

Zukunft Bau

STRUKTUR / GLIEDERUNG KURZBERICHT

Title

Erstellung eines Handlungsleitfadens zur denkmalgerechten Implementierung von Energieeinsparmaßnahmen in historische Gebäude
Guidelines for conservation compatible implementation of energy efficiency measures in historic buildings

Starting position

The historic building stock including the cultural heritage need innovative approaches for the implementation of energy efficiency solutions. In the frame of the EU funded project Efficient ENergy for EU Cultural Heritage 3ENCULT by exemplary and monitored integration of innovative measures into Case Studies.



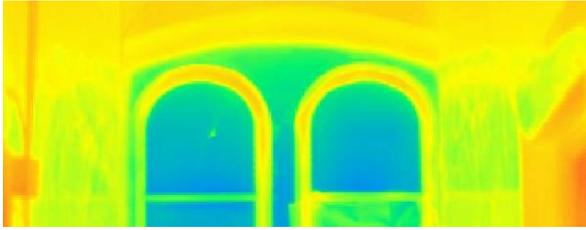
Picture 1: IPublic Weighhouse, Bozen, IRT-inspection facade



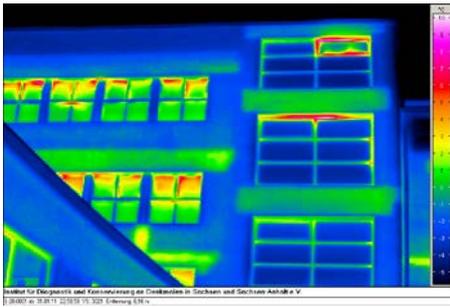
Picture 2: Energy Efficiency Solutions for Historic Buildings - A Handbook

Objective

The project 3ENCULT bridged the gap between conservation of historic buildings and climate protection, which is not an antagonism at all: historic buildings will survive if maintained as living space. Energy efficient retrofit is useful for structural protection as well as for comfort reasons - comfort for users and “comfort” for heritage collections. 3ENCULT demonstrated significant reduction in energy demand, depending on the case and the heritage value.

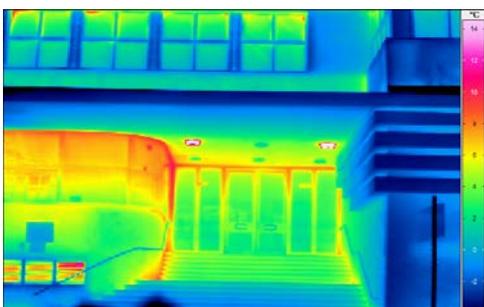


Picture 3: Public Weighhouse, Bozen, IRT-investigation inside

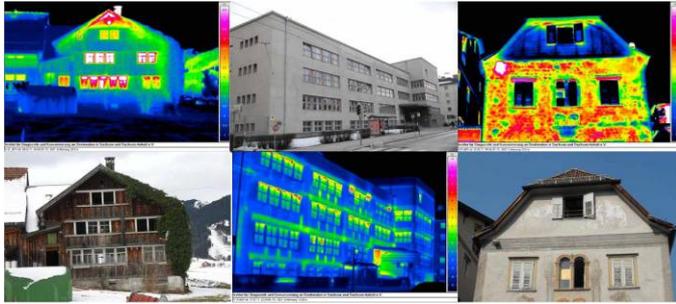


Picture 4: Staircase Hötting school building, IRT-investigation

In the 3encult handbook on energy efficiency solutions for historic buildings has recently been published. Combining the existing know-how of the experts involved, it is a helpful guide for many building owners and professionals tackling the renovation of their specific historic building. The book starts off with a general introduction to the basic principles of building physics and cultural heritage protection. After that it follows the typical sequence of a renovation project from pre-intervention analysis, over general planning guidelines, to a more detailed description of technical solutions. These include new solutions developed in 3encult as well as existing energy efficiency solutions for historic buildings. After the renovation has been completed, a Building Management System can optimize the operation of the technical systems, while a monitoring system can be used to check if the expected improvements have been achieved. The book ends with a description of the 3encult project and its 8 case study buildings where many of the technical solutions were practically implemented.



Picture 5: Portal Hötting school building, IRT-investigation



Picture 6: 3 of 8 Case studies, 3ENCULT

Conclusion

The project 3ENCULT developed new tools and approaches for the implementation of energy efficiency measures into heritage buildings. One significant tool is the methodological approach. Based on a multidisciplinary team conservation compatible solutions can be developed for any monument.

Keydata

Kurztitel: 3ENCULT Kofinanzierung

Forscher / Projektleitung: Dr. C. Franzen

Gesamtkosten: 171.072,00€

Anteil Bundeszuschuss: 18.972,00€

Projektlaufzeit: 24 Monate