

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

F1 | BEST PRACTICES COLLECTION

Best Practice Name:	Annamaria residence: the first in Umbria certified Class A CasaClima
Code:	IT_RE_CO_14

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>The real benefits are the cost of management, an apartment of 100 square meters built with traditional methods need to be heated to 1500 cubic meters of natural gas per year while in an apartment built with these design features will do about 300 cubic meters per year with a significant reduction of CO2 emissions.</p> <p>The precautions taken were as follows</p> <ul style="list-style-type: none"> - EXTERNAL WALLS realized with heat block poroton 30 cm expanded and insulation cover with polystyrene and graphite, 14 cm thick; - COVERAGE with laminated wood 18 cm of thermal insulation in wood fiber and ventilation chamber; - WINDOWS PVC and reversing camera with cavity with argon gas and low emissivity glass; - THERMAL BRIDGES resolution: at the base from the balcony has been used a thermal element; to ensure the air tightness of the cover has been used a particular sheet and the gutter has been produced with rafters fixed to the perimeter beam; to ensure continuity of insulation between the floor of the ground floor and the outer wall has been used a layer of cellular glass (FOAMGLAS) as starting of the masonry, this solution also prevents the rising damp; - PARTITION WALL BETWEEN APARTMENTS has been realized aiming mainly to acoustic comfort with insulating blocks 25 cm coated with hollow tiles to allow the passage of installations without compromising the insulating characteristics of the block - SYSTEM OF CONTROLLED VENTILATION. Mechanical and centralized ventilation with double flow and heat recovery inside the apartments to ensure the renewal of the air with natural recovery of the calories of the extracted air polluted to preheat the fresh air introduced into the local - HEATING AND COOLING SYSTEM FLOOR integrated with solar panels on the roof - RECOVERY OF RAINWATER for irrigation 	
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Location:	Perugia	Country:	Italy
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Contact (team):	<p><i>MORENO TIBERI</i> legal representative of the enterprise <i>GALLANO S.R.L - EDILIZIA EVOLUTA – VIA DEL CONSERVIFICIO 75a -06083 – BASTIA UMBRA (PG)</i> <i>tel: 075/8011822</i> <i>e-mail: morenotiberi@gallano.iit – http://www.gallano.it</i></p>		
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Type of building:	<input type="checkbox"/> Tertiary	<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Mixed
Property:	<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Mixed
Management:	<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Mixed

Fields of action:	<input checked="" type="checkbox"/> Construction	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Use
	<input type="checkbox"/> Energy generation and distribution		<input type="checkbox"/> Other
	<input checked="" 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 data collection has been complete and rigorous	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Communication and awareness processes have been developed to disseminate this practice	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Training actions have been provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Product and services have been improved	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Jobs have been created	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sustainable financial models have been applied	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Agreements or collaboration models 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):

ENERGY EFFICIENCY IMPROVEMENT (EE)	<p>The Annamaria Residence consumes 80% less energy compared to a building of the same size made according to the regulations in force (Legislative Decree n. 311 of 2006).</p> <p>Solar panels, in addition to the production of hot water, cover about 80% of the building's energy requirements.</p> <p>During the construction of the residence Annamaria, we literally cut and left exposed some points situated along the condominium, to make sure to create a trail for anyone interested in understanding what is behind the skin of buildings like this. So through these glass display cases is possible to create guided tours.</p>
FINANCIAL COVERAGE	<p>The Annamaria Residence has not benefited from public funding related to the field of EE. From the City of Perugia it has been recognized, during the project approval phase, a reward in sqm due to the high energy efficiency that characterizes the building being the first building to be certified CasaClima class in Umbria Region</p> <p>ROI: about 5 years of usage</p>
EMPLOYABILITY POTENTIAL	<p>The company Gallano LTD has taken many workers because of the need to train them to manufacture products with high energy efficiency. In addition, the companies involved have temporarily or continuously assumed the specialists in the design and implementation of parts of the plant</p>
OTHER	<p>It's definitely been a cognitive growth experience in the study and application of materials and techniques aimed at saving energy. It 'was a test and study very interesting, not only for the Gallano Ltd., but also for all companies involved, which have been "infected" by the philosophy that the project was born: to create a building that truly give maximum comfort and minimum energy consumption and to proceed scientifically in all phases of production, without losing any detail. The challenge was to certify these consumptions! It was uplifting for all of us to be able to</p>

	combine the type of construction typical of our area with contemporary technologies.
DIFFICULTIES	At a time when it was realized the residence Annamaria our workers were not formed for the laying of many of the materials that we used; now, with the training received, deep understanding of the spirit of the design of a building with high energy savings many of the problems are easily solved. For instance we have perfected the use of cellular glass, joints shock, we have made special subframe suitable for the solution of thermal bridges in buildings covered with coat, we have perfected the strategy plant being able to size it, without waste, depending on the structural characteristics of each building.

Agents involved in this experience:

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

(*) **RR_BB_FF_NN**

RR Country: **CY** (Cyprus), **FR** (France), **GR** (Greece), **IT** (Italy), **MA** (Macedonia), **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...**