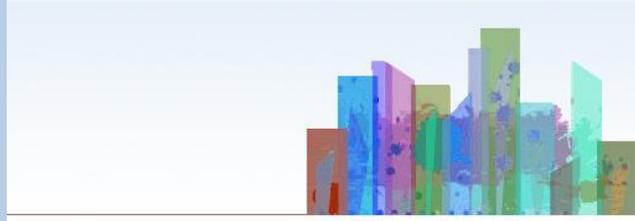


LifeGreenCity



AFTER LIFE COMMUNICATION PLAN

Set up of a software platform for the real-time
management of energy consumption in public buildings
in Nantes and Vigo



*LIFE09
ENV/FR/000602*

The GreenCity project

The **Life+ Greencity** project aims at setting up a system allowing the municipalities of **Nantes** (France) and **Vigo** (Spain) to control and manage the consumption of electricity, gas, diesel oil and water in the perspective of a more integrated urban management.

This software platform improves the visibility of energy and water consumptions, enabling to point out the energetic waste and implement the best possible adapted reduction actions. In the frame of the project, users have been made aware about the issues raised by a better energy management, and they have been actively involved in measures against energy waste.

OBJECTIVES

The approach chosen by Greencity is fully in line with the European Union's perspective and priorities concerning the urban energy management. Among others, it allows the partners cities to fit in the Directive 2002/91/CE which has set up a minimal energy efficiency certificate for buildings.

The outcome of the project is summarized below:

- **Reduction** of the energy consumptions by 18,4%, in the 47 public buildings involved in Nantes and in 6 sites in Vigo, corresponding to 16,6% of electricity savings, 7,7% of district heating savings and 22,6% of gas savings.
- **Improvement** of the overall efficiency of the buildings in terms of electricity, water, diesel oil and gas consumption, further reducing equivalent CO₂ emissions: 100 tones of equivalent CO₂ or 18000 km by car have been saved.
- **Promotion** of the good practices about energy for citizens and especially for children, through awareness campaigns around the project and implementation of actions involving pupils.
- **Achievement** of an inventory of the ways to manage energy in more than 63 cities of the EU, assessment of their needs and evaluation of the opportunities of implementing the system at the European level.
- **Dissemination** of the results at a European scale and drafting of recommendations.

The mid and long-term benefits targeted by the project are multiples and are related to the three pillars of sustainable development at a European scale. Environmentally, the implementation of such system allows consequent energy savings and CO₂ emissions reduction. Furthermore, the economic savings are not negligible in a context of fossil fuel depletion leading to the increasing of the energy prices. The dissemination of the results at the largest possible scale takes part of the European citizen awareness about the issues raised by a better energy management at different levels. From a regulatory point of view, a strengthening of the national and European legislations for the rehabilitation and the construction of new public buildings concerning the energy management could be expected.

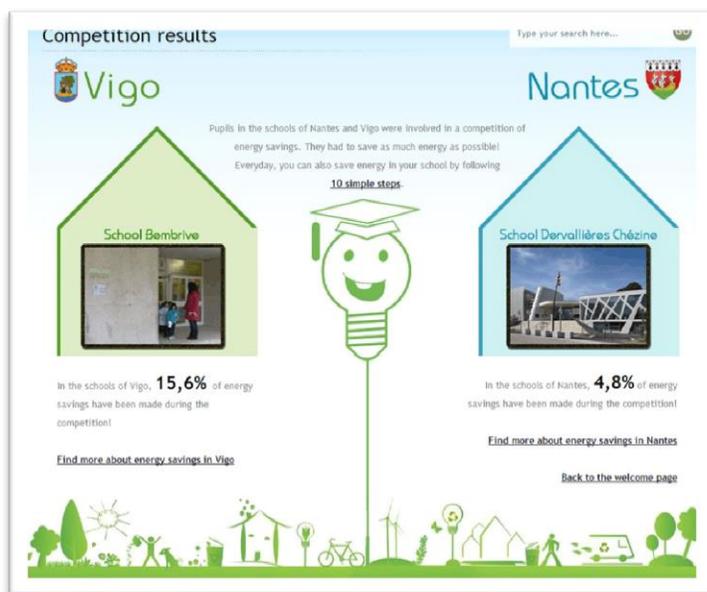
Project development

The project ran for 34 months, from December 2010 to September 2013, and consisted of two major phases:

- A **first phase of technical** study during which the project has been set up. Technical audits have been carried out in order to determinate the public buildings to be equipped in the two cities. The system has been calibrated and adapted for each building.
- A **second phase of demonstration** has been carried out. Reduction actions have been carried out by the stakeholders, and the efficiency of the system has been proved through calculation and analysis of results in terms of energy savings.

One of Greencity's objectives was to have a significant impact on the awareness of issues raised by a better energy management by a large audience, and in the long term to implement the same type of real-time energy management system in other European countries. Thus, numerous **awareness activities** have been realised. Two main awareness actions have been carried out, completed by a permanent dissemination of the results and advancement during the 34 months of the project.

- The partners have implemented a **competition** of energy savings between two groups of schools in Nantes and Vigo. The pupils have been actively involved and informed about the advancement of the project through a dedicated page on the Website.



- On the other hand, Euroquality has carried out a **European survey** about the energy management in public building of 63 cities of the European Union. This survey has permitted to assess the needs in terms of energy management systems, and allowed the constitution of an updated database of contacts which will be useful for the dissemination of the results at a European scale.

Furthermore, a wide panel of communication and dissemination tools has been implemented, such as a web portal with direct information about the advancement of the project and the achieved results; leaflets and brochures, newsletters, participation to numerous events and workshops...

DISSEMINATION TOOLS



A COMPLETE, USER FRIENDLY AND PRACTICAL WEBSITE

- A **public portal** and a restricted website dedicated to the project: <http://www.lifegreencity.eu/>
- A page « **Results** » has been set up for the communication around the energy savings realised thanks to the project
- A **specific section** was established on the website for the **competition** between schools. This page, regularly updated, allowed the following-up of the advancement of the results in terms of energy savings in schools. Designed in the form of a game, it ensures the awareness regarding children.
- The main **dissemination tools** are available on a website section: newsletters, press releases, publications...



DISSEMINATION EVENTS

- **Ecocity World Summit**, permanent stand dedicated to the project: **Nantes (France)** *September 2013*
- **Sustainable development week-Energy transition**: **Nanterre (France)**-April 2013
- **Innovative City Convention**: **Nice (France)** *June 2012*
- **Energy Workshop for Barcelona City Council** : **Barcelona (Spain)** *October 2012*
- **Bio-atlantic Workshop**, first international event on green and eco-industry focused on northwest Spain: **Vigo (Spain)** *October 2011*

- **6 newsletters** have been published on the Greencity website
- **9 Greencity posters** have been designed
- More than **1000 leaflets**: 500 in English, 500 in Spanish and leaflets 'info parents' distributed in Nantes schools.
- **5 Press releases** (3 in French, 1 in English and 1 in Spanish, disseminated by a press agency)

The communication strategy

The GreenCity activities will continue after the end of the project through dissemination activities. Different channels will be used such as the Greencity website, communication campaigns and events related to the energy management.

DISSEMINATION ACTIVITY

Given that the GreenCity website will be active for the next five years, the awareness tools developed during the project will continue to exist, thus making the citizens aware of the energy efficiency issues.

VIGO will keep implementing energy savings actions notably in the schools and public buildings in order to further contribute to the awareness of citizens regarding energy issues.

NANTES (Séquoia) will keep implementing awareness actions in the school and organizing workshop with the energy box. In addition, the “10 things to do to save energy at school” poster will be further displayed in other schools. Finally, energy performance diagnostics will be annually updated and displayed in the public buildings to inform users of energy consumption trends.

To ensure the sustainability of the project and to promote energy efficiency best practices in EU, the results on the project will also be disseminated at **EU level**.

In order to ensure the impact of the project in the future in terms of dissemination, the project will be highlighted and presented during the future energy conferences.

Disseminating the results of the project in Spain and France through schools, universities and decision makers will spread awareness of local and national energy goals and encourage future actions in those countries on energy efficiency.

DISSEMINATION TOWARDS EU STAKEHOLDERS

- Diffusion of communication tools about the project (leaflets, newsletters, etc.) to **334 cities in Europe** and **energy efficiency stakeholders**
- Dissemination to the **European Environment Agency (EEA)**
- Keeping relationships with the other **LIFE+ project teams** via the **national contact points**

FUTURE USE OF THE TOOL

The existing GreenCity tool is a state-of-the-art system for monitoring energy consumption in real-time.

In **VIGO**, motivated by the results achieved during the GreenCity project concerning the energy savings and environmental emissions reduction, the local council has decided to keep the monitoring of energy consumption of these buildings and suggested similar actions in other municipal buildings.

The University of Vigo has also decided to keep on monitoring energy consumption of the Sport Centers, which were included in the GreenCity project in order to carry out several energy savings actions, to improve the environment. Therefore, technicians from the University of Vigo will keep analyzing the information recorded by the installed equipment in the Sport Centers as well as in other buildings which also belong to the University.

In **NANTES**, following the GreenCity project, all new scholar and sport buildings will be equipped with sub-metering and remote management allowing the monitoring of the energy consumption.

On existing buildings, the 20 largest electricity consumer buildings will be equipped with a monitoring solution. Regarding the heating system, the decrease of consumption following the monitoring of the temperature programming during the project was significant. Therefore, this practice will be pursued. Finally, regarding water, once the current contract issue will be solved, the implementation of a wireless system remote management will be reconsidered. The water consumption could then be easily monitored in the Schneider Electric monitoring platform to identify abnormal consumption and put in place reduction actions.

Letters of engagement signed by NANTES and FAIMEVI are available in annex of the final report affirming their intention to use the system in the future.

REQUIREMENTS FOR FUTURE USE OF THE TOOL:

- In NANTES, to equip the 20 largest electricity consumer existing buildings 50 000€ per year during 6 years are required
- The estimation of a subscription fee for the solution provided by Schneider Electric, which would include maintenance and technical assistance, would be of 40 € per year and per counting point that to say
 - 15 960€ per year for the 399 points in NANTES
 - 2 160€ per year for the 54 points in VIGO
- A version 2 of the solution is now available and is recommended. The migration from V1 to V2 would cost 20 000€. This would enable Nantes & Vigo to benefits from new technical and functional features of the solution.
- Schneider Electric Energy Efficiency experts could also be involved to identify energy savings actions (Schneider Electric can make a commercial proposal based on Nantes and Vigo needs

FUTURE IMPROVEMENT AND LIMITS OF THE SYSTEM

The energy consumption monitoring solution provided during the GreenCity project is running on an automatic basis for providing the precise real-time following of energy consumptions. The system set up has been tuned and validated during the different phases of the project. There are therefore no immediate requirements for improving the system in the near future. In the long run it is however recommended to update the platform software in order to work with different computer and to have a better understanding.

FUTURE IMPROVEMENTS

- Migration to the version 2 of the solution with better performance

MONITORING ENERGY CONSUMPTION IN THE FUTURE

- The following of energy consumption will allow the reduction of the consumption and thereby the reduction of carbon emission.

LIMITS

- The current platform software is not compatible with Windows 8.
- For a common user, the management of the software is complicated. Another type of models should be used to simplify the interface.
- It is not possible to compare the consumption of different year. Historical series will be entered as data.

PROJECT DATA

- **Project type:** Life+
- **Project website:** <http://www.lifegreencity.eu/>
- **Coordinating beneficiary:** SCHNEIDER ELECTRIC
- **Associated beneficiaries:** NANTES, FAIMEVI, CYRISEA, Euroquality
- **Implementation country:** France and Spain
- **Project duration:** 34 months
- **Total budget:** 1.579.412,04 €
- **EU contribution:** 756.088 €

Contact: Mr. TABARY
SCHNEIDER ELECTRIC
35 rue Joseph Monier
CS 30323
92 506 Rueil Malmaison Cedex, France
Tel: +33 1 41 37 67 00,
E-mail: pierre.tabary@schneider-electric.com

PARTNER DATA

- **NANTES**
Website: <http://www.nantes.fr/home.html>
Contact person: Claire Bernard de Courville
- **FAIMEVI**
Website: <http://www.faimevi.eu/>
Contact person: Bernardo Parajó
- **SCHNEIDER ELECTRIC**
Website: <http://www.schneider-electric.com/site/home/index.cfm/fr/>
Contact person: Elise Perrot
- **CYRISEA**
Website: <http://www.cyrisea.com/>
Contact person : Cyril Villemain
- **EUROQUALITY**
Website: <http://www.euroquality.fr/>
Contact person: Elodie Cluzel