

Soft Mobility and Urban Transformation

some European Case Studies

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ABSTRACT

This paper examines some European cases referred to promotion of soft mobility as a new lifestyle aimed to improve benefits on environment and urban livability.

Soft mobility includes any non-motorized transport (human powered mobility). According to this, soft mobility refers to pedestrian, bicycle, roller skate and skateboard transfers. It could be indented as "zero-impact" mobility too. As a matter of fact, the words to define this way of moving have not been codified yet, therefore *mobilité douce*, *soft mobility*, *slow traffic* are synonymous in referring mainly to pedestrians and cyclists to indicate alternative to car use. Soft mobility, indeed, can be defined as a special form of sustainable mobility able to optimize urban livability, by keeping the individual right to move.

At present, cities are engaged in defining policies, procedures and interventions to further "slow traffic", both to relieve the traffic congestion, and to work for regeneration and environmental improvements.

This asks for an in-depth cooperation between different political and administrative levels to achieve common objectives of development more attentive to environmental concerns.

Despite this increasing attention, the idea of a "network" for soft mobility has not been yet achieved and the supply of integrated facilities and services as an alternative to the car use seems to be still difficult of accomplishment.

High disparity characterizes European countries in promoting soft mobility: despite a prolific production of laws and roles referred to emergency of adopting alternative ways of moving to minimize negatives impacts (especially air and noise pollution as very threat to health) due to car dependence for urban short distance too. And yet, soft mobility could represent a real occasion of urban and territorial regeneration aimed to rehabilitate some disused paths and routes (greenways). Some successful European cases show how it is possible to capitalize territorial resources by promoting alternative way to visit them.

Tourist and leisure activities, in fact, are probably the most suitable to improve a car-free lifestyle.

Some pilot projects carried out in alpine regions, for instance, propose to integrate public transport supply with tourist demand of visiting different destinations.

"Soft mobility" should be a different way of thinking about mobility and its impact on environment.

This is what this article try to underline giving an overview of some European cases of public policies aimed at supporting soft mobility.

Mobilité douce, soft mobility, slow traffic...different ways of saying similar thing

"Soft mobility" includes all forms of non motorized transport (NMT) that use only the "human energy" (Human Powered Mobility).

The Swiss Department of the Environment, Transport, Energy and Communications (DETEC) gives such a definition also to indicate its policy for sustainable mobility.

The Guidelines for Slow Traffic drawn by the Federal Roads Office (FEDRO) in 2002, in fact, intend to serve as a framework for defining general conditions to improve the mobility system both at urban and regional level.

Among the European cases the Swiss one is perhaps the most significant example of public policy involved in integrating "slow traffic" into the global mobility system (private motorized traffic and public transport).

In fact, the Swiss Department of the Environment, Transport, Energy and Communications (DETEC) and the Federal Roads Office in particular, has the specific task of creating the more favourable conditions to develop this particular way of moving.

Even though there is not yet a unique definition, we can argue that soft mobility (pedestrian, cycle and other not motorized displacements) is a "zero impact" mobility trying to be alternative to the cars use. According to this, "*mobilité douce*", "*soft mobility*" or "*slow traffic*" are different ways to express the same concept.

This refers to the global concept of sustainable mobility aimed at increasing urban livability, keeping the individual right to move.

As a matter of fact, soft mobility could improve urban environment especially referring to:

- levels of noise and air pollution;
- traffic congestion;
- road safety.

Generally, soft mobility and its promotion in urban policies has been linking to the problem of emissions generated by vehicular traffic. Such a promotion is also based on the belief that the increase of soft mobility would reduce private car traffic, particularly as regards short trips.

The emerging attention to environmental concerns has been leading many cities towards the development of specific infrastructures and services dedicated to soft mobility.

This should ensure highest levels of urban safety increasing occasions of public spaces regeneration.

Despite this increasing attention, the idea of a “network” for soft mobility has not yet been carried out. The supply of integrated facilities and services, being alternative to the car use, seems to have still difficult of accomplishment.

Soft mobility supports territorial fruition

“Soft mobility” should be a different way of thinking about mobility and its impact on environment. This needs for an in-depth cooperation between different political and administrative levels to achieve common objectives of liveability.

Tourist sector is probably the most appropriate for supporting the implementation of soft mobility and the cooperation above mentioned.

The “Alps Mobility” project is a valid example of political and administrative cooperation aimed at implementation of sustainable mobility in tourist development. The pilot project has been carried out in the framework of the European initiative “Alpine Space” and it has concerned eight different regions sharing the same objectives of well-balanced development as the EU Interreg III program

suggested. The “Alps Mobility” project (the title was “*Pilot Project for Environmentally Sound Travel Logistics Linked with Electronic Booking and Information Systems in Alpine Tourist Regions*”) Started in 1998 and has been developed till 2001.

The main purpose of this project was to reduce mobility impacts by implementing public transport to ensure tourist displacements inside destinations (car free tourism). The pilot project focused on the development and the establishment of environmentally sound travel logistics with regional mobility management centres (optimization and combination of rail, bus, taxi, bicycle, shipping and lift offers and services) linked with the development of an integrated travel information system by connecting public transport timetable and touristic information.

At beginning, the partners involved were Italy, Austria and Germany, but the positive feedback have been leading toward a new transnational project with the inclusion of new partners (France and Switzerland). Furthermore, based on the successful result of the “Alps Mobility” the cooperating partners decided to expand their collaboration to develop further transnational strategies aimed at promoting soft mobility in the Alps regions. The new project “Alps Mobility II” has been carried out from 2003 till 2006.

Based on the idea of promoting high quality level in tourist supply, this new project has lead to the creation of a tourist destinations network called “Alpine Pearls”. This tourist region is a network of twenty communities sharing the same objective of promoting their territorial resources in environmentally conscious way.

Soft mobility is strongly supported to visit and to enjoy tourist destinations. In fact climate protection and nature conservation via soft mobility is one of the main focus of the Alpine Pearls association.

Both projects have been based on a wider concept of soft mobility

Project partner	Project region
Federal Ministry for Agriculture and Forestry, Environment and Water Management	Pongau (Salzburg)
Federal Ministry for Transport, Innovation and Technology, Province of Salzburg	
Bavarian State Ministry for Provincial Development and Environmental Affairs	Oberallgäu and Berchtesgadener Land (Bavaria)
Region of Lombardia	Alta Valtellina
Region of Veneto	Dolomites
Region of Friuli-Venezia-Giulia	Carnia
Autonomous Province of Trento	Sella Range (Dolomites)
Autonomous Province of Bolzano	Sella Range (Dolomites) and Alta Pusteria /Hochpuster Valley

Nine project partners have worked together under the title “Alps Mobility”, developing environmentally friendly transit and tourism solutions.

that also includes the supply of environmentally sound transport (electric buses and cars, dedicated rail lines, etc.) besides cycles and pedestrians. The progressive feature of these projects is still trying to affirm a new tourist model of visiting also supported by innovative instruments (GPS, GIS, webGIS, etc) to improve quality levels of supply services. Some other European projects have interested Alpine regions remarking that alternative ways of travelling are possible via soft mobility.

The "Alpine Awareness" project (2006-2008), for instance, has chosen the claim *"in the mountain without my car"* to promote soft mobility as lifestyle especially for young generation.

Italy, France, Austria and Germany were the partners involved in this project. Provincial administration of Belluno (Italy), in particular, led the project with DolomitiBus, the local transport service provider.

This project has invested a lot on education of young generation to make themselves promoter of sustainable mobility. French alpine regions were particularly engaged in working out specific plan for school mobility on the English model of the "safe routes to school" (Sustrans, 2007). The main idea was to convert some driveways along the home-to-school way, in order to create a distinct protected routes system.

Soft mobility and urban policies

British experience in supporting soft mobility is remarkable, mainly as regards promoters of this modality of travel.

By the end of the Seventies, the charity *Sustrans* (contraction of *sustainable transport*) has worked to affirm a vision in which people can choose to travel according modalities that benefit health and environment. *Sustrans* pointed to alert both common people and administrators about the need of reducing the environmental and resource impacts of transport.

To get this target, *Sustrans* has been engaged in demonstrating that it is possible to change people behaviors and the benefit of this change could be measured in terms of health, environment, quality of life and value for money. One of the main actions has been referred at retrieval of some disused railways, driveways or paths which have been turned into *greenways* (voies douces) on the American model. The *National Cycle Network*, for instance, could still represent one of the most significant project carried out by the Seventies. Disused Bristol & Bath Railway was turned into a traffic-free trail becoming one of the first "green route". Nowadays the network takes about 12.000 miles and it attends about 55% of population travels. Local and regional government have collaborate a lot to accomplish this project and also to support other projects

aimed at soft mobility spreading. "Links to schools" for instance is another project funded by Department for Transport to connect schools and its communities to the National Cycle Network.

To create safe route for young people is the main objective but benefits on health and environment are not negligible.

Since 2004, when the project started, about 260 links (500 linked schools) have been created, enabling to reach school in a safer way. On the Dutch "*woonerf*" model are based other projects that try to integrate urban requalification and vehicular mobility.

The concept of home zone briefly refers to reverse the logic of giving priority to the car encouraging cycles and pedestrians. Home zones are designed so that drivers naturally chose to proceed slowly and carefully. Residents are involved in redesigned their streetscape and contribute to the success of the project.

As concerns English experience, since 2000, home zones projects have been funded by "Home Zones Challenge Fund" of Department for Transport that has allowed many projects of urban regeneration and environmental improvements.

But the *greenways* concept has really modified the way of thinking about soft mobility as a real chance for territorial retrain. This is particularly referred to a system of routes dedicate to a non-motorized traffic, and connected each others in a network enabling people to move in a different way.

In 1987, President's Commission on American Outdoors in the USA outlined a widely accepted vision referred to the need of creating *"a living network of greenways... to provide people with access to open spaces close to where they live, and to link together the rural and urban spaces in the American landscape... threading through cities and countrysides like a giant circulation system"* (President's Commission, p. 102; Walmsley, 1995 in Fabos 1997).

The publication of the President's Commission report on greenways appears to have launched the *greenway movement* that has spread all over the world and it has captured the interest of professionals from diverse field (from lawyer to scientists, to landscape architects, to politicians).

This movement is still engaged in creating a network of "nature corridors" that will be evident like highways or railways networks are. The project idea refers to a mobility system of routes and paths completing the traditional one (highways, roads, railways).

This vision requires strong and in-depth cooperation between land use decision makers and also means turning into a new idea of moving, especially for leisure and tourist activities.

Nevertheless, to support this vision greenways movement has improved to make government and local administrators more aware of the need to change. The retrieve of abandoned railroads, rural roads, mountain and lowland paths has become the main proposal to get a soft mobility network. By the latest Nineties, Italy has her

own Greenways Association engaged in creation of a soft mobility network. Its work is particularly dedicated to the use of greenways as opportunities of enhancing territorial resources also for sustainable tourist development.

It is interesting to note how greenways always refer to a "system of routes" well-connected so that they can be also dedicated to weak users (children, pregnant women, elderly and disabled person). Project of greenways, in fact, must consider different solutions to make available and safe routes. The system of routes, indeed, should meet specific project requirements (width, gradient, type of flooring, and so on) in order to allow the access to all users and assure an easy route and comfort.

The Italian Greenways Association (IGA) defines the characteristics the routes should have in order to be included in a greenways network:

- high safety levels by split-up from road network;
- availability by adopting specific technical solutions (slope, width, flooring etc.).

Perhaps greenways are the most expressive examples of integrating mobility system with the objectives of territorial regeneration.

Belgium has greatly spent specific political objectives in supporting soft mobility. The RAVeL project (Autonomous Network for Slow Road) has been developed in the Nineties and it refers to the creation of a soft mobility network all over the Walloon region with a total length of 2000 kilometres. The network RAVeL has been built along towpaths, abandoned railways or country lanes, its users are pedestrians, horse riders, cyclists all type of non-motorized users.

It has been regulated by Highway Code that establishes the rules for all kind of users. Particular vehicles are admitted for disabled users but they have to respect the imposed speed limits.

At urban scale, Belgium is engaged in the fulfilment of "PICVerts" project (Plan d'Itinéraires Communaux verts). Funded by Walloon Government (Home Office) it has been started in 2005 and it is still in progress. The project PICVerts supports and funds Walloon cities in developing and building green route networks.

In its first phase (2005) thirteen cities were involved, nine projects have been selected and 1.5 million euro were funded. In the second phase (2007), 106 cities were involved, 41 projects were selected and 3.6 million euro were funded.

The main goal of the project is to create a network of cycle and pedestrian paths to allow safety routes for short urban displacements. These routes have their own circuit being apart from road and vehicular traffic.

This is to assure higher level of safety for slow traffic. Main urban function (education, administration, trade, leisure) are connected by the slow traffic network that allows to reach them in a few time. Final goal of the project is to replace cars use for commuters too.

A further tool targeted to promote soft mobility within the cities especially referring to weak users (elder and disable peoples) is the so called "Plan Escargot" (Snail Plan). This plan has the main goal of supporting the local administration in creating favourable conditions to soft mobility development. It also represents a tool for realizing urban regeneration project.

Particularly aimed at improving safety road level, this plan refers to the intersection areas between vehicular traffic and crosswalk.

Projects are funded for 75% of the total cost.

Cities must have worked out Urban Mobility Plan to profit by funding. In 2008, Grand Duchy of Luxembourg has worked out a "National Action Plan for Soft Mobility". This plan aims to increase slow traffic from 18% to 25% of total amount by 2020.

This plan defines a program of actions to develop soft mobility within different sectors (information, communication, land and regional planning, legislation, transport infrastructure).

Its goal is to affirm soft mobility as life style to improve conditions of natural and urban environment.

The Swiss Federal Department for Environment, Transport, Energy and Communications has drawn the *Guidelines for Slow Traffic* (2002) that establish rules and conditions for promoting soft mobility. Guidelines consider different sectors that could be engaged in development of soft mobility (urban and regional planning, infrastructure; cities and agglomerations, guide and information systems, safety, combined mobility, training and information for people, research and development, pilot plants and demonstration, statistics and assessment, mobility information system).

Global vision intend to integrate soft mobility with motorized private traffic (MPT) and public transports (PT). Soft mobility must be integrated also in urban and regional planning proceedings to assure implementation of dedicated infrastructures and facilities.

Confederation supports cantons by:

- specific funds for setting up soft mobility infrastructures;
- publication of directives, aids to implement and documentation;
- basic research and support of pilot projects;
- updating laws for transports;
- rating and monitoring.

Guidelines give framework conditions to develop local policies of increasing soft mobility in each Swiss canton.

This is also to involve private actors in financial support to spread slow traffic as the main modality of transport.

Soft mobility in Italy

Italy stands out for the delay in replaying the increasing attention to the promotion of soft mobility as life style.

The research report "Sustainable mobility in Italy survey of fifty cities" (Euromobility 2008), worked out by the Kyoto Club together with Euromobility, underlines internal disparity, among the Italian regions referring to sustainable mobility. Car dependence is so much strong that the rate of motorization is one of the highest in Europe (62 vehicles per 100 inhabitants). Italy has not yet defined a global policy of promoting soft mobility; initiatives have been performed at regional or local administrative level.

Generally they refer to restrictive actions to limit car access to specific urban areas (that is normally the inner city).

"Ecologic Sundays" or "Day without car" instead try to make people aware about the chances that soft mobility could offer.

There are not yet remarkable examples referring to soft mobility improvement. Probably the most significant action aimed at improving alternative way of moving within the city is "bike sharing". On the model of many other European cities also Italian cities have adopted this solution in order to promote alternative to the cars. Nevertheless its diffusion is still limited to a few number of cities that have decided to invest in sustainable mobility.

At regional level it is possible to notice better conditions of actions planning. Puglia Region has moved forward in promoting sustainable model of development also referred to mobility system.

The CYRONMED project (CYclo Route Network for the MEDiterranean) has been funded by the European Interreg IIIB Archimed (Mediterranean Archipelago) and it has been coordinated by the Local Authority Transport Department of Puglia Region.

Project proposes to create a Mediterranean network of cycle route integrated with other transport link (railway, bus, sea port and airport). The network should join Mediterranean countries of South Europe on medium-long routes. It is linked to the routes of the EuroVelo and Bicalita project. Campania is involved in this network too, but at present, it has not elaborated any feasible proposal.

Italian confederation of associations Co.Mo.Do. has proposed to create national network for soft mobility and has also established its requirements:

- recovery of abandoned territorial infrastructure;
- integration among different users;
- separation from road network;
- integration with local public transport system;
- connection with accommodation network.

Soft mobility network projects always base on retrieve of abandoned railways to turn into cycle or pedestrian paths. Nevertheless, at present in Italy, few projects have been carried out. Modena-Vigliola, Cortina-Dobbiaco; Rocchette-Asiago and Caltagirone_San Michele di Ganzaria in Sicily have been turned into cycle paths, allowing a new use of regional resources both for inhabitants and for tourists.

At urban level, the proposal worked out by Municipality of Palermo, in 2007, within the strategic Plan for Sustainable Mobility, seems to be particularly interesting. It contains the indications to promote soft mobility referring both to intervention aimed at transforming some urban areas into pedestrian zones.

Soft mobility in Paris (France)

Among the European cities Paris is probably the most engaged in a continuous activity of requalification of public spaces in order to make them more available to all users (residents and tourists).

The projects of requalification are mostly aimed at improving the quality of urban environment by encouraging soft mobility (cycles and pedestrians).

Actions mostly refer to the creation of:

- "green districts";
- espaces civilisés;
- planning of cycling.

The creation of *green districts* is a specific urban policy target to improve the use of public spaces and to increase the road safety

Action for this mostly refer to:

- creation of reduce speed limit zones (30 km/h);
- road direction planning ;
- dedicated routes for soft mobility.

Espaces civilisés refer to action to differentiate zones within the same road. The interventions refers to:

- creation of cycle tracks along the road;
- widening of sidewalks;
- crosswalk;
- protected corridors for buses;
- loading zones.

The Cycle mobility planning deals with the widening of about 327 kilometres of cycle tracks that Paris already has available at present. One of the most significant project of requalification aimed at promoting soft mobility refers to the so called *Promenade Plantée* or the *Coulée Verte*. This crosses the 12th arrondissement extending for more than five Kilometres.

The idea of recovering the ancient abandoned railway Paris Bastille-Vincennes dates back to the end of the Seventy's, but only at the beginning of the Ninety's the project of transforming the viaduct into a green axis connecting Bastille Square to Varenne Wood was accomplished.

The upper part of the original viaduct has been turned into a greenway while the lower side has been turned into artists' studios or art gallery. The ancient viaduct Daumesnil has been turned into the "Art Viaduct" (*Viaduct des Artes*) by Samaest (Société

d'economie mixte d'aménagement de l'Est de Paris) which has been responsible for the project.

It is possible to rich the "Promenade Plantée" by different points corresponding to specific filter areas equipped with pedestrian and children facilities.

Conclusions

The promotion of soft mobility affects different countries and different administrative levels.

Although actions targeted to create dedicated facilities for cycle and pedestrian are still different according to territorial scale, they have been oriented at encouraging alternative way of moving that should be more compatible an sustainable. This is to reduce the noxious emission caused by vehicular traffic as well as to improve healthier life styles, at least for leisure and tourist activities.

Despite a prolific production of laws and roles referred to emergency of adopting alternative ways of moving to minimize negatives impacts (especially air and noise pollution as very threat to health) due to car dependence, the promotion of soft mobility still depends on private initiative of associations or institutions, although they act together with public institutions.

This is widely common, except small European country (Luxembourg, Switzerland, Belgium, the Netherlands, Denmark), where the promotion of soft mobility takes a specific segment of public policies. This often involves different governmental department (environmental, infrastructural transport, and urban and regional planning) that have been engaged in a cooperative work to allow the implementation of soft mobility use.

As concerns large scale it is possible to individuate a common trend toward the creation of a "system of routes" dedicated to soft mobility aimed at promoting territorial resources too.

As concerns urban level it is more difficult to refer to a "systemic idea" of promoting soft mobility even though there are some good practices that have been carried out in big cities too.

The cases examined in this paper have shown that soft mobility should be a new way of thinking the ways to move in urban and territorial region.

At present, this is still difficult to achieve but some cases have underlined that it is possible to change human behaviour when benefits could be measured in terms of health, environment, quality of life and value for money. There is still a lot to work to.

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