INVESTMENT FACTSHEET

(applicable for investments > 25.000 EUR total cost)

Project index number	CE0100345	**Acronym**	ZEB4ZEN
Investment number	I2.2	**Investment title**	Optimization of the thermal insulation system
Linked to pilot action (Output number - O.xx)	O.2.2	**Pilot action title**	Optimization of the thermal insulation system of historical tenement houses pilot action /Thermal insulation of the attic of a historic building
Responsible partner	City of Zamość		
Investment finalisation date	31 March 2026		
Project website	https://www.interreg-central.eu/projects/zeb4zen/ https://www.zamosc.eu/projekty/87-zero-energy-buildings-for-zero-energy-neighbourhoods		

Summary description of the investment

Please address the following topics.

Technical description of the investment (e.g. specific characteristics, technological concept, size, capacity, etc.)

(max. 5000 characters - depending on the investment size and related costs - if needed, please adjust the size of the textbox accordingly)

The pilot investment under Activity A2.2 refurbished the attic of the historic tenement house at Ormiańska 11, Zamość, in the UNESCO-listed Old Town. The works addressed attic walls, roof slopes and the ceiling adjoining the unused loft, using heritage-compatible internal thermal insulation rather than external façade insulation. Mineral insulation boards were installed on external walls and roof slopes, typically 10 cm thick and locally 5 cm where spatial or conservation constraints applied. The loft-side ceiling and roof slope were insulated with 15 cm sheep's-wool insulation, incorporating appropriate membranes and maintenance access. Works also included heritage-compatible window joinery, refurbishment of the heating installation and radiators, mechanical supply/extract ventilation, a multi-split air-conditioning system and related electrical installations. The intervention preserved the historic external architectural character; required visible service elements were positioned with conservation constraints in mind. The investment was based on technical surveys and material testing and required conservation and building permits. Construction was completed on 2 October 2025; formal acceptance took place on 7 October 2025. Post-renovation measurements, including thermography and in-situ U-values, were conducted in January 2026, separately from the model-based assessment of annual energy performance.

Transnational relevance of the investment and how it contributed to the pilot action
(max. 1000 characters)

The investment tests a replicable process for improving energy efficiency in protected historic buildings, combining material investigations, hygrothermal considerations, conservation approval, technical design and measured post-renovation checks. Zamość's experience was exchanged with other ZEB4ZEN partners and incorporated into D.2.4.2. The pilot demonstrates how municipal authorities, technical experts and heritage bodies can implement a site-specific renovation without applying inappropriate standard external-insulation solutions.

Ownership, durability and, if applicable, maintenance of the investment after the project end (see also programme manual chapters I.4.3.6 and III.5)
(max. 1000 characters)

The City of Zamość owns the building and the installed improvements and remains responsible for inspections, repair and maintenance under applicable conservation and building rules. The intervention is a lasting part of the building fabric. Maintenance and future replacement of components fall within the City's ordinary building-management and budget procedures. Project design documents, technical evaluations and measurement records remain useful for subsequent maintenance and planning decisions.

Potential for scaling up or replicating the investment, contribution to the preparation and leverage of large-scale investments (if applicable)
(max. 1000 characters)

The pilot provides a documented approach for other protected tenement houses: establish the heritage and moisture baseline, test compatible solutions, obtain conservation permissions, design the insulation and building services, perform controlled works, and verify the outcome. It can inform future municipal renovation programmes but does not imply that the same insulation material or thickness is suitable everywhere. Replication requires building-specific hygrothermal assessment, structural and fire-safety checks, conservation consent and realistic life-cycle costing. Results are shared through WP2 technical reports and the transnational handbook D.2.4.2.

Environmental sustainability of the investment
Description of possible environmental effects of the investment. In particular for infrastructure investments with an expected lifespan > 5 years, possible impacts of climate change and planned mitigation measures for increasing climate resilience of the investment, if applicable (see also programme manual chapters I.3.3.3, I.4.4.5 and II.2.1.2)
(max. 1000 characters)

The works reduce the building's modelled useful heating and ventilation energy demand and can therefore reduce associated emissions, depending on actual energy supply and operation. The energy assessment estimates a 57,114 kWh/year (43.5%) reduction; this is not a full year of measured consumption. Internal insulation preserves protected exterior surfaces, but long-term performance depends on adequate moisture control, inspection and maintenance. The upgraded building services and envelope also support indoor comfort. No unverified quantified greenhouse-gas saving is claimed.

Fulfilment of regulatory obligations
(e.g. EU and national legislation and environmental policies, authorisations or permits by national/regional/local authorities etc.), if applicable
(max. 1000 characters)

The pilot followed conservation and building-permit procedures for the protected building, including preparatory surveys and design documentation. The City of Zamość carried out the investment through the applicable public-procurement process and obtained the necessary conservation and construction authorisations described in D.2.2.2. The work was formally accepted on 7 October 2025 and evaluated using subsequent measurements. Programme eligibility and visibility requirements are treated separately from the construction acceptance.

Fulfilment of programme branding requirements
(see chapter I.4.4.2 of the programme manual)
(max. 500 characters)

The City of Zamość reports that a permanent ZEB4ZEN project plaque was installed at Ormiańska 11. The investment is also identified in materials bearing the Interreg CENTRAL EUROPE and EU co-funding visual identity. Site photographs showing the plaque in place and its readable branding are separate supporting evidence required for JS verification.

Investment costs *Please include the total investment costs considering only costs for equipment (CC5) and infrastructure and works (CC6)*				82.767,25 EUR
Location of the investment	**NUTS 3**	PL812	**Address**	Ormiańska 11, 22-400 Zamość, Poland
GPS coordinates, if available				
Annex(es), if applicable (e.g. pictures) - *please specify the type of annex(es), pdf file to be separately uploaded in Jems*				Photo record of the pilot action in Zamość - pdf file