

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

**F1 | BEST PRACTICES COLLECTION**

Best Practice Name:	UPCO2
Code:	SP_TE_US_09

Best Practice Description:

Type:	<input checked="" type="checkbox"/> Action for improvement in the EE	<input type="checkbox"/> Training experience (*)	
Description:	Environmental management within the Program UPCO <sup>2</sup> , which has as main objective to reduce the energy consumption and the CO <sup>2</sup> emissions of the Universitat Politècnica de Catalunya (UPC) buildings. Development of a methodology and pilot action in the building of ETSAV (Escola Tècnica Superior d'Arquitectura del Vallès).		
Location:	Sant Cugat, Barcelona	Country: Spain	
Contact (team):	Albert Cuchí Burgos (UPC - <a href="http://www.etsav.upc.es/">http://www.etsav.upc.es/</a> ) Societat Orgànica Consultora Ambiental SL ( <a href="http://www.societatorganica.com">www.societatorganica.com</a> )		
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 type="checkbox"/> Construction	<input checked="" type="checkbox"/> Maintenance	<input checked="" type="checkbox"/> Use
	<input type="checkbox"/> Energy generation and distribution		<input type="checkbox"/> Other
	<input type="checkbox"/> Replacement or implementation of renewable energies		<i>Which ones?</i>

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

	Yes	No
The <b>data collection</b> has been complete and rigorous	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Communication and awareness</b> processes have been developed to disseminate this practice	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Training actions</b> have been provided	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Product and services</b> have been improved	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Jobs</b> have been created	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Sustainable financial models</b> have been applied	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Agreements or <b>collaboration models</b> have been defined between parties	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

<b>ENERGY EFFICIENCY IMPROVEMENT (EE)</b>	The methodology affects the building's skin, its facilities and its use and management. The first actions affect only the building's skin and the facilities management. The comparison of the consumption in the period when the actions were done in opposition to the consumption during the same period of the year before, considering the climate variation and the increase of surface to air-condition, gave an energy saving of 28% and a
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	reduction of CO <sup>2</sup> emissions.
<b>FINANCIAL COVERAGE</b>	In this case, with these tested actions, there is no important investment in machinery. The investment is only in staff operators in order to carry out the previous studies and the application of the specific actions. The project proposes financing models when the investment starts to be of importance (machinery, skin, etc.)
<b>EMPLOYABILITY POTENTIAL</b>	In this pilot action the aim was not to generate employment, but to reorient the existing employers, specially the UPC maintenance staff, which would probably need some complementary training.
<b>OTHER</b>	The project and the methodology, although centered in energy and CO <sup>2</sup> , can be used to apply in other areas like water consumption, materials and waste emissions.
<b>DIFFICULTIES</b>	The main difficulty is to obtain the collaboration, mainly during the initial phase, of a big part of the people involved in the use and management of a building (and building market) which, in this case, it would be the users of the building: students, teachers, administrative, directive, maintenance and cleaning staff, etc. Other usual difficulties in these kind of projects could be the low prices of conventional energies or the obstacles that some regulations can generate.

Agents involved in this experience:

	Legislation agencies
	Public promoters
	Private promoters
X	Technical public institutions
	Technicians of the private sphere (professional associations ...)
	Builders
X	Industrial
	Facility Managers (property managers, cleaning companies ...)
X	Energy supply companies
X	Users/owners (homeowners association, schools ...)
	Other:

<b>GAPS</b>	The need of training in sustainable refurbishment, understanding the whole life cycle of the building and the different impacts, is essential nowadays. It affects all areas (technicians, promoters, industrials, property administrator, etc.) It is fundamental that all the studies that are done related to this, need to be collected, analyzed, disseminated and the conclusions need to be done. And before that, they need to be promoted and coordinated from an institution. From the Oficina Verda it was suggested to create a Sustainability Observatory of Catalunya to lead this process.
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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...**