POLITECNICO DI TORINO

Honors thesis

Master Course of Architecture Construction City

Abstract

Strategic Choice Approach and Analytic Network Process to support decisions in adaptive reuse of abandoned hospitals. The civil Hospital of Fermo

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The reuse of disused hospital areas in Italy represents a complex and articulated problem, since there is no single management line, but decisions depend on the different subjects directly involved. In addition, there are many aspects to take into account, such as architectural, urban planning, social and economic. Discussions on the subject are often complex and difficult to manage. As a case study, exemplifying the problem, the Civil Hospital of Fermo, in Italy, was chosen, which in the coming years will be abandoned, creating a huge urban void in the historic center of the city. The case study and the comparison with other examples of reuse of health care buildings have made it possible to understand both the opportunities in the transformation of these areas, and the complexity of the decision-making process.

The work presents an innovative approach to the problem, with the integration of two methodologies, the first belonging to the family of Problem Structuring Methods (PSM), the second to the Multi-Criteria Decision Analysis (MCDA): Strategic Choice Approach (SCA) and Analytic Network Process (ANP). The combination, which is absent in the literature, initially involves the development of the first two phases of SCA (Shaping mode and Designing mode). The individual and group applications, with a class of students of Master course of Architecture at the Politecnico of Turin, have allowed to develop possible and plausible scenarios of transformation or alternatives. With ANP, through the structuring of a decision network that establishes dependencies and interdependencies between aspects of different nature, questions of comparison in pairs emerged to compare alternatives. These questions, generated by the Superdecisions software, were submitted in the form of a questionnaire to expert and qualified subjects, in direct connection with the property in question and with the city of Fermo. The answers brought out the final ranking of the alternatives, with the identification of a single favorite scenario. The application shows how the combination of SCA and ANP is a valid decision support tool in the case of complex problems, because the understanding and structuring of the problem, the identification of uncertainties and the deepening of a decision focus of SCA are completed by the ANP, with the consideration of quantitative aspects, as well as qualitative, and with the involvement of experts.

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