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European Union instruments and strategies for sustainable urban mobility: Exploiting PUMS and ITS to develop an efficient car sharing proposal

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Abstract

In the last decade, a big European effort has been made in terms of research, strategies and initiatives to boost new forms of sustainable urban mobility to replace individual transport. Among the other instruments identified to achieve this goal the European Commission emphasises integrated planning at all mobility levels, to be realised through the writing of the PUMS, and its management and through Intelligent Transport Systems (ITS). Under these two conditions, car sharing is expected to become an efficient sustainable transport service, able to limit the use of private cars and to facilitate multi-modality for public transport.

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1. Introduction

For the past several decades, transport and mobility have been a crucial part of our economy and our society whilst conducting a vital role both for the internal market and for the quality of life of citizens. However, European

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cities which are home to 70% of the EU population and generate more than 80% of EU GDP, even though they are connected by one of the best transportation systems in the world (the TEN-T network) have within them an increasingly difficult and inefficient mobility. Urban mobility is still based very largely on the use of public and private means to conventional power, while the moving towards more sustainable transport methods occurs very slowly. In fact, many European cities suffer from traffic congestion, with annual costs estimated at 80 billion euro.

European urban areas, as well as being responsible for a very large part (about 23%) of all CO₂ emissions from the transport sector, also have a high number of fatal accidents. An estimated 28,000 in 2012 around 40% takes place in the urban centres. (Mastretta M., & Burlando C, 2007)

Eurobarometer survey analysed the position of citizens in the sector of urban mobility. The vast majority of those considered of primary importance where the problems of congestion the costs and impacts on human health, mobility and urban transport. (Speciale Eurobarometro 406, 2013)

In the light of these considerations, the European Union, in the "Europe 2020 document "A strategy for smart, sustainable and inclusive growth", stresses the importance of creating the most modern and sustainable transport system for the future development of the Union, through spatial planning, which is the result of feedback from a synergy between the different sectors and areas of urban areas [4], and by the inclusion in the organisation of the modern intelligent management systems and mobility services that are able to improve efficiency.

2. The proposal of the European: PUMS of Sustainable Urban Mobility Plans

The European Commission points out that, in order to transform urban mobility effectively, it is necessary to operate the assessments that are the result of a joint action between the different transport sectors, policy makers and relevant authorities at all levels. In order to make significant improvements and decisions it therefore appears essential to end the fragmented approaches of the past. From this premise, which was created from the European Commission's proposal to develop the PUMS - sustainable mobility plans, taking into account the urban area and proposing initiatives to be integrated in a wider urban and regional strategy. These plans should be developed in cooperation between different sectors and policy areas (transport, planning and land use, environment, economic development, social policy, road safety etc.), between the different governmental and administrative levels and in cooperation with the authorities of neighboring areas, both urban and rural, keeping in mind that an adequate and proper urban planning can already contribute to the base to reduce the need for mobility, such as to avoid urban sprawl.

The PUMS then aimed to achieve a balanced development and better integration of different modes of mobility. These ideas about planning show that urban mobility concerns primarily the people and therefore places emphasis on the participation of citizens and stakeholders while promoting a change of mobility behavior. In the various approaches to urban mobility and related plans it should also be taken into account urban logistics. The operations and urban logistics have a significant potential for improvement and captive fleets, (such as those of mail delivery or garbage collection), and lend themselves to being rapidly replaced by new types of vehicles and alternative fuels capable of reducing dependence on oil, contributing to the intended objective with zero CO₂ emissions of urban logistics in major European cities by 2030.

The idea of sustainable urban mobility plans has raised considerable interest in recent years, which is why the European Commission intends to continue to support the promotion and development in the coming years. However, to ensure widespread adoption of best planning practices, such concepts should be aligned to the specific requirements and existing planning practices in each Member State and should be actively promoted at a national level. In addition, the member states should be taking adequate measures to establish framework conditions that allow local authorities to implement successful strategies.

[... Member states should therefore:

- Make a careful evaluation of the efficiency of this urban mobility in their respective territories, especially in light of the EU's key strategic objectives:
- Develop an approach to urban mobility which ensures coordinated and integrated interventions at national, regional and local levels;

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