

The Efficient Buildings Community



**The MED hub for innovative and shared
Energy Efficiency solutions**

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The MED Efficient Buildings Community is an important piece of the Interreg Mediterranean programme.

As the MED hub for innovative and shared energy efficiency solutions, the MED Efficient Buildings Community facilitates the discussion on how to overcome the barriers that public organisations, namely local authorities, face to reduce their building’s energy consumption.

A team of local public authorities, energy agencies, research institutes and NGOs promotes the activities of the MED Efficient Buildings Community by communicating, transferring and capitalizing its results and experiences to new regions.

By establishing a joint transnational network around these issues, the MED Efficient Buildings Community helps improve the skills of public building owners and managers when it comes to better energy efficiency practices. The MED Efficient Buildings Community sees itself as a multi-stakeholder advocator aiming at influencing EU and national policies. The EU Renovation Wave Strategy and its further implementation by Member States may present an opportunity for a new regulatory framework that considers Mediterranean specificities and makes use of innovative solutions tested and proposed by the MED Efficient Buildings Community.

This booklet presents an overview of the work of the MED Efficient Buildings Community including a short description of its projects and main outputs, namely the tools, methodologies, platforms and e-learnings ready to be used and implemented in other regions.



The Interreg MED Modular Projects

Aiming at transforming ideas into concrete and innovative solutions with a transnational impact, the Interreg MED programme 2014-2020 developed a module-based approach which allowed projects to adapt to the focus and quality requirements of the European Commission and the MED area, allowing each applicant to optimise its role and activities according to its expertise and technical or institutional profile.

The Interreg MED Modular Projects of the programming period 2014-2020 priority axis 2 “Low-carbon economy” were aimed at raising capacity for better management of energy in public buildings. While some projects focused on the assessment and implementation of sustainable energy policies and urban plans, others were dedicated to the development of innovative financial schemes, energy strategies, management models and solutions for nearly zero-energy buildings (NZEB) or for deep renovation of public buildings.



Sustainable Mediterranean cities CESBA MED

The main objective was to reinforce the capacities of public administrations through the provision of a transnational methodology and set of tools able to optimize energy planning measures at a neighbourhood level (buildings and urban spaces).

<https://cesba-med.interreg-med.eu/>

School low carbon footprint in Mediterranean cities

EDUFOOTPRINT

EduFootPrint intended to raise capacity of owners and managers of public schools and to promote low carbon footprint schools in Mediterranean cities. The project developed and tested a Life Cycle Assessment methodology for the carbon footprint of several pilot schools.

<https://edufootprint.interreg-med.eu/>



Joint actions for energy efficiency

ENERJ

ENERJ focused on promoting new financial schemes to undertake energy saving measures and policies. It also supported the optimization of planning procedures for a more efficient use of financial resources.

<https://enerj.interreg-med.eu/>



Integrated management support for energy efficiency in Mediterranean public buildings

IMPULSE

After extensive testing in different Mediterranean cities, IMPULSE developed an integrated management support information system to plan energy efficiency interventions.

<https://impulse.interreg-med.eu/>

New finance for energy efficiency measures in public buildings

NEW FINANCE

NEW FINANCE aimed at catalysing investments in energy efficiency measures and renewable energy integration. The project supported the development and implementation of innovative financial schemes that leverage public funds on private financial resources and lead to bankable energy projects.

<https://new-finance.interreg-med.eu/>



Prioritise energy efficiency measures in public buildings

PrioritEE

PrioritEE intended to strengthen public building's owners planning competences and to give methodological support for the operative implementation of local action plans (cost-effective measures and soft behavioural actions).

<https://prioritee.interreg-med.eu/>

Shared knowledge for energy renovation in buildings by public administrations

SHERPA

SHERPA's main objective was to reinforce the capacity of public buildings owners and managers on EE issues, namely on energy renovation solutions, by using a holistic, transnational and peer-to-peer approach.

<https://sherpa.interreg-med.eu/>



Supporting innovative schemes in the Mediterranean area

SISMA

SISMA focused on the development of innovative supporting schemes for buildings refurbishment. The project also developed a common strategy to accelerate the adoption of these models at local level, in the MED area.

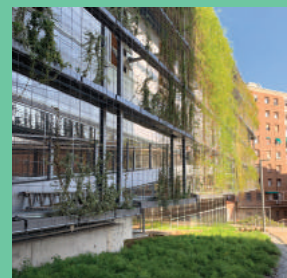
<https://sisma.interreg-med.eu/>

Supporting Energy Performance Contracts public procurement

STEPPING

In order to support the implementation of energy performance contracts in the MED area, the STEPPING project tested different EPC investment plans and verified their cost-effectiveness in the MED context.

<https://stepping.interreg-med.eu/>



Transferring energy efficiency in Mediterranean schools

TEESCHOOLS

TEESCHOOLS aimed at providing new solutions to local authorities, both in technical and financial terms, to implement Nearly Zero Energy Building (NZEB) renovation actions in Mediterranean Schools.

<https://teeschools.interreg-med.eu/>

a community for efficient public buildings

A few results of the Community

Thanks to the pioneering projects and its proximity with practitioners on the ground, the MED Efficient Buildings Community gathered its knowledge in several publications to help public authorities across the Mediterranean region improve their buildings energy performance.

Technical Papers

The MED Efficient Buildings Community developed four Technical Papers that summarize all technical knowledge acquired by the Interreg MED modular projects in different topical areas.

Financing schemes and barriers. Analysis of all financial tools, methodologies and Energy Performance Contracting guidelines, and identification of the main financial barriers faced by public authorities.

Methodologies, tools and indicators. Review of all technical instruments and respective categorization by phase of the life cycle of an energy efficiency investment.

Training methodologies and capacity gaps. Presentation of the methodologies used to identify capacity gaps, engage stakeholders and transfer results.

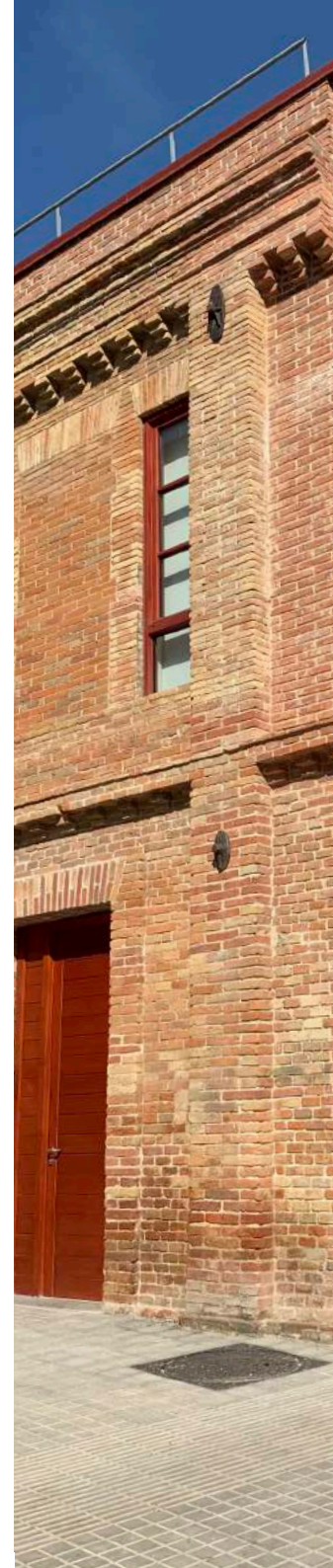
MED lessons learned. Presentation of the main pilot actions carried out, including the main opportunities and barriers faced during the implementation of the demo cases.

Policy Papers

The local experience of the MED Efficient Buildings Community on facing and overcoming barriers and legislative constraints has also been summarized and transformed into policy recommendations for national and European decision-makers.

Financing Energy Efficiency in Public Buildings. Financial resources are the real enablers of the energy renovation process

Communication, Education and Capacity Building. The missing gear between plans and actions.



Why is a better policy framework for building-related policies in the Mediterranean Member States needed?

The European Green New Deal, issued by the Commission on December 2019, and the resilience and recovery plans in response to Covid-19 are an opportunity to trigger a wide-scale renovation wave coupled with decarbonised supply. They will ensure a rapid and sustainable economic recovery while bringing numerous long-term benefits for people and climate. Moreover, building renovation should be a priority in the next long-term EU budget 2021-2027.

Buoyed by their on-the-ground experiences and considering the momentum created by the EU's ambition to decarbonise Europe, notably through a Renovation Wave, the Efficient Buildings Community pressures EU and national policymakers, programme managing authorities and national public authorities to encourage low-carbon public buildings by taking into consideration the learnings from the relevant stakeholders in the Mediterranean area.

Key policy messages from the MED Efficient Buildings Community ¹

For European policymakers

1.

Monitor the transposition and implementation of the buildings related EU Directives (EPBD, EED and RED) to effectively identify synergies and barriers

- Evaluate the transposed laws and regulations as well as strategic plans (NECPs, LTRS) issued by Member States
- Monitor and enforce the implementation through new build standards (NZE Buildings), ambitious renovation standards and renovation rate (3%)
- Further encourage the involvement of regional and local levels in the implementation of their 2030 Long Term Renovation Strategies

2.

Adapt financial rules and dedicate funding tailored to the Mediterranean area

- Establish a financing facility of the "ELENA MED" type
- Set up a funding program during the 2021-2027 period that aims at massively replicating know-how generated in EU funded projects

3.

Foster harmonisation of EU-wide standards while designing differentiated policies

- Increase data availability and uniformity for all public building types at all governance levels (public building databases and observatory)
- Introduce a common and unique framework for energy audits and building renovation passports
- Set European standards in green buildings training programmes/ certification specifically addressing the skills gaps in public authorities

¹ Developed in the first half of 2020 and considering the policy scenario at the time

For national policymakers in Mediterranean countries

1.

Coordinate building renovation objectives in all strategies through a multi-governance approach

- Monitor and support the implementation of SECAPs and align national strategies (NECPs, LRTS) with regional and local plans
- Member States should publicly communicate their LTRS milestones and regularly report on implementation progress
- Harmonise laws and norms throughout all jurisdictions

2.

Improve the organisational readiness for the evaluation and benchmarking of public building performance

- Create more possibilities for ad-hoc training of local and regional technicians coupled with user-friendly and versatile diagnosis tools for the implementation of an Environmental Management System
- Implement and enforce in local and regional authorities
- Develop a national buildings performance observatory

3.

Improve national training and qualification strategies for the energy performance of buildings

- Review national training strategies and co-design them with the involvement of local administrators in order to be aligned with the European 2050 carbon-neutrality objective
- Develop a sustainable energy skills passport/register for building professionals at national or regional level

4.

Facilitate access of local and regional authorities to public money

- Simplify administrative formalities and procedures for public fund requests: A national central financing helpdesk should be provided to support the technical services of municipalities in all the technical, legal and economic phases for the preparation and management of a request for public funds

5.

Speed up the use of Energy Performance Contracting (EPC) schemes to finance public building renovation

- Put in place standardised procedures and create a more favourable public procurement framework for energy performance contracting
- Implement tailored training courses for public servants on Energy Performance Contracting



A large pool of tools, methodologies, platforms and e-learnings for public planners

The Efficient Buildings project is responsible for transferring and capitalizing the outputs of the Interreg MED Modular projects in the context of the policy change and the new EU Green Deal. All the outputs were successfully implemented in the Mediterranean area and now the MED Efficient Buildings Community is working to expand their implementation, contributing to long-term renovations and an increase in the energy performance of public buildings.

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methodologies

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platforms and
e-learnings

To better achieve this goal, the MED Efficient Buildings Community focused on the outputs which are ready to be used and implemented in different territories.





Tools ready to be used

From the analysis previously mentioned, seven tools were selected for the transferring and capitalisation activities.

► EduFootprint Calculator

Tool to calculate the environmental footprint of public schools. The calculator covers energy consumption, mobility, food and waste. It measures resource consumption and the activities carried out in the schools and calculates their environmental impact.

Scope: Measurement and assessment

Target: Schools owners and final users (teachers and students), Local authorities

Test countries: The tool has successfully been applied in Spain, Greece, Slovenia, Italy and Portugal.

► IMPULSE Online

Integrated management support system for planning energy efficiency interventions in public buildings. The tool is a GIS-based platform that allows the user to see in a simple way the energy results of gradual energy upgrading investments for a group of public buildings.

Scope: Strategy and planning

Target: Local decision-makers and technical experts

Test countries: The tool has successfully been applied in Italy, Greece, Spain, France, Croatia and Bosnia.

► IMPULSE Financial Scheme Evaluation Tool

Online web-based application for the simulation of long-term financial plans for the gradual energy renovation of public buildings. The objective of the tool is to characterize the building stock, plan gradual retrofitting according to four levels of performance and investments (minor, medium, major and deep renovation) and simulate possible financial schemes.

Scope: Strategy and planning | Procurement and Finance

Target: Local decision-makers and technical experts

Test countries: The tool has successfully been applied in Italy, Greece, Spain, France, Croatia and Bosnia.

► PrioritEE Decision Support Tool

Tool to calculate energy and financial savings in individual public buildings and the whole building stock by applying different energy efficiency measures.

Scope: Strategy and planning

Target: Local decision-makers and technical experts

Test countries: The tool has successfully been applied in Italy, Greece, Portugal, Spain and Croatia.

► SISMA Set Tool

Simplified calculation for a preliminary assessment of energy and financial aspects of energy efficiency investments in public buildings and in particular, of the minimum amount of public subsidy needed to make an investment bankable.

Scope: Procurement and finance

Target: Local decision-makers and technical experts

Test countries: The tool has successfully been applied in France, Italy, Greece, Spain, Slovenia and Bosnia.

► STEPPING EPC Simulation Tool

Assessment of investment scenarios for energy renovation projects in public buildings. The tool was specifically designed to assess an investment plan of a bundling of buildings.

Scope: Procurement and finance

Target: Local decision-makers and technical experts

Test countries: The tool has successfully been applied in France, Italy, Greece, Portugal, Slovenia and Malta.

► TEESCHOOLS Pre-audit web tool

Integrated set of tools supporting energy efficiency management in schools. The set includes tools for the estimation of the buildings energy performance compared to the national benchmark, the calculation of the potential energy savings and the selection of the most promising renovation actions, but also a tool that allows the user to evaluate these actions from a financial point of view.

Scope: Measurement and assessment

Target: Local decision-makers and School building users

Test countries: The tool has successfully been applied in France, Italy, Greece, Spain, Croatia and Cyprus.



Methodologies for better planning and decision-making

From the analysis previously mentioned, seven methodologies were selected for the transferring and capitalisation activities.

► EduFootPrint Guidelines for energy efficiency monitor and management in public buildings

Guidelines to support owners, users and managers of public schools in the definition of energy action plans and their integration with the local Sustainable Energy Action Plan and Sustainable Energy and Climate Action Plan.

Scope: Strategy and planning

Target: Schools owners and final users (teachers and students) and local authorities

Additional notes: The methodology was developed by partners in Spain, Greece, Slovenia, Italy and Portugal.

► ENERJ Guidelines for Joint Actions for Energy Efficiency

Guidelines for the technical and administrative steps to effectively plan, design, implement, manage and monitor joint actions for energy efficiency, preferably within the framework of joint Sustainable Energy Action Plans.

Scope: Involvement and training

Target: Local decision-makers and technical experts

Additional notes: The guidelines were based on the knowledge from partners from Italy, Spain, Croatia, Greece, Portugal, Slovenia and Albania.

► IMPULSE Methodology Booklet

Methodology for an integrated management support system for planning 20-year building energy upgrades in public buildings. The methodology establishes the different stages for the building gradual retrofitting, including the classification of the building stock, an energy analysis through Key Performance Indicators and the renovation and financial planning.

Scope: Strategy and planning

Target: Technical experts

Additional notes: The methodology has been tested in Italy, Greece, Spain, France, Croatia and Bosnia.

► PrioritEE How to Briefs

Compilation of information to facilitate energy efficiency and renewable energy deployment on municipal public buildings. The briefs address several topics including stakeholder's engagement, sustainable energy action plans development, innovative financing, roof-top uses for more efficient buildings, building envelope and sustainable thermal comfort, centralised energy management and behavioural changes for increased energy efficiency in public buildings.

Scope: Involvement and training

Target: Local decision-makers, technical experts and building managers

Additional notes: The methodology was based on the knowledge of partners from Italy, Greece, Portugal, Spain and Croatia.

► PrioritEE Repository of Good Practices

Compilation of good practices to promote sustainable energy awareness and foster behavioural changes in municipal public buildings.

Scope: Involvement and training

Target: Local decision-makers, technical experts and building managers

Additional notes: The database is composed by best practices implemented in Italy, Greece, Portugal, Spain and Croatia.

► SHERPA Joint Action Plan

Document that capitalises common experiences of regional and local administrations and that identifies five strategic themes and operative actions for policy implementation as well as an investment plan for the implementation of the actions

Scope: Strategy and Planning

Target: Energy agencies, National, regional and local authorities, building industry professionals, financial institutions, enterprises, business support organizations, NGOs and academic & research institutions

Additional notes: The document was based on the knowledge of partners from France, Italy, Greece, Spain, Croatia and Malta.

► STEPPING Mediterranean EPC Guidelines

Step-by-step guidance for the energy retrofitting of public buildings through Energy Performance Contracts, taking into consideration the intrinsic characteristics of the Mediterranean area.

Scope: Procurement and finance

Target: Local decision-makers, technical experts, enterprises (ESCO) and financial institutions

Additional notes: The methodology was tested in France, Italy, Greece, Portugal, Spain and Slovenia.



Platforms and E-Learnings to share know-how and best practices

From the analysis previously mentioned, seven platforms and e-learnings were selected for the transferring and capitalisation activities.

► EduFootprint Platform

Repository of best practices in the fields of electric energy, thermal energy, mobility and other practices related to the reduction of carbon footprint

Scope: Measurement and assessment

Target: Schools owners and final users (teachers and students) and local authorities

Additional notes: The platform contains best practices implemented in Spain, Greece, Slovenia, Italy and Portugal.

► ENERJ Platform

Database of energy retrofit actions included in SEAPs also containing a useful tool for the development of scenarios and the assessment of the impact of the implemented joint actions. It is also a suitable tool to evaluate and monitor the effectiveness of the Joint Actions.

Scope: Involvement and training

Target: Local decision-makers, technical experts and citizens

Additional notes: The platform contains information about SEAPS and actions implemented in Italy, Spain, Croatia, Portugal, Slovenia and Malta.

► SHERPA Capitalisation set of toolkits

Hub of useful information aiming at fostering transnational cooperation around buildings' energy renovation (ERB). The toolkits are divided in four main categories each containing a repository of deliverables, best practices, methodologies, experiences and results from the SHERPA project as well as from other related MED/EU projects and initiatives on the energy efficiency of buildings.

Scope: Involvement and training

Target: Energy agencies, National, regional and local authorities, building industry professionals, financial institutions, enterprises, business support organizations, NGOs and academic & research institutions

Additional notes: The platform contains information related to project in France, Italy, Greece, Spain, Croatia, Slovenia and Malta.

► SISMA Training Scheme

Training scheme to increase the knowledge of local public authorities on innovative financing models to improve the energy performance of public buildings. The training exploits and transfers innovative financing solutions that use public/private schemes for financing (such as ESCOs) and that leverage energy savings' potentials.

Scope: Involvement and training

Target: Local decision-makers and technical experts

Additional notes: The training scheme was successfully implemented in France, Italy, Greece, Spain and Slovenia.

► STEPPING EPC Training Package

Capacity building on Energy Performance Contracts for technical experts and local authorities. The training addresses different topics including EPC schemes, energy audits, engagement of the local EPC market, elaboration of tender schemes, contracts and specifications, among others.

Scope: Involvement and training

Target: Local decision-makers and technical experts

Additional notes: The training was successfully implemented in France, Italy, Greece, Portugal, Spain, Slovenia and Malta.

► STEPPING Platform

Platform aiming at increasing the adoption of EPC investment schemes for public buildings energy refurbishment in the MED Area. It was designed to help build new business partnerships, exchange project ideas, support the stakeholders via training activities and to develop a true EPC MED community.

Scope: Involvement and training

Target: Local decision-makers, technical experts, enterprises (ESCO) and financial institutions

Additional notes: The platform contains information related to the different outcomes developed by partners in France, Italy, Greece, Portugal, Spain, Slovenia and Malta.

► TEESCHOOLS E-learning Platform

Capacity building on the implementation of nearly Zero Energy Buildings (NZEB) in the school sector. The e-course provides up to date information on the legislative context, the available technical solutions and existing financial incentives for local authorities of the Mediterranean area.

Scope: Involvement and training

Target: Local decision-makers and technical experts

Additional notes: The training was tested in France, Italy, Greece, Spain, Croatia and Cyprus.



To further promote the EBC outputs and to extend the number of testing areas and users, the Efficient Buildings project will organise peer-to-peer events to disseminate the outcomes such as Living Labs, capacity-building workshops and city twinning partnerships.

Follow the work of the MED Efficient Buildings Community and become part of it:

<https://efficient-buildings.interreg-med.eu/>



As a Mediterranean hub for energy efficiency innovative and shared solutions, the MED Efficient Buildings Community brings together local, regional and national public authorities, energy agencies, enterprises and research organizations. It facilitates the discussion on how to overcome the barriers that public organisations, namely local authorities, face to reduce their building's energy consumption.

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