EMMETI

# From 5 stores in energy class G to 7 apartments in class A4 nZEB

The new EMMETI case history tells the story of a complete energy retrofit, where the integrated system becomes the key to comfort, efficiency and a new quality of living.

**FROM 5 STORES**
commercial use
energy class
**G**

**TO 7 APARTMENTS**
residential use
energy class
**A4 nZEB**

**ENERGY RETROFIT**
complete energy retrofit
and change of
use destination

**INTEGRATED SYSTEM**
for comfort,
efficiency and new
quality of living

## AN INTEGRATED SYSTEM, A CONCRETE RESULT.

From class G to class A4 nZEB: comfort, efficiency and a new quality of living.

# 1. CONTEXT AND INTERVENTION

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A 1992 building of **350 m²** in Caltana di Santa Maria di Sala (VE) was renovated and transformed from **5 shops** into **7 mini apartments.**

**LOCATION**
Caltana di Santa Maria di Sala (VE)

**YEAR OF CONSTRUCTION**
1992

**TOTAL SURFACE**
Approx. 350 m²

**ORIGINAL USE**
5 shops – energy class **G**

**NEW USE**
7 mini apartments – energy class **A4 nZEB**

**PROJECT OBJECTIVE**
Complete energy retrofit and change of use to achieve high efficiency standards.

**CHANGE THE USE, CHANGE THE COMFORT, CHANGE THE SYSTEM.**
The challenge was to rethink the entire system in order to ensure efficiency and well-being in every season.

# 2. How did EMMETI redesign the system for the 7 mini apartments?

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EMMETI designed an integrated system that manages **heating, cooling, dehumidification and control** in a coordinated way, providing comfort, efficiency and control in every season.

### HEAT PUMPS
New thermal generation replacing the previous boiler.

### RADIANT FLOOR SYSTEM
Uniform heating and cooling for maximum living comfort.

### DEDICATED DEHUMIDIFICATION
ESD 25 IS EVO dehumidifiers for proper humidity control in summer.

### SMART CONTROL
FEBOS Basic for coordinated and optimized system management.


**An integrated solution, tailor-made to transform the spaces**
and ensure comfort, efficiency and living quality in every apartment.

# 3. WHAT RESULTS WERE ACHIEVED?

Thanks to the complete retrofit and the integrated EMMETI system, the building made a radical leap in performance, moving from a very low initial energy condition to a highly efficient residential standard.

### ENERGY CLASS UPGRADE

From class **G**
to class **A4**
for all 7 residential units.

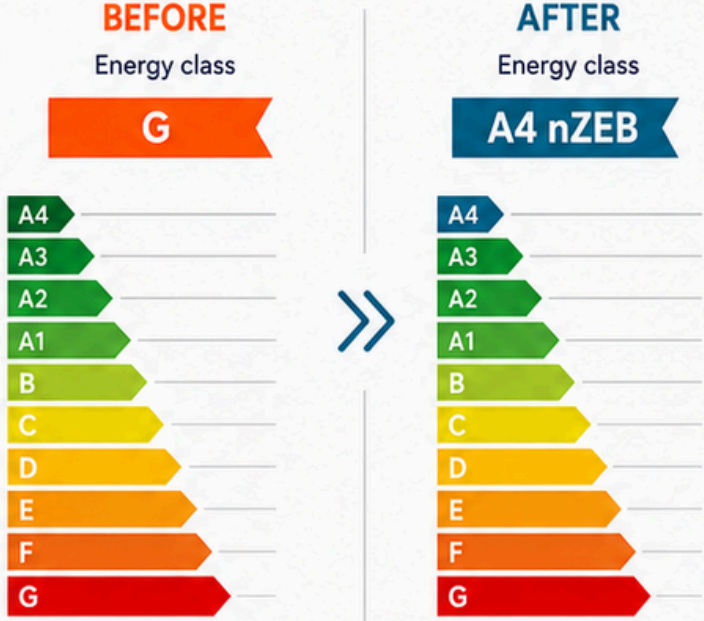
### STANDARD ACHIEVED

All units achieved energy class A4 and the nZEB standard (Nearly Zero Energy Building), the highest level of energy efficiency currently achievable in the building sector.

### EXTREMELY LOW ENERGY DEMAND

The result translates into an extremely low non-renewable primary energy demand, with consumption typically ranging between 5 and 20 kWh/m² per year, confirming the high performance of the project.

## ENERGY CLASS COMPARISON




**ALL 7 UNITS NOW IN**

**A4 nZEB**

Nearly Zero Energy Building

### WHAT IT MEANS

An A4 nZEB building combines very low energy demand, high system efficiency and advanced living comfort.

A concrete result that combines **energy efficiency**, **living comfort** and a **new residential quality**, enhancing the property after the change of use.