

**Municipal ordinance for the
deployment of access networks to
next-generation telecommunication
services in UNIVERSAL format**

DRAFT

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Preliminary Report and Justification

1.- Objectives of the initiative

a) Background and context

Electronic communications or telecommunications are services with an increasing effect on society in general, affecting all areas from the formative development of people and leisure as well as areas of economic production and business. It is also a pillar for supporting intelligent public services. Accelerating the existence of the best technology offering at the best possible cost is therefore a key factor in the development of our society and public services and of the competitiveness of companies in the territory.

All of this results in a context with important transformations:

Technological evolution

The capabilities, features, and cost of the technology are evolving rapidly:

1. Nowadays, the data transmission capacity of a single fibre is huge and continues to grow enough to carry the Internet, which thousands of homes require and which is expected to continue to grow. This allows us to contemplate new ways of sharing that were previously unthinkable.
2. The distance in the transportation of data is no longer an obstacle, as it was when transport systems in the access network were reduced to copper or radio-communications. Hence, this provides the technical possibility of offering the same quality and bandwidth at any point.
3. Although the cost of fibre optics and their handling as well as technology in general have gone down, the cost of civil work is still very important.

Economic transformation

The progress and widespread application of technology has an increasingly significant effect on the competitiveness of economic and productive fields. Telecommunications are included in this process.

Another consequence of the widespread application of new technologies and telecommunications is that they are no longer restricted to highly skilled or corporate areas. They have become a powerful component with a much more general scope, within the reach of citizens, freelancers, and small and medium enterprises. Entry barriers have disappeared and new business and economic models are facilitated, thus enabling greater diversity.

Finally, it is worth mentioning that the increase in capacity results in the ability to create new models for sharing where they were not possible before, and thereby also enables the emergence of new economic models based on sharing infrastructure or collaborative economy and alternatives to traditional and proprietary infrastructure.

Changes in regulatory frameworks

Accompanying these changes, the concept of the market of telecommunications services has also transformed in a few decades from a monopolistic state model to a

framework that is considered a service that corresponds to the private sector to provide service in market conditions with free competition. In addition, the role of the administration is to encourage and facilitate services in terms of transparency and non-discrimination so that there is plurality of offerings and real competition, in other words, equal conditions for operators, which eliminate entry barriers and avoid situations of domination or influence of the development of business models, stimulating and maximising investments.

This new general framework stems from several EU directives, particularly from directives 2002/19/EC on the access to electronic communications, associated resources, and their interconnection (access directive) and 2002/20/EC on the authorisation of electronic telecommunication networks and services (authorisation directive), which were modified more recently by directive 2009/140/EC.

Then, at national level, the framework was developed in the Law 32/2003 on November 3rd, General Telecommunications, which was recently amended in Law 9/20014 on May 9th, General Telecommunications.

Finally, this normative transformation currently culminates in directive 2014/61/EU on measures to reduce the cost of deployment of high-speed telecommunications networks, which is currently in a phase of transformation.

In relation to the latter directive, it should be noted that to achieve its objectives of reduction of cost, it refers to civil infrastructures, which are often competition or managed at a municipal level. See for example its consideration (9):

'Measures aiming at increasing efficiency in the use of existing infrastructures and at reducing costs and obstacles in carrying out new civil engineering works should provide a substantial contribution to ensuring a fast and extensive deployment of high-speed electronic communications networks while maintaining effective competition, without adversely affecting the safety, security and smooth operation of the existing public infrastructure.'

All this is in order to accelerate and facilitate the emergence of the best and most diverse range of new generation telecommunication services to society in general.

b) Aim

The aim is to adapt the new European and state regulatory framework at a local level in a clear and stable way in order to:

1. Comply with European directives and the applicable legal order at the level of the state and Catalonia, while developing skills that are typical of those municipalities in the related issues, such as spatial aspects of visual effects or ensuring transparency and non-discrimination.
2. Facilitate the deployment of access networks to next-generation telecommunications services (ANNGTS¹) with the maximum possible speed and efficiency, stimulating and ensuring the efficiency of investment, while ensuring its sustainability based on

¹ See definition of «ANNGTS» in Article 11, point 4.- Access networks to next-generation telecommunication services or "ultra-fast" (ANNGTS) of Chapter VI of definitions (page 17),

use and minimising the cost to the public administration and citizens and society, in general.

3. Facilitate the deployment of the necessary connected infrastructures (sensor devices, etc.) to develop new and better smart public services (lighting, waste management, security, mobility, etc.).
4. Provide access for citizens and society in general to a varied and affordable offering of telecommunication services of the highest quality and capacity, regardless of location, without conditional business models that develop from the private sector, ensuring its diversity and avoiding situation domains or speculation that would harm that diversity.

c) Scope of application

The scope of application is regarding the competence of the city council related to the infrastructure capable of hosting ANNGTS or its components.

2.- Reasons for its necessity

Since the authorities already manage spaces and public domains in order to host various services and, to the extent possible, plan for these infrastructures to support the deployment of ANNGTS not only in a private manner but also on a shared basis, providing any type of service in any mode of operation or business model is not mutually exclusive. It is an opportunity to improve efficiency and diversity and consequently develop the existing regulatory framework at the municipal level in a consistent and orderly manner.

3.- Consequences of not adopting it

a) Perpetuation of old practices and conflicting interpretations of the law

It is important to note that, prior to the regulatory changes, the framework was very different; therefore, procedures that are appropriate for a state monopoly for the use of the infrastructures that are currently capable of supporting ANNGTS were set.

For example, in the previous situation, when a public operator occupied an infrastructure, it occupied the domain in its entirety. Currently operators are private. In those cases where sharing is technically feasible, if they have a chance, they could aim for occupations to be interpreted according to the existing practices to hinder the presence of new competitors. New entrants would then be forced to attend an exception proceeding, such as having to appeal through the regulator, so that they are forced to share or to present a conflict, when this obviously proves much less effective from the perspective of compliance of the law than having a well-established form of sharing from an applicable rule. All this results in a slowdown and discourages new deployments.

a) Increased costs and the digital divide

The necessary infrastructures to effectively provide these new generation services have a significant cost. If not shared effectively, this entails several dangers: that the availability of the infrastructure will result in a lack of real diversity in supply, that the deployment will become uneven or slow following strict speculative or economic efficiency-based criteria, that some operators will try to hinder the entry of others, over-investment², or that the performance of the administration will affect

² See definition of «over-investments» in Article 11, pt 9.- Over-investment or overbuilding of Chapter VI of definitions (page 20)

certain business models, excluding or hindering new ones.

All these dangers can ultimately materialise, cause discrimination when it comes to access, and unnecessarily increase the cost of services.

4.- Evaluation of the effects

b) On previously deployed networks

The ordinance has no effect on previously deployed networks. The ordinance predicts any use and therefore also includes existing deployments.

In any case, it will prevent those uses and occupations and the agreements that support it from being interpreted in a manner contrary to the law and from becoming extensive not only regarding the existing employment and deployment but also regarding the capacity that is still free.

a) On citizens

As it facilitates the development and emergence of a more varied offering at a lesser cost than ANNGTS, it improves access to the information society.

b) On the businesses and the economy in general

As it facilitates the deployment and emergence of a more varied offering at a lesser cost than ANNGTS, it improves competitiveness in the territory and prevents aspects related to these services that can be the cause of relocation.

c) On operators

It facilitates the emergence of new operators, and new economic models can be developed, such as those based on the sharing of resources or a collaborative economy.

d) Benefits for the city council

More specifically, for the city council, the most significant effects are (among others):

1. The establishment of framework, procedures, and general criteria for the actions of the city council within its scope in relation to the deployment of ANNGTS and the sharing of the infrastructures that support them.
2. The normalisation of previous situations that were not adapted to changes in the existing regulatory framework, avoiding interpretations contrary to the law.
3. In the establishment of sharing, a systematic forecast is performed for the self-service capacities of the city council for smart public services, thus reducing cost.
4. It allows, if the city council wishes, recovery of the financing costs of the deployment of the ANNGTS or of the infrastructures that support them.
5. By sharing the same infrastructures for commercial uses, which are predicted to cover the expenditure for its maintenance, the recurrent expenditure of the city council, which is needed to maintain the infrastructure that provides self-service, is reduced.

Municipal ordinance for the deployment of access networks to next-generation telecommunication services in UNIVERSAL format

Preamble

This ordinance brings those matters in which the application is the responsibility of the city council, into the local regulatory environment at the level of EU directives, such as 1) directive 2014/61/EU on measures to reduce the cost of deploying high-speed electronic communications networks and 2) directives 2002/19/EU, 2002/21/EU, and 2009/140/EU concerning access to electronic communication networks, associated resources, and their interconnection. It develops partial exploitation rights contained in the Fifth Book, Title IV, Chapter III of the Civil Code of Catalonia in the field of resources designated for telecommunications, applying Articles 36 and 37 of the General Telecommunications Law 9/2014 (hereinafter Law 9/2014).

Let the following quotes from the directives and rules be used to illustrate the most important principles that are meant to be addressed in this ordinance:

From the directive 2014/61/EU, Article 1:

'1. This Directive aims to facilitate and incentivise the roll-out of high-speed electronic communications networks by promoting the joint use of existing physical infrastructure and by enabling a more efficient deployment of new physical infrastructure so that such networks can be rolled out at lower cost.'

From the directive 2009/140/EU:

In consideration (43):

'(...) Improving facility sharing can significantly improve competition and lower the overall financial and environmental cost of deploying electronic communications infrastructure for undertakings, particularly of new access networks. (...) National regulatory authorities should in particular be able to impose the sharing of network elements and associated facilities, such as ducts, conduits, masts, manholes, cabinets, antennae, towers and other supporting constructions, buildings or entries into buildings, and a better coordination of civil works. The competent authorities, particularly local authorities, should also establish appropriate coordination procedures, in cooperation with national regulatory authorities, with respect to public works and other appropriate public facilities or property (...).'

From directive 2002/21/EU, Article 12:

'Co-location and sharing of network elements and associated facilities for providers of electronic communications networks.

1. property. (...) be able to impose the sharing of such facilities or property, including entries to buildings, building wiring, masts, antennae, towers and other supporting constructions, ducts, conduits, manholes and cabinets (...).'

From the directive 2002/19/EU, Article 12:

'Obligations of access to, and use of, specific network facilities

1. (...) impose obligations on operators to meet reasonable requests for access to, and use of, specific network elements and associated facilities, inter alia in situations where the national regulatory authority considers that denial of access or unreasonable terms and conditions having a similar effect would hinder the emergence of a sustainable competitive market at the retail level, or would not be in the end-user's interest.

Operators may be required inter alia:

(...)

f) to provide co-location or other forms of facility sharing, including duct, building or mast sharing;'

From Law 9/2014, Articles 36 i 37:

'Article 36. Planning of electronic communication infrastructures in urbanization projects and in civil works funded with public resources.

1. When urbanization projects are undertaken, the technical urbanization project will need to foresee the installation of civil works infrastructure to facilitate the deployment of public electronic communication networks, being able to additionally include passive network elements and equipment in the terms determined by the telecommunications technical regulations dictated in development of this article.

The infrastructures to be installed to facilitate the deployment of public electronic communications networks in accordance with the previous paragraph will form part of the set resulting from the urbanization works and will become part of the municipal public domain. The public administration holding the ownership of the public domain shall make such infrastructures available to interested operators in conditions of equality, transparency and non-discrimination.

(...)

In civil works financed wholly or partly with public funds shall provide, under the circumstances and conditions to be determined by royal decree, the installation of related facilities and other civil engineering infrastructures to facilitate the deployment of public electronic communications networks, which will be made available to interested operators in conditions of equality, transparency and non-discrimination.

Section 3.^a Access to public infrastructure capable of accommodating electronic communications networks

Article 37. Access to infrastructures capable of accommodating public electronic communications networks

1. Public administrations holders of infrastructure that can be used for the deployment of public electronic communications networks will facilitate access to such infrastructures, provided that such access does not jeopardize the continuity and security of provision of services of a public nature that in such infrastructure are made by the holder of the ownership, in objective conditions, of transparency and non-discrimination to operators who may install or exploit public electronic communications networks, but in no case can preferential or exclusive right to access be established to said infrastructure for the benefit of a specific operator or of a specific electronic communications network. In particular, access to such infrastructures for installation or operation of a network may not be granted or recognized by tendering procedures.'

In short, the government should facilitate access to these infrastructures in objective, transparent, and non-discriminatory conditions, never in an exclusive or preferential manner for a determinate

operator, forbidding the granting of access through tendering procedures. The deployment in Universal format and the type of transmission for the deployment of the ANNGTS that is established in this ordinance is the formula that allows realisation of this opportunity and of consistent obligations within the existing regulatory framework.

Chapter I. Objectives of the Ordinance

In those circumstances in which the city council is qualified to determine it, the objective is to set the Universal deployment format³ to be compatible with any type of use.

Another objective is to develop procedures for processing municipal employment domains or for which the city council is qualified to process, by the operators.

Chapter II. Purpose and Scope of Application

Article 1.- Purpose.

The purpose of this ordinance is to regulate the deployment of infrastructure that could be used for ANNGTS,⁴ which is the responsibility of the city council.

Article 2.- Scope of Application.

Regarding municipal authority, the scope of application areas affects aspects related to the deployment of the ANNGTS. Where appropriate, the following initiatives define the format of the deployment and/or its administrative procedures:

a) Initiative of the city council.

When the initiative or investment in the deployment is the city council's, setting the deployment format as Universal, the city council is able to reserve a minimum of structural units for self-service, as set out in Article 8 of this ordinance.

b) Operators' private initiative.

When the operators⁵ that offer ANNGTS services to the general public⁶ on their own initiative using their own resources, take initiatives and make investments for the development of infrastructure and ANNGTS, without defining the format for it, it is up to operators to determine the format, while still ordering the administrative processing, as set out in Article 7 of this ordinance.

c) Other private initiatives or those from operators that do not offer services to the general public.

When there is no benefit from the ability to deal with public and private domains according to the predictions in Articles 29 to 33 of Law 9/2014 (i.e., cases not predicted in the preceding paragraphs of this article), such as private firms or operators that do not offer services to the general public.

In order to benefit from and to accommodate these investments so that they are compatible with the general interest and Law 9/2014, it is set to be made with the agreement of operators that do provide services to the general public, determining that the format for

3 See definition of «Universal deployment format» in Article 11, point 7.- Deployment in Universal format of Chapter VI of definitions (page 18).

4 See definition of «ANNGTS infrastructures» in Article 11, point 5.- ANNGTS infrastructures of Chapter VI of definitions (page 18).

5 See definition of «operator» in Article 11, point 1.- Operator of Chapter VI of definitions (page 17).

6 See definition of «services available to the general public» in Article 11, point 2.- Service available to the general public of Chapter VI of definitions (page 17).

deployment is Universal and ordering their processing and the ability to reserve the corresponding part for exclusive use to the investor, as set out in Article 8 of this ordinance.

Chapter III. Administrative Processing

Article 3.- Municipal Licences.

For activities related to the deployment of ANNGTS, which are carried out by operators that offer services to the general public, a municipal licence is not required. The operators are already authorised for their deployment in accordance with Law 9/2014 in Title III, Chapter II, Section 1a (Articles 29 to 33), and the presentation of deployment plans and statements of responsibility are sufficient.

However, the municipal licence is still required when:

- a) Beyond the deployment of components of ANNGTS, the objective is to perform significant civil works or, in the case of installations of new construction, to have an effect on protected areas, in accordance with Article 34.6 of Act 9/2014 and the third additional provision of Law 12/2012 on December 26th concerning urgent measures of liberalisation of trade and certain services.
- b) Action is promoted by a private entity or an operator who carries out private use without providing widely available service; therefore, Articles 29 to 33 of Law 9/2014 do not apply.

Article 4.- Development Plan.

Operators of networks that are available to the general public should communicate to the city council by announcing their intention to deploy ANNGTS so that the city council can inform them of the applicable regulations and whether drafting a project to obtain a municipal licence is appropriate or whether an affidavit of communication would be sufficient.

The deployment plan must, at the very least, include the following:

- a) In whose name it is done and in which role.

The deployment plan must include in whose name it is done and who the final owner of the infrastructure will be, in order to determine whether it will be by an operator or a private entity, etc. When the concurrence of more than one part is required, for example, in the case of deployments driven by private entities or operators that do not make the network available to the general public, those other parts need to be identified.

All parties referenced in this section shall be the signatories of the document to allow for clear identification and to attest to their knowledge, approval, and assumption of their corresponding responsibilities so they can verify their qualifications.

- b) Basic description.

The basic description can include descriptions and diagrams (external and/or vertical photo montages) of locations through which it passes (aerial, facade, underground, etc.).

In principle, a basic description is sufficient. If details are insufficient, it shall be attached to the affidavit after the deployment plan.

c) Objective.

The objective is to be able to determine whether the infrastructure will be of use in widely providing broadband in the area as a service available to the general public,⁷ or, on the other hand, whether the infrastructure is for other uses, and to be able to evaluate whether it corresponds to the Universal format.

d) Type of intended use of exploitation.

According to the types of intended uses⁸ in the definition of this ordinance, the deployment plan must determine whether the infrastructure will be exploited in a private manner, shared, or as a commons, using Universal deployment, etc.

e) Type of funding.

The deployment plan should indicate whether the infrastructure is fully or partly funded with public money or is completely private, in order to be able to avoid over-investment if necessary, for example, applying the provisions in Point 2 of Article 7 of this ordinance.

Article 5.- Affidavit.

a) Previous communication.

The affidavit is the communication regarding an operator's deployment of ANNGTS infrastructures by developing a deployment plan.

If a deployment plan has not previously been disclosed, information equivalent to that in a deployment plan will be required.

When necessary, greater detail in the description of what has been provided in the deployment plan may be provided (description of action, diagrams, external or vertical photo montages, etc.) of the location through which it passes (aerial, facade, underground, etc.).

When the individual who executes the action is different from the person signing the declaration or the deployment plan, this fact should be indicated in order to identify the corresponding responsibilities for each person.

b) Communication of the completed results as built.

Once the action has been completed, if a minor divergence that was not predicted by the communicated and completed description is justified during the implementation that affects the required administrative records regarding the works and the deployed infrastructures or in the event that there is no divergence but where an appropriate level of detail for the records was not provided before executing the action, the outcome of the description must be communicated as it was built with the level of detail required within two weeks.

Article 6.- Omissions, Non-compliance, Regulatory Violations, and/or Falsehoods in Projects for the Acquisition of Licences, Deployment Plans, or Affidavits.

The communication of affidavits, as indicated in Article 34.6 of Law 9/2014, does not necessarily mean that it meets the applicable regulations or limits the exercise of administrative powers of

⁷ See definition of «service available to the general public» in Article 11, point 2.- Service available to the general public of Chapter VI of definitions (page 17).

⁸ See definition of «intended uses» in Article 11, point 6.- ANNGTS uses of Chapter VI of definitions (page 18)

verification, inspection, sanction, and general control over the administration at any level.

When there is a defect that can be rectified, whoever made the statement will be notified to make an amendment within a maximum period of two weeks. A reasonable justification is necessary if a longer period is required. After this period, if the necessary amendment has not been carried out, a resolution may be issued, cancelling the statement and its registration.

The inaccuracy, falsehood, or omission of an essential nature of any fact, manifest, or document that accompanies or is incorporated into a project, deployment plan, or affidavit can result in the 1) impossibility of exploiting the deployment or the 2) obligation to withdraw it, without prejudice of other responsibilities that may have been caused or 3) application sanctions.

Chapter IV. Determining the Type of Deployment

Article 7.- In Deployments by Operators of Services That Are Available to the General Public.

1. As is typical of a free market economy, in the deployment of networks or ANNGTS infrastructures carried out as initiatives of the operators that offer services that are available to the general public and that are entirely of their own resources, the deployment may be exploited and developed in a format freely determined by the operator. The expected procedures in the administrative processing chapter shall apply.⁹
2. When the expected form of exploitation is for exclusive use of the operator and/or when a public infrastructure that supports the deployment of ANNGTS is exploited to significantly reduce costs, and there is no overbuilding¹⁰ nor it is used to reduce the interests of other operators, thus reducing the variety of real offerings, provided that it serves to provide a service to the general public, any other operator will be able to buy up to a third of the minimum structural units¹¹ of the deployed infrastructure to allocate them to an exploitation in Universal or shared format at a price proportionally equivalent to the acquired part of the total cost.

Article 8.- In Universal Format for All Other Cases.

In all cases not anticipated in the previous article, and for the purpose of achieving maximum efficiency in investments, ensuring that it not only serves the interests that motivate investment as well as the general interests, and avoiding duplication in investment, while any form or business model of exploitation is ensured and one does not exclude the other, the deployment will be managed and exploited according to the definition of '*Deployment in Universal format*'¹²

More specifically, in the cases listed below, the deployment must always be carried out in Universal format when:

- a) It is carried out by the city council.

The city council reserves the corresponding share of the use in self-service mode.

⁹ Chapter III. Administrative Processing is in page 12.

¹⁰ See definition of «overbuilding» in Article 11, point 9.- Over-investment or overbuilding of Chapter VI of definitions (page 20).

¹¹ See definition of «minimal structural unit» in Article 11, point 8.- Minimal structural unit of Chapter VI of definitions (page 19).

¹² See definition of «Deployment in Universal format» in Article 11, point 7.- Deployment in Universal format of Chapter VI of definitions (page 18).

- b) It is carried out by a private entity with the intention of providing themselves with self-service or by an operator without offering ANNGTS services to the general public.

The private entity reserves the corresponding share for private use, keeping in mind the concurrence of one or more operators, among which one must have authorisation to acquire the responsibility to manage it in Universal format.

- c) It is completely or partly carried out with public funding.

The entity that carries it out reserves the corresponding share for private use.

Chapter V. On Sustainable Management and Maintenance

Article 9.- Private Deployments of Operators

The incumbent operator of the infrastructure or deployment ANNGTS is responsible for the cost of management and maintenance.

The lack of maintenance or fulfilment of the obligations attributable to the operator can cause the loss of the ability to exploit without prejudice of other liabilities that may arise.

Article 10.- Deployments in Universal Format.

Within the reservation scope of each use, they are freely managed by the beneficiaries but always according to its definition and its due nature.

If a use varies from that corresponding to another part, the reservation will be considered the part corresponding to the actual use made of it, with the understanding that there should always continue to be a minimum of structural units for each use, thus maintaining the deployment as defined by the Universal format.

The sustainability and maintenance of the infrastructure is the responsibility of all those who make use of it. The lack of maintenance or fulfilment of the attributable obligations can cause loss of use to the responsible party that caused it, without prejudice of other liabilities that may arise.

- a) Exemption of maintenance costs for self-service of the city council.

When the council deploys ANNGTS using self-service and permits other uses, the city council is exempt from assuming any part of the cost of the maintenance and sustainability, with the understanding that the other uses must already expect this same contribution and consequently an additional contribution from public money is not necessary when it has already been covered. Similarly, and for the same reasons, the city council is not to set any fee for this concept and for this type of deployment, thus also contributing to the reduction of the cost of ANNGTS and helping make the service available to society at an affordable price.

- b) Management and implementation of the private use¹³ of ANNGTS by the city council.

When the infrastructure is not merely to support the deployment of ANNGTS, as is referred to in Paragraph 3 of Article 37 of Law 9/2014 (ducts, spaces, poles, etc.) but are elements of the

13 See definition of «privative use» in Article 11, point 6.b) Private. of Chapter VI of definitions (page 18).

ANNGTS (fibres, electronic components, etc.), management and implementation are activities that goes beyond municipal jurisdiction, being of the operators in free competition as established in Article 2, Point 1 of Law 9/2014.

In order to ensure free competition, when ownership is municipal, exploitation is in Universal format to allow for implementation of private use. The city council may have two variants:

1.- Constituting an operator.

The city council may assume the function of constituting an operator, depending on the city council, and notify the regulatory authority of the creation of an operator for this purpose and fulfil the requirements set forth when the administration creates operators.

2.- Through a shared operator without conflict of interest.

The city council may also give guarantees to comply with the requirements for the absence of conflicts of interest with other operators through an organisation like the one described by the governance of shared use or commons.¹⁴ Thus, the administration must act according to objective conditions of transparency and non-discrimination as provided in Paragraph 1 of Article 37 of Law 9/2014.

In assuming this, it is understood that the city council no longer assumes the role of operator.

In this case, it is formalised in the same way as described in Point c of the same article.

c) Implementation of sharing or commons.

The cost of management and maintenance of the infrastructure affects the operators that use it proportionately to the use made by each by applying criteria set for transparency, absence of conflicts of interest, and non-discrimination.

To comply with these conditions, the implementation of sharing or of commons is done through an entity that is responsible for applying the governance of this shared use, as defined in this ordinance.¹⁵ The formalisation of the order to implement this governance can be made through the following:

1.- An agreement.

Formalisation of the order can be made through an agreement between whoever deployed the infrastructure in Universal format and the entity that will take care of it.

2.- An assignment.

When whoever deployed the infrastructure is an entity through assignment by the city council in accordance with Article 49.1.b of Decree 336/1988 of October 17th on the regulation of local heritage, assignment is expected for private non-profit entities with the purpose of public utility or social interest.

d) Recovery of investment by the city council.

When investment is made by the city council, the city council can decide, according to its criteria, if

¹⁴ See definition of «shared use or of commons» in Article 11, point 6.c) Shared or commons. of Chapter VI of definitions (page 18).

¹⁵ See definition of «shared use or of commons» in Article 11, point 6.c) Shared or commons. of Chapter VI of definitions (page 18)

it wants to recover the investment it has made from those acquiring private uses, thus becoming an investor in a funding mechanism. As such, it is understood that, once completed, the return of investment in the infrastructure becomes an asset of the entity that manages it according to the expected assumptions in Point b of this article, which is who should implement this return.

However, although this circumstance occurs, the use of the result in favour of the city council is permanently established, which consists of the maintenance of the ability to use the part aimed at self-service of the city council, and the infrastructure continues to be managed according to the criteria of Universal format.

Chapter IV. Definitions

Article 11.- Definitions

For the purposes of interpretation of this ordinance, the following definitions apply:

1.- Operator

In accordance with the provisions of Point 26 of Annex II of Law 9/2014, the operator is the natural or legal person that provides communication services to the general public¹⁶ through public networks, as defined in Point 32 of Annex II and that has sent a notification informing the corresponding authority of the exercise of this activity.

2.- Service available to the general public

A service available to the general public is understood as a service of electronic communications that is offered to everyone, that is, to society in general, according to the definition of Point 32 of Annex II of Law 9/2014 General Telecommunications on public telecommunications networks, at a cost that is the average cost according to market criteria.¹⁷

3.- Market cost of a service available to the general public with market criteria

To determine if the cost of a service that is available to the general public corresponds to market criteria, the latest study published by the European Commission on 'Retail broadband access prices' or 'Basic Internet Access Cost' (BIAC),¹⁸ or any index published in the future that may replace it with a similar function will be taken as a reference, understanding that this condition is met when the operator publishes and commits to providing services of ANNGTS at prices for the end user comparable to those published by the study for a similar service, which is understood as comparable as when it is within the range corresponding to the data for the member states of the European Union.

4.- Access networks to next-generation telecommunication services or "ultra-fast" (ANNGTS)

The ANNGTS are the telecommunication networks based on fibre optics or similar when the networks provide access to similar services that are available to the general public with

16 See definition of «service available to the general public» in point 2.- (next)

17 See definition of «cost with market criteria» in Article 11, point 3.- (next)

18 Examples of reference documents relating to 2015:

<http://ec.europa.eu/digital-agenda/en/news/study-retail-broadband-access-prices-february-2015>

http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc_id=11183

bandwidths of 30 Mbps or more in general society or with connectivity to public services.

5.- ANNGTS infrastructures

Infrastructures capable of supporting ANNGTS referenced in Paragraph 3 of Article 37 of Law 9/2014, such as pipes, ducts, boxes, chambers, cabinets or any similar resource necessary to support it or even those within the ANNGTS itself, such as fibres, electronic components, antennae, etc.

6.- ANNGTS uses

a) Self-service for the city council.

The use of ANNGTS infrastructures to provide public communications to smart public services or among its own.

If the city council desires, it may waive this use of being users of another.

b) Private.

Infrastructure exploitation is private if done in a private manner by either an operator providing services to third parties (other operators or end users), or a private entity who is not an operator using services for self-service.

When an operator shares his/her private use with third parties but reserves the right to decide the terms of sharing, it is also considered private use. Such sharing is also called vertical sharing or resale.

c) Shared or commons.

Sharing is between operators of the same infrastructure in an effective manner through a governance scheme that ensures the absence of conflict of interest and that is always open to any skilled operator that wants to participate in conditions of transparency and equal conditions, thereby creating a shared space (also called commons, neutral, or open) in which a collaborative economy is developed where the costs of management and maintenance are proportionally compensated for by the operators who share the ANNGTS infrastructure and its use.

It is specifically considered that there is a conflict of interest when the same activity is practised by the entity that implements the governance or the people who manage it or when an ownership interest exists or similar interest links other operators who may be in competition in the interest of exploiting the structural elements of the ANNGTS to offer services to end users, even if this competition develops in other places or municipalities.

A declaration of intent or value is not sufficient. Governance must be implemented effectively through a legally constituted entity for this purpose and must meet the requirements mentioned in this definition.

7.- Deployment in Universal format

Deployment in Universal format is deployment that simultaneously allows for the three uses described in the previous section (self-service for the city council, private, and shared or common use).

To do so, it is divided into three parts, one for each use. At the start, each part has a minimal

structural unit.¹⁹ The rest of the free structural units will be available for upgrades for those who need them, and who have irrefutably proved that they have exhausted the initially reserved capacity.

See the figure below for an example of the initial distribution of the reserves of use of an optic fibre cable in three parts (self-service for the city council, private, and shared), using fibre tubes as the minimal structural units.

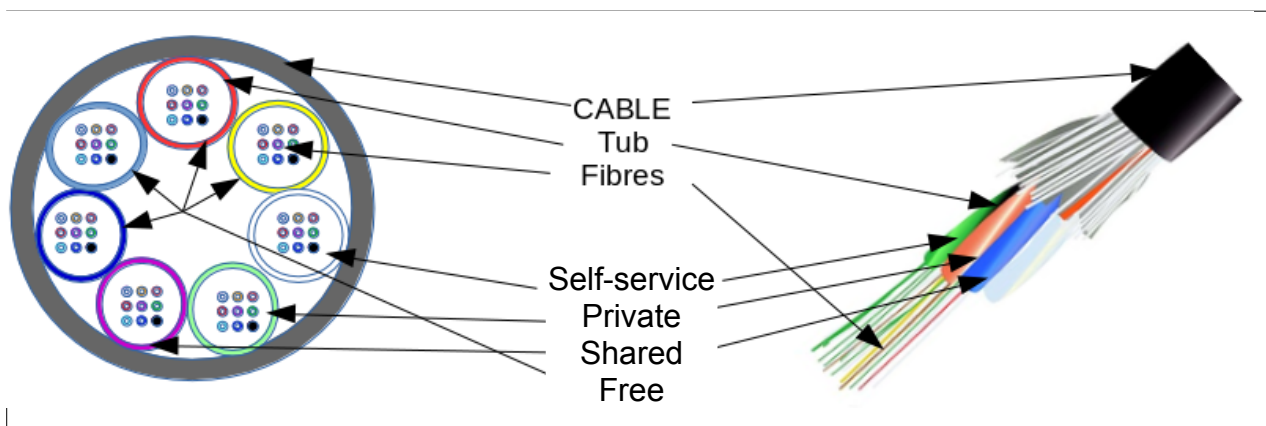


Figure 1: Reserves the initial parts of an optic fibre cable in Universal format using fibre tubes as a minimal structural unit:

1. First, three parts are made with a minimal structural unit (fibre tube), each reserved for each use.
2. Next, each part can be extended in new minimal structural units using the remainder that are free, as it is irrefutably proved that they have efficiently exhausted the previously assigned units.

8.- Minimal structural unit

It is the minimal unit that can be allocated to a single use in the most practical way, while allowing the management of a single infrastructure for multiple different uses, depending on the Universal format model. Examples of minimal structural units include the following:

- a) In the fibre cable where the fibres are grouped into tubes:
The tubes.²⁰
- b) In loose or bare fibres (blown in micro tubes):
The fibre.
- c) In multiple ducts and tri-tubes:
The duct.
- d) In insulated ducts:
When sub-conduction is feasible, the sub-duct.
- e) In the single fibre:
When the multiplexing of a single fibre in various wavelengths is feasible, the pair of

¹⁹ See definition of «minimal structural unit» in Article 11, point 8.- (next)

²⁰ See figure on the definition of deployment in Universal format of the previous point.

wavelengths that allow for two-way communication.

f) **Otherwise:**

The unit that allows for the viable and practical division of uses with similar criteria to those applied in the previous points will be used. Should there not be any, its use will be preferably shared through the shared format or commons, which must naturally expect the shared use of the same structural unit in conditions of transparency and non-discrimination.

9.- Over-investment or overbuilding

Over-investment or overbuilding consists of the deployment of more than the necessary ANNGTS infrastructure, doubling or multiplying investments.

This is a practice that not only can cause inefficiency in investments but also can hide the real purpose of affecting the viability of potential competitors from those who practice it, diminishing their ability to gain a return on investment. In the long run, this can cause a decrease in the variety of offerings that enable real freedom of choice for users.

To the extent that the purpose of this ordinance is to maximise efficiency in investments while ensuring varied and high-quality offerings in non-discriminatory conditions, when the investment is partially or completely made by the city council or public funds, over-investment or overbuilding will be avoided if possible.