

MANUTENZIONE PREVENTIVA/PROGRAMMATA E GIS: NUOVE PROSPETTIVE DI RICERCA PER LA DEFINIZIONE DI UN PERCORSO DI TUTELA

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Abstract

The current state of scientific and technical research on the protection of cultural heritage highlights the need for a unified approach to ensure not only the conservation of historical assets, but also adequate maintenance, both before and after interventions. While the constantly evolving legislative framework seems to have finally set itself the goal of making the concept of “maintenance” structured, verifiable and codifiable, it is worth noting that, unfortunately, it has not yet fully achieved its purpose. Conversely, the development of technology in the field of conservation, which has undergone a marked acceleration in recent years, constantly offers different solutions to this issue.

In this regard, the new frontiers of research in the use of GIS technology can be a significant help. GIS allows for the acquisition, analysis, correlation, comparison and visualization of a huge number of variables, offering an opportunity of great economic and cultural interest. By guaranteeing the possibility of configuring a precise relational analysis, based on the positions and characterizations of each individual element of the structure under investigation, GIS can be used to define a detailed and easily updatable mapping of its state of conservation.

The present paper assesses, through case studies, how preventive and programmed conservation has evolved over the last fifteen years. In particular, it highlights how the application of GIS to the analysis of material degradation allows for the clarification, *ex ante*, of the conservation conditions of an artifact. Furthermore, it clarifies the use of the application also in the subsequent phase of material conservation interventions and, finally, through the Maintenance Plan, by making more precise choices even in the definition of the technological system.

Keywords: GIS, Maintenance Plan, Restoration.