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The case of Serres

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Mobility Management in small and medium cities: The case of Serres
Apostolis Giantsidis

Abstract

Mobility Management refers to the policies and soft measures for the achievement of a more sustainable and efficient transportation system. During the last few years, many cities and even regions have started implementing transportation policies based on Mobility Management for the modification of the transportation system and the benefits from the use of the alternative means of transport. Serres is a small city in the northern part of Greece that has also undertaken MM measures so as to promote cycling and hence modify the travel behaviour of the citizens and the image of the city. To this purpose, the city took part in the EU program, PIMMS TRANSFER, the target of which was the promotion of cooperation between European cities and the exchange of good practices in the transportation system.
In this paper, I analyze the above quoted measures as well as complementary actions such as school events and, educational programs. Consequently, the current situation and in particular the transportation system in the city is analyzed by examining policy documents and interviews of key policy makers. Additionally, I present future plans and strategies for further promotion of cycling and the bicycle: cycling paths, pedestrianization and parking outside the city. Finally, I present a comparison to other European cities with similar demographic, geographic and mobility characteristics as Serres.
I found that despite the positive effect of measures, cycling is not very popular yet, because of the lack of infrastructure.

Key words: Mobility Management, Cycling, PIMMS TRANSFER, Serres.
JEL classification: R41, R42
1. Introduction

Transportation is playing a crucial role in people’s life and keeps a big part of everyday activities. As travelers increase, problems as well. Proliferation of air pollution, congestion, stress, and noise forced even more people to ask for more sustainable means of transport and various policy makers have turned into alternative methods of urban transportation. According to Victoria Transport Institute (2010) Mobility Management (MM henceforth) includes all the methods, strategies and soft measures for the achievement of a sustainable transport system (meaning cycling and walking). Soft measures include all those measures that do not require new infrastructure, but aim at increasing the efficiency of the existent transport methods (Ray, 2011).

Apart from the achievement of general progress and promotion of MM which are more general targets of cities, they are also called to fulfill specific targets. The main target of the city of Serres is the promotion of cycling as daily means of transport for the citizens in the city. Serres is a small city in Greece where transport problems increased in the last years, then the Municipality launched actions to discourage the use of vehicles and promote cycling. The purpose of this paper is to assess those actions as well as MM measures and the EU program “PIMMS TRANSFER” to encourage the use of bicycle. At the mean time the interest of cities with similar problems to Serres to change the travel habits is growing. The rapid increase in the oil price combined with the intense congestion problems in the majority of the cities has rendered the car less attractive and accordingly the citizens are willing to turn into cheaper means of transportation, such as cycling.

The methodology of this paper is the review and analysis of policy documents and interviews with some key policy makers. Moreover, some international experiences are examined to compare the plans of the Municipality. The policy makers that have been interviewed are the Mayor of Serres Mr. Petros Aggelidis, the head of the Municipality’s Transport department, Mr. Nikos Papadikis and an engineer, who was responsible for the PIMMS TRANSFER program, Ms. Foteini Mikiki. One of the policy documents that are analyzed is the policy of the city council for the transport planning.

The structure of the paper consists of four main parts. At first, the literature review of Mobility Management and cycling is cited. Subsequent to that, a description of Serres and the existing transport system takes place. Moreover, information about PIMMS TRANSFER in EU
is given. The third part consists of more specific information about the cycling in Serres and of the interviews with the policy makers combined with the analysis of the policy documents. The presentation of the case studies and their analysis and comparison with Serres Municipality’s actions is also included in this part. At the end, conclusions and suggestions for further research.

2. Literature Review

The objective of this chapter is to present the targets and the methods of MM thus, it helps to understand how MM could be applied successfully in the case of Serres.

2.1 Mobility Management: definitions

Mobility Management or Travel Demand Management (TDM) according to the MAX program (2007) of European Platform of MM (EPOMM) is defined as: "a concept to promote sustainable transport and manage the demand for car use by changing travelers’ attitudes and behavior. At the core of MM are "soft" measures like information and communication, organizing services and coordinating activities of different partners. (...) MM measures (in comparison to "hard" measures) do not necessarily require large financial investments and may have a high benefit-cost ratio" (MAX All Work Packages, 2007).

Some other researchers from the European Conference on MM (ECOMM98) hosted in Nottingham, provide alternative definitions: "MM is any action aimed at the development and implementation of concepts that ensure the mobility of people and the transportation of goods to the end-user. It aims at making the transport systems more efficient while at the same time continuously improving this transport with regard to its respect for the environment and for society as a whole” (MOMENTUM, 1997).1

Almost simultaneously, Lundgren (1999) defined MM as “a broad approach aimed at improving the use of traffic and transportation in a city or a particular area, thereby reducing the solo traveling by car or reduce the share of shipments of low load factor. The goal is to achieve an environmentally sustainable transport system. A few years later Lundgren and Backmark (2004) argued that “MM is among traffic planners a relatively well-known approach

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1 MOMENTUM (MM for the Urban environMent) is a R&D hosted by the European Commission
to addressing and resolving a wide range of traffic problems and increase the sustainability of the transport system.” Bjerkmo (2006) based on the measures that MM, pointed out: “MM is often used as a synonym for soft measures to enhance the effects of other measures and accelerate the implementation / acceptance”. At the same year, Mattson (2006) focused on the many and different parts that take part in MM and argued that “Characteristic of MM is a wide cooperation with many players. The main tools are information, communication, coordination and organization”.

2.1.2 The concept of Mobility Management

In order to define what does MM include and what it does not, I present its characteristics according to the MAX – consortium and EPOMM.

The first characteristic concerns the orientation of MM and it indicates that MM is “demand oriented – instead of supply-oriented”. Practically the said boundary means that the aim of MM is to change the habits of the travelers/citizens instead of leading them to follow a different way of moving by constructing more highways.

As a complement to the above statement, the second characteristic arises, “the Infrastructure measures can be supportive measures to MM” ². According to this statement, some supportive measures can be built to help MM, such as parking for bicycles or even a bicycle route.

On the other hand, “sustainable urban transport plans are not MM, but they should contain MM”, according to the boundaries that have been set by EPOMM. “Traffic and transport planning is part of MM if it is site based”. This restriction includes some parts of the whole planning referring to MM and focuses on some specific cases such as the access to a hospital. The same purposes serve also the boundaries for the transport of goods. The said transport could be considered as MM only if it is part of the whole mobility planning and/or if it includes also the movement of the passengers and only if it exists as side effects again.

2.1.3 Measures of Mobility Management

² www.epomm.eu
MM measures are of vital importance since they are regarded as the tools of the strategy and can be applied either by regions or cities or by companies that want to add MM in their policy. The following are the categorization and explanation of the measures.

Information measures: These measures aim at providing the travelers with information as regards the means of transportation that they can use and the facilities they can enjoy, according to their needs and demands. Information is provided by the “Mobility Center” and mobility consultant.

Promotional measures: The main target of these measures is to make people realize the importance of using other means of transportation. These measures are “Personalized Travel Assistance (PTA)”, “Advertising campaigns” and, “Targeted promotion of alternative modes and trip reduction/chaining”.

Organization and coordination measures: These measures have as a purpose to categorize the needs of travelers of a specific region. These measures are “Car Pooling”, “car sharing” and “Van Pooling”.

Site-based measures: The main idea is to organize and coordinate the movement of travelers who belong to certain and the same teams or communities and, as a result travel to the same places. Of great importance for the application of these measures is the development of a “Mobility Plan”, then the idea is to offer travelers alternatives according to their needs and by taking into account and regulating a number of issues, which may extent from the provision of free bus tickets to the “parking cash-out”. A sub-category is the “School Mobility Plans”.

Education and Training measures: The aim of this category of measures is to make MM part of the education in schools or to acquaint specific groups such as the “Mobility Member Staff”.

Telecommunications and flexible time organization: According to this set of measures, initiatives by public organizations and other parties could be taken for the reduction of the time needed for the transportation to an organization in which a task has to be fulfilled and for the reorganization of working practices. In addition, the public services could modify their working hours and their way of operation.

Supportive/integrating actions: This last category of measures aims at improving the efficiency of MM by affecting the end user’s travel behavior and contributing to the effective MM. These actions indicatively include parking management, “location efficient mortgages”, “congestion charging”, “offering integrated fares” or finally “multimodal fare”.

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3 The categorization was made according to the directions of MAX – consortium and EPOMM (2007).
2.1.4 Benefits of Mobility Management

One of the advantages of MM is the reduction of the gas emissions produced by the abnormal use of private cars. The high pollution produced by vehicles has lead the researchers to declare that the most effective way to reduce the gas emissions of the cars is the combination of environmental friendly cars and MM (Litman a’, 2011; Leather, 2009).

MM could contribute to the reduction of the emissions not only through the alternative methods of transportation, but also by means of a most reasonable usage of the cars. The main problem of the emissions caused by vehicles is the fact that their engines are working more than needed because of the congestion, traffic lights and the “hunting” of parking places MM (Litman, b’ 2011)

Apart from the importance to the environment, MM encounters many economic benefits also. “MM offers substantial cost savings and increased service effectiveness” (Burkhardt and McLary, 2011). All the measures that MM uses have as a purpose to reduce the overuse of cars and consequently the costs for the gas. Moreover the benefits for the transit agencies are also significant since they increase their productivity and reduce their costs.

The benefits of MM can be visible to the companies so as to apply some of the measures to their policy. The flexible working hours for example can affect the productivity of the employees. (Litman, c’ 2011)

2.2 Cycling

Cycling is one of the most environmental friendly means of transport and fits most of the MM measures. It is one of the most common ways to commute and travel short distances. Humankind started to use bicycle on a daily basis mostly during economic crises. Copenhagen, for example, became the number one bike-friendly city in 1932 when the global economic crisis made oil accessible only to a slight proportion of entity. (Hunt and Abraham, 2006).

Cycling, walking, skating and other human-powered transport modes consists the “active transportation” (Litman, 2003). The benefits of cycling are several and they concern not only the

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4 “Transit agencies in the Denver, Detroit, and Portland (Oregon) regions are now realizing savings of about $2 million or more per year by applying MM strategies tailored to the unique needs and resources of their communities” (Burkhardt and McLary, 2011)
users but also the urban environment. The most direct effect for the cyclists is the improvement of their health condition and their stamina. Litman (2003) points out that daily cycling not only for leisure activities but also for the required traveling could substitute the exercise effectively. The decline of vehicle use has positive impact on public health due to the reduction of CO₂ emissions (NC Unwin) and noise pollution. Moreover the benefits of cycling are also visible in the daily travels into the city as a result of the congestion’s reduction. This reduction affects also the number of parking places, because with less congestion. The decrease of parking places may lead to the change of land use, since the increase of free land used for pedestrian zones, parks or cycling paths (Litman, 2003).

2.2.2 Promotion of cycling

Despite the above benefits, citizens do not have in most of the cases the right incentives to cycling. Furthermore, in some cases the lack of infrastructure could be also dangerous for the bicycles and instead of incentives the cyclists face some serious problems in their daily travels. According to Pucher and Dijkstra (2000) the low modal sharing of cycling in some regions, is mainly connected with the lifestyle which is car oriented in some cases. This lifestyle leads to some wrong and unfounded perceptions that car is sign of power and richness and bicycle is a less welfare way to travel. Additionally, another determinant factor, is how convenient and safe is to use a bicycle in the city (Bauman et al. 2008). This could mean that not only the general perception of cycling and the lifestyle, but also more practical factors, such as the given infrastructure, the climate and the distances someone should cover, affect the modal split. Although MM promotional measures are oriented at overcoming these barriers, the MM is merely focused on soft measures. The target of these soft measures is to modify the wrong perceptions about cycling and after that the travel behavior and the modal split.

2.2.3 Cycling infrastructure
Above soft measures of MM require some technical changes to achieve the desire outcome. These kinds of measures include infrastructure like cycling paths and parking facilities. Plenty of researchers highlighted the importance of infrastructure in cycling promotion. Pucher and Buehler (2010) studied examples of countries with high percentage of cycling in modal split (Netherlands, Denmark and Germany) and, sustained that the desire impact relies on the provision of separate cycling facilities along with heavily travelled roads and at intersections, combined with extensive traffic calming of residential neighborhoods. Moreover, Dill (2009) claimed for a “supportive environment” which is characterized by bike lanes and paths that addresses people’s concern about safety from motor vehicles. This “supportive environment” includes a well-connected network of low-traffic streets and some bicycle boulevards, which is more effective than adding bike lanes on major streets with high volumes of motor vehicle traffic. She point out that public agencies can look for opportunities to build new rail transit lines, along existing transportation corridors, and when expanding to new undeveloped areas. Attempting to apply these scientific opinions in the case of Serres and according to the Municipality’s plan, bicycle paths will be embodied in every new and reconstructed street for the achievement of a sufficient infrastructural background. The existing bicycle paths are too limited, but by means of the new infrastructure the cycling paths will cross the whole city and will connect all city areas. Other researches claimed that personal and subjective factors play an important role over the decision of the transport mode. The significance of proximity to trail strongly suggests that adding continuous and protected facilities near residential areas and, securing neighborhood access to them can yield increases in cycling (Vernez et al 2005). In summary, without sufficient infrastructure that could guarantee safe but also convenient bicycle trips, it is very hard to convince people to use their bicycles. Besides, the quality and quantity of given infrastructure affects cycling since people are more eager to use their bikes. In other words, the possibilities are higher for them to use their bikes not only for commuting to their jobs daily, but also for leisure time and to be physically and mentally benefited by not harming at the same time the environment.

3. Serres
Serres is a small city located at the north part of Greece in the Region of Central Macedonia, close to the Greek borders with Bulgaria (Graph 1). The city of Serres is the capital of prefecture of Serres and the total population of the prefecture is 176,050 (EL.STAT., 2011) citizens. That makes the city important not only for its citizens but also for the nearby smaller towns. The distance between Serres and the capital of Greece, Athens is about 600 km and as a result their connection becomes difficult and the development of economic and other activities that could take place in the city are also hindered. The closest big city is Thessaloniki, the capital of the region of Central Macedonia, which is only 90 km away from Serres. The citizens are used to go often to Thessaloniki for some amenities.

Graph 1. Location of Serres

The Municipality of Serres consists of the city and three other communities: Eleonas, Eptamiloi and Oinoussa. Its official population is 76,240 but including students and visitors citizens may reach 100,000 inhabitants. Considering the size of the city (253 km²) and the number of inhabitants, makes of it a crowded city.

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5 Hellenic Statistical Authority (EL. STAT.) Temporary results, July 2011
3.2 Transport system

The above mentioned factors combined with the worldwide changes in the life standards, have contributed to the rapid evolution of the city but without a real urban planning the absence of which brought some problems to the city. One of the biggest problems is the congestion because of the increase of the cars in the city. The infrastructure of the city and the existing traffic system could not afford the new cars (Serres Chamber, 2010). Even it has been in the policy maker’s agenda for a long time, participation in PIMMS and PIMMS TRANSFER is recent.
Serres is clearly a “car friendly city”. Indeed, this is a city with total radius only 1, 5 km that faces congestion problem. Moreover, the whole mobility plan of the previous years and the lack of public transport rendered the car as the only means of transport for short travels in the city. As far as the more sustainable means of transport in the city are concerned they are not so developed and widely used. The infrastructure for cycling in the city center is almost inexistent and that makes the cycling in the city center very difficult and even dangerous in some cases. However, the geographical terrain and weather encourage cycling.
To correct the abnormal use of car, the policy makers have taken the initiative to promote alternative means of transport and more specifically, cycling. Their efforts were boosted by the EU program PIMMS TRANSFER.

3.3 PIMMS TRANSFER

PIMMS TRANSFER (Partner Initiatives for the development of MM Services & Transferring Actions in Sustainable mobility for European Regions) is a project hosted by European Union, which is aiming at promoting the cooperation between 14 regions in the fields of MM and the development of sustainable mobility practices. The project is running for 3 years (2008 – 2011) and is funded by INTEREG_IVC.
The cities that take part in this project are:
Progression Regions: Almada, Portugal - Frankfurt, Germany - Graz, Austria - London, UK - Serres, Greece - Stockholm, Sweden - Treviso, Italy
Initiation Regions: Bratislava, Slovakia - Gdansk, Poland - Klaipeda, Lithuania - Larnaca, Cyprus - Maribor, Slovenia - Sofia, Bulgaria - Timisoara, Romania

The main target of PIMMS TRANSFER is “to increase sustainable mobility by promoting and transferring effective MM techniques to regional and local decision-makers” (PIMMS 2011). The PIMMS TRANSFER project’s aim is to exchange the experience with the new Member States but also between the Progression Regions in order to smooth the differences and provide a better life standard for all the citizens. That could happen via the reduction of the congestion and the gas emissions, the conduction of faster and safer trips in the cities and by the encouragement of using other means of transport.

The project has two main objectives. The first one is “to stimulate modal shift towards more sustainable forms of transport by increasing the implementation of high quality MM techniques and policies in European regions.” The second one is “to extend, deepen and promote best practice in MM.” (PIMMS, 2011).

The specific targets that Serres wants to fulfill by means of this program in order to improve the traffic system and to be benefited by MM is the “expansion of the pedestrian paths to the whole industrial and historical center of the city” (PIMMS, 2011). As a consequence, the emissions of CO\textsubscript{2} will be reduced. Moreover, the decrease of parking places in the city center would lead to the increase of pedestrian paths or parks but there is also the plan of increasing the controlled by the Municipality parking places to 4000, mainly at the surroundings of the center.

To this direction, three big parking places are going to be built outside the city in its main entrances. Moreover, a net of calming roads which will surround the schools is going to be built for the increase of cycling safety but also for the safety of the pedestrians and the reduce of the noise in these areas. A correspondent net is going to be built also in the internal side of the new cycling route of 13,5 km that is expected to cover the main areas of the city\textsuperscript{6}.

According to the Mayor of Serres Mr. Petros Aggelidis and the head of the transport department Mr. Nikos Papadikis the aim of the local authorities is “to hinder the private cars’ approach to the city center”. Moreover the projects that PIMMS TRANSFER aim at the promotion of cycling mainly by introducing soft measures for the change of the citizens’ mentality and the negative perceptions towards cycling.

\textsuperscript{6} http://www.pimms-transfer-eu.org
To achieve the desired goals of PIMMS TRANSFER, some projects have been introduced by the partners. These projects are namely the European mobility week & car-free-day, Master classes, Conferences, Study trips, School challenge, Mentoring, Sustainable Urban Transport Policies (SUTPs) and some pilot projects for each partner.

4. Cycling policies in Serres

The transport policy in the city was focused mainly on the private cars during the past years. Consequently, the whole transport policy of the Municipality was “car oriented”. However, as mentioned above, this policy has started to change the last years. To achieve this, the participation of the city in the EU program PIMMS TRANSFER was of vital importance.

According to the mayor of Serres “The first priority of the Municipality was the promotion of the sustainable means of transportation and the MM measures”. It was initially planned to make it harder for the private cars to enter and park in the city center so as to give more space for the bicycles. To meet this goal the authorities turned at first to the conversion of some streets in the economic and historical center into pedestrian paths. Moreover the promotion of cycling and the construction of a cycling paths’ net were also of vital importance for the Municipality and also the promotion of public transportation by the construction of the new bus station out of the city. Finally, the construction of safety roads around the schools and the increase of paid parking places from 600 to 4000 were also included in the plans of the mayor at the beginning of this reform of the city’s modal split. This transport policy is part of the general policy of the mayor to “foster the local economy” In order to achieve this foster in the economy, the authorities are trying to attract “clients for the city”.

4.1.2 Transport plan

The transport plan of the Municipality since 2008 was oriented at MM and was merely focused on the promotion of cycling. To this direction were the policy document (city council 721/2008) and the rest of the policies by that time on.

The policy of 2008 was sustainable transport oriented and suggested a whole new package of new infrastructure to help cycling in the city center (Graph 2). On one hand, a new cycling’s path net would be constructed to help the cyclist to move safely in the city and on the other hand the
introduction of traffic changes and new infrastructure would impede the travel of the private car drivers in the city center by enforcing them to use their cars only if it would be very necessary.

More specifically, many traffic changes in the main streets of Serres were planned to take place and they were including the transform of one way roads to double way ones and the restriction of the parking places in the streets. Instead of parking in the street, the creation of fewer standard parking places in special place next to the sidewalk was predicted.

**Graph 2. Existence and planed infrastructure in Serres**

Furthermore in the same streets, the sidewalks were planned to be widened in order to provide with more space for walking and less for driving. At the same direction was also the transformation of some roads into pedestrian zones.

The head of the transport department expressed the belief that these changes would seriously affect the usage of private cars since in the cases that the changes have already taken place, it has become really hard to use and especially to park the private car and as result.
He also expressed the belief that the entrepreneurs of the city would be positively affected. More specifically, he mentioned that “The entrepreneurs of the city center have been adversely affected the last years but not so much because of the traffic changes as mainly because of the difference in the use of land. The Municipality proceeded with these changes (pedestrian paths in the city center) mainly for discouraging the car drivers to drive in the city center but this had as an additional effect the rapid increase of bar industry and restaurants that had more space available for their tables. Consequently, not only the economy in the city center was boosted but also its character changed from commercial to entertaining”.

Besides from the measures that were taken to make driving a private car in the city center unpleasant, the policy also seeks to provide the cars with benefits so as to stay at the edges of the city. The measure known as “park and ride” plan to reform three old military camps into mega parking places for private cars but also for heavy vehicles for the relief of the city center, while the drivers will be transported to and from these parking places with mini buses. This measure combined with the decision of increasing the paid parking places in the city center from 600 to 4000 is predicted to contribute in the reduction of the private cars in the city center.

As for the infrastructure, that shall enhance cycling and shall provide the bicycle users with the necessary amenities for commuting with bicycle, there is a very ambitious plan of creating 13.5 km of cycling paths. According to the mayor “The citizens’ reaction was impressively positive towards all these soft measures and the cycling promotional actions, especially because of the geographical and geomorphological characteristics of the city. The Municipality strongly believes that after the changes in the infrastructure, the main means of transport is going to be the bicycle.”

The plans might be quite ambitious but at the moment “there are more plans than works” according to Mr. N. Papadikis. He also pointed out that after the promotional measures and without the necessary infrastructure yet, the sales have increased more than 100% during the last 3 years, despite the economic crisis. It seems that bicycle is the only product in Serres, the sales of which were increases last years. More specifically, a well-known bicycle store in Serres used to sell about 400 bicycles per year while now bicycles’ sales overcome the 1000 per year.

Ms F. Mikiki also noticed an increase on bicycle use but as she said at the moment the majority of cyclists use bicycle for leisure or for sport and not for commuting. It is believed by her that if
the infrastructure was built according to the plan and the traffic changes were more systematic and coordinated the results could be very impressive.

The Mayor also agrees with the fact that the willingness of the citizens to cycle is mature at the moment and now they need the necessary infrastructure. An example is the “cyclist movement” on the basis of which more than 1000 bicycles are gathered once a week and they are cycling around the city by demanding more amenities. Additionally, he points out that “the most effective way to persuade them to change their minds was to prove that the changes and the promotional events were aiming at the general good of the city and the citizens”. As far the reactions from the entrepreneurs are concerned, Mr. N. Papadikis claimed that all of them have realized that the changes may affect them positively rather than negatively in the near future.

The future plans of the Municipality include the construction of a school cycling path net and the public bicycle rental following the example of Barcelona and other smaller European cities.

As far as the public benefits are concerned, first of all the access to the city center and to the commercial streets has been rendered easier by bicycle than by car and additionally it is less hard to park a bike than a car.

4.2 PIMMS related to bike

The promotion of cycling is also enhanced by the participation of the Municipality in the PIMMS TRANSFER program. The specific program works mainly with “soft measures” for the promotion of cycling. The local authorities at first organized promotional events with the participation of primary school’s pupils and then moved to special promotional events.

4.2.1 Municipality’s policy

The increase of the usage of bicycle was the Municipality’s priority. For this reason the local authorities came forward with a pilot project to promote it. This project was presented by Mr. N. Papadikis in the 2nd Regional Conference PIMMS TRANSFER.

The main target of this project was “to give incentives for the increasing of the usage of bicycle in the city and also to reduce the usage of private cars and increase the urban environment”. In
addition, the improvement of the conditions of traffic environment and the public health was a further goal, for the achievement of which five actions were planned:

- The building of new infrastructure such as cycling paths combined with traffic changes.
- To set 10 special storage places for bicycles in the city in order to offer to each citizen integrated services for cycling.
- The distribution of 50 bicycles for one year to the employees of the Municipality and the entrepreneurs of the city.
- Educational conference for the right usage and the proper maintenance of the bicycles.
- Fifth, the promotion of and familiarization with bicycle’s usage through brochures and leaflets to the entrepreneurs of the city and the employees working in the city center.

4.2.2 Side measures to promote cycling

The Municipality of Serres in close cooperation with the Directorate of Primary Education of Serres organized the “School Travel Plans” and “School Challenge” programs. These programs aimed to make the transportation of the pupils to their school safer and also to promote cycling as an alternative mean of transportation in the city. The general idea was to integrate into the school daily program actions to promote cycling and environmental friendly methods of transport beginning. The Directorate of Primary Education and the school teachers were also willing to teach the pupils and practice with them methods for their more secure and environmental friendly transportation to the school like the method of “walking bus”.

4.2.2.1 “School Travel Plans”

The program “School Travel Plans” is divided into two parts, the “analysis” and the “proposals”. The first part includes the examination of the educational, building, urban planning and traffic data in the school, so as to identify road safety problems. These problems were listed and classified by the Directorate of Primary Education and the Municipality. The second part comprises proposals for the application of specific projects and practices that could contribute to the sustainable operation of the school.

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7 N. Papadikis, 2nd Regional Conference PIMMS TRANSFER, 7/2011
More concretely, the data that were examined were mainly the general and specific information about the school, such as location, capacity, number of teachers and pupils, hours of courses and extracurricular activities. Furthermore, the factors that could reduce the road safety were taken into account, as well as more general mobility problems encountered such as environmental issues directly related to the school. At the end the results of mobility among pupils, parents and teachers of the school showing the ways in which non-school trips are talking into account.

The program also includes included proposals for the organizational structure of the support group for the safety transport plan. This group’s main task was the drawing up and monitoring of the plan’s implementation. It was also responsible for accelerating the required interventions and for constantly updating the plan. Other proposals could include projects and interventions in the road infrastructure of the area around the school. Some other proposals were related with information actions. The design of a website where suggestions would be made as regards the safest way to reach the school and advice for safe travel would be a very common information action. Another suggestion would be to embody MM into the structure of the school time table as a course but also to introduce more MM promotional games in the school. Finally a system of evaluation of the progress of each school regarding MM could be introduced and further advice could be given for the improvement of the effectiveness of the already existence plan.⁸

4.2.2.2 “School challenge”

According to this program, the pupils had to estimate and evaluate the reduction of CO₂ emissions after having changed the way of traveling to and from the school. The schools had at their disposal some “school traffic policemen” for the rush hours to help the pupils to cross the streets safely and guide teachers who would organize the “walking bus”. Apart from the benefits for the kids, events like these were quite initiative and strange for a small city like Serres and the media coverage was intense in the whole time that these pilot projects took place. According to Ms. Foteini Mikiki the engineer responsible for the PIMMS TRANSFER program “the media coverage of an event related to MM and PIMMS TRANSFER,

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is the most effective way to promote cycling even to the citizens that do not have the chance to take part in the promotional events.”

4.2.2.3 “European Car free Day & European mobility week”

The last decade, the program of European Mobility Week was initiated so as to support the cities’ campaigns for the creation of a pleasant and healthy environment for the citizens by encouraging them to use other means of transportation than the car, more environmental friendly and less traffic burdening. The Municipality of Serres by participating in the PIMMS TRANSFER program, has organized plenty of activities during the last years for the promotion of cycling and MM in general. Within this framework, various activities during the European Car free Day and for European mobility week were organized in the city center of Serres, in cooperation with the Directorate of Primary Education of Serres. They were including, among others, a Walking Bus for young children from their school to the city center, establishment of information kiosks for teaching to kids how to get to their school with safety, bicycle trips from the schools to the city center with special bicycle jackets with the logo of the city on them, paintings in the streets and the sidewalks and games related to cycling and MM.

The participation of the number of participant schools increased every year. Subsequently, children became more aware of cycling and their future travel behavior was also influenced. Moreover, also the adults participated in the activities either directly or indirectly, by contributing in the carrying out of these events. Finally, the media coverage of the above events was of vital importance.

4.3 International experiences

Some case studies are presented in order to compare the cycling promotional activities with other cities’ efforts to promote cycling. The selection of the following cases was made on the basis of their relevance to the characteristics of Serres (demographic characteristics, geographical terrain etc.).
4.3.1 Completed measures

The “school challenge” combined with the actions of European Mobility Week & car-free-day was merely focused on the promotion of cycling among the pupils. The idea was based on PIMMS TRANSFER but it was used also in some other cases. In the city Pamiers in France the local authorities implemented the “cycle awareness for children” as part of the ADDED VALUE EU project. The result was hopeful for the organizers because of the high number of participated pupils (more than 100 pupils in total population out of 15.000 inhabitants took part in the activities). Moreover, the perception of the parents about cycling changed and they were more eager to let their children to cycle to school (Pamiers city, 2011).

Similar promotional measures have been implemented in other European cities also. The city of Znojmo in Chez Republic made also an effort to raise schoolchildren’s awareness, using the same method with Pamiers and Serres as part of the European project ADDED VALUE. In the events took part 13 schools with 800 pupils but it is estimated that almost 4000 children became aware of and were benefited by the campaign indirectly, because of the media coverage. This number is really high taking into account the population of the city which is 35.000 inhabitants. Moreover, the participant children in the event of European car free day were increased from 3000 to 3900 the following year (Znojmo city, 2011).

Bigger than Serres, but quite close to the mentality and climate, the Bulgarian city of Varna used information measures with the purpose of informing young pupils about cycling use and MM in general. The result was also promising given that after three years of implementation at around 10.000 children and adults were acquainted with cycling and more than 500 pupils took part in the two training programs (Varna city, 2011).

Similar to the “school challenge” at Serres, is the BiciBus program that was implemented in the Italian Reggio Emilia with great success. Both cities’ goal was to inform pupils about MM and to promote cycling to school instead of car use. The number of the pupils that took part in that initiative was 70 in 2003 but it increased rapidly and during 2009 their number reached the 510 pupils, who learnt to use the bike and they got used to it (Reggio Emilia, 2011).

4.3.2 Planned measures
Cycling paths: The city of Koprivnica combined the undertaking of information measures with the creation of cycling paths and promotional events for the pupils and the results were amazing. They built 80 km of cycling lanes and pedestrian footpaths which covered the biggest part of the city with its 31,000 inhabitants and as a result almost 50% of the citizens were commuting by bike. That made the city the most cyclist friendly city in Croatia at 2008 (Koprivnica city, 2011).

Similar to Serres but more extended was the improvement of the infrastructure in the Croatian capital Zagreb. The local authorities there decided to build 110km of extra cycling paths in order to cover a bigger part of the city. The idea was to add cycling paths to every reconstructed or new road and to accordingly perform a total reform of the city’s transportation system. Part of the infrastructure was built in 2005 and the results were already visible in 2007 with an increase in cycling use within the city by 5, 56% (Zagreb city, 2011).

The capital of Bulgaria, Sofia is similar to Serres’ experience because both municipalities have used the same promotional events such as European car free day and the cyclist’s movement. The promotional events and the informational measures were combined with the building of two cycling paths of 16km each, which were shorter than the planned 13.5km long paths in Serres, compared to the size and the population of the two cities. However, the results were positive while the participants in the cyclists’ community and the several cycling events in Bulgarian capital were doubled (Sofia city, 2011).

The city of Odense in Denmark was another example where the authorities used infrastructure combined with information measures to promote cycling. Of course the existent infrastructure for cycling in Odense is remarkable and almost the whole city is covered by cycling paths. However, policy makers intended to increase cycling by 20% and also to decrease the number of accidents especially the mortal ones by 20%. To fulfill this goal, the authorities made some traffic changes which were including parking facilities for the bicycles, interventions with the traffic lights’ use and cycling paths and adjustments to the crossroads. It is worth mentioning that, when these changes were taking place, they were keeping promoting cycling with motivational campaigns. After the completion of the infrastructure system in 2002, the car usage was reduced by 15% and the commuting with public transports was also reduced by 45% (Odense city, 2011).

Even there are other cities which ran similar measures (Slovenia in Ljubljana and Ploesti in Romania) data is not available to report comparisons.
Pedestrianization of the city center: The plan of the Municipality of Serres to transform some of the streets in the city center into pedestrian roads was implemented in the case of Bucharest in Romania and the results were positive. More specifically, the Bucharest’s municipality invested on this project a total amount of 35 million euros with the purpose, among others, of providing the cyclists who are in lack of private cars with amenities. At 2011, only 1/3 of the total project was executed but the results were already visible since the cycling in the city center was increased (Bucharest city, 2011).

Parking outside the city: Serres’ plan of “park and ride” was also implemented in the city Znojmo of Czech Republic. The efficiency of the measures in Znojmo was impressive while the cars entered the city were reduced rapidly and the cycling was increased in the reformed city center. However, the plan there was also including a payment fee for those who wanted to enter the city (Znojmo city, 2011).

The same measure was implemented in the Romanian city Sibiu. The authorities built parking places outside the city and altered the free parking places into payment ones. The results after two years of implementation of the measure were the decrease of the private cars in the city center and the increase of cycling (Sibiu city, 2011).

5. Conclusions

The aim of this research was to present and analyze the methods used by the Municipality of Serres in order to promote cycling. As it seems “soft measures” and participation in PIMMS TRANSFER program played a crucial role for the achievement of the goal.

Indeed, soft measures are addressed in the right direction, but still infrastructure is needed for the promotion to be completed. The specific promotional measures were quite effective, according to the policy makers, as they provide information to the citizens about cycling. Definitely the willingness of the citizens to use bicycle has increased and so has increased the cycling for leisure activities and sports also. However, the cycling as a mean of commuting for daily activities is not very popular yet due to lack of infrastructure and safety perception.

The limitations on this research were mainly the lack of modal split data for the city of Serres. There are no numerical evidences of any increase or decrease in the number of bicycles because
of this lack. However, the interviews and study cases allow me to assess the impact of policies on the promotion of cycling as well as the problems preventing it. In order to alleviate transport problems further research must be conducted. In the particular case of Serres and cities where infrastructure is developing to promote cycling research should be conducted after its completion, when all the given amenities for the cyclists will be available. A research like that could take place in order to examine the effectiveness of the infrastructure combined with the soft measures. Moreover similar researches should be initiated in regions where there is the willingness to apply MM measures to promote cycling. All the proposed research requires the develop of specialized data. In addition, a unified system data of different cities would be valuable to compare similar measures that seek cycling promotion.

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