

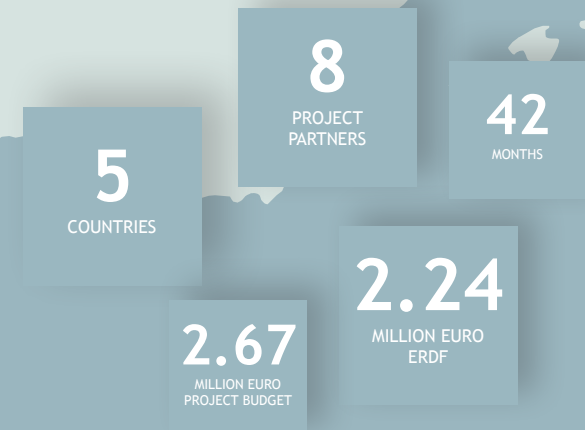
eCentral
ENERGY EFFICIENT PUBLIC BUILDINGS
IN CENTRAL EUROPE



PROMOTING nZEBs
NEARLY ZERO ENERGY
BUILDINGS

WHAT WE DID

We supported key stakeholders to realize benefits of the nearly Zero Energy Building (nZEB) standard for renovation and construction of public buildings. Objective of the project was to motivate public authorities to aim for more ambitious energy renovation standards of buildings, and to test the applicability of three innovative financing models in pilot regions.



**TAKING
COOPERATION
FORWARD**

WHO WE ARE

Partners from five central European countries joined their forces to develop and implement solutions for increasing energy efficiency and renewable energy usage in public buildings.

Austria

- Energy Agency of Styria

Croatia

- North-West Croatia Regional Energy Agency
- City of Sveta Nedelja

Hungary

- Energiaklub Climate Policy Institute and Applied Communications Association
- Municipality of 18th district of Budapest

Italy

- Eurac Research

Slovenia

- Energy Agency of Savinjska, Šaleška and Koroška Region
- Municipality of Velenje



WHO FUNDED US

Our project was funded by the Interreg CENTRAL EUROPE Programme that encourages cooperation on shared challenges in central Europe.

With 246 million Euro of funding from the European Regional Development Fund, the programme supports institutions to cooperate beyond borders to make central European cities and regions better places to live and work by implementing smart solutions answering to regional challenges in the fields of innovation, low-carbon economy, environment, culture and transport.

What started with Interreg IIC CADSES has evolved into today's Interreg CENTRAL EUROPE. Since 1997 transnational cooperation helped hundreds of great ideas to come true. More concretely, Central Europe projects build regional capacities by involving and coordinating relevant players from all governance levels. Within the four priority axes, they realise outputs with a focus on policy-learning, pilot actions and pilot investments.



www.interreg-central.eu

DISCOVER MORE ABOUT
eCentral

www.interreg-central.eu/eCentral

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ENERGY EFFICIENT PUBLIC BUILDINGS IN CENTRAL EUROPE

Energy Performance Building Directive requires that **all new public buildings have to be nZEB from 2019 onwards**. eCentral project raised awareness and motivated public authorities to implement renovation of public buildings into nZEB through innovative financing models.

FACTS AND FIGURES

€ 1,7 MIL
EUR of direct investments in CE regions

15
Strategic local and regional documents for sustainable energy planning

38
Feasibility studies of energy renovation projects worth 20,5 MIL EUR

19 MIL
EUR of investments in public buildings estimated in project documentation



5 TOOLS

Innovative technical and financial tools to help regional and local public authorities to develop complex energy efficiency projects

1. LIVING EPC TOOL

<https://nzeb.thorium.software>

The Living Energy Performance Certificates managing tool is a complex interactive web-based tool that offers **different combinations of cost-optimal measures for reaching nZEB requirements**. It is addressed to public authorities in partner regions Croatia, Hungary and Slovenia, available in national languages and national nZEB standard.

2. LIVING EPC TOOL DATABASE

Together with the EPC tool, its growing database **enables a better insight into the state of local building stock and renovation potential**.

3. STEP-BY-STEP GUIDE ON HOW TO TURN PUBLIC BUILDINGS INTO NZEB

<https://tinyurl.com/eCentral-StepbyStep-guide>

The guide aims to **supporting important phases of**

the renovation process through information about national nZEB targets, innovative financing schemes and regulation on tender processes. It is available in **english an also in five national versions**, with specific regulations of the project partners countries.

4. DECISION SUPPORT TOOL ON NZEB RENOVATION WITH INNOVATIVE FINANCING SCHEMES

<https://tinyurl.com/eCentral-DST>

To complement the guide, the decision support tool provides **understandable information about PPP, EPC and Crowdfunding to facilitate the decision** on the type on financing schemes to implement during the renovation project. The tool also provides useful best practice examples.

5. NZEB LIVING LAB

<http://nzeb.subant.com>

The Living Lab is a **user-centred, web-based knowledge sharing platform that enables networking** activities through a virtual forum. It integrates broad research on nZEB standard, innovative financing and legislation, with direct insights into experiences gained from our concrete pilot actions.



13 TRAINING EVENTS

Trainings for public authorities and energy agencies have been performed in the three target countries: Croatia, Hungary, Slovenia

Objectives of the activity were to deliver technical and financial knowledge on nZEBs, enable participants to understand the financial and environmental benefits of such projects, enable participants to develop new skills and facilitate their transition to inspired and motivated project developers. The trainings were based on the nZEB curriculum, a program jointly developed at transnational level and then tailored according to specialities and needs of each country and target group.

The nZEB curriculum covered four topics:

1. Energy Efficiency policies and nZEB regulations
2. nZEB technologies
3. Innovative financing schemes for nZEB refurbishments
4. How to prepare nZEB tenders

The trainings have been performed by **Regional Working Groups** in form of face to face and online events and **involved 118 participants**.



4 STRATEGIES & ROADMAPS

Strategies for financing and renovating public buildings have been developed for various levels of governance

Three energy renovation roadmap for the pilot actions have been developed. The process starts from the feasibility study, discussed during a peer review workshop, followed by the preparation of tender documentation for Public-Private Partnership (PPP) and Energy Performance Contracting (EPC), and the campaign development in the case of crowdfunding. The following steps are the contracting, (re)construction and commissioning of the project, that must then be monitored, verified and promoted.

Based on market assessment and concrete pilot actions that will apply innovative financing schemes **a Joint strategy for market uptake** has been developed using a bottom-up approach.

The strategy identifies barriers and bottlenecks on national levels and provides concrete policy improvements for the wider Central European region.



3 PILOT ACTIONS

Innovative financial models have been tested for the (re)construction of public buildings in accordance with nZEB standards

1. CROATIA - Testing of PPP model

The investment for the construction of a new kindergarten in Sveta Nedelja, as initially planned, was too small for any PPP model. As a result, the pilot action included the construction of two schools in the municipalities of Marija Bistrica and Stupnik.

2. HUNGARY - Testing of EPC models

The investment for the renovation of Vackor kindergarten in Budapest, as initially planned, was not seen as cost-feasible by ESCOs. As a result, the pilot action included the renovation of two swimming pool and sport centres.

3. SLOVENIA - Testing of crowdfunding model

The investment for the renovation of the Lifelong Learning centre in Velenje has been realised with additional funding from the municipal budget. Crowdfunding for energy renovation project was a novelty, and Slovenia lacks proper legislation for this financial model.