CEDM - Centre for Eco-Friendly City Freight Distribution

LIFE05 ENV/IT/000870

Project description Environmental issues Beneficiaries Administrative data Read more

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Project description:

Background

In the last ten years, major efforts have been carried out by European cities to tackle traffic congestion and related pollution. Access restriction to city centres has become a common practice based on specific transport schemes and innovative infrastructure. However, little attention has been paid to the urban goods distribution process, which is one of the major sources of energy consumption, noxious gas emissions and noise levels in urban areas. The main reason for this lack is the multiplicity of actors involved in the process.

The project is a response to the need to tackle increasing traffic congestion and related energy consumption, as well as with the urge of reducing the air and noise pollution in urban areas, the damages caused to the environment, to the historical and artistic heritage, and to the citizens' quality of life. Over the past few years, the city of Lucca has invested significant resources to reduce the energy consumption related to traffic, and the noxious gas and noise emissions. The municipal administration aims to enhance the urban logistics services by reducing its environmental and social impact and by redirecting it to a sustainable development.

Objectives

The aim of the CEDM project was to implement a series of measures (at

regulatory, organisational and technological levels) to launch the Centre for Eco-Friendly City Freight Distribution in the historical centre of Lucca. These measures would be based on city logistics schemes integrated in the broader context of mobility and transport measures. This would allow Lucca to achieve high standards of energy efficiency and environmental quality, thereby acting as a model for other European cities. The project would demonstrate innovative models focusing on the co-operation of the different actors within the logistics chain, such as freight transport operators, eco-friendly fleets for city deliveries, local authorities and mobility operators.

Results

The CEDM project demonstrated an integrated and innovative approach to urban logistics. This approach relies on co-operation among several actors involved in the logistics chain and the use of new distribution schemes. It is also dependent on the implementation of a number of measures (regulatory, organisational, operational and technological) which reduce the negative impacts that the current logistic processes have on the urban environment.

The approach verified the feasibility of the logistic base (Transit Point), which is favourably located with regard to the route network and the historical centre of Lucca and works as a transfer point for the goods in entrance and exit to the centre. A web based IT platform enabled the management of urban distribution activities, aimed at reducing the vehicle circulation and increasing the efficiency of the urban delivery system. Moreover, the project tested an ecological vehicle fleet for the supply of logistic services within an urban context, thereby reducing the entrance flow of freight diesel vehicles.

The results achieved during the system test phase are valuable for the implementation of an innovative solution of goods delivery processes in urban contexts. The developed business plan points out that the proposed solution for the full scale service is viable and economically sound even in the minimum scenario.

Estimated environmental benefits for the implementation of the CEDM approach based on a reduction of either 1/3 or 2/3 of the non-ecological freight vehicles circulating within the historical centre included a reduction of

- the visual intrusion of duty vehicles by 24% or 54%
- polluting vehicles by 48% or 85%
- emissions of the most harmful air pollutants (CO, PM, NOx and VOC) by 35% or 75 to 80%
- the average noise levels during the day by 2,8 dBA or 8,6 dBA respectively

These positive results form the basis on which the Municipality’s action can develop further, after having tested and validated the most suitable solutions. The Ministry of Environment granted additional funds needed to implement the full-scale system, which will be operative starting from early 2009. This is expected to lead to a decrease in the number of circulating vehicles, increased efficiency of the urban distribution scheme, an improvement of the offer and quality of the services in the city and the trialling of additional services for commercial operators and their customers (deliveries to parking areas/private homes/hotels, collection of used packaging, etc.).

Sustainability of the project's achievements will depend on the ability of the new municipal utility managers to gain market share as well as to develop the solutions of the project to their full potential. This includes further innovative services with added value and higher quality aimed at different categories of urban logistics users: third party warehouse services for shopkeepers, deliveries with monitored parking areas – park&buy – services to hotels, services dedicated to underprivileged users, delivery at particular points such as pick-up-points, e-lockers, etc.

This project has been selected as one of the 17 "Best" LIFE Environment projects in 2008-2009.

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Environmental issues addressed:

Themes

Land-use and Planning - Transport planning - Traffic monitoring
Air and Noise - Noise pollution
Services & Commerce - Transportation - Storage
Climate change Mitigation - GHG reduction in non EU ETS sectors
Air and Noise - Air quality monitoring

Keywords

urban area, freight transport, transport planning, logistics, climate change mitigation, mobility

Target EU Legislation

- Urban Environment
- COM(98)605 -"Communication on Sustainable Urban Development in the European Union: A Framework fo ...
- Decision 1411/2001/EC - "Community Framework for co-operation to promote sustainable urban develo ...
- Noise
- Directive 2002/49 - Assessment and management of environmental noise (Noise Directive) (25.06.200 ...
- Climate Change & Energy efficicency
- COM(2000)88 - "Towards a European Climate Change Programme (ECCP)" (08.03.2000)
- Air
- Directive 92/72 - Air pollution by ozone (21.09.1992)
- Directive 96/62 - Ambient air quality assessment and management (27.09.1996)
- Directive 2001/81- National emissions ceilings for certain atmospheric pollutants (23.10.2001)
- Directive 2002/3 - Ozone in ambient air (12.02.2002)

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	Comune di Lucca
Type of organisation	Local authority
Description	The beneficiary is the Municipality of Lucca, which is also the beneficiary of the LIFE project: SERIAL WELLFIR (LIFE04 ENV/IT/000503).
Partners	Regione Toscana, Italy ENEA, Italy SOFTECO, Italy Aalborg Municipality, Denmark MEMEX, Italy COTAS LOGISTICA, Italy

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Administrative data:

Project reference	LIFE05 ENV/IT/000870
Duration	01-NOV-2005 to 30-APR -2008
Total budget	1,423,204.00 €
EU contribution	711,602.00 €
Project location	Nordjyllands amt,Toscana

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Read more:

Project web site	Project's website (IT/EN)
Publication: After-LIFE Communication Plan	Title: After-LIFE Communication Plan (IT) Year: 2008 No of pages: 3
Publication: Layman report	Title: Layman report (IT/EN) Year: 2008 No of pages: 34

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