CiVITAS
Cleaner and better transport in cities
E L A N

CASE STUDY

ENERGY EFFICIENT FLEET MANAGEMENT

SAFETY AND SECURITY


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Ghent needed to improve the management of the it's vehicle fleet, which is used by employees on municipal business. The main goal was to address emissions levels by increasing efficiency and reducing the use of fossil fuels. As a result of this measure, the overall number of vehicles was reduced, cleaner vehicles were introduced and car-sharing was promoted. A group of 54 employees had the chance to reduce their fuel consumption through eco-driving training. These activities were implemented within the fleet of the municipality, without the involvement of citizens.

Municipal context

Ghent is Belgium's third largest city with about 247,000 inhabitants and an area of 156.18 km^2. Over the past years, Ghent has made considerable efforts to curb the use of private cars, calm traffic in the city centre and improve bicycle mobility.

Today, the city's important port and university make it a bustling place. The presence of 67,000 university and high school students adds to the city's role as a Flemish cultural centre.

Ghent has an extensive public transport network serving the city centre and surrounding area. It has a metropolitan area of about 500,000 inhabitants. The city is surrounded by major motorways that make the city centre easy to reach by car, but which leaves Ghent jammed with private vehicles.

In 1997, Ghent launched its "Mobility Plan for the Inner City". The ambitious endeavour to transform the city's mobility structures initially faced major opposition from retailers and citizens. The main features of the plan were to free the city centre of through-traffic, create a large pedestrian zone, calm traffic, and redesign streets and squares to make them more enjoyable for visitors and citizens.

Recent surveys confirm that living and visiting Ghent has become far more pleasant than a decade ago.

MUNICIPAL PROFILE

LOCATION
Ghent, Belgium

POPULATION
247,251

LAND AREA
156.18 km^2

CIVITAS BUDGET
Total Ghent budget: EUR 7,500,000
Total EU contribution: EUR 4,400,000

GHENT IN CIVITAS

Ghent (Belgium) participated in CIVITAS ELAN, an innovative collaboration between the cities of Ljubljana (Slovenia), Ghent (Belgium), Zagreb (Croatia), Brno (Czech Republic) and Porto (Portugal). The motto of the project is "Mobilising citizens for vital cities."

CIVITAS ELAN

CIVITAS ELAN took an approach where "Putting the citizen first" was at the core of the work in the five cities. Aside from encouraging involvement, its cities pro-actively worked to convince citizens that clean mobility solutions are in their interest. With its 68 activities, ELAN increased the modal share of walking and cycling, supported innovative freight delivery solutions, implemented innovative demand management, and increased the use of cleaner and energy-efficient vehicles. It ran from 2008-2012.

READ MORE AT:

http://civitas.eu/display-all-projects

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Charging point for electric car fleet

Introduction

The main goal of this measure was to reduce the emissions of the municipality's vehicle fleet (cars and vans up to 3.5 tonnes) by increasing efficiency and reducing the use of fossil fuels.

A fleet management group was established to carry out the main activities. Initially, it prepared the integration of biodiesel (B30) in the city car fleet, with the aim to be less dependent on fossil fuels. B30 is not yet approved in Belgium, which means that B30 can only be used in a closed circuit and by partners of a biodiesel project approved by the federal government.

Ghent, however, does not have any closed pump circuits, which made it impossible to fulfill the requirements of the federal government and this activity was cancelled.

The group then replaced old cars with cleaner models following a sustainable procurement strategy, which included the environmental score as a selection criterion in the tendering procedure. They also introduced cleaner vehicles in the city fleet, such as electric cars, hybrid trucks and compressed natural gas (CNG) vans. During the CIVITAS period, 13 electric cars and one hybrid truck were purchased.

As a result of the work performed under CIVITAS, the services and logistics division of the city has launched three new framework contracts giving a wide range of options to all city departments to choose the best performing vehicle with the best ecological score possible. These contracts, which create a potential of about 24 CNG cars and about 108 electric cars over a four year period, can be used by several other non-municipal organisations that profit from pre-negotiated prices.

In order to increase the efficiency of the car fleet, the use of electric bikes and car-sharing was stimulated. This lead to the integration of Cambio shared cars and a reduction of 45 vehicles in the city fleet.

Finally, eco-driving trainings were provided to drivers with the aim of reducing fuel consumption. Since early 2013, tyre pressure checks have been scheduled regularly. It has been proven that this can lead to reductions in fuel use of 4 percent.

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Eco-driving trainings

Taking a closer look

The measure explored several aspects:

- Integration of electric cars in the city fleet;
- Development of a sustainable procurement strategy; and the
- Development of a new city fleet management tool.

For the procurement strategy, selection criterion based on environmental aspects (CO2 emission and two Belgian standards: Euronorm or ecoscore) were included in the tender specifications. These also stated that standard vehicles needed to be B30-proof to avoid technical problems when implementing biodiesel (B30).

The fleet management tool consisted of a data monitoring system for more energy efficient use and a reservation tool for shared cars and (electric) bikes.

New policy instruments were also implemented. Ghent is the only city in Belgium that has set up a sustainable fleet management group. Their tasks are to:

- Encourage city employees to "eco-drive" and reduce fuel use;
- Stimulate alternative fuels by introducing biodiesel, electric cars, hybrid trucks and CNG vans in the city fleet;
- Increase efficient use of the car fleet by simultaneously stimulating use of bike and car sharing; and
- Reduce fuel use and emissions by optimising the car fleet (checking tyre pressure, replacing old cars with newer ones, etc.).

Results

Despite the first positive results of eco-driving, which led to a reduction by 7 percent of fuel consumption, the long term effect cannot be measured at this particular time. The city of Ghent will continue to promote energy efficient driving and to stimulate car users to optimise tyre pressure in portable station or at locations provided by fuel suppliers.

The total fuel use of the city fleet decreased by 24 percent. This is a result of removing 45 standard cars and 38 light freight vehicles from the fleet in August 2011 and replacing the vehicles with cleaner models following sustainable procurement guidelines, which include environmental scores as selection criteria in the tendering procedure.

Evolution of fuel use when following eco-driving courses

The removal of cars from the fleet made employees think about their own transport. Bikes were perceived as an interesting alternative, which often can move quicker through the city centre than the car.

This in turn led to a 30 percent reduction of kilometres driven in the fleet. The total number of kilometres driven by light freight vehicles registered a reduction of 11 percent.

By June 2012, 14 electric vehicles had joined the city fleet and one hybrid truck was being used for internal city logistics.

Cambio car sharing

Lessons learned

It is advisable to have a **permanent manager** to monitor the city fleet. The purchasing decisions, including number and types of vehicles, need to be centralised.

It is recommended to **organise a feasibility study in advance**. By doing this, Ghent was able to be more efficient during the city's time as part of the CIVITAS Initiative. It is also required to in order to provide a more active partner role for the fuel supplier(s).

A **detailed monitoring system** is useful to increase fleet efficiency. Where needed, the fleet manager can organise eco-driving lessons and follow-up the results over a longer period. Alternatively, the manager can decide to remove the vehicles with low mileage from the fleet and stimulate the use of car sharing. This results in more savings year on year.

Detailed **follow-up of tyre pressure** is a must. During the eco-driving project, many cars were detected with insufficient tyre pressure, directly leading to higher fuel consumption and faster deterioration of tyres.

The fleet manager needs to investigate **which vehicles** are needed to **meet the needs** of the municipality. If vehicles are used rarely, car-sharing must be stimulated. If vehicles are only used over short distances, the purchase of electric vehicles needs to be stimulated. For long distances, the fleet manager can suggest to purchase hybrid vehicles or a CNG alternative.

It is recommended to i**nclude the use of bike or public transport** in the fleet policy. A bike sharing scheme can also be set up.

Upscaling and transferability

The City of Ghent will continue to improve the city fleet by introducing 100 electric cars and 24 CNG vans; by replacing 10 percent of the fleet every year, following the sustainable procurement strategy; and by equipping the central garage with a central tyre pressure system.

The city fleet management tool will be made fully operational and will monitor the fuel consumption of the fleet. Drivers of vehicles with the highest fuel consumption will be invited to do an extra tyre pressure check or to take eco-driving trainings. When vehicles are used only for short trips or are only used rarely, the department will be forced to remove the car and to use the car sharing system.

All actions done within this case can be easily transferred to other cities.

Budget and Finances

In terms of implementation, data collection and dissemination, a total of EUR 282,000 was spent. EUR 31,000 was spent on research and development activities.

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References or sources

http://civitas.eu/content/energy-management-public-fleets

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