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Urban mobility management: new challenges for a sustainable future

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Abstract

Nowadays urban areas show increasing signs of environmental problems (bad quality of air, traffic congestion, limited land resources etc.) while green areas and open spaces are under continuous threat. Urban activities deeply affect environment and the overall quality of life of the urban population.
So urban mobility is becoming more and more an international problem and efforts regarding sustainable mobility issues are spreading worldwide. Several countries are proposing new standards to actual mobility, leading transport to a new sustainable future.
Sustainable mobility means inducing a modal shift towards more sustainable transport patterns such as walking, cycling or public transport through the instruments of information and promotion campaigns. These measures are able to improve the effectiveness of “hard” urban transport and to develop sustainable behaviour among the citizens. Several international projects dealing with mobility management were promoted in Europe, most of them supported by the European Union. Furthermore, the European Platform on Mobility Management (EPOMM) was officially launched in 1999 as an international partnership aiming to promote and further develop mobility management in the EU.
The main goal of this paper is to identify the different sustainable mobility strategies in the European context, to give an account of the most relevant European mobility projects and to try to demonstrate that best practices in sustainable mobility management could be easily transferred to other scarcely developed realities in many Italian cities.

Keywords: *Sustainability, Transports, City, European Policies, Projects*

Rezumat. Managementul mobilităţii urbane: noi provocări pentru un viitor durabil
Zonele urbane din zilele noastre cunosc probleme de mediu tot mai mari (calitatea proastă a aerului, aglomerarea traficului, resurse de subsol limitate, etc.) în timp ce zonele verzi şi spaţiile deschise sunt în pericol continuu. Activităţile urbane afectează profund mediul şi calitatea generală a vieţii populaţiei urbane.
Astfel mobilitatea urbană devine din ce în ce mai mult o problemă internaţională şi eforturile în ceea ce priveşte domeniul mobilităţii durabile se răspândesc la nivel mondial. Mai multe ţări propun noi standarde pentru mobilitatea reală, ducând transportul către un nou viitor durabil.
Mobilitate durabilă înseamnă a induce un transfer modal către modele de transport mai durabile, cum ar fi mersul pe jos, mersul cu bicicleta sau transportul public prin intermediul instrumentelor de campanii de informare şi de promovare. Aceste măsuri sunt în măsură de a îmbunătăţi eficienţa transportului urban "greu", şi de a dezvolta un comportament sustenabil în rândul cetăţenilor. Mai multe proiecte internaţionale care se ocupă cu gestionarea mobilităţii au fost promovate în Europa, cele mai multe dintre ele susţinute de către Uniunea Europeană. Mai mult decât atât, Platforma Europeană pentru Managementul Mobilităţii (EPOMM) a fost lansată oficial în 1999 ca un parteneriat internaţional cu scopul de a promova şi de a dezvolta în continuare gestionarea mobilităţii în UE.
Scopul principal al acestei lucrări este de a identifica diferite strategii sustenabile de mobilitate în contextul european, pentru a prezenta proiectele europene cele mai relevante de mobilitate şi pentru a încerca să demonstreze că cele mai bune practici în gestionarea durabilă a mobilităţii ar putea fi transferate cu uşurinţă la alte realităţi abia dezvoltate în multe oraşe italiene.

Cuvinte-cheie: *durabilitate, transporturi,oraş, politici europene, proiecte*

Introduction

This paper examines mobility in urban life and some issues connected to innovation in the transport systems.

In the last few years mobility has become one of the most crucial themes of economic and social development of nations.

For this reason there is a growing interest towards mobility management in the urban contexts and many European cities are experimenting new interesting sustainable solutions that could be taken as examples of how to cope with urban transport problems.

The purpose of transportation is to bring people and goods to places where they are needed, and to concentrate the greatest variety of goods and people within a limited area, in order to widen the possibility of choice without making it necessary to travel.

This is how the urban theorist Lewis Mumford (1963) defined the purpose of transportation.

Transports are essential means for the economic competitiveness and for commercial and cultural trades. They contribute to bring citizens closer to each other and answer to the fundamental need of mobility. Nowadays transport activities are a crucial part of the life of the city. On the other hand, the development of mobility causes atmospheric pollution, traffic accidents and generally involves a certain environmental impact that cannot be undervalued anymore. Indeed, currently, the growth trends of mobility and the increasing transportation demand cannot be satisfied only by a physical expansion of the transport networks.

In this century transports have increased rapidly thanks to fuel consumption, because petrol has been considered as a cheap and inexhaustible source for years. But now, as the Brundtland Report

underlined, we are obliged to find an alternative to petrol and to environmental pollution, meeting the needs of our present generation and without compromising future generations. So we must plan a transformation of our urban areas and make them sustainable cities (Brebbia, 2011).

Recently, this topic has provoked practical and theoretical questions. On the practical level the availability of limited resources, in combination with the will of a raising environmental and urban quality, imposes a governance with a cohesive planning process to administrators. The topics of efficient and effective planning, optimal management of services, public open spaces, technological infrastructures used for energy saving and reduction of pollution, have to be developed according to this process.

This is the reason why the theme of sustainable mobility is at the heart of the European transport policy (De Castro, 2010).

According to theoretical approaches the radical structural changes that happened in the hinterland of big cities during the last twenty years played an important role.

During the previous phase of suburbanization the demographic pressure determined an expansion of urban centres with new multifunctional areas located around a nucleus (the so-called compact city) and characterized by high settlement density (Van den Berg et al., 1982).

The current phase of expansion, which occurred without significant demographic pressures, causes the 'dilution' of urban space in a form of mono-functional areas, located randomly in the territory (Leonori et Testa, 2013).

The result of these changes has been an abnormal growth of private mobility and use of space with serious effects in terms of congestion and air pollution.

What is sustainable mobility?

Sustainable mobility means transport systems and planning that are in line with concerns of sustainability; so its main goal is to accommodate the right to mobility and the need to reduce the negative effects of environmental pollution.

In the main European urban contexts, traffic and pollution are responsible of the main health problems (lung diseases, heart diseases, carcinogenic effects and others) and environmental damages (acid rain, haze, climate change etc.); so a change in the way urban areas are managed is urgently required.

The limit value of 40 µg/m3 was exceeded in the annual concentration of. PM10, (*particulate matter*)[1] in 2009. Long-term exposure to PM10 could have chronic effects on our health, such as impaired development of lung functions and risks of acute effects, such as asthma attacks and respiratory symptoms.

The White Paper *Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system*[2] affirms that average mobility per person in Europe has increased by 7% between 2000 and 2008 (passenger–kilometre per inhabitant). So it is necessary to convey users to other new sustainable attitudes, discouraging the use of private vehicles and fostering collective and "ecologically compatible" mobility measures.

The first step in the process of education to urban sustainability is constituted by awareness raising on the theme among citizens and particularly among professionals working in the mobility field. It is fundamental to influence travel behaviour and to stimulate demand for more sustainable transport options. People who want to live and work in communities with high quality of life should be educated to sustainability with the aim to be ready to drive significantly less and rely more on alternative modes (walking, cycling and public transit) so to reduce traffic crashes and air pollution emissions, increasing physical fitness and mental health (De Castro, 2010).

Mobility practices

Recent changes of life style, car flexibility and inconvenient public traffic have contributed to a huge increase of private car use. So there must be an alternative to the use of cars, such as the use of bicycles, public transport and walking with their benefits: freedom of movement, reduction of road congestion and no need for a parking space. In addition to new sustainable transport modes the provision of new routes (walking paths and lanes) or the renovation of the existing ones is needed in the urban contexts. It could make walking more comfortable and help people living in car-free or car-reduced areas.

The following are the main sustainable transport modes.

Car Sharing

Car-sharing is a kind of car rental. People can rent a car for a period of time in car hire stations inside their city centres; this system is linked to internet-based reservations. Car-sharing is mainly suited to residential areas although it can also be used for businesses that need cars during the day. Through car sharing people are not obliged to use

[1] Particulate matter concentrations refer to fine suspended particulates less than 10 microns in diameter (PM10) that are capable of penetrating deep into the respiratory tract and causing significant health damage

[2] [COM (2011) 144 final]

their own cars and gain the benefits of private cars without the costs and responsibilities of ownership.

Bike sharing

Bike-sharing was implemented for the first time in Amsterdam, but this system spread only in recent years all over Europe.

If we want to define bike sharing we could say that it is like a bicycle rental system. You can take a bicycle in one point and give it back so that it can be rented by another user.

Bike sharing programmes have expanded rapidly throughout Europe because cities are in search of new ways to meet mobility demand and reduce environmental impacts. Today bike sharing is quite popular among European citizens, especially young users. They provide a fast, easy and energy efficient transport and they are very useful also as a transport mode for tourism.

Car Pooling and Van Pooling

Car pooling consists in commuting a vehicle. Usually commuters are employees of the same company that share expenses using the same vehicle. Van pooling is similar to car pooling; it refers to the use of a shared van, belonging to one of the commuters or to the company in which commuters work (OECD, 2007).

Other sustainable measures to limit the presence of private vehicles in the urban context are: Tele-work development, traffic restrictions and pedestrian mobility promotion. Tele-work may reduce the home-work trips and possibly even avoid them, every time the employee can work at home.

Pedestrian mobility is an important part of sustainable transportation construction. More and more administrations and scholars are working on encouraging walking through the enhancement of pedestrian environment.

An example of promotion of pedestrian mobility at local level is the Italian project PEDIBUS, implemented in the city of Gorizia. Developed in the framework of Agenda 21, PEDIBUS project consisted in promoting home-to-school walking routes for children and parents with the aim to encourage "eco-friendly" behaviours.

Obviously, a more efficient transport system and multiple economic, social and environmental advantages are the result of the most suitable strategies in the field of mobility management. In fact mobility management is implemented in many European countries and around the world because it has been proved that it is able to produce the most pragmatic solutions to transport problems.

Mobility management means enhancing efficient transport measures like walking, cycling and public transports with the aim to achieve the best transportation planning objectives in the urban contexts, considering benefits and costs (Litman, 2012). So public administrations, when experimenting mobility strategies, have to consider the three dimension of mobility management:

- **Environmental dimension**: because it regards the opportunity for citizens to take advantage from alternative means and live their transport experiences.
- **Social dimension**: because sustainable mobility is able to offer regular services, accessible tariffs and equal accessibility to transport options to the population.
- **Economic dimension**: because an efficient urban mobility plan will involve economic efficiency and advantages for both transport companies and consumers (Brebbia, 2011).

Europe for Mobility

The conference promoted by United Nations in Tokyo in 1987 traced a route for all European countries about sustainable development.

Soon after this event, in Europe, the question of sustainable mobility has become a crucial topic and for this reason, especially during the last ten years, European Community started incessantly to issue several norms in aid of sustainable mobility. Therefore, the action plan of the European Union provides twenty effective actions in order to help national, regional and local administrations to achieve their goals for an urban sustainable mobility. These actions follow the Green Paper on urban mobility adopted in 2007. The national and local authorities are free to use this action plan as a support together with the tools it offers. The twenty actions of this plan can be grouped in the following macro-themes:

- **Improved information**: In order to make the transfers easier, the Commission works with the authorities and transportation stakeholders to improve the information systems of transport networks.
- **Passengers rights**: The Commission is working to achieve an agreement with all involved stakeholders about passengers rights of urban transports.
- **Better planning**: An integral planning can give better solutions to the challenges that cities face in the field of mobility. In order to facilitate the adoption of sustainable mobility plans, the Commission is making information materials and promotion activities.
- **Ecological transports**: The Commission is working to support research projects on ecological transports (e.g. ultra-low emission vehicles) and also promoting a confrontation between stakeholders of the healthcare sector about urban mobility.
- **Sharing experiences**: In order to help public administrators to share their experiences, the Commission has instituted a database with a large gamma of solutions already adopted. This database

includes also a body of UE laws and important financial and educational tools that are useful for the urban mobility. The Commission is also studying the modes to improve the sharing of statistical data, to facilitate the exchange of information about road pricing and to encourage the international dialogue about urban mobility with European neighbor states and other international partners.

- **Funding sources**: This is a crucial topic. The European Commission works hard to make these financial sources more accessible, with an eye to the future ones. The information and education campaigns, such as the European Mobility Week, play an important role for the creation of a new culture of urban mobility. For this reason, the Commission keeps on financing the organizations promoting these campaigns.

As already stated, a variety of initiatives are being set up by the European Union in the field of sustainability and environmental protection. In some cases, they are particularly aimed at improving the quality of mobility and transports of the main European cities.

Among the European programmes there are: *Life+, Intelligent Energy Europe (EIE), CIVITAS Initiative and INTERREG IV C*. INTERREG is financed by European Regional Development Fund.

LIFE+ provides funding of "operational activities of NGOs that are primarily active in protecting and enhancing the environment at European level and involved in the development and implementation of Community policy and legislation" (Annex 1 of the Regulation No. 614, 2007). Every year calls for proposals are published on the web site of the DG Environment of the EU. Beneficiaries could be organizations that wish to apply for funding under this programme, non-profit organizations and independent environmental non-governmental organizations. They must be active at European level.

Intelligent Energy Europe is a programme that refers to renewable energy sources and diversification of energy supply.

The areas of intervention of the programme are:

- SAVE that regards rational use of energy and demand management;
- ALTENER that concerns renewable energy sources and innovation;
- STEER that underlines the importance of energy in the field of transports (Varotto, 2010).

CIVITAS is a European initiative started in 2002 that basically helps cities across the European continent to implement and test innovative an integrated strategies on energy, transport and environmental objectives. Its fundamental aim is to support cities to introduce ambitious transport measures and policies towards sustainable urban mobility. In order to obtain this important goal, the initiative tends to encourage both innovative technology and policy-based strategies. Thanks to *CIVITAS*, in the last ten years the European Commission has promoted more than ten projects in which a great number of European cities participated; this number is growing more and more. Almost sixty European cities have been co-funded by the European Commission to implement innovative measures in clean urban transport.

These so-called demonstration cities are part of the larger *CIVITAS* forum network, which comprises almost two hundred cities committed to implementing and integrating sustainable urban mobility measures. This, in turn, represents a great percentage of European citizens scattered in all European countries. By signing a non-binding voluntary agreement known as the *CIVITAS Declaration*, cities and their citizens benefit from the accumulated know-how, experience and lessons learned of every participant.

INTERREG IVC promotes interregional co-operation and the transfer of experiences and knowledge among regions in the EU.

The following thematic areas are the most suitable to be chosen for an *INTERREG* project: natural and technological risks (including climate change); water management; waste management; biodiversity and preservation of natural heritage (including air quality); energy and sustainable transports; cultural heritage and landscape. It follows the previous *INTERREG III C* programme, activated from 2002 to 2006 (*INTERREG* IV C, website).

With the aim to support Mobility management initiatives all over Europe and to ensure the exchange of best practices and successful experiences among countries, the European Platform on Mobility Management (EPOMM) has been recently created. Every participant country is represented by its Ministries and by the public administrators who are responsible for Mobility management. EPOMM is a non-profit organization located in Brussels. It provides support in the process of transferring best policies and mobility practices to each member country, organizes training sessions and events and coordinates national networks to foster communication among members.

Examples of European projects. An overview

The careful attention that the European Community has paid about sustainable mobility in the last decades has been converted in the realization of several co-financed projects of cooperation about sustainable mobility. Some of them are shortly focused:

PIMMS project

PIMMS (Partner Initiatives for the Development of Mobility Management Services) is a project financed by the *INTERREG III C* programme. Its

goal is to realize an operative network to exchange best practices in urban mobility through the use a of a Mobility Management database, the creation of local supporting groups whose activities are focused on mobility, the exchange of information among the partners and the sharing of results.

MMOVE project

Another project recently financed by the European Commission through the *INTERREG* Programme is called *MMOVE* (Mobility Management over Europe). This project is made up of several partners from seven European nations: Sweden, Italy, Spain, Germany, Greece, Romania and Bulgaria. The main goal of this project is to improve the effectiveness of sustainable mobility policies implemented by local authorities in small and medium sized towns in Europe and to improve awareness of the importance of supporting these policies within regional development frameworks amongst policy makers. To make it possible, this project provides several actions about cooperation, sharing and exchange of information among the partners involved in it. As it is shown in the table (Fig.1), best practices about collective and public transport, communication among various transport companies, control measures for parking and traffic have been tested by MMOVE partners. The final result of this project should be that the cities would acquire a deeper knowledge concerning mobility policies, best adopted practices and above all, a better ability to influence the political actors to a developing route according to the modern sustainable measures.

Partner	selected Best Practice
Municipality of Reggio Emilia	Tram network extension - Ulm
Brighton & Hove City Council	Bicibus - Reggio Emilia
Girona City Council	More Flexi motorists - Mölndal
City of Mölndal	JourneyOn Campaign - Brighton and Hove
Municipality of Varberg	Bus quality partnership - Brighton and Hove
Volos Development Company	Home to work for employees of the historical centre of the city - Pesaro
	Municipal Department of Mobility and Public Streets - Girona
Municipality of Razlog	Modes of flexible public transport - Ulm and Quality bus partnership - Brighton & Hove
	Creating homogenous net of cycle tracks - Senigallia and Cycle week - Varberg
	Bollards - Kavala and City centre traffic calming plan - Volos
City of Ulm	Electric experience - Reggio emilia
Municipality of Kavala	Flexible Transport Modes - Ulm
Brasov Metropolitan Agency for Sustainable Development	Electrical experience - Reggio Emilia
	Creation of a homogeneous net of cycle tracks - Senigallia
	Low level sidewalks - Ulm
	Bus friendly curb stone and efficient driving -Brighton & Hove
SVIM-Sviluppo Marche	Quality bus partnership - Brighton & Hove, Flexible transport mode - Ulm, Bus 12 card - Girona
	Bici Bus - Reggio Emilia and Cycling for Health - Varberg
	New Mobility Management Plan - Razlog and City center traffic calming plan - Volos

Fig. 1 MMOVE Best Practices (Source: MMove website)

FLIPPER project

The *FLIPPER* project (Flexible Transport Services and ICT platform for Eco-Mobility in urban and rural European areas) is also a European territorial Cooperation project funded under the *INTERREG* Programme. This project aims at the transfer of experience, knowledge and good practices about Flexible Transport Services (FTS) among different European Regions with a careful attention to increase the social inclusion of disadvantages citizens groups and areas, reducing energy consumptions and environmental impacts thus encouraging sustainable social and economic growth.

The project has been developed through a series of activities of coordination, communication, sharing and management. A key operational phase was the exchange of experiences dedicated to the identification and analysis of good practices which was dedicated to the knowledge transfer among the different *FLIPPER* European areas with the organization and realization of training courses, technical visits, thematic workshops targeted to local authorities, transport operators, practitioners of the different EU areas (Fig. 2).

ECOSTARS project

The financial help provided by the European Community is not only reserved for terrain mobility projects. *ECOSTARS* project is an example of European cooperation projects about maritime transports. This projects point at developing a recognition and evaluation system of fleets in order to facilitate goods and passengers transports respecting environment with eco-sustainable and efficient modes. *ECOSTARS* is financed by *IEE* (Intelligence Energy Europe) programme and operates today with a three-year scheme in eight different zones

belonging to six European nations: Edinburgh (United Kingdom), Rotterdam (Holland), Ostrava (Czech Republic), Cantabria and Basque Country (Spain), South-East of Sweden, Parma and Emilia Romagna Region (Italy). The project provides an important support for all operators in every sector (public and private sector, industrial transport, commercial goods transports, public local transports etc.) and for fleets with different dimensions (international, national and local fleets). There are several benefits for operators subscribing to the project: a considerable fuel saving with a consequent decrease of maritime pollution, an important public merit at a European level as social responsible operators thanks to a Certification system about quality levels of operation management and environmental impact of fleets involved.

		Initiation Partners Attended						
Host City	Topics Covered	Bratislava	Klaipéda	Maribor	Larnaca	Gdansk	Sofia	Timişoara
Graz	Parking policy, public transport organisation and policy, bicycle training and tram extension	✓					✓	
Frankfurt	Integrating approaches to public transport organisation and public transport policy	✓	✓	✓			✓	
London	Public engagement and training			✓				
Stockholm	School travel plans, Mobility Management and clean vehicles	✓	✓		✓		✓	
Almada	Policy and integration		✓			✓		
Treviso	Bicycle management				✓	✓		
Serres	Public engagement and training				✓			
Graz	Accessibility in public areas for disabled people – barrier free measures			✓				
London	Congestion charge, travel planning, shared space and carbon trading schemes						✓	

Fig. 2 Topics covered by PIMMS (Source: Flipper website)

MUSA project

This is an Italian cooperation project among different regions: Puglia, Sicilia, Calabria and Campania. *MUSA* has been launched by the local administrations thanks to European funds of *"Governance e Azioni di sistema"*, National Operative Program (PON). This project intends to favour and involve public administrations in planning effective and innovative policies to manage urban mobility. The aim is to create stable relations and best practices sharing among administrations in order to obtain a concrete improvement in urban environment and to improve as well citizens quality of life. As a part of this important goal, the project points at providing the suitable tools to local authorities of the cited regions, to enforce their ability to govern and face problems about urban mobility with a greater sustainable vision. This intervention model includes several actions: enforcement of specific competences in local administrations, active participation of citizens through dialogue tools, best practices sharing with virtuous national and international realities, promotion of territorial activities, creation of a real and stable network of actors in charge of sustainable mobility plans.

CIVITAS Archimedes

This project, part of *CIVITAS* initiative, has been recently financed and aims at introducing innovative strategies for transport system regarding an energetic point of view. Therefore, these strategies have implied an important impact on energy policies, but also on environmental sustainability. This project has been accomplished in six different cities: Monza, Aalborg, Brighton & Hove, San Sebastián, Iaşi, Ústí nad Labem. The choice of these cities has not been random, all of them are characterized by a small-medium dimension and lack of resources, for this reason they present a high transports volume with bigger neighbouring cities. Thanks to eighty three different actions, it has been possible to make this transport network safer, more efficient and convenient from the energetic point of view. This improvement has also caused, as a positive effect, a decrease of CO2 emissions.

CIVITAS Mimosa

Cities involved in this project are: Bologna (Italy), Funchal (Portugal), Gdansk (Poland), Tallin (Estonia), Utrecht (Netherlands). Mimosa offers to its participants the opportunity to face together new sustainable approaches for urban transports thanks to the support of a scientific team. Cities participating to Mimosa are quite different regarding a physical, climatic and cultural point of view, but all of them share the same view to solve problems in urban transports. The project is constituted by sixty nine activities. The most important ones are addressed to promotion of vehicles with fuel consumption reduction, public parks management, promotion of public transport system and use of vehicles with a sustainable point of view such as car sharing. The main goal is then to guarantee mobility to all citizens preserving the environment and economy in the cities involved.

CIVITAS Renaissance

Renaissance project, also financed by *CIVITAS* Initiative, is carried out by five European cities: Perugia (Italy), Bath (United Kingdom), Gorna Orygavutsa (Bulgaria), Szczecinek (Poland), and Skopje (Macedonia). Their common characteristic is the significant seasonal tourism because of their famous and prestigious historic centres. All of them have to face the typical criticality transports systems are subjected to, when huge tourist flows occur. Therefore, this project aims at developing a measure system to make these historic centres safer and cleaner. In order to make it, forty five actions have been carried out in each city. These new and important solutions can then facilitate mobility in these historic centres but also the economic growth protecting, at the same time, the cultural goods and the safety of citizens and tourists.

Conclusion

The above mentioned projects show us that a sustainable future for transports in Europe is achievable if innovative policies are complemented by actions to reduce transport intensity.

The crucial step is to make people accept that change is necessary. Indeed the involvement of all actors at local and interregional level and the leading role of the European Union is fundamental to activate a combination of actions at both levels.

It is widely recognized that the European Union has stimulated its members to take part in the process of building a sustainable mobility model for the urban contexts through sensitization campaigns and substantial economic allocations: in fact successful European projects and mobility practices are often realized thanks to EU contributions. In addition to the European Union efforts, greater public involvement in transport planning should be ensured by recourse to participatory instruments and prescriptive and economic interventions at the local and national level.

In Italy, the "Ronchi Decree" of March 27th, 1998, has promoted a series of programmes to support municipalities and institutions, co-financing projects for the establishment of the figure of the mobility manager and promoting policies on mobility management (Messina, 2009). Several advantages for the local public transport and encouraging results have been reported; but only some virtuous administrations stand out in our national context, as the data from the Annual Euromobility (*Italian Mobility Manager Association*) Report on sustainable mobility in 50 Italian cities confirm (Bertuccio, 2012).

The 50 cities considered by the report are all regional capitals, the capitals of the two autonomous provinces and cities with a population exceeding 100,000. A huge number of indicators were used to make up the ranking of the most "mobility-friendly" cities in 2012. The results clearly show that there has been an increase in the use of alternative measures of mobility such as bike-sharing and car sharing, but less use of LPG and methane gas vehicles.

The most "mobility-friendly" city of Italy in 2012 was Turin. The secret of this success was an effective public transportation system, an efficient car-sharing service (2.600 users), an equally valuable service of bike sharing (14.400 users), cars with low environmental impact and a very good level of safety on the roads.

At the top of the list we find the Northern cities, while at the bottom there are cities from the South of Italy (Catanzaro and Reggio Calabria) (Fig.3). So the undeveloped Italian urban areas and their administrators should participate in mobility management events and projects and learn from the virtuous ones trying to experiment the same practices that have already been embraced in other Italian cities.

1°	Torino	11°	Genova	21°	Napoli	31°	Ravenna	41°	Foggia
2°	Brescia	12°	Vicenza	22°	R. Emilia	32°	Salerno	42°	Siracusa
3°	Parma	13°	Firenze	23°	Palermo	33°	Livorno	43°	Taranto
4°	Milano	14°	Udine	24°	Perugia	34°	Trento	44°	Sassari
5°	Bologna	15°	Trieste	25°	Ferrara	35°	Monza	45°	Latina
6°	Bergamo	16°	Bolzano	26°	Roma	36°	Aosta	46°	Potenza
7°	Venezia	17°	Piacenza	27°	Verona	37°	Terni	47°	Campobasso
8°	Prato	18°	Padova	28°	Rimini	38°	Cagliari	48°	R. Calabria
9°	Modena	19°	Forlì	29°	Pescara	39°	Messina	49°	Catanzaro
10°	Ancona	20°	Novara	30°	Bari	40°	Catania	50°	L'Aquila

Fig. 3 Euromobility Report on sustainable mobility in 50 Italian cities (Source: Euromobility)

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