

Smart Eco Homes: a life-size exhibition area



Project summary

Lannion-Trégor Communauté has been organising visits to the Maisons Evolutives et Intelligentes (Smart Eco Homes - MEI) since March 2012. This one-of-a-kind exhibition area is situated at the Pôle Phoenix in Pleumeur Bodou, Brittany and is designed to raise awareness of the issues of eco-renovation, energy saving and home automation technology among school children and the general public.

The two houses, located in Pleumeur-Bodou, were built to an identical design in the early 1980s. They are particularly representative of the urban housing stock built more than 20 years ago: high energy consumption, equipped with obsolete sanitary fittings and not suitable for the needs of certain populations (persons with reduced mobility).

Thirty years on, and the two houses have been given a makeover: one has been perfectly renovated to Low Consumption Building standard, complying with accessibility standards and integrating home automation technology. The other, which has simply been renovated to a standard to allow the general public to visit, acts as a control to compare with the eco refurbished home

These two life-size exhibition areas present a huge variety of energy and environmental issues. The house which remains as it was originally built tackles themes relating to energy and water consumption, interior air quality (air pollution, ventilation, aeration) and the health of the occupants (carbon monoxide, radon, electromagnetic fields linked to domestic appliances, and so on). The eco-renovated house, a model of an exemplary restoration, tackles themes relating to low-energy renovation (bioclimatic design, eco-materials, thermal insulation and draught exclusion), energy management (renewable energy, production and consumption), adaptation of the home for

disabled people, home automation technology and management of an ecological garden.

Project objectives

The MEIs are an educational tool dedicated to the problems of ecological and efficient home renovation, the adaptation of homes to meet accessibility standards and serve as an introduction to home automation technology.

The objectives of the Smart and Eco homes are:

- to present an eco-renovation project in one of the houses and to keep the other in its original condition (renovated to meet standards), for educational and demonstrative purposes.
- to promote low energy renovation and integration of home automation technology into the home to adapt the housing stock to energy saving needs and to ensure that elderly occupants can continue to live independently.
- to create a resource centre for the general public, school children and building professionals at the Pôle Phoenix.
- to offer concrete information to individuals undertaking a renovation or construction project.

Methodology/approach

Information: Free visits by appointment.

Audience: ages 8 and up.

Length of visit: from 45 mins to 2 hours, depending on the audience and demand.

Capacity: Maximum of 15 people per visit.

The organisers are able to present the themes in an interactive manner using various materials such as models, videos, themed boards and worksheets and home automation technology interfaces.

Tools used, in particular those aimed at the general public

- Public information via the Point Information Habitat (Housing Information Point)
- Campaign in the local press
- Partnership with nearby public buildings for local canvassing, particularly for schoolchildren.

How is the project being managed?

The project is coordinated by an organiser who carries out visits, ensures that the materials are kept up to date and promotes the site.

How much did the project cost and how was it financed?

Investment

| Areas of expenditure | | Amount in euros (excl. VAT) |
|-------------------------------------|--|-----------------------------|
| Buildings | Studies - engineering and works | €395,000 |
| Home automation technology | Studies - engineering and works | €37,000 |
| Exterior construction works | Works | €29,000 |
| Layout - educational content | Studies - engineering/product ion of materials and equipment | €65,000 |
| TOTAL COST | | €526,000 |

Operation

1 "organiser" post/co-financed by LEADER

How has this work been used within the SEACS project?

This tool has been used to raise awareness among the general public through a series of open days such as the Salon de l'éco-habitat (eco-homes exhibition) and the Fête de la Science (science festival).

It has supported the advice given to the recipients of the SEACS "Energy Coach" and "renovation support" tools. Two meetings arranged for these groups included time to visit the homes.



It also served as an introduction to energy for school groups. Some visits were conducted in both French and English to allow pupils to work on their technical vocabulary.

What have we learned from this project?

The content was not specifically tailored to a young audience. Following visits by groups of primary school children, it became clear that the activities and/or materials need to be made more fun for them.

More generally, the content is rich and is suited to people in need of advice on renovation and construction projects, as well as on energy saving solutions that are easy to put into practice. The educational materials need to be updated regularly to keep them in line with the latest regulations.

Contact details for further information.

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Case study:

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