



The A.I.Te.C.H. Project: Applied Innovation Technologies for Diagnosis and Conservation of the Built Heritage

Angela Calia

C.N.R.-I.B.A.M. Institute for the Archaeological Heritage, Italian National Council of Research, Lecce, Italy
(a.calia@ibam.cnr.it)

The activities related to the built historical and architectural heritage are of great importance and interest, both with reference to the maintenance of the housing functionality and in relationship with the recovery, restoration and preservation of measures. They have been becoming increasingly important with the inclusion of the minor historical buildings of the historic towns within the cultural heritage.

Diagnosis and preservation are crucial moments in the handling of the cultural heritage, and they require a highly qualified technological supply. The laboratory network of the A.I.Te.C.H. project was born moving from the demand of optimization and innovation of technology in the sector of the diagnostic and the preservation of the built heritage. It is supported by the FESR funds made available by the Apulia region (Southern Italy) and it is based on the integration of competences, laboratories and of research activities owned by the Italian CNR (National Council of Research) and the Salento University. Its capabilities range from the set up of new products and technologies, through the methodologies for the interventions, up to their validation in relationship with the relevant structures and the materials.

The network is organised for the following actions.

1. Advanced atmospheric monitoring of main gaseous pollutants and particulate
2. Upgrade and validation of instruments and methodologies for diagnostic investigation and in situ controls.
3. Experimental investigation relative to rehabilitation, strengthening, improvement and adaptation of masonry existing structures, based on innovative materials and techniques, such as FRP; research of correlations between non destructive and destructive diagnostic investigations
4. Characterization of innovative products for the stone conservation and assessment of their performance with relation to the stone substrate characteristics
5. Database of the intervention performed in the past and of the exploited products.

The AITECH activities are carried out with the partnership of public institutions and SME, that are also the potential users of the research products and facilities of the A.I.Te.C.H. network. They range from the public institutions in charge of the safeguard and the preservation, to the enterprises for the restoration. They can be the users of innovative technological solutions and reliable technical-operative praxes related to the diagnostic knowledge and to the interventions for the preservation. Further partners and users are the companies that commercialise stone products, the small and medium regional companies that work in the sector of products for diagnosis, building and restoration. An action of technological transfer is devoted to them within the project.