

# Review

**Steve Faulkner** is impressed by a thought-provoking book which makes the case that all design firms should be using BIM in their projects.

## BIM for Design Firms: Data rich architecture at small and medium scales

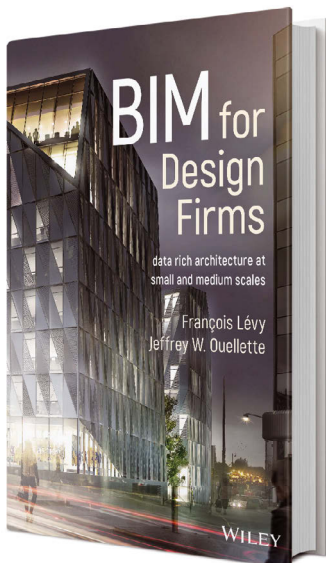
**Authors:** François Lévy and Jeffrey W. Ouellette

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**I SHOULD START BY SAYING** that when I was asked to write a review of this book, I was a little sceptical. Not because I am uninterested in building information modelling (BIM) – indeed the opposite could not be truer – but because in the past I have read books that focus on one particular aspect of BIM and then analyse it until I become bored.

My early scepticism could not have been more misplaced. This book is a really good read. François Lévy, a US architect and the main author, clearly has an excellent understanding of both BIM and design. Certainly from my perspective, this is fundamentally important and enabled Lévy to have my attention almost from the outset.

What makes this ‘BIM book’ different, is that Lévy is clearly not just following ‘industry’ guidance and everything that he promotes revolves around how different BIM processes can guide better design outcomes and drive efficiency. He states, ‘*I keep questioning how and why I design what I design*’. What might well appeal to readers of *The Structural Engineer* is that, while sketching is not necessarily BIM, I liked the fact that Lévy continually makes comparisons to sketching and the love that he clearly has for his pencil!

In reviewing *what is wrong with BIM*, Lévy delves into history to ‘ponder’ that the term *architect* originates from *master builder or chief craftsman*. He is honest enough to acknowledge that very few architects have a background in building nowadays and believes that this contributes to some of the issues, suggesting that ‘*on one hand we have master builders who do not build, and on the other hand we have building processes that are further and further removed from craft...*’. This book is very much about how BIM can help drive great design.

The authors also pick up on something that I have had numerous discussions about: (even in the USA) contractors tend to completely rebuild information models rather than reusing information from the design team’s federated model. They highlight that ‘*This astonishing apparent inefficiency flies in the face of the collaborative spirit of BIM*’.

The book recognises that BIM requires designers and project stakeholders to think differently about the processes of designing, coordination, collaboration and verification. This is an important message for those of us in the UK who try to shoehorn BIM processes into existing contracts or as a bolt-on service. Additionally, Lévy (quite rightly) equally values the benefits of both geometry and data outputs, and emphasises that one must consider that a BIM



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workflow is one that allows multiple authors and stakeholders to participate in order to make ‘*richer design decisions*’.

The way in which case studies are integrated into the different sections of the book to showcase practical examples of how particular processes have been implemented on real projects is very good, whether this is reviewing how variables such as programme, materials, number of stories and metrics can have a real-time impact, how algorithms or scripts (both Dynamo and Grasshopper examples are reviewed) can help shape a design, or how fabrication processes can be improved to streamline with CNC cutting machines. In particular, though, the University of Texas case study that Lévy includes is an enthralling read and really demonstrates the huge benefits that BIM can help deliver.

This book is a very good read: it has good guidance on initial training and how to transition to BIM, as well as some very detailed explanations as to why certain processes are worth implementing. The case studies are enormously thought-provoking and, although there is a slight disparity with the UK’s BS EN ISO19650 suite of documents, I would recommend this book. I fully agree with Lévy when he states, ‘*there are now enough firms using BIM workflow to make a convincing case that even while not all firms use BIM, any firm could. This book makes the case that any firm probably should*’.

I will finish this review with Lévy’s reference to Prokofiev’s ‘Peter and the Wolf’ (to demonstrate that BIM is a collaborative approach: ‘*each musical instrument represents a single character. It isn’t until all the musicians play together that one understands the orchestra*’).

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