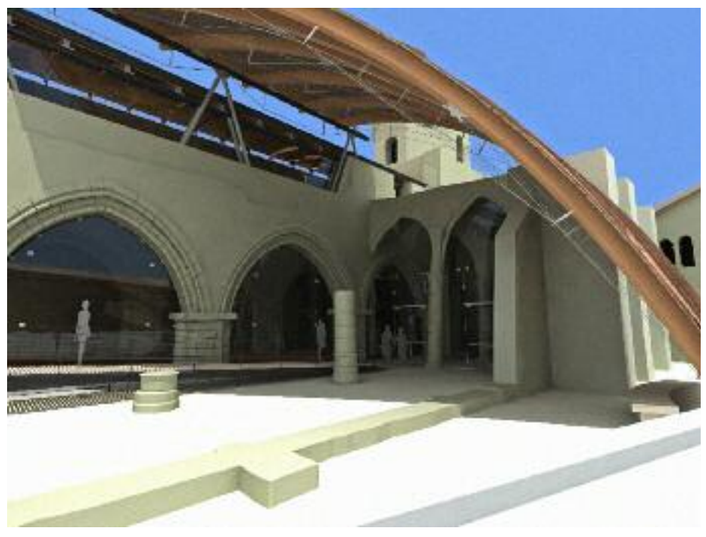
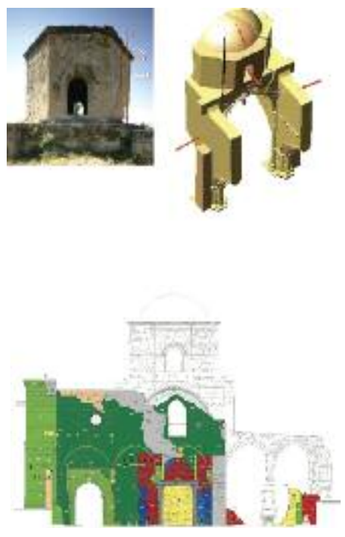
Institute for Technologies applied to Cultural Heritage (ITABC) www.itabc.cnr.it

Study/Assessment designs and supervision/monitoring for the structural and architectural restoration of the Bedestan (Saint Nicholas) Nicosia, Cyprus





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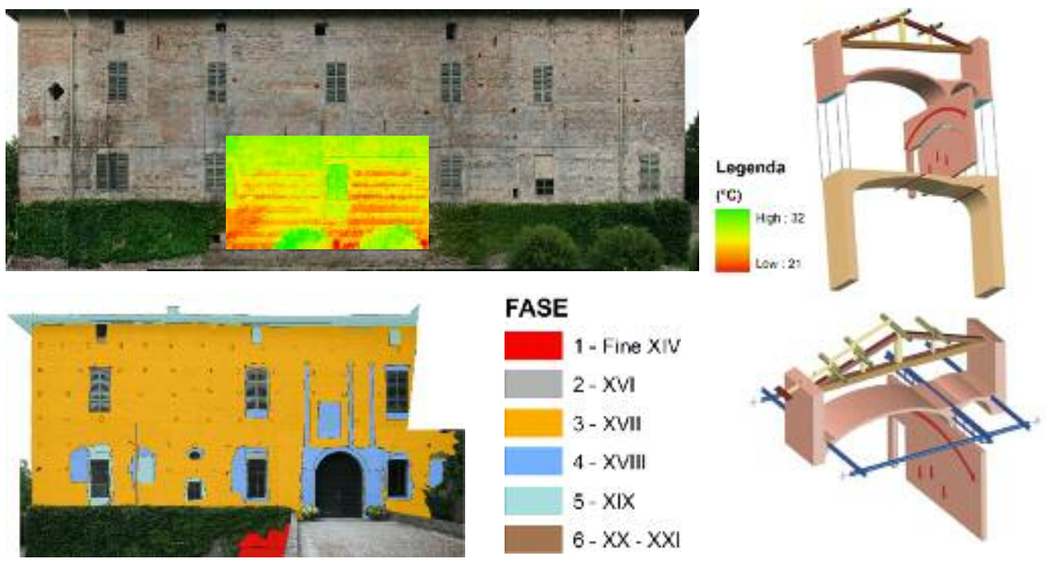
The Bedestan, formerly St. Nicholas Church, is a uniquely important building in Nicosia, a building born as a religious complex and later used as a covered market place (obedestano is a Turkish term meaning covered market). The Bedestan stands in the centre of the walled city of Nicosia. The study aims at enhancing a building of great architectural value by means of actions starting with historical research, diagnostic investigations prior to assessment for static consolidation, conservative restoration, re-qualification and re-insertion of the monument inside the historic quarter of Selimye.
The study, the research for the restoration and re-use restoration of the Bedestan are financed by the European Union through the United Nations Development Programme "Partnership for the Future" (UNDP-PFF).
This is a complex study showcasing the current problems facing restoration, as the monument of the Bedestan stands half way between a disused building and an archaeological ruin. The study takes into consideration this dual nature and ensures that its functionality is recovered in so far as it is possible to restore it in both structural and architectural terms. At the same time, the partially ruined elements demanded preferential treatment which would enable both the occasional visitor and an attentive observer to view and appreciate them. Reliance was placed on the relationship between physical space and the building's own spatial properties, by linking together in a new but respectful figurative unit the fragments or disconnected surviving images.

SOCRATES project: "Operative System for Coordinated Research on Technological Innovations in Historical Buildings". The case study of Zena Castle

Partnership: *CNR ITABC Institute of Technologies Applied to Cultural Heritage* (Scientific Coordination); *University of Bologna Archeological Department; Polytechnic of Turin Department of Territory Environmental and Geotechnology Engineering; Polytechnic of Milan Energy Department.*
The Zena castle lies in the plain of Piacenza is an important historical monument and now is also the focal point for research, studies and comparisons on the theme of restoration and enhancement of the architectural cultural heritage. Studies and research on the reuse of historical buildings were carried out with the aim of improving and promoting buildings of great architectural value such as the Zena Castle. The project focuses its attention on an innovative manner in the theme of restoration and maintenance of historical buildings, using methods and procedures that are synthesized in the concept of "sustainable restoration", to demonstrate sustainable energy intervention in historic buildings respecting culture, heritage and local character. The objective is to preserve the authenticity of the original architectural structures of monuments sustaining the insertion of their assets into the cultural, social and economic reality of the territory in which they are located. The scientific committee involved into the technological upgrade of castle, analyzed the different possibilities of the integration of the various technological installations carried out with the aim of reducing energy consumption for air conditioning in summer and winter, hot water system and the internal and external lighting system. Emphasis was placed on the innovative aspects of energy production and use of renewable resources, with the aim of establishing a low cost efficient energetic solution.



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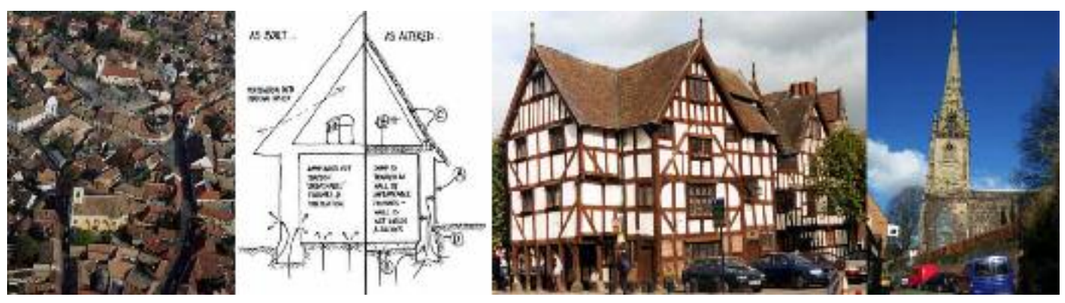
SECHURBA Project
Sustainable Energy Communities in Historic URBan Areas



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SECHURBA project, financed in the 2008 by the EU (CIP- IEE Programme), aims to assess the contribution of energy market and climate change objectives beyond statutory requirements for acknowledgement in future energy policies in historic buildings and areas. The project aims to demonstrate sustainable energy intervention in historic urban areas and buildings respecting culture, heritage and local character. SECHURBA will work in historic communities and buildings in 10 case study communities to demonstrate how by addressing barriers, they can contribute to cultural, social, economic and environmental objectives and enable governments to exceed their statutory climate change requirements. A key objective is that increased awareness of prospects through intervention in historic areas will award them greater priority in future energy strategies.
13 partner from: UK, Italy, Greece, Hungary, Denmark, Ireland, (Universities, Research Centers, National and local energy centres, Municipalities).
Funds: € 1.980.000,00 Duration: 30 months

About monuments conservation the ITABC has a Built Heritage Lab (BH-LAB), set up with the aim of improving documentation and restoration methodologies for the architectural heritage. Implementing conservation guidelines is the final goal of a process that integrates a multidisciplinary analysis approach to historical buildings with the drafting of re-use projects aimed to their revitalisation and adaptation to innovative solutions. The BH-LAB works thought integrated research projects supported by European, transnational and national funds.
Milestones of the Built Heritage Lab (BH-LAB):

- Integrated diagnostic analysis to support decision making for restoration projects
- Sustainability measures and technologies for restoration projects
- Energetic building renovation, Rational and Renewable Energy Strategies for the restoration of ancient buildings and historical cities
- Tool e expert systems aimed at supporting decision makers for evaluations of conservative interventions
- Development of an Integrated Georeferenced systems for the survey and the visual representation of 3D models for the visualization of state of conservation of the ancient buildings and for the conservative interventions
- Dissemination and training on the job

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