Project PERHT

PARKING GREEN SERVICES FOR BETTER ENVIRONMENT IN HISTORIC TOWNS

sustainable mobility

PROJECT DESCRIPTION

In Europe most small and medium-sized cities face problems with the mobility of people and goods. In many cases in these urban areas it can be noted that the majority of journeys take place by private car and that there is a low attractiveness of local public transport (LPT). This condition can also be worsened by the widespread offer of parking lots and parking places that further encourage the exclusive use of private cars. The PERHT project wanted to address these mobility issues by proposing an alternative approach based on sustainable mobility strategies, focusing in particular on a better management of parking places and, more generally, of parking areas. The general objective of the interventions carried out was to offer and promote alternative mobility services with low environmental impact aimed at ensuring a modal shift that favors the interchange between different means, leading also to the reduction and optimization of the use of private vehicles.

OBJECTIVES

The PERHT project was implemented in the urban area of Treviso, as a representative city of many realities, including European ones, with a strong historical-architectural relevance and a significant touristic vocation. The project involved the creation of an integrated system of eco-sustainable, flexible and coordinated urban mobility services pursuing the following objectives:

- reducing the urban traffic's impact through the development of **a system of innovative services and integrated measures of eco-sustainable mobility**, which are part of the general framework of existing urban mobility;
- supporting a modal shift from private cars to a series of alternative services (individual and collective) for sustainable mobility;
- reducing the commercial traffic's impact by implementing specific interventions related to the parking of freight vehicles, with a view to integrating it in the more general parking management system;
- promoting electric mobility for people and goods;
- developing innovative infomobility services to support sustainable mobility services.

The PERHT project involved the design, construction, demonstration and evaluation of "*Green Mobility Services*" to be implemented with integration of the existing parking management system as its central element and thus creating a "hub for eco-sustainable urban mobility services". With reference to the existing system it is to be mentioned that in 2010 the Municipal Administration of Treviso made innovative investments aimed at better managing the parking spaces through the installation of induction sensors detecting the presence of vehicles in parking places and transmitting the information to a central management system. This system (TreviSosta) allows to know in real time all the data relating to the service.

One of the aims of the PERHT project was to integrate, expand and make this system more effective. The services developed have enabled the city of Treviso to reach higher levels of urban environmental quality as well as guarantee energy savings, contributing to the preservation of the historic center of Treviso and improving the quality of services offered to residents, tourists and economic operators.

PROJECT PHASES

The PERHT project was developed through different phases. The main ones were:

- preparation;
- analysis of the real needs of users and of European trends in mobility services;
- planning of sustainable mobility measures and of the IC technologies;
- definition of the evaluation and planning criteria for the activities and of the evaluation procedures for the planned interventions;
- realization of support infrastructures for the different planned interventions;
- startup of pilot systems (demonstration phase);
- environmental impact assessment.

During the different phases different actions were implemented and different tools were defined in order to achieve the project objectives, as described in the following paragraph. In carrying out the project, the preparatory phase of analysis was decisive for identifying the characteristics and real mobility needs of the urban area of Treviso in order to create an integrated structure of the interventions, well suited to the reference context.

The main actions were (see figure 1):

- encouraging the use of sustainable mobility and related green services proposed in the city context;
- testing of a flexible mobility service for people: "Col-Taxi" (collective taxi), especially useful during the weekend and in the evening hours when the LPT service is limited;
- implementation of the "Infomobility" service, through the creation of information processes to provide users with info on urban mobility with the widespread use of different types of multimedia tools integrated among them such as: web portal, Mobile APP, fixed totems;
- strengthening of the municipal regulation of Treviso by issuing specific regulations aimed at encouraging the use of electric/ hybrid vehicles both for the transport of goods and people. Specific regulations allow for circulation in limited traffic areas and free short- and medium-term parking of electric vehicles;
- improvement of the distribution of goods in the urban area through the organization of the "L/ U Areas" service consisting in the real time control of a system of places for loading and unloading of goods, thus to avoid to occupy the places for too much time;
- creation of the "Ev Re-Charging" service consisting of several charging stations for electric vehicles;
- creation of “bike stations” at passenger interchange nodes (such as stations), to encourage the use of bicycles and promote the existing bike sharing services as well as the modal shift from car to bicycle or bus.

PROJECT RESULTS

The adoption of new models of mobility services has led to significant environmental benefits and energy savings, contributing to the improvement of the urban environment and the quality of life in the historic center of Treviso. The main results achieved were:

- expansion of the "Bike Sharing" service (TVBike Treviso) provided by the Municipality of Treviso, carried out on the basis of the analysis of the purely technical/ technological and operational aspects carried out during the project. The expansion included an increase in the number of bicycles and columns at 3 existing stations and the extension of the service by installing additional 6 stations;

- development of the integrated *Park & Bike* approach to favor the modal shift from the use of private car to bike through the creation of three innovative free "*Bike Station*" for the citizens' own bikes. In order to guarantee an adequate level of security the stations are protected and video monitored with controlled access ensured by magnetic card; these are located in strategic points at the interchange car parks for users arriving at the historic center and at the railway station for commuters/ travelers;
- preparation and development of various programming and planning documents, such as the planning document "Bike-Plan - Municipal Bicycle Mobility Plan";
- implementation of the freight vehicle parking management service. The specific places for loading and unloading have been equipped with "TreviSosta" sensors to control the parking times, introducing preferential price and/ or time terms for those users who use electric/ hybrid/ CNG-fueled freight vehicles and enter the city center with optimized loads;
- promotion of electric vehicles by approving a specific municipal regulation, introducing preferential price and/ or time terms, granting free access to the limited traffic areas and installing three columns for free charging of electric vehicles in the parking areas;
- implementation of the "Col-Taxi" (collective taxi) system, an integrated LPT service during evening hours, when the availability of services and vehicles is limited. The service is developed in collaboration with the Treviso Radio Taxi Cooperative and provides for passenger pick-up and drop-off points at the LPT stops. 4 areas are defined for the calculation of the tariff and reservation can be made by SMS, mobile application (App) or call-center, which provide to combine trips with more users;
- creation of an informative web portal and the "TREVI MOVE" App for smartphones (Android and iOS) which allow citizens to know in real time the overall offer of mobility services and their availability on the territory of Treviso and province;
- installation of information points (totems) in some highly frequented areas (such as ticket office at the railway station, parking facilities, airport) in order to provide dynamic information about local mobility.

The services and measures carried out within PERHT have significantly contributed to improve urban and environmental quality and the quality of life of citizens and are in line with the indications contained in the "Clean Air Policy Package" and in particular in the " Urban Mobility Package "issued by the European Commission in December 2013, which address the problems of the quality of the urban environment in relation to urban mobility, such as traffic congestion, noise pollution levels and CO2 emissions.

Stima degli impatti/benefici ambientali ed energetici nel lungo termine
(a 5 anni da fine progetto, su base annua)

Servizio/Misura LIFE+ PERHT	Totale riduzione CO^2eq (Kg/anno)	Totale risparmio energetico (Kw/h/anno)
Potenziamento LIFE+ PERHT Servizio BIKE SHARING	1.913	5.589
Servizio LIFE+ PERHT BIKE STATION	161.170	470.898
Misura LIFE+ PERHT L/U AREAS	78.185	224.902
Servizio LIFE+ PERHT EV RE-CHARGING	78.194	145.768
Servizi LIFE+ PERHT INFOMOBILITY	24.534	131.435
Totale riduzione	**343.996**	**978.592**

The expected long-term benefits, quantified with reference to the 5th year after the end of the project, include the **reduction of CO2 emissions for a total of 344 tons/ year and energy savings for a total of 978,592 kWh/ year due to the reduce**

d use of vehicles. The estimate (see the table in the figure) is based on the decrease in the annually covered distances.

Following the closure of the project on 31/03/2016, the developed eco-sustainable services passed from the demonstration phase to full operation, becoming definitively integral part of the city mobility system.

As proof of the project's great success, the Municipality of Treviso and MOM (the company managing the LPT services in the Province of Treviso) are considering the possibility to further enhace the developed services.

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Acronym
PERHT

Number of reference
LIFE11 ENV/IT/000015

Reference Programme
LIFE

Beneficiary Coordinator
MOM (Mobilità di Marca) S.p.A.

Contacts
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EU contribution
706.810

Call Year
2011

Start Year
2012

End Year
2015

Beneficiary headquarters

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Italy

Region
Veneto

Description

Comune di Treviso