

# Review of the book by Richard Garber “BIM Design. Realising the Creative Potential of Building Information Modelling”

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Review of the book  
by Richard Garber

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The focus of newly published book “BIM Design. Realising the Creative Potential of Building Information Modelling” is building information modeling (BIM) - the dynamically arising topic of nowadays. The popularity and importance of the abbreviation BIM is becoming no less significant than that of the acronym CAD at the junction of the last two decades of the previous century.

“BIM Design. Realising the Creative Potential of Building Information Modelling” is a captivating work. Two and a half hundred of pages include 181 images (coloured, monochrome illustrations, and diagrams), the table of contents, 35 items of selected bibliography, and a broad list of indexed references on 5 pages. Each chapter provides the list of references named Notes as well as the list of images. The book includes 8 numbered chapters and 7 named chapters presented as the case studies. The acknowledgement, dedication and foreword written by Mario Carpo can also be found in the book. The design of the book is stylistically attractive for the reader.

The fact that there are many articles, essays, conference proceedings, also live debates among the web-based professional groups shows that building information modelling is one of the most widely discussed issue in the field of architectural design and construction. However, the lack of essential books substantively representing BIM can be felt.

In my opinion at least two aspects can be clearly identified while reading the book. The first one concerns the organization and logical structure of the work. The material appears by turns as methodological therefore more theoretic (numbered chapters) and as the case studies therefore more practical (named chapters). Anyway, a big part of analysis of the BIM problems is done as the case study analysis of various experiences of the advanced companies of the world but with the special emphasis to generative design experience, creative use of parametric geometries, environmental performance simulations and managing of construction and fabrication operations.



The cases are chosen by the author as the specific ones each of them revealing different features of BIM and digital technologies starting from the historical references in the early Renaissance and ending with the contemporary concepts of knowledge architecture and life-cycle strategy. Each case study in some way reflects any of BIM methodical issues.

The other aspect concerns the role of architects and their growing potential via the use of BIM as the concept and the technological system that is able to put more control, sustainability and reliability in the processes and results of both design and construction. Successful interdisciplinary collaboration between different teams and companies is a critical issue. The reflection of the problems mentioned above can be foreseen in the title of the book.

The book extends the notion that architectural design is a rather disembodied process of aesthetic creation, and it also advocates holistic concept of architecture. This can be understood as general lineage of the work.

Generally, the influence of contemporary information technology as a multi-faceted and universal phenomenon to architecture and construction are very different but the author discovers the most important influences that aim to reunite design and making and close the gap between design intentions and project delivery, in the name of BIM invite a new business model as well as a new legal framework for project delivery proclaiming new collaborative digital culture and possibly in the same time transforming the conception of authorship. On one hand, the author is concerned about the success of implementation of creative idea. On the other hand, he talks about the urgent need and inevitability of interdisciplinary collaboration. Consequently, the book proclaims a new architectural paradigm defined as "Actualization", which tends to integrate design, construction and the use of products on the basis of digital platform substituting the old paradigm "Representation" that becomes limited.

Finally, the author discusses the importance of participation in the investment cycle of BIM of the new types of experts like BIM managers, and also software developers, primarily because integration between various new platforms is becoming more and more necessary in the field of architecture, engineering and construction (AEC) industry.

This is only the beginning of a long distance run related to building information modeling, interrelations between the parts of it, and consideration of consequences relating society. Although the book gives a good reflection of the state-of-the-art in the field, some important questions such as achievements and problems of data exchange and issues of the supply chain in the construction industry could be disclosed in a wider extent.

There are also at least two additional evident and interesting problems of BIM which deserve more attention. Not every form and structure is possible to create as a parametric precise native adequately detailed instance of the model what in reality leads to controversial solutions of hybrid models consisting of various types not associated objects. The other often discussed question is how we can define and estimate the size and complexity of the building that is appropriate to design and construct using the new BIM methodology.

The aim of the book is not to teach definite methods of implementing specific procedures but mainly to provide knowledge and to make some impact on the reader's thinking and understanding of. This is the reason for the usage of some particular illustrations that support the statements of the book.

I believe the intention of the author was fulfilled. The book covered BIM topic with a rich content and numerous examples. The work is well-written and easy to comprehend. The terms and keywords in *Italic* can be characterized as conventional and understandable for experts. The referencing and

documentation of sources used are accurate. The illustrations (photos, renderings and diagrams) are of a very good quality and easily readable.

The book can serve as the essential reference not only for architecture and both structural and civil engineering students, but also for students of related study programmes.

**Richard Garber** *"BIM Design. Realising the Creative Potential of Building Information Modelling. John Wiley & Sons Ltd, 2014, ISBN 978-1-118-71980-0, Pp. 248, (executive editor Helen Castle)*

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