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MOBILITY MANAGEMENT IN SPAIN

Miguel Mateos
Centro de Estudios del Transporte, CEDEX
Madrid (Spain)
miguel.mateos@cedex.es

INTRODUCTION

Even though Mobility Management (MM) is not new in Spain, looking at its application, it could be said that it is an idea that has been traditionally relegated to a secondary level, in the framework of a general transport policy based, mainly, on the construction of new infrastructures and the extension of the existing ones (approach founded on the wide accepted believe – now being questioned – that Spain has an historic deficit, both qualitative and quantitative, in terms of transport infrastructure, compared to its European neighbours). This resulted in the long time consideration of MM as a complement for the main infrastructural projects, but without an entity by its own that would justify the adoption of specific programmes on the matter.

Nevertheless, like in many other countries, the evidence that transport policies solely based on the addition of capacity to the transport infrastructure network can not cope with transport problems, as well as the generalization of the sustainability concept; have lead to a shift in the traditional transport policy in Spain. Now, the shared goal of the vast majority of policy documents developed by the different administrative levels, is the achievement of a sustainable mobility. And is in this new context where MM has taken a renewed impulse, being identified as one of the most effective tools to approach the mobility problems from a sustainable perspective.

But these considerations should not lead us to the wrong believe that during the last years there were no MM achievements in Spain. It is true that, due to this tendency, there is not an "official" MM definition in Spain and it hasn't been developed yet a sound knowledge infrastructure around the MM concept. Therefore MM has been adopted and interpreted in a quite voluntarist way for those (municipalities, regions,…) who decided to use it, which leaded to different approaches in its applications, not always coincident in their goals. There is a long way ahead regarding MM in Spain, mainly in terms of generalization of its application and the priority consideration of its use referred to other transport solutions in the framework of the overall transport policy. But there are several municipalities and regions in Spain that reach the level of other European homologues where MM enjoys a very good health; where the technical development of this discipline is important and the results achieved are relevant. An example of this is the leading position of Spain in terms of organization of metropolitan public transport services, with a wide experience in the formation of transport consortia, which have led to significant MM applications in their development (e.g. fare integration, service coordination, mobility centres, integrated information provision, etc.).

INSTITUTIONAL FRAMEWORK

To better understand the state of the art in terms of MM in Spain it is important to pay attention to the institutional framework in which it has to be developed:

General info about Spain

The territory of Spain covers 505,182 km^2 (similar to Sweden) and it has 44 million inhabitants (more than 4 times the population of Sweden), concentrated in the big cities and the coastal zones. Seven urban areas are inhabited by more than 700,000 people, which imply 35.5% of the population in total.

The public administration has been organised in 8108 municipalities, 50 provinces, 17 autonomous regions and 2 autonomous cities (Ceuta and Melilla), and the National Government.

Basic figures about the transport system in Spain

In Spain there are:

- 163,200 km main roads (national: 24,800 km; regional and local: 138,400 km);
- 14,250 km railroads (national: 13,490 km; regional and local: 760 km);
- 42 airports of national interest;
- 44 national ports, and
- 11 metropolitan transport authorities, which manage mobility within the urban area.

The modal split depends on the characteristics of the city and its inhabitants. MOVILIA, the only mobility survey at a national level developed in Spain in 2000 revealed different car use rates depending on the city size: 55% in smaller cities (10.000 to 50.000 inhabit.), 44% in medium cities (50.000 to 500.000 inhabit.) and 35% the bigger cities (more than 500.000 inhabit.). For example in 2005 in Barcelona 41.3% of the people used the car, 24.5% travelled by public transport and 34.2% cycled or walked. In Madrid the modal split in 2004 was: 34.1% by car, 31.6% by public transport and 34.3% walking or cycling.

Division of competences in the transport system

Transport related competencies within Spain are divided as follows:

- The National Government has the exclusive competence for the roads and railroads which pass the borders of the autonomous regions, for communications and motorised traffic in general. Moreover, the National Government is responsible for the ports and airports of national interest, and air traffic control.

- The Autonomous Regions have competencies in the field of infrastructure and transport, established by the Spanish Constitution: responsibility for roads and railroads, which are located in the Region concerned, and for transport services within this Region via roads, railroads, waterways and cable; for the ports,

airports and heliports, which are not of national interest, and non commercial ports in general.

- The Provinces are responsible for the coordination of services for which the municipalities are competent, in order to guarantee an integrated and efficient contribution of the transport sector to the Province as a whole. Moreover, they invest in technical and financial co-operation with the municipalities.

- According to the "*Ley Reguladora de las Bases del Régimen Local*", the Municipalities have competences in the field of public transport in urban areas, and they have to provide public transport services in municipalities with more than 50.000 inhabitants (by their own or in association with other neighbour Municipalities). Municipalities are also responsible for traffic management within their road network.

This division of competences has not stimulated a sufficient cooperation between the various levels of government, and therefore individual ways of intervention have been consolidated. Cooperation is limited to the following aspects:

- Compatibilisation of infrastructure plans and projects;
- Financial cooperation: national contribution to public transport funding in urban areas;
- Concerted actions in urban areas: usually by means of a contract signed between administrations.

It is clear that there is a need for a better cooperation and harmonisation of the planning of infrastructure and transport projects. Nevertheless, the financial model for the public transport system in urban areas and the establishment of Public Transport Authorities (PTA) could act as starting points for the integration of transport planning.

Financial cooperation is achieved by means of a contract signed between the National Government and the Municipalities for funding public transport services and infrastructure in large metropolitan areas, and subsiding public transport in the rest of the urban areas. This model was designed with the main purpose of helping ensure the financial health of the companies responsible for the supply of public transport services. But taking into account the sustainability framework, this model needs to be reviewed, and new goals and criteria could be linked to this financial cooperation.

Since 1975, the establishment PTA (transport consortia) in the main metropolitan areas in Spain has helped overcome the lack of a solid framework for cooperation between the different levels of government in the long term planning of the transportation system. Nowadays, there are 13 metropolitan areas (A Coruña, Bizkaia, Madrid, Barcelona, Pamplona, Alicante, Valencia, Sevilla, Asturias, Granada, Bahía de Cádiz, Málaga y Zaragoza) with a PTA in operation (some other are currently developing it), integrating local and regional competences, and favouring communication with the National Government; in order to develop a cooperation framework for fare integration and public transport services management and coordination. This framework has favoured significant concerted action in these metropolitan areas.

But these could only be seen as starting points in the consolidation of a new model for transport planning and management in Spain, from a sustainable perspective. As we will see below, the first steps of the process have already been taken.

POSITION OF MOBILITY MANAGEMENT IN SPAIN

Starting Point

As stated above, for many years in Spain MM has been relegated to a secondary level, mostly considered as a complement for the main infrastructural measures, and its application has been limited to several municipalities and/or regions concerned with that matter.

This is, to a great extent, a consequence of the institutional framework described above. Even though there are several aspects within this framework that could act as starting point for a further extension and a generalization in the use of MM in Spain:

- Financial model: taking into account the sustainability framework, the financial model for cooperation between National and Local Governments could be reviewed, introducing new goals and criteria linked to promote MM measures;
- Transport consortia: PTA have favoured concerted action in the main Spanish metropolitan areas, where significant MM measures have been taken (e.g. interchanges, P&R, HOV lanes, time and frequency coordination, etc.);

the development of MM in Spain claims for an adequate institutional framework to favour its knowledge and dissemination, promote its use and guide its application.

For many years this responsibility has relayed almost exclusively on the shoulders of a few concerned municipalities, individually approaching the matter. Most of the times this approach was a consequence of their participation MM related European Projects. Moreover, European Projects could be seen as the main source for the introduction and dissemination of MM in Spain, still being one of the main driving forces for its development. There are several European Project where MM is concerned which count or did count with Spanish participants:

EU Project	Programme	Participants
CIVITAS	Framework Programme	Burgos; Barcelona.
ECOCITY	Framework Programme	Trintat Nova (Barcelona).
TAPESTRY	Framework Programme	Vitoria.
MOST	Framework Programme	Barcelona; Islantilla; Málaga; Navarra.
ASTUTE	IEE	Granada.
BYPAD PLATFORM	IEE	San Sebastián; Mataró; Menoría.
MOVE	IEE	Ente Vasco de la Energía.
SNOWBALL	IEE	San Sebastián; San Fernando de Henares.
SPICYCLES	IIE	Barcelona.
SMILE	LIFE	IDAE, Terrassa.
GESMOPOLI	LIFE	Barcelona.
SUNRISE	INTERREG	Terrassa
PIMMS	INTERREG	Terrassa
AGATA	INTERREG	Terrassa; Granada.

But it seems like MM is taking a renewed impulse in Spain, and the first steps are being taken for the development of the adequate institutional framework. Recently, different Administrations have issued policy documents in which MM plays a significant role.

MM in the National transport policy

The most relevant initiatives taken at the National level for the promotion of sustainable mobility, and MM in particular, are derived from the approval of the Infrastructures and Transportation Strategic Plan 2005-2020 (PEIT) by the Spanish Cabinet and the development of the First Action Plan 2005-2007 of the Strategy for Energy Saving and Efficiency in Spain 2004-2012 (E4) of the Spanish Government:

- PEIT (Infrastructures and Transportation Strategic Plan 2005-2020)

  The "Plan Estratégico de Infraestructuras y Transporte 2005-2020" (PEIT) was approved by the Spanish Cabinet in July 2005, and later presented by the President of the Government on February, 2nd, 2006. The main objectives to be reached regarding the Spanish Infrastructure and Transportation Network are:

  - Improve the global system efficiency, for both people and goods.
  - Strengthen social and territorial cohesion.
  - Contribute to general system sustainability.
  - Promoting economic development as well as encouraging competition.

  PEIT investment is around 249 milliard euros, which include policies focused on:

  - Developing an integrated transportation, with a strong focus on intermodality.
  - Optimization of current infrastructure networks performance.
  - Encouraging infrastructure conservation and maintenance policies.
  - Empowering the role of urban and metropolitan areas in economic development.
  - Issuing R+D+i programs as well as technology advances applied to transport.

  In this framework, one specific objective is innovation in the transport sector. Part of the strategy to achieve this innovation is a focus on urban transport to improve accessibility of urban areas, sustainability and quality of life. To promote sustainable transport and the introduction of MM measures on a regional and local scale, the PEIT foresees concerted action on the national level, as well as improved co-operation between the three administration levels, the private sector and other stakeholders. These are the main steps in this strategy:

  1. Introduction of guidelines for action towards sustainable mobility
  2. Promotion of Sustainable Urban Transport Plans (SUTP)
  3. Publication of a catalogue of possible mobility management measures
  4. Launch of a call for innovative pilot projects
  5. Realisation of a research and innovation programme.

- E4 (Strategy for Energy Saving and Efficiency in Spain 2004-2012)

  The Estrategia de Ahorro y Eficiencia Energética en España 2004-2012 (E4 for short) was approved on November 28th, 2003. It proposes, for each of the main sectors concerned, a series of measures that are to be established during this time spam. A detailed specification of the concrete action, timescales, targets, resources, responsibilities and financial aspects, as well as an overall analysis of the impacts of these actions, is developed within the first Action Plan, covering the period from 2005 to 2007. The Spanish Institute for Diversification and Energy Saving (IDAE) is responsible for the implementation of this Action Plan. It is estimated that this Action Plan will produce a cumulative primary energy saving of 12 million tonnes oil equivalent (toe) and a reduction in atmospheric CO_2 emissions of 32.5 million tonnes, together with other additional benefits. In the Transport sector it is expected an energy saving of 5,277 ktoe and 14,483 ktCO_2 emissions avoided. To do so, 15 measures grouped under three main headings are included:

  1. Modal Change Measures
  2. Measures to improve the Efficiency of Means of Transport
  3. Measures to improve the Energy Efficiency of the Vehicles

  Within these measures "Sustainable Urban Transport Plans", "Company Transport Plans", "Efficient Driving Programmes" for passenger cars, lorries and buses, and the "Management of Transport Infrastructures" have been given maximum priority among the 20 urgent measures in the 2004-2007 Action Plan. The "Programme to Renew" car stock and road transport fleet, along with the measures concerning the "Management of Road Transport Fleets" and "Increasing the Share of Rail Transport", have been given high priority.

  So far 69 Sustainable Urban Transport Plans, 25 Pooled Bicycle Schemes, and 50 Company Transport Plans (among other measures) are being implemented in the framework of the 2004-2007 Action Plan of the E4 strategy.

MM in the Regional transport policy

In the framework of their competences, several Autonomous Regions have issued specific legislation or plans to guide the action in terms of mobility - always form a sustainable perspective - in which MM plays an important role. Is the case, for rxample, of the Mobility Law in Cataluña and the Assistance Plan for Sustainable Transport in País Vasco.

- Mobility Law of Cataluña

  Issued on June 2003, the main objectives of this Law could be summarised in three:

  1. Reduce the need for mobility, specially motorised mobility, by means of, among other measures, an adequate land use planning;
  2. Increase the modal share of sustainable modes of transport (public transport, walking and cycling);

3. Increase the efficiency of the transport modes, reducing their impacts and energy consumption.

The Law distinguishes three different levels for transport planning, with their corresponding planning instruments:

i. National level (Region) – Notional Guidelines on Mobility
ii. Regional level (Sub-regions) – Mobility Master Plan
iii. Local level (Municipalities) – Sustainable Urban Transport Plans

Sustainable Urban Transport Plans (SUTP) are identified as the basic strategy for sustainable mobility in municipalities across Cataluña. By means of this Law, the elaboration and development of SUTP is mandatory in municipalities providing public transport services. Moreover, until a SUTP is approved, no urban project above 25 M€ could be developed in these municipalities, except for those including an induced mobility study as part of it.

- Assistance Plan for Sustainable Transport 2002-2012 of País Vasco

In 2002 the Department for Transport of the Vasque Government approved the Assistance Plan for Sustainable Transport: the Common Transport Policy in Euskadi 2002-20012. These are the main objectives of the Plan:

- To decouple economic growth and transport demand;
- To achieve universal accessibility;
- To stimulate a re-equilibrium amongst modes of transport;
- To promote the strategic position of the Basque Country in Europe;
- To advance towards a model of sustainable transport which also respects the environment.

In order to do so, two basic pillars are put forward:

i. The Single Transport Authority;
ii. The Logistic Platform Basque Country – Aquitaine.

Some of the measures that will be developed in the framework of the Plan include:

- Modernisation of the transport system and promotion of ITS;
- Extensive P&R network;
- Promotion of access restriction schemes in urban centres, favouring their pedestrianalisation;
- Cycling Plan for Euskadi;
- Car-pooling schemes;
- Parking regulation;
- Fare integration;
- Bus only lanes;
- etc.

Following this tendency, several Spanish Regions have also approved or are currently developing sustainable mobility strategies, but overall Cataluña and País Vasco could still be considered the leading Regions regarding the integration of MM in the transport policy agenda.

MM in the Local transport policy

As explained above, for many years the responsibility for the development of MM has relayed mainly on the shoulders of the municipalities, which individually explored the potential of MM to cope with mobility problems. Most of the times this was a consequence of the participation of these municipalities in MM related European Projects. European Projects still remain as an important driving force for the development of MM in Spanish cities and towns. But nowadays this effort is being complemented by the extension and generalisation of local sustainability concerns, whose main evidence is the development of LA21 in many Spanish municipalities (1054 cities and towns in Spain have signed the Aalborg Charter).

In the framework of the LA21 initiative, there are many Spanish municipalities implementing sustainable mobility measures, many of them being MM measures such as: pedestrianalisation and access restriction to city centres, cycling infrastructure networks and promotion schemes, parking management, school buses, etc.

According to the impulse taken by the LA21 initiative, the Spanish Ministry of Environment is placing a big effort towards coordination, technical guidance and monitoring of LA21 development. With this purpose, the Ministry of Environment recently launched the Network of Networks of Sustainable Cities and Towns of Spain, integrating the work of the different local and regional networks in Spain. As soon as the Network of Networks gets totally developed, it would be possible to evaluate the extent to which MM is integrated in the development of LA21 in Spain.

Another reflection of the extension of MM in Spain is the great success within Spanish municipalities of the European initiative European Mobility Week. Spain is the European country where most municipalities participate in the EMW initiative (226 in 2005, which counts for a 23.6% of the total number of municipalities involved). In terms of the permanent measures adopted, Spain is also in a leading position, with a total of 1204 permanent measures, which averages for 4 permanent measures in each city and town. The most frequent permanent measures adopted in Spanish cities are:

- Sustainable Transport Plans for companies and industrial areas;
- Traffic calming in school areas;
- Bike parking;
- Extensive traffic calming schemes;
- Mobility websites and information services;
- Bycicle lanes;
- Car-sharing schemes.

Conclusions regarding the position of MM in the transport policy in Spain

The above analysis of Spanish transport policies and the position of MM within them reveal an important shift in the Spanish approach to mobility, whose main consequence

is the consideration of MM as an effective strategy to cope with transport related problems and to contribute to sustainable mobility, whose development needs of specific programmes in the framework of the overall transport policy.

But the shift is still on their beginning stages, and there are still steps to be taken to make this turn effective. The institutional framework and division of competences is not yet adequate, and still favour the fact that MM development is mainly a responsibility of municipalities. Therefore, as the main conclusion for the analysis, it could be said that the first steps taken are directed towards the consolidation of the adequate institutional framework for the development of MM in Spain. This adequate framework means concerted action between the different levels of government and stakeholders, which points out to Sustainable Transport Plans (for urban areas and/or companies) as the most effective tool to guide this cooperation. It is generally accepted that within this STP, MM should play a priority role.

Nevertheless, the adequate principles and mechanisms to regulate and guide the technical application of MM are not yet sufficiently developed, what claims for the above mentioned definition of an appropriated institutional framework, as well as for the development of a financial framework that stimulates the adoption of MM measures, and last but not least the development of a sound knowledge infrastructure regarding MM.

MOBILITY MANAGEMENT KNOWLEDGE INFRASTRUCTURE

As stated above, there is not an "official" MM definition in Spain and it hasn't been developed yet a sound knowledge infrastructure around the MM concept.

Until recently, the development and dissemination of MM was driven by the work of organizations and experts concerned with that matter, who individually explored the potential of MM and shared their experiences.

But now MM is smoothly entering the academic world linked to the transport sector, and its knowledge and dissemination is starting to integrate the scientific program of mobility courses, workshops, etc. Even more, now there are in Spain several courses, seminars and congresses focused almost exclusively on MM. It is the case, for example, of the 1st International Congress "Citizens and Mobility Management" celebrated in Madrid in September, 2006. It is also the case of the series of workshop organised by IDAE to promote and disseminate the benefits of STP, both for urban areas and companies (the most recent, the one celebrated in Madrid in March, 2007 under the title of "Urban Spaces –Human Spaces… Towards sustainable urban mobility").

But there is as long way ahead to consolidate a knowledge infrastructure dedicated to the promotion, dissemination and development of MM in Spain. Aware of this need, and attempting to provide this eventual knowledge infrastructure with a national perspective that would guarantee that MM reaches its maximum potential across the whole country, the Spanish Ministry of Transport (by means of CEDEX), has recently joined EPOMM, with the main purpose of learning from leading MM countries, improve MM knowledge in Spain, promote its application, and disseminate experiences and best practices, via a national network on MM.

BEST PRECTICES

Following there is a brief summary of several good practices in MM application in Spain:

Integrated transport and urban planning in San Sebastian

Over the last 12 years, San Sebastián has developed an integrated transport and urban planning in order to reintroduce cycling as a means of transport, develop vibrant and lively pedestrian friendly streets, achieve a high rate of public transport use and improve accessibility to hilly neighbourhoods:

- First Master Plan 1995: including pedestrian and cyclist as travellers and enhancing public transport
- Second Master Plan 2005: a complete pedestrian and cyclist network in the city centre and flat neighbourhoods
- Vertical Public Transport 2006: extension of pedestrian and cyclist network to upper city

Co-ordination and fare system integration in metropolitan areas in Andalucía

On March 2006, the PTA of Bahía de Cádiz, Campo de Gibraltar, Granada, Málaga y Sevilla signed a Memorando of Understanding, with the approval of the Regional Government, whose main purpose is:

- Interoperability of fare systems (vía smart-card)
- Develop a joint information centre
- Implementation of GPS/GPRS in the public transport fleet
- Real time information on public transport stops
- Develop a quality management system

BUS-HOV lane in Madrid

Opened in 1995, the BUS-HOV lane of the A-6 corridor in Madrid (a 12.3 km reversible double and a 3.8 km Bus-Only lane linked to the Moncloa interchange) has been a key factor in the increasing of suburban bus patronage (from 24% in 1991 to 36% in 2001) and the improving of the bus services reliability. There is also a consistent increase in the number of buses using the HOV lane (since its opening the number of bus services during the morning peak hour has doubled: 360 in 1995 to 609 in 2001). Private cars using the HOV lane have also had a significant growth. As a consequence there is an improvement of average occupancy rate due to the implementation of an HOV lane. Also, the number of passengers is growing faster than vehicles, which means that there is a decoupling demand effect, which proves the efficiency of the system (passengers growth between 1991 and 2001 counts for 63.3%, while growth rate for vehicles is40.5%). This is a consequence of the time savings achieved by BUS-HOV lane users, that could be up to 15 minutes.

Car-sharing in Cataluña

In 2004 the company Catalunya Carsharing SA was founded by, amongst others, the Regional Government of Cataluña and the Municipality of Barcelona, becoming the firs car-sharing provider in Spain. After two years in operation, figures reveal a big success:

- 850 registered clients
- 54 vehicles
- 20 parkings
- 14.000 reservations
- 220,000 hours of use
- 2,000,000 km

Recently IDAE has joined the supporting consortium of Catalunya Carsharing, which could help in the development of a national car-sharing platform.

IDAE's Guidebooks for Sustainable Transport Plans

In the framework of the Strategy for Energy Saving and Efficiency's First Action Plan, IDAE has published and made available on-line (www.idae.es), both a Guidebook for the Development of Sustainable Urban Transport Plans and a Guidebook for the Development of Company Transport Plans. To complement this initiative, IDAE is celebrating a series of Workshops for the promotion of Sustainable Transport Plans.

Mobility Management in industrial areas in Cataluña

Stimulated by the Mobility Law, and in the framework of an agreement for the development of the economic sector in Cataluña signed in February 2005 between the Regional Government, Industrial Associations and the main Unions, 22 action plans for the improvement of the accessibility of Industrial Areas in Cataluña were started during 2005. These plans include: provision of collective transport public services in this areas, and the development of Sustainable Transport Plans.

Public bicycle scheme in Vitoria

Since 2004 there is a public bicycle scheme operating in Vitoria-Gasteiz. Currently there are over 500 bicycles, 220 of them being distributed daily through the 11 strategically located parking spots where the loan is made effective. The bicycles are available for the use of the population (citizens under 18 years old needs parental authorization) for periods of no more than 4 hours, with the only requirement of a valid ID or Passport.