

MARIE TRAINING PROGRAM FOR IMPROVEMENT IN ENERGY EFFICIENCY (EE) OF EXISTING BUILDINGS

**F1 | BEST PRACTICES COLLECTION**

Best Practice Name:	Upstream thinking for good results on school buildings
Code:	FR_RE_CO_23

Best Practice Description:

Type:	<input checked="" type="checkbox"/> Action for improvement in the EE	<input type="checkbox"/> Training experience (*)
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Description:	<p>Setting up a school campus: includes rehabilitating a College (french intermediate school) and building a high-school and a gymnasium.</p> <ul style="list-style-type: none"> <li>• Comprehensive approach of the work</li> <li>• The project management team that won the tender proposed to keep the College building and to rehabilitate it (although there were plans to destroy it). In doing so, their plan was 4% below the budget estimate.</li> <li>• Complete rehabilitation of the College (only structure and joinery were kept)</li> <li>• 10 staff apartments were built on the roof of the school (instead of being built 300 m away as initially planned)</li> <li>• Energy consumption has been minimized, in particular by not heating the stairs</li> <li>• Detailed monitoring of consumptions</li> </ul>
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Location:	Vaison-la-Romaine	Country:	FRANCE
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Contact (team):	Daniel Fauré, 201 Le Corbusier -280 Boulevard Michelet 13 008 MARSEILLE +33 4 91 71 10 72
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Type of building:	<input checked="" type="checkbox"/> Tertiary	<input type="checkbox"/> Residential	<input type="checkbox"/> Mixed
Property:	<input checked="" type="checkbox"/> Public	<input type="checkbox"/> Private	<input type="checkbox"/> Mixed
Management:	<input checked="" type="checkbox"/> Public	<input type="checkbox"/> Private	<input type="checkbox"/> Mixed

Fields of action:	<input checked="" type="checkbox"/> Construction	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Use
	<input checked="" type="checkbox"/> Energy generation and distribution		<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Replacement or implementation of renewable energies		Wood boiler, thermal solar collectors for heating staff apartments

Please, evaluate if the following processes take place in the Best Practice that you are describing in this form:

The <b>data collection</b> has been complete and rigorous	Yes	No
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Communication and awareness</b> processes have been developed to disseminate this practice	Yes	No
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Training actions</b> have been provided	Yes	No
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Product and services</b> have been improved	Yes	No
	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Jobs** have been created

x	
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**Sustainable financial models** have been applied

	x
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Agreements or **collaboration models** have been defined between parties

	x
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Positive impact tested in the following fields (add quantitative data if you have):

<b>ENERGY EFFICIENCY IMPROVEMENT (EE)</b>	Improvement of energy efficiency by at least 20%
<b>FINANCIAL COVERAGE</b>	Funding from European Investment Bank
<b>EMPLOYABILITY POTENTIAL</b>	Teaching positions created
<b>OTHER</b>	<ul style="list-style-type: none"> <li>• Project regularly praised by the mayor of the township</li> <li>• Served as a case study for a trainers' training in sustainable buildings</li> <li>• Was part of a study on seven sustainable building projects in the PACA region, aiming at identifying the specific skills that had been mobilized and those that had been missing.</li> <li>• Lead to competitive dynamic between the Conseil Général (General Council, owner of the Collège or intermediate school) and the Conseil Régional (Regional Council, owner of the High-School)</li> <li>• Gave the idea of evaluating schools that had completed an environmental quality process</li> </ul>
<b>DIFFICULTIES</b>	<ul style="list-style-type: none"> <li>• It would have been preferable to replace the joinery that had installation defects</li> <li>• It was not possible to insulate the low-floor</li> <li>• There is an open corridor on the north side, facing the prevailing wind. It would have been preferable to glaze it, with some openings to remove the heat of summer.</li> <li>• Big airtightness issues, strongly impacting thermal comfort in heavy wind: the premises are then found to be under-heated, even though they are regularly over-heated when there is no wind. Hence the difficulty to define a temperature set point. It has been proposed to control the heating using an anemometer.</li> <li>• Problems with overheating in summer: no natural cross ventilation was planned</li> <li>• Problem of junction between the glazing and the joinery</li> </ul>

Agents involved in this experience:

	Legislation agencies
x	Public promoters
	Private promoters
x	Technical public institutions
	Technicians of the private sphere (professional associations ...)
	Builders

	Industrial
x	Facility Managers (property managers, cleaning companies ...)
	Energy supply companies
	Users/owners (homeowners association, schools ...)
	Other:

<b>GAPS</b>	<p>Training needs:</p> <ul style="list-style-type: none"> <li>• For building owners <ul style="list-style-type: none"> <li>- In order to be able to identify their contractors' missions: in terms of definition, and in terms of budget.</li> <li>- On the eco-conditionality of public aid.</li> <li>- Concerning the link between the Public Procurement Code and the sustainable requirements (in particular for owners and lawyers' Public Market Services).</li> </ul> </li> <li>• For contractors (architects and consultants) on all the topics of environmental quality: common core as well as trade specific modules. Also consider "à la carte" training option.</li> <li>• For companies working on the refurbishment <ul style="list-style-type: none"> <li>- On wood boilers</li> <li>- On control systems and Centralized Technical Management Systems</li> <li>- On the choice of ventilation systems</li> </ul> </li> <li>• Emphasis should be put on inter-trade training</li> </ul>
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(\*) **RR\_BB\_FF\_NN**

**RR** Country: **CY** (Cyprus), **FR** (France), **GR** (Greece), **IT** (Italy), **MT** (Malta), **PO** (Portugal), **SL** (Slovenia), **SP** (Spain)

**BB** Type of building: **RE** (residential), **TE** (tertiary), **MX** (mixed)

**FF** Field of action: **CO** (construction), **MA** (maintenance), **US** (use), **EN** (energy generation and distribution), **OT** (other)  
(in case of affecting more than one field of action choose the most relevant)

**NN** Number of the practice: **01, 02, 03...**

**(\*)IN CASE OF A TRAINING EXPERIENCE:**

Course name:	
Duration:	<i>Training hours/ECTS</i>
Web:	
Director/a:	
Who is it aimed:	<i>Profile of trainees</i>
Objectives:	<i>What enables this training?</i>
Program:	
Methodology:	<i>Format (face-to-face, on-line), structure of sessions, visits, case studies, evaluation systems, dynamic sessions, other aspects ...</i>

I agree to bring this experience to the database of the MARIE project, which will create a comprehensive training program for improving the energy efficiency of buildings in the area of the Mediterranean.