

SPECIAL MATERIAL FOR QS NEWS

ESTABLISHING THE STANDARD FOR 'LIFE CYCLE COSTING'

The need for a standard approach and common methodology for life cycle costing (LCC)

Most organisations now recognise the value of using whole life cycle costing (WLCC) in support of the investment decision making and the design appraisal processes. However, despite the Office of Government Commerce's WLC construction procurement guidelines, all too often decisions are based primarily on initial capital cost. So, across UK public and private sector construction procurement – the norm is that very few projects are actually realising the tangible benefits of using LCC properly in practice!

The two major barriers to the application of life cycle costing were identified in the NAO's report Improving public sector services by better construction (March 2005), namely: 1 - Lack of clarity on terminology and understanding of what is whole life costing/life cycle costing; when to use it and to what level of analysis; and 2 – Lack of a common data structure for predicting life cycle costing

So, why is it important to have a common standard for LCC in the construction industry?

1. To establish clear terminology and a common methodology for life cycle costing (LCC)
2. Enable the practical use of LCC so that it becomes widely used in the construction industry
3. Enable the application of LCC techniques and methodology for a wide range of procurement methods
4. Help to improve decision making and evaluation processes, at relevant stages of any project.
5. Address concerns over uncertainties and risks, to improve the confidence in LCC forecasting
6. Make the LCC assessments and the underlying assumptions more transparent and robust

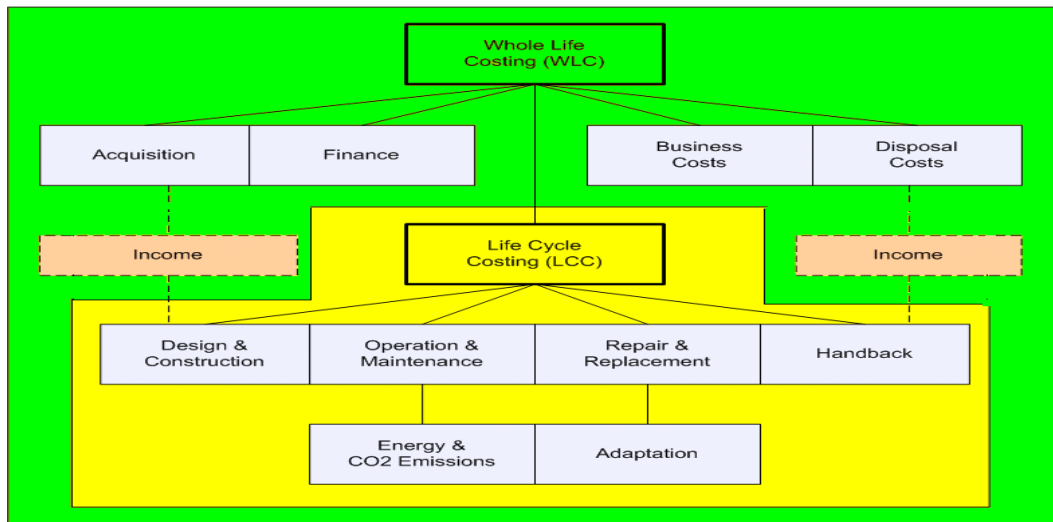
Working together to establish the 'standard' for the practical application of LCC in construction

Having an industry standard for assessing whole life cycle costing is close to becoming a reality following years of extensive work by leading experts in whole life cycle costing, across various related initiatives. To make this possible **Faithful+Gould** have been actively striving to help bring together the results of a number of LCC working groups, - as well as specifically addressing the two major barriers - by collaborative working with the RICS Building Cost Information Service (BCIS); Constructing Excellence; the Building Research Establishment (BRE); the CIBSE life cycle cost forum, and also with other QS practices, such as Cyril Sweett. This has helped to join up and unite the various initiatives, to address the barriers and confusion, and provide the basis for establishing a standardised approach and methodology, which has recently been incorporated into the final redrafting of the international standard DIS/ ISO 15686 – Part 5 for Life Cycle Costing.

Andy Green, director and head of whole life costing at **Faithful+Gould**, explains: *"Whole life costing is still regarded as something of a black art, with only a small number of specialists actually capable of doing it properly. So, without an industry accepted standard methodology the costing of uncertainty and assumptions associated with LCC predictions, could be very unreliable. Hence - why decision maker's lack confidence in LCC assessments; - which is putting QS's at risk of ultimately being sued. Having a standard approach is therefore essential if the cost management profession is to get a grip of life cycle costs. The Emperor needs new clothes before QS's can raise LCC standards."*

The ISO 15686 part 5 Life Cycle Costing, has been redrafted to address the key issues, by:

- Setting out the guiding principles, instructions, definitions for forms of LCC analysis and reporting
- Providing the framework for consistent life cycle cost predictions and performance assessment, - which will facilitate more robust levels of comparative analysis and cost benchmarking
- Providing a common basis for setting life cycle cost targets during design and construction, against which actual cost performance can be tracked and assessed over the asset life span.
- Providing a generic menu of costs for WLC/ LCC compatible with and customisable for specific international cost codes and data structure conventions
- Helping to unlock the real value of effectively doing LCC in construction – by adopting the ISO 15686 service life planning standards and practical guidance.
- Clarifying the differences between whole life costing (WLC) and life cycle costing (LCC); when to undertake it, to what level of analysis: and what costs should be considered.



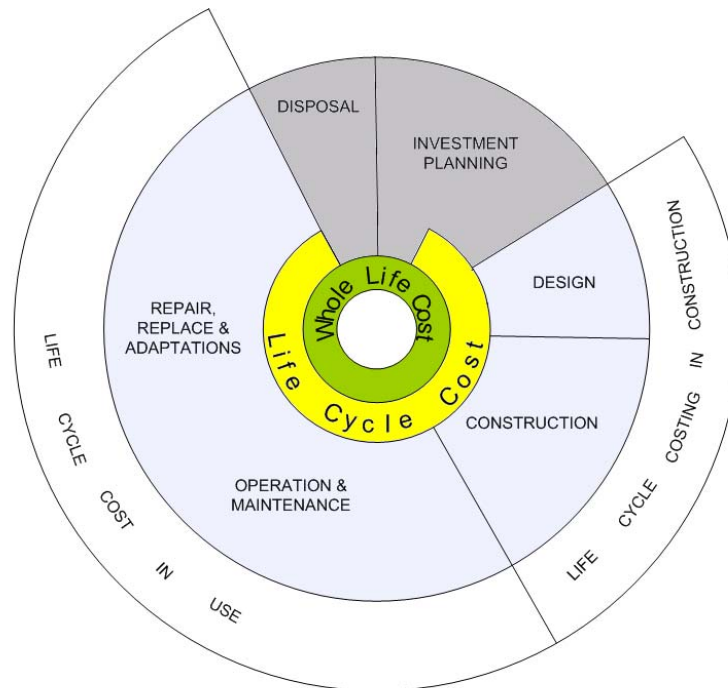
Source : European Construction Institute, Whole Life Value Taskforce 2005

When should WLC and LCC be undertaken and for what specific purpose?

LCC analysis must take into account relevant factors from acquisition, through operation and maintenance, renewal and adaptation, disposal and decommissioning, with regard to the client's specified brief and the project specific service life performance requirements. LCC therefore allows consistent comparisons to be performed between alternatives with different cash flows and different time frames.

There are three key stages during the whole life cycle of any constructed asset when undertaking LCC is particularly relevant (refer to figure below):

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| 1 | Project investment planning | WL/LCC strategic options appraisals - (pre construction) |
| 2 | During design and construction | or LCC in Construction - (system & detailed elemental levels) |
| 3 | During occupancy | or Life Cycle Cost In Use - (post construction and beyond) |



Source : European Construction Institute Whole Life Value Taskforce 2005

What Costs?

The RICS Building Cost information Service (**BCIS**) team, with the assistance of **Faithful+Gould**, have undertaken a comprehensive review of numerous cost structures, being used by countries across Europe and rest of the world and have now established a standard menu of whole life cycle costs – which aligns with the European Commissions Task Group 4's proposed cost data structure for LCC in construction. The intention being that the BCIS will publish this, along with the LCC guiding principles, instructions and definitions, in the forthcoming update to the current BCIS 'Standard Form of Cost Analysis'.

Joe Martin, director of the BCIS explains how this will help “The prime objective has also been to create a standard data structure for whole life costing, for adoption and use by the UK construction industry. The standard should help reduce mistakes in the scoping and underlying assumptions and facilitate the means to capture robust life cycle cost analysis information. This is expected to have a significant impact on the use of LCC in construction and give investment decision makers and project design teams much more confidence and transparency in the basis of the costing, not just for PFI projects.”

When will the LCC standards be published?

The ISO 15686 Part 5 'Life Cycle Costing' will go to a final ballot in April and, if endorsed, will become the international standard later this year. The BCIS plan to publish the revision to the latest RICS 'Standard Form of Cost Analysis, in a similar time frame.

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