

# **FROM INNOVATION TO THE LAW: A COMPARATIVE ANALYSIS OF NEW TECHNOLOGIES IN AUTONOMOUS MOBILITY LEGISLATION**

**Héctor García Crespo**

Researcher. University of Burgos

## **ABSTRACT**

Spanish Autonomous Communities have been approving Transport Laws for regional and urban services for more than thirty years. An analysis comparing these rules allows us to see how they have evolved towards greater involvement in sustainable mobility. From simple texts, which are limited to delimiting competences and ordering coordination between Administrations, to rules that assume the drawbacks of the current mobility model. The most recent Laws introduce in its principles and objectives the promotion of sustainable public transport from the socioeconomic and environmental aspects. This means offering conditions of universal accessibility and universal design and encourages the introduction of information and communications technology and quality at service. This paper is a review of this evolution, highlighting those Laws that have been milestones and culminating with the last two: that of the Principality of Asturias and that of Castile and León. Even with some shortcomings, this introduction represents a commitment by the legislator to sustainable mobility and quality public transport.

## **1. INTRODUCTION**

Technological innovation is a fundamental aspect of public passenger transport. Autonomous Laws have been introducing the promotion of quality and technology in public service beyond specific rules on vehicle approval, active and passive safety, and universal accessibility. All this has the aim of promoting an alternative for sustainable mobility. But we can ask ourselves: from what point has the law of transport been concerned with incorporating quality? How is innovation introduced into the legal regime of the public transport service?

## **2. EVOLUTION OF QUALITY AND NEW TECHNOLOGIES IN AUTONOMOUS LAWS**

Public transport is regulated in Spain with two legislative levels, apart from European legislation. On the one hand, transport that takes place within an Autonomous Community is considered autonomous competence. On the other hand, transport transiting the territory of two or more Autonomous Communities is the responsibility of the State. These powers affect regulation (primary and secondary) and its management.

The first autonomous legislative rule is the Catalan *Ley 12/1987, de 28 de mayo, sobre regulación del transporte de viajeros por carretera mediante vehículos de motor* (Law 12/1987, of 28 May, on the regulation of the transport of passengers by road by motor vehicles). This rule is contemporaneous with State *Ley 16/1987, de 30 de julio, de ordenación de los transportes terrestres* (Law 16/1987, of July 30, on land transport ordinance).

The Catalan Law lacks any reference in the main text to quality or sustainability. For its part, Law 16/1987 has as general principles the establishment and maintenance of a common system throughout the country, the satisfaction of the needs of society with the maximum degree of efficiency and minimum social cost and the maintenance of the market unit.

The appeal of the Generalitat de Catalunya (Catalan Government) before the Constitutional Court of certain provisions of Law 16/1987 was decided by Judgment 118/1996 of 27 June. That judgment annulled the provisions which supplementally regulated urban transport. The annulment led to a regulatory gap that had to be covered by regional legislation, so in the following years the Autonomous Communities passed laws to regulate urban transport and coordinate it with the regional intercity service.

The first autonomous laws after the Judgment were passed in Galicia and the Foral Community of Navarra. Specifically, they were *Ley 6/1996, de 9 de julio, de coordinación de los transportes urbanos e interurbanos por carretera de Galicia* (Law 6/1996, of July 9, coordination of urban and intercity transport by road of Galicia) and *Ley Foral 7/1998, de 1 de junio, reguladora del transporte público urbano por carretera* (Law 7/1998, of June 1, regulating public urban transport by road), respectively. None of them have references in their articles to sustainability or quality of service.

A first precept is found in *Ley 20/1998, de 27 de noviembre de ordenación y coordinación de los transportes urbanos de la Comunidad de Madrid* (Law 20/1998, of 27 November on the ordinance and coordination of urban transport in the Community of Madrid). This Law contains a brief chapter about environmental conditions. It consists of a single article, the 15th. This article indicates that sustainability will be promoted in the processes of renewal and expansion of fleets and in the setting of the technical conditions of taxis. This would be achieved through technologies that pursue maximum energy efficiency, the use of renewable fuels, the reduction of air and noise pollution and the recycling of materials. This inclusion of environmental or quality issues can be described as exceptional.

Both the *14/1998, de 30 de diciembre, de los Transportes Urbanos de la Comunidad Autónoma de Aragón* (Law, 14/1998, of December 30, of the Urban Transports of the Autonomous Community of Aragon) and the *15/2002, de 28 de noviembre, de transporte urbano y metropolitano de Castilla y León* (15/2002, of November 28, of urban and

metropolitan transport of Castile and León), antecedently the current Law of this Community lack objectives, principles or precepts linked to the quality and innovation in transport.

*Ley 2/2003, de 12 de mayo, de Ordenación de los Transportes Urbanos y Metropolitanos de Viajeros de Andalucía* (Law 2/2003, of 12 May, on Ordinance of Urban and Metropolitan Transports of Travellers of Andalusia) was a milestone. Its Preamble introduced the recognition of mobility problems in urban areas.

Its article 3, dedicated to the purpose and principles of public action, incorporates objectives linked to mobility. In particular, the Administrations will promote the adequate satisfaction of the transport needs of citizens, under conditions of social equity, territorial solidarity, security and accessibility for persons with reduced mobility.

The same article 3, in its second section, adds that the purpose Law is to promote and improve the quality and safety of the public passenger transport service. This is the first time that the improvement in the quality of transport is reflected in an autonomous law and, of course, it does so with prominence.

Article 4, concerning definitions, defines mobility as a set of displacements that persons and goods must make on the basis of work, training, health, social, culture or leisure, or by any other. Regarding sustainable mobility, the Law defines it as mobility that satisfies at a reasonable time and cost and minimizes the negative effects on the environment and the quality of life of people. It is the first definition of the concept of sustainable mobility in a Spanish law.

According to Moreu (2014), the legal concept of sustainable mobility is profiled by the following elements: holistic and integrated view of public policies: it is cross-cutting in including not only traffic and transport, but urban planning, education, health or the environment; pursues social and territorial cohesion; environmental objective, to reduce negative effects such as polluting emissions; economic outlook through low consumption and lower energy dependence; accessibility, especially for persons with reduced mobility; citizen participation.

This Law 2/2003 represents a qualitative leap. It is not limited to being a rule that seeks to order and coordinate, but takes mobility as a necessity of citizenship, which must be addressed through services. In addition, it is the first Law that introduces the concept of mobility linked to universal accessibility and sustainable development, as well as quality improvement.

A new step forward is found in *Ley 9/2003, de 13 de junio, de la movilidad* (Law 9/2003, of 13 June, on mobility). This Catalan rule is the first to introduce the concept of mobility into its title. Its first principle is based on the characteristics of what it is known as sustainable

mobility, with its three facets: social, economic and environmental. It includes the promotion, not only of public transport, but of zero impact modes, such as on foot and bicycle. This Law also introduces sustainable urban development.

The objectives of the mobility policy are a catalogue of measures. Actions linked to public transport include studying fare integration formulas, improving commercial speed and promoting demand-responsive transport. It should be noted that this Law does not regulate public transport, but mobility, in particular, instruments for planning, programming, evaluation and monitoring. Participation and management bodies are also regulated.

Law 4/2004, on the Transport of Road Travellers, of the Basque Country, recognizes in its Preamble the strategic nature of public transport for social, economic and territorial development and cohesion, aimed at meeting the population needs of society, within sustainable development. The safety and quality of this service are described as priority elements.

The article on the principles of the Law reproduces the above paragraph and has the basis of transport policy. In addition, this policy will also comply with other principles: meeting mobility needs effectively and lower social cost and promoting intermodality. Quality and environmental sustainability are each reflected in two principles. The quality of services is explained through the rights and obligations of users and through the development of quality transports. With regard to environmental criteria, the promotion of technology is established for this purpose, and more generically, the promotion of sustainable transport.

We move forward in this temporary review with *Ley 8/2005, de 30 de junio, reguladora del Transporte Urbano por Carretera de La Rioja* (Law 8/2005, of June 30, regulator of Urban Transport by Road of La Rioja). In this Community we find the peculiarity of being the only one where one Law regulates urban transport and another, which we will talk about later, establishes the legal regime for intercity transport. Both its Preamble and articles lack references to quality or sustainability.

The next rule is *Ley 14/2005, de 29 de diciembre, de Ordenación del Transporte de Personas por Carretera por Castilla-La Mancha* (Law 14/2005, of December 29, on the Ordinance of the Transport of People by Road in Castilla-La Mancha). This Law acknowledges in its Preamble that is based on the need for a transport system that responds the demand of the inhabitants, taking into account the geographical, demographic and economic peculiarities of the Community. It is based on the right to mobility, giving the importance it deserves to public transport.

The article on principles recognizes public transport as an essential public service to respond the mobility needs of the population. Among other objectives, transport policy will be aimed at meeting the demand for the mobility of the population, in conditions of safety and comfort.

This objective focuses on people with fewer resources, with reduced mobility or special transport needs, as well as in areas with low population density or remoteness.

Another objective is the achievement of optimal quality and safety objectives, through efficient use of resources, to reduce environmental costs. It is also mentioned the promotion of public transport spreading its knowledge and boosting its use.

We return again to La Rioja, because, as stated above, Law 8/2005 regulates only urban transport. Intercity service has its regulation in Law 8/2006 of 18 October. In its Preamble there is not relevant reference to quality or sustainability.

Within the purpose of the Law, in addition to the usual ones, it is intended to promote public transport through measures aimed at modernizing vehicles, a homogeneous corporate image of public services, improving access to persons with reduced mobility and incorporating technological innovations that improve the service.

The next law in this chronological review is the *Ley 13/2007, de 17 de mayo, de ordenación del Transporte por Carretera de Canarias* (Law 13/2007, of May 17, of planning of Transport by Road of the Canary Islands). The summary of the content made in the Preamble highlights the objective of promoting public passenger transport that responds the demand for population mobility by guaranteeing the right to quality and sustainable transport, with particular attention to people under-favoured and disabled. This is, undoubtedly, an object that is repeated in the different laws.

We also find other objectives in this Law: the promotion of public transport versus the private; the rational use of public resources, the achievement of the highest quality and safety in the provision of the service and the reduction of environmental impacts and costs.

Finally, within the Second Chapter, named mobility planning, sector promotion and financing of regular public transport, in title III, road transport services, there is a small section called promotion actions. The corresponding Regional Department may, in collaboration with the Island Councils, carry out development programmes.

Those promotion programmes will seek the modernization of company facilities and systems; the dissemination of the transport sector and any measures to facilitate the competitiveness and efficiency of the sector.

The next Law of this analysis is of the Community of Madrid, *Ley 5/2009, de 20 de octubre, de Ordenación del Transporte y la Movilidad por Carretera* (Law 5/2009, of October 20, on Transport and Road Mobility Ordinance). The brief Preamble to this rule indicates that its enactment responds to the relevance of road transport to the socio-economic development of the Community and at the will to ensure sustainable mobility. In general, it is a law simpler

than its contemporaries. The purpose of this Madrid Law is to achieve an efficient and coordinated transport system that meets the mobility needs of citizens.

As regards principles and objectives, the Law aims to facilitate mobility and contribute to territorial articulation, economic development, social cohesion and improve, in short, the quality of life of citizens. The provision of the service, as well as the construction and maintenance of the facilities should minimize the environmental impact, as well as seek the optimal consumption of resources. Finally, operators should ensure accessibility to persons with reduced mobility.

More advanced is *Ley 6/2011, de 6 de abril, de la Generalitat, de Movilidad de la Comunidad Valenciana* (Law 6/2011, of April 6, on Mobility of the Valencian Community). Its Preamble is noteworthy, recognizing the role of mobility in the progress of advanced society. Even more remarkable is the recognition of the limitations and conditions of mobility and development. The text refers to Buchanan's *Traffic in Towns*. The goal is to maintain the level of mobility by making it compatible with an urban space suitable for people and without falling into unacceptable energy dependencies.

The Preamble refers to European legislation for the legal framework for transport and mobility. The aim is to promote non-motorized modes and public transport. It recognizes the advantages of the Mediterranean urban model, which facilitates sustainable mobility by relying on integration of uses, intermediate densities and occupation of adjoining spaces. According to the Preamble, this model must be protected by the regulation. Therefore, it seeks to integrate mobility plans into urban development.

In the light of the main text, it is established that the purpose of the Law is the regulation of the powers of the *Generalitat* (Regional Government) in the field of mobility, i.e. to regulate planning instruments, the land transport of passengers and infrastructure.

The first principle of the Law is that administrations will facilitate the mobility of people, understanding that it is a backbone of their quality of life, by allowing them access to work, training, services and leisure.

The second principle is that administrations will promote the growth of mobility in a way that a number of objectives related to safety, accessibility, reduction of air and noise pollution, efficiency in energy consumption, participation of society in decision-making and the promotion of public transport and intermodality are met simultaneously.

Boix (2014) considers that this rule does not, despite what is stated in the Preamble and the principles, bring anything new in terms of transport to the problem of mobility. Thus, he tells us:

"All Title II of the Law, referring to the regulation of passenger transport, seems transplanted from a legal rule that had been prepared regardless of what the Law says in its preamble or the regulation and principles of Title I. The idea of sustainability disappears from the purposes and objectives to guide public authorities in setting routes, programmes or contracts, award procedures, exclusivity or subsidy mechanisms (...) but in no case links to mobility considerations these elements, as it was able to, for example, by identifying certain preferences for a certain type of vehicle or performance that guarantee less polluting emissions in the general rules that should be awards which, however, choose to give not a few technical and legal indications as to how these are to be carried out, but say nothing about the issue at hand."

Through various planning instruments, dedicated to territorial areas, but also to mobility-generating locations, the aim is to achieve the objectives of the Law. In particular, planning instruments should seek a modal distribution where the use of non-motorized modes and public transport expands. Also, the public transport must be accessible. These plans affect both the organization of transportation and the configuration of urban space.

The next rule of this study is *Ley 4/2014, de 20 de junio, de transportes terrestres y movilidad sostenible de las Illes Balears* (Law 4/2014, of June 20, on land transport and sustainable mobility of the Balearic Islands). This Law, the first to incorporate the qualifier of *sustainable* in its title, is very broad and regulates road and rail services in detail.

According to its Preamble, public administrations will promote the satisfaction of transport needs and favour the mobility of citizens. All this actions must be in accordance with a series of general principles, such as free access to goods and services, through adequate, accessible and safe mobility, with minimal social and environmental impact. Efficiency and rationalization in the use of media, resources and spaces are part of mobility policy.

One concept that is introduced in this catalogue of principles is that of social profitability. It is qualified as the assumption, according to the means available, of the needs of public service in terms of spatial or temporal availability, of attention to specific groups or the achievement of average levels of quality. Other principles included in this Law are the proper distribution of costs of implementation and management of transport, and the involvement of citizens through social participation.

We have left for the end another interesting principle, that of subsidiarity of the establishment of new transport services. It implies that such establishment will be subject to the existence of a demand commensurate with investment and environmental costs, and will take into account alternative modes of transport according to their price, safety, quality and environmental assessment results. If this principle had been applied in a widespread and rigorous manner, disproportionate investments would have been avoided, not only in public transport, but also in road infrastructure.

As regards the purposes of the Law, it retains a similar structure to the Law of the Valencian Community. Thus, this rule regulates public transport of travellers, urban and intercity; rail service, and mobility management through planning tools. Another purpose is to set the objectives and contents of the Sectoral Mobility Master Plan, island plans for regular road transport and mobility plans.

In addition to the principles and purposes of the Law, the objectives of the public transport service itself are also listed. These must constitute an integrated offer, organized as a network or multimodal infrastructure, to offer citizens the possibility of covering their travels.

A quality, safe, accessible and appropriately priced public transport is the first right of users listed in the Balearic Law. Others include the provision of services adapted for people with disabilities or transporting bicycles in public transport vehicles.

We move forward to reach the *Ley de Cantabria 1/2014, de 17 de noviembre, de Transporte de Viajeros por Carretera* (Law of Cantabria 1/2014, of November 17, on Road Passenger Transport). Its Preamble introduces equality and equity between men and women as a fundamental principle. This principle responds to the role of transport as an element of social and territorial cohesion, as well as the promotion of work-life balance. Also, sustainable mobility is pursued through intermodality and the transfer of travellers to greener ways.

The Preamble highlights several objectives of the Law, such as sustainability, transport modernization, attention to less-favoured sectors, persons with reduced mobility and areas with low population density. It should be noted that this section highlights the importance of public transport in a region with important demographic and orographic conditions. This point coincides with what is analyzed in the Law of Castilla- La Mancha.

The transport policy will also respond to these principles: achieving the optimum degrees of quality and safety in the provision of the service, through the appropriate use of available resources and the reduction of environmental cost; the rational use of resources for promotion and investment in transport, by prioritising projects with greater viability, social and environmental profitability and respect for the environment; combating climate change by promoting collective or non-motorized modes, encouraging the implementation and use of non-polluting technologies.

This last point is noteworthy, since, after the early inclusion in Law 20/1998 of the Community of Madrid, no autonomous law had met the factor of less polluting propulsion technologies.

Similar to the Balearic Islands Law, the Cantabrian one recognizes the right to use vehicles in conditions of comfort, hygiene and safety, with accessibility conditions, a timely and regular service.



Turning to planning regulation, sustainable mobility plans should accommodate novel solutions to reduce environmental impact, at the lowest possible cost and contribute to road safety.

We reached the last rule before entering the Laws of the Principality of Asturias and Castile and León, *Ley 10/2015, de 24 de marzo, por la que se establece el sistema competencial en el transporte urbano e interurbano de la Región de Murcia* (Law 10/2015, of March 24, which establishes the competency system in urban and intercity transport of the Region of Murcia).

The Preamble is more typical of the oldest laws. It should be noted, however, that this introductory statement expressly points out that the regulation of the mobility of persons is not an object of the Law. On the contrary, it merely regulates the competency frameworks for urban and intercity transport within the Community. Some aspects are outside, such as mobility planning and management, the operation of services, and the inspector and sanctioning regime. It should therefore come as no surprise that the objectives of the Act are limited to issues of service coordination and cooperation between operators. All other elements will be regulated by another rule, which has not been approved so far.

### **3. INNOVATION AND QUALITY IN THE MOBILITY AND TRANSPORT LAWS OF THE PRINCIPALITY OF ASTURIAS AND CASTILE AND LEÓN**

The Autonomous Communities of the Principality of Asturias and Castile and León have common factors, such as a low density and areas with scattered, aged population and with complicated orography. This is a real challenge for an adequate sustainable mobility policy, and in particular for the provision of the public transport service. It should be noted that while the Asturian Law is broader, it includes more elements of mobility, as well as rail transport, its Castilian and Lioness counterpart focuses on the transport of passengers by road.

*Ley del Principado de Asturias 12/2018, de 23 de noviembre, de Transportes y Movilidad Sostenible* (Law of the Principality of Asturias 12/2018, of November 23, on Transport and Sustainable Mobility) seeks, according to its Preamble, a legislative body (since they already have a prior Law regulating their Transport Consortium) that takes into account territorial, population and orographic singularities. Public transport should be part of a mobility model aimed at improving the quality of life of citizens, which is more economically sustainable, ensuring greater territorial and social accessibility, affordable and with care for persons with reduced mobility or disabilities.

The new model should offer alternatives to private transport, such as non-motorized modes, on foot and by bicycle, and public transport. The latter is intended to be empowered by its ability to reduce the environmental and social impact for mobility.

The Asturian Law clearly distinguishes between principles and objectives. The first are enumerated in a list of words or short concepts, without expound on them: safety, minimization of environmental impact, minimization of social costs, intermodality, sustainability and rational use of the territory, cost assessment and management, priority of universal accessibility in the allocation of public resources, coordination between public administrations, citizen participation, and incorporation of the gender perspective into transport planning and management.

The index of objectives stands out for its extension, thirty-three headings. A first transport policy block, with objectives aimed at improving transport accessibility by reducing its negative impacts. At this point, two objectives relating to the drive towards the knowledge economy can be highlighted through the development and application of technological advances to public transport; another is to introduce technological means linked to management and information.

The second goal block concerns urban planning and territorial and environmental impact of transport. More interesting for our study is the third block, related to innovation, security and education.

In that third block of objectives we find the introduction of new technologies in transport and mobility management, especially in user information and payment methods; encourage proposals that reduce accidents; incorporate safety measures into vehicles, and training programmes to promote sustainable ways.

Another section where we find references to innovation and quality in transport is in the planning instruments, something that we have already seen also happens in other studied laws. In this regard, we can underline that the Sustainable Mobility Strategy will have sectoral strategies as development instruments.

Several areas to be developed in Sectoral Strategies: the implementation of the electric vehicle and its infrastructures for public and private transport, with the objective of zero emissions; intermodality for the implementation of new technologies, fare unification, user rights status and physical adaptation of facilities and vehicles, and finally, the development of the bicycle and other active means without emissions. The content of some of these Strategies is developed, as detailed by Blasco (2019 a), in the Additional Provisions of the Law.

Finally we move on to *Ley 9/2018, de 20 de diciembre, de Transporte Público de Viajeros por Carretera de Castilla y León* (Law 9/2018, of December 20, Public Transport of Travelers by Road of Castile and León). Perhaps the most noteworthy facet about its Preamble is that it attaches great importance to the rural area of the Autonomous Community, where it is considered that ensuring mobility is fundamental.

The summary of the objectives highlights the adaptation of management contracts to mobility in a sustainable way, with the highest quality, safety and incorporating new technologies, elements that interest us in this study. The aim is also to improve environmental and economic efficiency. It is clearly stated that the Law is committed to sustainable mobility as a basic principle through a series of measures and instruments.

The Castilian and Lioness Law has only a catalogue of principles, not objectives, making it more succinct at this point than its Asturian counterpart. As we will see below, the accessibility of the rural environment will have great prominence in these principles.

The first principle is the satisfaction of the mobility needs of citizens, with special attention to persons with reduced mobility or disabilities, with guarantee of equal access to transport throughout the territory. Another principle is the development of a coordinated autonomous transport system, which promotes intermodality and promotes socio-economic cohesion and territorial structuring, especially in rural areas. The third principle is the promotion of sustainable mobility as an instrument towards less pollution and more efficient use of energy.

Two particularly relevant principles are the fourth and fifth. The fourth is the guarantee of the highest level of safety, quality and comfort in service, with the use of technological development in intelligent transport systems. The fifth is the promotion of the use of information and communications technology in the management of public transport.

The other principles concern issues of great importance such as universal accessibility and universal design, flexibility of modes of exploitation for better adaptation to social and territorial changes, an adequate fare regime, the promotion and prioritisation of public versus private transport, the integration of the autonomous transport network into the national single market, the guarantee and defence of user rights and the rational and efficient use of public resources in projects with greater social profitability.

The quality in public transport is reflected in a specific Chapter, dedicated to quality, sustainability, intelligent transport systems and automated driving. In his brief analysis of this Law, Blasco (2019) stops in this section, delving into its novel aspects.

As regards the quality of service, on the one hand the Administration will promote the obtaining of quality certifications. On the other hand, the Autonomous Government will establish the certifications required in this matter.

This quality shall be measured by controls by the Administration. The operators shall provide the required information. Several systems are indicated: user surveys, level of complaint response and contingency protocols. Vehicle technical requirements and employee working conditions will also be monitored.

Information and communication technologies also have a presence in the new Law of Castile and León. The transport network must have intelligent transport systems according to the characteristics of the service. This channel will serve citizens and operators. The Administration will promote the use of social networking services.

The Transport Department also assumes the role of collecting, systematizing and disseminating essential information on public transport. The Law establishes minimum data: critical qualitative and quantitative objectives of the service, impact on ecological footprint, supply and demand, costs, and, finally, occupational safety and health issues.

Another function of the Administration will be the impulse of marketing elements. The objective is the dissemination and promotion of public transport. In particular, a homogeneous corporate identity is mentioned.

An information tool would be a web portal, which would be launched within a year. This website would include data from all public transport services in the Community. The minimum information would be itineraries, schedules, universal accessibility, the possibility of traveling with bicycles and links to the purchase of tickets.

The Law includes the implementation of automated mobility systems. The goal is to improve efficiency, safety and environmental impact. The role of the Administration will be to facilitate testing for these systems.

In summary, the precepts collected focus on quality certifications, promotion of alternative propulsions, intermodality with the bicycle, quality control, information and promotion and automated systems. In the case of this Law, we see a remarkable emphasis on innovation and transport quality, something novel in regional transport legislation.

#### **4. INNOVATION AND QUALITY IN LAWS**

The presence of innovation refers to two main aspects. The first, in information and communication technologies, oriented both to the management of the service itself, mainly through navigation and geolocation systems, and to the user, through websites that, among other things, collect the information of others Systems. As for vehicles, the most noteworthy is the technology oriented to the reduction of pollution through more efficient propulsions or with reduced emissions. At this point, the most notable is the electric vehicle, both for private and public use.

Rojo (2011) developed an analysis method on the quality of the urban transport service. Its peculiarity was the introduction of variables in addition to those of frequency and fares, such as newer vehicles, large-class vehicles, fast-track traffic, fewer intermediate stops or the use of air conditioning, variables that affected demand and satisfaction. It is true that more

advanced elements such as Wi-Fi connection, USB connectors and, on long journeys, individual screens are currently valued.

Therefore, we have two models to regulate quality and innovation in the two most recent laws. On the one hand, a Law contains a specific chapter, albeit with somewhat open promotion measures. On the other hand, mobility and transport planning instruments includes determinations about innovation and quality.

## **5. IN CONCLUSION. FROM LAWS TO THE ROAD**

Sectoral legislation on passenger transport has been leading an evolutionary trajectory towards greater involvement in sustainable mobility. It has moved from rules aimed at regulating the delimitation of competences and coordination between administrative bodies to others that seek to increase quality and innovation in public service.

The inclusion of quality and innovation in the Laws are a sign of the involvement of autonomous legislatures in the improvement of public transport. It is recognition of the need to provide accessibility to citizens and to have alternatives for sustainable mobility.

The incorporation of these elements into the Laws, which have a vocation of permanence, has the risk of being too advanced or, on the contrary, being outdated by technological evolution. That is why, while positively reflected in the Laws, this carries certain risks.

On the other hand, these legislative developments generally lack of putting in place, as they refer to planning instruments or are not reflected in the conditions of management contracts. This limits the possibility of all these improvements reaching the road.

Moreover, there is no doubt that developments in the rules would become just theory if the Administrations do not support through appropriate compensation for the transport deficit to facilitate the incorporation of innovations.

Therefore, and with the limitations indicated, the incorporation of quality, safety and environmental sustainability implies the clear will of the regional legislator to enhance public transport as a quality tool for sustainable mobility.

## **REFERENCES**

BLASCO HEDO, E. (2019). Ley del Principado de Asturias 12/2018, de 23 de noviembre, de Transportes y Movilidad Sostenible. *Actualidad Jurídica Ambiental*, 86, pp. 125-128.

BLASCO HEDO, E. (2019). Ley 9/2018, de 20 de diciembre, de transporte público de viajeros por carretera de Castilla y León. *Actualidad Jurídica Ambiental*, 87, pp. 157-159.

BOIX PALOP, A. (2014). La movilidad urbana sostenible en la ley valenciana de movilidad. En A. BOIX PALOP y R. MARZAL RAGA (ed.) Ciudad y movilidad: La regulación de la movilidad urbana sostenible, Publicacions de la Universitat de València, Valencia, pp. 177-198.

MOREU CARBONELL, E. (2014). Reflexiones sobre el papel del Derecho para la movilidad sostenible. En A. BOIX PALOP y R. MARZAL RAGA (ed.) Ciudad y movilidad: La regulación de la movilidad urbana sostenible, Publicacions de la Universitat de València, Valencia, pp. 79-106.

ROJO ARCE, M. (2011). Modelización de la interrelación entre las variables de servicio y la demanda de viajeros de autobuses de tipo interurbano. Tesis Doctoral leída en la Universidad de Burgos.