PROMOTION AND IMPLEMENTATION OF ETV AS AN EU VOLUNTARY SCHEME FOR VERIFYING PERFORMANCE OF ENVIRONMENTAL TECHNOLOGIES

GREEN PUBLIC PROCUREMENT: LEARNINGS FROM PESARO CITY, ITALY

This project has received funding from the European Union's LIFE Programme under Project Number LIFE19 GIE/PL/000784 and is co-financed by the National Fund for Environmental Protection and Water Management, Poland and the Ministry of Agriculture, Hungary

National strategies for GPP/IP implementation, feedback from local authorities

LIFE PRO ETV

Green public procurement: learnings from Pesaro city, Italy

Margherita Finamore

Pesaro Municipality, Pesaro, Italy

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National Fund for Environmental Protection and Water Management

AGRÁRMINISZTÉRIUM

Green public procurement: learnings from Pesaro city, Italy

Introduction:

- Sustainable criteria in the GPP
- The importance of procurement for circularity:
  Monitoring and verification
- The case study of Pesaro City
- Recommendations & Results

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Green public procurement: learnings from Pesaro city, Italy

ANALYSIS NEEDS

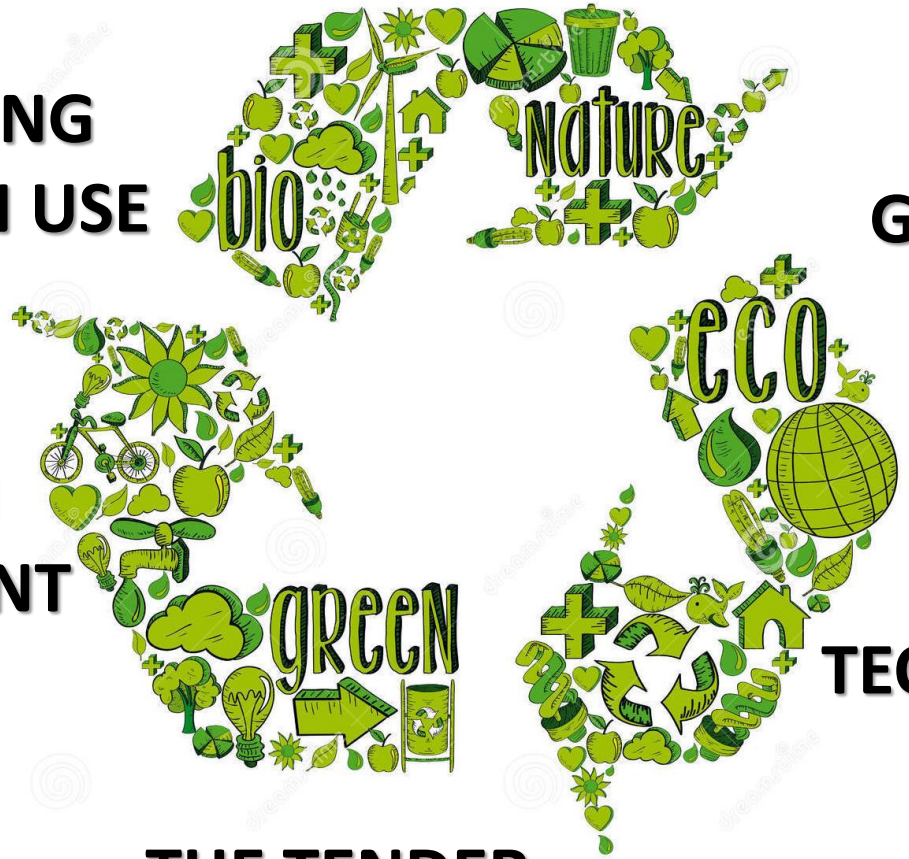
GOALS

TECHNICAL REQUIREMENTS

THE TENDER

CONSTRUCTION SITE MANAGEMENT

MONITORING RESULTS IN USE



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N. scheda	OGGETTO DELLE SCHEDA DI MIGLIORAMENTO ENERGETICO_AMBIENTALE
01	Efficienza termo-igrometrica elementi trasparenti
02	Efficienza termo-igrometrica copertura
03	Efficienza termo-igrometrica pareti perimetrali
04	Facciata ventilata
05	Frangisole esterni
06	Automatizzazione dell'illuminazione
07	Impiego di sistemi di VMC e recuperatore di calore
08	Pompa di calore
09	Monitoraggio consumi energetici
10	Gestione area di raccolta e stoccaggio materiali e rifiuti
11	Certificazione della sostenibilità energetico-ambientale

Envelope Efficiency

Plant Efficiency & Monitoring System

Environmental Efficiency

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4 Goals for achieving sustainability within GPP

LOW CARBON FOOTPRINT

COMFORT FOR ALL

RENEWABLE ENERGY PRODUCTION

ENERGY CONSUMPTION REDUCTION

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LOW CARBON FOOTPRINT

- **Low impact school:**
  - construction and demolition waste management, and also waste management during the construction phase;
  - zero land consumption;
  - EPD material labelling.
- **Waste management:**

  556,630 kg of waste were created
  546,378 kg was recycled
  98% recovered waste
- **Architectural design:**

  shape and position of the building orientated to best exploit solar radiation and optimize the free solar gains and natural lighting and shading
- **Labeling:**

  LEED Platinum with 88 points – nZEB standard

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- Remote and customized temperature
- both natural and artificial light control
- high acoustic performance obtained to create the best environment for learning and teaching
- parking for bicycles, electric charging stations for cars
- **indoor air quality** by mechanical filtered ventilation climate system with a CO2 monitoring able to guarantee higher levels of indoor air quality with the air exchange of 5V per hour
- **natural ventilation** thanks to opening in the upper window sections

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Renewable Energy Production

Optimal production of electric energy due to the PV panels

- Photovoltaic installation of 158,40 m2;
- n. 96 photovoltaic modules of 300Wph and 1,96 m2 each
- Photovoltaic power ratings 28,8 Kw continuous current
- Inverter Solaredge 27,6KW alternate current
- 113,5 kW heat pump

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ENERGY CONSUMPTION REDUCTION

Energy Consumption Reduction:

- -59,07% considering TEP reduction compared to standard construction (UNI TS 11300 and UNI EN 15193)
- - 34,8% reduction of annual costs thanks to:

Envelope efficiency:

- thermal insulation
- thermal bridges evaluation
- green roof and
- ventilated wall made of modular porcelain stoneware avoids overheating, minimize losses and reduces also the maintenance costs of the façade
- the high efficiency heat recovery unit
- optimized lighting (LED)
- automatic consumption monitoring control system to make also friendly and easy the use of building
- heating system: floor heating and VAV system (variable air volume)
- cooling system: floor cooling and VAV system (variable air volume)

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https://www.construction21.org/case-studies/h/antonio-brancati-middle-school.html

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Environment 2020 Europe's state:

change of direction urgently needed to face:

- **climate change challenges**
- **resource depletion**
- **ensure future prosperity**

Environmental Technology Verification: A scheme for de-risking cleantech innovations and investments

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Thank you for your attention

m.finamore@comune.pesaro.pu.it

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