceability. This type of system would enable commercial operators to access the most up-to-date version of the information at any time, and on their own. This approach of storing available information thus marks a positive step forward compared to the longstanding "information flows" approach.

The Authority considers that the information listed in Annex 2 of Arcep Decision No. 2009-1106, as well as that listed in Annex 3 and Annex 4 of the present Decision, constitute the resources necessary for the operative implementation of optical fibre lines. It therefore seems vital for the supply of this information to be included in the wholesale co-financing and line rental tariffs, and not give rise to separate usage-based billing (e.g. according to the number of connections to the information system), except under abnormal conditions of use.

As a result, provision of this information must enable the recipients:

- to access regularly updated information; the Authority considers that a period of one calendar day to make updated information available is reasonable;
- to access this information at any time, whether or not it has already been consulted, at no additional cost specific to this operation, within a short period of time; the Authority considers that the above-mentioned period of one calendar day is justified and reasonable;
- to utilise the information made available in an automated manner[11].

Furthermore, the Authority considers it necessary for an building operator to always describe a given network element in an identical fashion, except in special cases that must be justified. It might also be advisable for all building operators to employ the same basic description for that network element.

A building operator possesses all of the information regarding that network, especially when it has built the shared network itself. As mentioned previously, a large portion of the information collected by the building operator during the construction and operation of the network is a vital resource for operative access. It is therefore essential for any commercial operator to have all of this information at its disposal, and to be able to utilise it in a management system that can be industrialised. If the information is not made available under the conditions described above, the only means available to commercial operators to gather the information they need would be an exhaustive and faithful reproduction of the information system specific to each building operator. Given the wholesale market's increasing complexity, this would seem an inefficient way to proceed. The Authority therefore considers it necessary to impose the above-mentioned measures on the building operator to guarantee that all commercial operators have effective access to information.

The Authority considers that these measures are proportionate, particularly in view of the operating cost savings likely to result from their implementation. The implementation of an automated and industrial system for making information available contributes to more effective marketing of the building operator's lines. In addition, the technicality of the information needed for operative access, coupled with the growing number of operator and commercial infrastructures, make it less efficient to use of any system that is not automated and industrial. The implementation of the aforementioned deadline of one calendar day could have a potentially significant operational impact since building operators are currently content to "deliver" information to third-party operators only once as part of information "flows". The Authority is therefore aware of the operational consequences of implementing this system. The Authority thus considers that appropriate implementation deadlines must be provided in order to give the operators concerned sufficient time to set up robust information systems (see Section 5.1).

[10] Building operators have internal databases describing their entire shared network in a detailed and industrial way.

[11] Industrialisation and interoperability approaches are closely linked to the format of representation and organisation of the information made available. As a recommendation, with regard to the type of files that can be exported from the building operators' platforms, the Authority considers that the use of open file types, i.e. published and royalty-free file types, without restrictions on use and implementation (e.g. CSV), would be more likely to enable interoperability of exchanges. Computer interfaces should also be designed to allow automated modes of exchange (*e.g.* "machine-to-machine").

Lastly, in accordance with Article 4 of Decision No. 2009-1106, building operators' access offer must specify the conditions applied in terms of quality of service. Here, the Authority considers it necessary to require the building operator to include commitments regarding the technical availability of the information systems it operates in its access offer. It is crucial for this level of commitment to be implemented to ensure commercial operators' access to the network. Access to information is indeed an essential resource for the proper implementation of access. The building operator shall refer in particular to the following set of tools: access control tool (see Section 4.3.2), tools for making information on the shared network infrastructure available (see Section 3), tools enabling the building operator to make the terminal connection* and schedule appointments with customers (see Sections 4.2.2 and 4.3.2). The Authority shall be careful to ensure that the commitments defined by each building operator are incentivising and offer the assurance of a sustainable, industrial and automatable operation of these tools. Each building operator will be required to explain the precise terms and conditions by which it fulfils these obligations in its access offer.

The final measure seems proportionate insofar as, at this stage, the Authority does not intend to set a standard performance level for all the building operators, thus leaving the possibility of performance levels to each building operator's available technical means. The objective of harmonising how the wholesale market functions in the long term could, however, require that building operators' performance levels converge to comparable levels in the future.

2.1.2 Notifying information

The historical approach to "information flows" is based on notifying commercial operators when new information becomes available. If the measures adopted by the Authority are part of a "storing available information" approach, it nevertheless remains necessary to send "notification flows" as well.

Indeed, although having the building operator centralise information has its advantages, there also needs to be a system for the building operator to notify commercial operators, especially when providing particularly vital information. By way of illustration, information relating to the provision of elements of the shared network (concentration point, remote shared connection point*, remote shared connection point link* or optical connection point*) must be the subject of an *ad hoc* notification to commercial operators who have subscribed to an access offer for the building operator's lines in the area in question.

This measure seems proportionate, particularly since sending these notifications would not require significant IT developments from the building operators.

2.1.3 Stability and traceability

The sharing processes must provide commercial operators with a satisfactory level of transparency and reliability of information. To achieve this objective, the building operator must ensure that the line access offer describes the processing methods and how information will be made available, in a sufficiently detailed manner.

In addition, once available, information must be:

- accessible in its current state for the entire duration of the commercial operator's access to the lines in a given area;
- traceable in the event of changes inherent to the life of the network. Successive changes to information must be identified, understandable and accessible to commercial operators, allowing them to have an event history.

Regarding the condition of information traceability, commercial operators rely on the information made available by the building operator to construct their business plans and for the deployment of their own networks, in particular the scaling of these networks and connecting access points. As a result, and given the fact that they are "tenants" of the shared network or holders of long-term rights of use on this network via co-financing, they must be able to trace all of the changes made to the information provided and know the reasons for these changes, which may have consequences on their operations. To reduce the cost of managing such a history while ensuring it remains effective, the Authority considers it reasonable and proportionate that such an event history:

- be stored for a reasonable period of time, as the Authority intends to set out in this Decision;
- concern the most vital information for third-party operators, i.e. at the very least all the unique and

persistent identifiers of the buildings and elements of the shared network, the addresses and geographical coordinates of the elements of the shared network and the concentration points' maximum technical capacities. The addition or deletion of buildings or elements of the shared network is also vital for third-party operators and must therefore be traceable.

The work carried out by Arcep's departments and operators during multilateral meetings devoted to operational processes for ultra-fast broadband optical fibre electronic communication network sharing has demonstrated the necessity of such provisions. Indeed, commercial operators integrate the information made available to them into their plans for connecting the concentration points and into their marketing plans. It therefore does not seems entirely legitimate to allow the most vital information to be amended without a traceability mechanism, as irreversible investments and operations may have been initiated on the basis of this information. Finally, a retention period of six months seems necessary given the pace of deployments and information life cycles.

2.1.4 The Authority's recommendations on information system interoperability

In order to streamline the cost of implementing operators' information systems, the Authority recommends that building operators and commercial operators rely on the latest version of existing inter-operator protocols, as defined by the Interop' Fibre group, when defining and maintaining of their respective information systems.

In addition, conducting tests to validate the proper implementation of inter-operator protocols should increase the system's interoperability.

It would therefore be appropriate to explore the possibilities of strengthening inter-operator work to achieve, for example, common and structured management of certain functionalities related to the information systems necessary for network sharing.

The Authority does not, however, intend to adopt binding measures on the matter at this stage.

2.2 Non-discrimination

Compliance with the obligation of non-discrimination, provided for in CPCE Article L. 34-8-3, Article 2 of the Arcep Decision No. 2009-1106, and Article 1 of Arcep Decision No. 2010-1312, is one of the key purposes of the present Decision. In particular, the measures provided for in this Section are intended to clarify the rules.

Under the current framework, there is no obligation for the building operator to ensure strict equivalence of the operational processes it implements for providing information and processing of orders from its retail arm and third-party operators. The quality of service commitments and the penalties in the event of non-compliance with these commitments nevertheless ensure the same level of efficiency in the processes put in place by the building operator vis-à-vis its retail arm and third-party operators.

2.2.1 Access to information

In accordance with Decisions No. 2009-1106 and No. 2010-1312, the building operator is required to guarantee access to the lines and associated facilities under non-discriminatory conditions. Particular vigilance is required to ensure compliance with this obligation when the building operator is an integrated operator, which may have an incentive to favour its own retail arm.

It is therefore crucial that, in accordance with their obligation of non-discrimination, integrated operators ensure that any information made available to their retail arm is provided at the same time, with the same level of detail and the same utilisation possibilities (data format, automation), to the commercial operators who are signatories to their line access agreement. based on a principle of Equivalence of Outputs (EoO)[12].

In addition, CPCE Article D. 99-6 provides that "*operators in possession of information in the context of the negotiation or implementation of an interconnection or access agreement may only use it for the purposes explicitly provided for at the time of its communication. In particular, this information is not communicated to other departments, subsidiaries or partners for whom it could constitute a competitive advantage."*

[12] This concept is defined by the Commission in its Recommendation 2013/466/EU as "*the provision to access seekers of wholesale inputs that are comparable, in terms of functionality and price, to those provided internally by the SMP operator to its own downstream companies, but potentially using different systems and processes"* (point 6(h) of the non-discrimination Recommendation).

In particular, if an integrated operator's wholesale arm has access to sensitive information through its building operator business, including stock market shares and customer acquisition market share, it must not provide that information to the operator's retail arm or to a third-party commercial operator under any circumstances. Furthermore, it would not be consistent with the obligation of non-discrimination for a commercial operator, which has information prior to accessing an ultrafast optical fibre electronic communications network, to use that information in order to guide its retail market marketing strategy via another electronic communications network.

The Authority recalls that, in its opinion No. 09-A-47 of 22 September 2009 and regarding the issue of the exchange of prior information as part of a network sharing arrangement, the Competition Authority invited Arcep "*to ensure that,* [...] *the information necessary for the implementation of network sharing circulates properly between all the operators concerned, without discrimination."*

In its Opinion No.15-A-04 on the present Decision, the Competition Authority notes that Arcep is taking a "*positive approach"* to improve access to information from operators which "*avoids the risk of having the operator who has deployed the infrastructure capturing the potential end customer"*. It nevertheless also recalls that "*while the exchange of information can have pro-competitive effects,* [...] *it can also have anti-competitive effects when it leads to the elimination or reduction of operators' autonomy to determine their business policies"*.

The Opinion notes that "*the information exchanged relates a priori only to technical elements that are not likely to reduce the operators' business autonomy, in the wholesale or retail market"*.

Arcep has ensured that the information communicated by the building operators is limited to what is strictly necessary to meet the objective of non-discrimination and that it is in no way of a sensitive or commercial nature.

In this regard, it seems advisable for the building operator to make available to Arcep any information that will ensure that it has actually provided every concerned operator with the relevant information within the prescribed deadlines.

2.2.2 Advance notice period

Annex 2 of Decision No. 2009-1106, to which Article 2 of this Decision refers, provides that marketing[13] of ultra-fast broadband optical fibre electronic communications lines located in the concentration point's service area* (CP-SA) may not begin before the end of a notice period of not less than three months following the supply of the information necessary for accessing the lines, including information regarding the provision of the concentration point. This commercial notice period applies to any optical fibre electronic communications line located in the concentration point's service area. The implementation of this notice period satisfies a twofold need for non-discrimination.

First, commercial operators must be able to scale their optical transport link[14] and to carry out connection operations at the concentration point sufficiently in advance so as to be ready to sell subscriptions on the day that the lines located in the concentration point's service area become commercially available. In the event of a change in the initial information provided, any new information relating to this change and the provision of the CP must be sent[15].

When these changes are likely to affect the provisioning of commercial operators' transport link, they must be accompanied by a new notice period of three months for the new addresses served by the CP. In terms of regulatory obligations, the Authority thus considers that an increase in the CP's maximum technical capacity should be treated as equivalent to a new concentration point becoming available. Indeed, commercial operators need a significant amount of time to organise and then carry out connection and access operations to the CP. The process of implementing the Authority's Decision No. 2009-1106 confirmed that the three-

[13] Day one for marketing a ultra-fast optical fibre electronic communications line corresponds, as specified in this Annex, to "*the date from which the effective connection of an end customer to this concentration point is possible"*. In practice, this is the moment from which the building operator can send the report on the availability of the line to the commercial operator who has placed access line order and authorise the activation of the line.

[14] Optical infrastructure located between an optical backhaul node and a multi-tenant point.

[15] In the compendium of technical specifications for (v 1.1, 16/10/2013), the optical fibre expert committee refers to overcapacity distributed in cables on the one hand, and a reserve of space at the concentration point on the other. The conjunction of these two parameters characterises the margin of scalability of the CP between its initial capacity and its maximum technical capacity.

month notice period provided for by the Authority, once the concentration point became available, makes it possible to respond effectively to this first need for non-discrimination.

Second, commercial operators must be able to begin their commercial operations under the same conditions as the integrated operator's retail arm. This substantiates, as was already provided for in Decision No. 2009-1106, the stipulation that the three-month notice period can only begin once all the information necessary for access to the lines has been provided. Here, the Authority is keen to clarify that, for a line located in the service area of a concentration point housed in a street cabinet, this information includes providing access to the optical connection point (OCP) that makes it possible to service the line.

The Authority considers that a notice period of three months once OCPs are made available would, however, be excessive in view of the time needed for business prospecting operations. Third-party operators need to be informed of the availability of the corresponding OCP with enough advance notice to enable them to conduct their business prospecting operations for the newly available lines connected to the optical connection point. Here, the Authority considers it justified and proportionate that a ultra-fast broadband optical fibre electronic communications line cannot become available for marketing until the end of a reasonable notice period after corresponding optical connection point becomes available to third-party operators.

In the draft Decision submitted for public consultation on 10 December 2014, the Authority had envisaged imposing a one-month notice period once an optical connection point becomes available to third-party operators. The contributions received to this second public consultation led the Authority to consider that imposing a mandatory notice period of one month at this stage could also prove too restrictive in some cases. Although, in light of the objectives pursued by Authority, a period of one month seems reasonable in the majority of cases, the Authority nevertheless considers that it is more effective and proportionate for the building operator to have a certain flexibility in the implementation of its obligations to inform third-party operators. In particular, at the earliest, fifteen calendar days before opening a ultra-fast broadband optical fibre electronic communications line, the building operator may process an access order to this line, and is authorised to send an access order report* to the commercial operator who has placed an access order. The Authority considers that a certain flexibility should be maintained by allowing commercial operators wanting to do so the ability to plan the necessary operations (e.g. appointments with their customers and technicians' field operations) in advance of the opening of a line, to be able to market a subscription on the day the line becomes commercially available.

In any event, the Authority recalls that, in terms of the principle of non-discrimination, it is up to the integrated building operator to ensure that its retail arm does not have access to information that is different from the information made available to third-party operators, and does not have access to information before it is made available to third-party operators.

Competition Authority Opinion No. 15-A-04 of 6 February 2015 highlights the significant competitive advantage that an integrated operator could derive from obtaining privileged information compared to that what is made available to third-party operators. The Competition Authority thus invites the Authority, if applicable, to strengthen its Decision so that "*all commercial operators, including the retail arm of the operator that performed the deployment, are able to establish under the same conditions and at the same time the first commercial contacts with potential subscribers of a building in which the optical fibre is going to be or is installed"*.

It is therefore crucial that the Authority be able to ensure that the principle of non-discrimination described above is respected.

The Authority thus considers it reasonable and proportionate for any integrated operator to provide the Authority, upon request, with a detailed description of the processes and operational rules followed by the integrated operator's retail arm with a view to marketing retail offers to its own final customers. Integrated operators, which are the only ones concerned by this measure, are typically large corporations who are, *a priori*, easily able to provide this information to the Authority.

In addition, in order to achieve economies of scale and promote rapid growth in the penetration rate of ultra-fast broadband optical fibre services, some operators want to carry out systematic connection campaigns, in particular as soon as the network is deployed – this is known as "pre-connections" – instead of limiting themselves to a system of making connections in response to orders from commercial operators.

It should be noted that, within the framework set out in this Decision, any building operator wishing to carry

out a pre-connection campaign to the indoor optical terminal point* (hereinafter IOTP)[16] during the deployment of the shared network, may do so if they comply with the following principles:

- the construction of pre-connections must not favour any commercial operator, including, where appropriate, integrated operator's retail arm, particularly in terms of the selection of connected households or premises;
- no pre-marketing can take place in the wholesale market concomitantly with the construction of a pre-connection;
- all operators who have signed the access agreement must have the same visibility as the building operator on the planning of these pre-connections, if applicable, and on their availability date.

The Authority shall ensure compliance with these principles, notably through requests for information on the operational processes and rules implemented by the building operator.

2.2.3 Process applicable to new buildings

In the case of new buildings hosting an indoor concentration point* (ICP), an adapted chronology has been set up to allow occupants to have access to optical fibre services as soon as they move into the building. As optical fibre is often installed at the end of a building's construction, less than three months before the arrival of the occupants, this configuration raises questions regarding compliance with the three-month notice period and the designation of infrastructure operator[17].

In the specific case where the indoor concentration point has not yet been installed three months before the building's scheduled construction delivery date[18], the previously designated building operator (if applicable) must send all the mandatory regulatory information relating to the concentration point, with the exception of elements related to its location or accessibility if they have not yet been defined, three months before the building's scheduled delivery date.

In any event, the start date for marketing a line located in the ICP's service area can only take place, at the earliest, six weeks after complete information relating to the concentration point is officially made available.

2.2.4 Performance indicators

In order to monitor the non-discrimination obligations when placing orders with a commercial operator, the Authority considers it necessary to have detailed information on building operators' performance levels. However, this necessarily involves the regular measurement of a certain number of quality of service indicators.

While it must be possible to monitor the obligation of non-discrimination for all building operators, it must be monitored more carefully in the case of a building operator that also has departments, subsidiaries or partners in charge of a commercial operator business. In its Recommendation of 11 September 2013 on Non-discrimination obligations and consistent costing methods to promote competition and encourage investment in broadband, the European Commission states that a general non-discrimination obligation in prices may not be sufficient, and recommends the introduction of key performance indicators (KPIs)[19] designed to ensure compliance with non-discrimination obligations, which are considered by the Commission to be, "*more appropriate for detecting any potential discriminatory practices and increasing transparency regarding the supply and quality of regulated wholesale access products (...)*"[20]. Although the Commission's reasoning applies here to the case of a single vertically integrated operator deploying a next-generation network (assumed to be an operator with significant market power), it can be transposed to the case of any operator on the wholesale market. In particular, the Commission states that "*KPIs should cover the main*

[16] The IOTP usually comes in the form of a special optical terminal socket. Wiring can be extended downstream of the IOTP by an internal optical service terminated by another optical terminal socket.
[17] For example, the buyer of a building under construction may mandate the developer to allow the latter to sign the agreement with the building operator for the provision of the network for its operation, in the name and on behalf of the owner. The designation of infrastructure (aka infrastructure) operator must, if necessary, be confirmed by the first general meeting of the co-owners.
[18] "Delivery" is understood here to mean the date from which the households or business premises of buildings may be occupied.
[19] KPIs correspond to measurable, most often quantitative, indicators of the performance of an industrial activity. These measurement tools are addressed by the European Commission in its Recommendation No.2013/466/EU of 11 September 2013. While the principles set out in this Recommendation are not, as such, applicable to symmetric measures adopted by regulators, they may nevertheless constitute a useful reference in this context.
[20] Recital 23 of the Recommendation cited above.

activities of the supply cycle and cover all phases of the supply cycle, i.e. the ordering process, the provision of the service, the quality of the service, including failures and the time taken to repair failures, and the migration of access seekers between the different regulated wholesale inputs."[21].

In addition, even if the Authority does not have sufficient hindsight at this stage to impose a minimum level of performance on each of the KPIs, it must collect information on building operators' actual performance levels to be able, if necessary, to impose a minimum level of performance in the future by assessing the reasonableness and proportionality of such an obligation.

The Authority therefore considers it necessary to impose the collection of performance indicators on building operators, targeting at this stage – in the networks' "filling" phase – as a priority the processes of ordering and delivering access. The gradual implementation of KPIs for processing ultra-fast broadband optical fibre electronic communications line access orders was initiated in 2013 by Arcep's departments as part of the multilateral meetings dedicated to operational processes for ultra-fast broadband optical fibre electronic communication network sharing. The definition of KPIs and information gathering methods were discussed and approved by the operators participating in these multilateral meetings. What remains is for the Authority to formalise this approach by imposing the collection of these KPIs. Information shall be gathered on a quarterly basis and aggregated into indicators for the months of the quarter in question.

The thus collected data will provide the Authority with an overall view of building operators' performance. This will not only inform the multilateral work dedicated to the operational aspects led by the Authority but also, in the longer term, help the Authority support the sector on issues of access process performance.

The Authority nevertheless considers that it would not be proportionate to require, at this stage, such a collection of information from all building operators, regardless of their size. The Authority therefore intends to define a threshold below which building operators would not be required to collect indicators, for example by concluding that networks serving[22] fewer than 10,000 potential end customers (number of lines), will not be required to gather this information.

In addition, building operators' order rejection practices can have an impact on the reliability of these indicators. The Authority therefore considers it necessary to require that building operators' order rejection practices be justifiable, transparent and non-discriminatory. To this end, the building operator must provide the commercial operator with all of the objective elements enabling the latter to reconstruct the grounds for the order's rejection. In particular, an integrated building operator in the downstream market must process and, where appropriate, reject orders from its retail arm under the same conditions as orders from other operators. In addition, it seems necessary and reasonable to require that the building operator indicate in its line access offer the objective and precise criteria that it applies when rejecting orders.

The definition of these indicators shall be carried out without prejudice to the subsequent definition and collection by the Authority of the indicators which it may need to monitor operators' compliance with their obligations, in particular on:

- the provision of the elements of the shared network;
- access orders on activated "bitstream" offers;
- the recovery time following an incident on the active line* (see Section 2.3.4).

The indicators are listed in Annex 5. To take account of operational needs, these indicators may however be subject to modifications, after the Authority's consultation with the operators.

Finally, to monitor the information provided, it seems reasonable and proportionate to impose on operators an obligation to make all the elements, including the raw data, necessary for the verification of these indicators available to the Authority upon request. To this end, the building operator must keep this information for 24 months after the end of the corresponding quarter.

2.3 Line access offer

2.3.1 Publication and public dissemination of the access offer

[21] *Idem*

[22] The number of end customers that a ultra-fast optical fibre electronic communications network can serve corresponds to the number of households and business premises located in the service areas of the concentration points that have been made available by the building operator.

In accordance with CPCE Article L. 34-8-3, the building operator is required to provide access "*under transparent conditions"*. To this end, Article 4 of Arcep Decision No. 2009-1106 stipulates that the building operator shall publish an access offer covering the following services in particular:

"- *conditions for the installation of a dedicated optical fibre or a patching mechanism;*

- *access to the lines by providing a dedicated and/or shared optical fibre;*

- *access to associated facilities".*

For each of these services the offer must specify, "*the terms and conditions governing subscription and cancellation, prior information, technical features, delivery and after-sales service processes, turnaround time and prior notice, quality of service and pricing conditions".* The reasons for this Decision specify that "*It is on the basis of this access offer that the building operator will then be led to conclude access agreements with interested third-party operators".*

The publication and dissemination of the access offers are an essential part of fibre to the home access network sharing. This transparency is also necessary to prevent the risk of discrimination between operators.

In accordance with the above-mentioned provisions, the access offer published by the building operator must be sufficiently detailed to enable any interested operator to be fully apprised of the technical, pricing and contractual conditions that the building operator intends to offer in the actual access agreement with the commercial operator. As a result, when the access offer proposed by a building operator is not presented as one that a commercial operator could sign immediately, the actual access agreement proposed to the commercial operator must comply with the published access offer and cannot, barring an exception that is duly justified to the commercial operator or requested by the latter and under non-discriminatory conditions, contain conditions that are not stipulated in the published access offer.

2.3.2 Level of description of the operational processes

The access offer must be drafted in accordance with the above-mentioned provisions mentioned, in particular those contained in Article 4 of Decision No. 2009-1106.

Here, the Authority recalls that all the information relating to the lines and the concentration point that the building operator is required to provide in accordance with Decision No. 2009-1106 and the present Decision constitute associated facilities within the meaning of Article 4 of the Decision No. 2009-1106. In addition, CPCE Article D. 99-9 provides that access agreements must specify in particular "*the essential transfer of information between the two operators and the corresponding periodicity or notices".*

It is therefore up to the building operator to specify in the access offer that it publishes the precise terms and conditions for providing the information that it is required to transmit to the commercial operators who are signatories to the access agreement.

In particular, the information system for accessing and interacting with this information must be clearly introduced, and its technical specifications detailed in the building operator's access offer. Indeed, any operator requesting access to optical fibre lines must have a sufficient level of detail to anticipate possible investments in an information system.

In addition, the Authority recalls that the building operator is responsible for drawing up and complying with the technical specifications for access to the service (TSAS) that it specifies in its access offer (see Section 4.2.3). It ensures, where applicable, compliance with these TSAS by monitoring its subcontractors.

2.3.3 Monitoring the operational efficiency of access line order processing

With a view to improving operational efficiency, key performance indicators (KPIs) for taking access orders should be complemented by service level agreements (SLAs) and service level guarantees (SLGs[23]), i.e. penalties in the event that access order processing times exceed SLAs. These penalties must be sufficiently incentivising.

Ultra-fast broadband optical fibre electronic communication networks are new networks. The processes for accessing these networks should therefore be at least as efficient as the copper network access processes. The

[23] SLAs and SLGs correspond respectively to the levels of contractual commitments in terms of operational performance, most often measurable and quantitative, and the associated penalties in the event of non-compliance with contractual commitments. As with the KPIs, these tools are described in the above-mentioned European Commission Recommendation.

prospect of switching from the copper local loop to the optical local loop also requires the assurance that operational processes are at least as efficient on the new local loop. In addition, there are SLAs and SLGs[24] for the processing of access orders and service requests on the copper network. The Authority has also noticed that KPIs for optical fibre networks have been improving in recent quarters. Some building operators are also considering making commitments in their access agreements to send order reports[25] in a matter of days.

It also seems reasonable to the Authority to impose an overall order processing time for existing lines* as the line is already constructed from end to end and, if a sufficiently accurate and high-quality identification system and information system have been implemented by the building operator, it seems reasonable to require that this type of order be processed within a short period of time.

The Authority thus considers it reasonable and proportionate to require building operators to define SLAs and SLGs for each access order. These SLAs and SLGs will need to be associated with the corresponding performance indicators, and will need to be explicitly defined in the access offerings. For any access order whose deadlines do not meet the SLAs, the infrastructure must pay a penalty to the operator who placed the order.

In addition, the Authority considers it necessary to define service level agreements (SLAs) in this Decision on the turnaround time between the access order and the access order report. The access ordering processes in the wholesale market will need to be sufficiently fast to ensure dynamic competition in the fibre access market. In light of the contributions received to the public consultation that ran from 15 July 2014 to 26 September 2014, the Authority considers it reasonable, in view of current market standards, to retain a period of three working days[26], when the building operator is the one to perform the patch operation, and of one working day in other cases. The Authority also considers it reasonable, at this stage, to stipulate that this commitment will be calculated on the basis of the maximum lead time calculated monthly to the 95th percentile on all orders received by the building operator.

The indicators that must be covered by SLAs and penalties are as follows:

- for new lines (i.e. to be constructed)*, the turnaround time between the access order and the access order report[27];
- for existing lines, the turnaround time between the access order and the access order report[27];
- for existing lines, the turnaround time between the access order report and the report on the provision of the line.

Turnaround times are measured based on the data sent or received by the building operators (metadata associated with the data sent or received).

Turnaround times are expressed in working days. The choice of such a unit of measurement is the result of a consensus between operators that was expressed during the multilateral meetings dedicated to the operational processes for ultra-fast broadband optical fibre electronic communication network sharing. In addition, the Authority considers it more appropriate that the form of the indicators be the same for the KPIs on the one hand (see Section 2.2.4), and for the SLAs and SLGs on the other. It is particularly important that measurement be consistent.

2.3.4 Monitoring operational efficiency and response times when an incident occurs on active lines

Network performance is also linked to the building operator's ability to quickly remedy network malfunctions for which it is responsible. It seems necessary for the building operator to make a contractual commitment on the turnaround times for resolving such malfunctions. For example, on the copper network, for malfunctions exclusively attributable to Orange and already located by the operator leasing the line, a maximum service restoration time is defined, beyond which a fixed and definitive penalty is paid by Orange to the operator who accesses the line.

[24] Penalties increasing on a straight-line basis up to 2 months of subscription for an order delivered in more than 20 days, and up to 4 months of subscription for an order delivered in more than 30 days on an existing line.
[25] Refer to Section 4.3 for details on the access control process.
[26] Such a period should only concern very specific cases. These include network architectures that were built prior to the publication of the Authority's Decision No. 2009-1106.
[27] By distinguishing, where applicable, cases where patching at the concentration point is performed by the building operator.

In addition, it should be noted that optical fibre networks are new networks, and are also less subject to oxidation, theft, lightning and electromagnetic disturbances.

To avoid losing operational efficiency when switching to ultra-fast broadband networks, the Authority recommends that the building operator allow the operator leasing the line to open an incident ticket on active lines, and commit in its access offer to restoration times in the event of an incident, if necessary with a sharing of responsibilities to be defined with the operator of the line, providing for the payment of incentivising penalties in the event of non-compliance with its contractual commitments.

Additional multilateral work will need to be done on this subject. The Authority may consider imposing restrictive measures at a later date.

3 Process for providing information on shared network infrastructure

The process of making information related to the infrastructure of the shared network available is of critical importance for network sharing to function properly. There are three key aspects in particular that make up this process.

First, the process of consultation prior to the deployment of outdoor concentration points should be addressed. These preliminary consultations were already introduced by Arcep Decision No. 2010-1312. Second, the importance of providing building-scale information on shared network deployments needs to be emphasised, as this is the scale at which operators must be able to define commercial eligibility in the retail market. Third, principles governing the provision of information on the elements of the shared network to which commercial operators have access must be adopted. These elements include: the OCP, CP, CP-RSCP and RSCP link.

3.1 Consultations prior to deployment

3.1.1 Reminder of existing provisions

Decision No. 2010-1312 provides that consultations shall be held prior to any deployment of ultra-fast broadband optical fibre electronic communication networks outside of very high-density areas[28]. Through the Recommendations of 14 June 2011 and 21 January 2014, the Authority recommended extending the principle of these consultations to low-density pockets in very high-density areas, and to buildings with fewer than 12 units and business premises in very high-density areas, respectively.

The process provided for in Decision No. 2010-1312 aims to satisfy the goal of nationwide coverage, by avoiding long-term coverage gaps, and the goal of economic efficiency by avoiding inefficient overlaps of uncoordinated deployments in the same area. It is also a question of allowing commercial operators to express their specific needs at the time of these consultations, in particular concerning the hosting of passive or active equipment and remote shared connection links[29]. In addition, keeping local authorities properly informed creates the ability to reach consensus on local development matters and ensure compliance with the applicable urban planning rules.

As a reminder, the recipients of the information sent during these consultations are:

- operators on the list provided for in CPCE Article R. 9-2;
- the municipality(ies) in the concentration point's service area;
- the local authority or the group of local authorities executing a regional digital development blueprint (SDTAN) as defined in Article L. 1425-2 of the Local and Regional Authority Code (CGCT) where it exists;
- where applicable, the competent group of local authorities within the meaning of CGCT Article L. 1425-1.

[28] Article 5 of Decision 2010-1312 provides: "*In order to ensure that the concentration point's service area will be part of geographical division in a consistent manner, the building operator shall define a wider geographical grid and its partition into different concentration point service areas, taking the utmost account of the opinions expressed during the prior consultation by the affected local authorities and groups of local authorities, as well as the operators included in the list provided for by Arcep Decision No. 2009-0169 of 3 March 2009*."

[29] The Authority recalls that an operator's request for hosting at the concentration point active equipment level may not be considered reasonable if it is made after the consultation on that area. In any event, the requesting operator would have to bear specific shared costs.

3.1.2 Scope, parties to and duration of prior consultations

First, in order to avoid a process complicated by disparate implementation of the provisions established across the country, the Authority now wishes to establish a single framework that will apply to all outdoor concentration point deployments – indoor concentration points will therefore remain outside the scope of these consultations. To enable this harmonisation, the Authority considers it necessary to extend the principle of consultation provided for in Article 5 of Decision No. 2010-1312 to outdoor concentration point deployments in very high-density areas.

In addition, to promote the consistency of deployments desired by the legislator in the CPCE Articles L. 32-1 and L. 34-8-3, the Authority considers it necessary to stipulate that building operators operating a network in the same territory receive the information transmitted for the purpose of these consultations[30]. For instance, in the case of a public initiative network operator and a private operator deploying in adjacent areas, this process ensures information sharing on ongoing deployments. To this end, the Authority shall establish and maintain a list of building operators. This list will specify each of the listed building operators' coverage area. During prior consultation for a given territory, the building operators whose coverage area includes this territory will receive this information. For example, a building operator whose coverage area includes a given department will receive deployment information for the entire department in question. The procedures for creating and updating this list are detailed in Annex 2.

Through the building operator's creation of unique codes, this list will also enable better coordination between the information collected by the Authority (performance indicators, for example), and the information exchanged between operators.

To guarantee each operator's capacity to co-finance optical fibre networks under the best possible financial conditions, Article 8 of Decision No. 2010-1312 provides that "*the building operator will provide access to the lines allowing it to participate in the co-financing of these lines, both ab initio and a posteriori, at the concentration point level,"* and specifies that the *ab initio* access offer must, in particular, allow *"the building operator to identify, prior to the construction of the concentration point, the requests for hosting of passive and active equipment"*. To this end, the Authority considers that the possibility of *ab initio* co-financing must be available from the launch of the first prior consultation and remain in place at least until the concentration point becomes commercially available.

Finally, the minimum duration of a prior consultation should be defined, to allow the necessary time for the affected stakeholders to react, while avoiding slowing down deployments. Responding to the public consultation that ran from 15 July 2014 to 26 September 2014, several of the operators who expressed their views considered that the 45-day period provided for in the Authority's initial draft was excessive.

The Authority therefore considers it reasonable to set that minimum duration at 30 calendar days. The prior consultation end date is indicated in the consultation document. However, if one of the parties to be consulted is unable to make their comments known within this period, they can request an extension of a period not exceeding 15 additional calendar days[31] from the building operator, while stating the reasons for this request. The building operator can refuse to grant this request only on objective grounds, of which the applicant must be informed. It will inform the other consulted parties of the extension of the deadline, if it is accepted.

Throughout the duration of the consultation, the stakeholders concerned can comment on the information transmitted and the building operator must take the utmost account of these comments.

3.1.3 Content of prior consultations

In addition to the two developments mentioned above, the Authority also intends to promote the industrialisation of this process and properly informing the consulted stakeholders, by requiring that the building operator make a certain amount of information available during a prior consultation. This information, which is vital to ensuring that the consulted stakeholders are properly informed, is detailed in Annex 3 of the present Decision.

[30] Arcep's Recommendation of 21 January 2014 on the terms and conditions for access to ultra-fast optical fibre lines for buildings with fewer than 12 units or business premises in very high-density areas recommends that pre-deployment consultations be sent, among others, to "*building operators that have published an access offer for buildings with fewer than 12 units [or business premises] in very high-density areas"*. The establishment of a list of operators for the entire region will allow this principle to be widely adopted.

[31] From the end of the initial period indicated in the document of the prior consultation.

In particular, in the context of "tranche-based" co-financing offers, knowledge of the pace of ultra-fast broadband optical fibre electronic communication network deployment is key for commercial operators, and on which the building operator must provide them with clear information. Indeed, the increase in the scheduled number of households or business premises that can be passed during the deployment is an essential element for co-financing operators to calculate the financial stakes of the co-financing and build their business models accordingly. As the network is deployed, a co-financing operator will have to contribute to the investments, since the co-financing rates are generally divided into two components which are billed per household or business premises, respectively when the CP becomes available (scheduled household or business premises) then when the OCP (household or business premises passed) becomes available, the first part representing from 1/5 to 1/3 of the total price, depending on the offers.

The Authority therefore considers it reasonable and proportionate for the building operator carrying out a prior consultation to provide, at the same time, a series of data relating at a minimum to the estimated number of household or business premises scheduled and connectable year by year. This information, which exists in provisional form as part of the establishment of the building operator's business plan, must be made available to the co-financing operators from the first prior consultation, for the entirety of the area concerned by the co-financing commitments and, if necessary, updated for each new consultation on deployments in this area. Such an obligation is necessary to ensure, in particular, non-discriminatory treatment of co-financing commercial operators in relation to an integrated operator's retail arm. To ensure sufficient financial and technical clarity for co-financing operators, the relevant geographical mesh for providing this information should therefore correspond to the one chosen by the building operator when constructing its co-financing offer.

3.1.4 Information updates

To ensure that the implementation of the prior consultation process fully achieves its objectives, it also seems reasonable for the building operator to conduct an additional prior consultation in the event of significant changes in the information initially provided, in particular with regard to the following:

- an CP's maximum technical capacity;
- geographic coordinates of an CP serving more than a thousand lines[32] or an MDR; moreover, it seems reasonable for the building operator to provide, during the prior consultation stage, the best information it has on the civil engineering that can be used to connect commercial operators to the CP or the RSCP;
- the geographic boundaries affected by the prior consultation process.

3.2 Providing building-scale information

The building is the base mesh unit when deploying a shared fibre-to-the-home network. It is the most appropriate scale for handling any questions surrounding a household or business premises' eventual operative eligibility for an access order.

The Authority considers that any commercial operator that has signed an offer for accessing the building operator's lines must be provided with a source of information enabling it to stay apprised of information on the presence or expiry of the shared network deployed, or in the process of being deployed, for any concerned building.

The Authority notes that, in accordance with CPCE Article L. 33-6 and CPCE Articles R. 9-2 to 9-4 adopted in its application, the building operator must provide commercial operators registered on the list provided for in CPCE Article R. 9-2 and updated by Arcep with the information listed in this Article, corresponding to the buildings that have been the subject of the agreement provided for in CPCE Article L. 33-6 and required by the commercial operators likely to request access to the lines.

Under the present Decision, the Authority considers that the building operator must make available the information listed in Annex 4 of this Decision[33] to any operator who has signed the line access agreement. This information allows commercial operators who have signed the access agreement to enjoy greater clarity

[32] In response to the public consultation that ran from 15 July 2014 to 26 September 2014, several operators stated that it could be challenging to provide definitive information on the location of CPs of fewer than a thousand lines at the public consultation stage.
[33] These include the building identifier and the CP and OCP to which it is attached, the address and geographical coordinates of the building, the number of households or business premises of the building as well as the length of one of the building's lines.

and to adapt their co-financing and/or leasing strategy for the shared network based on regularly updated information. This process of providing information must take place with the following provisos:

- for buildings located in an area that has been the subject of a prior consultation, within the framework specified above, within one calendar day of the completion of that consultation;
- for buildings that have been the subject of an agreement provided for in CPCE Article L. 33-6 of, within one week of the date of signature of this agreement;
- for buildings located in an available shared point's service area, within one calendar day from when this concentration point is made available.

This supply of information shall comply with all of the principles governing information sharing set out in Section 2.1, and the building operator must send a notification within one calendar day of the availability or update of the information listed in Annex 4 to the operators who are signatories to the line access agreement.

As evidenced by current practices and the exchanges that have taken place during the multilateral meetings dedicated to the operational processes for ultra-fast broadband optical fibre electronic communication network sharing, the Authority notes that timelines for the current exchange of information are similar to those mentioned above. In the case of buildings located in an area that has been the subject of a prior consultation, and buildings located in an available shared point's service area, the information listed in Annex 4 is already available, respectively, from the prior consultation's start date, and from the day the concentration point becomes available. Lastly, in the case of buildings that have been the subject of an agreement provided for in CPCE Article L. 33-6, although currently on a fortnightly basis, the exchange of information seems compatible with the transition to a weekly basis. The operational impact in this latter case remains minor.

The Authority specifies that any building must be correctly identified by its exhaustive address, i.e. sufficiently complete so that the said building cannot be confused with any other building in the vicinity, and by its geographical coordinates (x, y) expressed in the relevant geographical reference system, for the territory in question, provided for by the most widely used coordinate reference systems in France[34]. On the date of publication of the present Decision, for Metropolitan France it is the Lambert 93 reference framework. Finally, a national project, called the National Address Database ("BAN" project) and led by IGN and La Poste, aims to provide private and public sector stakeholders with a collaborative and complete address database. The progress of the project, which should see the light of day in late 2015, will be closely monitored by the Authority. It should be noted that the "BAN" project will also use the Lambert 93 standard.

The provision of this information should enable operators who have signed the line access agreement to obtain an exhaustive view of the shared network's deployment status, at the granular level of each building located a given concentration point's service area. This information must therefore be consistent with the information provided in the context of the prior consultation process (Annex 3) and during the process of making information on the elements of the shared network available (Annex 4). In particular, an operator that has signed a line access offer must be able to associate, in a timely manner, a building falling within one of the above categories with the references for the elements of the shared network to which it is – or will be – attached, i.e. the CP and the OCPs located inside or outside the building and to which the building is associated, as well as the RSCP and the CP- RSCP link, if applicable.

3.3 Providing information on shared network elements (RSCP, CP, CP-RSCP link, OCP)

Under CPCE Article L. 34-8-3 and the Arcep Decisions taken in its application, the building operator shall update all of the information collected on deployments and required by commercial operators who have signed the line access agreement.

The work carried out by operators under the aegis of Arcep's departments, particularly during multilateral meetings dedicated to operational processes for ultra-fast broadband optical fibre electronic communication network sharing, testifies to the need to consolidate the processes for providing information on shared network elements. The Authority notes that, for the most part, these processes are already implemented and functional, particularly with regard to the deployment and operation of networks via outdoor CPs. These deployments will, however, represent the vast majority at the national level, both in private and public

[34] The reference document describing coordinate reference systems is published by National Geographic Institute on the following page: http://geodesie.ign.fr/contenu/fichiers/SRCfrance.pdf

initiative areas. A good understanding of these processes is therefore vital to tackling these networks' deployment and operational challenges and, ultimately, to ensuring their sharing schemes function properly.

This section details the entire process of supplying information on OCPs, CP, CP-RSCP and RSCP links. The reliability of the information on the CP, CP-RSCP and RSCP links is crucial to enabling commercial operators to connect their transport and optical backhaul networks to the shared network. Information regarding OCPs is needed to verify each line's eligibility for an access offer.

3.3.1 Process for supplying information on shared network elements

The elements of the shared network concerned by the supply of line access information are the following:

- CP
- RSCP,
- CP-RSCP link,
- OCP.

For the sake of clarity and legibility, the Authority specifies that any endpoint of one or more ultra-fast broadband optical fibre line at which the building operator gives operators access to these lines on a point-to-point basis, with a view to providing electronic communications services to the corresponding end-users, in accordance with Article L. 34-8-3 of the French Postal and Electronic Communications Code, is a concentration point. However, in the context of multilateral meetings dedicated to operational processes for ultra-fast broadband optical fibre electronic communication network sharing, the Authority was able to observe that some building operators make a distinction between the notion of "technical concentration point" (or TCP), which corresponds to the above-mentioned definition, and a second notion of "regulatory concentration point" (or RCP) which corresponds to the scale at which said building operators have arbitrarily chosen to provide information to commercial operators. The Authority recalls that a building operator is required to provide the information necessary to access the CP on the scale of each individual CP.

Moreover, if the remote shared connection goes up to the optical connection node (OCN),[35] which seems to be the benchmark architecture in less dense areas, then the OCN equals the RSCP, and the principles of the present Decision are not amended in any way.

Generally speaking, regardless of the configuration of the shared network deployed by the building operator, all the information provided to commercial operators as part of the process for supplying information on the elements of the shared network must be consistent, in accordance with the obligations of this Decision, in order to allow operative sharing. The Authority will be particularly vigilant to ensure compliance with this principle.

For each of the elements of the shared network mentioned above, when the building operator makes the shared network element available, it makes all of the information listed in Annex 4 available to the commercial operators who are signatories to the building operator's access agreement. This provision complies with all of the principles governing the supply of information defined in Section 2.1. In addition, for the supply of any shared network element, notification of the availability of the information associated with said shared network element must also be made within one calendar day from the date that shared network element becomes available.

The Authority recommends that the building operator also send the commercial operators who have signed the building operator's access agreement a weekly notification, containing all of the latest updates and notices of availability of shared network elements from the past week. The aim of this recommendation is to improve the operational monitoring that small third-party operators often perform through benchmarking. A weekly frequency seems reasonable in view of the pace of optical fibre access network rollouts observed so far by the Authority.

Finally, the Authority recommends that the building operator make available to the operators who have signed the access agreement a usable list of all the shared network's concentration points, remote shared connection points and remote shared connection point links, on a regular basis that can be automated. It

[35] This is the concentration point of an optical fibre network where the active equipment from which a commercial operator activates its subscribers' access is installed.

seems reasonable and proportionate that the operators who have signed the access agreement be able to benefit from a clear, aggregated view of all the elements of the shared network to which they can connect in order to access that shared network's lines.

As the Authority observed during the multilateral meetings it manages on the operational processes for ultra-fast broadband optical fibre electronic communication network sharing, the processes for providing information on the elements of the shared network are vital to ensuring efficient and non-discriminatory access to the lines. The Authority considers that most of the information listed in Annex 4 is information already provided by the building operators as an integral part of supplying the elements of the shared network that they operate.

In addition, with regard to the one calendar day period mentioned above, the ability to notify operators quickly seems indispensable, first, to comply with the notice periods and, second, to foster industrialisation of the processes. The operational impact of implementing such a notice period is, *a priori*, minimal, since the habitual notifications issued when shared network element becomes available are already being sent on the same day if not within hours of that element becoming available. As set out in Section 5.1, the Authority intends to provide sufficient implementation timelines to allow the affected operators to set up robust information systems.

In addition, the Authority recalls that:

- the building operator is required to provide commercial operators with a system that complies with all of the principles governing the provision of information, as defined in Section 2.1, allowing them to order access to an CP, an RSCP or an CP-RSCP link to access the lines attached to these elements of the shared network; the building operator's line access offer must detail the entire process;
- each commercial operator is required, under effective, reasonable and non-discriminatory conditions, to send the building operator a notification informing them of the successful completion of an access order to an CP, a RSCP or an CP-RSCP link, with a view to accessing lines attached to these elements of the shared network; the building operator's line access offer must detail the entire process.

A chronological description is provided in Section 3.3.3 of the present Decision.

3.3.2 Information specific to multi-fibre deployments with dedicated fibres in very high-density areas

Arcep Decision No. 2009-1106 provides that in very high-density areas, "*When requests for access are made prior to the establishment of the lines of a building, the building operator shall grant reasonable requests from operators relating to the constituent elements of the lines or their technical environment, in particular requests consisting of:*

- enabling each household or business premises in a building to benefit from a dedicated optical fibre to serve the end user from the concentration point [...]" (Article 5).

The choice of deploying point-to-point ultra-fast broadband optical fibre electronic communications network engineering is characterised by a higher initial investment than a point-to-multipoint deployment, offset by a theoretically lower operating cost since the building operator does not have to systematically venture into the field to patch the fibres at the concentration point to match the fibres downstream from the concentration point with its own transport fibres carrying the data signals. In addition, an operator choosing point-to-point engineering can elect to weld the fibres at the concentration point to avoid creating breaking points on its network.

However, in order to benefit from these advantages, an operator who has chosen a point-to-point architecture must have the ability to know which fibres will actually be used when making the connection to the concentration point and about any welding operations, as well as the fibres that could be used in the event of maintenance or network extension. To this end, and to safeguard technological neutrality, it seems necessary for the building operator to communicate to operators benefitting from a dedicated fibre the IDs of the fibres that will actually be used to serve the households or business premises in the concentration point's service area (CP-SA) as soon as the concentration point becomes available.

Amongst the incoming fibres to the concentration point, some are intended to serve households or business premises in the service area, but others are meant to be backup fibres – supernumerary fibres for network

extensions or maintenance operations, for example. If operators assign optical fibres over time (e.g. in response to orders, for example), an operator with a dedicated fibre cannot reap the benefits that its network engineering should provide.

3.3.3 Typical chronology of the process for providing information on the shared network's infrastructure

In this section, the Authority provides a chronological description of the various sub-processes imposed on building operators. This description is purely illustrative and by no means exhaustive.

Two distinct chronologies are proposed. The first concerns deployments in buildings connected to an indoor concentration point (ICP). The second concerns deployments in buildings connected to an outdoor concentration point (OuCP).

3.3.3.1 Typical chronology of deployments in buildings connected to an ICP

In accordance with Article 6 of Decision No. 2009-1106, this is necessarily a building with at least twelve residential units or business premises located in very high-density areas, or a building with fewer than twelve units or business premises located in very high-density areas and accessible through an accessible sewage network that can be accessed via a tunnel that is itself "visitable".

An agreement for the installation, management, maintenance and replacement of ultra-fast broadband optical fibre electronic communications lines (agreement concluded in accordance with CPCE Article L. 33-6) must be signed between the building operator and the building's owner, the building owners' association or the property owners' union.

The building operator shall inform the operators registered on the list provided for in CPCE Article R. 9-2 of the signature of said agreement, by means of a notification informing them of the availability of this information. This information will be updated regularly. In addition, the building operator also provides the operators who are signatories to the access agreement with the information provided for in Annex 4 of this Decision regarding the provision of information at the building level.

By the end of the six-month period provided for in CPCE Article L. 33-6 at the latest, the building operator must have completed the work designed to make the building's households or business premises connectable from the ICP. Upon completion of this work, the building operator must send the commercial operators who have signed the access agreement (pursuant to CPCE Articles L. 34-8 and L. 34-8-3) a notification of the availability of the ICP, and the OCPs located inside the building if applicable, mentioning the availability of the associated information. In addition, as part of the process for providing information on the elements of the shared network, the building operator must send the commercial operators who have signed the access agreement a weekly notification of all the updates made since the last information update.

At the end of the three-month notice period provided for in Decision No. 2009-1106 and the present Arcep Decision, the lines served via an ICPare deemed commercially available. This means that, at the end of this period, the building operator can send the line availability report to the commercial operator who has placed an access order, and authorise activation of the line. Building operators will allow commercial operators to place access orders for each of the lines served via an ICP fifteen calendar days before the end of the three-month notice period. It should be noted that the building operator is thus authorised, during the last fifteen days, to send the access order report, but that it can under no circumstances activate the line or send the line availability report during this period.

3.3.3.2 Typical chronology of deployments in buildings connected to an OuCP

Following the installation of each OuCP, the building operator must send to the commercial operators who are signatories to the access agreement a notification of the availability of the OuCP, and of all the OCPs installed on the date made available to the OuCP, mentioning the availability of the associated information. In addition, as part of the process for providing information on elements of the shared network, the building operator must send the commercial operators who have signed the access agreement a weekly notification of the information of all the updates made since the last information update.

Any provision of an OuCP outside very high-density areas where the CP-SA represents fewer than a thousand households or business premises must be accompanied by[36] the provision of the RSCP to which it

[36] In any event, notice periods can only begin when all the information is made available.

is attached as well as the corresponding CP-RSCP link.

The lines in the OuCP's service area served by the OCPs that have already been constructed when the OuCP is made available become commercially available at the end of the three-month notice period provided for in Arcep Decision No. 2009-1106 and the present Decision. Building operators will allow commercial operators to place access orders for each of the lines in the OuCP's service area served via these OCPs fifteen calendar days before the end of the three-month notice period. However, this only authorises the building operator to send the access order report, but not to activate the line or send the line availability report.

Second, the lines in OuCP's service area served by OCPs that have not yet been constructed when the OuCP is made available become commercially available at the end of a reasonable notice period, e.g. one month, after this OCP become available and until the deployment in the area is complete. Building operators will allow commercial operators to place access orders for each of the lines in the OuCP's service area served via these OCPs fifteen calendar days before the end of the one-month notice period. It should be noted that the building operator is thus authorised, during the last fifteen days, to send the access order report, but that it may not under any circumstances activate the line or send the line availability report during this period.

3.3.4 Provision of facilities associated with the remote shared connection point and the remote shared connection point link

Decision No. 2009-1106 introduced a notice period of three months from the date of the provision of the information necessary for access to the lines and in particular the information regarding the provision of the concentration point, before making the lines in the concentration point's service area commercially available.

The Authority nevertheless ascertained practical difficulties in cases where the concentration point includes fewer than a thousand households or business premises, tied to the fact that the remote shared connection point link is not always available when the concentration point becomes available, or that the delivery time for this link is too long. It therefore seems necessary for the Authority to specify a number of rules that apply to these cases.

In the event that the concentration point includes fewer than a thousand households or business premises, the Authority considers that hosting at the remote shared connection point, under conditions guaranteeing operators the ability to establish a transport or optical backhaul link up to that point, constitutes an associated facility necessary for access to the lines.

In this case, providing all the information relating to the remote shared connection point link and the remote shared connection point, as well as operators' actual ability to order access to the remote shared connection point link or hosting at the remote shared connection point, should therefore be ensured prior to, or at the very least simultaneous with, when the concentration point becomes available. Otherwise, the various notice periods will not be able to begin in the meantime. To guarantee commercial operators' effective access to the concentration point at the end of the three-month notice period, it seems necessary for the building operator to undertake to deliver remote connection orders within a reasonable period compatible with the notice period. When a commercial operator opts for a large-scale ordering method, without making any special technical arrangements, for example on all CPs serving the same co-financing area, the building operator should be able to fulfil remote connection orders simultaneously with the provision of the CPs on which the links have been ordered. On the other hand, in the event that the commercial operator uses a delivery method that includes certain specific technical arrangements, however, such as the choice of references and delivery point positions, rather than a generic, large-scale delivery method, a maximum of 20 working days of production from the building operator fulfilling the remote connection order seems reasonable, *a priori*, given the practices currently observed in building operators' access offers.

The Authority also stresses that delivery times for links and hosting locations must be compatible with the commercial availability of the lines served by the shared network elements under non-discriminatory conditions.

4 Optical fibre line ordering process and building operators' responsibilities

4.1 Ultra-fast broadband optical fibre electronic communications line identifier

On April 25, 2013, the Authority published a Recommendation on FttH line identifiers[37]. The Authority nevertheless notes that operators are not implementing this Recommendation quickly enough, as several of them continue to work with their own ID formats.

The purpose of this Decision is to harmonise information-sharing practices, processes and flows while paving the way for the eventual centralisation of resources. The line identifier (aka line ID) is a central reference in access-related processes since it allows an operator to identify a constructed line and thus to obtain all of the information necessary for its provision and operation. It therefore seems essential to apply, starting in the network construction phase, rigorous and homogeneous line identification practices that will facilitate the network's management and the procurement process over the long term, which are crucial to safeguarding business and competition dynamics.

The Authority therefore considers it necessary, in the context of this Decision, to render mandatory some of the measures referred to in the Recommendation of 25 April 2013 and listed below.

These obligations pertain to new lines to be constructed, and not to the stock of existing lines for which non-standardised identifiers have been used in the past. These provisions largely reflect the recommendations made in April 2013, whose importance the Authority has frequently reiterated to operators.

The timeline for implementing these obligations is specified in Section 5.1 of the present Decision.

4.1.1 Line ID features

The line ID has the following characteristics:

- Uniqueness on a national scale: this limits the risk of confusion between the lines and ultimately creates the ability to identify the line with certainty without any additional information.
- Future-proof: this identifier must not change when a socket is replaced, when the optical route is altered (defective fibre and assignment of a new fibre, for instance), or in the event of a change in the operator infrastructure. This will limit the risk of errors caused by outdated information being employed by end users or commercial operators when placing their orders.
- Long-term easy access: User must have access to the line ID with a low risk of error in order to transmit it to their commercial operator when placing their order. Labelling must therefore be performed of the IOTP installed on users' home or business premises, and at the floor box level, to enable a customer or a technician to find this identifier.
- Standard format nationwide: it is particularly important that the ID be of fixed length to allow for easy automation by information systems, and to avoid confusion amongst end users when they have to use this ID to subscribe to a service. Since different formats have been used in the past, information systems will still have to be able to process different formats, at least temporarily.

4.1.2 ID format

The target format for the identifier used for new lines is as follows: OO-XXXX-XXXX, with:

- OO: 2-character alphanumeric prefix;
- XXXX-XXXX: suffix of 8 alphanumeric characters.

The prefix is used to designate an "ID manager", which is responsible for assigning a unique identifier to each line.

In its Recommendation of 25 April 2013, the Authority proposed keeping an up-to-date list on its website of the two-character codes associated with each ID manager, i.e. each building operator. This list is available on the Authority's website.

The present Decision provides for the establishment of a list of building operators, in which the prefix assigned to each ID manager will now be included.

The suffix is used to assign a unique reference from within an ID manager's repository. The full ID (prefix and suffix) is therefore unique at the national level.

[37] This Recommendation can be downloaded from the following URL: www.arcep.fr/fibre

The recommendations designed to minimise confusion between alphanumeric characters remain relevant. The Authority also recommends that the identifiers for the lines that depend on the same concentration point differ by at least two characters in order to avoid confusion between two physically proximate lines, which could create a risk of wrongful line overwriting.

The alphanumeric codes of the prefix and suffix should exclude the letter O to avoid confusion with the number 0. The codes "01", "02", "03", "04", "05" and "09" will not be assigned to enable operators to potentially build integrated processes between the copper local loop and the fibre-to-the-home local loop. The codes "06", "07" and "08" will also not be assigned. The font used should also avoid confusion between the letters U and V in particular – this ID is meant to be printed.

With these rules, the number of possible prefixes is 1,209 (= $(25+10)^2 - 16$), which seems sufficient in relation to the number of building operators that can generate these identifiers.

4.1.3 ID marking location

This Decision clarifies the definitions of Indoor Optical Terminal Point (IOTP) and Optical Terminal Socket (OTS).[38] In accordance with the definitions in Annex 1, the first OTS downstream from the network penetration point in the household or business premises corresponds to a particular functional element called IOTP. Although, for simplicity's sake, the term OTS has been used in the Authority's Decisions[39] as well as in the Recommendation of 25 April 2013 (due to the particular context of deployment in existing buildings where only one OTS is installed by operators), it is the IOTP that is the subject of these regulatory provisions, and which constitutes the end of the ultra-fast broadband optical fibre electronic communications line. It is the IOTP that must be marked, in a permanent fashion that is legible and accessible to the end user[40].

External labelling of OTS does not appear to pose any particular difficulty from a material point of view. The OTS currently deployed are boxes or cabinets, onto which the technician installing the connection can easily affix a durable label provided for this purpose, indicating the line ID. Such external marking should therefore be systematic.

On 7 February 2014, the Authority launched a public consultation on FttDP (fibre to the distribution point), an architecture consisting of deploying optical fibre to a point very close to the subscriber's home or business premises and reusing existing metal wiring (copper line or coaxial cable) on the terminal segment to connect the home or business premises to the optical fibre.

No ONT would therefore be installed by the operator under this configuration. If this architecture were to be used as an alternative to the FttH connection, it could be necessary to implement a solution so that the line ID is marked and accessible inside the customer premises, while avoiding having an operator mistakenly believe that the terminal optical fibre connection has been made. The Authority nevertheless lacks sufficient feedback on the implementation of the FttDP in real-life situations to give an opinion on the practical arrangements for marking. Where appropriate, reuse or a matching system with identifiers used for ordering copper network or on coaxial cable network access, may need to be considered.

Finally, in order to facilitate future work at the OCP, the building operator must repeat labelling with the same identifier on the connection cable, at the output of the box/cabinet constituting the OCP. This will allow a technician to find the line ID if the marking is not present on the IOTP and to identify the right cable requiring maintenance.

Many building operators already label cabinets' output cables. This additional labelling does therefore not appear to represent an undue burden on building operators, and is necessary to facilitate line identification.

The Authority also considers it advisable for any maintenance operation on the line, including on lines existing on the date this Decision enters into force, to be an opportunity to apply all of the principles set forth above – labelling, standard ID format, etc.

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[38] Communication socket with at least one optical connector. The term OTS is often used to refer to the socket located inside the household or business premises to which the subscriber generally connects the operator's ONT ("box"), although this definition refers to generic equipment and not a network element.

[39] In particular, Decisions No. 2009-1106 and No. 2010-1312

[40] However, if for any reason an operator chooses to extend the wiring inside the home or business premises to another OTP, it is recommended that the line ID marking be repeated on this OTP to ensure that users can access this identifier.

4.2 The building operator's responsibilities

4.2.1 The building operator is responsible for optical fibre lines up to the indoor optical termination point

In accordance with Decision No. 2009-1106, the obligation to grant access to ultra-fast broadband optical fibre electronic communications lines pertains to the section of the line between the concentration point, or RSCP when applicable, and the indoor optical termination point. Because the building operator is required to ensure compliance with obligation, it is responsible for the ultra-fast broadband optical fibre electronic communications line from end to end, in other words from the concentration point to the indoor optical terminal point (IOTP).

In particular, in the case of an existing line, the building operator's responsibility extends to providing operators with access to a line in good working order (in particular, optical line continuity from the concentration point to the IOTP and correct line identification), and to managing any operations required for network compliance or maintenance, including the terminal connection.

The Authority recalls that, in addition to the building operator's obligations towards commercial operators wanting to access the lines, the building operator also has obligations towards the building's owner, the building owners' association or the property owners' union with which it has signed an agreement in accordance with CPCE Article L. 33-6. These obligations are provided for in CPCE Articles L. 33-6 and R. 9-2, R. 9-3 and R. 9-4.

In accordance with CPCE Article D. 99-9, the line access offer and the agreements concluded by the operators must specify "*the definitions and limits in terms of liability and compensation between operators,"* as set forth in the principles defined in this Decision.

4.2.2 Terminal connection installation by the building operator

Decision No. 2011-0846 of 21 July 2011, ruling on a request for dispute settlement between the companies Free Infrastructure and France Telecom, required France Telecom to propose, in very high-density areas, "*an offer for the construction of landing connections*[41] *in multi-tenant buildings, including when the end customer wishes to subscribe to the services of a third-party operator"*. The Authority now considers it necessary for this offer to be available on all building operators' lines. Even if retail operators often choose to make service calls to their customers themselves, it has not been established that they have the operational capacity to do so throughout the entire area that will eventually be served by fibre optics.

The pricing terms and conditions for this offer must comply with the principles of objectivity, relevance, non-discrimination and efficiency.

In addition, as part of the building operator's installation of the terminal connection, it must provide operators wanting access the network with a tool that allows them to view the building operator's planned workload, and to schedule appointments with customers according to that workload. It seems essential to make this type of tool available to ensure the installation solution is usable in an industrial context and compatible with commercial operators' expectations, under non-discriminatory conditions, in particular with regard to an integrated building operator's possible retail arm. Operators are already using a tool of this type for copper local loop unbundling.

4.2.3 Sub-contracting terminal connection work

In practice, the commercial operator may want to install the terminal connection itself, considering this service as an integral part of the business relationship with the customer and taking advantage of this appointment with the customer to activate the equipment needed to supply the service, once optical continuity has been established.

The commercial operator's construction of the terminal connection is a subcontracting relationship in which the commercial operator is contracted by the building operator to install the terminal connection, in accordance with the building operator's technical specifications for access. In practice, it is advisable for the subcontracting relationship to be formalised by means of a contract.

[41] Particular case of the terminal connection, when the optical connection point is located on the floors of a building.

Decision No. 2011-0893 of 26 July 2011 ruling on a request for dispute settlement between France Telecom and Free Infrastructure required Free Infrastructure to amend its contracts to authorise France Telecom to install the "*landing connection"* for its own customers, "*in accordance with the rules of the art and the reasonable terms and conditions appropriately defined by Free Infrastructure"*. The Authority recalls that this case pertained only to Free Infrastructure's access offer in very high-density areas.

The Authority considers that a request from a commercial operator wanting to install the terminal connection itself, acting as a subcontractor of the building operator, may be considered reasonable, subject to exceptions and only strictly in accordance with best practices[42].

While it makes it possible to prevent an integrated building operator from interfering in the commercial relationship between the commercial operator and its customer, this mode of operation also runs the risk of creating confusion over the building operator's responsibility with respect to the terminal connection. Although commercial operators often seek to obtain the greatest possible autonomy over the management of this network segment, including for its maintenance, it is the responsibility of the building operator to ensure compliance with the technical specifications for access to the service for which it remains responsible, in particular when switching retail operators or activating existing routes. For example, missing or erroneous marking on an IOTP or unfinished welds in the case of multi-fibre engineering can be problematic for the life of the network.

The building operator's responsibility up to the IOTP can be assumed by monitoring its subcontractors, if applicable, by implementing a log of construction work and of the life of the network.

In addition, the Authority recommends that, in the event that the commercial operator builds the terminal connection, the building operator provide access to a switchboard if the commercial operator has not been given all the information required for the installation prior to venturing out into the field, or if this information proved to be incomplete or erroneous once on site.

4.2.4 Network maintenance

The building operator must provide for a maintenance service in its line access offer, to be able to maintain the shared network in good working order throughout its lifetime, except in cases of force majeure.

This service includes the repairs and bringing into conformity work needed to make the line available to the commercial operator – in the event of a lack of optical continuity between the CP and the IOTP for instance.

In practice, this maintenance service can be carried out by a commercial operator as part of subcontracting relationship with the building operator. The Authority nevertheless considers that the building operator cannot impose this option on the commercial operator. The building operator can also offer maintenance services that satisfy QoS requirements for access services with SLAs, in particular for lines serving businesses. These particular maintenance services could then allow commercial operators wishing to invest in the business market to market retail offers with specific quality of service levels – guaranteed recovery time, maximum service interruption.

In addition, the Authority will pay attention to the consistency of network maintenance pricing in the wholesale market. Building operators typically include the cost of the maintenance services necessary to keep the supplied lines in good working order in their wholesale tariffs. This often takes the form of a recurring fee, covering recurring maintenance needs. However, a building operator also typically charges a fee for making the line available. It is important to ensure that any billing for certain maintenance services is consistent with the recurring maintenance fee, on the one hand, and the line provision fee, without incurring double billing.

4.3 Processes for ordering access to a ultra-fast broadband optical fibre line

4.3.1 Key steps in the process

To enable the industrialisation and interoperability of information systems, the Authority considers it necessary to define milestones for ordering access ultra-fast broadband optical fibre electronic communication networks.

[42] Here, it could be justified for a building operator to reject such a request in the event that the commercial operator repeatedly disregards best practices, and the reasonable technical specifications defined by the building operator.

In addition, as addressed in Section 2.2.4, the Authority intends to set up key performance indicators (KPIs) for access delivery times, which implies the prior definition of clear milestones.

Unless cancelled by a commercial operator, any access order on a ultra-fast broadband optical fibre electronic communications network is characterised by three milestones:

- the access order sent to the building operator by the operator wanting to access the line;
- the access order report (or access OR);
- the line provision report.

The line provision report is defined in Annex 1. Its submission is particularly important[43] in terms of responsibility sharing, as it marks the completion of the order, and triggers the building operator's ability to invoice the commercial operator for use of the line and for line maintenance.

The building operator sends the access order report to the commercial operator wanting to access the line. This report contains all the information that the commercial operator needs to connect the fibre(s) that make up the line being made available with the fibres in its transport (cross-connect) network, notably the following information:

- physical position of the connector at the concentration point constituting the line's endpoint[44];
- concentration point ID;
- concentration point location;
- in the case of existing lines, the line ID as marked on the indoor optical termination box and at the drop cable;
- in the case of new lines (i.e. not yet constructed), line ID intended to be marked on the indoor optical termination box and at the drop cable once installed.

In the specific case where the building operator carries out the cross-connection itself at the concentration point, the access OR makes it possible to notify the operator wanting to access the line that the cross-connect operations have been performed. The access OR in this instance does not necessarily contain all of the previous information about the concentration point.

If the operator wanting to access the line has to install the terminal connection, working as a subcontractor to the building operator, additional information will also be provided – including information about the optical connection point.

4.3.2 Order placement assistance tool

Placing orders is a key process that will ensure commercial and competitive dynamism on ultra-fast broadband optical fibre electronic communication networks. It appears that a certain number of obligations must be imposed to ensure the process runs smoothly.

First, it seems essential that the building operator provide operators wanting to access the network with a tool to help them take orders. In practice, it appears that this tool is vital for commercial operators at the operational level, in particular for establishing a dialogue with the end customer with a view to placing an order. This tool contains information about all connectable lines* and all existing lines. The Authority considers that such a tool constitutes an associated facility, necessary for the implementation of the access provided for in CPCE Article L. 34-8-3. In principle, it should not give rise to specific invoicing based on the use of this tool, on top of co-financing or line rental rates.

The Authority also believes that the consistency, completeness and quality of the information contained in the order placement tool are essential to the proper functioning of the access control process. This is why this tool must reflect the technical bases of the building operator that lists all of its existing and new lines. The

[43] It is important to specify that the purpose of the present Decision is to define a process shared by all operators. The three steps of the ordering process – placing the access order, the access order report and the line provision report – are all required for the implementation of the line access order process. In the present Decision, the Authority does, however, not seek to prohibit operators from defining – if they wish to do so – additional steps that they consider useful.

[44] In the case of an operator benefiting from dedicated fibre in very high-density areas, identification of the fibre as it appears in the information provided to the operator when the concentration point is made available.

information contained in this tool must be consistent with all the information made available to commercial operators elsewhere, in particular the information described in Annexes 3 and 4 of the present Decision.

In addition, it seems necessary that the order placement tool provide sufficiently detailed information to distinguish the different lines when placing an order. To this end, the Authority intends to require that a certain amount of information be made available in this tool.

This tool must thus make it possible to distinguish between existing lines and new lines, given the differences in terms of cost and operational constraints to activate these lines – the construction or resumption of the terminal connection, appointment scheduling and possible rescheduling, etc. Amongst the new lines to be constructed, the tool must make it possible to distinguish, on the one hand, between connectable and non-connectable lines and, on the other, between lines that are and are not commercially available. Finally, information that a line has been provided to a commercial operator[45] without, however, revealing the latter's identity, can be useful information when ordering: it can, in fact, allow the operator that controls the line to know if it is taking the place of another operator and facilitate the management of possible line overwriting.

For any connectable line, the tool must indicate the location of the household or business premises, as well as the ID and location of its optical connection point. For any existing line, the tool must indicate the ID of the line and the location of the household or premises. In addition, the Authority considers that in the case of multi-storey buildings, the building operator should provide additional, building-specific information, such as the number of residential units or business premises per floor and the number of existing lines per floor.

Moreover, the Authority considers that line deconstructions – i.e. breaks in end-to-end optical continuity – should only occur in exceptional cases. On the copper network, line deconstructions are not uncommon, but this is mainly due to the fact that it is often necessary to cross-connect at intermediate points along the line, in particular at the street cabinet level. Unlike with copper, where line joining operations are relatively simple, fibre joining is a lengthier and more expensive process. In exceptional cases where such deconstruction of existing lines has taken place, the Authority wants to prevent information from being lost. To this end, the building operator should allow operators to distinguish the deconstructed lines through the order placement tool and to give them, within a reasonable timeframe, information about the lines in question. As a result, in the event of a new order on the premises in question, the information that has been collected during the life of the network would be available to help draw up the order and could facilitate its processing.

Finally, the Authority considers it advisable that the order placement assistance tool provided by the building operator include a feature that allows commercial operators to report – in an automated and industrial way – any missing information in the tool to the building operator, as well as any additional information that may allow the building operator to complete the existing information.

Building operators already offer all or some of this information in their online services, so the implementation of these obligations will consist mainly of strengthening existing information systems.

In light of the objectives pursued, and of the provisions of CPCE Article L. 34-8-3, it appears justified and proportionate that the building operator implement the measures described above.

4.3.3 Placing orders on existing lines

The Authority believes that the placing of orders on existing lines is particularly indicative of the degree of reliability of the information system and the processes put in place by building operators. While network construction can be subject to events that are sometimes difficult to predict, once constructed, the network constitutes a relatively stable asset over time. It should therefore be relatively simple to order a line on an existing network, provided that this network has been correctly identified and described, both in the field and in the information systems made available to commercial operators. This is where the true effectiveness of the system set up by the building operator can be assessed.

Proper identification of each line in the network is essential, as explained in Section 4.1 using the example of labelling sockets at the time of installation. However, the principle of identifying and marking sockets is not sufficient and must be supplemented by an effective tool to help with order placement (see Section 4.3.2). To this end, while the Authority has imposed a number of obligations in this regard (see Sections 4.1 and 4.2), it

[45] The term active line refers to such a line.

wants to impose an obligation of result on building operators in terms of the efficiency for orders placed on existing lines. To encourage building operators to implement an efficient system, the Authority intends to require them to provide a line identification service in the event of an existing line order, the principle of which is detailed below.

First, it seems legitimate for building operators to impose a certain number of obligations on commercial operators when ordering access on an existing line, to guarantee that the system implemented by the building operator is not hijacked. It therefore seems legitimate that in the context of an existing line access order, the building operator be authorised to require that the commercial operator wanting to access the line provide it with any information allowing it to identify the line to which the occupant has access, as long as this information is available in the order placement assistance tool described above.

In exchange for this requirement from commercial operators, if the information available in the order placement assistance tool and to which the occupant of the household or business premises has access, does not allow the commercial operator to place the order even though the line exists, it seems legitimate to require the building operator to offer a service to provide the commercial operator with the information needed to place the order. It should also be noted that several building operators already offer such a service.

Finally, a number of rules need to be established for this solution, to ensure that it can be used effectively. The building operator should thus define a maximum turnaround time for this service in its line access offer, which cannot exceed seven working days in 95% of cases, as well as the penalties it will have to pay signatory commercial operators if it fails to meet that deadline. The penalties must be sufficiently incentivising for the building operator to comply with its commitments. This service should also not be subject to specific usage-based billing, on top of co-financing and line rental rates.

The building operator may, however, entrust the provision of this service to a commercial operator, subject to the latter's agreement and possible remuneration.

The principles set out in this Section are principles of sound management and long-term control of operating costs. They appear to be proportionate insofar as their implementation amounts to establishing efficient principles for identifying the network’s lines, which is essential for their marketing.

5 Implementing the Decision

5.1 Implementation deadlines

Certain provisions of this Decision may represent a significant change in the building operators and commercial operators’ industrial operation. The Authority is aware that the stakeholders concerned by the present Decision vary in size, and that a number of the provisions of this Decision will require IT developments. The Authority nevertheless maintains that a large percentage of the measures provided for in this Decision constitute a direct extension, and in some cases a mere clarification, of the obligations already provided for under Authority's Decisions No. 2009-1106 and No. 2010-1312. Some of these measures have already been implemented by operators. Finally, for many of the measures provided for in this Decision, the Authority has relied on the conclusions of the multilateral work on the operational processes for ultra-fast broadband optical fibre electronic communication network sharing. As these elements have been known to operators for several months, the Authority considers that a relatively short implementation period for the corresponding provisions is proportionate.

5.1.1 Provisions to be implemented within six months

In this Decision, the Authority distinguishes a first set of provisions for which it seems reasonable and proportionate to provide for short implementation periods. This concerns, in particular, the provisions relating to the prior consultation process, the line access offer, non-discrimination and certain provisions relating to the access ordering process.

Most of these provisions do not require a redefinition of operators' databases. Indeed, the majority of these provisions do not directly target the operation of information systems but relate chiefly to contractual aspects (content of access offers) and non-discrimination (notice periods, performance indicators). Some of these provisions do have more operational impacts (building operator’s responsibility, performance levels and penalties), because they require the operators to reorganise human resources and technical facilities

allocation to some extent. The Authority has nonetheless formulated these latter obligations in such a way that building operators are given sufficient operational leeway, in particular in the definition of the subcontracting relationships they wish to establish and of the performance levels and penalties they wish to set. In addition, the Authority considers that the provisions concerning prior consultation should benefit the consulted parties as early as possible in the process, for the sake of geographical consistency of deployments and regional digital development. As a result, the Authority considers that a period of six months from the publication of this Decision in the *Journal Officiel* of the French Republic is sufficient for the application of the provisions in question.

5.1.2 Provisions to be implemented within twelve or eighteen months

In this Decision, the Authority distinguishes a second set of provisions for which it seems reasonable to provide for longer implementation periods. In particular, this concerns the provisions concerning the principles governing the supply of information, the processes for making information available at the building level, the processes for providing information on the elements of the shared network and certain provisions relating to the access control process. Here, the Authority considers that a period of eighteen months from the publication of the present Decision in the *Journal Officiel* of the French Republic is sufficient for the application of the provisions in question.

These provisions require significant work to be performed on the affected operators' information systems. The Authority therefore considers it proportionate to give building operators a longer period of time to allow them to define the needs to upgrade their information systems and to plan these developments in an industrial manner.

Lastly, the Authority distinguishes the implementation of the order placement assistance tool from this second set of provisions. It is an essential element in the wholesale market's competition dynamic. The Authority thus considers that a period of twelve months from the publication of this Decision in the *Journal Officiel* of the French Republic is sufficient for the application of the provisions in question.

It should be noted that the various deadlines defined here are longer than those initially provided for in the draft Decision submitted for public consultation from 15 July to 26 September 2014, in order to take into account stakeholders' responses to that consultation. It is therefore all the more vital as time goes on that the Authority be able to ensure that building operators will take advantage of these extended deadlines to implement their obligations. To this end, it would appear necessary to implement a mechanism for monitoring this implementation.

5.2 Monitoring implementation

To be able to monitor the staggered implementation of the present Decision, and anticipate difficulties they may encounter, it seems reasonable to require building operators to provide the Authority with progress reports.

If the operators encounter no particular difficulties, these reports will consist of a brief report on the successful implementation of obligation by the set deadline, along with a status report on the implementation of any obligations whose deadline is at a later date, if applicable.

In particular, six months after the publication of this Decision, the operator must provide the Authority with a progress report on the successful implementation of the provisions that have entered into force by that time, along with a status report on the implementation of the provisions whose entry into force is scheduled for twelve and eighteen months hence.

On the basis of each progress report it receives, the Authority may be required to request clarification from the operator concerned, in particular in the event of any particular difficulty that operator has encountered.

Operators will therefore be required to send the Authority a progress report six months, twelve months then eighteen months after the date of publication of the present Decision in the *Journal Officiel* of the French Republic

5.3 Common information-sharing entity

As indicated in Section 1.2.4 of the present Decision, there is no obligation for a given operator to apply the recommendations of the Interop' Fibre group or to modify its information system to switch to a subsequent

protocol beyond a given date. In addition, the Authority was able to observe significant differences in the implementation of the same protocol by several separate operators. Added to which, the group defines invariants that must be applied by all, and best practices that are not intended to be imposed, despite the often critical nature of the information concerned.

In its work, the Authority considers that operators could achieve significant efficiency gains by consolidating their efforts to develop information systems into a single entity in charge of centralised inter-operator management for a portion of the ultra-fast broadband optical fibre electronic communication network sharing processes. Given the number of operators in this market and the cost of one-on-one interfacing between stakeholders, there is a strong likelihood that the current system will not remain viable in the long term. The Authority believes that stakeholders' current mobilisation of human and financial potential could be utilised even more effectively.

The Authority thus welcomes the establishment of a centralised inter-operator management of ultra-fast broadband optical fibre electronic communication network sharing processes in accordance with competition law, also in terms of such an entity being open in nature. The Authority remains at operators' disposal to obtain a more detailed definition of the role and needs associated with the implementation of such management system. In any event, the Authority considers that implementing a centralised inter-operator management system would create the ability to streamline human and material resources, and that such a system would not, *a priori*, hinder compliance with the regulatory obligations arising from the CPCE and the Decisions taken for its application.

With regard to the establishment of centralised management, Competition Authority Opinion No.15-A-04 relating to the present Decision, considers that "*the creation of a centralised system managed by a municipal entity which must facilitate third-party operators' access to the information necessary for their activity in the downstream market, by limiting the interfacing of their system to a single information base, could be beneficial. In addition, if the establishment of this structure means that all commercial operators, including the integrated operators' retail arms, have access to the same information under the same conditions by this single channel, the principle of non-discrimination could be strengthened"*. However, the Authority adds that "*the arrangements chosen for the constitution of this entity should be precisely regulated. They should at least ensure, on the one hand, that the information issued by operators is limited to what is strictly necessary for the implementation of network sharing and, on the other hand, that the very purpose of that entity is to specify that no information that is not strictly necessary is made accessible to other operators. In addition, the information exchanged within the framework of this entity must be accessible without discrimination, under the same conditions and at the same time, to all the operators concerned. Finally, the entity must not lead to artificially restricting its members' business policies"*.

5.4 Sending information to Arcep

The information exchanged in the context of ultra-fast broadband optical fibre electronic communication network sharing and to which Authority must be the recipient must be sent to lme[at]arcep.fr.

5.5 Future revisions of the present Decision

Given the progressive industrialisation of fibre optic network deployments, their marketing and technical developments, the technical and operational terms and conditions discussed in the present Decision are intended to evolve over time. The Authority may thus be required to revise, as necessary, the present Decision. In particular, in light of the state of competition that may be observed in the market, and of its operating conditions, the Authority may be led to re-examine the provisions relating to notice periods provided for in Section 2.2.2 of this Decision.

The following has been decided:

Section I. Definition

Article 1 Definition

The terms used in the present Decision are defined in Annex 1.

Section II. Principles governing the provision of information

Article 2 Notification of information

The building operator shall notify commercial operators of the availability of, or updates made to, the following information, within one calendar day:

- The information that must be provided as part of the prior consultations processes described in Articles 11 to 13;
- The information at building-level that must be provided in accordance with Article 14;
- The information on shared network elements (concentration point, remote shared connection point, remote shared connection point link, optical connection point) set forth in Article 15.

Article 3 Availability over time and preservation of the information

The building operator shall enable commercial operators who are access agreement signatories to have easy access to the information it is required to provide. To this end, commercial operators must be able to access the latest version of information made available to them previously, within one calendar day of their request, under conditions that allow these operators to utilise that information in an automated fashion.

This accessibility must be guaranteed throughout the life of the access agreement.

The services provided by the building operator in accordance with the present Article must not be subject to separate usage-based billing, except in cases duly justified by the building operator.

In its access offer, the building operator shall define the contractual service level agreements, with penalties, on the technical availability of the service it must provide in accordance with the present Article. These SLAs must be defined in a manner consistent with the information systems operated by the building operator.

Article 4 Stability and traceability of the information

The building operator shall provide access to the latest version of the information provided to commercial operators who are access agreement signatories. The information that the building operator provides to the commercial operator must indicate the successive changes made to this information over the previous six months, along with the nature, reasons, dates and times of these changes.

Section III. Non-discrimination

Article 5 Implementation of the obligation of non-discrimination

The building operator shall ensure that the information mentioned in Articles 11 to 17 and Article 20 is made available at the same time, with the same level of detail and with the same utilisation possibilities (data format, automation) to all commercial operators who are access agreement signatories including, when applicable, to its own departments, subsidiaries or partners engaging in a commercial operator activity.

The building operator shall ensure that these operational and technical terms and conditions relating to the

line access order process are comparable [notably in terms of performance and functionalities] as those used for the purposes of its own departments, subsidiaries or partners engaging in a commercial operator activity, if applicable.

At the request of the Authority, any vertically integrated building operator shall formalise, in a detailed fashion, the processes and operational and technical rules followed by its departments, subsidiaries or partners engaging in a commercial operator activity with a view to providing retail offers to their end customers, and sends all of this information to the Authority.

Article 6 Prior notice periods

Within the meaning of the present Decision, the process of making a line commercially available corresponds to the moment from when the building operator can send a line availability report to the commercial operator that has placed an access order, and authorises the line's activation.

A line cannot become commercially available until after the expiry of a three-month notice period following the provision of the concentration point and, when applicable, the corresponding remote shared connection point and remote shared connection point link.

Furthermore, a line cannot become commercially available until the expiry of a reasonable period after having provided commercial operators, who are access agreement signatories, with all of the information associated with the optical connection point used to serve this line.

Article 7 Terms and conditions specific to new buildings

By way of derogation from sub-paragraph 2 of Article 6, in new buildings outfitted with lines in accordance with the provisions of the French Construction and Housing Code, the prior notice period is shortened to six weeks.

Article 8 Order processing performance indicators

Building operators that operate a ultra-fast broadband optical fibre network capable of serving at least 10,000 potential end customers shall send the Authority performance indicators in accordance with the methods set forth in Annex 5 of the present Decision.

These indicators shall be sent to the Authority, at the latest, one month after the end of each quarter.

The building operator shall keep at the Authority's disposal, on request, all of the elements, including raw data, needed to verify these indicators. To this end, the building operator shall keep these elements for 24 months after the end of the corresponding quarter.

Section IV. Access offer

Article 9 Line access offer

The building operator shall publish the access offer provided for in Article 4 of Arcep Decision No. 2009-1106 on a dedicated page on its website. The building operator shall inform the Authority and the operators registered on the list provided for by CPCE Article R. 9-2 of the publication of its line access offer, along with any changes regarding this offer.

Article 10 Order turnaround time performance level and penalties

In its line access offer the building operator shall define the performance level it commits to and the penalties due to signatory commercial operators if it fails to meet these obligations. These commitments pertain, at a minimum, to the following performance indicators:

a) For new connectable lines that have yet to be constructed, the maximum turnaround time calculated monthly to the 95th percentile on all orders received by the building operator, between the access order and the access order report, with a distinction, when applicable, depending on whether cross-connection to the concentration point is performed by the building operator or not;

b) For existing lines, the maximum turnaround time calculated monthly to the 95th percentile on all orders received by the building operator, between the access order and the access order report, with a distinction, when applicable, depending on whether cross-connection to the concentration point is

performed by the building operator or not;

c) For existing lines, the maximum turnaround time calculated monthly to the 95th percentile on all orders received by the building operator, between the access order report and the line availability report.

For each of the services mentioned in a) and b) of the present Article, the building operator commits to turnaround times that cannot exceed three working days in cases where cross-connection to the concentration point is performed by the building operator, and one working day in the other cases.

The penalties due to signatory commercial operators in the case of failure to meet these commitments must create a sufficient incentive for the building operator to fulfil its commitments.

Section V. Process for providing information on the shared network's infrastructure

Article 11 Shared network co-financing terms and conditions

The present Article applies to offers for which a co-financing mechanism is proposed for a percentage of the lines installed in the co-financed concentration point's service area (co-financed in "tranches").

For co-financing schemes of every scale, the building operator shall provide the affected operators registered on the list provided for by CPCE Article R. 9-2, based on the best information at its disposal, a provisional deployment timetable, for this same scale, specifying the expected number of households or business premises planned and connectable, year on year, until the schedule completion of the deployments. This provisional timetable is made available from the first prior consultation mentioned in Article 12 regarding the scale of co-financing. At each following prior consultation regarding the scale of co-financing, the building operator shall update, when applicable, the provisional timetable provided to third parties.

Providing the information set out in the present Article shall comply with the rules for making information available defined in Articles 2 to 5.

Article 12 Prior consultations to deployments

Without prejudice to Article 5 of Arcep Decision No. 2010-1312, all deployments of an outdoor concentration point shall be preceded by a prior consultation on the terms and conditions set by the present Article.

The building operator shall inform the stakeholders mentioned in Article 13 of its deployment plans, and provide them with the information detailed in Annex 3.

The consultation shall be open for a duration of no less than 30 calendar days. When one of the stakeholders mentioned in Article 13 is unable to submit their remarks within that timeframe, it can ask the building operator to extend the initial deadline for a period of no more than an additional 15 calendar days, from the initial deadline, indicating the reasons for this request. The building operator can refuse to grant this request for objective reasons, which will be made known to the requesting party. The building operator shall inform all of the stakeholders mentioned in Article 13 of the extended deadline.

A new consultation shall be held in the event of a significant change to the information that was sent out initially, notably in the case of a change in the conditions for connecting to the concentration point when it serves more than a thousand lines, or the remote shared connection point if applicable, or the geographical boundaries concerned by the prior consultation. The launch of this new consultation creates a new deadline.

The process for providing the information set out in the present Article shall comply with the rules for making information available defined in Articles 2 to 5.

Article 13 Recipients of the information provided for the purpose of public consultations provided for in Article 12

The recipients of the information transmitted by the building operator as part of prior consultations to deployments as provided for in Article 12 shall be:

- the operators registered on the list provided for by CPCE Article R. 9-2 in the affected areas according to the coverage area indicated in this list;

- the building operators, registered on the list building operators kept up to date by Arcep according to the terms and conditions set out in Annex 2 of the present Decision, which deploy or plan to deploy a ultra-fast broadband optical fibre network in the affected areas according to the coverage area indicated in this list;
- the municipalities served by the concentration points' service areas;
- the local authorities or group of local authorities managing the regional digital development blueprint as defined by Article L. 1425-2 of the Local and Regional Authority Code (CGCT) when it exists;
- if applicable, the local authorities or group of local authorities exercising the powers set forth in Article L. 1425-1 of the CGCT;
- the local authorities or group of local authorities competent to issue the public land occupancy permits needed for the planned deployments;
- Arcep.

Article 14 Process for providing information at building-level

The building operator shall provide commercial operators who are access agreement signatories all of the information provided for in Annex 4 for buildings located in an area that has already been the subject of a prior consultation in accordance with Article 12, which have been the subject of an agreement provided for by CPCE Article L. 33-6 or that are located in an available concentration point's service area. This provision shall be carried out according to the following cases:

- for buildings located in an area that has already been the subject of a prior consultation, within one calendar day from this consultation's end date;
- for buildings that have been the subject of an agreement provided for by CPCE Article L. 33-6, within a week from the date of signing of this agreement;
- for buildings located in an available concentration point's service area, within one calendar day of this concentration point being made available.

The process for providing the information set out in the present Article shall comply with the rules for making information available defined in Articles 2 to 5.

Article 15 Making an element of the shared network available

An element of the shared network shall be considered as having been made available to commercial operators from the moment all of the following conditions are met:

- the information set out in Annex 4 regarding this element is available to these commercial operators;
- in cases where the element of the shared network is a concentration point, a remote shared connection point or a remote shared connection point link, commercial operators can effectively access this network element.

The process for providing the information set out in the present Article shall comply with the rules for making information available defined in Articles 2 to 5.

Article 16 Information specific to multifibre deployments with a dedicated fibre in very high-density areas

In very high-density areas, when making a concentration point available, the building operator shall provide commercial operators that have requested dedicated optical fibres with the information that gives them the ability to identify the fibres that will actually be used to serve the households and business premises in the existing concentration point's service area, as soon as the concentration point becomes available.

The process for providing the information set out in the present Article shall comply with the rules for making information available defined in Articles 2 to 5.

Section VI. Optical fibre access line order process and the building operator's responsibility

Article 17 Building operator's installation of the terminal connection

In its access offer, the building operator shall include a terminal connection construction service, at the request of the commercial operator. The pricing terms and conditions for this offer shall be reasonable and adhere to the principles of objectivity, relevance, non-discrimination and efficiency.

Article 18 Network maintenance

The building operator's line access offer shall include a maintenance solution for active lines.

Article 19 Ordering process for a ultra-fast broadband optical fibre electronic communication line access line

Every access order on a ultra-fast broadband optical fibre electronic communications network shall require a commercial operator to place an access order with the building operator, an access order report and a line availability report, except in the event that the commercial operator cancels the order, or the building operator rejects the order. The line availability report shall indicate the line ID as described in Article 21.

In its access offer, the building operator shall describe the conditions that can lead to an order being rejected. These conditions shall be objective and non-discriminatory. In the event of an order being rejected, the building operator shall provide the commercial operator with all of the elements required by the latter to reconstruct the reason for which the order was rejected.

Article 20 Order placement assistance tool

The building operator shall provide operators wanting to access the lines with an order placement assistance tool that provides information on the connectable lines and existing lines.

The order placement assistance tool's content and methods for making it available are described in Annex 6.

Article 21 Optical fibre line identification

When constructing a line, the building operator shall assign it an identifier, or line ID. This ID is composed of a two-character alphanumeric prefix that shall be assigned when it is logged in the list of building operators provided for in Annex 2 of the present Decision, and a suffix of 8 alphanumeric characters.

This ID shall remain unchanged over time, even when switching building operators or switching one or several of the fibre(s) running to the IOTP.

In a given concentration point's service area, side-by-side line IDs shall differ by at least two characters.

During line construction, the IOTP shall be marked with this ID in a permanent, legible fashion that is accessible to the end user. This ID shall be repeated on the drop cable at the output of the equipment serving as the optical connection point.

When the building operator contracts a third-party, notably a commercial operator, to perform certain work, it shall ensure that sub-contractor's compliance with the provisions of this Article.

Article 22 Orders on existing lines

When placing an access order on an existing line, the building operator can require the commercial operator wanting to access the line to provide it with all information needed to identify the line, to which the occupant of the household or business premises has access, once this information is available in the order placement assistance tool described in Article 20.

When placing an access order on an existing line, the commercial operator can request that the building operator provide it with the information it needs to place the order. In its line access offer, the building operator shall define the maximum turnaround time for providing this information, which cannot exceed seven working days in 95% of cases, and the penalties it will be required to pay signatory commercial operators should it fail to meet that deadline. The penalties shall create a sufficient incentive for the building operator to fulfil its commitments.

The service provided for in the above sub-paragraph cannot be subject to specific billing, except if it is shown that the information listed in the first sub-paragraph was effectively accessible, or in the event that the commercial operator cancels the order.

Section VII. Implementing the Decision

Article 23 Terms and conditions for using a common information-sharing entity

Operators can use a common entity to make it easier for operators to provide and share information and to place access orders, provided the services supplied that this entity comply with the obligations resulting from the French Postal and Electronic Communications Code and the Decisions taken by the Authority for its application.

In this instance, operators shall ensure that the services provided by this common entity comply with the principles of efficiency and non-discrimination and shall not create an impediment to the exercise of fair competition between operators.

Article 24 Entry into force

The provisions set out in Articles 6 to 10, Articles 12 and 13 and Articles 16 to 19 shall come into force six months after the publication of the present Decision in the *Journal Officiel* of the French Republic.

The provisions set out in Article 20 shall come into force twelve months after the publication of the present Decision in the *Journal Officiel* of the French Republic.

The provisions set out in Articles 2 to 5, Articles 11, 14 and 15 and Articles 21 to 22 shall come into force eighteen months after the publication of the present Decision in the *Journal Officiel* of the French Republic.

Article 25 Methods for monitoring implementation

Operators shall provide the Authority with an implementation report on the obligations of the present Decision six months, twelve months and eighteen months after the publication of the present Decision in *Journal Officiel* of the French Republic.

Signed in Paris, on 2 July 2015

Arcep Chair

Sébastien SORIANO

Annex 1 Definition of generic terms

Building: all constructed buildings containing one or several housing units or business premises.

Building operator (or infrastructure operator): the entity responsible for establishing and managing one or multiple ultra-fast broadband optical fibre electronic communications lines, as defined in Arcep Decisions No. 2009-1106 and No. 2010-1312.

Commercial operator: an electronic communications operator within the meaning of CPCE Article L. 33-1 having signed or intending to sign an access agreement for ultra-fast broadband optical fibre lines in accordance with CPCE Article L. 34-8-3.

Ultra-fast broadband optical fibre electronic communications line: a ultra-fast broadband optical fibre electronic communications network's passive link composed of one or several continuous optical fibre paths (depending on the choice of single or multi-fibre engineering) and providing the ability to serve an end user. Access obligations pertain to the part of the line between the concentration point and the indoor optical termination box.

Very high-density areas: municipalities listed in the Annex to Arcep Decision No. 2009-1106 as amended by Arcep Decision No. 2013-1475.

Shared network co-financing terms and conditions

Scale of co-financing: the geographical area in which the co-financing of a set of lines is proposed, if applicable, by the building operator.

Shared network infrastructure

Concentration point (CP): the end point for one or multiple lines where the building operator provides third-party operators with access to these lines, with a view to providing electronic communications services to corresponding end users, in accordance with Article L. 34-8- 3 of the French Postal and Electronic Communications Code. There are therefore no couplers downstream from the concentration point, including in a point-to-multipoint architecture.

Concentration point's service area (CP-SA): all of the households and business premises to be connected to the concentration point.

Indoor optical terminal point (IOTP): Passive element located inside the household or business premises that serves as the test point and the liability end point between the optical fibre access network and the end customer network. This is the first terminated closure point downstream from the network's penetration point into the household or business premises. The Arcep decisions on ultra-fast broadband optical fibre electronic communication network sharing pertain to the sections of these networks' lines between the concentration point and the first OTS downstream from the network's penetration point into the household or business premises, i.e. the IOTP.

Indoor concentration point (ICP): concentration point located on private property, in accordance with Article 6 of Arcep Decision No. 2009-1106.

Optical connection point (OCP): equipment used to connect upstream cable with the drop cable connected directly to the indoor optical termination box. The optical connection point can be located at the foot of the building or outside the customer premises, in which case it makes it possible to connect the cables installed upstream in the network with the drop cable connected directly to the indoor optical termination box. In multi-tenant buildings (residential or business premises) with a riser, the connection point provides the ability to connect the building's vertical cabling with the drop cable which is typically situate in the riser's floor cabinets.

Outdoor concentration point (OuCP): concentration point located outside private property boundaries.

Remote shared connection point link (or CP-RSCP link): all of the optical paths between the concentration point and the remote shared connection point, that can be used with a view to supplying the remote connection offer, as provided for by Decision No. 2010-1312.

Remote shared connection point (RSCP): delivery point for the remote connection offer provided for by Article 3 of Decision No. 2010-1312.

Terminal connection (or optical connection): the optical infrastructure located between the optical

connection point and the indoor optical termination box.

Access order placement

Existing ultra-fast broadband optical fibre electronic communications line (or simply **existing line**): ultra-fast broadband optical fibre electronic communication line with end-to-end continuity from the concentration point to the indoor optical termination box.

New ultra-fast broadband optical fibre electronic communications line (or simply **new line**): ultra-fast broadband optical fibre electronic communications without end-to-end continuity from the shared access point to the indoor optical termination box – e.g. a ultra-fast broadband optical fibre electronic communications line intended to serve a household or business premises, and that does not have optical continuity from the concentration point to the optical connection point.

Connectable ultra-fast broadband optical fibre electronic communications line (or simply **connectable line**): ultra-fast broadband optical fibre electronic communications line with optical continuity between the concentration point and the optical connection point, or between the concentration point and the indoor optical termination box if there is no optical connection point. The term “connectable household or business premises” is also used to refer to the corresponding household or business premises.

Active ultra-fast broadband optical fibre electronic communications line (or simply **active line**): existing ultra-fast broadband optical fibre electronic communications line for which a line availability report was sent to an operator, and for which no notification was sent to the commercial operator indicating the line was no longer available.

Access order report: the report that the building operator sends to the operator wanting to access the line.

In the particular case where the building operator performs the cross-connect at the concentration point, the access order report serves to notify the operator wanting to access the line that the cross-connect operations have been carried out. The access order report does not, in this case, necessarily contain all of the information regarding the concentration point.

Line availability report (or line provision report): report that the building operator sends to the operator wanting to access the line. It marks the completion of the access order and confirms end-to-end optical continuity between the concentration point and the indoor optical termination box, as well as the lines’ good state of repair. It provides the trigger for invoicing the operator accessing the line for said line. It also serves at the trigger for the operator accessing the line to gain access to a maintenance service.

Annex 2 List of building operators

The Authority keeps an up-to-date list of building operators.

This list is established based, in particular, on the information collected in accordance with the Decisions on gathering information regarding fixed broadband and ultra-fast broadband markets, the most recent of which is Decision No. 2012-1503 of 27 November 2012.

Any operator that has published a ultra-fast broadband optical fibre electronic communications network access offer can ask to be added to this list.

For each building operator, this list stipulates the territories included in its coverage area. These territories are established based on responses to the aforementioned information-gathering mechanism.

A building operator can request that its coverage area be expanded by substantiating its intention to perform ultra-fast broadband optical fibre electronic communication network deployments in the territories in in question.

A building operator on the list shall be assigned a unique two-character alphanumerical code. If applicable, this code is identical to the one it was assigned pursuant to the Arcep Recommendation of 25 April 2013 on identification of fibre to the home (FttH) lines.

The list of building operators is published on the Authority's website: www.arcep.fr.

Annex 3 Prior consultations

The information provided by the building operator as part of a prior consultation, as set forth in Articles 11 to 13 of the present Decision shall be as follows:

1. General information concerning the prior consultation

- the building operator's code, as defined in the list of building operators provided for in Annex 2, if the code is known at the time of the prior consultation;
- list of territories concerned by the consultation[46], if applicable;
- prior consultation identifier;
- prior consultation start date;
- prior consultation end date;
- number of households or business premises concerned.

2. Information regarding each concentration point and each remote shared connection point

- the building operator's code, as defined in the list of building operators provided for in Annex 2, if the code is known at the time of the prior consultation;
- unique and persistent identifier;
- Cartesian geographical x and y coordinates, with metric precision, expressed using the relevant geographical reference system, for the territory in question, provided for by widely used coordinate systems in France;
- if applicable, precise address; the CP (or RSCP) must be easy to identify and locate thanks to this information;
- number of households or business premises situated in the concentration point's service area;
- maximum length of the lines situated in the CP's service area;
- if applicable, unique and persistent identifier of the RSCP associated with the CP;
- if applicable, number of fibres deployed on the CP-RSCP link and commercially available;
- if applicable, length of the link between the CP and RSCP, in kilometres.

3. Information pertaining to each municipality concerned by the prior consultation

- the building operator's code, as defined in the list of building operators provided for in Annex 2;
- prior consultation identifier.

4. Geographical information

For deployments outside very high-density areas, the consultation contains a file in ESRI Shapefile vector data format (expressed using the relevant geographical reference system, for the territory in question, provided for by widely used coordinate systems in France), listing the boundaries of the concentration points' service areas for the plot in question (metric precision on the borders). The attributes of this layer contain the following information:

- the building operator's code, as defined in the list of building operators published on the Arcep website, if the code is known at the time of the prior consultation;
- unique and persistent identifier of the concentration point;
- if applicable, unique and persistent identifier of the RSCP associated with the concentration point.

[46] This list could be a list of departments. In any event, the territories must be of the same scale as the one chosen to establish the list of building operators (Annex 2).

Annex 4 Provision of information on ultra-fast broadband optical fibre electronic communication network deployments

1. Technical definition

Geographical coordinates: x and y coordinates of an object (network element, building) and Cartesian geographical coordinates expressed using a system of coordinates.

The address information requested for buildings and shared network elements must make it possible to easily identify and locate the object in question, based solely on this information, without running the risk of mistaking it and for another nearby object.

CP capacity: the CP's current capacity corresponds, on a given day, to the number of optical fibre lines that can be served from the CP based on the passive equipment it houses (notably sliding racks and commercial operators' equipment) without consideration of this CP's scalability margin.

CP scalability margin: distributed excess capacity in optical access cables on the one hand, and the available space in the CP on the other. The conjunction of these two parameters, on a given day, constitutes the CP's current scalability margin, i.e. the ability to increase the CP's current capacity up to its maximum technical capacity.

CP's maximum technical capacity: The CP's maximum technical capacity is defined as the sum of its current capacity and its current scalability margin.

2. Providing information at building-level

A building can be in one or several of the following categories:

- buildings located in an area that has been the subject of a prior consultation;
- buildings that have been the subject of an agreement as provided for by CPCE Article L. 33-6;
- buildings located in an available concentration point's service area.

The list of the information that must be provided for each individual building are as follows. If a building falls into several categories, the combined information for each category is required.

Building located in an area that has been the subject of a prior consultation

- the building operator's code, as defined in the list provided for in Annex 2;
- prior consultation identifier;
- unique and persistent identifier;
- unique and persistent identifier of the CP to which it is connected;
- if applicable, unique and persistent identifier of the RSCP to which it is connected;
- address;
- geographical coordinates expressed using the relevant geographical reference system, for the territory in question, provided for by widely used coordinate systems in France, with metric precision;
- number of households or business premises.

Building that has been the subject of an agreement as provided for by CPCE Article L. 33-6

- the building operator's code, as defined in the list provided for in Annex 2;
- unique and persistent identifier;
- unique and persistent identifier of the CP to which it is connected;
- if applicable, unique and persistent identifier of the RSCP to which it is connected;
- if applicable, unique and persistent identifier of the CP-RSCP link to which it is connected;
- address;

- geographical coordinates expressed using the relevant geographical reference system, for the territory in question, provided for by widely used coordinate systems in France, with metric precision;
- number of households or business premises in the building;
- signature date of agreement type L.33-6 when required;
- name of the building manager with whom agreement type L.33 was signed, when required;
- postal address of the building manager with whom agreement type L.33 was signed, when required.

Building located in an available concentration point's service area

- the building operator's code, as defined in the list provided for in Annex 2;
- unique and persistent identifier;
- unique and persistent identifier(s) of the OCP to which it is connected;
- unique and persistent identifier of the CP to which it is connected;
- if applicable, unique and persistent identifier of the RSCP to which it is connected;
- if applicable, unique and persistent identifier of the CP-RSCP link to which it is connected;
- address;
- geographical coordinates expressed using the relevant geographical reference system, for the territory in question, provided for by widely used coordinate systems in France, with metric precision;
- number of households or business premises in the building;
- date on which they become connectable, if applicable;
- date on which the lines in the building became commercially available, or will become commercially available, if applicable;
- length of one of the lines in the building.

3. Information provided on shared network elements

The building operator shall provide the information in this section once the corresponding shared network element is made available.

3.1 Remote shared connection point (RSCP)

- building operator's code, as defined in the list provided for in Annex 2;
- unique and persistent identifier;
- identifier of the corresponding prior consultation;
- date of RSCP availability;
- address;
- geographical coordinates expressed using the relevant geographical reference system, for the territory in question, provided for by widely used coordinate systems in France, with metric precision;
- number of households or business premises in the service area of a concentration point to which the RSCP is attached;
- useful information for a commercial operator to connect to an RSCP.

3.2 Remote shared connection link (lien CP-RSCP)

- building operator's code, as defined in the list provided for in Annex 2;

- unique and persistent identifier of the CP attached to the CP-RSCP link;
- unique and persistent identifier of the RSCP attached to the CP-RSCP link;
- identifier of the corresponding prior consultation;
- date of availability;
- total number of optical fibres commercially available on the link;
- length of the link.

3.3 Concentration point (CP)

- building operator's code, as defined in the list provided for in Annex 2;
- unique and persistent identifier;
- if applicable, unique and persistent identifier of the RSCP to which it is connected;
- if applicable, prior consultation identifier;
- date of availability;
- address;
- geographical coordinates expressed using the relevant geographical reference system, for the territory in question, provided for by widely used coordinate systems in France, with metric precision;
- CP's maximum technical capacity in number of lines;
- number of households or business premises served;
- number of connectable households or business premises;
- list of unique and persistent identifier for buildings located in the service area;
- useful information for a commercial operator to connect to the CP.

For deployments outside very high-density areas, information regarding an available CP includes a file in ESRI Shapefile vector data format (expressed using the relevant geographical reference system, for the territory in question, provided for by widely used coordinate systems in France), listing its service area's boundaries with metric precision on the borders. The attributes of this layer contain the following information:

- the building operator's code, as defined in the list provided for in Annex 2;
- unique and persistent identifier of the CP;
- if applicable, unique and persistent identifier of the RSCP associated with the CP.

3.4 Optical connection point (OCP)

- the building operator's code, as defined in the list provided for in Annex 2;
- unique and persistent identifier;
- unique and persistent identifier of the CP to which it is connected;
- availability date;
- date on which the serviced lines become commercially available;
- number of households or business premises served by the OCP;
- list of the unique and persistent identifier(s) of the building(s) served.

Annex 5 Order processing performance indicators – building operators

Building operators that operate a ultra-fast broadband optical fibre electronic communications network capable of serving at least 10,000 potential end customers (number of lines) shall provide the Authority with performance indicators in accordance with the present Annex.

Within one month from the end of each quarter at the latest (i.e. by 30 April at the latest for the first quarter, 31 July for the second quarter, 31 October for the third quarter, and 31 January of the following year for the fourth quarter), the building operators concerned by the present Annex shall send the Authority three separate files (one for each month of the quarter). The file format shall be defined by the Authority's departments.

These key performance indicators (KPIs) shall be based on the different stages for ultra-fast broadband optical fibre electronic communication network access orders. The turnaround times measured for each indicator shall be the 50th percentile (median turnaround time) and the 95th percentile of turnaround times.

Definitions for the abbreviations used can be found in Annex 1.

The following indicators are confined to the case of orders on connectable lines.

The building operators concerned by the present Annex are required to provide indicators regarding:

- orders for which an access OR was issued during the month: turnaround time between order placement and transmission of the access OR;
- orders for which a line provision report was issued during the month: turnaround time between transmission of the access OR and transmission of the line provision report;
- open orders at the end of the month and which have not been the subject of an access OR: turnaround time between order placement and the end of the month;
- open orders at the end of the month and which have been the subject of an access OR: : turnaround time between order placement and the end of the month;
- orders that the responding building operator failed to complete during the month, before sending the access OR: turnaround time between order placement and notification of the failure;
- orders that the responding building operator failed to complete during the month, before sending the line provision report: turnaround time between receipt of the access OR and notification of the failure;
- orders cancelled by the operator requesting access to the line during the month, before sending the access OR: turnaround time between order placement and receipt of the cancellation;
- orders cancelled by the operator requesting access to the line during the month, before sending the line provision report: turnaround time between receipt of the access and receipt of the cancellation.

Each of these indicators can be requested in aggregated format, or according to one or several of the following groupings:

- separating out access orders, when relevant from an operational standpoint, notably according to the following criteria:
    - orders on existing lines or on new lines;
    - orders with or without cross-connect performed by the building operator at the concentration point;
- separating out access orders received from each commercial operator (and if the building operator is an integrated operator, to consider its retail arm in the same way as any other third-party commercial operator, and to therefore highlight the indicators for that operator).

For each requested indicator, the number of affected access orders is required.

Turnaround times are measured based on data sent or received by the responding operator (metadata sent and received).

Turnaround times are expressed in working days, with the accuracy of a tenth.

Annex 6 Order placement assistance tool

The building operator must implement the order placement assistance tool in accordance with market standards.

The order placement assistance tool provides the ability to distinguish:

- existing lines and new lines (aka to be constructed);
- among new lines, lines that are connectable lines and lines that are not;
- lines that are commercially available and lines that are not;
- lines that are active and those that are not;
- among the new lines, the lines that have been activated and whose optical continuity from the concentration point to the indoor optical termination was subsequently broken, and the other lines;

For all connectable lines, the tool provides the location of the premises, as well as the ID and location of the optical connection point to which it is connected.

For all existing lines, the tool provides the location of the premises, as well as all of the information at the building operator's disposal that can be used to identify this line, notably the line ID in the format described in Article 21, if applicable.

For all activated lines, whose optical continuity from the concentration point to the indoor optical termination box was subsequently broken, the tool provides the information that was available prior to this disruption.

The list of information that must be provided in the order placement assistance tool, for the individual premises, are as follows. All third-party operators must be able to perform a search within the tool, using one or a combination of the following datapoints.

- building operator code, as defined in the list provided for in Annex 2;
- unique and persistent identifier;
- line status (of all the previously described states);
- building's unique and persistent identifier;
- unique and persistent identifier of the OCP to which it is connected;
- unique and persistent identifier of the CP to which it is connected;
- if applicable, unique and persistent identifier of the RSCP to which it is connected;
- if applicable, unique and persistent identifier of the CP-RSCP link to which it is connected;
- address;
- the building's geographical coordinates expressed in the relevant geographical reference system, for the territory in question, as provided for by the coordinate reference systems most widely used in France, with metric precision;
- premises' location in the building, notably: in the building and/or stairwell (only when relevant), floor and any information that creates the ability to clearly identify the premises on the floor (e.g.: "door on the left");
- number of households or business premises in the building;
- number of households or business premises on the floor;
- number of active lines on the floor;
- number of existing lines on the floor.