


BUILDING GOOD PRACTICE

School Benviure, Sant Boi de Llobregat - Barcelona

GENERAL INFORMATION	
Name of the public building renovation:	School Benviure, Sant Boi de Llobregat (Barcelona)
Building Good Practice Number (example: BGP n°1 – Cork)	BGP n°1 – Barcelona Provincial Council
Sub-group	Schools
Description	<div style="display: flex;"> <div style="flex: 1;"> <p>Photo</p> </div> <div style="flex: 2;">  </div> </div>
Address	Can Palauet, 1
Public sector contractor	
Architect	
Engineering consulting	
Characteristics of the building (m2, n° of users, orientation, etc.)	<ul style="list-style-type: none"> ▶ 4769 m² built ▶ 2100 m² roof ▶ 600 users ▶ 2 independent buildings ▶ main façade oriented north-east
Date of construction	Built on XIX century
Legal aspects (e.g.: protected property)	
Date of renovation	Renovated on 1998 to became a school

		2011
	Nature of the work (short description)	Changing conventional electric radiators for oil filled radiators with programmable electronic thermostat.
	Budget and source of financement	8.000 € Barcelona Provincial Council, Municipality of Sant Boi de Llobregat

AVAILABLE RESULTS	
What were the big problems (in terms of energy efficiency) to tackle?	<p>Loss of comfort and energy due to a poor condition of closure of windows and doors.</p> <p>Excessive air renewal due to the architectural structure of the building</p> <p>Heating system that not allows the programming of the individual equipment (electric)</p>
Has this building been already analysed and certified?	
What are the key innovative energy efficiency measures undertaken through the renovation?	Changing conventional electric radiators for oil filled radiators with programmable electronic thermostat
What are the measurable improvements in terms of energy efficiency in electricity and heating (kWh saved)? <ul style="list-style-type: none"> • kWh saved, kWh before/after, kWh given in the studies/real kWh • carbonated energy kWh substituted by REN • kg CO2 saved 	<p>Estimated annual reduction of CO2 eq (in t) 4,33 with the change of conventional electric radiators for oil filled radiators with programmable electronic thermostat</p> <p>With the actions developed during the Euronet 50/50 project (2011) the savings were: (in respect to annual consumption of 2009)</p> <p>Electricity: 17926 kWh saved, 2025 kg CO2 saved</p>

ENERGY EFFICIENT MEASURES	
Energy efficient measures of the building envelope	
Energy efficient measures of the heating system	▶ Changing conventional electric radiators for oil filled radiators with programmable electronic thermostat
Energy efficient measures of monitoring energy	
Energy efficient measures regarding behaviour	

Stakeholders' involvement in the energy efficient measures	<p>This school has been very active during the Euronet 50/50 project: all the educational community has been involved developing energy saving activities at school.</p> <p>The local authority has been involved, too, in the development of the project and with some little investments.</p> <p>The actions developed are basically focussed on change of users behaviours.</p>
Others?	

SUSTAINABILITY OF THE RENOVATION	
Design and choice of sustainable materials?	
Sustainable building site management? (sorting waste, water...)	
Application of a valuation method (BREEM? HQE? Others?) Carrying out consultation process with dwellers? Concerted choice on the work program? Which external partners?	

BUILDING MAINTENANCE: life of the building after the renovation	
Is the building object of an energy monitoring? Is there a responsible manager?	
Who is in charge of the maintenance of the heating system of the building?	
Who is in charge of the day to day energy management?	
Are there some specific measures to raise energy awareness and to implicate users in energy efficiency?	<p>This school is member of 50/50 Network and it has the commitment to develop energy savings actions, to disseminate activities, to inform of the results achieved, etc.</p>

FUNDING	
What financing plan?	
Innovative or specific aspects in the method of financing (European funds or	

loan, energy performance contract,...)	
What is the balanced budget for each stakeholder <ul style="list-style-type: none"> • Energy costs for tenant before /after • Increase in the rent 	
Is there any specific economical indicators (payback time on investment, global cost, ...)	

TRANSFERABILITY	
Transferable aspects according to the partner in charge of this example of good practice	Transferability of planning (forming a partnership, choosing priorities, setting up a renovation building teams, etc.)?
	Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)?
	Transferability of results (good solutions, adaptability, change of behaviour, etc.)?
Transferable aspects according to all the partners of Serpente project	<p>The other partners will analyse and validate these good practices. During the process of validation the partners will take on the role of auditors because they will assess and improve the effectiveness and portability of good practices in their context.</p>
	<p>The validation process will promote a systemic approach in local competent public administrations. Moreover, this process of selection and validation is a peer review and entails the mutual role of experts and auditors depending on typology of buildings and partner's expertise.</p>

SOURCES	
Publications	Energy audit (HVAC), ELENA project, Barcelona Provincial Council
Website	
Interviews	