

ADAPTIVE CLOISTERS BETWEEN NEW FUNCTIONS AND EFFICIENCY STRATEGIES

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Abstract

This contribution analyses and assesses the energy/environmental characteristics of a particular space in historical constructions: the cloister, an internal space that serves to organize monastic architecture. This represents an archetypal space of transition, a mediator among different types of areas (interior/exterior, public/private, building/city, etc.). Cloisters are characterized by particular microclimate effects that generate interesting natural energy fluxes. For this reason, such areas ought to be analysed in order to define strategies to change their use combined with the optimization of energy/environmental parameters related to energy efficiency and microclimate comfort. Examples of strategies to reuse cloister spaces represent a wide range of interventions and generate strongly characterized modifications. To identify an efficient strategy to evaluate the potential of a cloister space, a method was developed to parametrically analyse a set of geometric, weather/climate, and environmental data to look for possible configurations in order to guarantee adequate conditions for the intended use. In particular, the cloister of the monastery of Sant'Agostino in Ascoli Piceno (Marche Region) was used as a case study. It was used to test the design method to consciously reuse the spaces, making their adaptation efficient within a strategy of conservation.

Keywords: *transition spaces, new functions, efficiency strategies*