



Electric Bicycles *Comune di Verona, Italy*

Summary

The project “biciclette elettriche” was funded by the local and regional public authority and aimed at providing an economic incentive to private citizens in Verona in order to encourage them to buy electric bicycles, thanks to a specific agreement with local bicycle sellers. The target were the citizens of Verona and the objective was to increase the number of electric bicycles in order that they serve as an alternative to traditional vehicles like motorbikes, especially the two engine models, consequently reducing fuel consumption and pollutant emissions.

From 2002 to 2009 a total amount of 1649 electric bicycles were sold to the citizens of Verona, which means a emission reduction of pm 10 into the atmosphere, as well as savings for the citizens in terms of fuel and insurance costs.

End-user area

Transport and mobility
Education

Target Audience

Citizens

Technical

Energy efficiency

Context

Since 2002, the local administration has been looking for alternative solutions to the traditional mobility system.

The project was carried out in Verona, in an urban context, and the aim was to encourage our citizens to try an eco-friendly means of transport.

Notification was sent to the citizens, especially the elderly or professional men/women who, especially in the summer, want to move around quickly in the urban area, without too much effort, without polluting the environment and simultaneously lowering their transportation expenses.

Objectives

The main objective was to increase the number of electric bicycles along the city streets and to decrease the number of motorbikes, especially the oldest and the most polluting ones, in order to reduce PM10 emissions in the atmosphere.

Verona's local authority decided to promote the project to contribute to the spread of an environmentally friendly means of transport, such as electric bicycles, which can easily replace traditional motorbikes (< 50cc), without changing the transportation routines of its citizens..

Process

The project started in 2002 and contained the following phases:

- selection of electric bicycles available on the market,
- identification of the producers in Italy and of the local vendors in Verona
- evaluation of the functional standards of all vehicles



-meeting with producers and sellers in order to draw up an agreement that stated the procedural rules for them to sell a bike at a reduced price, this reduction corresponding exactly to the amount granted by the local public authorities.

-this allowed citizens to receive an immediate price discount, and the vendor would later receive the difference from the authorities.

-communication campaigns in order to inform the citizens of the economic incentive granted by the public administration

-satisfaction survey of the project, in order to check users' opinion about electric bicycles, understanding problems that might have occurred, and collect advice and information concerning beneficiaries' age and job.

-final report to summarize the results, also containing recommendations to the local authority about the best terms and conditions of sale and advice for the promotion of electric bicycles.

Financial resources and partners

The total cost of the project was €409 895, partly funded by the regional authority and partly by the municipal authority that carried out the project as follows:

Year 2002: Verona local authority funded the project with 100.000 Lira (corresponding to €51 645)

Year 2003: Verona local authority financed the project for the second year with €10 000 and the Veneto Region contributed with €80 000

Year 2004: Verona local authority funded the project for the third year with €68 000

Year 2006: The Veneto Region funded the project with another €80 000

Year 2007: The Veneto region funded the project with €46 500

Year 2008: The Veneto Region gave the project €23 750 and Verona local authority added € 30.000

Year 2009: Verona local authority contributed €20 000 to the project

The total amount funded from 2002 to 2009 was €409 895

These considerable financial contributions enabled us to fund the purchase of 1 649 electrical bicycles.

All the partners were public bodies. The idea was originally carried out by the Verona City Council after which the Regional authority joined the project. The bicycle vendors and producers helped promote the project.

Results

The purpose of Satisfaction Survey, submitted to the beneficiaries of 2007 and 2008, was to understand the effects of the use of the electric bike, if any problems occurred, to collect advice and to learn about the age and jobs of the beneficiaries. It showed the following results:



Age group: 65% of the beneficiaries were over 50 years old (64% in 2008), with 15% over 70 years old. The interest in this type of bike is lower among the younger group (20 - 30 years old) while it increases between 30 – 49 years old. We can say that the electric bike helps the users to maintain their mobility habits especially among older citizens. The programme was shown to also help people with no drivers license maintain their independence of other forms of transportation.

The number of beneficiaries who answered the survey increased from 33% to 45%. We can assume that such a result depends on the increase of public awareness and interest in the incentives.

The frequency of use of the electric bike is high (over 80%); the beneficiaries use the traditional motor vehicle (car, bus, motorbike) less after buying an electric bike. The survey also stated that the electric bike replaces the use of a car more than the use of motorbike (81% of beneficiaries in 2007 and 71% in 2008 affirm that now they use the car less). If we consider this data together with the high frequency in the weekly use of the electric bike (48% of users in 2007 and 40% of users in 2008 declare that they use the electric bike every day), we can state that this project was really successful, both stimulating the use of electric bicycles and contributing to fewer pollutant emissions.

The survey confirmed that the most efficient means of communication for this specific project were both advertising in the local newspaper and exchanges of opinion inside social groups. Internet was not a popular means of communication for this project (perhaps due to the fact that the majority of the beneficiaries were over 50 years old).

Lessons learned and repeatability

The economic incentive granted by the local public authority helped raise public awareness and interest for electric bicycles as an alternative to the traditional means of transportation. The lesson learnt also encouraged a change in urban mobility habits. In the long term, it will contribute to a reduction of fuel consumption, as well as air and noise pollution. Another positive result was the development of a vendor network, as well as an improvement in the quality of products available on the market.

The local authorities' goal is to increase eco-friendly transportation in urban areas by encouraging bicycle use and developing the urban network of cycling paths. At present, the total cycling surface in Verona is 50 km.

As regards the repeatability of the project, the procedures we implemented were fully adopted by the Veneto Region and could easily be repeated. These procedures can also be applied to any kind of eco friendly means of transport.

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