Inspiring good practices: Rainhof, a case study in the Italian alps

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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.
WHAT is documented?

The Rainhof is a farmhouse built around the 16th century in Santa Maddalena (Bolzano, Italy). This case study was one of first projects to be documented in the best-practice database and is presented here following the structure described before.
GENERAL information

Buildings included in the best-practice database are first described following a series of predefined parameters in order to improve the comparability among case studies and to enable a filter function that will allow narrowing down the amount of buildings to those of specific interest to the user.
Renovation PROCESS

a. Building description
b. Heritage significance
c. State of repair
d. Aim of retrofit

Architecture

BUILDING DESCRIPTION

This listed rural building, Reinhof, was built around the 16th century in St. Magdalena at 1,500 m above level. Reinhof is located at the end of the Osiesertal valley, just off the main road. It is one of the most precious rural buildings of the area. The ground floor was built with solid stone masonry walls, whereas first and top floor were built with the vernacular “Blockbau” (solid wood) technique. The building presents many traditional features, windows in deep louveres, decorated painted frames around the windows, and a vaulted ceiling at the entrance. The building was used as a typical agricultural dwelling. That means that it was usually inhabited by 3 generations (parents with children and grandparents). The traditional use of the ground floor was as living room and kitchen on one side and workshop and pantry on the other side; the entrance/entrance was used for animal slaughtering. Upstairs, sleeping rooms for the family and farm workers were located.

HERITAGE SIGNIFICANCE

+ ELEMENTS WORTHY OF PRESERVATION
+ HERITAGE VALUE ASSESSMENT

STATE OF REPAIR

+ CONDITIONS OF THE ENVELOPE
+ DESCRIPTION OF PRE-INTERVENTION BUILDING SERVICES
Renovation PROCESS

a. Building description
b. Heritage significance
c. State of repair
d. Aim of retrofit
Retrofit SOLUTIONS

a. External Walls
b. Windows
c. Other solutions
d. HVAC
e. Renewable Energy Systems
# EVALUATION

- **Energy Efficiency**
- **Internal Climate**
- Costs
- Environment
CONCLUSIONS

The goal of the best-practice database is to communicate this decision-making process in a way that is engaging, and persuading, for owners of historic buildings that are considering a renovation. In addition to that, the best-practice database allows presenting more detailed information (such as retrofit solutions, construction details or even evaluation results) so they can be of use for the other parties involved in the design of the renovation (architects, energy consultants, engineers, etc.).
THANKS FOR YOUR ATTENTION!

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