Inspiring good practices: a database to trigger energy efficient renovations of historic buildings

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A best practice database for energy efficient renovation of historic buildings
The Historic Building Energy Retrofit Atlas compiles cases of building renovation that are exemplary both in terms of heritage conservation and energy efficiency in order to inspire and foster energy retrofits.
HISTORIC buildings?

Renovating toward NZEB by bringing together design, efficiency and local use of renewable energy

According EN 16883 all buildings with elements “worthy of preservation”

all types & ages, not just listed/protected buildings
A best practice database for energy efficient renovation of historic buildings

- Notarjeva vila
- Mariahilfer Straße
- Basilica di Santa Maria di Collemaggio
- Mercado del Val, Valladolid
- Villa Catelli
- Lichtmayrgütl in Graming
- Beim Jäger
- Klostergebäude Kaiserstrasse
- Hof 6, Schwarzenberg
- Klitgaarden
- Osramhuset (The Osram Building)

- before 1600
- 1600-1700
- 1850-1899
- 1900-1944
- 1945-1959
WHAT is documented?

Any building of historic and/or cultural value independent of the level of protection is considered - from medieval buildings over buildings from the 1920s to post WWII architecture.
WHAT is documented?

The basic requirements for best-practices are
✓ Implementation of the project **completed**
✓ Renovation of the **whole building**
✓ **Significant reduction** of energy consumption (towards “lowest possible energy demand”)
✓ Evaluation of the **heritage compatibility** of the solutions
✓ Available **documentation** of technical solutions
HOW is it documented?

Second level of detail data and information

1. images of the building and key figures of the intervention
2. a description of the context and the rationale behind the solutions adopted
3. the different retrofit solutions implemented
4. evaluation of the intervention in terms of energy efficiency, internal climate, cost and environmental impact.
HOW is it documented?

First level of detail data and information
1. images of the building and key figures of the intervention
2. a description of the context and the rationale behind the solutions adopted
3. the different retrofit solutions implemented
4. evaluation of the intervention in terms of energy efficiency, internal climate, cost and environmental impact.
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Allowing focusing only on those buildings that are most relevant.

According to:
- Geographical area
- Building use
- Construction period
- Typology
- Construction material
- Solutions applied
WHO is documenting?

This is a joint development of two research projects:

- The European Interreg Alpine Space project “ATLAS”
- The International Energy Agency (IEA) project “IEA-SHC Task 59”.

Initially, the partners of both projects are contributing with evaluated case studies. In a second stance, owners and designers of suitable example are invited to participate.
DO YOU KNOW A GOOD EXAMPLE?
GET IN TOUCH!

Task59@eurac.edu
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CONNECTIVITY
Combining efforts – Linking online resources

100+ examples
Develop a **solid knowledge base** on how to save energy in historic buildings in a cost efficient way

Assess **replicable procedures** for multidisciplinary collaboration and promote **tools** for the implementation of EN16883

Identify and assess **conservation compatible retrofit** solutions and approached in a “whole building perspective”