BUILDING INFORMATION MODELING, REAL ESTATE ASSESSMENT, ENHANCEMENT OF ARCHITECTURAL AND URBAN ASSETS

In this issue, Territorio Italia will deal with the potential inherent in innovating approaches and tools, now widespread in other countries, which in Italy are being tried out especially in a university context, in order to promote best practices among private actors and the public administration and to focus practical actions on the "territory" with different competencies and roles.

Territorio Italia, born in 2011 in the context of renewal and internationalisation of the journal of the Agenzia del Territorio, thanks to a collaboration between the Agenzia delle Entrate and the Politecnico di Torino, intends to bring out the role of university institutions in fostering the growth of our country through research and education, according to the guidelines of the Horizon 2020 Calls for Proposals, which are based on the establishment of Europe-wide partnerships between university bodies and companies, increasingly featuring integration between human sciences and technological know how.

Research and education, in our country, have to deal with a crisis which presents inescapable structural elements, due to epoch-making changes which not only change production models, but also affect society itself from the roots, starting from the very means by which individuals belonging to it communicate and relate to each other.

Especially, the process of economic globalisation (which has caught the more strictly industrial sectors off their guard) and the critical situation of public finance in our country have compromised the role traditionally played by the territory as economic resource and development factor. Among the most obvious repercussions, one may mention on the one hand, the fall of prices and the collapse of sales in the real estate market and, on the other, the reduction of investments in the field of construction and especially public works.

Therefore, economic recovery cannot take place without innovation in economic and production models of the private industrial and building sector and in public administration management models, starting with the agencies which, locally and nation-wide, have the task of safeguarding, governing and developing the territory. Reform of public administration is an issue which has repeatedly been dealt with in this journal, revolving around reform of the cadastre, considered in terms of fiscal equity. Furthermore, issues concerning the real estate market have been amply dealt with, together with those of disposal of public assets.

In this issue of the journal, we have decided to start with a paper by Ciribini, Ventura and Bolpagni pointing out the potential which lies in digitalisation of the construction sector, a field where Italy is lagging behind other European countries. The authors deal with the role which new operating tools can have in handling public contracts, a crucial problem for our country, well known and much discussed. The authors consider BIM (*Building Information Modeling*) as an innovative approach which can be used both in the private sector but also in public bids for contract because of its capacity to cut down costs and improve the performance quality of works to be made. BIM, by going beyond two-dimensional approaches, provides an information management process, represented by geometrical and alphanumerical data, for the whole life cycle of works, planning, execution and management. One should emphasise that the final phase – management – is of special importance and has not yet been properly taken into account in terms of costs and quality of services delivered by public works.

The paper by Lo Turco highlights the potential of BIM (*Building Information Modeling*) in interventions on existing assets. It shows the issues which arise involving management and integration of graphic and alphanumerical information (project, technological and building, infrastructural, energy, use, preservation etc. issues) in order to optimise Facility Management procedures, stressing the

importance of integrated management of graphical and alphanumerical information. The author discusses application of *Senate Properties' BIM Requirements* to the case study of the new language centre of the Politecnico di Torino.

Maurizio D'Amato touches on the issue – repeatedly dealt with in this journal – of transparency of the real estate market in our country and the lack of information needed to apply statistical forecasting techniques which call for representative population samples. The author presents a operating application (reduced data table MCA) which uses a limited number of comparables to forecast the future value of real estate units currently being built. This approach is especially useful when future values are among input data to be fitted into the models showing economic and financial feasibility of a project.

The contribution by Grosso and Chiesa, on the other hand, deals with the topic of environmental sustainability. The authors deal with how to asses the environmental quality of buildings, in relation to the life cycle of the works (Life Cycle Assessment) and to environmental, economic and social sustainability. Especially, the authors concentrate on the social impact which the shape, location and orientation of buildings can have on the health and well being not only of users of the building, but also of those inhabiting the environment it belongs to. The authors suggest using indicators and "micro-climate matrices" to analyse and evaluate the environmental quality related to the location of the buildings. This is also an important contribution in terms of possible analyses of real estate values and price formation mechanisms, considering the acknowledged role played by "location" in setting prices.

The papers by Angrisano and Marinò show the profitable relation between research and teaching, because they were developed in a university context: the former as a PhD, the second as a master of science's thesis. They have in common the fact that they deal with issues of assets enhancement, the former working on historic urban landscape, the latter on architectural scale. Especially, Angrisano deals with the issue of regeneration of waterfronts of seaside cities, with large abandoned areas, considering good practices of international reference and the tools provided by UNESCO and ICOMOS for preserving and enhancing the value of historic assets of coastal cities. The author analyses the HIA – Heritage Impact Assessment – method, in order to evaluate the impact of major requalification projects on cultural assets. She experiments with it to assess the impact of the great Pompei project on the waterfront of Torre Annunziata and highlights its criticalities due to the lack of basic indicators for evaluating economic impacts.

Marinò deals with the problem of the lack of public resources for investment in conservation and re-use of assets of exceptional historical value, especially belonging to the great architecture of the 20th century, which have lost their original function and run special risk of not being preserved because of their age. The paper shows the results of a study carried out to assess the applicability of crowdfunding, in order to support the project for re-using the Torino Esposizioni complex. The study, carried out to evaluate willingness to contribute by potential users of the Torino Esposizioni complex (applying Contingent valuation) showed little willingness to collectively fund the project. This is due both to poor knowledge of crowdfunding as a funding tool and to limited awareness of the value which architectural criticism has recognised in the work by Sottsass and Nervi and of the importance of preserving the heritage of the 20th century. The contribution has shown how a possible crowdfunding campaign should be supported and prepared by an effective campaign for promoting the assets by the institutions involved.

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