



Book Review

Whole Life Costing: A New Approach

Peter Caplehorn, Routledge, London, 2012 136 pp., ISBN 978-0-415-43423-2, GBP 34.99 (pb)

If you are looking for an informed and thoughtful discussion related to whole life (cycle) costing of building projects, without numeric calculations, reference to discounted cash flow, or references *per se*, then this book is for you.

Peter Caplehorn is Technical Director at Scott Brownrigg. He is responsible for technical standards across the company, which has current projects amounting to more than £2 billion. He is a qualified Chartered Architect with over 30 years' experience. In this book, he presents a practitioner's perspective of the topic of whole life costing and why a new approach is needed.

The book is structured into 24 chapters. The first 22 chapters are a rather pessimistic account of the industry's failings over the past 50 years or so, for which a lot of the blame is laid at a short term profit seeking mindset. But even where a longer term view is taken by the design team and/or contractors, a preoccupation with money is argued as commonly undermining the achievement of value on projects. Consultants, including quantity surveyors (although not referred to by that name), are singled out as displaying a cost cutting mentality that is at odds with good design. The role of private financial initiative (PFI) as a procurement method is portrayed as counter-productive to long term value, and value engineering is described as 'collective madness' and should 'be consigned to the deepest pit' (p.48).

There is an underlying theme in the book that the architect, as someone who understands the intricacies of a design and the thinking behind decisions, is being usurped by others who are bent on cutting costs to the bone. The author perhaps is lamenting a diminished role for the architect over time and a lack of understanding, by others, for what the client really wants or needs. The book is very much written from a UK perspective, but nevertheless is generally applicable to other western societies.

Furthermore, the title of the book belies its content. It seems the title should have been *Whole Life Value*, which is argued as being quite different. Yet this argument is not well developed, and the reader is distracted from what might be an important idea by the string of practical problems and obstacles that get in the way. The author states that cost should not be the result of – nor the driver for – whole life costing (p.3). But what does this mean? If 'value' is substituted for 'costing', then the message may be that there is more to determining the benefit of a building over its lifetime than an analysis of costs, which is perhaps the point of the book. Whole life cost is defined as a true assessment of the worth of a building (within limits), but not a sensible way to approach future-proofing. The latter is what his 'new approach' can presumably deliver – a focus on whole life value.

Another major dilemma is attempting to predict the future. This problem is not new, but while it is acknowledged in the book that this should not stop us from trying to define the future, an argument is made for waiting until design details and specification have been resolved before doing so. Unfortunately the flaw in this logic is that if the project is later shown to not represent good value, or to be unreasonably expensive, it is too late to do much about it. That is why budgets are necessary, and why designing to a cost (cost planning) is a preferable approach to costing a design (estimating).

I have great respect for the ideals of long life, loose fit and low energy (p.40), but cost must be considered as a design consideration, along with form and function, in delivering what client's generally expect. Perhaps form follows function, and perhaps cost follows form, but all three are integrated and part of the modern design process. A longer term view of buildings necessitates an understanding of the ongoing liabilities that a design implies, and why life cost planning is so important.

Chapter 15 provides a brief respite from the endless difficulties involved with evaluating these liabilities. It provides a ten-point strategic plan. Is this the 'new approach' referred to in the title? Much of the plan is pretty basic stuff – understanding client needs, ensuring a longer term view of decisions is maintained, a collaborative design team, auditing decisions, detailed design consideration of every building element, consensus, continuity of design team thinking, and frequent auditing, checking, follow-up, etc. The final sentence in this chapter confirms that this may appear to be just good practice (p.84).

It is noted in the book that the greatest disincentive to the progress of whole life cost and value is the link to monetary units of analysis (p.106). The author argues that in any system going forward, it is necessary to break this link. Is decoupling money from design decisions the new approach?

The increasing importance of sustainability in building design and the role of carbon in whole life decisions is introduced in Chapter 22. Carbon is described as the new currency. Concepts of embodied energy in materials and greenhouse gas emissions into the atmosphere that can accelerate climate change are presented as new drivers for whole life cost implementation in practice. Also building information modelling (BIM) is identified as a way forward to enable all decisions to be virtually prototyped before construction on site begins. This seems an appropriate context to talk about the real world application of whole life costing into the future. Is this the new approach?

Chapter 23 begins with the words 'having considered the problems, I would now like to look at some possible solutions – practical recommendations for the real world' (p.122). This surely sets out the new approach. The text that follows briefly describes the need for a project plan, client brief, project documents and data, references and data sources, project set-up and structure, BIM, and carbon accounting. It appears that 'carbon reduction is the best thing to come along for whole life costing since its beginnings' (p.129). The new approach is, in fact, not so new after all. The takeaway message is 'it is important that:

- the design is right
- procurement is clear and provides a precise description of what is needed
- the construction process is well managed
- handover is smooth
- occupation is a smooth transition to full use
- ongoing maintenance is focused, controlled and disciplined' (p.129).

So who would appreciate a book written from this perspective? I suspect practising architects might buy it. Pretty sure quantity surveyors won't, and not sure that students will find it that useful for their studies in construction or engineering. But it does provide a different perspective, a non-monetary view, to what appears at the outset as a mainstream monetary topic. Whether real world engagement with whole of life considerations is enhanced by this approach – only time will tell.

To me, any new approach should embrace the rise of the facility manager as a 'constant' from design inception and building procurement through to end of life disposal. Their knowledge in building care, maintenance, replacement cycles, cost and value to the client or

tenant is much broader than that possessed by most architects or building consultants. They can carry forward the work entered into BIM software and use it over many years of ownership, help advise designers how to avoid long term problems, and provide feedback on the success of new design solutions and specification decisions. Whole of life costing should be the weapon of choice for any facility manager. Let's leave architects to be creative, and facility managers to be pragmatic. In the end, both want a building that performs well, is sustainable, and represents whole life value.

Craig Langston
Bond University, Australia